4. ECOLOGY

4.1 Introduction

This Chapter provides an appraisal of the potential effects on ecology and nature conservation (ecological features) as a result of the Project (both the Proposed and Associated Developments).

The specific objectives of the Chapter are to:

- describe the ecological baseline;
- describe the potential effects, including direct, indirect and cumulative effects, on ecological features;
- describe the mitigation measures proposed to address likely significant effects; and
- assess the significance of any residual effects remaining following the implementation of mitigation.

A separate Habitats Regulations Appraisal is provided in **Annex I** that describes potential for effects on European and Ramsar sites of nature conservation importance.

4.2 Methodology

4.2.1 Desk Study and Consultation

A desk study was undertaken to determine the presence of any designated nature conservation sites, within 10 km of the extended Survey Area and for any ancient woodland, tree preservation orders and records of protected species within 2 km of the red line boundary within the last 25 years (see **Figure 4.1**).

In September 2021, ERM consulted with NatureScot on behalf of SSEN Transmission to agree an approach to ornithology surveys for Crarae (see **Annex F**). It was agreed with NatureScot that the breeding bird surveys undertaken in 2015-2016 to inform SSEN Transmission's Inveraray to Crossaig 275 kV Overhead Line (OHL) Reinforcement Project 2018 Environmental Impact Assessment (EIA) would be sufficient to inform the Environmental Appraisal (EA) being submitted for the Project and no further ornithology surveys were required[1].

A request for information regarding designated sites, species records and, information on the habitats present was submitted to the Argyll Biological Record Centre (ABReC). However, the ABReC advised this data request could not be processed[2]. In the absence of local records, reference was made to the 2010-2015 Argyll and Bute Council Local Biodiversity Action Plan (LBAP)[3] and a review of SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project EIA Report (EIAR) was undertaken as the Associated Development element of the Project passes through and will eventually tie-in to the larger reinforcement project.

Further consultations with the Argyll Raptor Species Group (ARSG), Scotland's Raptor Study Group (SRSG) and The Royal Society for the Protection of Birds (RSPB) have been undertaken. At the time of writing, responses from all groups have been received. Data was requested for Schedule 1 and Birds of Conservation Concern (BoCC) raptor species within 2 km of the Crarae substation from the ARSG and data on other protected and sensitive species from the RSPB.

[1] Ornithology field surveys undertaken to inform the Inveraray to Crossaig EIAR were carried out between 2015-16 and included Vantage Point (VP), nesting diver, moorland/forestry birds, black grouse lek, breeding raptor and eagle nest surveys. Further VP surveys and eagle nest checks commenced in February 2017.

[2] The data request submitted requested information over the last ten years regarding designated sites, species records and, information on the habitats present. The search area for this information request extended for 2 km from the red line boundary of the Proposed Development area. However, on 9 December 2021, ABReC contacted ERM to advise they are currently unable to produce data search reports.

[3] This is the latest LBAP to be published by Argyll and Bute Council and is yet to be replaced.

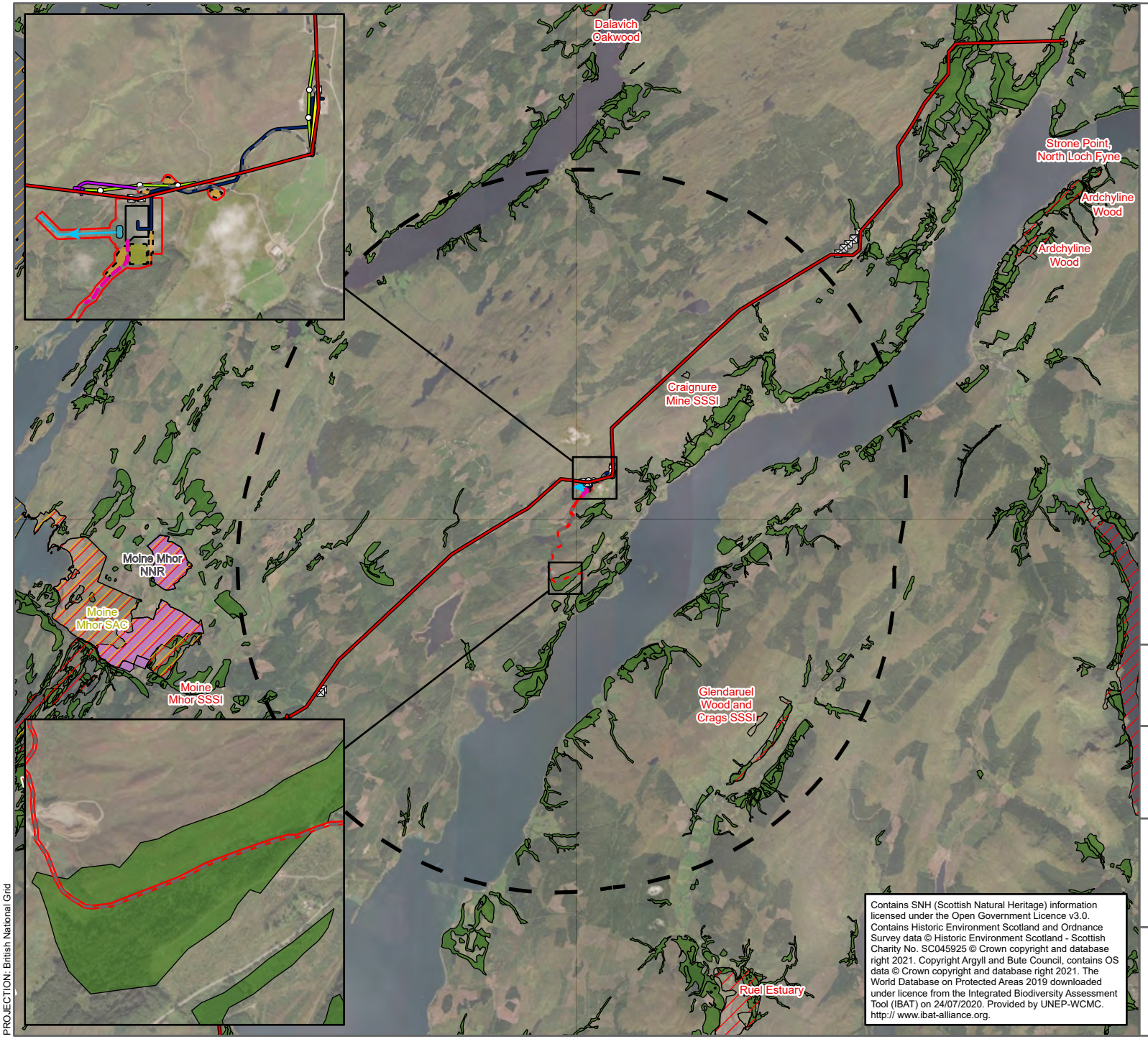

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Figure 4.1
Designated Sites and Ancient Woodland: Crarae

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Maxar, Microsoft, Earthstar Geographics

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4.2.2 Field Survey

An Extended Phase 1 Habitat Survey (EP1HS) was undertaken in October 2021 within the Project Survey Area (see **Figure 4.2**) and was based on the methods described in the Joint Nature Conservation Committee (JNCC) Handbook for Phase 1 Habitat Survey (2010)[1] as extended for use in Environmental Assessment[2]. A walkover survey for protected and priority species was undertaken during the EP1HS, which included a search for signs/sightings of species likely to occur in the locality and in the habitats present. The survey method for each species is detailed in the Crarae Extended Phase 1 Habitat and Protected Species Survey Report, (see **Annex G**).

A National Vegetation Classification (NVC) survey of habitats with the potential to support potential Groundwater Dependent Terrestrial Ecosystem (GWDTE) was undertaken alongside the EP1HS. The survey was based on the methods described in JNCC's National Vegetation Classification: Users' Handbook[3] with communities being identified by eye.

4.2.3 Impact Assessment

The impact assessment follows an approach whereby the sensitivity of an ecological receptor has been determined and assessed against the magnitude of the effect the activities associated with the Project may have on that receptor and the subsequent significance. The approach takes into account the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland[4] and refers to not significant, rather than negligible.

The impact assessments on designated sites, habitats and flora, and GWDTE have been assessed for both the Proposed Development and the Associated Development in order to determine the impact each development is having on each of these features and reported accordingly.

The impact assessment on protected species has been undertaken at a Project scale as habitats impacted by the separate developments which could potentially be used by protected species cover the Proposed Development and the Associated Development. As the footprints of the Proposed Development and Associated Development are located in the same sections of habitat the impact assessment on protected species has been undertaken on a Project scale.

Mitigation for the Project is split into two categories, embedded mitigation and additional mitigation. Additional mitigation is detailed within **Section 1.5** and sets out any further mitigation required to reduce the residual impact to not significant.

[1] 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.

[2] Institute of Environmental Assessment (1995) Guidelines for Baseline Ecological Assessment, Spon, London.

[3] Joint Nature Conservation Committee National Vegetation Classification: Users' handbook (2006), Peterborough.

[4] Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, freshwater, coastal and marine. Version 1.1 - Updated September 2019. Available at https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.1Update.pdf

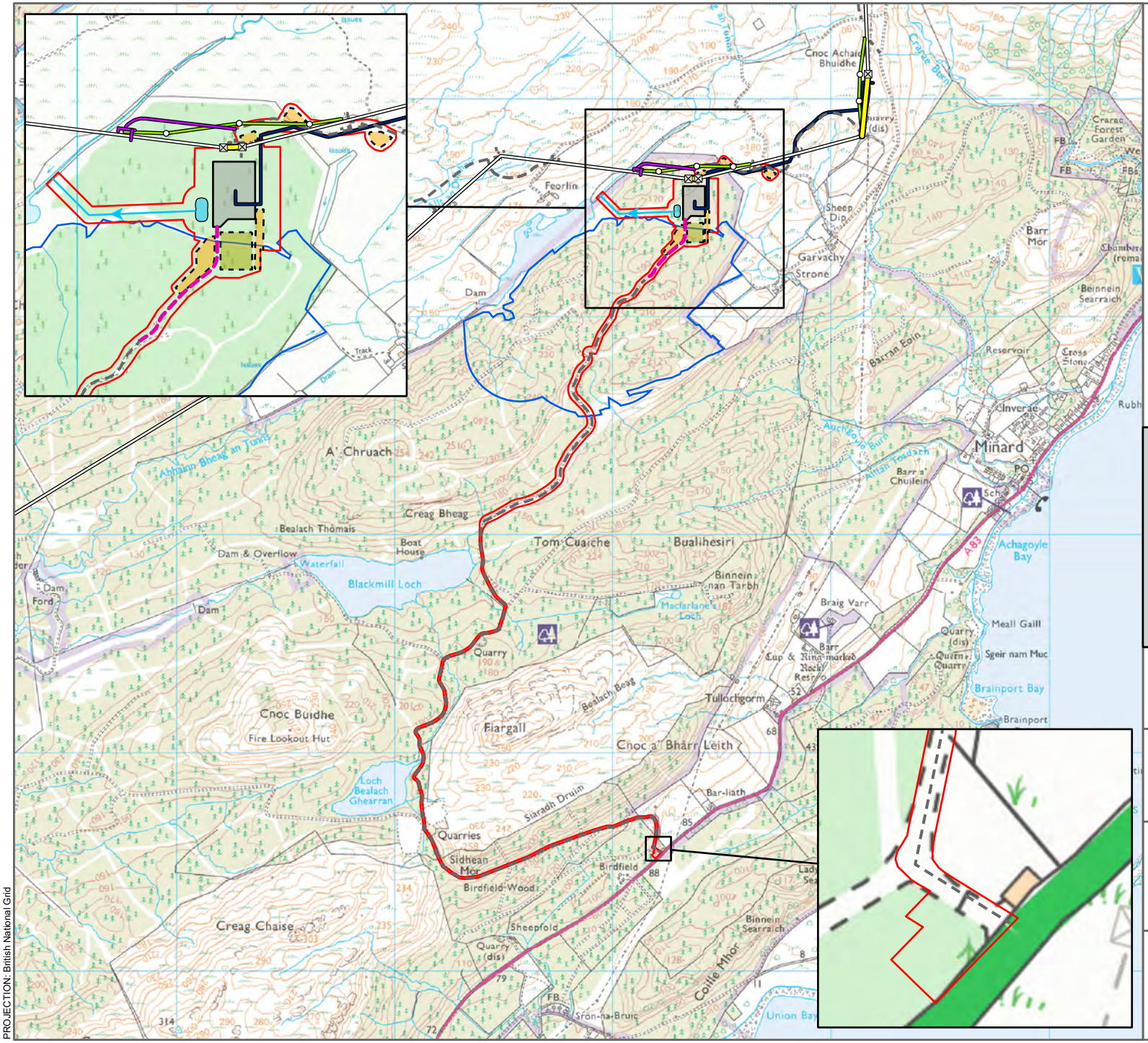

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Figure 4.2
Crarae Substation Red Line Boundary

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4.3 Baseline

4.3.1 General Ecological Context

The Project Site is located in a rural part of Argyll that is dominated by commercial forestry that is felled on a rotational basis and associated access roads / tracks. The survey and wider area predominantly consist of coniferous plantation and felled woodland as well as continuous and scattered sections of bracken and different forms of grassland. Grassland habitats include marsh, semi-improved; both acidic and neutral, as well as improved. The area also has both standing and running water with several natural and man-made lochs and streams throughout. There are areas of blanket bog to the north of the Proposed Development. Some of the conifer plantations in the Project area have been felled recently to allow for the construction of SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project, as shown in **Figure 4.3**[1].

4.3.2 Designated Sites and Ancient Woodland

No sites designated for their nature conservation importance lie within site identified for the Project. Eleven sites lie within 10 km of the Project (see **Figure 4.1**). The nearest designated sites to the Project are Moine Mhor Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI), which at their nearest point are located 5 km west of the western end of the main access road.

Moine Mhor SAC covers approximately 1149 ha[2] and is designated primarily for the presence of Annex I habitats including, active raised bogs (which is the priority feature of the site) and covers approximately 105.1 ha of the SAC. The SAC is also primarily designated for its degraded raised bogs still capable of natural regeneration, which cover approximately 688 ha. Other Annex I habitats present, which are not the primary reason for designation include: Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*), which cover approximately 93.4 ha of the site; old sessile oak woods with holly (*Ilex aquifolium)* and hard fern (*Blechnum spicant)* in the British Isles, which cover approximately 116.7 ha of the SAC; and mudflats and sandflats not covered by seawater at low tide, which cover approximately 140 ha of the SAC. Annex II qualifying species within the site, also not the primary reason for designation include marsh fritillary butterfly *Euphydryas (Eurodryas, Hypodryas) aurinia* and otter *(Lutra lutra*).

Moine Mhor SSSI covers approximately 1172 ha[3] and supports saltmarsh and estuarine raised bog habitats that together comprise a nationally uncommon habitat transition. The SSSI also supports upland oak woodland, marsh fritillary butterfly and a breeding bird assemblage, which includes hen harrier *(Circus cyaneus*), short-eared owl *(Asio flammeus*), red-breasted merganser *(Mergus serrator*), redshank *(Tringa tetanus*), curlew *(Numenius arquata*) and snipe *(Gallinago gallinago*). In winter, Greenland white fronted geese *(Anser albifrons*) and greylag geese *(Anser anser*) roost and feed on the bog and mudflats. The winter hen harrier roost is of local importance and part of the national harrier winter roost survey. In addition, the bay provides feeding for one of the largest concentrations of teal *(Anas crecca*), wigeon *(Anas Penelope*), shelduck *(Tadorna tadorna*) and mallard *(Anas platyrhynchos*) in mainland Argyll and acts as a staging post for migrating birds such as whooper swan *(Cygnus Cygnus*). The Moine Mhor National Nature Reserve (NNR) is located approximately 1.7 km north west of the Project and covers approximately 487 ha. The NNR is an internationally important peatland site in mid-Argyll. This extensive lowland raised bog supports biodiversity and plays a significant role in storing carbon. It is an important wildlife tourism site for mid-Argyll[4].

One area of Ancient Woodland lies adjacent to the existing access track. The Ancient woodland is called Birdfield woodland and is Long-Established (of plantation origin) (LEPO). Where possible, any upgrades or development required to the existing access track will avoid the area where the Ancient Woodland is present to minimise impacts. There is the possibly that during the works, trees may require to be pruned within the Ancient Woodland

[1] Inveraray to Crossaig 275 kV Overhead Line EIAR. Available at https://www.energyconsents.scot/ApplicationDetails.aspx?cr=ECU00000456
[2] Moine Mhor SAC Natura 2000 Data Form. Available at: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0019839.pdf
[3] NatureScot SiteLink Moine Mhor SSSI. Available at: https://sitelink.nature.scot/site/1174
[4] NatureScot Moine Mhor NNR. Available at: https://www.nature.scot/enjoying-outdoors/scotlands-national-nature-reserves/moine-mhor-nnr/moine-mhor-nnr-about-reserve

in order to allow access for the transformer along the track. There will be no significant change in the volume of traffic using the existing access track during construction or operation. A further 38 Ancient Woodlands lie within 2 km of the Project.

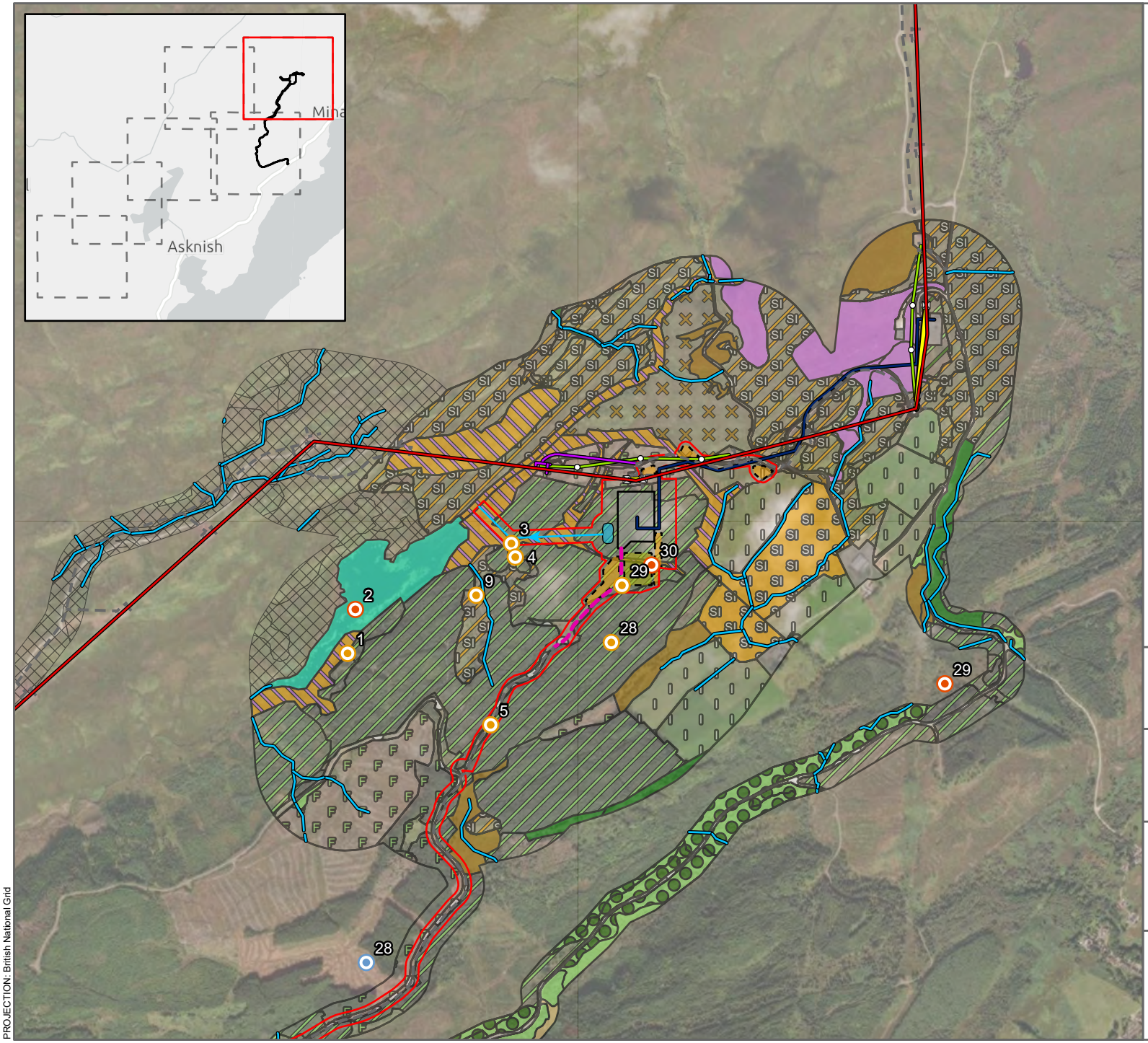

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Figure 4.3
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
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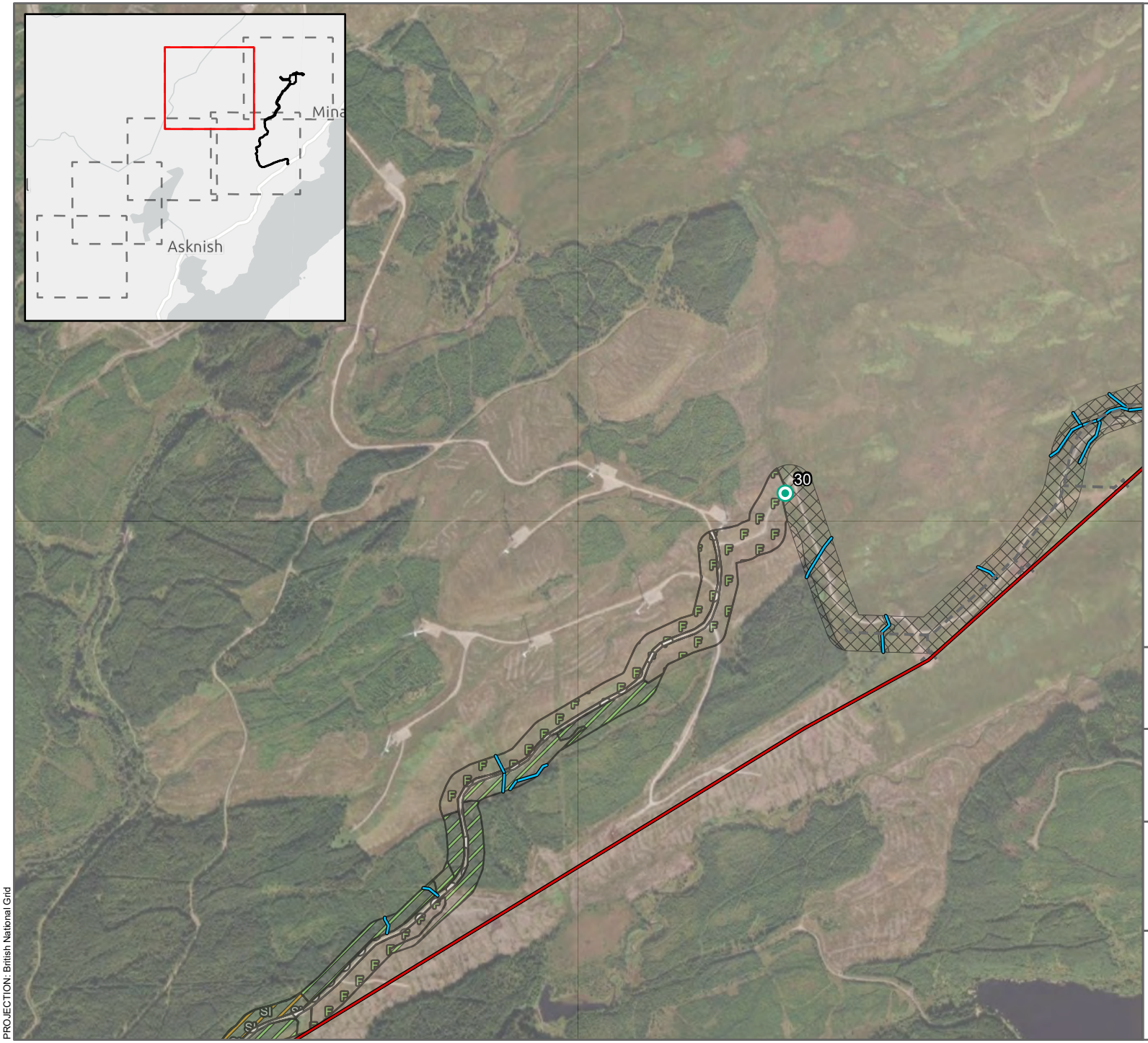

Access Note
Existing Inveraray to Crossaig Overhead Line
Existing Access Track
Phase 1 Habitat Classification:
G2 - Running water
Phase 1 Habitat Classification:
A1.2.2 - Coniferous woodland - plantation
A4.2 - Coniferous woodland - recently felled
B1.2 - Acid grassland - semi-improved
J4 - Bare ground
No land access available at the time of the survey

0 500
Metres

N

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Figure 4.3
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
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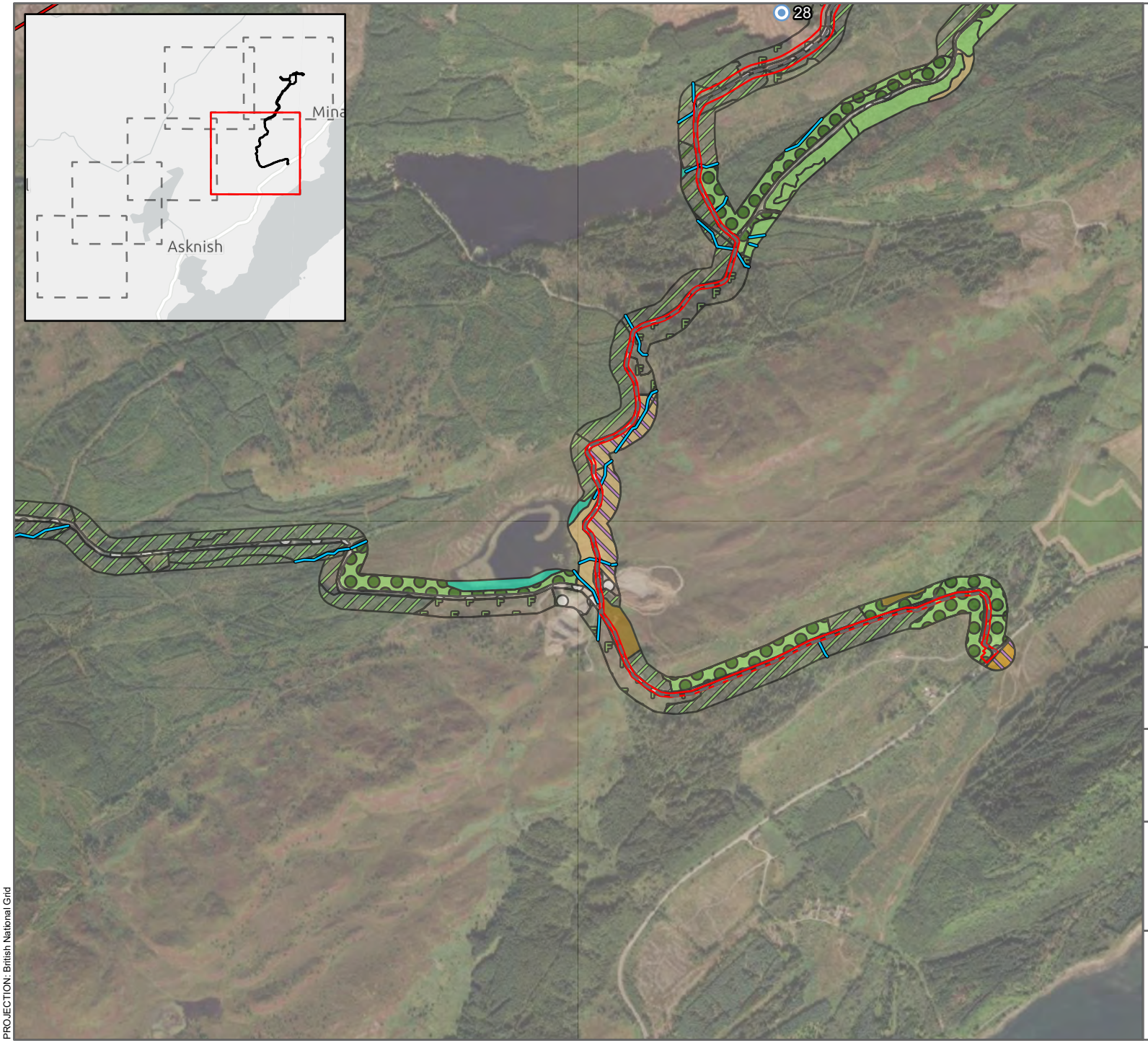

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Figure 4.3
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
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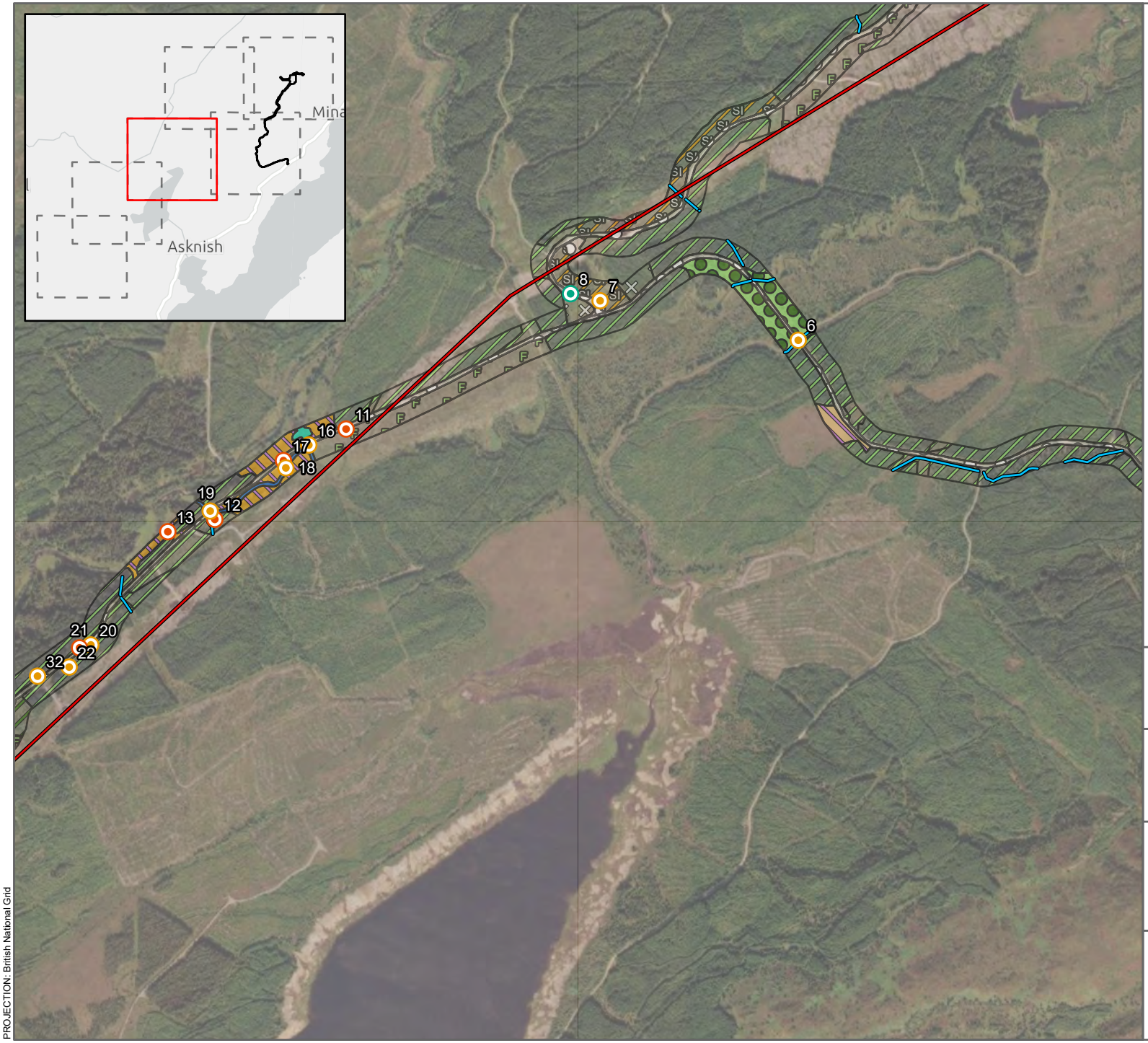

Access Note
Habitat Target Note
Mammal Target Note
Existing Inveraray to Crossaig Overhead Line
Phase 1 Habitat Classification:
G2 - Running water
Phase 1 Habitat Classification:
A1.1.2 - Broadleaved woodland - plantation
A1.2.2 - Coniferous woodland - plantation
A1.3.1 - Mixed woodland - semi-natural
A4.2 - Coniferous woodland - recently felled
B1.2 - Acid grassland - semi-improved
B5 - Marsh/marshy grassland
D2 - Wet dwarf shrub heath
G1 - Standing water
G2 - Running water
J1.3 - Cultivated/disturbed land - ephemeral/short perennial
J4 - Bare ground

0 500
Metres

N

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Figure 4.3
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
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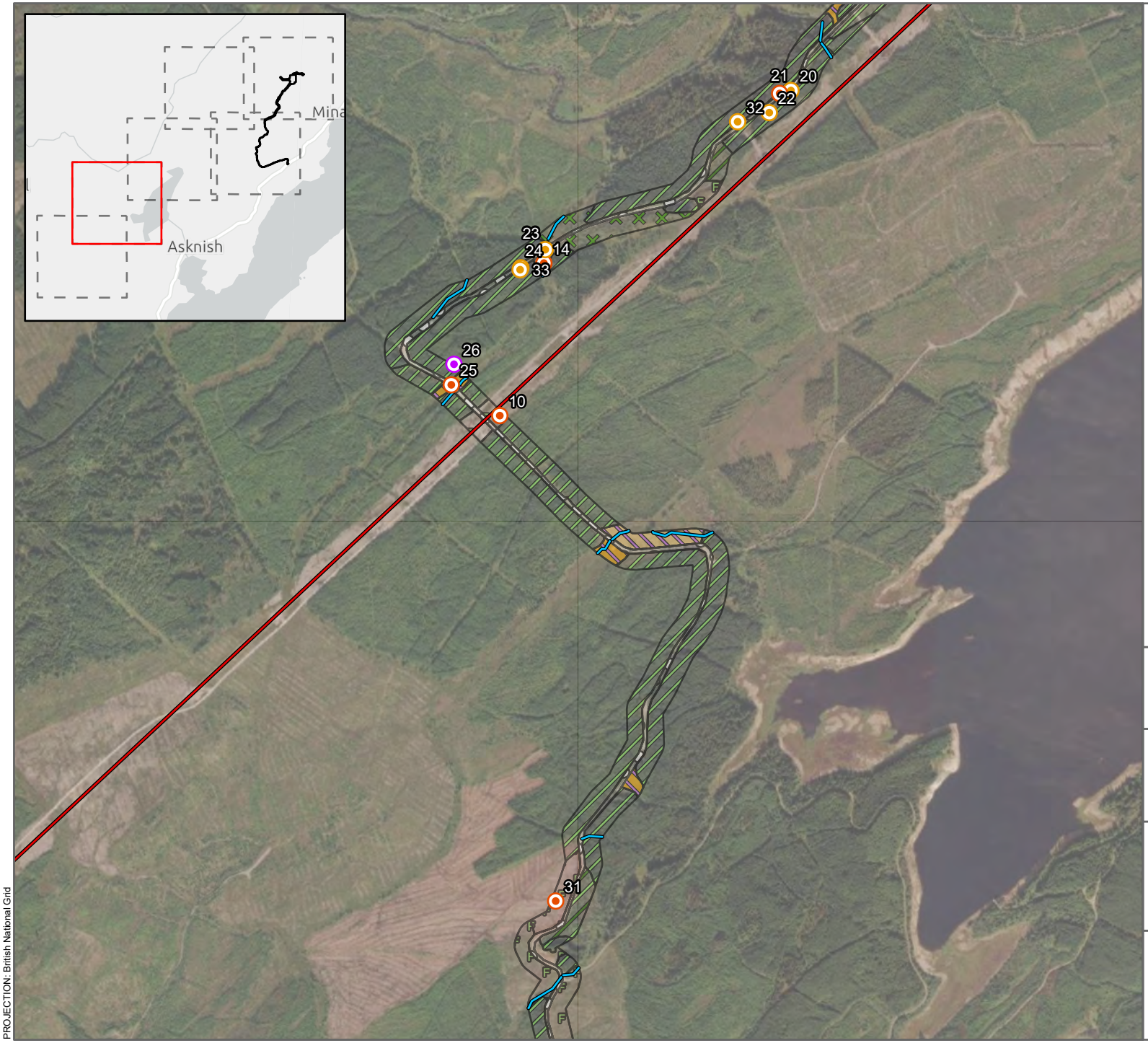

Bird Target Note
Habitat Target Note
Mammal Target Note
Existing Inveraray to Crossaig Overhead Line
Phase 1 Habitat Classification:
G2 - Running water
Phase 1 Habitat Classification:
A1.1.2 - Broadleaved woodland - plantation
A1.2.2 - Coniferous woodland - plantation
A1.3.2 - Mixed woodland - plantation
A2.2 - Scrub - scattered
A4.2 - Coniferous woodland - recently felled
B5 - Marsh/marshy grassland
D2 - Wet dwarf shrub heath
J4 - Bare ground

0 500
Metres

N

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Figure 4.3
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
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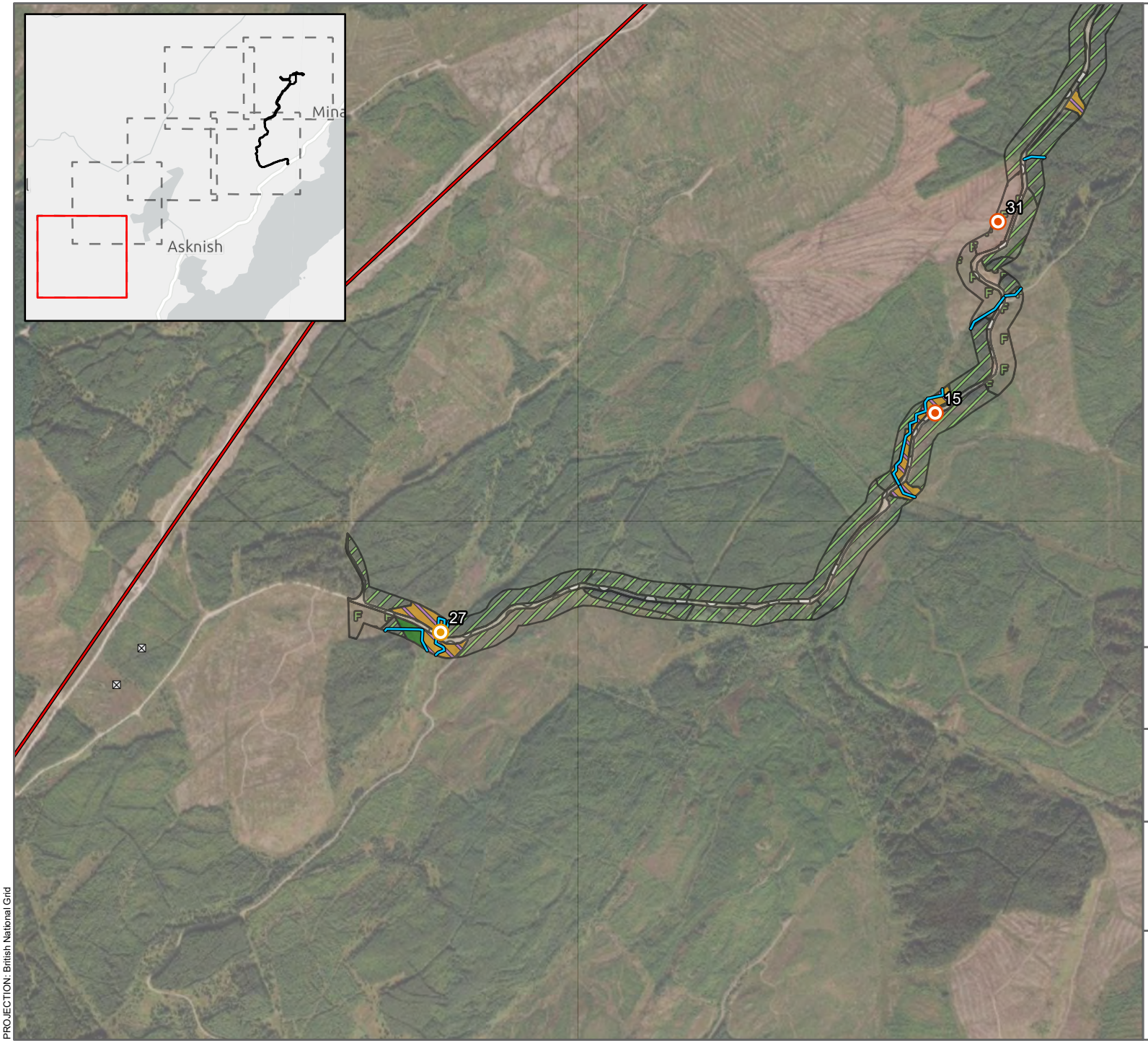

Habitat Target Note
Mammal Target Note
Existing Inveraray to Crossaig Overhead Line
Associated Development:
Proposed Tower Location
Phase 1 Habitat Classification:
G2 - Running water
Phase 1 Habitat Classification:
A1.1.1 - Broadleaved woodland - semi-natural
A1.2.2 - Coniferous woodland - plantation
A1.3.2 - Mixed woodland - plantation
A4.2 - Coniferous woodland - recently felled
B5 - Marsh/marshy grassland
J4 - Bare ground

0 500
Metres

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Figure 4.3
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
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4.3.3 Habitats and Flora Species

The Phase 1 Habitat maps are presented in **Figure 4.2**. Further details about the surveys including the approach and Target Notes are contained in **Annex G.**

Habitats within the Project and much of the immediate surrounds are dominated by continuous and scattered sections of bracken and different forms of grassland as well as dense commercial conifer plantations of varying ages (see **Figure 4.2**). Large sections of plantation were recently felled either as part of the typical commercial rotation, or for SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project. Within the footprint of the Project there are conifers, predominantly young Sitka spruce trees likely to be less than 15 years old. The coniferous plantation woodland was primarily a monoculture of semi-mature Sitka spruce (*Picea sitchensis*), however there were occasional monoculture patches of Lodgepole pine (*Pinus contorta*), European larch (*Larix decidua*) and Norway spruce (*Picea abies*) plantation bordering access roads south of the Survey Area. The four coniferous species occur in occasional plantation areas together also. Moreover, self-seeded Sitka spruce occurs in the South of the site in semi-natural, non-plantation-like format. Also bordering the access road leading up to the Survey Area.

Within the Survey Area there were very few recorded habitats of woodlands containing only broadleaved trees. Those that were recorded are located to the east of the Survey Area and are found bordering the access track leading to the west. There are small patches of mixed semi-natural woodland again neighbouring the roads of the Survey Area, south, south east and south west of the largest area of the Project. Additionally, there are two relatively small areas of mixed plantation neighbouring the access track heading south west towards the proposed site of the proposed Craig Murrail substation and a line of scattered trees were recorded to the southern extent of the Survey Area boarding two improved grassland fields.

Several types of grassland are found within the Project and along access tracks. There is a large section of semi-improved acid grassland in the north of the Survey Area, interspersed with marshy grassland. The semi-improved acidic grassland area was grazed by sheep horses and cattle. Improved grassland occurs in relatively large patches primarily across the east and south east of the Survey Area whilst neutral, semi-improved grassland occurs in the east. Marshy grassland (*Holcus-juncus)* occurs in the largest area at the north of the Survey Area, interspersing acidic, semi-improved grassland. Large sections of this habitat also occur in a more strip-like nature throughout the centre of and left of the Survey Area, either side of the lochan. A very small area of acid grassland is located next to an area of wet dwarf shrub heath that is situated at the access track split just up from the southerly entrance of the Crarae site. In the north of the Survey Area there is a large area of scattered bracken with acid grassland throughout and areas of continuous bracken were found between sections of coniferous plantation and improved grassland in across the south of the Survey Area as well as near the southern entrance of the Project neighbouring an access track.

There were areas of blanket bog to the east of the existing Crarae substation outwith the Project. The northern area was enclosed by a fence and the sheep and cattle have not been able to graze it. This has resulted in a good condition of bog with varying ages of common heath (*Calluna vulgaris*). The bog was dominated by cottongrass (*Eriophorum* species), with abundant common heather, bog asphodel (*Narthecium ossifragum*), occasional purple moor grass, and tormentil (*Potentilla erecta*). The sphagnum present were *Sphagnum cuspidatum, Sphagnum fallax, Sphagnum capillifolium, Sphagnum palustre, Sphagnum papillosum and Sphagnum austinii*. The remaining areas of bog south of this fence have been heavily grazed resulting in a poor condition of bog and only the *Sphagnum* is generally present, with small plants of common heather present.

There are two small areas of acidic, dry dwarf shrub heath in different locations adjacent to the access tracks running south from the main Survey Area. In addition, there are two small patches of this habitat neighbouring the access tracks just south of the Survey Area as well as near the Project southerly entrance road at the section of track where it splits in two, with one track heading towards Crarae and the other towards the proposed Craig Murrail Project.

There were several natural and man-made streams of running water, including burns and drains. These habitats were too small to map but have been included in the target notes (TN 6, TN 16, TN 18, TN 23 and TN 27) within the Extended Phase 1 Habitat Survey. Moreover, Loch Feorlin is located directly within and to the west of the main Survey Area, surrounded primarily by strips of marshy grassland. Loch Bealach Ghearann and Blackmill Loch, the largest of the three, also neighbour access tracks of the site. All lochs are in good condition.

A small area of cultivated/disturbed land ephemeral/short perennial habitat neighbouring access track out west towards Craig Murrail Project was recorded. Additionally, although no buildings were recorded within the red line boundary there are two farm complexes which consist of a farmhouse and associated outbuildings within the 250 m Survey Area and areas of bare ground are spread across the Survey Area, which consisted of the access tracks of gravel.

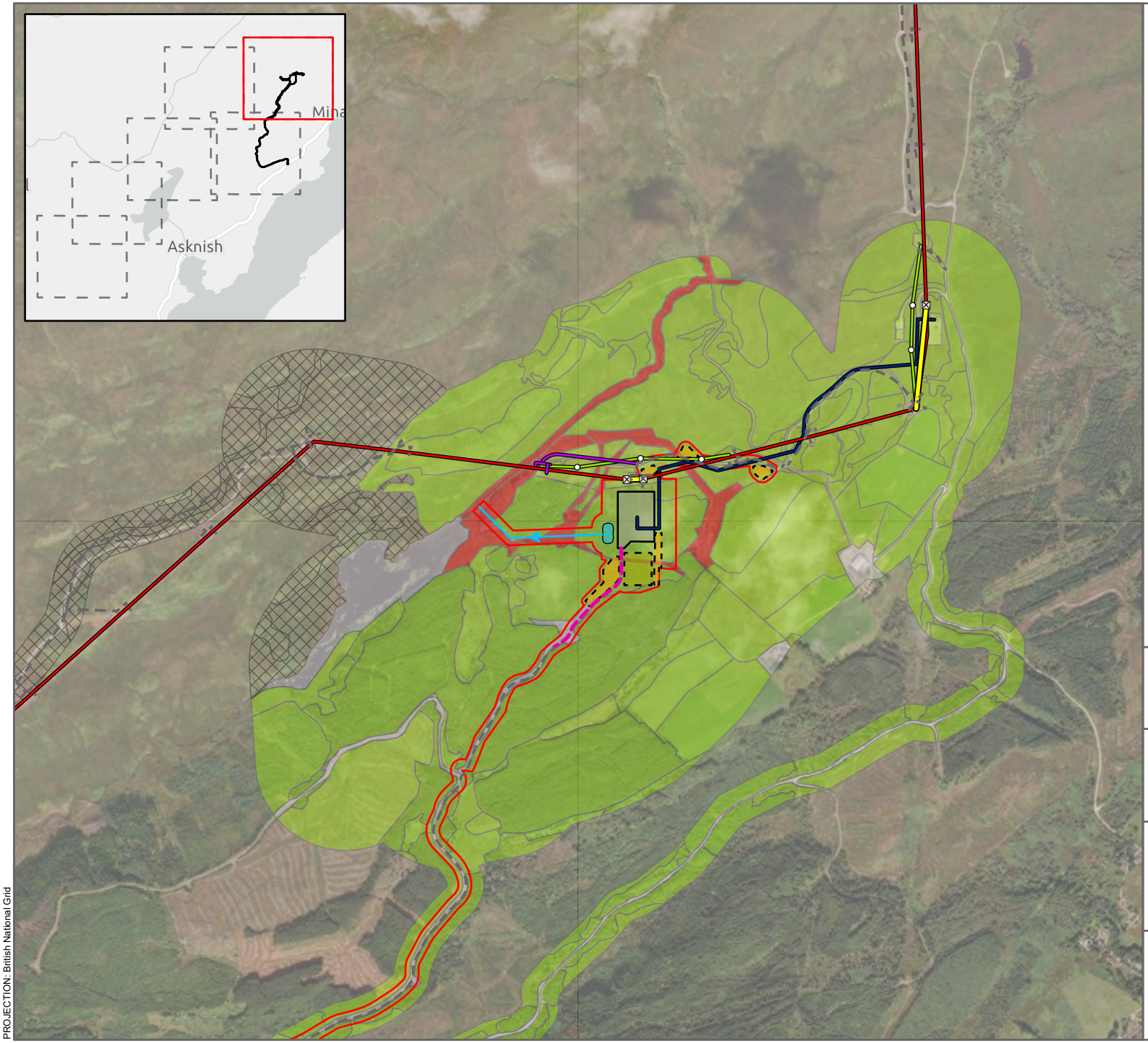
As part of the Phase 1 walkover survey, wetland habitats that could be dependent on groundwater (i.e., potential GWDTE (pGWDTE)) were identified. In these habitats, more detailed NVC surveys were undertaken to allow comparison of the habitats with those listed in SEPA guidance as likely to be highly / moderately ground water dependent. The pGWDTE habitats are shown in **Figure 4.4.** The results of the NVC survey are shown in **Figure 4.5**.

Habitats identified consisted of M6 *Carex echinata-Sphagnum recurvum* mire, M15 - *Scirpus cespitosus – Erica tetralix* wet heath, M23 - *Juncus effusus'/acutiflorus – Galium palustre* rush-pasture, M25 *Molinia caerulea - Potentilla erecta* mire, MG9 - *Holcus lanatus–Deschampsia cespitosa* grassland and W4 - *Betula pubescens - Molinia caerulea* woodland (see **Figure 4.5**). W4 and M6 are considered highly pGWDTE and M15, M23, M25 and MG9 are considered moderate pGWDTE. The Proposed Development appears to lie on top of low potential pGWDTE (see **Figure 4.4**).

Habitats in the Survey Area surrounding the Project were found to be similar to those within the Project (see **Figure 4.3**).

No invasive non-native flora species were recorded within the Survey Area during the EP1HS.

Further details of the habitats identified during the EP1HS are detailed in **Annex G**.



Existing Inveraray to Crossaig Overhead Line
Existing Access Track
Associated Development:
Proposed Temporary Tower Location
Proposed Tower Location
Temporary Access Track
Proposed OHL Alignment
Proposed Temporary OHL Bypass
Permitted Development:
33kV Interconnector Cable Route
Proposed Development:
Proposed Permanent Access Track
SUDs Outfall Pipeline
Proposed Substation Layout
Town & Country Planning Boundary
Proposed Substation Temporary Works Area
Temporary Peat Storage Area
SUDs Pond
GWDTE Classification:
High
Low
GWDTE code not applicable
No land access available at the time of the survey

0 500
Metres

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Figure 4.4
GWDTE Classification (Oct 2021)
Crarae Substation
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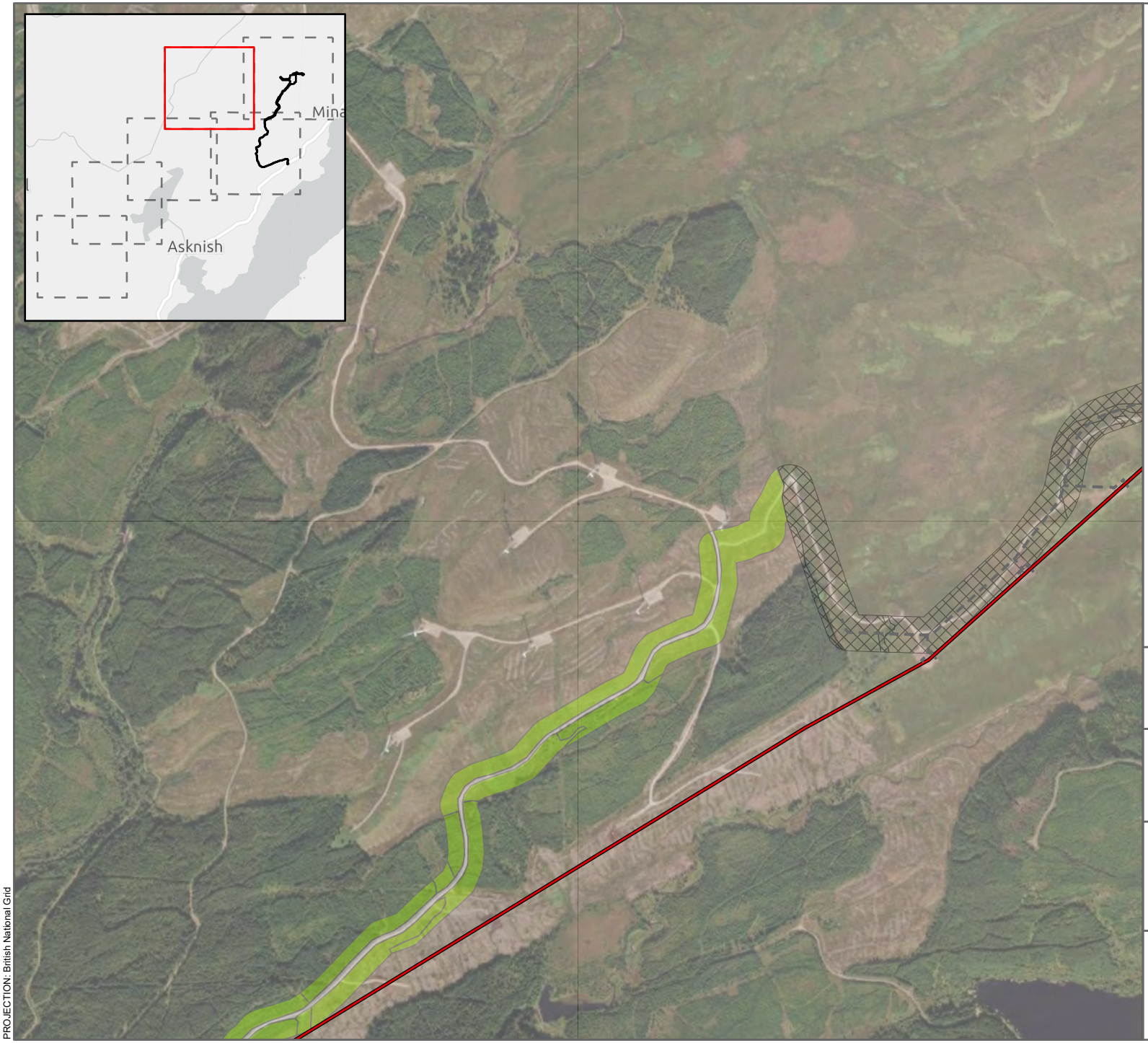

Existing Inveraray to Crossaig Overhead Line

GWDTE Classification:

Low

GWDTE code not applicable

No land access available at the time of the survey

0 500

Metres

N

SCALE: See Scale Bar	VERSION: A04
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 4.4
GWDTE Classification (Oct 2021)
Crarae Substation
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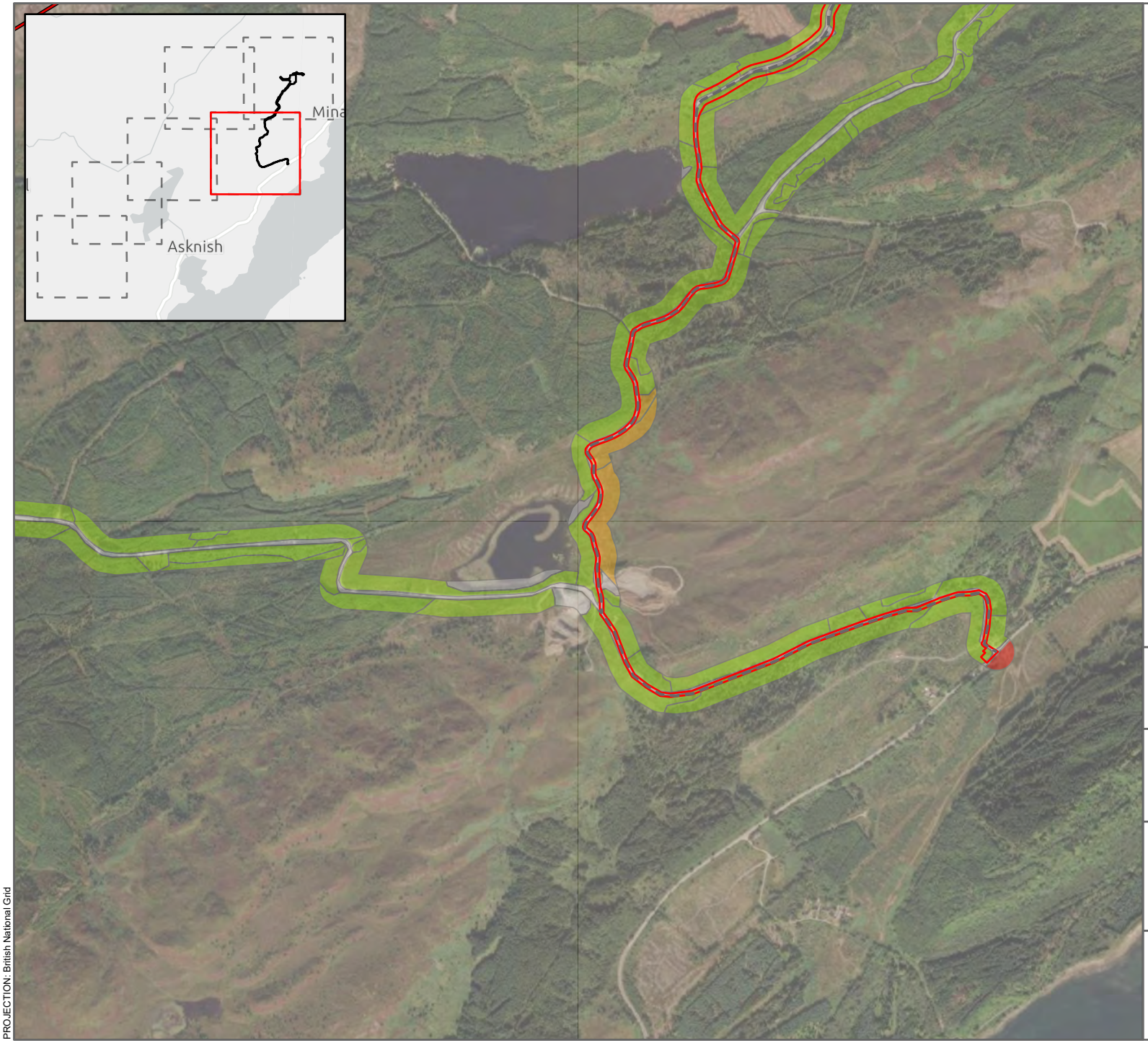

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Figure 4.4
GWDTE Classification (Oct 2021)
Crarae Substation
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PROJECTION: British National Grid

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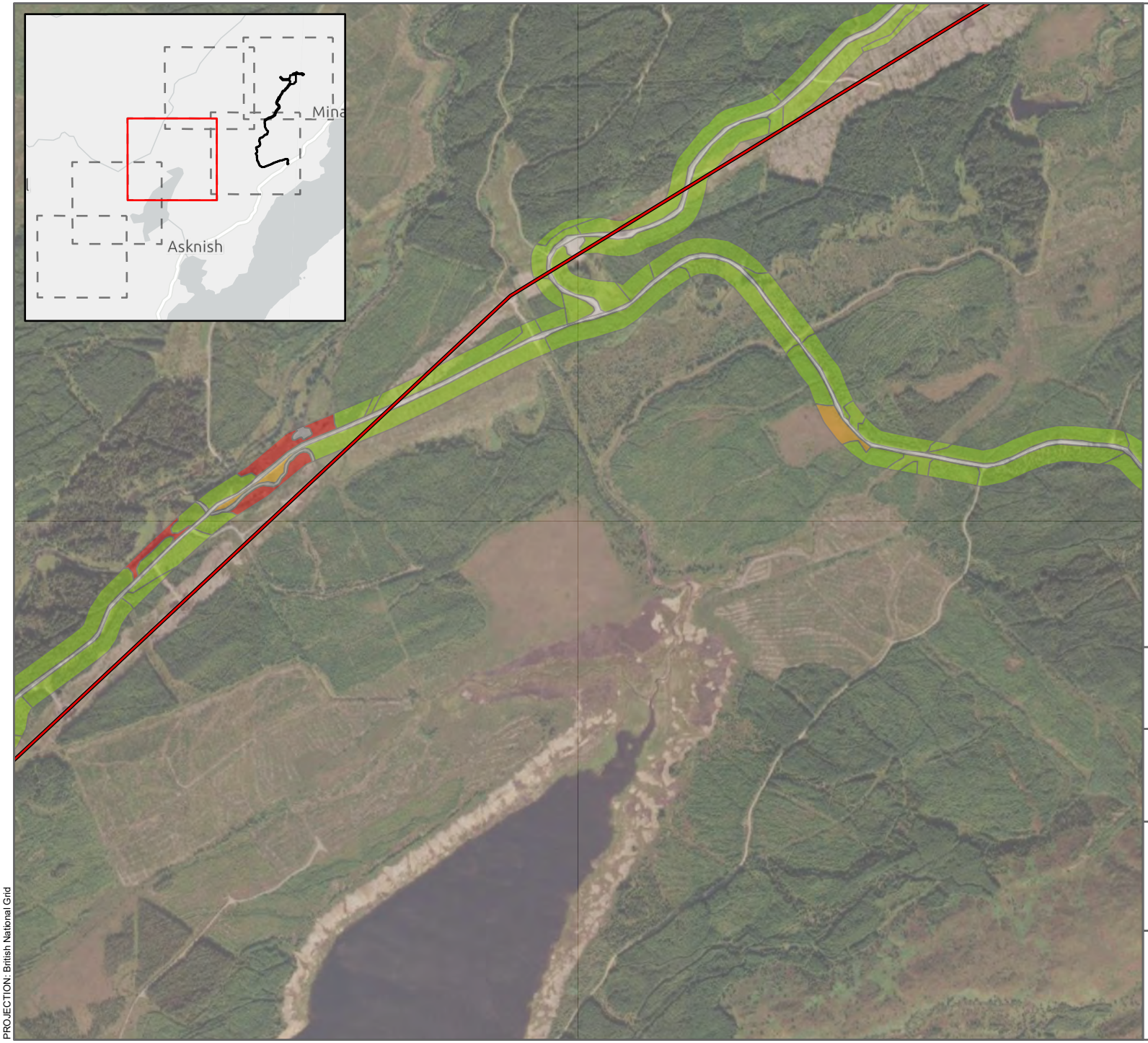

Existing Inveraray to Crossaig Overhead Line

GWDTE Classification:

- High
- Moderate
- Low
- GWDTE code not applicable

0 500

Metres

N

SCALE: See Scale Bar	VERSION: A04
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 4.4
GWDTE Classification (Oct 2021)
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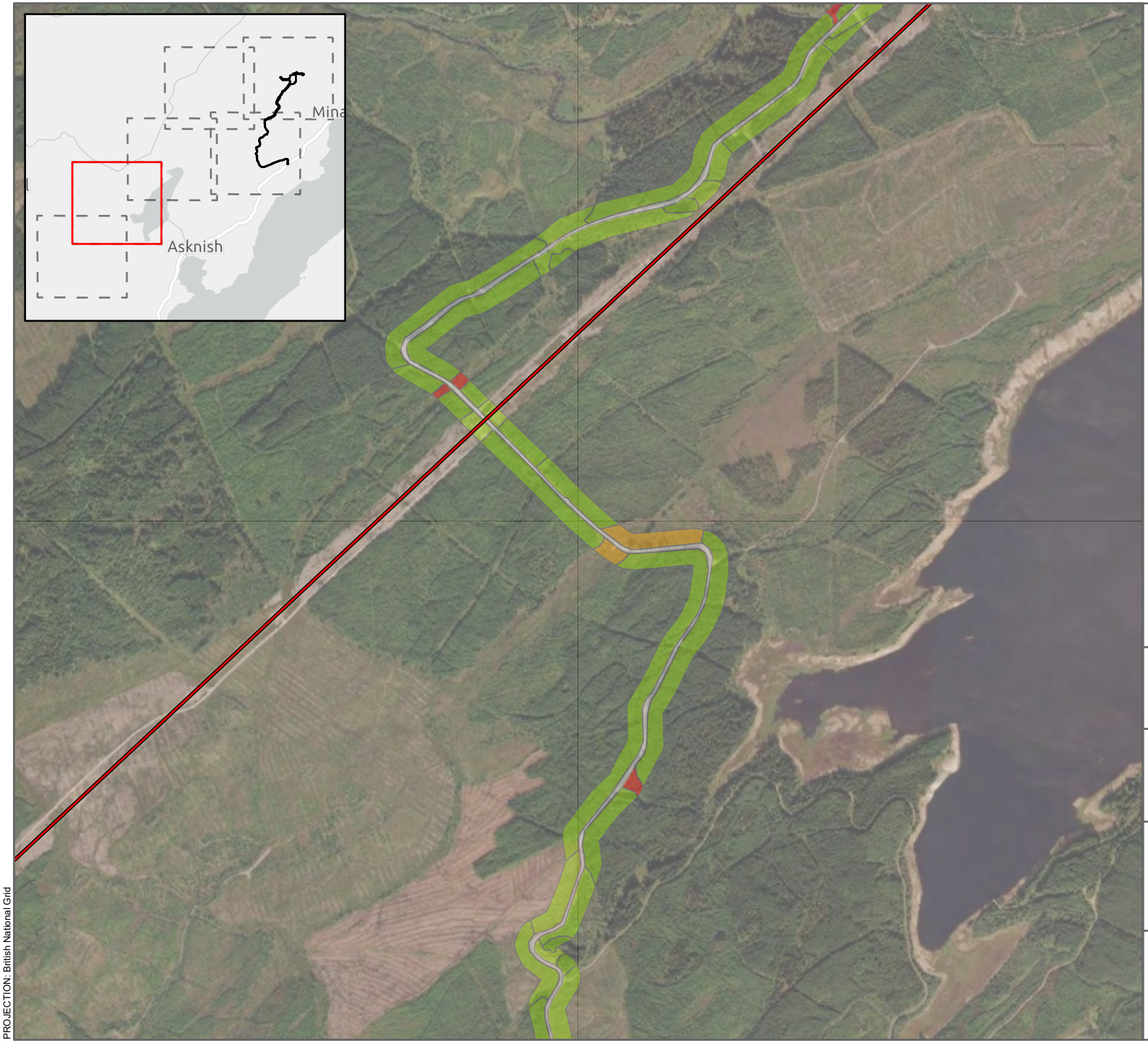

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PROJECT: 0607366	CHECKED: WB
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Figure 4.4
GWDTE Classification (Oct 2021)
Crarae Substation
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PROJECTION: British National Grid

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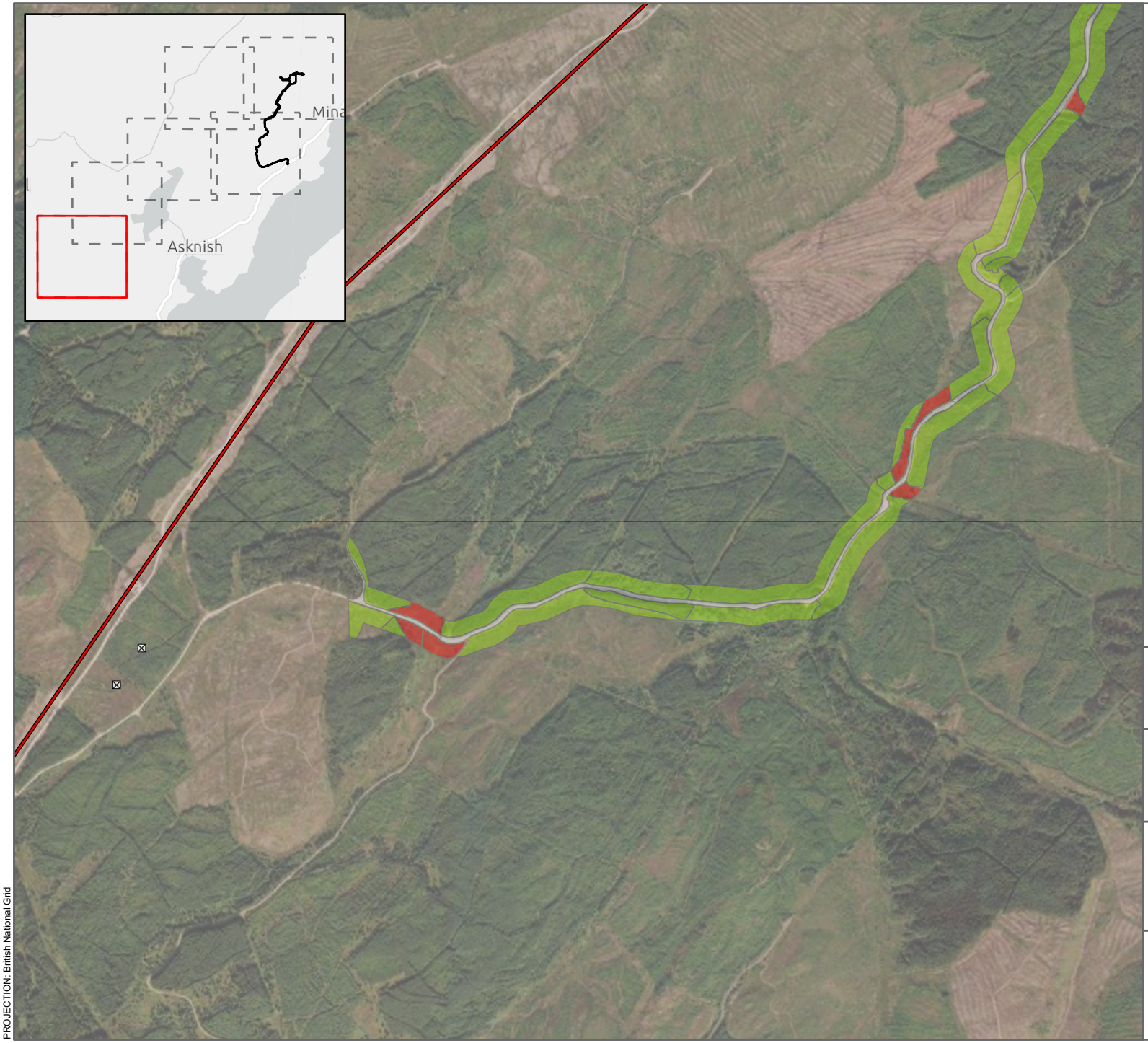

Existing Inveraray to Crossaig Overhead Line

Associated Development:

Proposed Tower Location

GWDTE Classification:

High

Low

GWDTE code not applicable

0 500

Metres

N

SCALE: See Scale Bar	VERSION: A04
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 4.4
GWDTE Classification (Oct 2021)
Crarae Substation
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PROJECTION: British National Grid

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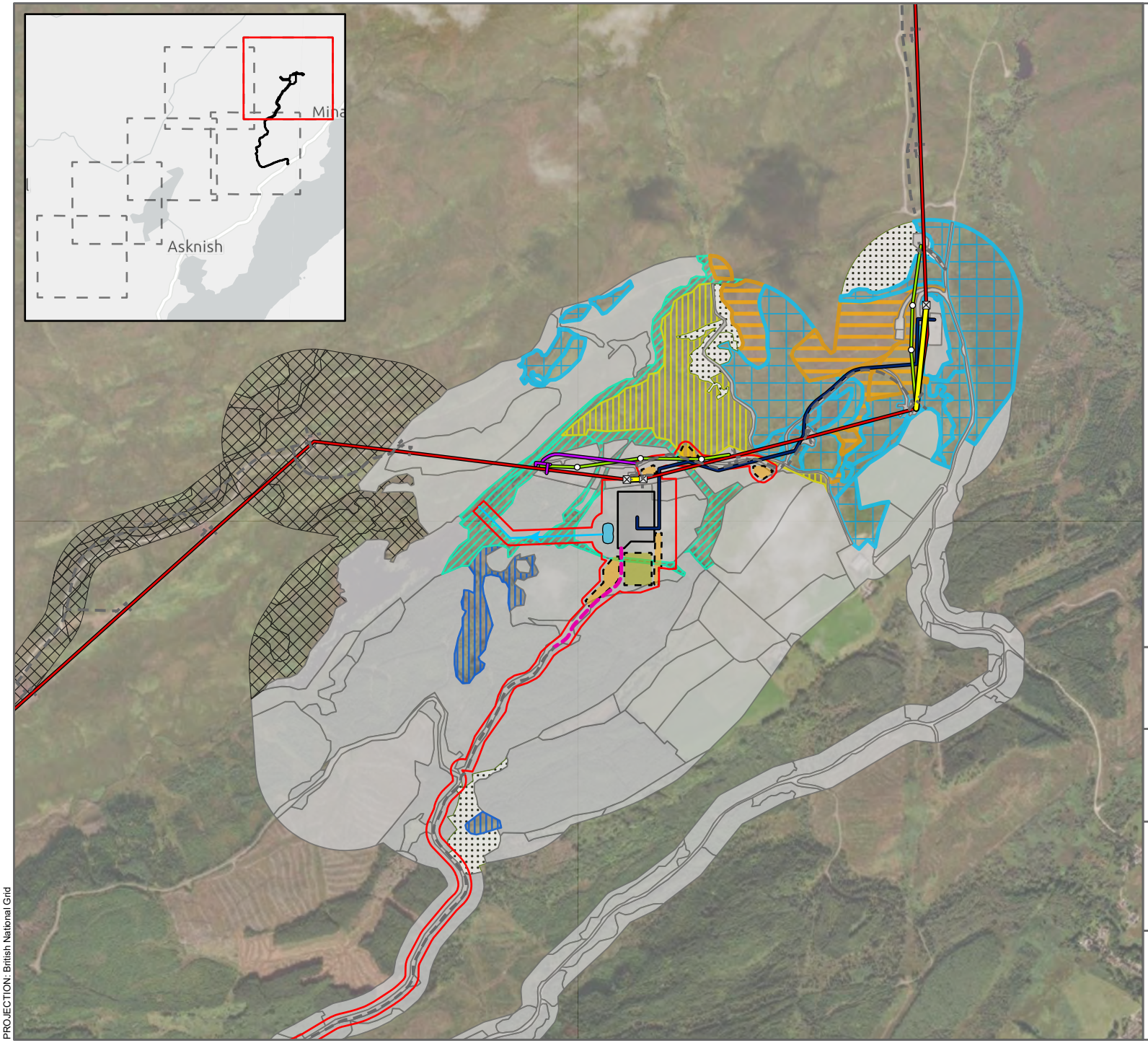

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Figure 4.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
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ERM

Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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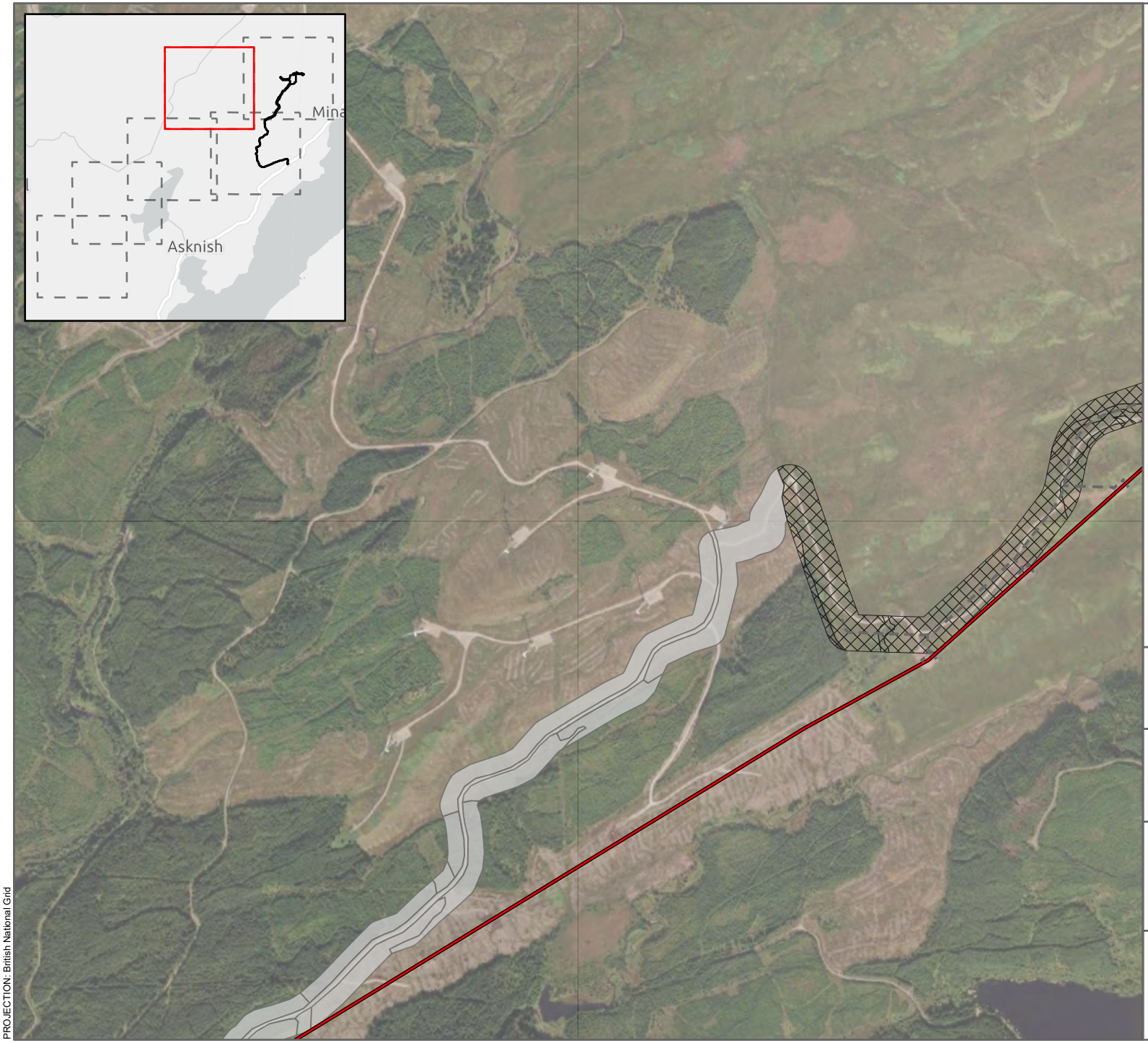

Existing Inveraray to Crossaig Overhead Line

National Vegetation Classification:

No land access available at the time of the survey

No NVC survey - limited GWDTE potential

0 500

Metres

N

SCALE: See Scale Bar	VERSION: A04
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 4.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
Page: 2

ERM

Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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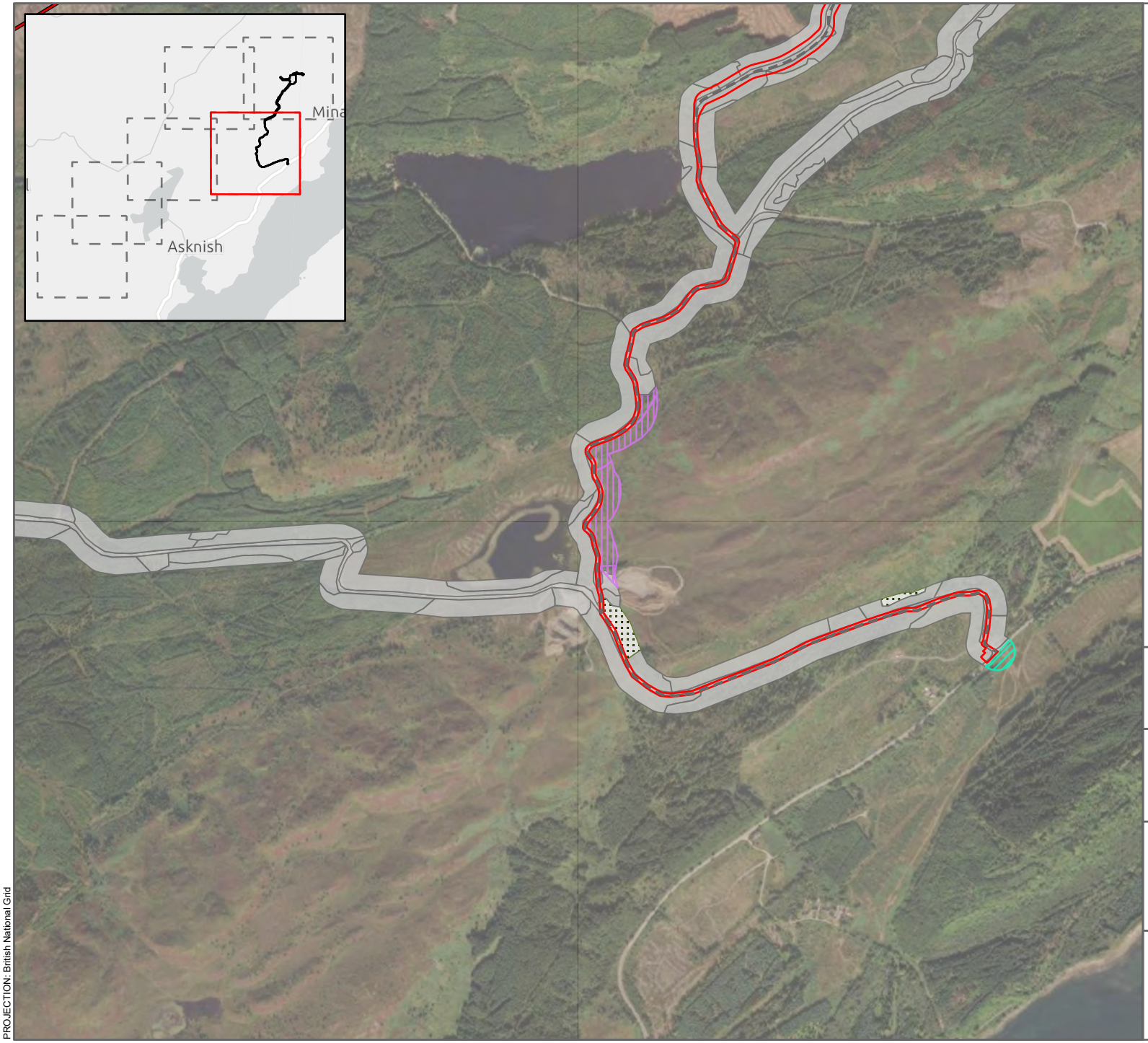

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Figure 4.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
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Scottish & Southern Electricity Networks TRANSMISSION

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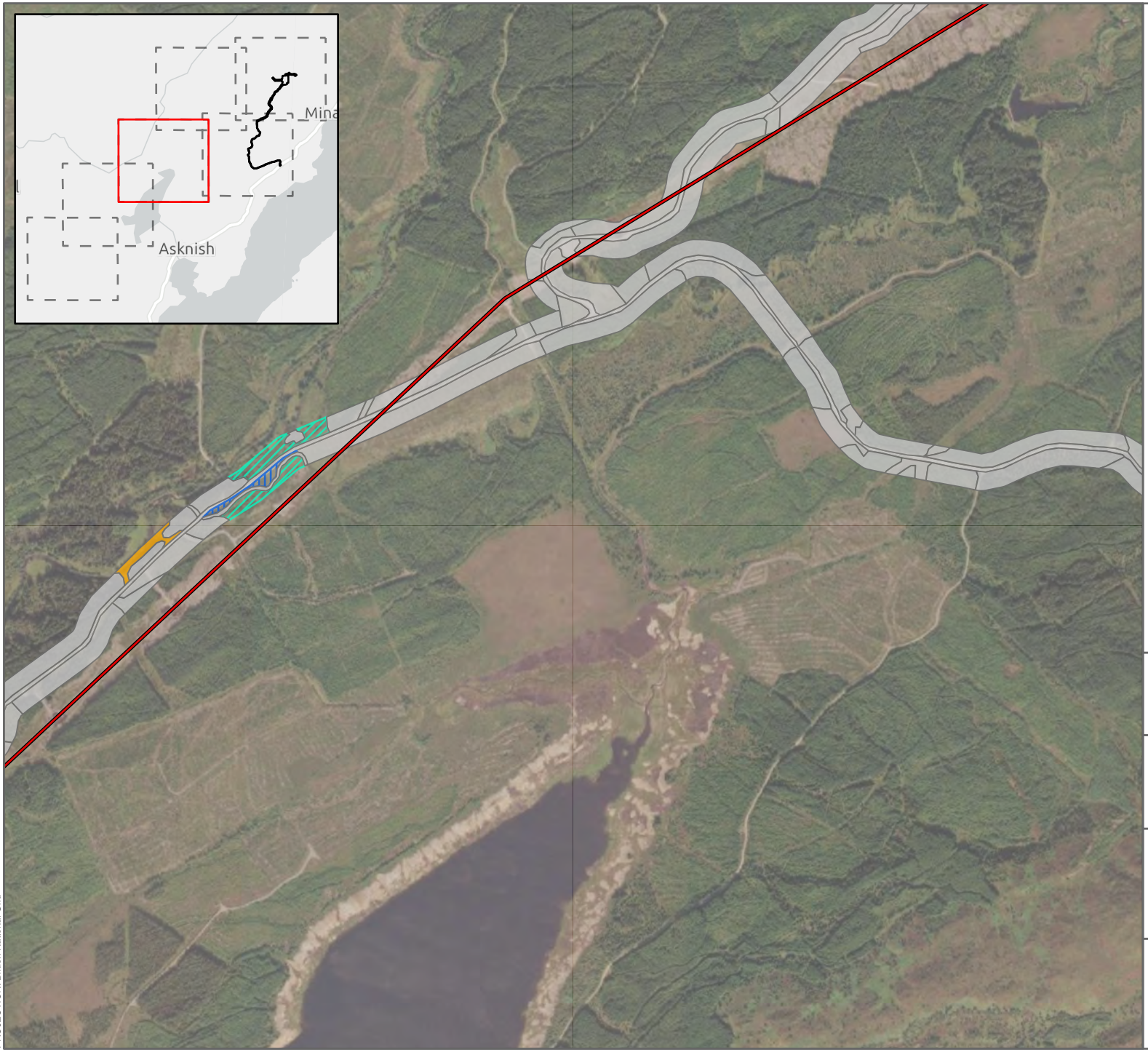

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Figure 4.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
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ERM

Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

Maxar, Microsoft, Esri UK, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS

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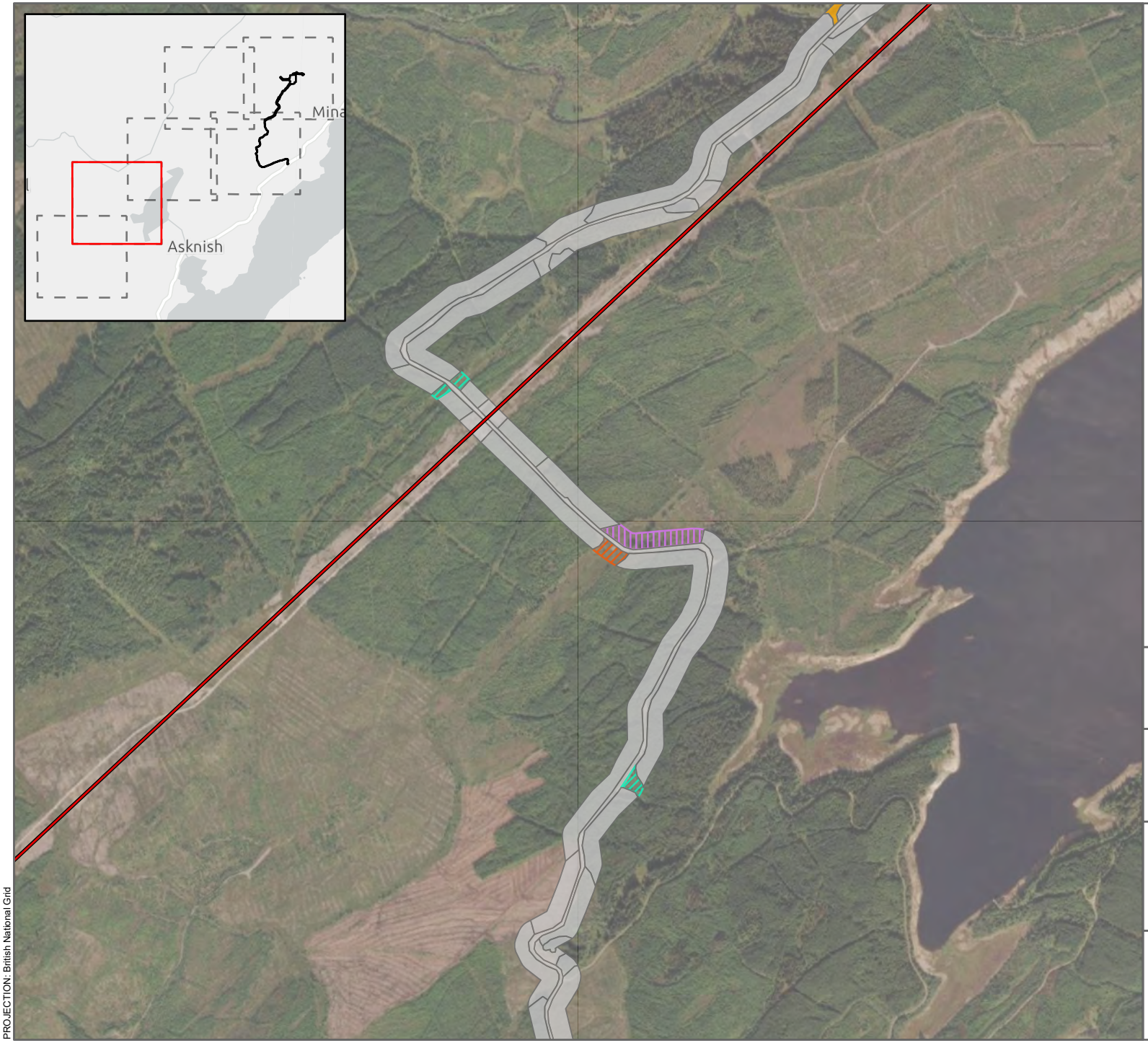

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PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 4.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
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ERM

Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

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SCALE: See Scale Bar	VERSION: A04
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 4.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
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PROJECTION: British National Grid

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4.3.4 Fauna including Protected Species

The only field signs of protected species recorded within the phase 1 Survey Area were suspected pine marten scats identified within the plantation woodland ride which is located approximately 100 m from the Project access track. The findings of the EP1HS mirror the findings from the Inveraray to Crossaig 275 kV OHL Reinforcement Project 2018 EIA which also found no evidence of protected species within their area of survey[12] with the exception of pine marten.

No field signs of protected species were identified within the habitat to be lost under the footprint of the Project, however, the coniferous plantation to be lost due to the Project has the potential to support pine marten, red squirrel, badgers and possibly wildcat. Additionally, oak trees to the east of the project area neighbouring the access track entering the Crarae Survey Area from the Craig Murrail Project were deemed potentially suitable to support suitable roosting features for bats. Moreover, although not clearly identifiable, potential otter footprints were observed under a bridge to the west of the area along the access track towards the location of the proposed Craig Murrail substation.

Water vole was not recorded although the Project lies in a part of Argyll area they are known to exist. The burns located within the Project were deemed unsuitable to support water vole due to their shallow bankside, shallow water depth, likely variation in water flows, small width and limited availability of suitable vegetation for foraging. No suitable aquatic vegetation was recorded which would provide food for water vole.

With the exception of the wayleave created for SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project, the baseline conditions appear to have changed little since the surveys undertaken to inform the EIAR for that project took place. As agreed with NatureScot (see **Section 4.2.1**), no additional bird surveys were deemed to be required and the baseline from the Inveraray to Crossaig 275 kV OHL Reinforcement Project 2018 EIA was considered to be valid. It recorded a range of common bird species in and immediately around the Project, some of which may breed. Only willow warbler was recorded in the footprint of the Project, with buzzard (*Buteo buteo*)[13], chaffinch (*Fringilla coelebs*), coal tit (*Parus ater*), robin (*Erithacus ruhecula*), and siskin (*Carduelis spinus*) recorded in the wider area of the Project. No data was found in RSPB records for black grouse (*Lyrurus tetrix*), however the ARSG notified ERM that there was a known Hen harrier (*Circus cyaneus*) site approx. 3 km from the Proposed Development. In addition, during the EP1HS carrion crow (*Corvus corone*) and raven (*Corvus corax*) were recorded in and/or over the footprint on the Project.

There are no waterbodies in the Project to support breeding amphibian species. The nearest waterbody to the Project is Loch Feorlin. No field signs of amphibians were identified during the EP1HS. Loch Feorlin is located 300 m to the east of the Proposed Development.

No field signs of reptiles were identified during the EP1HS, however, the purple moor grass grassland within the broadleaved woodland rides offers good foraging habitat for amphibian and reptile species.

Full details of the protected species findings from the EP1HS are provided in **Annex G**.

[12] Inveraray to Crossaig 275 kV Overhead Line Reinforcement EIA Report: Volume 2: Main Report

[13] The buzzard was recorded over the existing access track.

4.4 Appraisal – Construction Effects

The assessment has taken into account the potential impacts that could occur from the Project during construction and operation for example:

- direct habitat loss due to permanent and temporary facilities;
- effects on habitats in the surrounds (e.g., from incursion by workforce, pollution / spillages, dust, effects on surface / groundwater);
- direct effects on fauna, including their killing and injury and the destruction of their places of shelter; and,
- indirect effects on fauna species including disturbance / displacement.

4.4.1 Designated Sites and Ancient Woodland

The Proposed Development

No sites designated for their nature conservation importance, or woodlands listed on the Ancient Woodland inventory will be affected by the proposals. The nearest site is Moine Mhor SAC/SSSI that lies approximately 5 km west of the eastern end of the main access road. One Ancient Woodland lies adjacent to the existing main access track; however, this woodland is Long-Established (of plantation origin) (LEPO). LEPO woodlands are not considered to be irreplaceable habitat as per the SSEN Transmission's Biodiversity Net Gain metric guidance. The access track is also likely to remain in its existing form with no long term change in use by vehicular traffic.

The Proposed Development will not result in any impact on designated sites. Construction best practice measures will be implemented (these will be included with the Construction Environment Management Plan (CEMP) and General Environmental Management Plan (GEMP)) to prevent indirect/accidental damage and this embedded mitigation will result in **no significant effects.**

The Associated Development

No sites designated for their nature conservation importance, or woodlands listed on the ancient woodland inventory will be affected by the Associated Development. The nearest designated site is Moine Mhor SAC/SSSI, which at its nearest point is located 5 km east of the eastern end of the Project area and approximately 6 km east of the closest area of habitat to be lost for the Associated Development.

The Associated Development will not result in any impact on designated sites, therefore, **no significant effects** on designated sites are predicted.

4.4.2 Habitats and Flora

The permanent[14] and temporary[15] loss of the habitats due to the construction of the Project are shown in Table 4.1 (also see **Figure 4.1** and **Figure 4.2**).

Table 4.1: Permanent and Temporary Habitat Loss due to the Project

Habitat Type	Habitat Description and Assessment	Permanent Loss		Temporary loss	
		Proposed Development (ha)	Associated Development (ha)	Proposed Development (ha)	Associated Development (ha)
Conifer woodland plantation	This is estimated to be around 40 years old based on a review of historical aerial imagery. Such habitat is common and widespread in this area of commercial forestry and is botanically of low value.	1.85	2.99	1.15	0.21
Conifer woodland recently felled	These areas have been felled recently for the creation of the wayleave for SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project and as part of commercial rotational forestry. These areas have low botanical value. Such areas are common in this rotational commercial habitat as evidenced by the review of historical aerial imagery.	-	1.41	-	2.17
Mixed woodland plantation	These are areas of plantation woodland that have been replanted within the last 10 years. These are located to the south and east of the Proposed Development.	-	0.63	-	-
Mixed woodland – semi-natural		-	0.39	-	-

[14] Permanent habitat loss – the permanent footprint of any component of the Project which will not be restored following construction.

[15] Any component of the Project that will be restored following construction, for example temporary works area, temporary access tracks and temporary towers and OHL diversions.

Acid grassland - semi-improved	These are areas of over grazed upland grassland. Due to the quality of the habitat the area has a low botanical value.	-	0.76	-	0.85
Improved grassland	These areas are sheep grazed grassland fields. These areas have low botanical value.	-	0.16	0.12	0.56
Marsh/marshy grassland	These areas have a moderate botanical value. Though the habitat has been over grazed and is of a poor quality.	0.02	-	0.10	0.80
Bracken - continuous	These areas have low botanical value.	-	0.23	-	0.48
Bracken - scattered	These areas have low botanical value.	-	-	0.11	0.56
Dry dwarf shrub heath	Small area of dry heath located adjacent to the existing access track	-	0.02	-	-
Wet dwarf shrub heath	Small area of wet heath located adjacent to the existing access track	-	0.20	-	-
Blanket sphagnum bog	This area of a degraded blanket bog has been over grazed and is in a poor quality. The botanical value of the habitat is usually high however due to the grazing pressure there is little botanical interest.	-	-	-	0.09
Wet heath / acidic grassland	Small area mosaic of wet heath acidic grassland located adjacent to the existing access track	-	0.04	-	-
Bare Ground	These areas consist of gravel access track and/ or layby areas.	0.25	4.15	0.01	0.96

Embedded mitigation measures will be in place to avoid / manage effects on habitats in the surrounds of the areas to be directly affected, for example to prevent spillages, discharges, incursion into habitats not required for the footprint and to allow construction, control dust etc. These include the timing of installation and careful siting of permanent and temporary structures to avoid or minimise interaction with sensitive receptors, SSEN's Transmission General Environmental Management Plans (GEMPs) and a post-submission CEMP and Construction Traffic Management Plan (CTMP) (see **Section 4.6** for further details on mitigation).

Given the generally low botanical value of the habitats, with the exception of the blanket bog and marshy grassland affected by both The Proposed Development and The Associated Development, and the relatively small area of their respective footprints, significant effects on habitats or flora from The Proposed Development and The Associated Development are predicted to be **negligible**; following the implementation of the proposed embedded mitigation, and **no significant effects** are predicted.

4.4.3 pGWDTE

The Proposed Development

There is one pGWDTE habitat which is likely to be affected by the footprint of the Proposed Development. This habitat is M23 *Juncus effusus'/acutiflorus – Galium palustre* rush-pasture as the potential to be highly ground water dependent. A SUDs outfall pipeline is to be placed through the pGWDTE. The habitat will be restored once the pipeline in installed.

There are no further pGWDTE habitats directly affected by the footprint of the Proposed Development. The nearest pGWDTE is approximately 50 m to the north and the NVC survey for this habitat suggests that the community present (M23 *Juncus effusus'/acutiflorus – Galium palustre* rush-pasture) has the potential to be highly ground water dependent. A detailed assessment of the potential of the GWDTE status of the surrounding habitat is provided in the **Chapter 6: Hydrology, Hydrogeology and Geology**.

Given the low botanical value, the widespread occurrence of the habitat and that the habitat will be restored once construction is completed the impact predicted between the pGWDTE and the Proposed Development is to be **minor** and a **significant effect.** Specific mitigation measures to address these effects are outlined in **Section 4.6**.

The Associated Development

There are no pGWDTE habitats to be directly affected by the footprint of the Associated Development. The nearest pGWDTE is approximately 30 m to the west. The NVC survey for this habitat suggests that the community present (M23 *Juncus effusus'/acutiflorus – Galium palustre* rush-pasture) has the potential to be moderately ground water dependent. A detailed assessment of the potential of the pGWDTE status of the surrounding habitat are discussed in the Hydrology **Chapter 6: Hydrology, Hydrogeology and Geology.**

Given the distance of the pGWDTE habitats to the Associated Development and no direct loss, **no significant effects** are predicted.

4.4.4 Fauna

4.4.5 Protected Species Assessment

There is to be an area of access track widened to the north. This will result in the loss of existing Sitka spruce plantation. As stated below it is unlikely that protected species will be affected by the loss of Sitka spruce plantation and therefore, **no effects** to protected species along the existing access track are predicted due to the Project.

No signs of protected species were recorded within the footprint and immediate surrounds of the Project during the EP1HS. The only sign recorded during the EP1HS was a pine marten scat located approximately along the Proposed Development access track within the plantation woodland ride. These findings mirror those reported in

SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project EIAR for the section of the OHL alignment that crosses the area of the Project.

The small sections of Sitka spruce (*Picea sitchensis*) conifer plantation found within the footprint of the Project can provide suitable habitat for several protected species, however, as stated in the EP1HS report (see **Annex G**), there are reasons why the trees to be lost due to the Project are unlikely to support protected species, including:

- the trees to be lost are too young to support roost sites for bats and tree cavities for pine martens; and
- Sitka spruce plantations are not favoured by red squirrels for foraging and are less likely to create dreys in them than other conifer species known to be present in the surrounding area.

Despite the above, it is still possible that the areas of conifer plantation to be lost due to the Project could be used by badger, red squirrel, pine marten, birds, reptile, and wildcat. Therefore, it is recommended that pre-construction surveys are undertaken to determine if signs of badger, red squirrel, pine marten and wildcat are present in the conifer plantations to be lost and immediate surrounds. Additional mitigation measures may be required if signs are found (see **Section 4.6** below).

Embedded mitigation measures will be implemented during the construction work, including the timing of installation and careful siting of permanent and temporary structures to avoid or minimise interaction with sensitive receptors. Compliance with project wide and site-specific environmental management procedures, with reference to SSEN Transmission GEMPs will also be implemented. This will outline the proposed approach to construction methods and environmental protection during construction of the Project, including details of ecological constraints and measures (e.g., no night-time working, control of light spill, noise emissions, pollution, avoiding incursion into habitats to be retained), procedures for surface water management and, pollution prevention guidelines.

Embedded mitigation measures to protect biodiversity will include a pre-construction site walkover survey of the Project by a suitably qualified ECoW, focussing on habitats to be directly and indirectly impacted by the Project. The purpose of the survey would be to confirm any changes in use of the site by protected species, as many of the species are highly mobile. Should a species be identified, the appropriate Species Protection Plans (SPPs) (included within the GEMP) would be followed during construction of the Project.

SSEN Transmission have well-established SPPs for a number of protected species, which have been developed in consultation with NatureScot and are currently being used on other SSEN Transmission projects. Each SPP provides details on what actions are required should species be encountered during construction of the Project (see **Annex H**) further surveys should be undertaken.

Given the generally low ecological value of the habitats affected by the Project, as well as their relatively small footprints and the embedded mitigation, significant effects on protected species from the Project are predicted to be **negligible** and therefore **no significant** effects are predicted.

4.4.6 Birds

No schedule 1 species were recorded within the Project during the EP1HS. ARSG notified ERM that there was a known Hen harrier site approx. 3 km from the Proposed Development. The site is within 150 m of the existing access track. As there will be no habitat loss or significant increase in vehicle activity along the existing access track, **no effects** to protected species along the existing access track are predicted due to the Project.

Surveys undertaken for SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project identified up to 6 leks in their Survey Area adjacent to Project, with the closest lek being located approximately 400 m to the east of the Project footprint. Although the volume of traffic using the access track is not predicted to significantly increase, studies by Ruddock and Whitfield (2007)[16] found that leks may be actively disturbed at

[16] Ruddock, Marc & Whitfield, D. (2007). A review of disturbance distances in selected bird species.

300 m to 500 m from the disturbance source, therefore, black grouse may be displaced from lekking, breeding or foraging habitat due to construction traffic using the existing access track.

Assuming a worst-case loss of a potential new lek, due to disturbance, the unmitigated effect would be predicted to be **minor** and is therefore potentially **significant**. Specific mitigation measures to address these effects are outlined in **Section 4.6**.

The removal of the habitat will be undertaken outside the breeding bird season (see section on Mitigation), it is expected that impacts to nesting birds will be avoided.

Mitigation measures will be implemented (SSEN Bird SPP) to avoid any indirect effects on suitable habitat in the surrounding area that could support breeding birds, therefore the ability for breeding birds to use the surrounding plantations will be maintained.

As a result, the magnitude of the effect on birds is considered to be **negligible** and **no significant**[17] effects on birds are predicted with the exception of black grouse where effects are to be considered **minor** of significance.

4.4.7 Other Fauna

Signs of red fox (*Vulpes vulpes*) and Sika deer (*Cervus nippon*) were observed during the EP1HS across the project area. Red fox populations have remained relatively constant in the UK in the past decade whilst Sika deer are considered a non-native species. **No significant effects** on these species are predicted.

The areas of coniferous plantations to be lost are unlikely to be favoured by reptiles as they are more likely to utilise the open habitats available, including the areas of purple moor grass within the broadleaved woodland rides and open grasslands which offer good foraging habitat for amphibian and reptile species. Most of this lies out with the areas to be directly affected and more extensive areas of such habitat occur in the surrounds of the Proposed Development. The habitat surrounding the Associated Development comprises of open degraded blanket bog, acidic grassland and improved grassland field which are not suitable habitat for herpetofauna. The removal of habitat will be done in a manner that encourages any reptiles present in the more open areas affected to move to adjacent habitat that will remain unaffected. Hence the magnitude of the effect of the habitat loss is considered **negligible** and **no significant effects** are predicted.

4.5 Cumulative Assessment

4.5.1 The Project

An appraisal of the cumulative impacts from both the Proposed Development and the Associated Development are presented in **Table 4.2.**

Table 4.2 Combined Assessment of the Proposed Development and the Associated Development

Receptor	Impact from the Proposed Development	Impact from the Associated Development	The Project
Designated Sites and Ancient Woodland	No significant effects	No effects	No significant impacts
Habitats and Flora	No significant effects	No significant effects	No significant impacts
pGWDTE	Significant effects	No significant effects	Significant impacts
Protected Species	No significant effects	No significant effects	No significant impacts

No cumulative effects are predicted as a result of the Project in combination. Any additional effects associated with the Project are considered to be **negligible** and **no significant cumulative effects** are predicted.

[17] Assuming habitat removal takes place outside of the breeding bird season.

4.5.2 Other Cumulative Developments

Cumulative effects include both the total effects resulting from the Project in combination with other similar proposed developments within an area of influence (AoI). As the Project will result in the permanent loss of relatively small area of habitat that if of low ecological value, an area of influence (AoI) for the Project of 5 km was determined. Within this 5 km AoI, a search for all relevant current and planned developments was performed and are shown in Table 4.3.

Table 4.3: Current and Planned Developments

Development / Project	Description	Approximate distance to the Project	Consenting Status	Cumulative Effects
SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project	Construction of a new 275kV overhead line, Inveraray and Crossaig	0 km	Section constructed which crosses the Project.	A cumulative effect would likely occur during the dismantling of the existing 275 kV OHL and installation of the new 275 kV section of OHL within the AoI. Given the relatively small scale, permeant combined effects on habitats, which are predicted to recover following dismantling / construction works, and the availability of similar habitats in the surrounding area, the development will likely not result in a significant effect. As a result, no cumulative effects are predicted.
Existing substation	An existing substation is located approximately 500 m north east of the Proposed Development.	0 km	Built	The existing substation is built and therefore no cumulative impacts are expected.

Given that once built, the Project will have no operational impacts, only construction activity is considered for cumulative effects.

SSEN Transmission are proposing similar substation and OHL developments across Argyll at Craig Murrail to the north east of Lochgilphead, An Suidhe, south west of Inveraray and Crossaig North, north of Carradale, on the Kintyre peninsula. They are due to be constructed at the same time as the Project. All of these substation projects however are located beyond 5 km from the Project AoI. As such, these projects have been scoped out of this assessment.

SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project listed in Error! Reference source not found. has resulted in a small loss and degradation of habitat, and disturbance and displacement of species in the area of the Project. However, as discussed in **Section** Error! Reference source not found., the habitats and flora within the footprint of the Project Site and in the immediate surrounds are of low botanical and ecological value and are unlikely to support protected species, as such the level of effect is the same as that presented in **Section** Error! Reference source not found..

Summary of Cumulative Assessment

No cumulative effects are predicted as a result of the Project in combination with other developments. Any additional effects associated with the Project are considered to be **negligible** and **no significant cumulative effects** are predicted.

4.6 Mitigation

The Project design has sought to locate the majority of the development in habitat of less value to biodiversity (*e.g.,* existing and recently felled Sitka spruce plantation).

4.6.1 Additional Mitigation

Additional mitigation measures that go further than the embedded mitigation discussed in **Section 4.2.3** are detailed below:

- To avoid effects on nesting birds, habitat removal will be undertaken outside the breeding season (March to August inclusive)[18]. If this is not possible, a pre-construction site walkover survey focussing on the habitat to be lost within the Project will be undertaken to determine if any nesting birds are present. If nesting birds are identified, the SSEN Transmission Bird SPP will be implemented by a suitably experienced Ecological Clerk of Works (ECoW). If there is a delay to commencing construction following habitat removal, further mitigation may be necessary to deter birds using the site (e.g., regular human presence, tapes across the site, other scaring devices).
- Habitat in the smaller more open areas will be removed in a manner that allows any reptiles using it to move to other suitable habitat that remains nearby.
- Night-time working will be avoided where possible, and the site will not be permanently lit overnight, to avoid any effects on nocturnal species (e.g., otters, bats, badger) should they pass through / forage in the affected area. Hours of work is detailed within **Chapter 2: Project Description**, **Section 2.5.6**.
- An ECoW should be present when any tree works are to be undertaken within an Ancient Woodland.
- To avoid effects on black grouse:
    - A pre-construction black grouse surveys should be undertaken if any works are proposed to be undertaken within the black grouse breeding season (April to May).

[18] UK Government Wild birds: surveys and mitigation for development projects. Available at https://www.gov.uk/guidance/wild-birds-surveys-and-mitigation-for-development-projects

- An ECoW should undertake a preconstruction walkover survey in the area of the nearest lek and its surrounds to identify if any leks are present.
- Should any leks be identified within the footprint of the Project or with the black grouse Protection Zone as stipulated in the SSEN SPP, a 300 m to 500 m disturbance buffer will be established (as stipulated in the bird SPP). No activity will occur within these buffer areas two hours after sunrise and two hours before sunset within the main black grouse lekking season (April to May).
- Should the existing access track fall within any lek buffer zones, a maximum speed limit of 15 mph should be enforced, and personnel will remain within vehicles wherever possible to minimise the possibility of disturbance to any leks.
- Any construction activity along the existing access track, such as track widening, should take place outside of the black grouse breeding season (April to July) where possible, or if not, at least 300 m from lek sites and/or outside of the daily lekking period.
- Where possible, gates within 300 m of lek sites will remain open after first arrival, avoiding the need for every subsequent entry to open and close the gate and the associated potential disturbance to the lek due to pedestrian activity.

- To avoid effects of the blanket bog and pGWDTE:
  - that excavated peat will be removed in sections with a 300 mm top section of living peat (acrotelm) or vegetated turf being excavated first. These will be stored separately to the catotelmic peat. If mineral subsoil is removed this will also be stored separately;
  - soils will usually be stored close to the area they are removed from and in reverse order (i.e. the top layer will be stored furthest away) to reinstatement;
  - this will also allow the top living peat layer to be used to provide bunding to prevent potentially more mobile catotelmic peat from moving;

4.7 Residual Impacts and Compensatory Habitat

The Project will result in the permanent loss of:

- 4.84 ha of conifer plantation;
- 1.41 ha of recently felled conifer plantation;
- 0.63 ha of mixed woodland plantation;
- 0.39 of mixed woodland semi-natural;
- 0.76 ha of acidic grassland;
- 0.16 ha of improved grassland;
- 0.02 ha of marshy grassland;
- 0.23 ha of continuous bracken;
- 0.02 ha of dry dwarf shrub heath;
- 0.20 ha of wet dwarf shrub heath;
- 0.04 ha of wet heath / acidic grassland; and,
- 4.4 ha of tracks/ bare ground.

These habitats are common within the area and therefore both quantitively and qualitatively, the loss of these areas is not significant.

The loss of the Sitka spruce plantation could affect red squirrel, pine marten, badger and wildcat if present and further surveys will be undertaken to seek to determine if there are any signs of use of the plantations by these species. However, due to the small amount of this habitat type (and other habitats) to be lost, the likely low numbers of species as a result, even if present and the abundance of similar habitat in the surrounding area, the effects of such losses are predicted to be **not significant**.

SSEN Transmission published a sustainability strategy in 2018[19]. Following this, in 2019 SSEN Transmission published an 'Approach to implementing a Biodiversity Net Gain'[20] (BNG) strategy approach. This document sets the target to achieve No Net Loss (NNL) on all projects gaining consent from April 2020 and Net Gain (NG) on projects gaining consent from April 2025. This will embed biodiversity considerations into all stages of project development and project lifecycle.

Habitats which are subject to temporary loss will be restored to blanket sphagnum mire. The peat depth surrounding the Project is sufficient to support restoration of the habitat to blanket sphagnum mire.

There will be a temporary loss of 0.09 ha of blanket sphagnum bog. This will be restored back to blanket bog. Included within the CEMP will be mitigation measures to ensure that the blanket bog can be restored following the installation of the 33kV interconnector cable.

[19] Delivering a smart, sustainable energy future: The Scottish Hydro Electric Transmission Sustainability Strategy", May 2018 https://www.ssen-transmission.co.uk/media/2701/sustainability-strategy.pdf

[20] SSEN (2019) A Network to Net Zero: Approach to Implementing Biodiversity Net Gain. https://www.ssen-transmission.co.uk/media/3459/ssen-riio-t2-bio-diversity-net-gain-paper-16pp-22789-web.pdf

4.8 Summary

The appraisal of ecological effects is summarised in **Table 4.4.**

Table 4.4 Appraisal of Ecology

Environmental Feature	Project Interaction	Embedded Mitigation Measures	Mitigation Measures	Receptor sensitivity	Magnitude of effect	Significance of effect
Designated Sites	None predicted	Standard mitigation to prevent indirect / accidental damage to ancient woodland	Pre – construction Ancient Woodland Survey	Medium	Negligible	Not Significant
Habitats	Loss of habitat.	Standard mitigation to prevent indirect / accidental damage of habitats	None required.	Low	Not significant	Not Significant
pGWDTE	Disruption to water flow to habitat	Standard mitigation to prevent indirect / accidental damage of habitats	None required.	Low	Negligible	Not Significant
Bats	Loss of foraging and commuting habitat.	Standard mitigation to reduce the risk of disturbance (e.g., no night-time working, noise, light spill controls) / SPP.	None required.	High	Not significant	Not Significant
Otter	Effects on commuting routes and disturbance.	Standard mitigation to reduce the risk of disturbance (e.g., no night-time working, noise, light spill controls, pollution) / SPP.	None required.	High	Not significant	Not Significant
Water Vole	None predicted	None required	None required	N/A	N/A	N/A
Badger Pine Marten Red Squirrel Wildcat	Loss of habitat Effects on foraging / commuting and disturbance	Standard mitigation to reduce the risk of disturbance (e.g., no night-time working, noise, light spill controls, pollution) / SPP.	Further focused surveys and any mitigation necessary as a result	Medium (B/PM/RS) High (W)	Not significant	Not Significant
Birds	Loss of nesting / foraging habitat	Standard mitigation to reduce the risk of disturbance (e.g., no night-time working, noise, light spill controls, pollution) / SPP.	Avoid habitat removal in breeding bird season.	Low	Not significant	Not Significant

	Disturbance during construction.					
Black grouse	Loss of nesting / foraging habitat Disturbance during construction.	Site selection to avoid sensitive areas for biodiversity. SSEN Transmission Construction Environmental Management Plans (CEMPs). Species Protection Plans (SPPs). Construction Traffic Management Plan (CTMP).	Avoid habitat removal in breeding bird season. No night-time working, noise, light spill controls, pollution. Spatial and temporal leks identified for black grouse.	Low	Not significant	Not significant
Reptiles and Amphibians	Loss of habitat. Disturbance during construction.	Standard mitigation to prevent indirect / accidental adverse effects on species.	Habitat removed in a consistent way to allow for movement of species to adjacent habitats.	Low	Not significant	Not Significant

This Chapter has considered the potential effects of the Project on the ecological receptors. The habitats and flora identified within the footprint of the Project were found to be of low botanical value and are common in the wider area. No signs of protected species were found within the footprint of the Project and habitat present within the footprint of the Project are unlikely to support protected species. However, pre-construction checks to confirm that no protected species are present prior to construction commencing are recommended.

The Project has followed the mitigation hierarchy to avoid harm to ecological features through careful site selection and mitigating effects through embedded and additional mitigation to ensure there are no residual significant effects. Compensation for the permanent loss of habitat due to the Project has been implemented through the use of SSEN Transmission's Biodiversity Net Gain metric, which has led to the reinstatement of blanket sphagnum mire.

Following the implementation of the proposed embedded and additional mitigation measures outlined throughout this chapter, there are no significant residual impacts on sensitive receptors predicted as a result of the Project.