Scottish & Southern Electricity Networks

TRANSMISSION

Annex G - Extended Phase 1 Survey Report

November 2022

Argyll and Kintyre 275 kV Substations: LT288 Crarae

Extended Phase 1 Habitat Survey and Protected Species Survey

August 2022

Project No.: 0607366

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August 2022

Argyll and Kintyre 275 kV Substations: LT288 Crarae

Extended Phase 1 Habitat Survey and Protected Species Survey

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CONTENTS

List of Tables

List of Figures

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 and Southern Electricity Networks (SSEN Transmission), operating under licence held by Scottish Hydro Electric Transmission plc, owns, operates and develops the high voltage electricity transmission system in the north of Scotland and remote islands and has a statutory duty under Schedule 9 of the Electricity Act to develop and maintain an efficient, co-ordinated and economical electrical transmission system in its licence area.

SSEN Transmission (the Applicant) proposes to construct a new 275 kV electricity substation and overhead line diversion (located at easting and northing: 196140 697498) in the vicinity of the existing Crarae substation in order to upgrade the substation to provide reinforcement to the existing network which will support the continued generation of renewable energy.

1.2 Consent Requirements

Consent for construction and operation of the Proposed Development is being sought by way of a planning application to Argyll and Bute Council under the Town and Country Planning (Scotland) Act 1997 (as amended).

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 construction of the Associated Development will be consented under a separate Section 37 application under 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 Crarae and will therefore hereby be referred to as 'the Project'.

The location and layout of the Project is shown in **Appendix A Figure 5.1**.

The Proposed Development subject to consent under the Town and Country Planning Act comprises:

- A substation platform in the region of 1.43 ha;
- A transformer building, control building and Gas Insulated Switchgear (GIS)[1] building;
- A temporary works area (TWA) compound adjacent to the Substation Site, of approximately 0.67 ha. Half of which would be for permanent operational purposes and half would be temporary and reinstated after construction;
- Use of existing forestry access track, approximately 4.7 km in length, to the new access track;
- Construction of a new permanent access track, approximately 855 m long; and
- Landscape planting, as per the Landscape Plan in **Figure 3.3**, to screen the Proposed Development (including the Substation Site and ancillary works within the wider site boundary) and provide biodiversity enhancement.

Components of the Associated Development subject to Section 37 of the Electricity Act 1989:

[1] Within a GIS, live electrical equipment uses special gas as the insulating medium, usually sulphur hexafluoride (SF6) 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.

- Three new towers are required to make the connection into and out of the proposed substation;
- Approximately 352 m of temporary access tracks providing access to the existing Inveraray to Crossaig overhead line (OHL);
- Two temporary overhead line (OHL) diversions during construction;
- Two permanent OHL diversions; and
- Dismantling of five redundant towers and sections of overhead line.

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 and was used as an access route for the development of SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project.

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[2]. The Survey Area comprised the red line PAN boundary plus a buffer of 250 m this boundary where the Project is located[3] and a 50 m buffer around the red line boundary along the proposed main access track[4]. 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.

1.5 Site Location and Description

The Survey Area is situated 13.5 km north east of Lochgilphead, with the Project centred at grid reference NR 96140 97498. The survey and immediate surrounds predominantly consists 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 consists of both standing and running water with several natural and man-made lochs and streams throughout. An area of blanket bog was recorded within the northern section of the Survey Area.

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 **Appendix A Figure 5.2**.

[2] 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 later date.

[3] 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)

[4] 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.

2. METHODOLOGY

2.1 Desk Study

A desk study was undertaken to identify 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 Survey Area. Only records within the last 25 years have been included.

The following sources were consulted:

- NatureScot SiteLink[5] – data on designated sites and notable species in Scotland;
- NatureScot Scottish Biodiversity List (SBL)[6] - a list of species which are important for Scotland's Biodiversity;
- Scotland's Environment Web Map[7]- an interactive map which shows biodiversity areas across Scotland;
- National Biodiversity Network (NBN) Atlas[8] - a national interactive map that shows biodiversity areas;
- Scottish Forestry[9] - 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**), and
- 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.
- 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 Crarae. 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)[10] open source data. This mapping was then ground truthed during the survey on site.

[5] NatureScot SiteLink. Available at https://www.nature.scot/information-hub/snhi-data-services

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

[7] Scotland's Environment Web Map. Available at https://map.environment.gov.scot/sewebmap/

[8] National Biodiversity Network Atlas. Available at https://nbnatlas.org/

[9] 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

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

2.2 Extended Phase 1 Habitat Survey

An EP1HS was undertaken by ERM within the Project Survey Area (see **Appendix A Figure 5.2**). The survey was based on the methods described in Joint Nature Conservation Committee (JNCC) Handbook for Phase 1 Habitat Survey (2010)[11] as extended for use in Environmental Assessment[12].

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

A National Vegetation Classification (NVC) survey of habitats with the potential to support Groundwater Dependent Terrestrial Ecosystems (GWDTE) was undertaken by ERM within the RLB (see **Appendix A Figure 5.2**). The survey was based on the methods described in Joint Nature Conservation Committee (JNCC) National Vegetation Classification: Users' handbook[13]. 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 Survey

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 **Sections 2.4.10 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)[14] (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 within at least 30 m of the red line boundary. 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**).

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	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.

[11] 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.
[12] Institute of Environmental Assessment (1995) Guidelines for Baseline Ecological Assessment, Spon, London.
[13] Joint Nature Conservation Committee National Vegetation Classification: Users' handbook (2006), Peterborough.
14 Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines.3rd edition. The Bat Conservation Trust, London.

	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). 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.	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.
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).	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. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
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.	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. 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. Site is close to and connected to known roosts.

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)

Accessible areas of suitable habitat to support water voles within the Survey Area 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**). Within the Survey Area, there are areas of running freshwater (burns and field drains) offering suitable bankside habitat for water vole.

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)

Accessible areas of suitable habitat to support pine marten within the Survey Area were surveyed for evidence of pine marten activity in the form of dens, feeding signs and scat (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.

2.4.6 Red Squirrel (Sciurus vulgaris)

Accessible areas of suitable habitat to support red squirrel within the Survey Area were surveyed for evidence of red squirrel activity in the form of dreys, feeding signs and scat (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[15] (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 of habitat with the potential to support any other species of note (e.g., Scottish Biodiversity List species, Local Biodiversity Action Plan species, reptiles, amphibians), or direct field signs of species themselves, was recorded.

[15] 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

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)[16]: 4; Cloud cover (CC)[17]: 8.
12 October 2021	Amelia Hodnett Aaron Nugent	Extended phase 1 survey European Protected Species walkover	0930/1700	Rain: 1; Temp: 13°C; WS: 4; CC: 8.

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 burns and drainage ditches 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.

Badger surveys can be undertaken at any time of year when vegetation growth is not high. Badgers are more active and mark their territories in the spring, but they are still active above ground throughout the year. Badgers can have territories that are over 2 km^2; therefore, seasonal foraging in an area that is within a territory may not be recorded.

Land access was not granted at the time of the survey for all areas within the Project, which is shown on **Figure 5.4**.

16 Met Office Beaufort wind force scale. Available at https://www.metoffice.gov.uk/weather/guides/coast-and-sea/beaufort-scale
17 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

Eleven 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 5.3**.

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
8520 Knapdale Lochs	SPA	4.4	■ Black-throated diver (*Gavia arctica*), breeding	No, due to: ■ lack of connectivity between the Project and the designated site; and ■ lack of connectivity between potential impact pathways and designated features of the site.
Moine Mhor	SAC	5	Annex I habitats, including: ■ Active raised bogs; and ■ Degraded raised bogs still capable of natural regeneration. Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: ■ Mudflats and sandflats not covered by seawater at low tide; ■ Atlantic salt meadows; and ■ Old sessile oak woods with Ilex and Blechnum in the British Isles. Annex II species present as a qualifying feature, but not a primary reason for site selection: ■ Marsh fritillary butterfly; and Otter.	
Inner Hebrides and the Minches	SAC	8	■ Annex II species that are a primary reason for selection of this site	
Taynish and Knapdale Woods	SAC	9.5	Annex I habitats and species, including: ■ Old sessile oak woods with Ilex and Blechnum in the British Isles; and ■ Marsh fritillary butterfly. Annex I habitats and species present as a qualifying feature, but not a primary reason for selection of this site: ■ Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the Isoëto-Nanojuncetea; and	

Site Name	Designation	Proximity to the Project (km)	Reason for Designation	Considered further in the assessment
			■ Otter (*Lutra Lutra*).	
8158 Knapdale Woods	SSSI	3.7	■ Upland oak woodland ■ Loch trophic range ■ Bryophyte assemblage ■ Lichen assemblage ■ Dragonfly assemblage ■ Breeding bird assemblage	
8105 Knapdale Lochs	SSSI	4.4	■ Black-throated diver (*Gavia arctica*), breeding	
443 Criagnure mine	SSSI	4.5	■ This site is designated as it contains 'Mineralogy of Scotland' features	
1174 Moine Mhor	SSSI	5	■ Upland oak woodland ■ Estuarine raised bog ■ Saltmarsh ■ Marsh Fritillary (*Euphydryas aurinia*) ■ Breeding bird assemblage	
Inverneil Burn	SSSI	9	■ Lichen assemblage ■ Bryophyte assemblage	
733 Glendaruel wood and crags	SSSI	9.1	■ Upland oak woodland ■ Rocky slopes (includes inland cliff, rocky outcrops, chasmophytic vegetation)	
Moine Mhor	NNR	5	■ Active raised bog* (Estuarine raised bog) ■ Degraded raised bog ■ Atlantic salt meadows (saltmarsh) ■ Intertidal mudflats and sandflats ■ Western acidic oak woodland (Upland oak woodland) ■ Marsh fritillary butterfly (UKBAP and LBAP species) ■ Large heath butterfly (UKBAP species) ■ Otter (UKBAP and LBAP species)	

Site Name	Designation	Proximity to the Project (km)	Reason for Designation	Considered further in the assessment
			■ Breeding bird assemblage ■ Hen harrier (LBAP species)	

Key:
SPA – Special Protected Area
SAC – Special Area of Conservation
SSSI – Site of Special Scientific Interest
NNR – National Nature Reserve

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 Inventory

A review of the Ancient Woodland Inventory (using publically available data from NatureScot[18]) identified thirty nine Ancient Woodland sites have been identified within 2 km of the Project (see **Table 3.2** and **Figure 5.3**).

Table 3.2 Ancient Woodland Inventory within 2 km of the site

Protected Area	Designation	Approximate Distance to Project Redline Boundary (km)	Considered further in the assessment
Unnamed	Other (on Roy map)	South east of the access track	Birdfield woodland is located adjacent to an existing access track. It is possible that pruning to the trees may be required to allow for access of the transformer. Further recommendations are detailed below. 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	Long-Established (of plantation origin)	East of the access track	
BIRDFIELD WOOD	Long-Established (of plantation origin)	Adjacent to southern access track	
Unnamed	Ancient (of semi-natural origin)	South east of the Project	
Unnamed	Ancient (of semi-natural origin)	South east of the Project	
Unnamed	Ancient (of semi-natural origin)	South east of the Project	
Unnamed	Ancient (of semi-natural origin)	East of the Project	
Unnamed	Long-Established (of plantation origin)	South east of the access track	

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

Protected Area	Designation	Approximate Distance to Project Redline Boundary (km)	Considered further in the assessment
Unnamed	Other (on Roy map)	East of the Project	
Unnamed	Other (on Roy map)	East of the Project	
Unnamed	Ancient (of semi-natural origin)	0.1	
Unnamed	Long-Established (of plantation origin)	0.1	
Unnamed	Long-Established (of plantation origin)	0.1	
Unnamed	Ancient (of semi-natural origin)	0.1	
Unnamed	Other (on Roy map)	0.1	
Unnamed	Long-Established (of plantation origin)	0.1	
Unnamed	Other (on Roy map)	0.2	
Unnamed	Ancient (of semi-natural origin)	0.3	
Unnamed	Long-Established (of plantation origin)	0.3	
Unnamed	Ancient (of semi-natural origin)	0.3	
Unnamed	Other (on Roy map)	0.4	
COILLE MHOR	Long-Established (of plantation origin)	0.4	
Unnamed	Ancient (of semi-natural origin)	0.4	
Unnamed	Other (on Roy map)	0.4	
Unnamed	Long-Established (of plantation origin)	0.4	
Unnamed	Ancient (of semi-natural origin)	0.4	
Unnamed	Ancient (of semi-natural origin)	0.5	
Unnamed	Ancient (of semi-natural origin)	0.5	
Unnamed	Other (on Roy map)	0.5	
COILLE MHOR	Ancient (of semi-natural origin)	0.5	
Unnamed	Ancient (of semi-natural origin)	0.5	
Unnamed	Long-Established (of plantation origin)	0.6	
Unnamed	Long-Established (of plantation origin)	0.6	
Unnamed	Long-Established (of plantation origin)	0.6	
Unnamed	Long-Established (of plantation origin)	0.6	
COILLE MHOR	Long-Established (of plantation origin)	0.6	
Unnamed	Long-Established (of plantation origin)	0.7	
Unnamed	Ancient (of semi-natural origin)	0.7	
Unnamed	Other (on Roy map)	0.8	

Key:

Protected Area	Designation	Approximate Distance to Project Redline Boundary (km)	Considered further in the assessment
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 red line boundary 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 red line boundary of the Project. Whilst protected species including bats, otter, badger, pine marten and red squirrel were recorded in the wider area along the alignment of the OHL, none were reported in the area of the Project. Water vole was not recorded although the Project lies in a part of Argyll area 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 Project location recorded: skylark (*Alauda arvensis*), wheatear (*Oenanthe oenanthe*), sand martin (*Riparia riparia*), black grouse (*Lyrurus tetrix*), linnet (*Linaria cannabina*), grasshopper warbler (*Locustella naevia*), chaffinch (*Fringilla coelebs*), curlew (*Numenius arquata*), snipe (*Gallinago gallinago*), grey heron (*Ardea cinerea*), willow warbler (*Phylloscopus trochilus*), chiffchaff (*Phylloscopus collybita*), swallow (*Hirundo rustica*), grey wagtail (*Motacilla cinerea*), cuckoo (*Cuculus canorus*), whinchat (*Saxicola rubetra*), reed bunting (*Emberiza schoeniclus*), little grebe (*Tachybaptus ruficollis*), hooded crow (*Corvus cornix*), jay (*Garrulus glandarius),* meadow pipit (*Anthus pratensis*, tree pipit (*Anthus trivialis*), song thrush (*Turdus philomelos*), and hen harrier (*Circus cyaneus*).

The 2015 – 2016 survey also included a black grouse lek survey which recorded five lek sites within 1 km of the Project.

Baseline conditions within the Project Survey Area were considered not to have changed to the extent that additional bird surveys were required.

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 BoCC raptor species within 2 km of the Crarae substation from the ARSG and data on other protected and sensitive species from the RSPB. 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.

4. SURVEY FINDINGS

4.1 Extended Phase 1 Habitat Survey Results

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

- broadleaved woodland – semi natural (A 1.1.1);
- coniferous woodland – semi natural (A 1.2.1);
- coniferous woodland – plantation (A 1.2.2);
- mixed woodland - semi-natural (A 1.3.1);
- mixed woodland – plantation (A 1.3.2);
- scrub - scattered (A 2.2);
- broadleaved parkland/scattered trees (A 3.1);
- coniferous woodland - recently felled (A 4.2);
- acid grassland - semi-improved (B 1.2);
- neutral grassland - semi-improved (B 2.2);
- improved grassland (B 4);
- marsh/marshy grassland (B 5);
- bracken – continuous (C 1.1);
- bracken – scattered (C1.2);
- dry dwarf shrub heath – acid (D 1.1)
- wet dwarf shrub heath (D 2);
- wet heath/acid grassland; (D 6)
- blanket bog (E 1.6.1);
- standing water (G 1);
- running water (G 2);
- cultivated/disturbed land-ephemeral/short perennial (J 1.3);
- buildings (J 3.6);
- 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 results of the phase 1 habitat survey are presented in **Appendix A Figure 5.4**. Target notes are presented in **Appendix B**.

4.1.1 Broadleaved woodland – semi natural (A1.1.1)

Within the Survey Area there were very few broadleaved only woodlands. Those that were recorded are located to the east of the Project area and found bordering the access track leading into the majority of the Project area. The canopy of these woodlands comprised silver birch (*Betula pendula*) and willow spp. (*Salix spp.*) 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*), and bog mosses*; Sphagnum capillifolium, Sphagnum fallax, Sphagnum papillosum* and *Sphagnum palustre*.

4.1.2 Coniferous woodland – semi natural (A1.2.1)

Generation of self-seeded Sitka spruce (*Picea sitchensis*) appearing in semi-natural, non-plantation-like format occurs in the south of the Project, also bordering the access road leading up to the majority of the Project.

4.1.3 Coniferous woodland – plantation (A 1.2.2)

Planation woodland was recorded across the Project. The woodland was primarily a monoculture of semi-mature Sitka spruce, however there was occasions of monoculture patches of Lodgepole pine (*Pinus contorta)*, European larch (*Larix decidua)* and Norway spruce (*Picea abies*) plantation bordering access roads south of the Project. The four coniferous species occur in occasional plantation areas together also.

The understory is variable but consisted of species including bracken, fescue (*Festuca*) spp., hard fern, bilberry, *cladonia* spp., and tormentil (*Potentilla erecta*). Moss understorey consisted of *Aulacomnium palustre, Polytrichum commune, Hylocomium splendens* and *Ptilium crista-castrensis*.

4.1.4 Mixed woodland - semi-natural (A 1.3.1)

There are small patches of mixed semi-natural woodland again neighbouring the roads of the Project, south, south-east and south-west of the largest area of the site. These woodlands support varying proportions tree species within their canopies, including willow spp., European larch, silver birch, hazel (*Corylus avellana*), sycamore (*Acer pseudoplatanus*), rowan (*Sorbus aucuparia*) as well as self-seeded Sitka spruce.

4.1.5 Mixed woodland – plantation (A 1.3.2)

There are two relatively small areas of mixed plantation neighbouring the main access track heading south west towards Craig Murrail. Sitka spruce and downy birch (*Betula pubescens*) were the two dominant species within these areas.

4.1.6 Scrub - scattered (A 2.2)

Scattered scrub habitat occurs far west along the access track towards Craig Murrail. The habitat is dominated by eared willow (*Salix aurita*) and occasional Sitka spruce, as well as tufted hair-grass (*Deschampsia cespitosa*), sharp-flowered rush (*Juncus acutiflorus*), common heather (*Calluna vulgaris*), *Hylocomium splendens*, tormentil, devil's bit scabious (*Succisa pratensis*) and cross-leaved heath.

4.1.7 Broadleaved parkland/scattered trees (A 3.1)

A line of scattered trees was recorded to the southern extent of the Project boarding two improved grassland fields. The trees were dominated by sycamore and were semi-mature in age.

4.1.8 Coniferous woodland - recently felled (A 4.2)

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

4.1.9 Acid grassland - semi-improved (B 1.2)

There is a large section of semi-improved acid grassland at the northern end of the Project, interspersed with marshy grassland. The grassland area was grazed by sheep. Moreover, other small sections in the middle of the Project as well as south of the Project and west along the access track

towards Craig Murrail were recorded. Tufted hair-grass, purple moor-grass, soft rush (*Juncus effuses*), common heather, and jointed rush (*Juncus articulatus*) dominate this habitat. Common sorrel (*Rumex acetosa*), creeping buttercup (*Ranunculus repens*) and heath bedstraw (*Galium saxatile*) also occur frequently.

4.1.10 Neutral grassland - semi-improved (B 2.2)

Neutral, semi-improved grassland occurs in the east of the Project. The grassland is dominated by Yorkshire fog (*Holcus lanatus*).

4.1.11 Improved grassland (B4)

Improved grassland occurs in relatively large patches primarily across the east and south east of the Project. The grassland consisted of dominant Perineal ryegrass (*Lolium perenne*), abundant crested dogs tail (*Cynosurus cristatus*), frequent white clover (*Trifolium repens*), and soft rush, occasional heath rush (*Juncus squarrosus*), and fescue (*Festuca*) spp. The habitat was grazed by sheep.

4.1.12 Marsh/marshy grassland (B5)

Holcus-juncus marshy grassland occurs in the largest area at the north of the Project, 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 Project, either side of the lochan. These habitats are dominated by, jointed rush, and Yorkshire fog, with occasional marsh thistle (*Cirsium palustre*), heath rush, common sorrel (*Rumex acetosa*) and creeping buttercup (*Ranunculus repens*), Along the access tracks heading west towards the proposed Craig Murrail Project, as well as the southern entrance of the Project there were other small sections of marshy grassland. These sections were recorded to include some of the following additional species: sharp-flowered rush, flat-topped bogmoss, yellowcress spp. (*Rorripa*), water horsetail (*Equisetum fluviatile*), great wood-rush (*Luzula sylvatica*), eared willow (*Salix aurita*), alder (*Alnus gluinosa*), downy birch, Sitka spruce, tufted hairgrass (*Deschampsia cespitosa*), *Calliergonella cuspidate*, purple moor-grass, tormentil, and bilberry.

4.1.13 Bracken – continuous (C 1.1)

Areas of continuous bracken were found between sections of coniferous plantation and improved grassland in across the south of the Project as well as near the southern entrance of the Crarae Proposed Development neighbouring an access track.

4.1.14 Bracken – scattered (C1.2)

A large area of scattered bracken with potential acid grassland throughout in the north of the Project. This habitat was plotted from afar as there was no land access available at the time of the survey.

4.1.15 Dry dwarf shrub heath – acid (D1.1)

In two small areas adjacent to the access tracks dry dwarf heath was recorded the dominate species was common heather, with frequent tormentil (*Potentilla erecta*), matt grass (*Nardus stricta*), and occasional tufted hair grass (*Deschampsia cespitosa*).

4.1.16 Wet dwarf shrub heath (D2)

Two small habitats neighbouring the access tracks just south of the Project as well as near the Crarae Project southerly entrance road at the section of track where it splits in two, with one track heading towards Crarae Project and the other towards the proposed Craig Murrail Project. Common heather, cross-leaved heath (*Erica tetralix*), purple moor-grass and bog myrtle (*Myrica gale*) are dominant.

4.1.17 Wet heath/acid grassland (D6)

A very small area of acid grassland is located next to an area wet dwarf shrub heath that is situated at the access track split just up from the southerly entrance of the Crarae site. The habitat is dominated by cross-leaved heath.

4.1.18 Blanket bog (E1.6.1)

There were areas of blanket bog to the east of the existing Crarae substation. The northern area was enclosed by a fence and the sheep and cattle have not been able to graze. This has resulted in a good condition of bog with varying ages of common heath. 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.

4.1.19 Standing water (G1)

Loch Feorlin (TN 2) is located directly of the west of the Project, surrounded primarily by strips of marshy grassland. Loch Bealach Ghearann and Blackmill Loch, the largest of the three, also neighbour Project access tracks..

4.1.20 Running water (G2)

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).

4.1.21 Cultivated/disturbed land-ephemeral/short perennial (J1.3)

Small area of habitat neighbouring access tracks out west towards Craig Murrail Project. Yorkshire fog and soft rush dominate the habitat with occasional jointed rush, sweet vernal grass (*Anthoxanthum odoratum*), yellow-rattle (*Rhinanthus minor*), alder, willow spp., bracken and coltsfoot (*Tussilago farfara*) occur throughout.

4.1.22 Buildings (J3.6)

Within the Project there are two farm complexes which consist of a farm house and associated outbuildings. No buildings were recorded within the red line boundary.

4.1.23 Bare ground (J4)

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

4.1.24 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 Chilean rhubarb (*Gunnera tinctoria*) and butterfly bush (*Buddleja davidii*).

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:

- M6 - *Carex echinata - Sphagnum recurva/ auriculatum* 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.

The mapped results of the NVC survey are presented in **Appendix A Figure 5.5**. The GWDTE classification for the Survey Area is presented in **Appendix A Figure 5.6**. Target notes are presented in **Appendix B**.

4.2.1 M6 - Carex echinata - Sphagnum recurva/ auriculatum mire

There is a small area of M6 *Carex echinata - Sphagnum recurva/ auriculatum* mire located adjacent to the existing access track. The community is dominated by start sedge, with frequent purple moor grass, heather, tufted hair grass, and occasional, soft rush, marsh thistle, *Polytrichum commune, Sphagnum fallax* and *Sphagnum palustre*. The community has a high potential to be groundwater-dependent.

4.2.2 M15 - Scirpus cespitosus – Erica tetralix wet heath

There are two small area of M15 - *Scirpus cespitosus – Erica tetralix* wet heath located adjacent to the existing access track. The community is dominated by cross leaved heath, with abundant tormentil, frequent deergrass and occasional devil's-bit scabiuos. The community has a moderate potential to be groundwater-dependent.

4.2.3 M23 - Juncus effusus'/acutiflorus – Galium palustre rush-pasture

Within the rides of the plantation woodland to the north of the Project are areas of M23 *Juncus effusus'/acutiflorus – Galium palustre* rush-pasture. The community is dominated by soft rush, with frequent Yorkshire fog and occasional tufted hair grass, purple moor grass, and marsh thistle. The community has a moderate potential to be groundwater-dependent.

4.2.4 M25 - Molinia caerulea - Potentilla erecta mire

There is a small area of M25 *Molinia caerulea - Potentilla erecta* mire located adjacent to the existing access track. 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.

4.2.5 MG9 - Holcus lanatus–Deschampsia cespitosa grassland

There is an area of MG9 - *Holcus lanatus–Deschampsia cespitosa* grassland to the south east of the Project within the forest rides. The community is dominated by tufted hair grass with frequent Yorkshire fog and occasional soft rush, and common sedge. The community has a moderate potential to be groundwater-dependent.

4.2.6 W4 - Betula pubescens - Molinia caerulea woodland

Extents of woodland scattered within the Project 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.

4.3 Protected Species Survey Findings

4.3.1 Bats

4.3.1.1 Bat roost potential

There is potential for bat roosts in oak trees located to the east of the Project area (TN 7) neighbouring the access road entering the Crarae Survey Area from Craig Murrail Project. The oak trees are located 60 m from the current track and not proposed to be affected by the Project. No buildings that offered bat roosting potential were recorded. The nearest buildings located to the Project are a farm complex located 500 m away. The trees along the plantation edge were observed for roosting features though none were recorded. The Project is proposed to cross two plantation woodland blocks of which 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 or night time use along the existing access track (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.

Given the above, no further detailed bat surveys are necessary

4.3.1.2 Bat habitat Assessment

The broadleaved woodland located 0.7 km to the south of the Project offers good foraging habitat for bat species.

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 detailed bat surveys are necessary.

4.3.2 Otter

No field signs were found in the footprint of the Project, or in its immediate surrounds. Potential footprints were observed under a bridge to the west of the area along the access track approximately 5.5 km south west of the footprint of the Project (TN 19). Although no signs of otters were identified within the footprint of the Project, the burns and river offer suitable habitat for commuting and foraging across the Project area (TN 16, TN 18, TN 19, TN 21, TN 23, and TN 27). Therefore, it is likely that otters are present within the Survey Area and that they utilise the running fresh water (burns and river) and standing fresh water (small ponds and lochans) for foraging and commuting.

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.

4.3.3 Water Vole

No field signs of water vole were identified within the Project area. The burns located within the Project area 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. No further surveys for water vole are considered necessary.

4.3.4 Badger

No signs of badgers were found at the time of the survey, which is mirrored in the finding of SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project EIA. However, as mentioned in **Section 2.6**, a detailed survey of the dense coniferous woodland for signs of badgers was not possible. Therefore, it is not possible to rule out the presence of badgers (including setts) in these areas of dense coniferous woodland. The broadleaved semi-natural woodland provides suitable foraging habitat, although no field signs were identified. 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.

4.3.5 Pine Marten

No field signs were found in the footprint of the Project, or in its immediate surrounds. However, suitable habitat to support pine marten is present within the footprint of the Project and wider Survey Area consisting of broadleaved woodland, and coniferous plantation woodland. A pine marten scat was recorded 100 m to the south west of the Project.

Whilst pine martens favour native woodland they can live in conifer plantations[19]. Large areas of conifer plantation occur within the footprint of the Project and in the immediate surrounds. Given this, further focused surveys are required in and adjacent to these areas prior to construction that are likely to be directly affected, to determine if pine marten are present.

4.3.6 Red Squirrel

No definitive field signs of red squirrel were identified during the survey. A potential disused drey was identified approximately 6 km south west from the footprint of the Project in a Sitka plantation (TN 32) adjacent to the existing access track. Red squirrels are less likely to create dreys in Sitka spruce plantations and they are not their favoured feeding areas (Scottish Forestry Guidance Note[20]). The findings of the surveys reported in SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project EIA recorded few red squirrels throughout the alignment, suggesting populations are low in this general area (see **Section 2.1**). However, there are areas of coniferous plantations (TN 20) and other woodland in and around the Survey Area that could still support red squirrels, including in areas where there will be habitat loss to accommodate the Project.

Given the above, further focused surveys are required in and adjacent to these areas prior to construction likely to be directly affected to determine if red squirrel are present.

4.3.7 Wildcat

No field signs of wildcat were identified during the survey. However, wildcat are native to Scotland and are known to be present in the area of the Project[21] . Wildcat have a preference for woodland edges, uplands with rough grazing and moorlands with limited pastures in the west of Scotland[22]. Although the habitat to support them is declining across much of Scotland leading to a decline in their distribution range and population[23]. There is suitable habitat surrounding the Project, consisting of coniferous planation and small areas of broadleaved woodland and mixed plantation. Therefore,

[19] Pine Marten, NatureScot. Available at https://www.nature.scot/plants-animals-and-fungi/mammals/land-mammals/pine-marten

[20] 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

[21] Natural England Joint Publication JP025. A Review of the Population and Conservation Status of British Mammals: Technical Summary 2018. Available at https://www.mammal.org.uk/wp-content/uploads/2021/06/MAMMALS-Technical-Summary-FINALNE-Verision-FM3290621.pdf

[22] Scottish wildcats Naturally Scottish. Nature Scot, 2011. Available at https://www.nature.scot/sites/default/files/2017-07/Publication%202011%20-%20Naturally%20Scottish%20-%20Wildcats.pdf

[23] Natural England Joint Publication JP025. A Review of the Population and Conservation Status of British Mammals: Technical Summary 2018. Available at https://www.mammal.org.uk/wp-content/uploads/2021/06/MAMMALS-Technical-Summary-FINALNE-Verision-FM3290621.pdf

further focussed surveys are required in and adjacent to the areas prior to construction that will be directly affected.

4.3.8 Birds

No birds with special protection under Schedule 1[24] were recorded during the survey. There is suitable habitat for nesting raptors within the plantation woodland.

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

- UK Amber Status Birds of Conservation Concern (BoCC)[25]including wood pigeon (*Columba palumbus*)*;* and,
- UK Green BoCC including common buzzard (*Buteo buteo*), robin (*Erithacus rubecula*), blackbird (*Turdus merula*), and common raven (*Corvus corax*).

4.3.9 Other Fauna

Signs of red fox (*Vulpes vulpes*) and Sika deer (*Cervus nippon*) were recorded across the Project.

There are no waterbodies present within the Project Survey Area that have the potential to support breeding amphibian species with the exception of Loch Feorlin. The areas of recently felled coniferous woodland to be lost due to the Project offer good foraging and basking habitat for reptile species, with additional areas of continuous bracken and recently felled coniferous woodland within the wider Survey Area offering suitable habitat for reptiles. The purple moor grass grassland within the woodland rides offers good foraging habitat for amphibian and reptile species.

[24] RSPB The Schedules. Available at: https://www.rspb.org.uk/birds-and-wildlife/advice/wildlife-and-the-law/wildlife-and-countryside-act/schedules/

[25] Birds of Conservation Concern 5. Available at https://www.bto.org/sites/default/files/publications/bocc-5-a5-4pp-single-pages.pdf

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 Project Survey Area. The habitat within the direct footprint of the Project is recently felled woodland planation 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 Project Survey Area; Chilean rhubarb and butterfly bush.

No evidence of roosting bats was recorded within the Project Survey Area. There is limited suitable habitat for roosting bats within the Project, though there is suitable habitat for foraging and commuting bats.

No evidence of otter, water vole, badger, red squirrel, pine marten and wildcat were recorded within the Project Survey Area. There is suitable habitat for these species within the Survey Area.

Wood pigeon, common buzzard, robin, blackbird, and common raven were recorded during the survey.

There are no water bodies recorded within the Project which would offer suitable habitat for breeding amphibians.

There is suitable habitat present for within the Project area for reptiles.

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

- M6 - *Carex echinata - Sphagnum recurva/ auriculatum* 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.

W4 *Betula pubescens - Molinia caerulea* woodland, M6 - *Carex echinata - Sphagnum recurva/ auriculatum* mire, M23 - *Juncus effusus'/acutiflorus – Galium palustre* rush-pasture is generally considered to be of high GWDTE. M15 - *Scirpus cespitosus – Erica tetralix* wet heath, M25 *Molinia caerulea - Potentilla erecta* mire and MG9 - *Holcus lanatus - Deschampsia cespitosa* grassland are considered to be a moderate GWDTE habitat. No Potential Groundwater Dependent Terrestrial Ecosystems (pGWDTE) are within the Project. The proposed new access track crosses M23 *Juncus effusus'/acutiflorus – Galium palustre* rush-pasture for approximately 20m.

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 possibly that tree pruning maybe required on trees within Birdfield LEPO Ancient Woodland adjacent to the existing access track. If works are required with the woodland, then the following is to be undertaken:

- 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, wildcat and reptiles to determine if they are present and to understand any mitigation that may be required before construction can commence (see below).

- Badger - in the areas of conifers to be lost due to the new proposed access route to the sub-station 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 for the new proposed access route to the sub-station and in a buffer of up to at least 100 m in where suitable habitat occurs. Any scats found should be collected and sent for eDNA analyses to confirm that they are pine marten prior to construction.
- Red squirrel – in the area of conifers woodland to be lost for the new proposed access route to the sub-station and a buffer of 50 m (red squirrel) where suitable habitat occurs.
- Wildcat - in the areas of conifers to be lost due the new proposed access route to the sub-station and at least 200 m where suitable habitat occurs.
- Reptiles – in the areas of recently felled conifer woodland to be lost and in a buffer of up to at least 30 m where suitable habitat occurs.

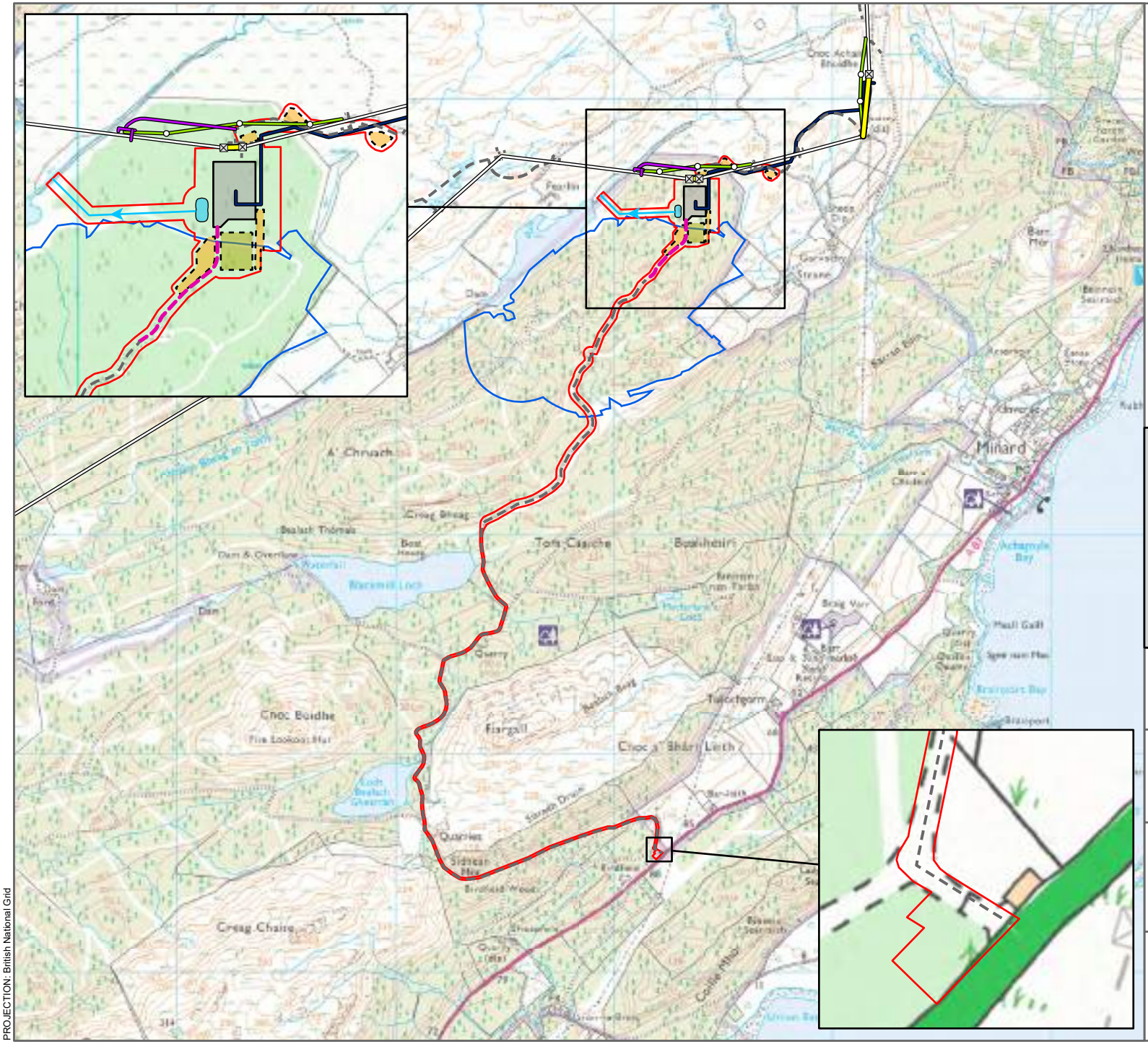
Much of the habitat to be lost will be coniferous plantation and it is evident from the Extended Phase 1 Habitat Survey that it is often dense and access may not be easy, or even possible, in places (see **Section 2.6**). Given the comparatively small area to be surveyed further, the survey effort should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

It is expected that effects on any reptile and amphibian species that may use these habitats would be avoided through the implementation of appropriate mitigation.

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 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.

A pre-construction walkover survey by a suitable qualified Ecology Clerk of Works (ECoW) will be undertaken within the Project footprint 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



SCALE: See Scale Bar	VERSION: A03
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 27/10/2022	APPROVED: SW

Figure 5.1
Crarae Substation Red Line Boundary

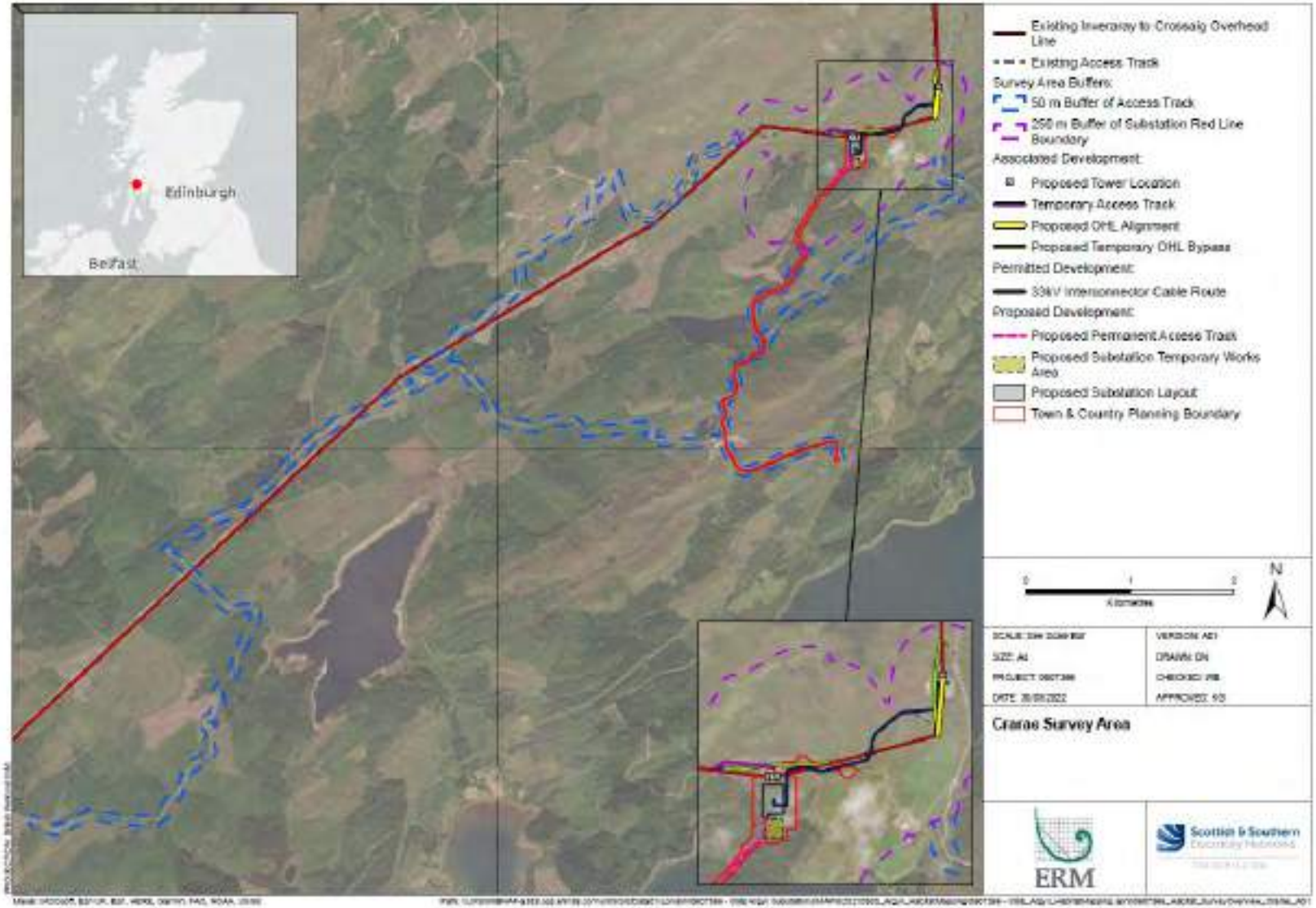
ERM

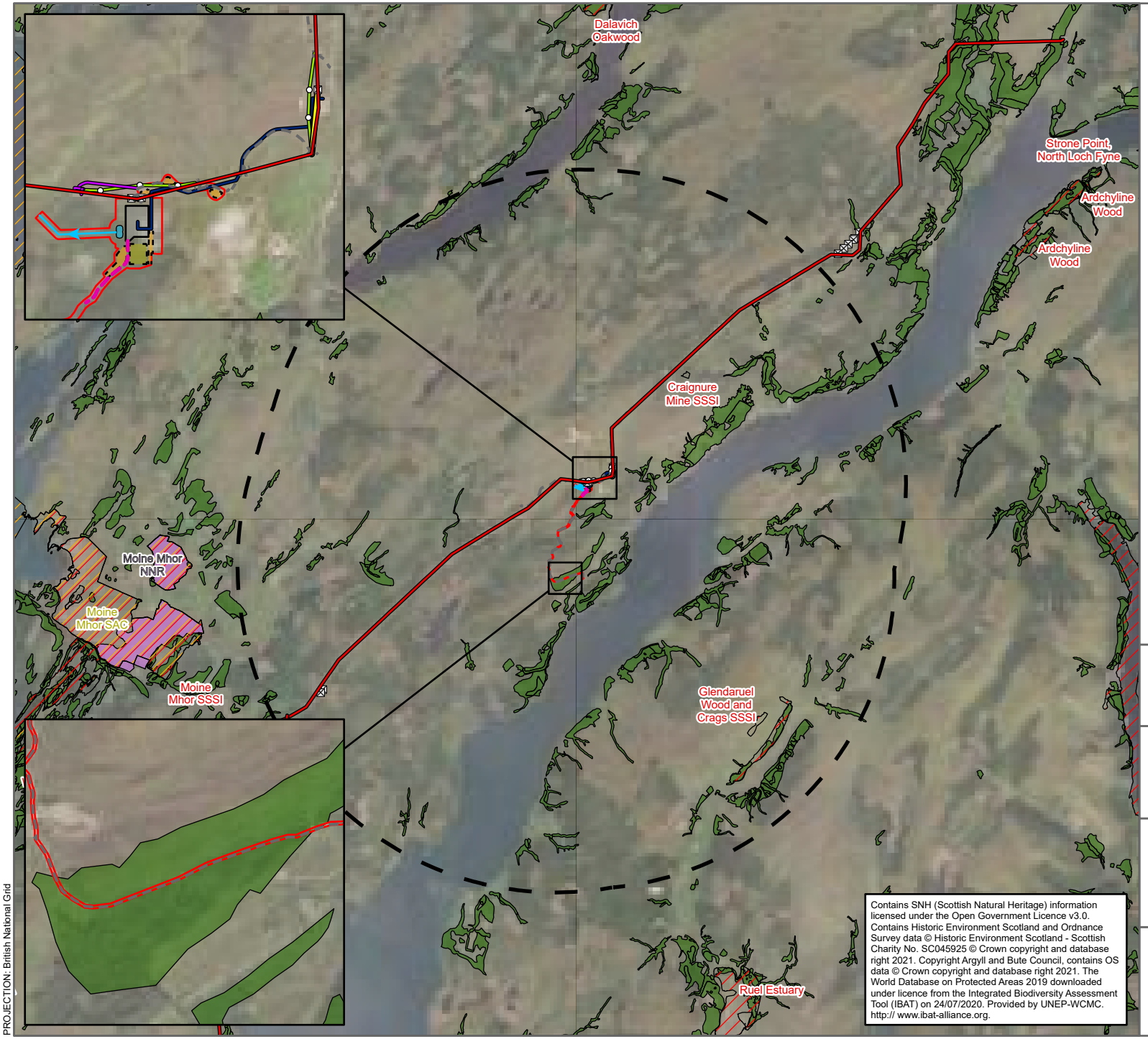
Scottish & Southern Electricity Networks

PROJECTION: British National Grid

Path: \\UKSSMBNAF-a383.ops.erm55.com\UKSGISData01\London\0607366 - SSE Argyll Substations\MAPS\0607366 - SSE Argyll Substation.aprx\0607366_DesignFreeze_RedLineBoundary_Crarae_A03

Figure 5.2 Crarae Survey Area





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SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 5.3
Designated Sites and Ancient Woodland: Crarae

ERM

Scottish & Southern Electricity Networks

PROJECTION: British National Grid

Maxar, Microsoft, Earthstar Geographics

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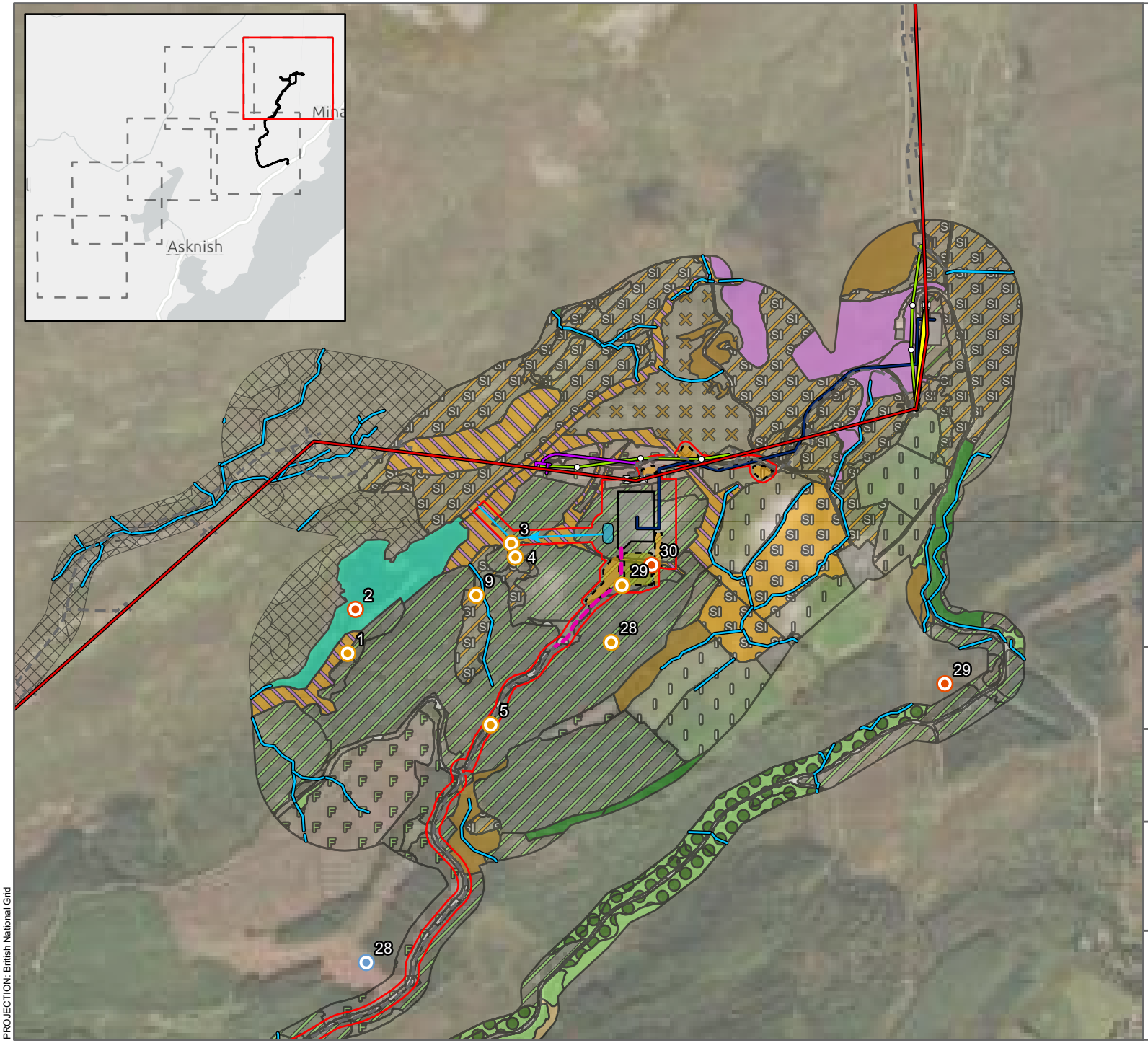

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SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 5.4
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
Page: 1

PROJECTION: British National Grid

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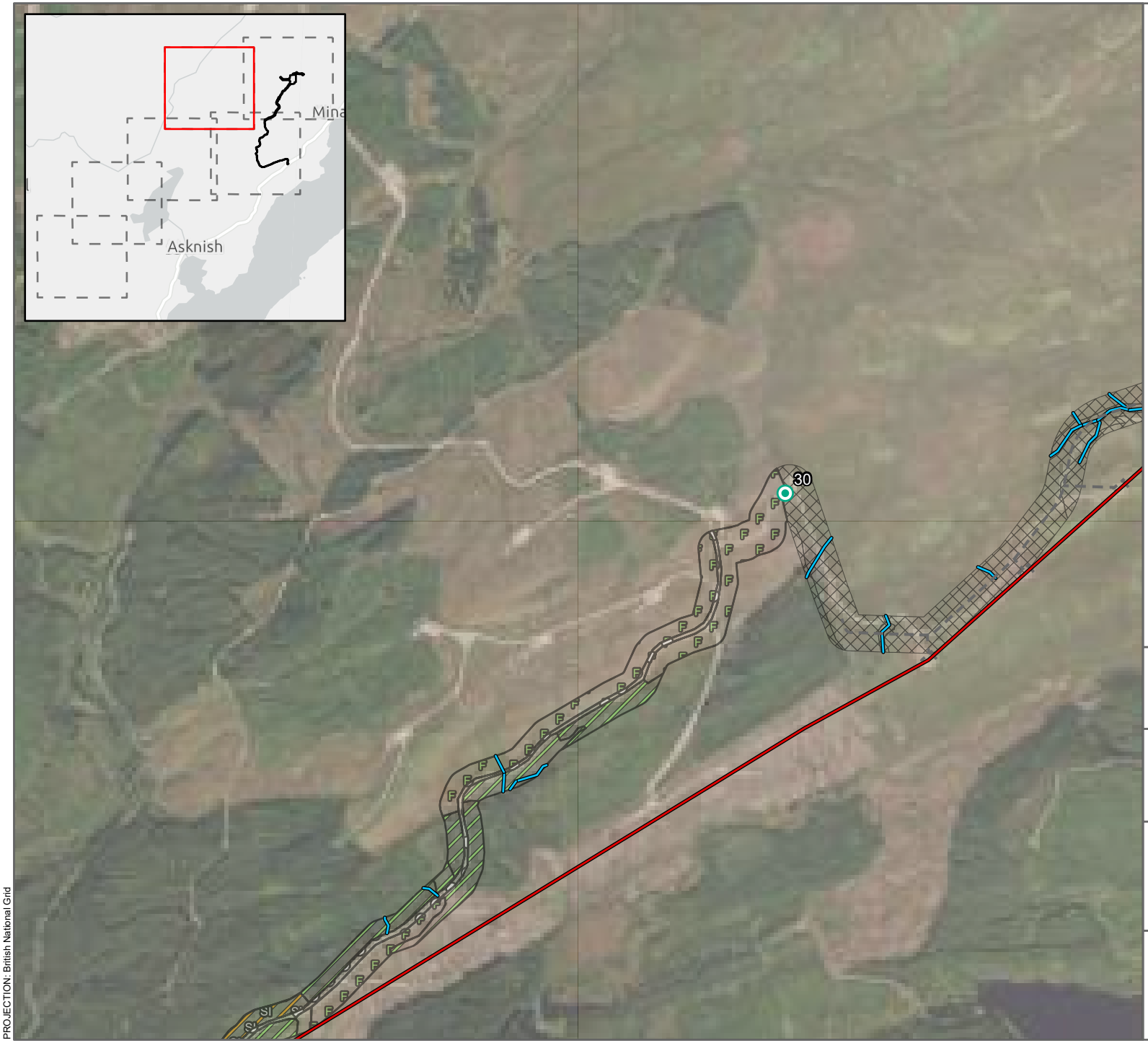

Access Note
Existing Inveraray to Crossaig Overhead Line
Existing Access Track
Phase 1 Habitat Classification:
G2 - Running water
Phase 1 Habitat Classification:
A1.2.2 - Coniferous woodland - plantation
A4.2 - Coniferous woodland - recently felled
B1.2 - Acid grassland - semi-improved
J4 - Bare ground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

0 500
Metres

N

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

Figure 5.4
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
Page: 2

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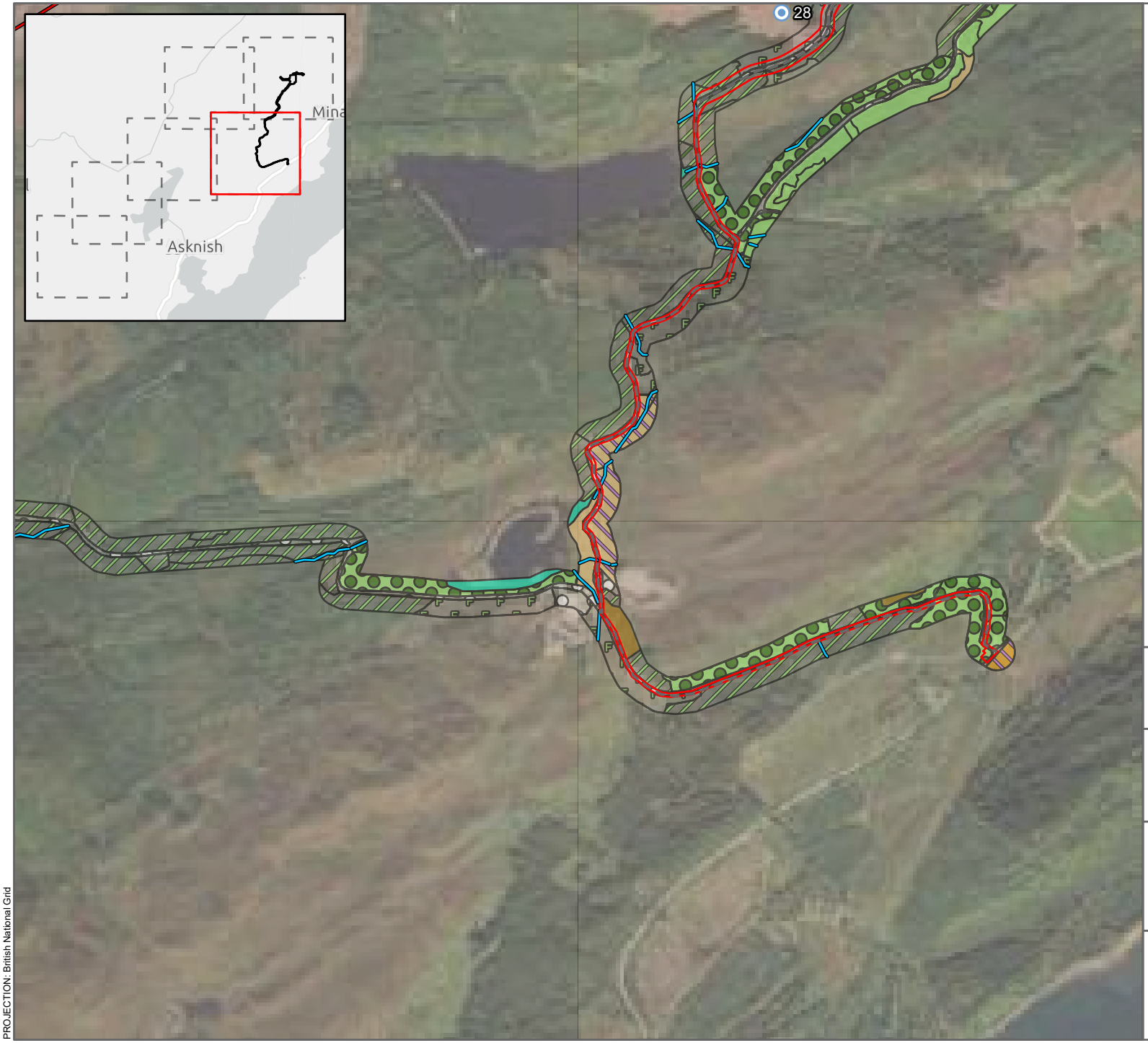

SCALE: See Scale Bar	VERSION: A04
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PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 5.4
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
Page: 3

PROJECTION: British National Grid

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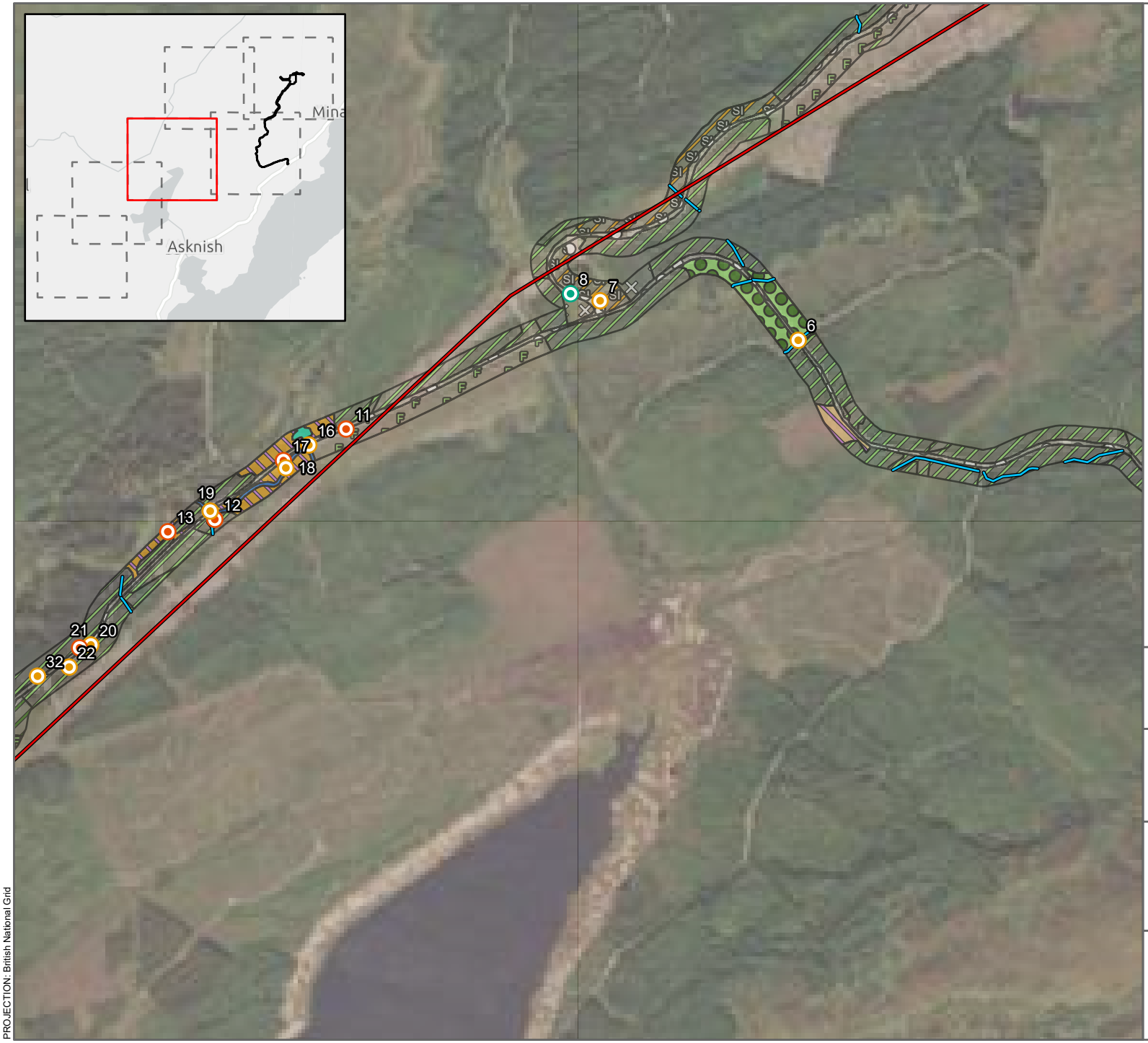

Access Note
Habitat Target Note
Mammal Target Note
Existing Inveraray to Crossaig Overhead Line
Phase 1 Habitat Classification:
G2 - Running water
Phase 1 Habitat Classification:
A1.1.2 - Broadleaved woodland - plantation
A1.2.2 - Coniferous woodland - plantation
A1.3.1 - Mixed woodland - semi-natural
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

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

Figure 5.4
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
Page: 4

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Scottish & Southern Electricity Networks

PROJECTION: British National Grid

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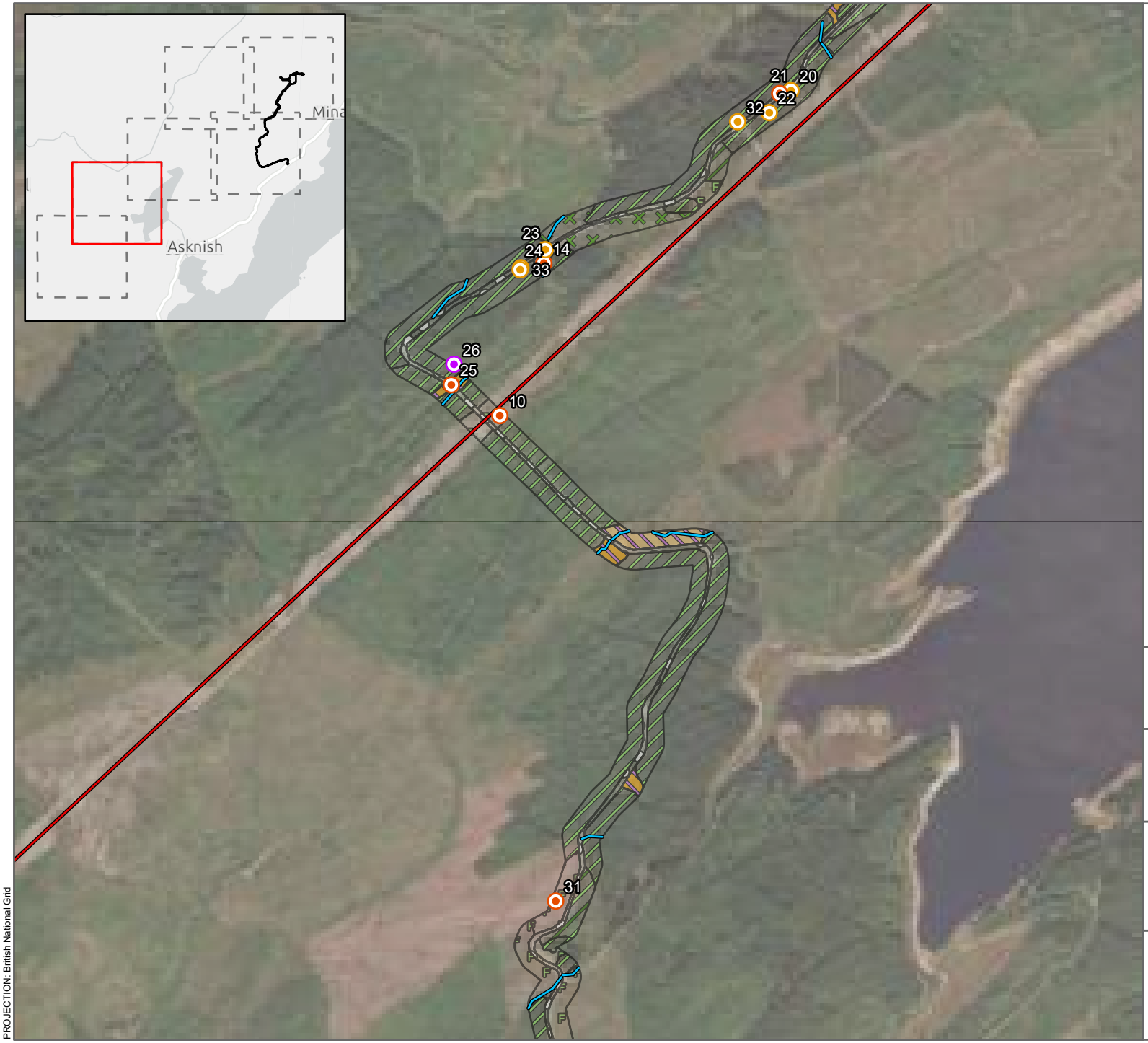

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PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 5.4
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
Page: 5

PROJECTION: British National Grid

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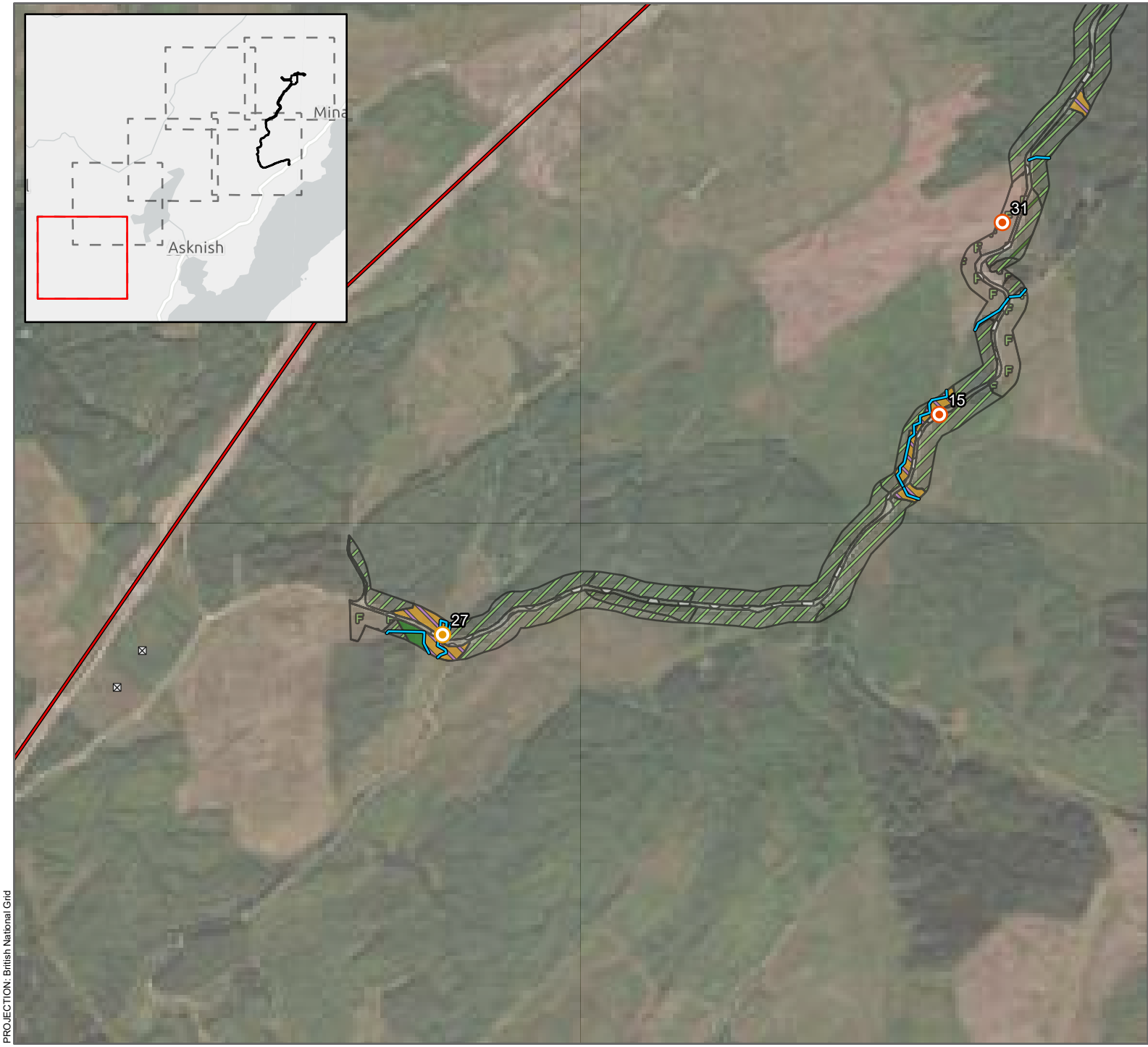

Habitat Target Note
Mammal Target Note
Existing Inveraray to Crossaig Overhead Line
Associated Development:
Proposed Tower Location
Phase 1 Habitat Classification:
G2 - Running water
Phase 1 Habitat Classification:
A1.1.1 - Broadleaved woodland - semi-natural
A1.2.2 - Coniferous woodland - plantation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

0 500
Metres

N

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

Figure 5.4
Extended Phase 1 Habitat Survey (Oct 2021)
Crarae Substation
Page: 6

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PROJECTION: British National Grid

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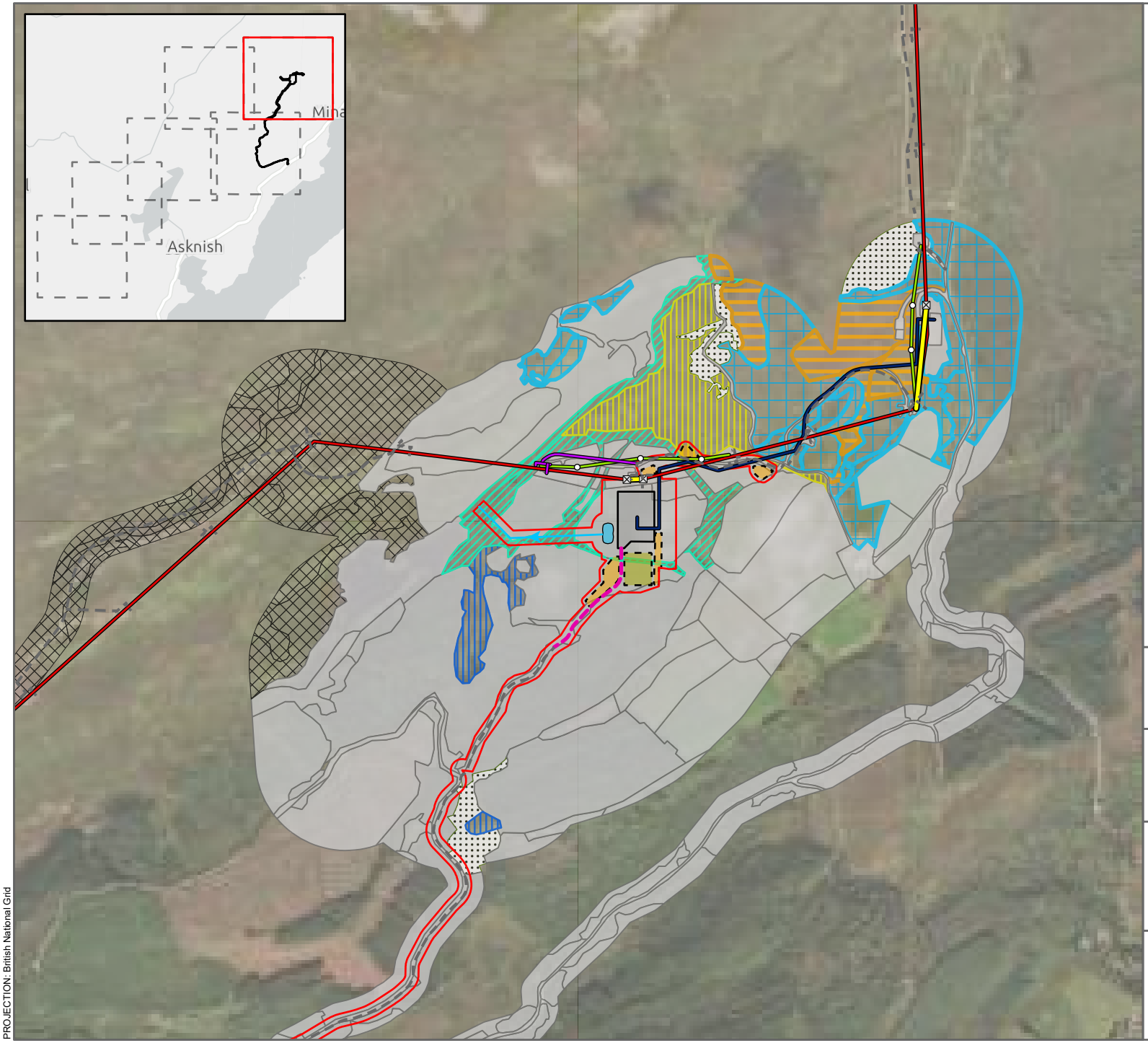

SCALE: See Scale Bar	VERSION: A04
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PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 5.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
Page: 1

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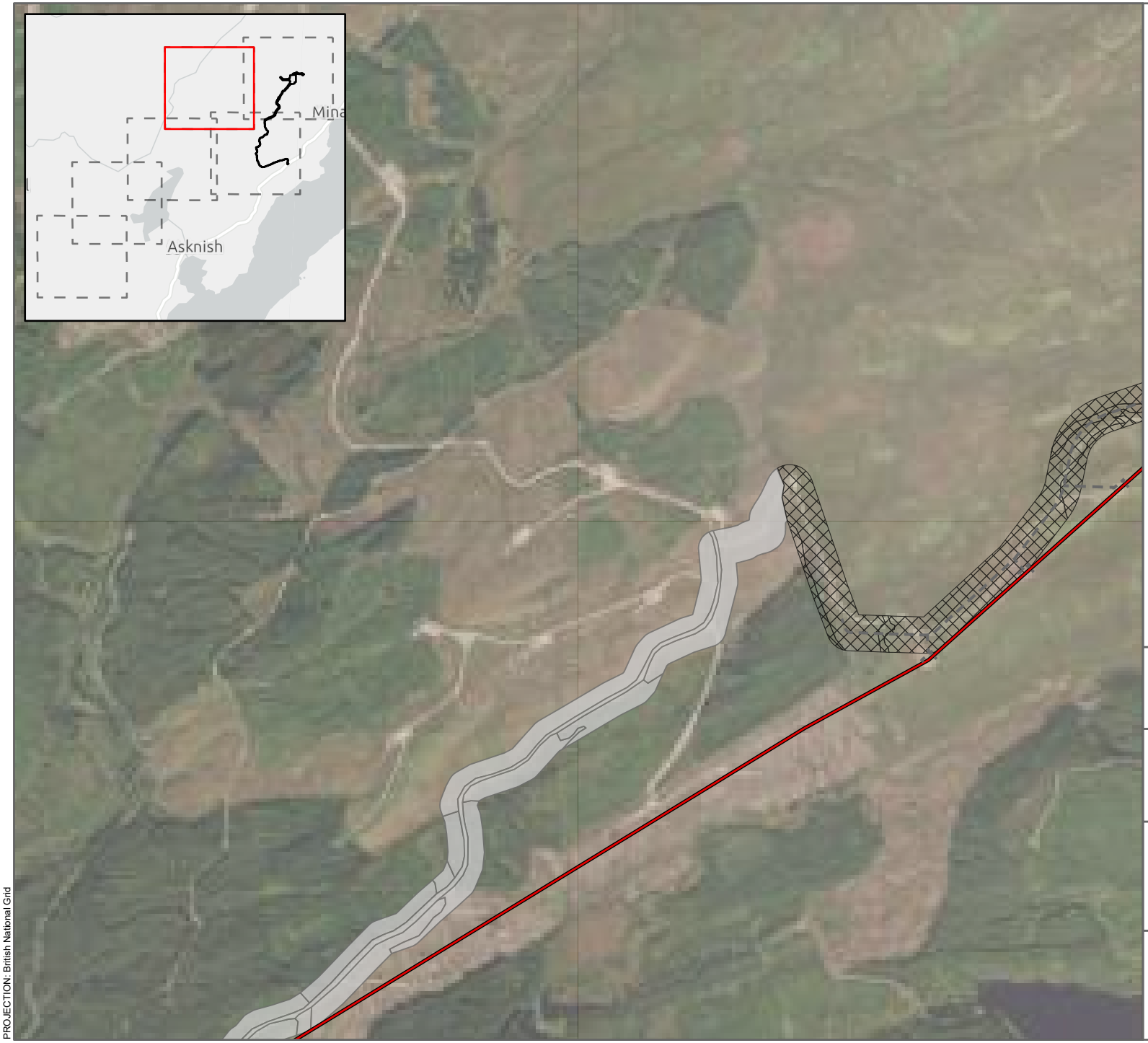
Scottish & Southern Electricity Networks

PROJECTION: British National Grid

Path: \\UKSSMBNAF-a383.ops.erm55.com\UKSGISData01\London\0607366 - SSE Argyll Substations\MAPS\20210930_Argyll_HabitatMapping\0607366 - SSE_Argyll_HabitatMapping.aprx\0607366_NVC_Crarae_A04



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

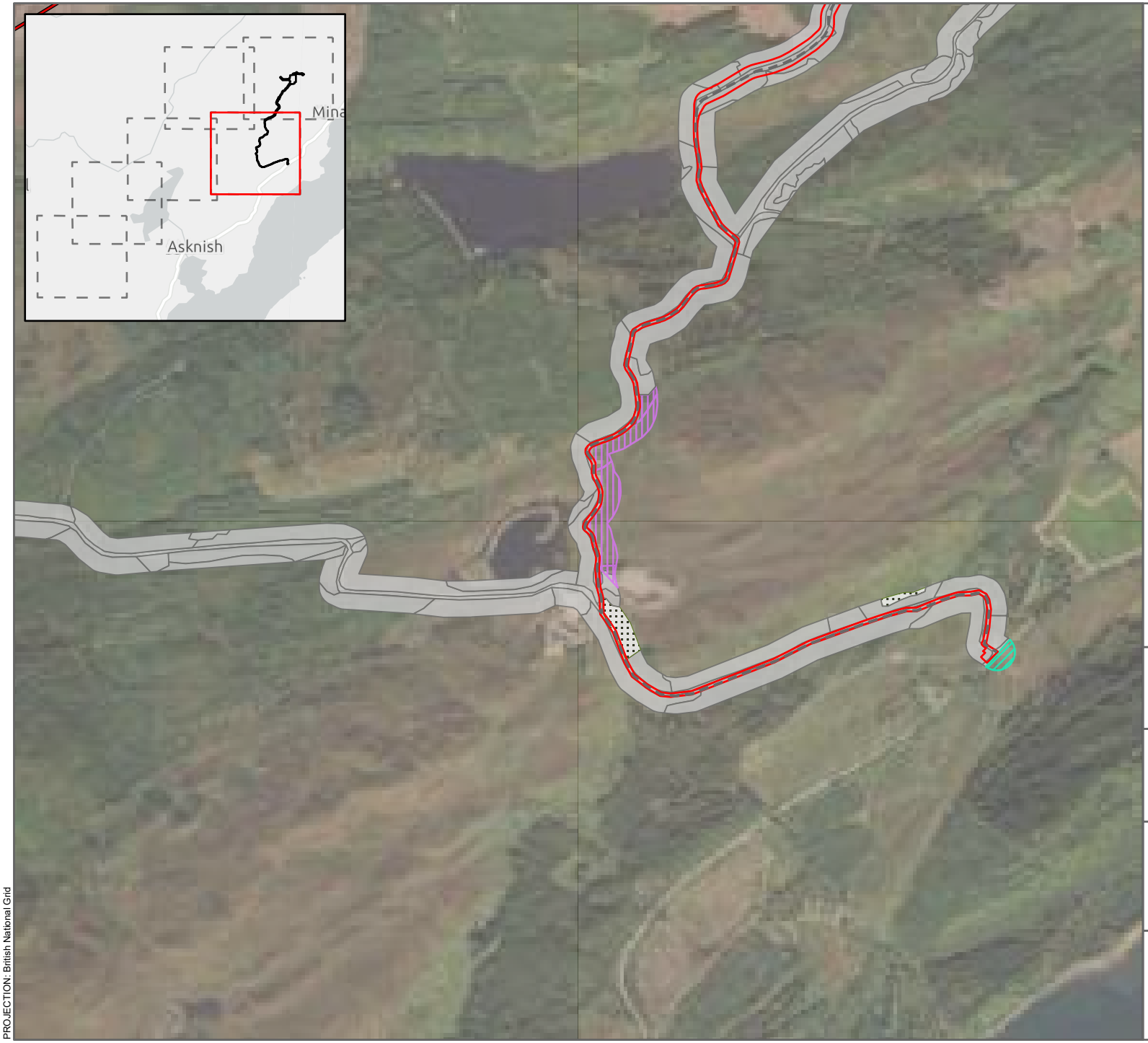
N

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

Figure 5.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
Page: 2

PROJECTION: British National Grid

Path: \\UKSSMBNAF-a383.ops.erm55.com\UKSGISData01\London\0607366 - SSE Argyll Substations\MAPS\20210930_Argyll_HabitatMapping\0607366 - SSE_Argyll_HabitatMapping.aprx\0607366_NVC_Crarae_A04



Existing Inveraray to Crossaig Overhead Line

Existing Access Track

Proposed Development:

Town & Country Planning Boundary

National Vegetation Classification:

M15 - *Scirpus cespitosus* – *Erica tetralix* wet heath

M23 - *Juncus effusus'/acutiflorus - Galium palustre* rush-pasture

U20 - *Pteridium aquilinum - Galium saxatile* community

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 5.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
Page: 3

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Scottish & Southern Electricity Networks

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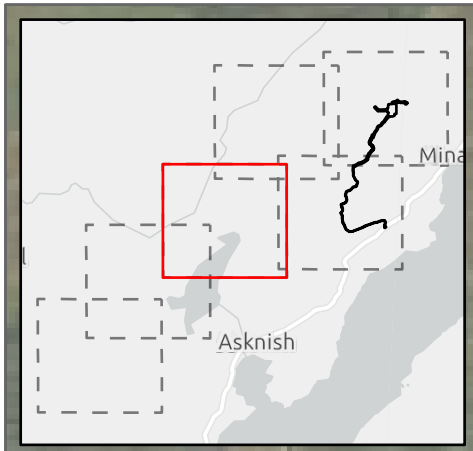


Existing Inveraray to Crossaig Overhead Line

National Vegetation Classification:

M6 - *Carex echinata - Sphagnum recurva/auriculatum* mire

M23 - *Juncus effusus'/acutiflorus - Galium palustre* rush-pasture

MG9 - *Holcus lanatus–Deschampsia cespitosa* grassland

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

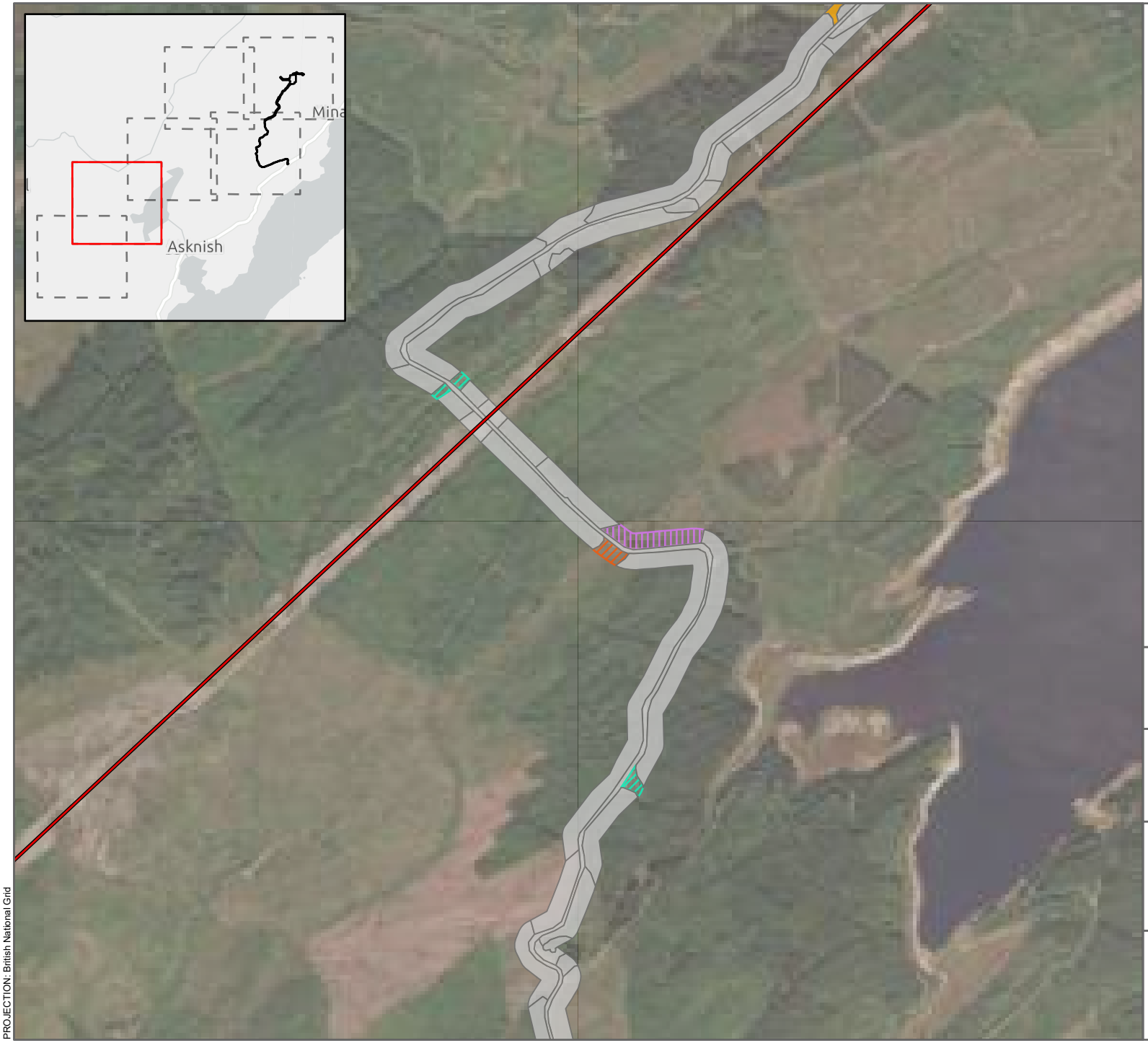
Figure 5.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
Page: 4

ERM

Scottish & Southern Electricity Networks

PROJECTION: British National Grid

Path: \\UKSSMBNAF-a383.ops.erm55.com\UKSGISData01\London\0607366 - SSE Argyll Substations\MAPS\20210930_Argyll_HabitatMapping\0607366 - SSE_Argyll_HabitatMapping.aprx\0607366_NVC_Crarae_A04



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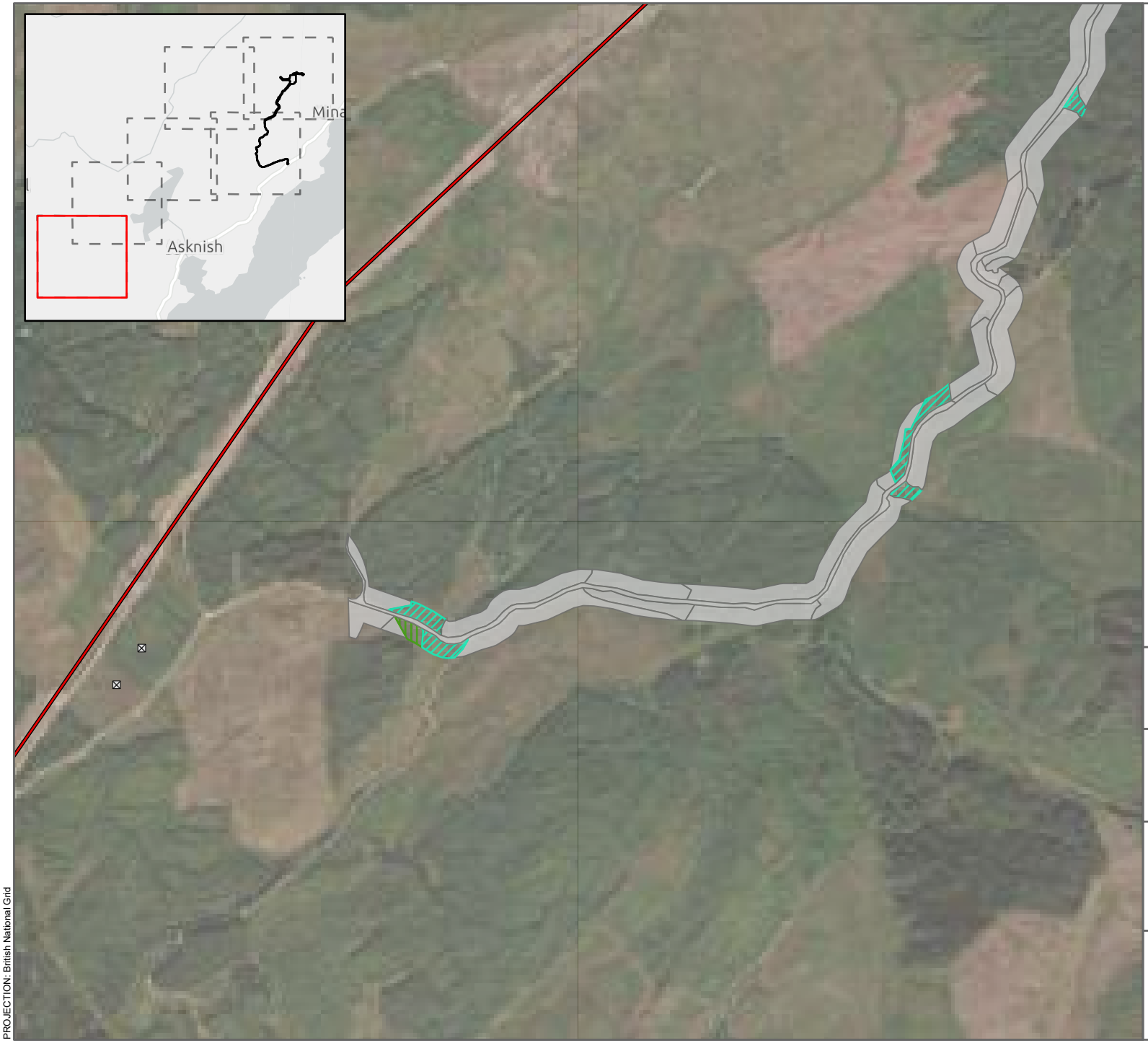
PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 5.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
Page: 5

PROJECTION: British National Grid

Path: \\UKSSMBNAF-a383.ops.erm55.com\UKSGISData01\London\0607366 - SSE Argyll Substations\MAPS\20210930_Argyll_HabitatMapping\0607366 - SSE_Argyll_HabitatMapping.aprx\0607366_NVC_Crarae_A04



Existing Inveraray to Crossaig Overhead Line

Associated Development:

Proposed Tower Location

National Vegetation Classification:

M23 - *Juncus effusus'/acutiflorus - Galium palustre* rush-pasture

W4 - *Betula pubescens - Molinia caerulea* woodland

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 5.5
Targeted National Vegetation Classification (Oct 2021)
Crarae Substation
Page: 6

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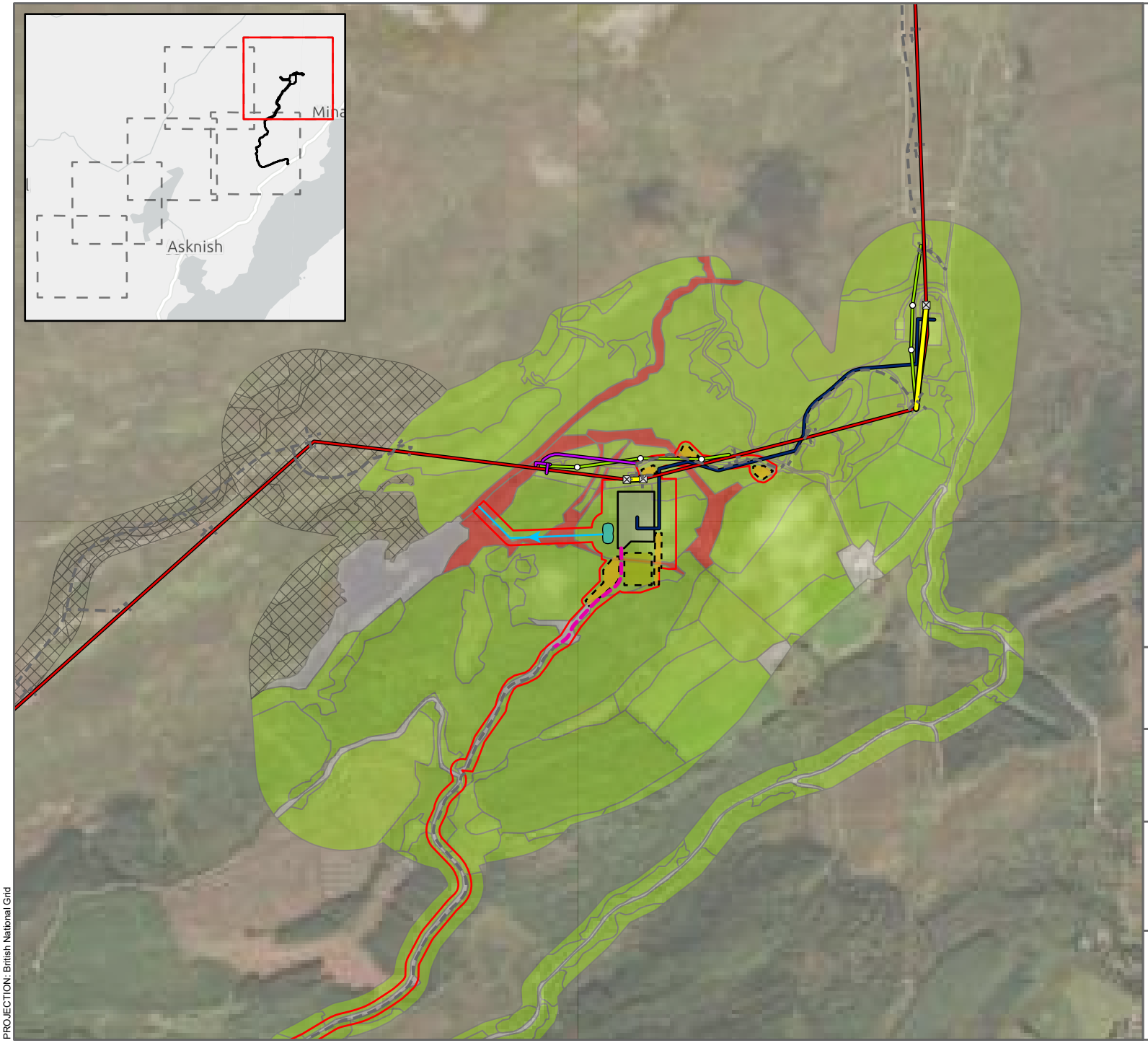
Scottish & Southern Electricity Networks

PROJECTION: British National Grid



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

N

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

Figure 5.6
GWDTE Classification (Oct 2021)
Crarae Substation
Page: 1

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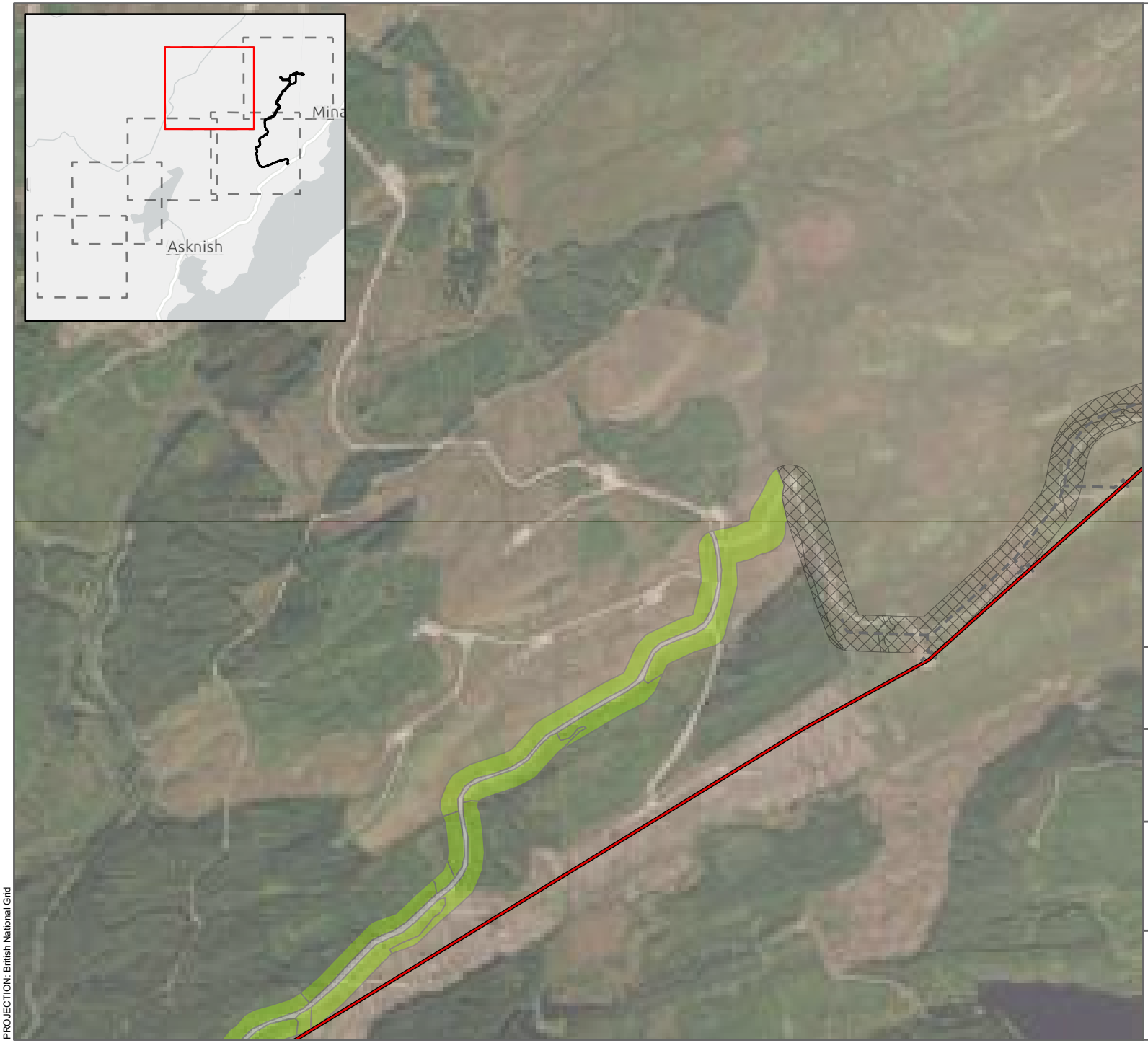
Scottish & Southern Electricity Networks

PROJECTION: British National Grid

Path: \\UKSSMBNAF-a383.ops.erm55.com\UKSGISData01\London\0607366 - SSE Argyll Substations\MAPS\20210930_Argyll_HabitatMapping\0607366 - SSE_Argyll_HabitatMapping.aprx\0607366_GWDTE_Crarae_A04



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 5.6
GWDTE Classification (Oct 2021)
Crarae Substation
Page: 2

ERM

Scottish & Southern Electricity Networks

PROJECTION: British National Grid

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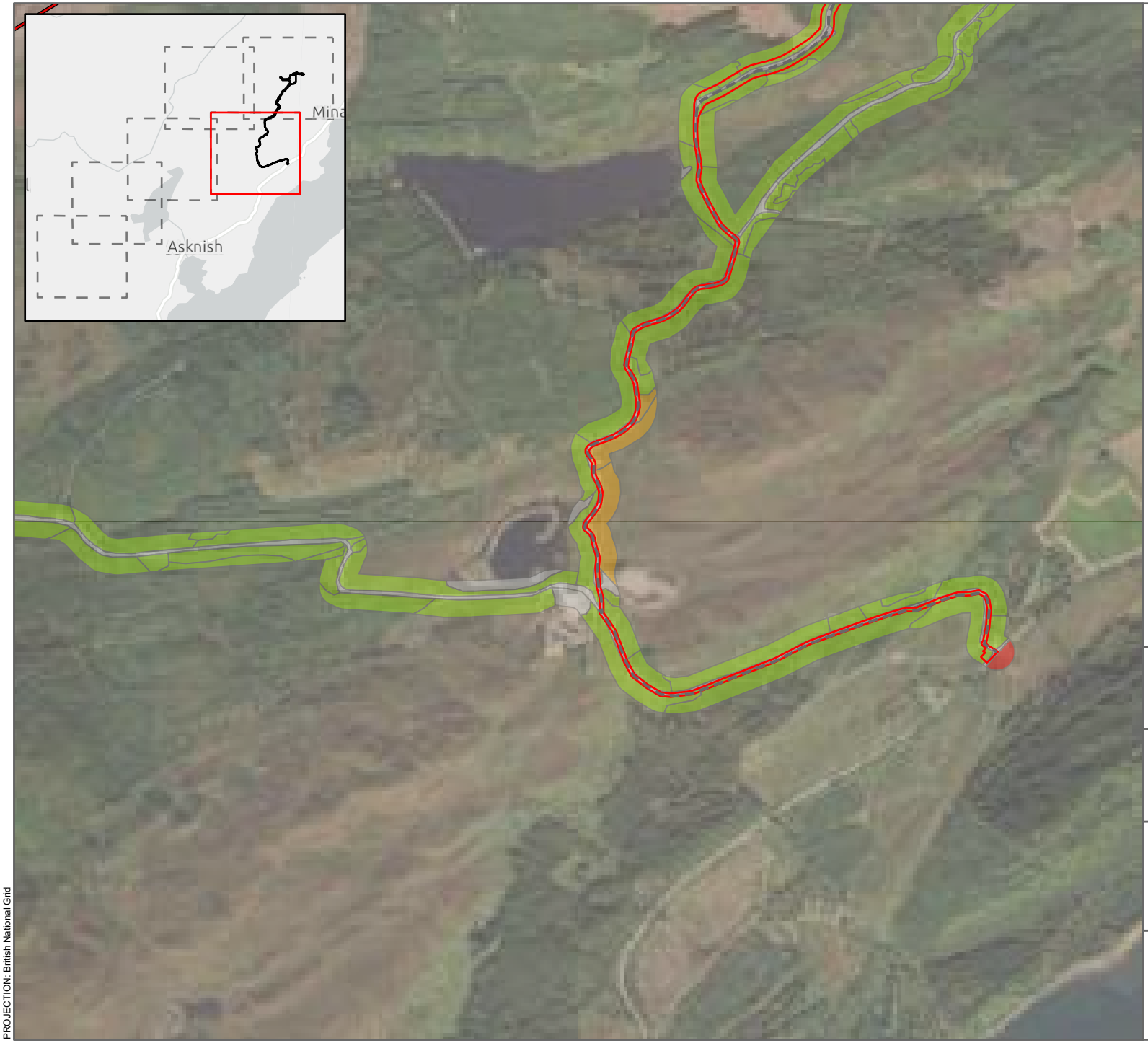


Existing Inveraray to Crossaig Overhead Line

Existing Access Track

Proposed Development:

Town & Country Planning Boundary

GWDTE Classification:

High

Moderate

Low

GWDTE code not applicable

0 500

Metres

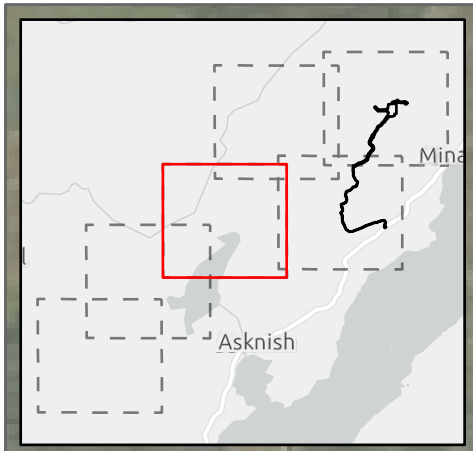
N

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

Figure 5.6
GWDTE Classification (Oct 2021)
Crarae Substation
Page: 3

PROJECTION: British National Grid

Path: \\UKSSMBNAF-a383.ops.erm55.com\UKSGISData01\London\0607366 - SSE Argyll Substations\MAPS\20210930_Argyll_HabitatMapping\0607366 - SSE_Argyll_HabitatMapping.aprx\0607366_GWDTE_Crarae_A04



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 5.6
GWDTE Classification (Oct 2021)
Crarae Substation
Page: 4

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Scottish & Southern Electricity Networks

PROJECTION: British National Grid

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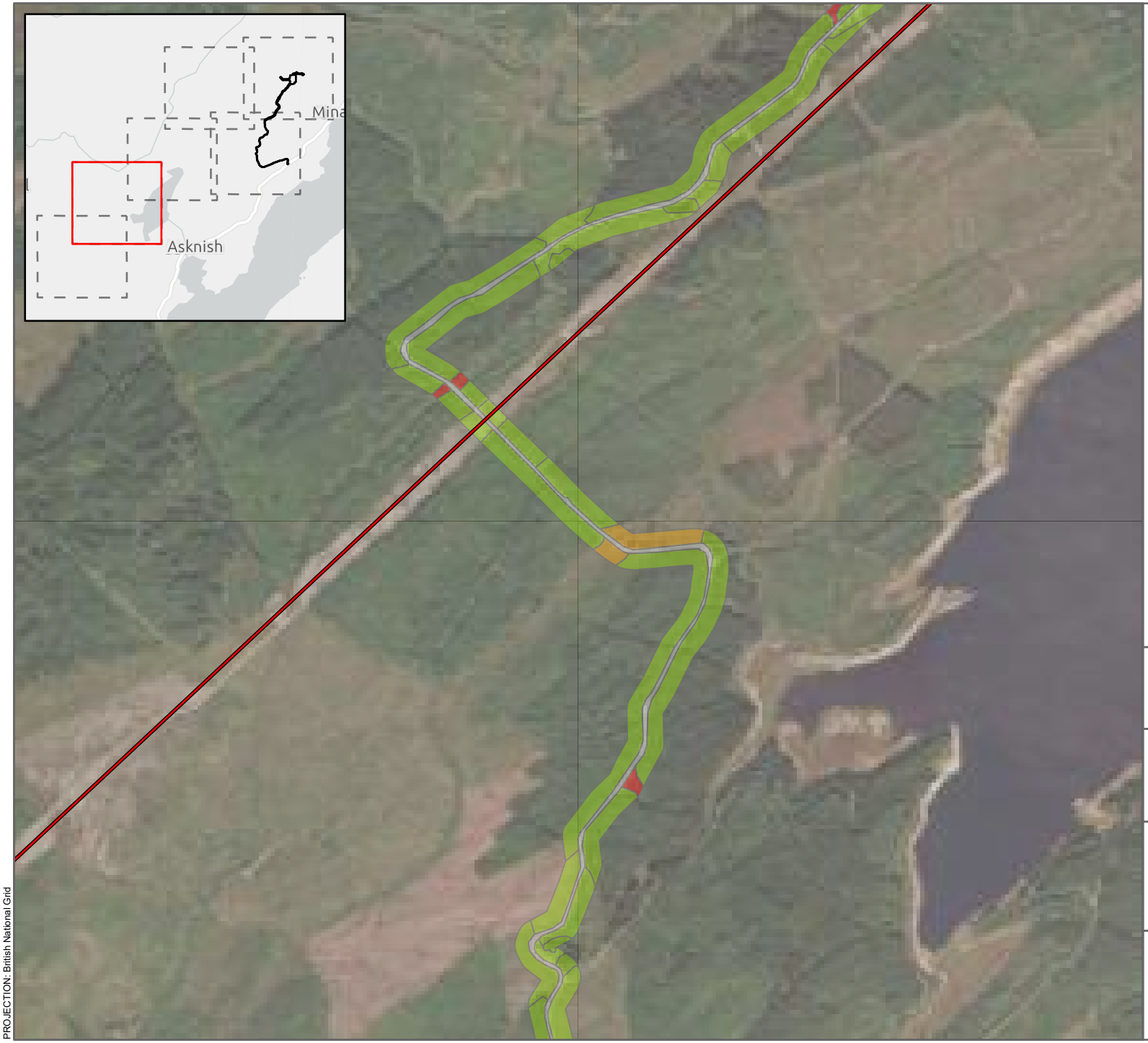

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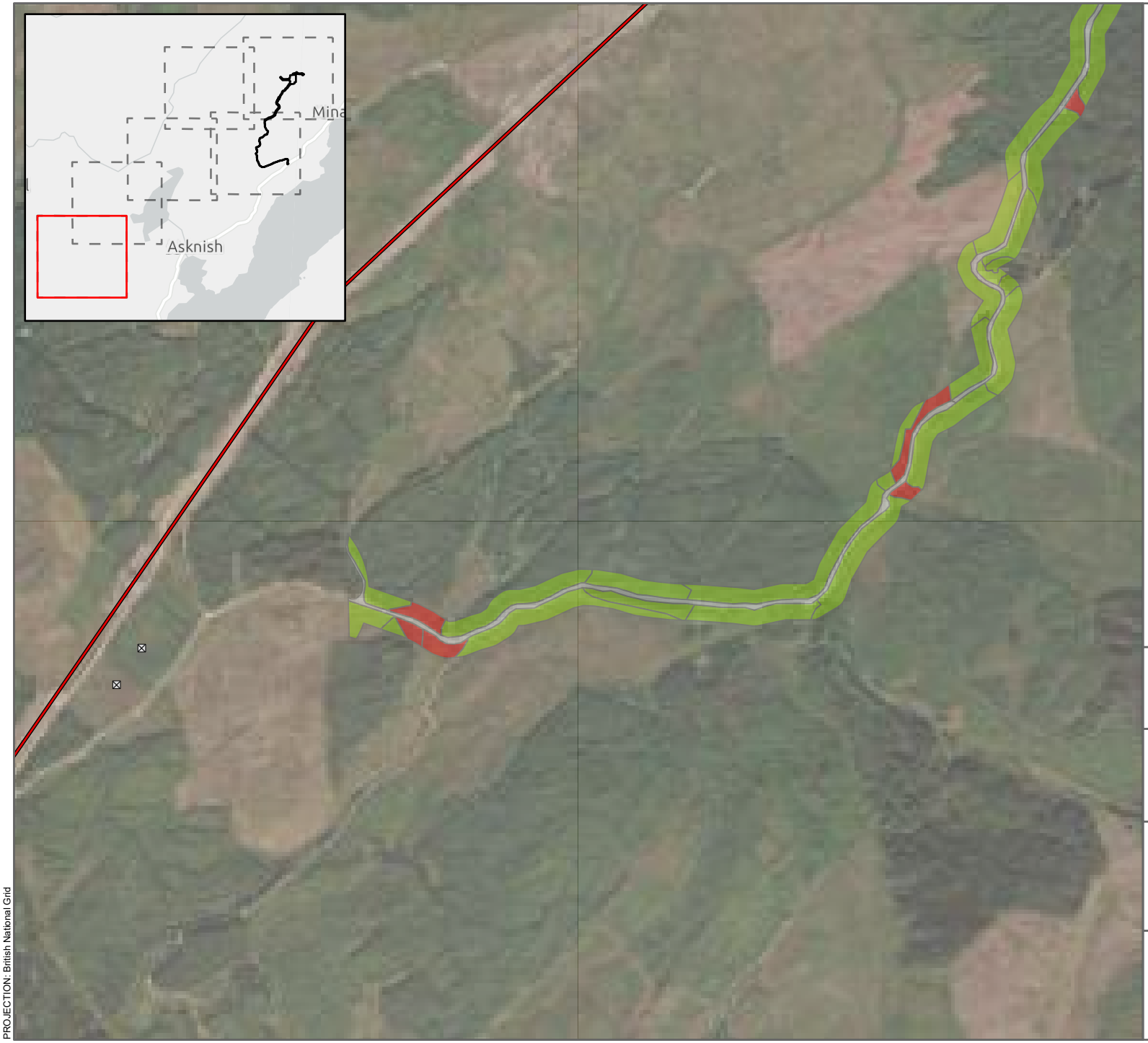
PROJECT: 0607366	CHECKED: WB
DATE: 02/11/2022	APPROVED: KG

Figure 5.6
GWDTE Classification (Oct 2021)
Crarae Substation
Page: 5

PROJECTION: British National Grid

Path: \\UKSSMBNAF-a383.ops.erm55.com\UKSGISData01\London\0607366 - SSE Argyll Substations\MAPS\20210930_Argyll_HabitatMapping\0607366 - SSE_Argyll_HabitatMapping.aprx\0607366_GWDTE_Crarae_A04



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 5.6
GWDTE Classification (Oct 2021)
Crarae Substation
Page: 6

ERM

Scottish & Southern Electricity Networks

PROJECTION: British National Grid

Path: \\UKSSMBNAF-a383.ops.erm55.com\UKSGISData01\London\0607366 - SSE Argyll Substations\MAPS\20210930_Argyll_HabitatMapping\0607366 - SSE_Argyll_HabitatMapping.aprx\0607366_GWDTE_Crarae_A04

Appendix B TARGET NOTES

Table 5.1 Target Notes

Target Note number	Appropriate grid reference	Description of evidence/feature	Photograph
1	NR9558197152	Mammal Target Note: Deer droppings	

2	NR955819715	Habitat Target Note: Loch Feorlin	
3	NR9603197454	Mammal Target Note: Red fox (*Vulpes vulpes*) scat	

4	NR9604297416	Mammal Target Note: Mammal track	
5	NR9597296954	Mammal Target Note: Fox scat	

6	1: NR9277895193 2: NR9277995195	Habitat Target Note: Man made water control system, potential to be used by organisms	 1

			 2

7	NR9223395303	Mammal Target Note: Potential for bat roosts in pedunculate oak (*Quercus robur*) trees	

8	NR9215295322	Access Note: “Have you logged onto the windfarm? Contact Infinis Operational Control on 0131 243 2390”	

9	NR9593497311	Mammal Target Note: Fox scat	
10	NR8999293450	Habitat Target Note: Newly felled woodland plantation with SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project .	

11	NR9165595004	Habitat Target Note: New SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project	
12	NR9115894720	Habitat Target Note: Hillside of perennial ryegrass (*Lolium perenne*), common hair moss (*Polytrichum commune*), common tamarisk-moss (*Thuidium tamariscinum*), great wood-rush (*Luzula sylvatica*), Sitka spruce (*Picea sitchensis*), Dryopteris species.	

13	NR9105694663	Habitat Target Note: M6 *Carex echinata* - *Sphagnum recurva/ auriculatum* mire with sharp-flowered rush (*Juncus acutiflorus*), and flat-topped bogmoss (*Sphagnum fallax*) behind plantation along burn with water horsetail (*Equisetum fluviatile*).	
14	NR9013893898	Habitat Target Note: A1.3.2; Pedunculate oak, *Salix* spp., Sitka spruce.	

15	NR9000991601	Habitat Target Note: Butterfly bush (*Buddleia davidii*) x2 adjacent to track.	

16	1: NR9140794895 2: NR9140994896 3: NR9143294905 4: NR9140394893	Mammal Target Note: Burn alongside of track. Surrounding habitat suitable for otters (*Lutra lutra*). No signs found.	 1  2

			 3  4

17	NR9136294863	Habitat Target Note: Wetland boggy area immediately to side of track.	

18	1: NR9136994844 2: NR9136994845	Mammal Target Note: Burn alongside access track within buffer. Otter potential. Suitable surrounding habitat. No field signs found.	 1  2

19	1: NR9115094719 2: NR9114794713 3: NR9115794720 4: NR9114794714 5: NR9115794711 6: NR9115994712.	Mammal Target Note: Potential otter footprints under bridge.	 1  2

			 3  4

			 5  6

20	NR9080594364	Mammal Target Note: Plantation woodland immediately to side of track. Woodland open canopy and not as dense compared to other sections of spruce. Good potential for red squirrel (*Sciurus vulgaris)* dreys. None seen.	

21	1: NR9078794351 2: NR9079294353	Habitat Target Note: Small burn running through woodland. No signs of otter.	 1

			 2

22	1: NR9076794310 2: NR9076594307	Mammal Target Note: Thick, impenetrable plantation woodland. Unable to enter to undertake badger, pine marten or red squirrel detailed search. No field signs seen around edge. Typical plantation woodland bird assemblage.	 1  2

23	NR9015793919	Mammal Target Note: Drain. No signs of otter.	 1

			 2

24	1: NR9010193868 2: NR9009893865	Mammal Target Note: Thick, impenetrable plantation woodland. Unable to enter to undertake detailed search for badger, pine marten or red squirrel. No field signs for either species seen around edge. Typical plantation bird assemblage.	 1  2

25	NR8989893547	Habitat Target Note: Ride over track.	
26	NR8997993458	Bird Target Note: Raven (*Corvus corax*) heard calling amongst plantation.	

27	1: NR8864490986 2: NR8864590999 3: NR8865290996	Mammal Target Note: Small bridge over burn. No underpass. Water comes up to bridge cement walls. No signs of otter either side.	 1  2

			 3
28	NR9570396311	Safety Observation Note: Active Forestry Felling.	No associated photograph
29	NR9729597077	Habitat Target Note: Chilean rhubarb (*Gunnera tinctoria*).	No associated photograph
30	NR9411297262	Access Note: Gate locked	No associated photograph
31	NR9025692136	Habitat Target Note: Recently felled	No associated photograph
32	NR9075694280	Mammal Target Note: Potential disused drey within open plantation. 10-12 m up. 22 m from access track.	No associated photograph
33	NR9015893873	Mammal Target Note: Thick, impenetrable plantation woodland. Unable to enter to undertake detailed search for badger, pine marten or red squirrel. No field signs for mammal species seen around edge. Typical plantation bird assemblage.	No associated photograph

Appendix C SPECIES LIST

Table 5.2 Species List

Vascular and Nonvascular Plants		SBL[26]	Argyll & Bute LBAP[27]
Common Name	**Scientific Name**		
Alder	*Alnus gluinosa*	*N*	*N*
Bent grass species	*Agrostis spp*	*N*	*N*
Bilberry	*Vaccinium myrtillus*	*N*	*N*
Bog myrtle	*Myrica gale*	*N*	*N*
Bottle sedge	*Carex rostrata*	*N*	*N*
Bracken	*Pteridium aquilinum*	*N*	*N*
Broad-leaved dock	*Rumex obtusifolius*	*N*	*N*
Bog asphodel	*Narthecium ossifragum*	*N*	*N*
Butterfly bush	*Buddleia davidii*	*N*	*N*
Chilean rhubarb	*Gunnera tinctoria*	*N*	*N*
Coltsfoot	*Tussilago farfara*	*N*	*N*
Common beech	*Fagus sylvatica*	*N*	*N*
Common bent	*Agrostis capillaris*	*N*	*N*
Common cottongrass	*Eriophorum angustifolium*	*N*	*N*
Common dandelion	*Taraxacum officinale*	*N*	*N*
Common heather	*Calluna vulgaris*	*N*	*N*
Common sorrel	*Rumex acetosa*	*N*	*N*
Cotoneaster spp.	*Cotoneaster spp.*	*N*	*N*
Creeping buttercup	*Ranunculus repens*	*N*	*N*

[26] 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

[27] 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

Creeping thistle	*Cirsium arvense*	*N*	*N*
Crested dog's tail	*Cynosurus cristatus*	*N*	*N*
Cross-leaved heath	*Erica tetralix*	*N*	*N*
Devil's-bit scabious	*Succisa pratensis*	*N*	*N*
Downy birch	*Betula pubescens*	*N*	*N*
Eared willow tree	*Salix aurita*	*N*	*N*
European larch	*Larix decidua*	*N*	*N*
Great wood rush	*Luzula sylvatica*	*N*	*N*
Grey willow tree	*Salix cinerea*	*N*	*N*
Hairs tail cottongrass	*Eriophorum vaginatum*	*N*	*N*
Hard fern	*Blechnum spicant*	*N*	*N*
Hazel	*Corylus avellana*	*N*	*N*
Heath bedstraw	*Galium saxatile*	*N*	*N*
Heath rush	*Juncus squarrosus*	*N*	*N*
Hemlock	*Conium maculatum*	*N*	*N*
Jointed rush	*Juncus articulatus*	*N*	*N*
Leyland cypress	*Cupressus × leylandii*	*N*	*N*
Lodgepole pine	*Pinus contorta*	*N*	*N*
Marsh thistle	*Cirsium palustre*	*N*	*N*
Norway spruce	*Picea abies*	*N*	*N*
Pedunculate oak	*Quercus robur*	*N*	*N*
Perineal ryegrass	*Lolium perenne*	*N*	*N*
Purple moor-grass	*Molinia caerulea*	*N*	*N*
Rosebay willowherb	*Chamaenerion angustifolium*	*N*	*N*
Rowan	*Sorbus aucuparia*	*N*	*N*

Sika spruce	*Picea sitchensis*	*N*	*N*
Silver birch	*Betula pendula*	*N*	*N*
Sharp-flowered rush	*Juncus acutiflorus*	*N*	*N*
Soft rush	*Juncus effusus*	*N*	*N*
Sycamore	*Acer pseudoplatanus*	*N*	*N*
Sweet vernal grass	*Anthoxanthum odoratum*	*N*	*N*
Tormentil	*Potentilla erecta*	*N*	*N*
Tufted hair grass	*Deschampsia cespitosa*	*N*	*N*
Water horsetail	*Equisetum fluviatile*	*N*	*N*
White clover	*Trifolium repens*	*N*	*N*
Willow	*Salix spp*	*N*	*N*
Yellow-rattle	*Rhinanthus minor*	*N*	*N*
Yorkshire Fog	*Holcus lanatus*	*N*	*N*
Lower Plants			
Aulacomnium Palustre		*N*	*N*
Calliergonella cuspidata		*N*	*N*
Cladina spp.		*N*	*N*
Hylocomium splendens		*N*	*N*
Ptilium crista-castrensis		*N*	*N*
Pleurozium schreberi		*N*	*N*
Polytrichum commune		*N*	*N*
Rhytidiadelphus squarrosus		*N*	*N*
Sphagnum capillifolium		*N*	*N*
Sphagnum fallax		*N*	*N*
Thuidium tamariscinum			

Mammals		SBL	Argyll & Bute LBAP
Common Name	**Scientific Name**		
Badger	*Meles meles*	*N*	*N*
Fox	*Vulpes vulpes*	*N*	*N*
Otter	*Lutra lutra*	*Y*	*Y*
Pine marten	*Martes martes*	*N*	*N*
Red squirrel	*Sciurus vulgaris*	*N*	*Y*
Roe Deer	*Capreolus capreolus*	*N*	*N*
Water vole	*Arvicola amphibius*	*N*	*Y*
Wildcat	*Felis silvestris*	*Y*	*Y*
Birds		**SBL**	**Argyll & Bute LBAP**
Common Name	**Scientific Name**		
Blackbird	*Turdus merula*	*N*	*N*
Common buzzard	*Buteo buteo*	*N*	*N*
Common Raven	*Corvus corax*	*N*	*N*
Robin	*Erithacus rubecula*	*N*	*N*
Wood Pigeon	*Columba palumbus*	*N*	*N*

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