

# Annex I - HRA

February 2023



**Habitat Regulations Appraisal (HRA)**  
**Argyll and Kintyre 275 kV Substations:**  
**LT289 Crossaig North**

**February 2023**





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## 1 INTRODUCTION

- 1.1.1 Environmental Resources Management Ltd (ERM) has been commissioned by Scottish & Southern Electricity Networks Transmission (SEN Transmission) to assess the potential environmental impacts associated with the proposed Crossaig North 275 kilovolt (kV) substation. SEN Transmission propose to construct and operate a 275 kV substation in Argyll and Kintyre (the Proposed Development), under the Town and Country Planning Act. It is also proposed to construct an overhead line (OHL) Tie in which requires the creation of permanent and temporary access tracks, (together known as “the Associated Development”) to connect the substation to the transmission network, and consent for the Associated Development is being sought under Section 37 of the Electricity Act. The Proposed Development and the Associated Development are hereafter referred to together as ‘the Project’.
- 1.1.2 This document has been produced to inform the Habitats Regulations Appraisal (HRA) process for the Project. It provides information to enable the screening of the Project with respect to its potential to have a likely significant effect (LSE) on European and Ramsar sites of nature conservation importance.

## 2 PROJECT DESCRIPTION

### 2.1 Background

- 2.1.1 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.
- 2.1.2 SSEN Transmission proposes to construct a new 275 kV electricity substation at Crossaig, on the east of the Kintyre Peninsula (located at Grid Ref NR825503) in order to provide reinforcement to the existing network which will support the continued generation of renewable energy.

### 2.2 The Project

- 2.2.1 The Project will connect the new 275 kV electricity substation to the recently constructed 275 kV Inveraray to Crossaig OHL network.
- 2.2.2 The Proposed Development, which is subject to consent under the Town and Country Planning Act comprises:
- A substation platform extending approximately to 2.4 ha for the new Crossaig North substation;
  - A 275 kV Gas Insulated Switchgear (GIS) Building, maximum height 16 m;
  - A 132 kV Gas Insulated Switchgear (GIS) Building, maximum height 16 m;
  - Installation of two 275/132 kV supergrid transformers (SGT), rated at 480 MVA, each located in a ventilated building of maximum height 18 m;
  - Installation of two gantries and electrical equipment to connect the OHL and the proposed substation;
  - A temporary works area (TWA) adjacent to the substation site, of approximately 3 ha and areas for temporary peat storage;
  - Diesel Generator and two automatic voltage regulators;
  - Borehole for water and septic tank;
  - Turning and parking areas;
  - Use of existing forestry access tracks (existing Cross Kintyre Haul Road and Cour Estate track), approximately 25 km in length to enable access to the existing Crossaig substation. Ongoing maintenance of this track will be required;
  - Construction of a section of permanent access track, approximately 660 m in length between the existing Crossaig substation and the proposed Crossaig North substation and for access to the SuDS pond;
  - A 2.4 m high security fence of palisade construction around the substation perimeter; and
  - Foul and surface water drainage (Sustainable Drainage System (SuDS) pond and outfall pipe);
  - An extension to the south of the substation platform at the existing Crossaig substation of approximately 0.13ha to support electrical equipment and associated access
  - Tree and vegetation clearance required to accommodate both the Proposed Development and the Associated Development.

In addition, tree felling and compensatory planting will be required, as described in **Chapter 5, Forestry Appraisal and Annex J**.

- 2.2.3 Components of the Associated Development which are subject to Section 37 of the Electricity Act 1989 are as follows:
- Construction of one new terminal lattice steel tower and one new lattice steel angle tower to support a new OHL connection from the existing Inveraray to Crossaig 275 kV OHL into the new 275 kV Crossaig North substation including new downlead terminations from the terminal tower to the substation gantries;
  - Four temporary towers or masts and associated temporary OHL diversion to facilitate the build of the new towers to avoid double-circuit network outages;
  - A new section of permanent access track approximately 225 m long connecting the Crossaig North substation to the southern most proposed permanent (terminal) tower and a 25 m long track connecting the northern most proposed permanent (angle) tower to the existing track;
  - A temporary access track 134 m long, connecting existing private forestry tracks to the northern most proposed temporary tower;
  - A temporary access track 22.7 m long connecting existing private forestry tracks to the most southerly proposed temporary tower; and
  - Dismantling of three redundant lattice steel towers near the existing Crossaig substation;
  - Tree and vegetation clearance.
- 2.2.1 The substation will not be illuminated at night during normal operations. Floodlights will be installed at the substation but would only be used in the event of a fault during the hours of darkness or during the over-run of planned works.
- 2.2.2 The existing access track will require maintenance but this is not predicted to impact any of the sites considered in this report. An assessment of potential impacts associated with the maintenance required to the access track are considered in the Crossaig North Environmental Appraisal (EA) **Chapter 4 – Ecology and Ornithology**.
- 2.2.3 Further details of the Project, comprising the Proposed Development and the Associated development can be found in **Chapter 2, Project Description**.

## 2.3 Construction Activities

2.3.1 Key tasks during construction of the Proposed Development are as follows.

- Site clearance, including removal of existing vegetation; creation of temporary welfare and material laydown area;
- Creation of a level platform through processing of site won materials and import of commercial aggregates, as required;
- Connection into drainage network;
- Concrete foundations/bases for substation building and electrical equipment;
- Installation of new transformers;
- Restoration of ground temporarily disturbed during construction;
- Landscape earthworks and tree/shrub planning;
- Erection of security fence around the site perimeter; and
- Commissioning.

2.3.2 Key tasks during construction of the Associated Development are as follows:

- Existing OHL network diversion;
- Vegetation management and forestry clearance;
- Road improvements and access;
- Creation of a level platform through processing of site won materials and import of commercial aggregates, as required;
- Concrete foundations/bases for new tower and electrical equipment;
- Installation of electrical plant e.g., cable sealing ends and tower. Scaffolding will be required for cable jointing;
- Restoration of ground temporarily disturbed during construction;
- Erection of security fence around the site perimeter;
- Commissioning; and
- Removal of temporary OHL diversion and reinstatement.

## 2.4 Site Traffic

2.4.1 During the construction phase, there will be a requirement for access to, and egress from, the Project by heavy goods vehicles (HGVs) and light traffic.

2.4.2 Access for HGVs will be via the A83 Trunk Road and will utilise the existing Cross Kintyre Haul Road (CKHR) and Cour Estate access track, the latter being built to facilitate the construction of the existing Crossaig substation. The monthly maximum two-way return HGV movements during construction is 425 for a period of six months during earthworks (months seven to 12). This equates to approximately 19 HGV return movements per day (based on 22 working days per month). During months three and four of the Project, the monthly two-way return trips for HGVs is 308, equating to approximately 14 HGV return movements per day. No baseline data traffic census data is available for use of the CKHR or Cour Estate access track. On a precautionary basis,

it is assumed that this would result in a significant increase in traffic use of the CKHR and Cour Estate access track.

- 2.4.3 During the remaining 22 months, outside of these peak periods, the monthly maximum two-way return trips for HGVs is 120, equating to approximately 5 HGV return movements per day. This would result in a minor increase in the current use of the CKHR and Cour Estate, which is not considered to be significant.
- 2.4.4 Access for light traffic, comprising light goods vehicles (LGVs) and cars, will be via the A83 to the north of the junction with the B8001 (Redhouse Junction). After this point cars and LGVs are likely to turn east on the B8001 then the B842. Car and LGV movements during construction will result in approximately 880 movements each month, assuming an even distribution across the construction period. This would result in approximately 34 two-way return movements per day (assuming 26 working days per month). This would avoid or minimise increase in use of the CKHR and Cour Estate by light traffic, which is not considered significant.
- 2.4.5 Further details can be found in **Chapter 9, Traffic and Transport**.

## 2.5 Site Establishment and Laydown Area

- 2.5.1 A temporary works area (TWA), including staff welfare and material laydown area will be established. The TWA would be regraded and revegetated on completion of construction.

## 2.6 Program and Hours of Working

- 2.6.1 It is anticipated that construction would take place over a 30-month period. Detailed programming of the works will be the responsibility of the appointed contractor in agreement with SSEN Transmission.
- 2.6.2 Construction activities would in general be undertaken during daytime periods. This would involve work between approximately 07:00 to 19:00 on weekdays, 07:00 to 18:00 on Saturdays and for short periods (for non-construction work, for example commissioning and switching works) on Sundays 08.00 to 13:00. Any variation in these working hours would be agreed in advance with Argyll and Bute Council on an as-required basis. All deliveries would take place during agreed weekday hours only.

## 2.7 Operation

- 2.7.1 Once constructed the substation would normally be unmanned, with regular operational switching of the substation being managed remotely through SSEN Transmission's Network Control Centre.
- 2.7.2 Substation plant will require maintenance and inspection at monthly intervals and maintenance work would be undertaken most years. There would be other occasional visits as required for operational duties. This level of activity is consistent with the current Crossaig substation.

## 2.8 Requirement for Habitats Regulation Assessment

- 2.8.1 Where a development has the potential, either alone or in combination with other plans or projects, to result in likely significant effects on one or more European sites <sup>(1)</sup><sup>(2)</sup>, it is subject to the requirements of The Conservation of Habitats and Species Regulations (2017) (the Habitats Regulations) with regards to Section 37

*(1) These are Special Areas of Conservation (SACs), candidate Special Areas of Conservation (cSACs) and Special Protection Areas (SPAs). this protection is also extended to proposed SPAs and proposed SACs. Where Ramsar site interests coincide with qualifying interests protected under an SPA or an SAC it is Scottish government policy to extend the same protection to these features.*

*(2) Scottish Government (2019) Implementation of Scottish Government policy on protecting Ramsar sites. Guidance Document.*

developments, and the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland) for Town and Country Planning developments.

- 2.8.2 If a development is likely to affect a European site and/or a European marine site, a report must be provided with the application showing the site(s) that may be affected together with sufficient information to enable the Competent Authority to undertake a Habitat Regulations Appraisal (HRA). For the Proposed Development, the Competent Authority is Argyll and Bute Council (ABC), and the Energy Consents Unit (ECU) for the Associated Development. Both Competent Authorities are advised by NatureScot.

### 3 METHODOLOGY

3.1.1 The approach to the HRA has followed that set out in the Conservation of Habitats and Species Regulations 2017, as amended ('The Habitats Regulations') and NatureScot guidance on the consideration of plans or projects affecting SACs and SPAs <sup>(1)</sup> <sup>(2)</sup>. It has also taken account of a range of other guidance material including that produced by the European Commission (EC) (2018a <sup>(3)</sup>), (2018b) <sup>(4)</sup> 2007 <sup>(5)</sup>; 2002 <sup>(6)</sup>.

#### 3.2 Overview of HRA Process

3.2.1 The HRA process comprises four main stages. These are:

- **Stage 1 Screening** - to identify the likely effects of a project on a European site and consider whether the effects are likely to be significant;
- **Stage 2 Appropriate Assessment** - to determine whether the integrity of the European site will be adversely affected by the Project;
- **Stage 3 Assessment of Alternative Solutions** - to establish if there are any that will result in a lesser effect on the European site; and
- **Stage 4 Imperative Reasons of Overriding Public Interest (IROPI) and Compensatory Measures** to establish whether it is necessary for the project to proceed despite the effects on the European site, and to confirm that necessary compensatory measures are in place to maintain the coherence of the European site 2000 network.

3.2.2 Each of the stages is discussed in more detail in the following sections.

##### Stage 1 – Screening

3.2.3 The purpose of screening is to identify likely impacts upon European sites, as a result of either a project alone or in combination with other plans and projects and consider whether these impacts are likely to be significant.

3.2.4 In order to determine if the Project is likely to have any significant effects on the designated sites the following issues have been considered:

- could the proposals affect the qualifying interest and are they sensitive / vulnerable to the effect;
- the probability of the effect happening;
- the likely consequences for the site's conservation objectives if the effect occurred; and
- the magnitude, duration and reversibility of the effect.

3.2.5 The objective of the screening stage is to conclude whether;

1. no likely significant effect will occur;
2. a likely significant effect will occur; or
3. it cannot be concluded that there will be no likely significant effect.

*(1) SNH (2014) Natura 2000 Casework Guidance – How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).*

*(2) SNH (2019) Guidance Note - The handling of mitigation in Habitats Regulations Appraisal - the People Over Wind CJEU judgement*

*(3) European Commission (2018) Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. EC*

*(4) European Commission (2018) Guidance on Energy Transmission Infrastructure and EU nature legislation. EC*

*(5) European Commission (2007) Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC. EC*

*(6) European Commission (2002) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites. Methodological Guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. EC*

- 3.2.6 If the screening stage concludes the second or third outcome, then an Appropriate Assessment (AA) is triggered. The implications of the identified likely significant effect(s) on the European designated site, in view of its specific conservation objectives and qualifying features and the nature, scale and location of the potential impact should be assessed. The term Habitat Regulations Appraisal encompasses both the initial screening stage and, where required, the follow-on AA stage.

### Stage 2 – Appropriate Assessment

- 3.2.7 An Appropriate Assessment is required to determine potential effects of a project upon the integrity of European sites. It should provide and analyse sufficient information to allow Argyll and Bute Council (for the Proposed Development) and the Energy Consents Unit (for the Associated Development), as the Competent Authorities to determine whether the aspects of the project pertinent to their consents will or will not adversely affect the integrity of European sites. Appropriate Assessment should exclusively focus on the qualifying features of the European site and it must consider any impacts on the conservation objectives of those qualifying interests. It should also be based on and supported by evidence that is capable of standing up to scientific scrutiny. European Commission guidance states that without proper reasoning the assessment does not fulfil its purpose and cannot be considered 'appropriate' and therefore cannot be consented. In terms of what is reasonable, guidance states “*to identify the potential risks, so far as they may be reasonably foreseeable in the light of such information as can be reasonably obtained*”<sup>(1)</sup>.
- 3.2.8 In undertaking an Appropriate Assessment, there are two phases;
- a scientific evaluation of all the likely significant effects of the project on the relevant qualifying interests of a European site; and
  - a conclusion based on outcomes of the scientific evaluation whether the integrity of a European site will be compromised.
- 3.2.9 The emphasis for Appropriate Assessment is to prove that no adverse impacts due to a project will occur which would undermine a European sites integrity.
- 3.2.10 Site integrity can be defined as:
- “the coherence of its ecological structure and function, across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified”*<sup>(2)</sup>.
- 3.2.11 The assessment will also take into account any avoidance or mitigation measures which will be implemented to avoid or reduce the level of impact from the project. The Competent Authority may also consider the use of conditions or restrictions to help avoid adverse effects on site integrity.
- 3.2.12 If the Appropriate Assessment concludes that there will be an adverse effect on the integrity of the European site, or that there is uncertainty and a precautionary approach is taken, then consent can only be granted if there are no alternative solutions, IROPI is applicable and compensatory measures have been secured.

### Stage 3 – Assessment of Alternative Solutions

- 3.2.13 All feasible alternatives have to be analysed to ensure that there are none which “*better respect the integrity of the site in question*” and its contribution to the overall coherence of the Natura 2000 network (EC, 2007).

(1) Scottish Natural Heritage (SNH) (2001) *Natura Casework Guidance: Consideration of Proposals Affecting SPAs and SACs*. SNH Guidance Note Series. SNH

(2) Scottish Natural Heritage (SNH) 2014 *Natura Casework Guidance: How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)*. SNH

Alternatives could include the location of the site, its scale and design, and the way in which it is constructed and operated. The 'zero' option also has to be considered.

- 3.2.14 The comparisons of alternatives should not allow other assessment criteria (e.g., economics) to overrule ecological criteria (EC, 2007). However, the same guidance also refers to the opinion for the case C-239/04 <sup>(1)</sup>, where the opinion of the Advocate General was that *"the choice does not inevitably have to be determined by which alternative least adversely affects the site concerned. Instead, the choice requires a balance to be struck between the adverse effect on the integrity of the SPA and the relevant reasons of overriding public interest"*.

#### Stage 4 - Imperative Reasons for Overriding Public Interest and Compensation Measures

- 3.2.15 Where a development has an adverse effect on the integrity of a European site and there are no alternative solutions consent can only be granted if there are imperative reasons of overriding public interest, including those of social or economic nature which would require the realisation of a project. A definition of 'overriding public interest' does not occur in the directive, however examples considered are:

- human health, public safety or beneficial consequences of primary importance to the environment; or
- any other reasons which are considered by the Competent Authority to be IROPI taking account of the opinion of the EC; and
- if the site does not host a priority habitat or species then IROPI must be demonstrated, and the reasons can include those of a social or economic nature.

- 3.2.16 If the importance of the project is deemed to outweigh the effects which will result on the European site, and there are no alternatives, compensatory measures must be secured before consent is granted. Compensatory measures are independent of the project and are intended to offset the adverse effects of a project, corresponding specifically to the negative effects on habitats and species concerned.

- 3.2.17 To be acceptable, compensatory measures should:

- take account of the comparable proportions of habitats and species which are adversely affected;
- be within the same bio-geographical range within which the European site is located;
- provide functions which are comparable to those which justified the selection of the of the original site; and
- have clearly defined implementation and management objectives so the measures can achieve the aim of maintaining the overall coherence of the network.

### 3.3 Consultation

- 3.3.1 A summary of the comments received from stakeholders, together with how they have been addressed within this HRA Screening Report, is provided in **Table 3.1** below.

(1) Commission of the European Communities V Portuguese Republic [2006] Case C.239/04

**Table 3.1 - Summary of consultation undertaken on the HRA Screening Report**

CONSULTEE	COMMENT	ADDRESSED
<p><b>NatureScot – email consultation on 30 September 2021 to discuss ornithology impacts from the project</b></p>	<p>We note the intention to use survey information dating back to 2015/16 and, although we generally determine that data older than 5 years is out of date, given the location of the substations within habitats of low ecological and conservation value (predominately commercial forestry), this approach is deemed acceptable providing the baseline habitat conditions have not changed since the initial surveys. However, we do suggest that you consult with the RSPB, FLS and the Argyll Raptor Study Group to determine if they have any more recent bird recordings that you could use to feed into the assessment.</p> <p>Based on the information presented to date, the Crossaig substation is likely to be the most sensitive location with breeding Schedule 1 species (inc. golden eagle) in close proximity. We note that breeding barn owl (a Schedule 1 species) were recorded in woods adjacent to the existing Crossaig substation in 2012. If the substation works are capable of disturbing Schedule 1 species, then they should be scheduled to be completed out-with the breeding bird season.</p> <p>We also wish to highlight that we are seeing increasingly more white tailed eagle breeding activity in Mid-Argyll and Kintyre, and pairs could have set up nests in commercial forestry since the initial bird surveys were undertaken. As such, you will need to consider this species (as well as osprey) in the pre-felling / construction checks.</p>	<p>Species identified by NatureScot assessed for connectivity to European sites.</p> <p>Data requests were made to RSPB and Argyll Raptor Study Group (ARSG) and records of European site designated feature species reviewed.</p> <p>Consultation was also undertaken with High Constellation Wind Farm, relating to protected species survey data.</p> <p>Survey data collected for SSE's Sheirdrim Wind Farm connection project was also reviewed.</p> <p>Information received from NatureScot, RSPB, ARSG and other sources were considered adequate for assessment, therefore Forestry and Land Scotland (FLS) were not consulted for additional data.</p>
<p><b>NatureScot – email consultation on 17 February 2022 to discuss ornithology impacts from the project</b></p>	<p>Many thanks for consulting us on the Habitats Regulation Appraisal (HRA) Screening information provided by SSEN with respect to the proposed new 275 kV substation at Crossaig North ('the Proposal'). I understand that the construction of the substation falls under the Town and Country Planning Act, with the overhead line (OHL) tie-ins to connect the substation to the transmission</p>	<p>The Likely Significant Effects of the Proposal on roosting Greenland white-fronted goose at Loch na Naich as raised by NatureScot has been assessed and carried forward through to Appropriate Assessment.</p>



CONSULTEE	COMMENT	ADDRESSED
	<p>network to dealt with under Section 37 of the Electricity Act.</p> <p>In our view, based on the information provided by SSEN, we agree that the Proposal will not have any direct or indirect effects on the Sound of Gigha Special Protection Area (SPA), however we consider that the Proposal may have a Likely Significant Effect (LSE) on the Kintyre Goose Roosts SPA / Ramsar, designated for over wintering Greenland white-fronted geese. Whilst we are in agreement that the Proposal itself won't have any significant adverse effects on the SPA / Ramsar, I note that the construction access route (which we have not previously been consulted on) is approximately 80 m from Loch na Naich which has historically hosted roosting Greenland white-fronted geese which form part of the SPA population.</p> <p>As such, we consider that there is potential for disturbance and displacement effects from the construction of the Proposal. In order to avoid these effects, works could either be completed outside of the wintering period (Oct – Mar) or, if this is not possible, the track should not be used within one hour after sunrise and one hour prior to sunset to minimise disturbance to geese flying between the Loch na Naich roost site and their feeding fields on the west coast of Kintyre.</p>	

## 4 ENVIRONMENTAL BASELINE

4.1.1 The Project baseline has been informed by a range of published and publicly available data including:

- NatureScot SiteLink<sup>1</sup> - data on designated sites and notable species in Scotland;
- NatureScot Scottish Biodiversity List (SBL)<sup>2</sup> - a list of species which are important for Scotland's Biodiversity;
- Scotland's Environment Web Map<sup>3</sup> - an interactive map which shows biodiversity areas across Scotland;
- National Biodiversity Network (NBN) Atlas<sup>4</sup> - a national interactive map that shows biodiversity areas;
- Data from 2012 Breeding Bird Surveys, based on a scaled down Common Birds Census (CBC) (refer to SNH, 2017; Gilbert et al., 1998) at existing Crossaig substation;
- Vantage Point (VP) surveys, raptor surveys, wintering wildfowl surveys and breeding bird surveys following guidance issued by NatureScot<sup>(5)</sup> carried out between 2015-2018 to inform the EIA for the Inveraray-Crossaig 275 kV OHL which covered the proposed substation location;
- VP surveys undertaken for the construction of the Inveraray-Crossaig OHL between March to May 2021;
- VP surveys for the nearby Sheirdrim Windfarm, undertaken between 2014 and 2019; and
- VP surveys following guidance issued by NatureScot<sup>(5)</sup> carried out since September 2021 for Sheirdrim – Crossaig 132 kV OHL that covers the proposed Crossaig substation site.

4.1.2 Based on the data collected from consultation and desk based study, the following surveys have been undertaken to inform the ecological assessment:

- Extended Phase 1 Habitat Survey<sup>(6)</sup>.

4.1.3 A summary of the baseline environment is presented in the Project Environmental Appraisal.

<sup>1</sup> NatureScot SiteLink. Available at <https://www.nature.scot/information-hub/snhi-data-services>

<sup>2</sup> NatureScot Scottish Biodiversity List. Available at <https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy/scottish-biodiversity-list>

<sup>3</sup> Scotland's Environment Web Map. Available at <https://map.environment.gov.scot/sewebmap/>

<sup>4</sup> National Biodiversity Network Atlas. Available at <https://nbnatlas.org/>

<sup>(5)</sup> SNH (2016) *Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds. Guidance. Version 1. July 2016.*

<sup>(6)</sup> *In accordance with JNCC Phase 1 survey 2010 methodology*

## 5 SCREENING OF EUROPEAN SITES AND FEATURES

### 5.1 Approach to Initial Screening

- 5.1.1 This stage is essentially a site-identification / selection process which effectively identifies all those designated sites and the relevant features which are at risk of likely significant effects (LSE), should those features be sensitive to the relevant effects.
- 5.1.2 The criteria used in this first stage of selection takes account of the location of the European sites (including Ramsar sites) in relation to the Project, the area of influence (AOI) of potential impacts associated with the Project and the ecology and distribution of qualifying features. These criteria are described in **Table 5.1**.
- 5.1.3 Due to the nature and location of the Project, only terrestrial European sites or sites with bird species qualifying interest features have been included in the initial screening – marine SACs have been screened out due to the lack of impact pathway.

**Table 5.1 Criteria Used for Initial Screening of Relevant European Sites**

CRITERIA USED FOR SCREENING OF RELEVANT EUROPEAN SITES	
1	European or Ramsar site with physical overlap with the Project location,
2	European or Ramsar site with adjoining 'functionally linked habitat' with physical overlap with the Project.
3	European or Ramsar site with a qualifying feature located within the potential area of influence (the AOI) associated with the Project; the area of influence is considered to be a radius of 5 km of the Project.
4	European or Ramsar site with qualifying mobile species whose range (e.g., foraging, migratory, overwintering, breeding or natural habitat range) may interact with potential effects from the Project.

- 5.1.4 Details of European Protected sites initially screened in under one or more of the above criteria are provided in **Table 5.2** and illustrated in **Figure 5.1**. The qualifying features for each site are detailed, using publicly available information obtained from the Magic website<sup>1</sup>, SiteLink<sup>2</sup> and JNCC<sup>3</sup> websites. The most recent SPA citations available on NatureScot SiteLink have been used to inform the HRA.
- 5.1.5 Connectivity with SPAs has been informed by NatureScot Guidance<sup>4</sup>.

<sup>1</sup> The MAGIC website provides geographic information about the natural environment from across government. The information covers rural, urban, coastal and marine environments across Great Britain. It is presented in an interactive map which can be explored <http://www.magic.gov.uk/> accessed 12.01.2022

<sup>2</sup> NatureScot: <https://sitelink.nature.scot/home> accessed 12.01.2022

<sup>3</sup> Joint Nature Conservation Committee: <http://jncc.defra.gov.uk/page-4> accessed 11.01.2022

<sup>4</sup> Scottish Natural Heritage (2016) Assessing Connectivity with Special Protection Areas (SPAs) Guidance

**Table 5.2 Initial Screening of Relevant European Sites**

EUROPEAN SITE NAME (SITE CODE)	AREA OF SITE (HA)	APPROXIMATE DISTANCE FROM PROJECT (KM)	QUALIFYING FEATURES OF INTEREST	SCREENED IN/OUT OF ASSESSMENT
<b>Special Protection Area (SPA)</b>				
Sound of Gigha (UK9020318)	36326.83	Access Track: 0.67 km  Project: 9.5 km	<b>Annex I Species:</b> Wintering great northern diver ( <i>Gavia immer</i> ) (505 individuals, estimated 20.2% of GB population) Wintering slavonian grebe ( <i>Podiceps auritis</i> ) (37 individuals, estimated 3.4% of GB population) <b>Regularly occurring migratory species:</b> Wintering common eider ( <i>Somateria mollissima</i> ) (1,295 individuals, estimated 2.2% of GB population) Wintering red-breasted merganser ( <i>Mergus serrator</i> ) (117 individuals, estimated 1.4% of GB population)	Screened in – potential for disturbance impacts and for flights across the Project–no connectivity distances available for wintering qualifying interest species.
Kintyre Goose Roosts (UK9003071)	412.4	Access Track: 2.5 km  Project: 5 km	<b>Annex I Species:</b> Wintering greenland white-fronted goose ( <i>Anser albifrons flavirostris</i> ) (2,300 individuals, estimated 16 % of GB population and 8% of world population).	Screened in – within SPA connectivity distance for Greenland white-fronted goose.
<b>Ramsar Site</b>				
Kintyre Goose Roosts (UK9003071)	309.25	Access Track: 2.5 km  Project: 5 km	<b>Ramsar Criterion 6:</b> Greenland white-fronted goose ( <i>Anser albifrons flavirostris</i> ) (estimated 2,300 individuals, 8% of the total biogeographic population).	Screened in – within SPA connectivity distance for Greenland white-fronted goose.

## **5.2 Effects Considered in Assessment**

- 5.2.1 The potential effects upon European site(s) as a result of the Project that have been considered within this HRA report are listed in the following sections.
- 5.2.2 No potential effects on supporting habitats within an SPA, SAC or Ramsar site are predicted.
- 5.2.3 As all bird features of the Kintyre Goose Roost Ramsar site are also qualifying interest features of the Kintyre Goose Roost SPA, effects on these features have been considered together.
- 5.2.4 Potential effects on ornithology features outside of the European sites are considered to comprise of:
- indirect loss of bird habitats due to the displacement of birds (disturbance and/or displacement) by construction works and operation;
  - accidental mortality due to collision with project infrastructure; and
  - potential barrier effects as a result of the presence of infrastructure.
- 5.2.5 All other impacts arising from the Project are not likely to have significant effects due to the lack of connectivity and/or distance such that there is no pathway of effect between the European sites and the Project.

## 6 DETERMINATION OF LIKELY SIGNIFICANT EFFECTS

### 6.1 Introduction

- 6.1.1 The European sites initially screened in for assessment of likely significant effects (LSE) are documented in **Table 5.2**. These sites were selected for screening using the criteria outlined in **Table 5.1**. There is therefore a need to consider the potential for LSE on these sites in relation to the Project.
- 6.1.2 In addition, in **Section 5.2**, the likely effects that may result during construction, operation and maintenance and decommissioning of the Project (and are relevant to the receptors being considered here) are identified to enable these to be considered. This section combines that information for the Project alone and presents the assessment of LSE, thus providing the necessary information for Stage 1 of the Habitats Regulations Appraisal process.
- 6.1.3 The assessment of LSE is based on the Project's current understanding of the baseline environment and the scope and nature of the proposed project activities, together with the relevant information available for the designated sites. Consultee and advisor responses to this document, and refinements to the Project design may change this assessment.

### 6.2 Assessment of Likely Significant Effects (LSE)

- 6.2.1 The assessment and conclusions, with regards to LSEs on the relevant European sites (**Table 5.2**) and the relevant features identified, has been carried out taking account of the AOI of potential impacts, location of the European sites under consideration and (where known) the distribution of qualifying features in relation to the Project. The information is presented below in **Table 6.1**.



Table 6.1 Assessment of LSE

DESIGNATED SITE	FEATURES SCREENED IN	RELEVANT EFFECT	CONSIDERATION OF LSE	CONCLUSION OF LSE
Sound of Gigha SPA	Great northern diver ( <i>Gavia immer</i> ) wintering population	Indirect loss of bird habitats due to displacement of birds (disturbance and/or displacement) by construction works and operation.	The Project does not physically overlap the SPA. The construction access road is approximately 670 m from the edge of the SPA, however the Project itself is approximately 9.5 km away. Traffic along the main road to the construction access road will not be substantially increased by the Project. Great northern divers winter in UK coastal marine habitats. They will consequently not be significantly displaced from foraging and resting areas by the Project's (onshore) construction works, or once the site is operational. Overall, no likely significant effects are predicted.	No LSE
		Accidental mortality due to collision with project infrastructure.	Wintering great northern divers remain offshore in coastal marine habitats for foraging and resting. No flights of great northern diver were recorded during the baseline surveys reviewed to inform this HRA. Great northern divers are unlikely to fly near to, or over, the project infrastructure. No likely significant effects are predicted.	No LSE
		Potential barrier effects as a result of the presence of infrastructure.	Wintering great northern divers remain offshore in coastal marine habitats for foraging and resting. No flights of great northern diver were recorded during the baseline surveys reviewed to inform this HRA. They are unlikely to fly near to, or over, the project infrastructure. No likely significant effects are predicted.	No LSE



Slavonian grebe ( <i>Podiceps auritis</i> ) wintering population	Indirect loss of bird habitats due to displacement of birds (disturbance and/or displacement) by construction works and operation.	The Project does not physically overlap the SPA. The construction access road is approximately 670 m from the edge of the SPA, however the Project itself is approximately 9.5 km away. Traffic associated with the Project will not substantially increase traffic along the main road to the construction access road. Slavonian grebes typically winter in UK coastal marine habitats. They will consequently, not be significantly displaced from foraging and resting areas by the Project's (onshore) construction works, or once the site is operational. Overall, no likely significant effects are predicted.	No LSE
	Accidental mortality due to collision with project infrastructure.	Wintering Slavonian grebes typically remain in coastal marine waters for foraging and resting. No flights of Slavonian grebe were recorded during the baseline surveys reviewed to inform this HRA. Slavonian grebes are unlikely to fly near to, or over, the Project infrastructure. No likely significant effects are predicted.	No LSE
	Potential barrier effects as a result of the presence of infrastructure.	Wintering Slavonian grebes typically remain in coastal marine waters for foraging and resting. No flights of Slavonian grebe were recorded during the baseline surveys reviewed to inform this HRA. They are unlikely to fly near to, or over, the Project infrastructure. No likely significant effects are predicted.	No LSE



Common eider ( <i>Somateria mollissima</i> ) wintering population	Indirect loss of bird habitats due to displacement of birds (disturbance and/or displacement) by construction works and operation.	The Project does not physically overlap the SPA. The construction access road is approximately 670 m from the edge of the SPA, however the Project itself is approximately 9.5 km away. Traffic associated with the Project will not substantially increase existing traffic levels. Common eiders winter in UK coastal marine habitats. They will consequently not be significantly displaced from foraging and resting areas by the Project's (onshore) construction works, or once the site is operational. Overall, no likely significant effects are predicted.	No LSE
	Accidental mortality due to collision with project infrastructure.	Wintering common eiders remain offshore in coastal marine habitats for foraging and resting. No flights of common eider were recorded during the baseline surveys reviewed to inform this HRA. Common eiders are unlikely to fly near to, or over, the project infrastructure. No likely significant effects are predicted.	No LSE
	Potential barrier effects as a result of the presence of infrastructure.	Wintering common eiders remain offshore in coastal marine habitats for foraging and resting. No flights of common eider were recorded during the baseline surveys reviewed to inform this HRA. They are unlikely to fly near to, or over, the project infrastructure. No likely significant effects are predicted.	No LSE



Red-breasted merganser ( <i>Mergus serrator</i> ) wintering population	Indirect loss of bird habitats due to displacement of birds (disturbance and/or displacement) by construction works and operation.	The Project does not physically overlap the SPA. The construction access road is approximately 670 m from the edge of the SPA, however the Project itself is approximately 9.5 km away. Traffic associated with the Project will not substantially increase existing traffic levels. Red-breasted merganser winter in the UK in coastal marine habitats and larger inland waterbodies. They will consequently not be significantly displaced from foraging and resting areas by the Project's (onshore construction works, or once the site is operational). No likely significant effects are predicted.	No LSE
	Accidental mortality due to collision with project infrastructure.	Wintering red-breasted merganser remain in coastal marine habitats or larger inland waterbodies for foraging and resting. No red-breasted merganser flights were recorded during baseline surveys within 20 km of the Project in baseline surveys reviewed to inform this HRA. Red-breasted mergansers are unlikely to fly near to, or over, the project infrastructure. No likely significant effects are predicted.	No LSE
	Potential barrier effects as a result of the presence of infrastructure.	Wintering red-breasted merganser remain in coastal marine habitats or larger inland waterbodies for foraging and resting. No red-breasted merganser flights were recorded during baseline surveys within 20 km of the Project in baseline surveys reviewed to inform this HRA. Red-breasted mergansers are unlikely to fly near to, or over, the project infrastructure. No likely significant effects are predicted.	No LSE



<p>Kintyre Goose Roosts SPA and Ramsar Site</p>	<p>Greenland white-fronted goose (<i>Anser albifrons flavirostris</i>)</p>	<p>Indirect loss of bird habitats due to displacement of birds (disturbance and/or displacement) by construction works and operation.</p>	<p>Greenland white-fronted goose winter onshore in the UK feeding within ancestral peat bog habitat and most commonly on improved grasslands linked to a loch roost site, therefore depending upon terrestrial resources. The Project does not physically overlap the SPA/Ramsar site. The access track is approximately 2.5 km from the closest SPA loch, however, the Project itself is approximately 5 km from the closest SPA loch. At these distances there is no potential for loss of habitat or disturbance to the SPA itself. However, the access track passes within 80 m of Loch na Naich which, although not part of the SPA, has historically been used as a roost by part of the SPA population of Greenland white-fronted geese. As a result, there may be disturbance to qualifying interest bird features at Loch na Naich during construction as HGV traffic levels will be increased significantly as part of the Project. The Project will result in the loss of coniferous plantation woodland which is not used for foraging by Greenland white-fronted geese.</p>	<p>LSE</p>
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		<p>Accidental mortality due to collision with project infrastructure.</p>	<p>No Greenland white-fronted goose flights were recorded during baseline surveys for the Inveraray- Crossaig OHL project. White-fronted goose flights were recorded during baseline surveys for the Sheirdrim Wind Farm, however, all flights were approximately 3 km west of the Proposed Development.</p> <p>The Associated Development (which will replace some of the existing Inveraray to Crossaig OHL) is short in distance and either enclosed by or at the outer edge of existing coniferous plantation. Therefore, it is unlikely that Greenland white-fronted goose in flight will be at collision risk height with the Associated Development. Any flights from SPA/Ramsar site lochs to the east coast of the Argyll peninsula will be above the height of the coniferous plantation before crossing the Associated Development. As a result, no likely significant effects are predicted.</p>	<p>No LSE</p>
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		<p>Potential barrier effects as a result of the presence of infrastructure.</p>	<p>No Greenland white-fronted goose flights were recorded during baseline surveys for the Inveraray- Crossaig OHL project. White-fronted goose flights were recorded during baseline surveys for the Sheirdrim Wind Farm, however all flights were approximately 3 km west of the Proposed Development.</p> <p>The Associated Development is short in distance and either enclosed by or at the outer edge of existing coniferous plantation. Therefore, it is unlikely that Greenland white-fronted goose in flight will be at collision risk height with the Associated Development. Any flights from SPA/Ramsar site lochs to the east coast of the Argyll peninsula will be above the height of the coniferous plantation before crossing the Associated Development. As a result, no likely significant effects are predicted.</p>	<p>No LSE</p>
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### 6.3 In Combination Assessment

6.3.1 Six projects that could potentially result in in-combination effects have been identified are as follows:

- SSEN Transmission are developing plans to connect the consented Sheirdrim Wind Farm to the existing Crossaig substation via a 132 kV OHL and underground cable (UGC). Bird surveys are ongoing to help inform the selection of the preferred route for the connection. Given the lack of potential impacts, and the lack of impact pathway, for impacts from the Project on features of European sites, in-combination impacts with the proposed Sheirdrim Wind Farm OHL and UGC are not predicted.
- Cnoc Breacam Wind Farm is a proposed 18 turbine wind farm which would be located approximately 2 km north west of the Project. Scoping for the project was submitted in January 2021, and studies and assessment are ongoing<sup>(1)</sup>. Given the lack of potential impacts, and the lack of impact pathway, for impacts from the Project on features of European sites, in-combination impacts with the proposed Cnoc Breacam Wind Farm are not predicted.
- High Constellation Wind Farm is a consented 10-turbine windfarm currently under construction which will be located within the Project area. The nearest turbine will be located approximately 2 km to the south-west of the Project. A substation proposed as part of the High Constellation development would be located approximately 300 m to the south-east of the Project. Given the lack of potential impacts, and the lack of impact pathway, for impacts from the Project on features of European sites, in-combination impacts with the proposed High Constellation Wind Farm are not predicted.
- Eascairt Wind Farm is a proposed 13 turbine wind farm, which would be located approximately 2.4 km from the Project. Given the lack of potential impacts, and the lack of impact pathway, for impacts from the Project on features of European sites, in-combination impacts with the proposed Eascairt Wind Farm are not predicted.
- High Constellation Wind Farm Connection is a proposed UGC to connect the consented High Constellation Wind Farm to the existing Crossaig North Substation. A substation proposed as part of the High Constellation development would be located approximately 300 m to the south-east of the Project. Given the lack of potential impacts, and the lack of impact pathway, for impacts from the Project on features of European sites, in-combination impacts with the proposed High Constellation Wind Farm are not predicted.
- Inveraray to Crossaig 275 kV Overhead Line Reinforcement is a consented and in construction, 81 km long OHL, supported by supported by lattice steel towers between Inveraray Switching Station and the existing Crossaig Substation, located within the Project area. Given the lack of potential impacts, and the lack of impact pathway, for impacts from the Project on features of European sites, in-combination impacts with the consented Inveraray to Crossaig 275 kV OHL Reinforcement are not predicted.

### 6.4 Summary of LSEs

A summary of the European sites, features and impacts for which a potential for an LSE have been identified and are presented in **Table 6.2** below.

**Table 6.2 - European sites and features for which Potential LSEs have been identified**

SITE	FEATURE	PROJECT PHASE	EFFECT
<b>Kintyre Goose Roosts SPA and Ramsar Site</b>	Greenland white-fronted goose	Construction	Disturbance/displacement

<sup>(1)</sup> Cnoc Breacam Renewables LLP (2021) Cnoc Breacam EIA Scoping Report

## 7 APPROPRIATE ASSESSMENT

### 7.1 Introduction

7.1.1 The findings of the Screening Assessment in **Section 6** (and summarised in **Table 6.2**) determined that an Appropriate Assessment (AA) was required as an LSE cannot be ruled out for the qualifying interest feature of Kintyre Goose Roosts SPA and Ramsar Site. The likely significant effects result from:

- the potential for displacement of Greenland white-fronted geese from a roosting area outside of the SPA (Loch na Naich).

7.1.2 This section assesses the impacts of the Project on the relevant qualifying interest features of Kintyre Goose Roosts SPA and Ramsar Site in relation to the conservation objectives for the site. The aim is to identify whether no adverse effect on the integrity of the European sites can be concluded as described in **Section 3**, or whether there will be adverse effects on the integrity of the Kintyre Goose Roosts SPA and Ramsar Site.

### 7.2 Conservation Objectives

7.2.1 The conservation objectives for the Kintyre Goose Roosts SPA are:

- to avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- to ensure for the qualifying species that the following are maintained in the long term:
  - population of the species as a viable component of the site;
  - distribution of the species within the site;
  - distribution and extent of habitats supporting the species;
  - structure, function and supporting processes of habitats supporting the species; and
  - no significant disturbance of the species.

### 7.3 Assessment of Effects

7.3.1 Greenland white-fronted geese forage and roost throughout the Kintyre Peninsula and are known to commute in both a north-south and west-east direction through the Peninsula to and from roosts and foraging grounds. <sup>(1)</sup>  
<sup>(2)</sup>.

7.3.2 As stated in **Table 6.1**, the Project does not physically overlap with the SPA / Ramsar site and the existing access track that will be used for construction access is approximately 2.5 km from the closest SPA loch. There is no potential for loss of habitat or disturbance to the SPA itself. However, construction access for HGVs will be taken via the existing CKHR access track, passing within 80 m of Loch na-Naich, which, although not part of the SPA, has historically been used as a roost by Greenland white-fronted geese which form part of the SPA population. Use of the CKHR will be limited to HGVs, with light vehicles accessing the Project via the A83, B001 and B842 roads. A peak number of approximately 19 HGV return movements per day will be required during construction. In the absence of mitigation, there is therefore potential for disturbance to

1 <http://www.freasdail-windfarm.co.uk/media/25482/Appendix%20A8.1%20Report%20to%20Inform%20a%20Habitat%20Regulations%20Assessment.pdf> (accessed 15.03.22)

2 Crabtree, B., Humphreys, L., Moxey, A. and Wernham, C. 2010. 2010 Review of Goose Management Policy in Scotland. A report to the Scottish Government. BTO Scotland, Stirling.

qualifying interest bird features at Loch na Naich from vehicle movements along the CKHR access track during construction, leading to an indirect functional loss of roosting habitat during construction.

- 7.3.3 During operation, traffic movements are predicted to be limited to light vehicles (LGVs and cars), accessing the Project via the A83, B001 and B842 roads and as such are not anticipated to cause disturbance to the roost at Loch na Naich. During operation, the Project will result in the loss of and disturbance to coniferous plantation woodland which is not used for foraging by Greenland white-fronted geese. Therefore, there will be no indirect loss of habitat during operation.

#### 7.4 Proposed Mitigation Measures

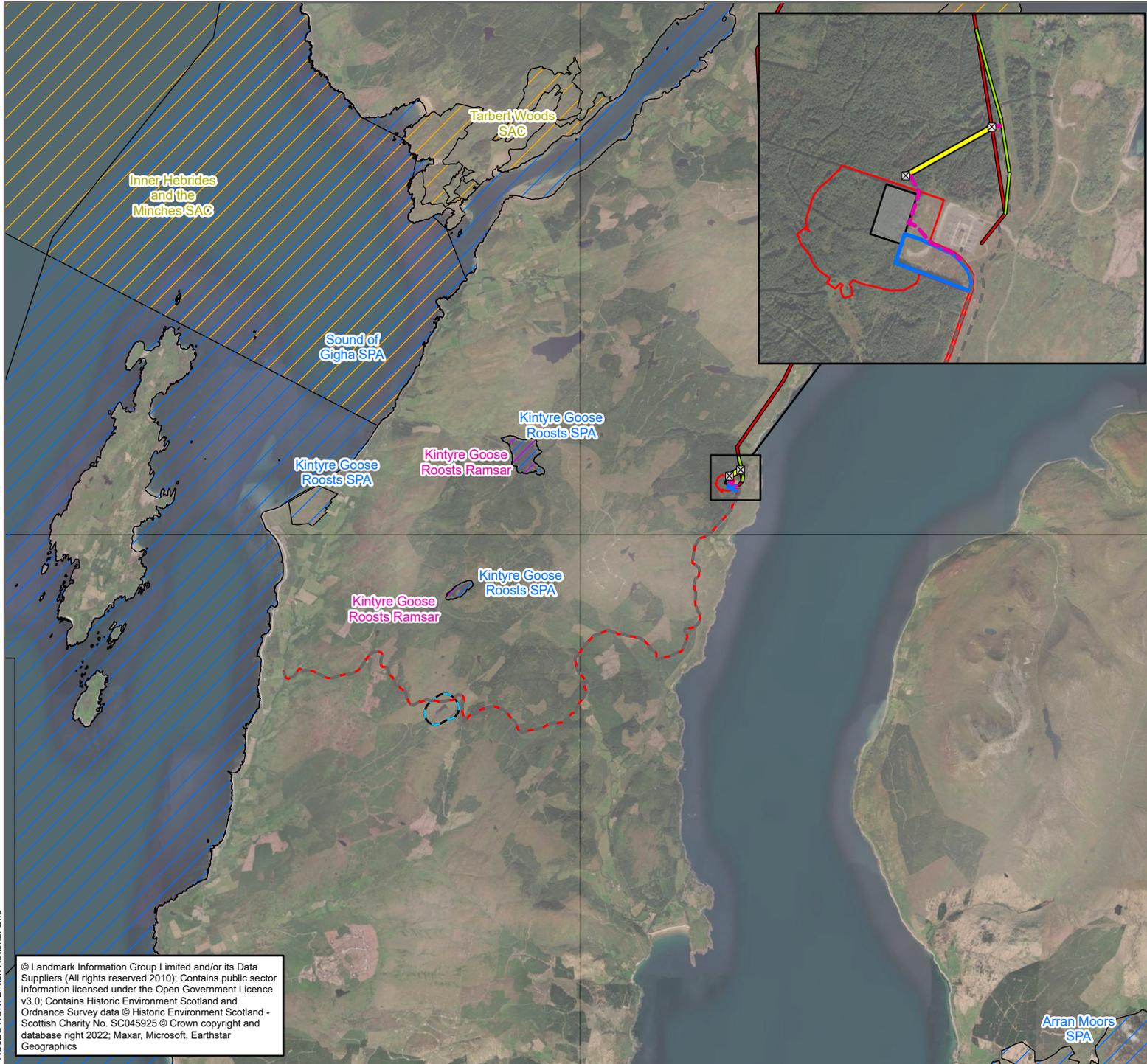
- 7.4.1 Proposed mitigation measures will follow the mitigation hierarchy where possible, with measures to avoid impacts considered before measures to reduce, then reinstate and finally offset impacts.
- 7.4.2 All works will be undertaken according to the SSEN Transmission Bird Species Protection Plan (SPP).
- 7.4.3 To avoid disturbance to Greenland white-fronted geese (*Anser albifrons flavirostris*) at Loch na-Naich within the wintering period (October – March), no vehicle movements will take place past Loch na Naich or within 600 m either side of the Loch during the one hour period either side of sunrise or the one hour period either side of sunset.
- 7.4.4 With these mitigation measures in place, the Project is not predicted to have an adverse effect on the integrity of the Kintyre Goose Roosts SPA and Ramsar site.

#### 7.5 Summary of Effect on Site Integrity

- 7.5.1 A summary of the European sites, features for which LSE has been identified, and the assessment of effects on the integrity of Kintyre Goose Roosts SPA/Ramsar site is presented below in **Table 7.2**.

**Table 7.1 – Summary of Appropriate Assessment Stage**

SITE	FEATURE	ADVERSE EFFECT INTEGRITY?
Kintyre Goose Roosts SPA/Ramsar Site	Greenland white-fronted goose	No



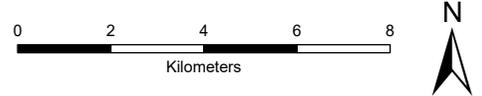
- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track
- Special Protection Area (SPA)
- Ramsar
- Special Area of Conservation (SAC)
- Loch na Naich White-fronted Geese Buffer Zone

Proposed Development:

- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- Indicative Town & Country Planning Boundary

Associated Development:

- Proposed Tower Location
- Access Track
- Proposed OHL Alignment
- Proposed Temporary OHL Bypass



SCALE: See Scale Bar	VERSION: A02
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: PW
DATE: 05/05/2022	APPROVED: KG

**Environmental Designations within 10 km of Crossaig North - HRA**

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PROJECTION: British National Grid