



MAGNORA  
OFFSHORE WIND

# Talisk Floating Offshore Wind Farm

Onshore Scoping Report

January 2025

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Abbreviation	Meaning
AC	Alternating Current
BESS	Battery Energy Storage Systems
BGS	British Geological Survey
CCR	Climate change resilience
CEMP	Construction and Environment Management Plan
CES	Crown Estate Scotland
CIEEM	Chartered Institute of Ecology and Environmental Management
CTMP	Construction Stage Traffic Management Plan
DTM	Digital Terrain Model
DWPA	Drinking Water Protected Area
EIA	Environmental Impact Assessment
ELC	European Landscape Convention
ES	Environmental Statement
FOI	Freedom of Information
FRDA	Flood Risk and Drainage Assessment
FTE	Full time Equivalent
GDL	Garden and Designed Landscape
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GLVIA3	Guidance for Landscape and Visual Impact Assessment, Third Edition)
GW	Gigawatts
GWDE	Ground water dependent terrestrial ecosystems
GWP	Global Warming Potential
HDD	Horizontal Directional Drilling
HEDBA	Historic Environment Desk Based Assessment
HES	Historic Environment Scotland
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IAIA	International Assessment for Impact Assessment
ICCI	In-combination Climate Change Impact
IEMA	Institute of Environmental Management and Assessment
LCA	Landscape Character Assessment
LCREE	Low Carbon and Renewable Energy Economy
LCT	Landscape Character Type
LI	Landscape Institute
LVIA	Landscape and Visual Impact Assessment
MLWS	Mean Low Water Springs
MOW	Magnora Offshore Wind
MPA	Marine Protected Area
NBN	National Biodiversity Network
NHZ	Natural Heritage Zone
NPF4	National Planning Framework 4
NRTF	National Road Traffic Forecast
NVC	National Vegetation Classification
O&M	Operation and Maintenance
OHL	Overhead Line
OHLDP	Outer Hebrides Local Development Plan
OWF	Offshore Wind Farm
PAC	Pre-Application Consultation
PAN	Planning Advice Note
PLHRA	Peat Landslide Hazard Risk Assessment
PO	Plan Option
PVA	Potentially Vulnerable Area
PWS	Private Water Supplies
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SEPA	Scottish Environmental Protection Agency
SMP	Sectoral Marine Plan
SPA	Special Protection Area

Abbreviation	Meaning
SSEN	Scottish and Southern Electricity Networks
SSSI	Site of Special Scientific Interest
TGN	Technical Guidance Note
UGC	Underground Cable
WeBs	Wetland Birds Survey
WFD	Water Framework Directive
WLA	Wild Land Area
WQMP	Water Quality Monitoring Plan
ZTV	Zone of Theoretical Visibility

Glossary Term	Definition
Cumulative Effect	Changes to the environment caused by the potential effects of the Proposed Offshore Development combined with the potential effects of consented and future projects, plans or activities.
Developer	Magnora Offshore Wind.
Grid Connection Point	The connection point which connects the offshore wind farm (OWF) to the national grid so that the electricity can be exported for public consumption.
Landfall	The location where the Offshore Export Cables will be brought onshore.
Landfall Area of Search	The area under consideration where the offshore export cables are proposed to be brought onshore.
Landscape Character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another.
Landscape Character Types	Distinct type of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but they share broadly similar combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement pattern, and perceptual and aesthetic attributes.
LVIA	Landscape and Visual Impact Assessment – a standard process for examining the likely landscape and visual effects of a development.
Magnitude (of effect)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long in duration.
Magnora Offshore Wind (MOW)	Magnora Offshore Wind (MOW) is the developer of this project and this company is jointly owned by Magnora ASA and TechnipFMC.
Project	Talisk Offshore Wind Farm (covering the onshore and offshore infrastructure).
Proposed Offshore Development	The offshore elements of the Talisk Offshore Wind Farm covered by a separate Offshore Scoping Report relates. For the Offshore Scoping Report these elements include the array area, inter-array and interconnector cables, offshore export cable corridor, offshore substation, and landfall area of search (up to Mean High Water Springs (MHWS))
Proposed Onshore Development	The onshore elements of the Talisk Offshore Wind Farm to which this Onshore Scoping Report relates. For the Onshore Scoping Report these elements include the substation, underground cables between the landfall and substation and substation and grid connection point and landfall area of search (to Mean Low Water Springs (MLWS))
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to specific type of change or development proposed and the value related to that receptor.
Site Selection Search Area	The area under consideration where the substation and underground cables may be located.
Talisk Offshore Wind Farm	The Project which includes the wind farm and all associated offshore and onshore infrastructure.
Visual amenity	The overall character of the views people enjoy of their surroundings which provides a setting or backdrop for the enjoyment of activities of people working, living, recreating, visiting or travelling through an area.
Visual effects	Effects on specific views and on the general visual amenity experienced by people.
Visual receptors	A computer simulation, photomontage or other technique illustrating the predicted appearance of a development.
Zone of Theoretical Visibility	A map, digitally produced showing areas of land and sea within which a development is theoretically visible.

# 1. Introduction

## 1.1 Background

- 1.1.1 In response to the climate crisis, Scotland has set a target to achieve net zero emissions of greenhouse gases (GHGs) by 2045. Alongside this, the Scottish Government is targeting generating 50% of Scotland's overall energy consumption from renewable sources, including 11 gigawatts (GW) of installed offshore wind capacity, by 2030. The UK Government has set a target for 50GW of offshore wind capacity by 2030, which will help secure a sustainable energy supply for the future while minimising Scotland's environmental impact. In 2021, Crown Estate Scotland (CES) initiated the ScotWind leasing process, making areas of the seabed available for renewable energy development.
- 1.1.2 Magnora Offshore Wind (MOW) (referred to hereafter as the Developer) was established by Magnora ASA, a renewable energy developer, and TechnipFMC, a leading service provider within the offshore industry. The Developer was selected as a successful bidder within the N3 Plan Option (PO) with their plans to develop the Talisk Offshore Wind Farm (OWF) (the Project), and was granted an Option Agreement, providing them with exclusive development rights.
- 1.1.3 At its closest point, the awarded option area (Array Area) is approximately 25km off the northern coast of the Isle of Lewis and approximately 73km off the northwest coast of the Scottish mainland. The Option Agreement stipulates that the Developer must obtain all key consents and permissions from the relevant regulatory authorities in order to construct and operate the Talisk OWF. As part of this, the Developer will apply for the necessary consents and permissions, including conducting an Environmental Impact Assessment (EIA) and preparing the subsequent Environmental Statement (ES).
- 1.1.4 The Developer is proposing to submit an application for Planning Permission to Comhairle nan Eilean Siar (CnES) under the Town and Country Planning (Scotland) Act 1997 for permission to construct and operate a 400kV AC substation and associated underground cable infrastructure (described hereafter as "Proposed Development"). A preferred site is yet to be confirmed therefore this scoping report is based upon the site selection search area on land located approximately 3km southwest of Stornoway on the Isle of Lewis (hereafter referred to as the "Site"). The location of the Site is shown in Figure 1-1.
- 1.1.5 Regulation 17 of the EIA regulations states that a developer may request the relevant planning authority to adopt a scoping opinion on a planning application where an EIA is deemed necessary, in order to determine the scope of the EIA required for the specific development.
- 1.1.6 This Onshore EIA Scoping Report addresses all onshore infrastructure for the Talisk OWF located landward of Mean Low-Water Springs (MLWS). The report is designed to identify the key sensitive receptors that could be affected by the Proposed Development during its construction, operation and maintenance and decommissioning. It supports the Developers request to seek a scoping opinion from CnES.
- 1.1.7 A separate scoping report has been produced for the offshore development seaward of MHWS (Magnora, 2024). This report will be submitted to the Marine Management Organisation (MMO) to allow them to provide a scoping opinion to inform the Offshore EIA which will be a separate submission on the Onshore EIA.



**Talisk**  
Scoping Report

**EIA Scoping Report – Proposed  
Onshore Development Area**

**Legend**

Onshore Scoping Boundary



**Notes**  
Contains Ordnance Survey data  
© Crown copyright and database  
rights [2024] Ordnance Survey  
0100031673 World Ocean Base:  
OceanWise, Esri, GEBCO,  
Garmin, NaturalVue

Datum: OSGB36  
Projection: BNG

0 500 1,000 m

0 2,000 4,000 ft

Scale: 1:25,000 @A3 Date: 01/10/2024 Drawn by: BPHB Checked by: FM Approved by: GB

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**Figure 1**

Figure 1-1 Location of the Proposed Onshore Development.

## 1.2 Developer Background

- 1.2.1 As previously mentioned, the Developer, MOW, is a company owned by Magnora ASA and TechnipFMC. Magnora ASA has been a renewable energy developer since 2018, after transitioning from the oil and gas sector. Magnora is developing projects within offshore and onshore wind, solar power and battery energy storage system projects and is currently operating in six countries: the UK, Norway, Sweden, Italy, Germany, and South Africa.
- 1.2.2 TechnipFMC is a global leader in both traditional and renewable energy sectors, employing approximately 21,000 people across 39 countries. The company provides the technologies, fully integrated projects, systems and services needed to meet the world's energy demands. With experience in fixed and floating offshore projects and floating offshore wind projects, TechnipFMC will use its competence to support the development of the Proposed Offshore Development.
- 1.2.3 The Developer has commissioned GoBe Consultants Ltd (part of the APEM Group) to lead and deliver the EIA scoping reports for the Talisk OWF Project. GoBe Consultants LTD will oversee the overall EIA process and manage the offshore aspects whilst APEM LTD (part of the APEM Group) will manage the onshore aspects. Two separate planning applications will be made, one for the offshore elements and one for the onshore elements; in line with this consenting strategy separate scoping reports have been produced for offshore and onshore.
- 1.2.4 This Onshore Scoping Report has been prepared by APEM on behalf of GoBe (both APEM group companies), as commissioned by MOW. GoBe is a registrant of the Institute of Environmental Management and Assessment (IEMA) Quality Mark in recognition of the standard of the EIAs produced for numerous large scale infrastructure projects. This means APEM adheres to the IEMA quality mark commitments and meet the requirements as set out in Regulation 5(5) of The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (The EIA Regulations). A statement confirming the competence and relevant expertise of those preparing the EIA Report shall be included in the submitted EIA Report.
- 1.2.5 DNV supports the project by providing verification and review of the deliveries of the EIA work undertaken by GoBe.

## 1.3 Scoping Report Objectives

- 1.3.1 The purpose of the scoping report is to inform the scope of the environmental assessment for each topic area covered within the ES to be submitted for the onshore works for this development.
- 1.3.2 The objectives of the Onshore Scoping Report are:
- to provide an overview of the baseline environment and an initial assessment of the likely sensitivities and constraints;
  - to provide information on the data collection and survey methodologies that will be used to inform the baseline characterisation for each technical environmental assessment;
  - to propose topics to scope into the EIA process where there is potential for significant effects based upon existing information and presenting topic-specific assessment methods where applicable; and
  - to propose topics to be scoped out of the EIA process where there is clear justification to do so based on existing information.
- 1.3.3 In accordance with the EIA regulations this scoping report contains:
- a description of the location of the development, including a red line boundary plan sufficient to identify the land;
  - a brief description of the nature and purpose of the Proposed Development and its likely significant effects on the environment; and
  - additional supporting information or representations as identified at scoping stage in accordance with the design.

## 1.4 Scoping Report Structure

- 1.4.1 The structure of this Onshore Scoping Report is set out within Table 1-1.

Table 1-1: Onshore Scoping Report Structure

Chapter	Title	Summary	Author
1	Introduction	Introduces the Onshore Proposed Development, the Developer and the key objectives and outcomes from the Offshore Scoping Report.	APEM
2	Policy and Legislation	Provides an overview of the legislation and policy relevant to the Onshore Proposed Development.	APEM
3	Proposed Project Development Description	Provides a summary of the Onshore Proposed Development.	APEM
4	Proposed EIA Methodology	Describes the proposed EIA methodology, including measures taken to proceed towards proportionate EIA.	APEM
5-17	Onshore technical topics	Chapter 5: Landscape and Visual	MacroWorks
		Chapter 6: Ecology and Ornithology	APEM
		Chapter 7: Archaeology and Cultural Heritage	Wessex Archaeology
		Chapter 8: Geology and Peat	Atmos
		Chapter 9: Hydrology and Hydrogeology	Atmos
		Chapter 10: Noise and Vibration	Atmos
		Chapter 11: Traffic and Transport	SYSTRA
		Chapter 12: Socio-economics	Atmos
		Chapter 13: Population and Human Health	Trium
		Chapter 14: Air Quality	APEM
		Chapter 15: Climate Change	APEM
	Chapter 16: Major Accidents and Disasters	APEM	
	Chapter 17: Other Issues	Atmos	
18	Summary and Scoping Conclusions	Summarises the scoping approach and outcomes	APEM
19	References		
Appendix A	Data Sources	Sets out data sources used to inform the scoping report for each technical discipline	APEM
Appendix B	UXO Scoping Report		Landmark

## 2. Policy and Legislation

### 2.1 Introduction

2.1.1 This section outlines the key legislation and policy context within which the Proposed Development would be considered in detail. The planning input to the ES will focus on the relevant development plan and material considerations. The ES will not assess the Proposed Development against the relevant planning policy. This will be provided in a separate Planning Statement. The Planning Statement will consider the balance of effects of the Proposed Development as set out in the EIA, in the context of the statutory requirements of the legislation; a high-level view of the legislation relevant to the Talisk onshore infrastructure is detailed below.

### 2.2 Policy Context

#### Climate Change and Renewable Energy

- 2.2.1 The challenges associated with climate change, energy supply and supply security are driving government policy and decision making on renewable energy developments. There are now a significant number of national and international policies, strategies and regulations relating to climate change relevant to the development of renewable energy in Scotland.
- 2.2.2 The Climate Change Act 2008 transposes into UK law the commitments made following signature of the Kyoto Protocol, which came into effect in 2005. This protocol sets international binding Greenhouse Gas (GHG) emission reduction targets. Following subsequent amendments, the Act now requires a 78% reduction in GHG emissions by 2035. The Climate Change (Emission Reduction Targets) (Scotland) Act 2019 sets even more ambitious Scottish targets (i.e., net zero by 2045) applicable to the Project.
- 2.2.3 The Paris Agreement 2016 (Paris Agreement under the United Nations Framework Convention on Climate Change) is an international treaty, agreed at the Paris Climate Conference. This agreement aims to improve resilience to climate change impacts and provide support to developing countries to implement climate change mitigation. The targets in this agreement supersede those made in the Kyoto Protocol, aiming to keep the global temperature to below 2°C above pre-industrial levels, and limit global warming to 1.5°C.

#### Scottish Climate and Energy Policy

- 2.2.4 The Scottish legislation relevant to the Project includes:
- 2.2.5 **The Climate Change (Scotland) Act 2009** as amended by the Climate Change (Emission Reduction Targets) (Scotland) Act 2019 sets out a legally binding target for 'net zero', i.e., reducing GHG emissions by a value 100% lower than 1990 levels by the year 2045, five years earlier than the remainder of the UK. The Act also requires Scottish Ministers and public bodies to act within sustainable development parameters and places duties on them to act within and deliver these objectives. Furthermore, it also allows Scotland to contribute to the Paris Agreement goals of limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C.
- 2.2.6 **The Climate Change (Emission Reduction Targets) (Scotland) Act 2019** commits to making Scotland net-zero by 2045 relative to a 1990 baseline.
- 2.2.7 **The Sectoral Marine Plan (SMP)** for Offshore Wind Energy provides a spatial strategy for OWF leasing (including the E3 allocation for Talisk OWF site under the Scotwind Leasing Round in 2022) and other marine developments. The spatial strategy seeks to reduce any potential impacts on the environment and other marine users. The SMP also provides options for strengthening the Scottish economy including adding jobs and investments through new offshore developments (Scottish Government 2023a).
- 2.2.8 **The Scottish Energy Strategy: The Future of Energy in Scotland**, presents the plan for decarbonising and improving energy infrastructure within Scotland. This includes the Scottish Government's vision for renewable and low carbon energy solutions, including energy supply and delivery. It also set a target of supplying the equivalent of 50% of Scotland's heat, transport and electricity consumption from renewable energy sources. The strategy emphasizes the importance of recent Contracts for Difference auctions for Scottish offshore wind projects and how the same process can be used and expanded upon for future marine energy developments. The draft 'Energy Strategy and Just Transition Plan' was published for

consultation on 10 January 2023 and will eventually replace the Scottish Energy Strategy (Scottish Government 2023b).

## 2.3 Planning Context

### National Planning Policy

- 2.3.1 The Scottish Government national planning policy is provided in the National Planning Framework 4 (NPF4), which sets out the national spatial strategy for Scotland. It was published in February 2023 and sets out the government spatial principles, regional priorities, national developments and national planning policy. Annex B of NPF4 outlines 18 national developments that will support the delivery of the Scottish Ministers' spatial strategy. The first national development listed is 'Energy Innovation on the Islands', which supports proposed developments in areas including the Outer Hebrides for renewable energy generation, infrastructure and shipping, thereby encompassing the Proposed Development.
- 2.3.2 National planning policy is supported by Planning Circulars, Planning Advice Notices (PANs) and Specific Advice Sheets. The PANs and Specific Advice Sheets considered relevant to the Talisk onshore infrastructure and considered in this scoping assessment include:
- PAN1/2013 Environmental Impact Assessment 2013;
  - PAN 1/2011 Planning and Noise, March 2011;
  - PAN 2/2011 Planning and Archaeology, July 2011;
  - PAN 3/2010 Community Engagement, August 2010;
  - PAN 51 Planning, Environmental Protection and Regulation, October 2006;
  - PAN 60 Natural Heritage, January 2000;
  - PAN 61 Sustainable Urban Drainage Systems, July 2001;
  - PAN 75 Planning for Transport, August 2005;
  - PAN 79 Water and Drainage, September 2006;
  - Scottish Government's Policy on Control of Woodland Removal, February 2009;
  - Wind Farm Developments on Peat Land, May 2013; and
  - Specific Advice Sheet: Guidance on Developments on Peat Land: Peatland Survey, 2017.

### Outer Hebrides Local Development Plan (OHLDP)

- 2.3.3 The Talisk onshore site is located within an area administered by CnES. Within the Planning Statement the proposed onshore development will be assessed against the Outer Hebrides Local Development Plan (OHLDP) (adopted November 2018).
- 2.3.4 The OHLDP provides planning policies and supplementary guidance, which outline the requirements for new developments for them to be considered acceptable and receive approval. The policy considered most relevant to the proposed onshore development is EI 8: Energy and Heat Resources as this provides detailed criteria for the development of wind farms and the associated infrastructure. There are also a number of additional policies within the OHLDP relating to the design and construction of the development, and concerning environmental considerations, including:
- DS 1: Development Strategy
  - PD 2: Car Parking and Roads Layout
  - PD 5: Open Space and Outdoor Sports Facilities
  - PD 6: Compatibility of Neighbouring Uses
  - ED 4: Fish Farming and Marine Planning
  - ED 5: Minerals
  - EI 1: Flooding
  - EI 2: Water and Waste Water
  - EI 3: Water Environment
  - EI 8: Energy and Heat Resources
  - EI 9: Transport Infrastructure
  - EI 11: Safeguarding
  - EI 12: Developer Contributions
  - NBH 1: Landscape
  - NBH 2: Natural Heritage
  - NBH 3: Trees and Woodland
  - NBH 4: Built Heritage
  - NBH 5: Archaeology

- EI 5: Soils
- EI 6: Coastal Erosion
- EI 7: Countryside and Coastal Access
- NBH 6: Historic Areas
- STY3: Development of Stornoway Port Area
- EI 8: Energy and Heat Resources
- EI 9: Transport Infrastructure

## 2.4 Relevant Legislation and Regulations Licenses

### The Town and Country Planning (Scotland) Act 1997

2.4.1 The Town and Country Planning (Scotland) Act 1997 is the primary legislation that establishes the legal framework for applying for, examining and determining applications for projects and infrastructure of this scale and complexity.

2.4.2 The key objectives of the Town and Country Planning Act (Scotland) 1997 are:

- Sustainable use of land;
- Promoting sustainable economic development;
- Encouraging regeneration; and
- Maintaining and enhancing heritage assets including those of a natural and cultural description.

### The Town and Country Planning (Pre-Application Consultation) (Scotland) Amendment Regulations 2021

2.4.3 These regulations set out the requirements for Pre-Application Consultation (PAC), specifically the requirement for a minimum of two public events spaced in excess of fourteen days apart.

### The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (EIA Regulations)

2.4.4 These regulations set out the provisions for EIA, how they should be applied to a proposed development and what information should be included. These regulations are applicable to the proposed onshore development.

## 2.5 Legislation Relevant to Nature Conservation

### Conservation of Habitats and Species Regulations 2017 (as amended) and Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

2.5.1 The European Union Council Habitats Directive (92/43/EEC) and elements of the Wild Birds Directive (2009/147/EC) led to the establishment of European sites for the conservation habitats and species and sets out how they should be protected. These directives are translated into specific legal obligations which cover the requirements for:

- Protecting sites that are internationally important for threatened habitats and species; and
- A legal framework for species requiring strict protection.

2.5.2 The 2017 regulations were amended due to the UK leaving the EU, but the amendments direct that the requirements of the Habitats and Bird Directives continue to be applied to ensure European sites are designated and protected.

### Wildlife and Countryside Act 1981

2.5.3 The Wildlife and Countryside Act 1981 provides the regulatory framework for:

- prohibiting certain methods of killing or taking wild animals;
- protecting certain mammals;
- restricting the introduction of certain animals and plants;
- the provision of laws relating to nature conservation, the countryside and National Parks and to make provision with respect to the Countryside Commission; and
- the provision of laws relating to public rights of way (including core paths).

## 3. Proposed Project Development Description

### 3.1 Introduction

- 3.1.1 This chapter outlines the elements of the Onshore Proposed Development and activities associated with construction, operation, maintenance (O&M) and decommissioning stages. At this stage design and final site locations are yet to be determined therefore this chapters sets out the parameters under which the scoping assessment has been made.
- 3.1.2 The final design to be presented in the ES will be informed by ongoing design studies, public consultation, stakeholder feedback, and baseline data collection. The appraisal of likely environmental impacts and the corresponding proposed methodologies in this Scoping Report have taken the indicative nature of the scoping layout into account and, where appropriate, worst-case assumptions have been made. Therefore, it is not expected that the outcomes of this scoping report will be significantly altered by design development. The final proposed design will be subsequently submitted in the planning application.
- 3.1.3 The Proposed Development will be located within the scoping boundary shown in Figure 1-1. The scoping boundary has been refined and determined by a series of investigations into feasible landfall locations, onshore cable corridors and locations of grid connection infrastructure. The Proposed Development Scoping Boundary has sought to minimise the length of the onshore underground cable (UGC) therefore reducing the length of trenching required, combine with other known developments in the area to limit disturbance and minimise the distance between the substation and grid connection infrastructure.

### 3.2 Site Selection

- 3.2.1 The next phase of onshore project development will involve the identification of potential sites and cable corridors within the red line boundary shown in Figure 1-1. Each of these sites and corridors will be subject to an optioneering process to identify a preferred site and cable route.
- 3.2.2 This process will involve desk-based assessment of Environmental, Engineering and Economic factors. Each of these factors will be given a rating or score in order to compare the different site and route options.
- 3.2.3 The aim of the site selection process is to identify a preferred site and cable route which has minimal environmental impacts and is technically and economically achievable and proportionate.
- 3.2.4 The site selection process and outcomes will be included within the ES.

### 3.3 Project Site and Location

- 3.3.1 The onshore Proposed Study Area (Figure 1-1) is located approximately 1.5km south-west of Stornoway (Isle of Lewis, Western Isles). The red line boundary encloses the search area within which the Developer seeks to identify a suitable site for the Proposed Development.
- 3.3.2 The study area predominately comprises of open moorland and grassland. The Landscape Character Type is identified as Boggy Moorland – Outer Hebrides by the NatureScot Landscape Character study (NatureScot 2019) (see Chapter 5 – Landscape and Visual for further detail).

### 3.4 Onshore Design Parameters and Components

- 3.4.1 The detail of the Proposed Development is currently being developed and therefore for the purposes of EIA scoping indicative layouts, platform sizes and building heights have been used (Figure 3-1). Where details are unknown at this stage a worst-case scenario has been used.

#### Landfall

- 3.4.2 Where the offshore export cable comes ashore this will most likely be installed using Horizontal Directional Drilling (HDD) across the intertidal zone. Other methods, like open-cut trenching, will also be considered.
- 3.4.3 A subsurface joint bay will be installed in close proximity to the landfall location to enable the joining of the offshore export cable with the onshore infrastructure (Figure 3-1).

#### Underground cables

- 3.4.4 Installation of a High Voltage Alternating Current (HVAC) UGC of approximately 5km between the landfall and new substation.
- 3.4.5 Installation of UGC between the new substation and grid connection point (SSEN HVDC converter station).

### **Substation**

- 3.4.6 Construction of a new substation with an indicative development area footprint of 120x140m (including buildings, roads, landscaping etc.) and a building height of 17m (assumed technical specification base on similar infrastructure).

### **Ancillary Works**

- 3.4.7 There are likely to be ancillary works required during the construction phase these may include:
- Vegetation clearance, temporary and permanent access, establishment of temporary site compounds; and
  - some road upgrades may be required including potential utility diversions. This will be determined and detailed as the project is further developed.
- 3.4.8 Full details of construction traffic and transport analysis, impacts and controls will be detailed in a Construction and Traffic Management Plan.

### **Construction Compounds**

- 3.4.9 Temporary Construction compounds will be required during the construction period. These will be located within the site boundary and will contain office and welfare facilities, parking, laydown areas and holding and servicing space for construction machinery.

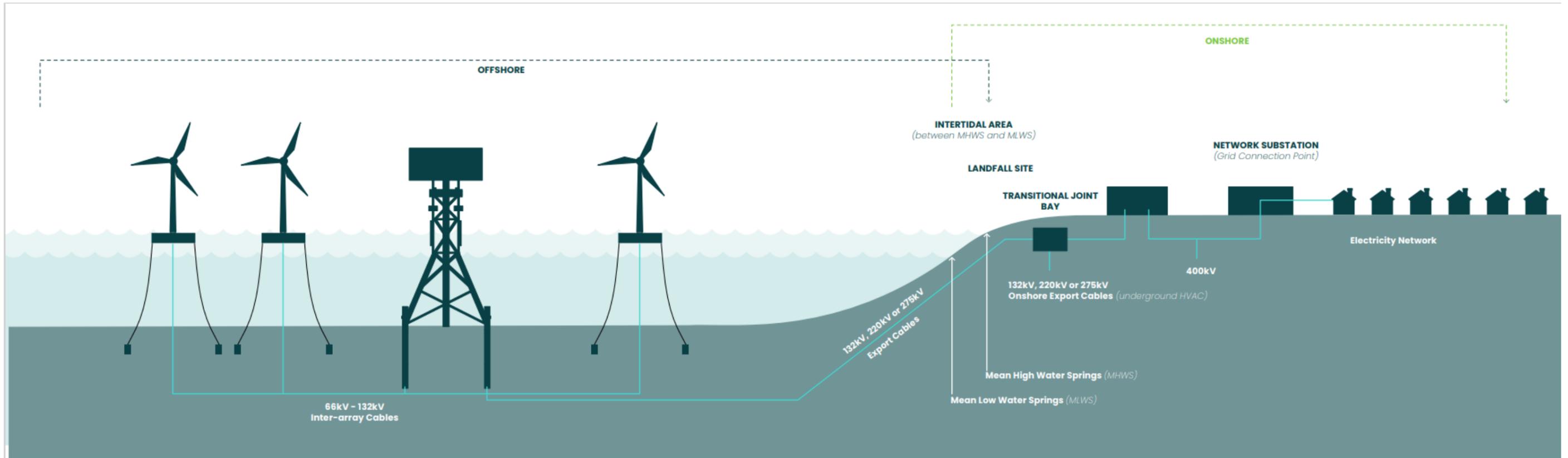


Figure 3-1 Indicative Onshore/Offshore layout and interface

## 3.5 Development Phases

### Construction

- 3.5.1 It is anticipated construction will commence in 2029 with expected completion in 2030.
- 3.5.2 A detailed construction phase plan will be developed as the design is progressed. Further information will be provided in the ES including an indicative construction programme.
- 3.5.3 Construction will be limited to daylight hours only. Working hours are likely to be between 07:00 and 19:00 on weekdays. Weekend working maybe required. Working hour assumptions and restrictions will be detailed in the EIA and agreed with CnES.
- 3.5.4 A Construction Environmental Management Plan (CEMP) will be prepared by the contractor to ensure that best practice is followed during all construction activities.

### Operation and Maintenance

- 3.5.5 The Project anticipates a lifetime of between 30 and 35 years, during this time the proposed onshore development will require operation and maintenance activities to take place over.
- 3.5.6 Following completion of construction, the substation would be monitored and operated remotely; however, access to the onshore infrastructure will be required for inspection and maintenance activities.

### Decommissioning

- 3.5.7 It is assumed that Construction Phase activities are representative of worst-case decommissioning effects.

## 4. Proposed EIA Methodology

### 4.1 Introduction

- 4.1.1 This chapter sets out the approach that will be taken to complete the EIA of the Proposed Development.
- 4.1.2 The ES will meet the requirements as set out in Schedule 4 of the EIA regulations (2017). It will also follow Institute of Environmental Management and Assessment (IEMA) best practices guidelines and meet the IEMA Quality Mark criteria. The ES will present the findings of the EIA for the Proposed Development informed by the Scoping Opinion provided by CnES, with the inclusion of responses obtained by CnES from the relevant statutory and non-statutory consultation bodies.
- 4.1.3 Each of the following technical chapters of this scoping report (Chapters 5 to 17) provides an overview of the specific EIA guidance and/or methodologies relevant to that topic.

### 4.2 Assessment Methodology

- 4.2.1 The assessment methodology proposed here has been informed by the 2018 EIA Handbook as far as is practicable. The 2018 Handbook together with professional judgement presents the best practice and robust methodology available in terms of assessing the significance of effects for EIA.
- 4.2.2 The methodology firstly assigns the importance of a feature or its sensitivity to change before determining the magnitude of impact a development could have on the significance of an environmental receptor. By combining the two, the significance of effects score is calculated. Effects can either be Significant or Not Significant under the EIA Regulations.

#### Sensitivity / Importance of Receptors

- 4.2.3 The sensitivity of the baseline conditions will be defined according to the relative importance of existing environmental features within or in the vicinity of the site, or by the sensitivity of receptors which would potentially be affected by the Proposed Development.
- 4.2.4 Criteria for the determination of sensitivity or of importance (e.g., international, national, regional or authority area) will be established based on prescribed guidance, legislation, and / or statutory designation. Where no published standards exist, the assessments presented in the technical chapters will describe the professional judgements (assumptions and value systems) that underpin the attribution of significance.

#### Magnitude of Change

- 4.2.5 The magnitude (scale) of change for each effect will be identified and predicted as a deviation from the baseline conditions, for the construction, operation and maintenance and decommission phases of the Proposed Development.
- 4.2.6 The scale of change will generally be assessed as either high, medium, low, or negligible and can be either adverse or beneficial. This assessment will take into consideration any legislative or policy standards or guidelines, and / or the following factors:
- The degree to which the environment is affected, e.g., whether the quality is enhanced or impaired;
  - The scale or degree of change from the existing situation;
  - Whether the effect is temporary or permanent, indirect or direct, short term, medium term or long term;
  - Any in-combination effects; and
  - Potential cumulative effects.
- 4.2.7 In some cases the likelihood of effect occurrence may also be relevant, where this is a determining feature of the assessment it will be clearly stated.

#### Evaluation of Effects

- 4.2.8 The final significance of effects score is generally calculated based on the matrix presented in Table 4-1; however, it must be noted that professional judgement should be applied at this stage.

Table 4-1 Matrix for determining the significance of effects

		Sensitivity / Importance of Receptor			
		High	Medium	Low	Negligible
Magnitude of Change / Effect	High	Major Significant	Moderate Significant	Minor Significant	Negligible Not Significant
	Medium	Moderate Significant	Moderate Significant	Minor Significant	Negligible Not Significant
	Low	Minor Significant	Minor Significant	Negligible Not Significant	Negligible Not Significant
	Negligible	Negligible Not Significant	Negligible Not Significant	Negligible Not Significant	Negligible Not Significant

- 4.2.9 Effects can be temporary or permanent, short term long term, reversible or irreversible. In accordance with the EIA Regulations, moderate to major effects are considered Significant in EIA terms, while negligible to minor effects are considered Not Significant in EIA terms.
- 4.2.10 In identifying the likely significant effects, an attempt is made to reduce the scope of the assessment process to the most important potential effects.
- 4.2.11 The significance of effect will vary according to the environmental factor under consideration and the context in which the assessment is made. It depends on the availability of data relating to existing environmental conditions (which is unlikely ever to be complete) and the value placed on those conditions. Any limitations identified when undertaking each technical assessment will be reported in the ES.

### 4.3 Application of a Proportionate EIA

- 4.3.1 It is widely recognised that delivering a proportionate EIA is key to ensuring that potential environmental effects are recognised, understood and effectively avoided, minimised or mitigated. Scoping plays an important role in achieving a proportionate EIA by identifying topics where there is potential for significant environmental effects and scoping out topics where negligible impact is expected. The EIA will follow best practice guidance for the technical topics to ensure relevant surveys and assessments are undertaken and these are reported in the ES to allow a clear understanding of potential impacts and required mitigations.

### 4.4 Characterisation of the Baseline Environment

- 4.4.1 A comprehensive evaluation of the existing environment in which the proposed onshore development will be located, will be undertaken to enable a robust assessment of the potential effects on receptors.
- 4.4.2 The baseline environmental receptors will be determined through a combination of desk-based studies, primary survey data and consultation.
- 4.4.3 Each of the technical chapters below sets out how the baseline environment will be characterised for that topic; including appropriate study areas.

### 4.5 Cumulative Impact Assessment

- 4.5.1 An assessment of cumulative effects will be undertaken for the proposed onshore development in line with Schedule 4 of the EIA Regulations. This will consider the potential for cumulative effects from this Proposed Development together with other existing and/or approved projects as well as projects that have submitted applications that are not yet consented, as per paragraph (5)(e) of Schedule 4.
- 4.5.2 Cumulative impact assessment is a key part of the EIA process and is concerned with identifying situations where a number of potential effects from separate projects could combine to cause a significant impact on a particular resource. Cumulative effects will be assessed within each technical discipline chapter, at a scale appropriate to that subject.
- 4.5.3 There are two aspects to Cumulative Effects, defined as follows:

**In-combination effects:** the combined effect of the Proposed Development together with other reasonably foreseeable developments (taking into consideration effects at the site preparation and earthworks, construction and operational and maintenance phases); and

**Effects interactions:** the combined or synergistic effects caused by the combination of a number of effects on a particular receptor (taking into consideration effects at the site preparation and earthworks, construction and operational and maintenance phases), which may collectively cause a more significant effect than individually. A theoretical example is the culmination of disturbance from dust, noise, vibration, artificial light, human presence and visual intrusion on sensitive fauna (e.g. certain bat species) adjacent to a construction site.

4.5.4 Of particular note to the cumulative impact assessment of the Onshore Proposed Development are:

**Scottish and Southern Electricity Networks (SSEN) Western Isles Connection Project**, High Voltage Direct Current (HVDC) Converter and Alternating Current (AC) substation – the SSEN development will provide the grid connection point for the proposed onshore development for Talisk OWF. The redline boundary study area of the proposed onshore development has therefore been located to take into account the proposed site of the SSEN development.

**Stornoway Deepwater Port** – As part of this development it is proposed to upgrade the single track Arnish Moor road from the A859 to Arnish Point (application yet to be determined – 24/00140/PPD submitted Apr 2024). The proposed upgrade will involve straightening and widening the road to double carriageway. As part of the upgrade there is an opportunity for cable ducts to be installed within the road to carry the UGC required for the Proposed onshore Development and SSEN’s Western Isles Connection Project.

**Northland Power, Spiorad na Mara (N4)** – The proposed wind farm is set in an area approximately 5–13 kilometres off the west coast of the Isle of Lewis. With a potential expected capacity of around 900MW. This project has a proposed landfall on the western coast of Lewis, an underground cable will connect a substation in the vicinity on the landfall with the grid connection point provided by the SSEN Western Isles Connection Project. The project development phase covers 2022–2027, an EIA scoping report was submitted in October 2023.

**Northland Power, Havbredey (N2)** – Located approximately 35km offshore, to the northeast of Lewis with a potential capacity of around 1,500MW. The project is in the early stages of development with an expected date for planning submission in 2027.

4.5.5 Within the ES the Onshore Proposed Development will be considered with regard to these additional developments to assess the potential for in-combination and effect interactions. A full list of other developments to be included in this assessment will be developed as part of the ES.

4.5.6 Additionally, the Proposed Onshore Development has dependencies on some of the above projects, i.e. the SSEN Western Isles Connection Project will provide the grid connection point for Talisk Offshore Windfarm.

## 5. Landscape and Visual Impact

### 5.1 Introduction

- 5.1.1 This Chapter identifies the landscape and visual receptors of relevance to the proposed onshore development and considers the potential effects arising from its construction, operation (including maintenance), and decommissioning. In lieu of detailed proposals, this Chapter focuses on the effects of an onshore HVAC UGC, a new substation, and UGC between the new substation and the SSEN Western Isles Connection Project (see section 3.4), assuming that this will occur within the Scoping Study Area (as outlined in Chapter 3).
- 5.1.2 In relation to the UGC, it is assumed that the majority of this UGC can be accommodated within the upgrades to Arnish Road proposed as part of the Stornoway Deep Water Port Upgrade which is separate from the potential development under consideration in this scoping report, and which will be complete prior to any construction associated with the proposed onshore development to which this chapter applies.
- 5.1.3 This Chapter provides an overview of the baseline landscape and visual environment, followed by a review of potential likely significant effects on relevant receptors that will need to be addressed as part of a Landscape and Visual Impact Assessment (LVIA). It also sets out the proposed approach to assessing these effects within an LVIA, and the topic specific criteria that will be adopted.
- 5.1.4 The approach adopted accords with the primary best practice guidance document for LVIA produced by the Landscape Institute (LI) and IEMA entitled 'Guidelines for Landscape and Visual Impact Assessment, Third Edition', 2013 (herein referred to as GLVIA3), and the subsequent LI Technical Guidance Note (TGN) 'Notes and Clarifications of Guidelines for LVIA Third Edition' (LITGN-2024-01).
- 5.1.5 Although closely linked, landscape and visual impacts are considered separately.
- 5.1.6 Landscape Impacts are concerned with the effects of a development proposal on the landscape as a resource in its own right and how it will affect the elements that make up the landscape, its aesthetic and perceptual qualities, and its distinctive character.
- 5.1.7 Visual Impacts are concerned with the effects of a development proposal on specific views and general visual amenity experienced by people. It is concerned with how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views due to the change or loss of existing elements of the landscape and/or introduction of new elements. Visual impacts may occur from visual obstruction (blocking of a view, be it full, partial or intermittent) or visual intrusion (interruption of a view without blocking).
- 5.1.8 This Chapter is supported by the following figures:
- Figure 5-1 a - Scoping Study Area – Ordnance Survey Basemap;
  - Figure 5-1 b - Scoping Study Area – Aerial Photography Background;
  - Figure 5-1 c - LVIA Scoping Study Area – Ordnance Survey Basemap;
  - Figure 5-1 d - LVIA Scoping Study Area – Aerial Photography Background;
  - Figure 5-1 - Indicative Zone of Theoretical Visibility;
  - Figure 5-2 - Visual Receptors;
  - Figure 5-3 - Landscape Character and Designations.
- 5.1.9 It is important to clarify the differences between this chapter and other chapters in this report, particularly Chapter 6 (Ecology and Ornithology) and Chapter 7 (Archaeology and Cultural Heritage). Where this Chapter recognises the presence of designated cultural heritage assets, this is in order to provide an indication of the value and quality of the wider landscape as well as an indication of areas from which visual receptors are potentially present and/or more sensitive to change. Similarly, whilst the LVIA recognises the presence of sites designated for nature conservation, this context is provided in order to communicate the natural attributes that contribute to the value and quality of the wider landscape.
- 5.1.10 Landscape and Visual impacts considered within this chapter are distinctly different from those considered in these other chapters, which are concerned specifically with the potential effect that a

change in the environment may have on the cultural heritage significance of heritage assets, and the effects on ecology receptors.

## 5.2 Study Area

- 5.2.1 With the intent that the focus of this scoping report remains proportionate to the identification of likely significant landscape and visual effects (as advocated in GLVIA3), an LVIA Scoping Study Area that extends to 3km in all directions from the Scoping Study Area outlined in Chapter 3 (illustrated in Figure 5-1 a and Figure 5-1 b) has been adopted. The LVIA Scoping Study Area is identified in the supporting Figure 5-1 c and Figure 5-1 d.
- 5.2.2 Beyond this distance, whilst the proposed onshore development has the potential to remain visible, due to the presence of other built forms (both existing and proposed), the increasingly distant and partial nature of visibility, and the degree to which the wider landscape and other more prominent visual features and characteristics prevail in their influence, the landscape and visual effects of the proposed onshore development are unlikely to be significant.
- 5.2.3 The LVIA Scoping Study Area is considered proportionate to the scale of the development proposed, and receptors to whom effects would be most notable.

## 5.3 Data Sources at Scoping

- 5.3.1 The data sources used to inform this LVIA Chapter of the Scoping Report are presented in Appendix A. These data sources will be taken forward and used to inform the EIA, alongside any additional site-specific data that is collected for the Project.

## 5.4 Description of Baseline Characteristics

### Current Baseline

- 5.4.1 An overview of the baseline landscape and visual environment is described in relation to the Scoping Study Area adopted and the wider LVIA Scoping Study Area (refer to Figure 5-1 c and d and Figure 5-1 respectively). It draws reference to landscape features and characteristics including its landform, drainage, vegetation, land use, built context, perceptual characteristics and qualities, landscape character types presented within published descriptions of character, landscape planning designations, views of recognised scenic value, and visual receptors (people) that may gain visibility of the proposed onshore development.
- 5.4.2 Applying the broad parameters of the above-ground elements of the proposed onshore development to all parts of the Scoping Study Area (with the exception of areas with notable topographical constraints), an indicative computer-generated Zone of Theoretical Visibility (ZTV) mapping has been produced (refer to Figure 5-1 and detail provided later in this Chapter). This ZTV map indicates those parts of the landscape where visibility of the proposed onshore development is theoretically possible based on it being located anywhere within the Scoping Study Area.
- 5.4.3 Whilst it is recognized that this ZTV will invariably over-emphasise the degree to which the proposed onshore development will be visible once it is located in a part of the landscape, for the purposes of this scoping study, it is useful in identifying where the proposed onshore development does not have the potential to be visible, in order to provide a focus on those landscape and visual receptors that have the potential to be influenced.
- 5.4.4 The level of detail provided is proportionate to this scoping stage and will be comprehensively analysed and presented at the EIA stage and will be based on the developed proposals. However, it is clear from the indicative ZTV, that theoretical visibility is likely to be relatively comprehensive within around 1km, beyond which theoretical visibility becomes patchier and more localised to specific locations.
- 5.4.5 The identification of landscape and visual receptors at the EIA stage will be informed by the developed proposals, and more specific ZTV maps, which will indicate those parts of the landscape where visibility of the proposed onshore development is theoretically possible.

### Landscape Elements and Character

- 5.4.6 The Scoping Study Area comprises an area of land to the southwest of Stornoway and west of Arnish Point. A large proportion plays host to open moorland, small lochans, and rocky outcrops that are typical of the island's wider context, albeit this landcover is influenced at a local level by large regular vegetative features

associated with Macaulay Farm, built form and road infrastructure and features such as Arnish Point Industrial Estate, Arnish lighthouse and Stornoway Deep Water Port (currently under construction). These features are further contrasted by the designed landscape qualities of Lews Castle and Lady Lever Park which fall partly within the northern part of the Scoping Study Area (refer to Figure 5-2).

- 5.4.7 With reference to the wider LVIA Scoping Study Area, the landscape within the central, western, and southern parts of the study comprises gently undulating peat moorland, becoming rockier and irregular towards the southern extents and coastal edge. This rockier landscape contains a myriad of small, medium, and large-sized lochans. These generally drain towards the coast, with the most notable watercourses being the River Creed, which flows west to east through the Scoping Study Area, flowing into the sea just north of the Stornoway Deep Water Port, Bayhead River which flows into Stornoway Harbour, and Laxdale River which flows into the sea north of Stornoway.
- 5.4.8 Vegetation cover in the form of woodland and trees is limited, albeit occasional areas of forestry, woodland, and small agricultural shelter planting are scattered across the landscape. The landscape elements that may be affected by the Project are likely to include rough grassland/peat moorland, crofting land, individual trees, plantation forestry and woodland.
- 5.4.9 The landscape of the LVIA Study Area is strongly influenced by its physical association with Stornoway Harbour and the town of Stornoway, an important port and administrative centre in the context of the Outer Hebrides. Stornoway has a rich heritage and is a hub of activity. In addition to the settlement, the port and marinas facilitate a variety of marine traffic, and Stornoway Airport provides a key access point to Lewis, Harris and the wider Outer Hebrides Archipelago.
- 5.4.10 The northern part of the Scoping Study Area (on the northwest side of Stornoway Harbour) contains Lews Castle and Lady Lever Park. The castle lies on a heavily wooded hillside and dominates views from Stornoway and is part of a Designed Victorian estate and parkland landscape that is distinctive in the context of the wider LVIA Study Area, given its contrast with the other characteristics and qualities of the landscape. Refer to Chapter 7 – Cultural heritage for further information.
- 5.4.11 Like many landscapes that are located in close proximity to an urban area, the landscape is influenced by built form and infrastructure associated with it. Within the LVIA Scoping Study Area, it is noted that there are numerous settlements and villages outwith the urban area of Stornoway, such as Sandwick, Newmarket and Steinis, albeit these are focused within the northern part of the LVIA Study Area, within a comparatively rural, part of the landscape within which grazing and agricultural land-uses are prevalent.
- 5.4.12 Settlements in the central, western and southern parts of the study area are much more limited, comprising clusters of properties, such as at Grimshader to the south, and Macauley Farm, interspersed within a comparatively moorland context. Whilst this part of the LVIA Scoping Study Area has a more natural character, it is influenced by road infrastructure, numerous wind turbines, regular banks of coniferous plantations, overhead electrical infrastructure, quarries (including Marybank Quarry and Lochs Road Quarry), and various built components such as Lochside Arena, Stornoway Substation, and Lewis Car Hub, which all adjoin the A859 near to Macaulay Farm.
- 5.4.13 In 2019, NatureScot published a digital map-based national Landscape Character Assessment (LCA) that illustrates broad areas of consistent and recognisable landscape character, referred to as Landscape Character Types (LCTs). This LCA supersedes previous national landscape character descriptions and mapping.
- 5.4.14 The descriptions of character and the areas they relate to are considered to be of a scale that is appropriate to the consideration of effects on landscape character posed by the proposed onshore development and will therefore be used as the basis of the identification of effects on landscape character. The following NatureScot LCTs are located within the LVIA Study Area, shown in Figure 5-3.
- LCT 317 – Gently Sloping Crofting
  - LCT322 – Boggy Moorland – Outer Hebrides
  - LCT323 – Rocky Moorland – Outer Hebrides
  - LCT324 – Cnoc and Lochan
- 5.4.15 The Scoping Study Area falls within LCT322 and LCT323, and as such, the effects of the proposed development on these areas of character would be direct. Concerning the other LCTs that fall within the wider LVIA scoping Study Area, effects have the potential to be indirect only, as a result of visibility of the development, and the resulting indirect influence it has on landscape character.

## Landscape Planning Designations

- 5.4.16 The Scoping Study Area and wider LVIA Study Area do not fall within any international, national or regional designated landscapes.
- 5.4.17 The Harris – Uig hills Wild Land Area (WLA), lies approximately 7km west of the study area. Whilst the WLA is a nationally important mapped interest that is recognised in NPF4 and regional planning policy, it is not considered that the effects of the proposed onshore development would be significant at this distance given the prevalence of other features, such as wind turbines, that are at closer proximity. It is therefore proposed the Harris – Uig hills WLA is scoped out of further assessment in the ES.
- 5.4.18 The most notable designation of relevance to the landscape assessment pertains to the Lews Castle and Lady Lever Park Garden and Designed Landscape (GDL), which has been selected for inclusion in the Inventory of Gardens and Designed Landscapes by Historic Environment Scotland (HES) (refer to Figure 5-3). Inventory status is a material consideration in the planning system, and the inclusion of the Lews Castle and Lady Lever Park GDL reflects its designed landscape qualities and its importance as part of Scotland's historic environment and landscape.
- 5.4.19 Whilst the impact of the proposed onshore development on the setting and significance of the GDL forms part of the Archaeology and Cultural Heritage assessment, its character, value, and quality, together with its contribution to wider landscape character, is recognised. Likewise, the contribution of the Lews Castle and Lady Lever Park GDL to views, and indeed the presence of sensitive visual receptors is recognised as being of relevance to the visual assessment.

## Visual Receptors

- 5.4.20 Visual receptors are people who are likely to obtain views of the proposed onshore development. They will inherently differ in their sensitivity but will include those travelling along routes through the landscape, those within settlements and homes, and those at points of interest or visitor attractions.
- 5.4.21 Based on developed proposals, the identification of visual receptors at the EIA stage will be informed by computer-generated ZTV mapping, which will indicate those parts of the landscape where visibility of the proposed onshore development is theoretically possible. In lieu of a detailed understanding of where the proposed onshore development would be located, the indicative ZTV included in Figure 5-1 highlights locations where views may be possible and allows an initial consideration of visual receptors who have the potential to experience changes to their view.
- 5.4.22 The landscape of the LVIA Scoping Study Area contains sensitive visual receptors, and given the relatively open and elevated character of parts of this landscape, there are likely to be proximate and more distant locations from which visual receptors are likely to obtain views of the proposed onshore development.
- 5.4.23 Concentrations of people are present in Stornoway and the associated outlying settlements such as Sandwick, Newmarket and Steinis. The wider urban area includes locations that are more closely associated with the historic core of the town and key civic spaces, as well as locations that fall within the more suburban context, and areas that host industrial/commercial uses. Whilst the ZTV indicates that visibility may be restricted from large parts of the urban area, it is clear in showing that there may be visibility from certain locations.
- 5.4.24 Residential receptors are scattered throughout the landscape, either in more isolated farm contexts, or linear development adjoining minor roads throughout the landscape. In the context of the Scoping Study Area, the proximate residential receptors at Macauley Farm are noted.
- 5.4.25 Transitory visual receptors are likely to include motorists on the A857, A859 and A866, the main routes within this part of the Isle of Lewis that link across between the west and east coasts. It may also include those on the B897 which lies within the southern part of the LVIA Scoping Study Area, and the numerous minor roads that traverse the wider landscape. Arnish Road is a notable minor road that travels through the Scoping Study Area towards Arnish Point.
- 5.4.26 The Ullapool to Stornoway ferry route enters the southeast corner of the LVIA Study Area, as it approaches Stornoway, and there are likely to be visual receptors within ferries and other marine vessels that may obtain views of the development. Likewise, those arriving at Stornoway Airport are likely to obtain views over the site on approach and take off.
- 5.4.27 The Hebridean Way walking route is the only long-distance route within the LVIA Study Area. Stage 12: Balallan to Stornoway, approaches Stornoway from the west, and lies within approximately 1.5km to the northwest of the Study Area. The ZTV suggests that much of this route falls outwith the ZTV pattern.

- 5.4.28 There are numerous Core Paths within the grounds of Lews Castle, comprising Lews Castle and Lady Lever Park GDL. Patrons to the GDL and users of the network of core paths will need to be considered, as well as high points from where views over the wider landscape are possible, including the summit of Cnoc Croich.
- 5.4.29 There are numerous recreational locations within the LVIA Scoping Study Area. Whilst set within a relatively wooded environment, it is noted that the Raon Goilf Golf Course may offer the potential for views, as well as the Lewis Car Club track, which adjoins the Scoping Study Area to the west.
- 5.4.30 The LVIA Scoping Study Area contains numerous cultural sites and visitor attractions where visual receptors are attuned to changes in views. This includes locations such as the Bonnie Prince Charlie Monument (south of Arnish Point Industrial Estate), Arnish lighthouse, the Lolaire Memorial (north of Stornoway Harbour), and the Isle of Lewis 1st World War Memorial (refer to Figure 5-2). A further review of such locations will be undertaken at the EIA stage.

#### **Preliminary representative viewpoint locations**

- 5.4.31 The LVIA will be structured around a series of representative viewpoint locations located within the public domain. As the location for the proposed onshore development has not been defined at this stage, it is proposed that representative viewpoints be selected and agreed upon during further consultation with NatureScot and CnES as part of the EIA process.
- 5.4.32 The viewpoint locations will be informed by a detailed ZTV analysis and will aim to be comprehensive in communicating the variable nature of the visual effects experienced by visual receptors in the landscape, whilst also considering the representation of different landscape character receptors.

#### **Designated Sites**

- 5.4.33 As stated previously, the Scoping Study Area and wider LVIA Scoping Study Area do not fall within any international, national or regional designated landscapes. Whilst the presence of the Lews Castle and Lady Lever Park GDL is acknowledged, the impact of the proposed onshore development on the setting and significance of the GDL forms part of the Archaeology and Cultural Heritage assessment.

### **5.5 Embedded Mitigation and Design Assumptions**

- 5.5.1 No detailed proposals have been developed on which to definitively identify and outline mitigation measures at this stage. The following features could be included in the detailed design as embedded mitigation to reduce the impact on Landscape and Visual receptors:
- The siting, layout and scale of the proposals informed (amongst other factors) by the landscape and visual sensitivities of the environment, considering any developments (such as the aforementioned Western Isles Connection Project) that may come forward.
  - Adoption of a recessive colour that will help to moderate its influence on the character of the landscape, and on views of it. Colour references should be drawn from the natural environment considering the rich variety of colours present through the seasons. Any colour selected will seek to be compatible with this seasonal change, mindful of where the proposed development will be visible from, and against what backdrop.
  - Incorporation of landscape treatments such as earth bunding and planting to moderate the influence of the development on landscape character and visual receptors.
  - Adoption of modern technological solutions to minimise light spillage and include motion sensor technology to provide the required security and operative lighting during hours of darkness.



## Talisk Scoping

### Scoping Study Area Ordnance Survey Basemap

#### Legend

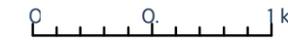
Scoping Study



#### Notes

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Projection: BNG



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**Figure 5.1a**

Figure 5-1 a Scoping Study Area - Ordnance Survey Basemap



**Talisk  
Scoping**

**Scoping Study Area  
Aerial Photography Background**

**Legend**

 Scoping Study



**Notes**  
Source: Esri, Maxar, Geographics, and the GIS Community

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**Figure 5.1b**

Figure 5-1 b Scoping Study Area – Aerial Photography Background



**Talisk**  
Scoping Report

**LVIA Scoping Study Area**  
Ordnance Survey Basemap

**Legend**

- Scoping Study Area
- 3km LVIA Scoping Study Area

**Notes**

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Datum: OSGB36  
Projection: BNG

0 0.7 1.4 km

0 0.35 0.7 nm

Scale: 1:35,000 @A3 Date: 2024-10-04 Drawn by: LD Checked by: MS Approved by: RB

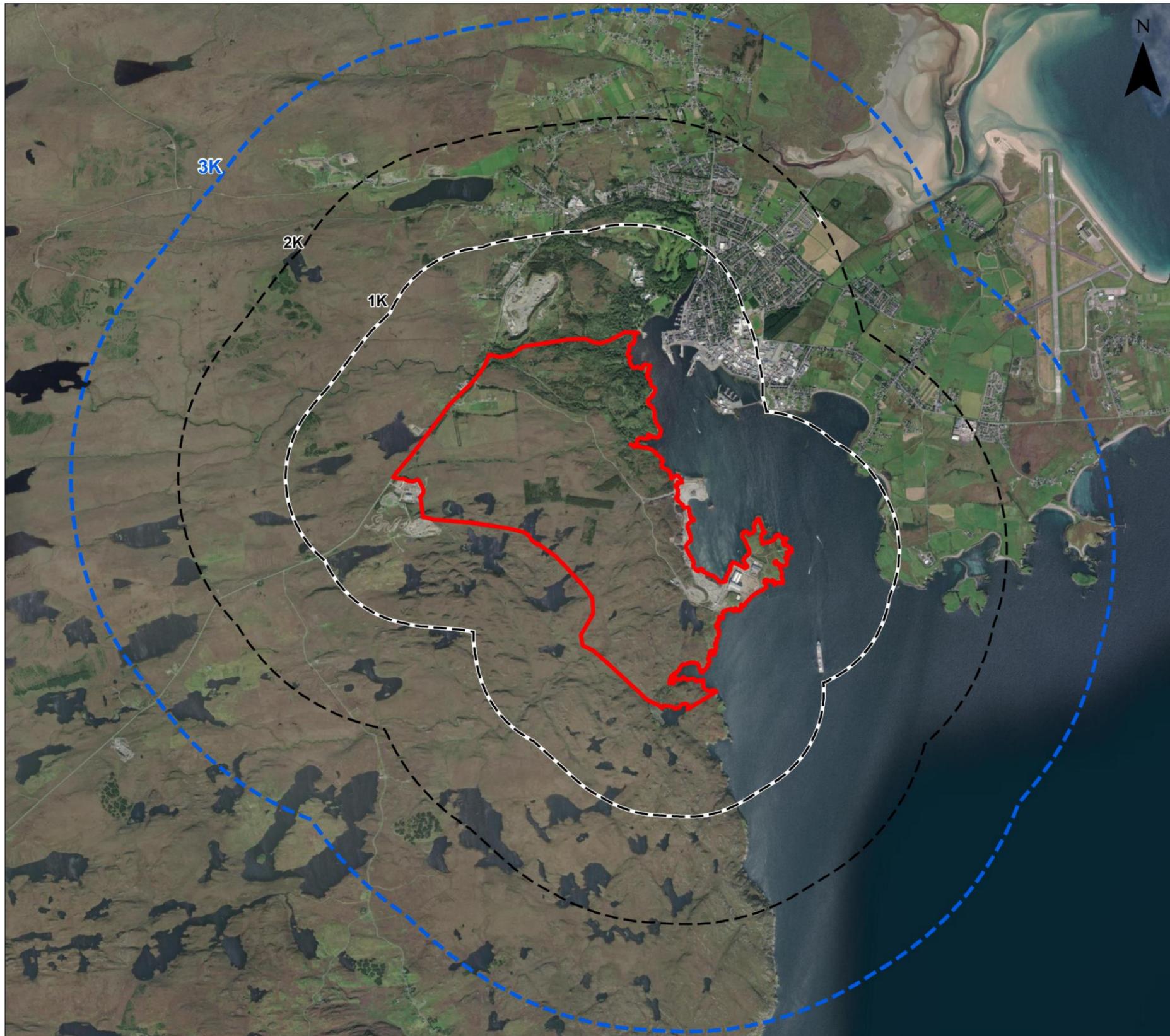
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**Figure 5.1c**

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Figure 5-1c LVIA Scoping Study Area - Ordnance Survey Basemap



**Talisk**  
Scoping Report

**LVIA Scoping Study Area**  
Aerial Photography Background

**Legend**

- Scoping Study Area
- 3km LVIA Scoping Study Area



**Notes**  
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Datum: OSG836  
Projection: BNG

0 0.7 1.4 km

0 0.35 0.7 nm

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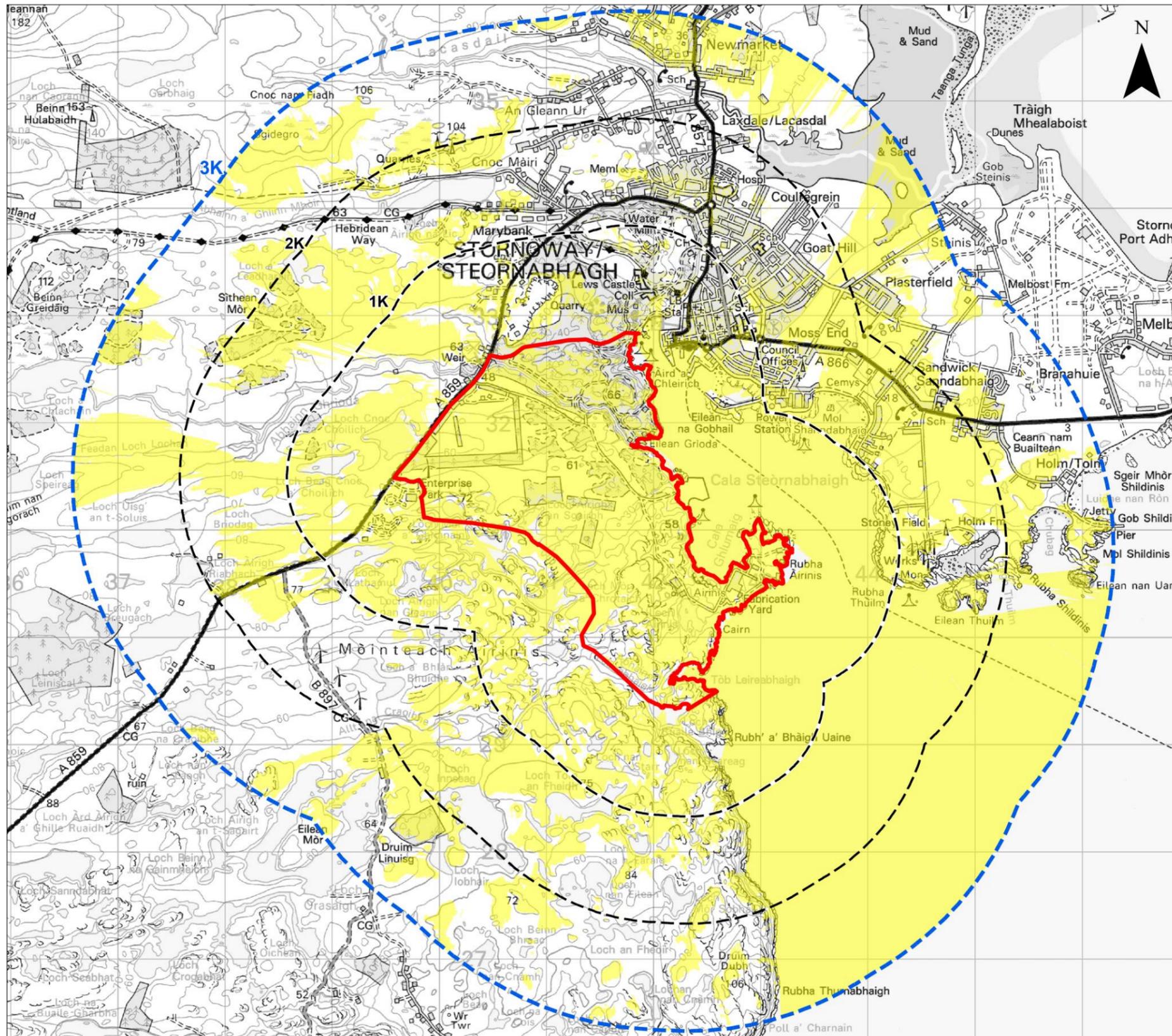
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**Figure 5.1d**

Figure 5-1 d LVIA Scoping Study Area – Aerial Photography Background



**Talisk**  
Scoping Report

**Indicative Zone of Theoretical Visibility**

**Legend**

- Scoping Study Area
- 3km LVIA Scoping Study Area
- Theoretical visibility based on the parameters of the Proposed (above ground) Onshore Development applied to the entire Scoping Study Area



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This ZTV map has been calculated using a Digital Surface Model (DSM) and takes into account the existing screening. Observer eye

Datum: OSGB36  
Projection: BNG

0 0.7 1.4 km

0 0.35 0.7 nm

Scale	Date	Drawn by	Checked by	Approved by
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**Figure 5.2**

Figure 5-1 Indicative Zone of Theoretical Visibility

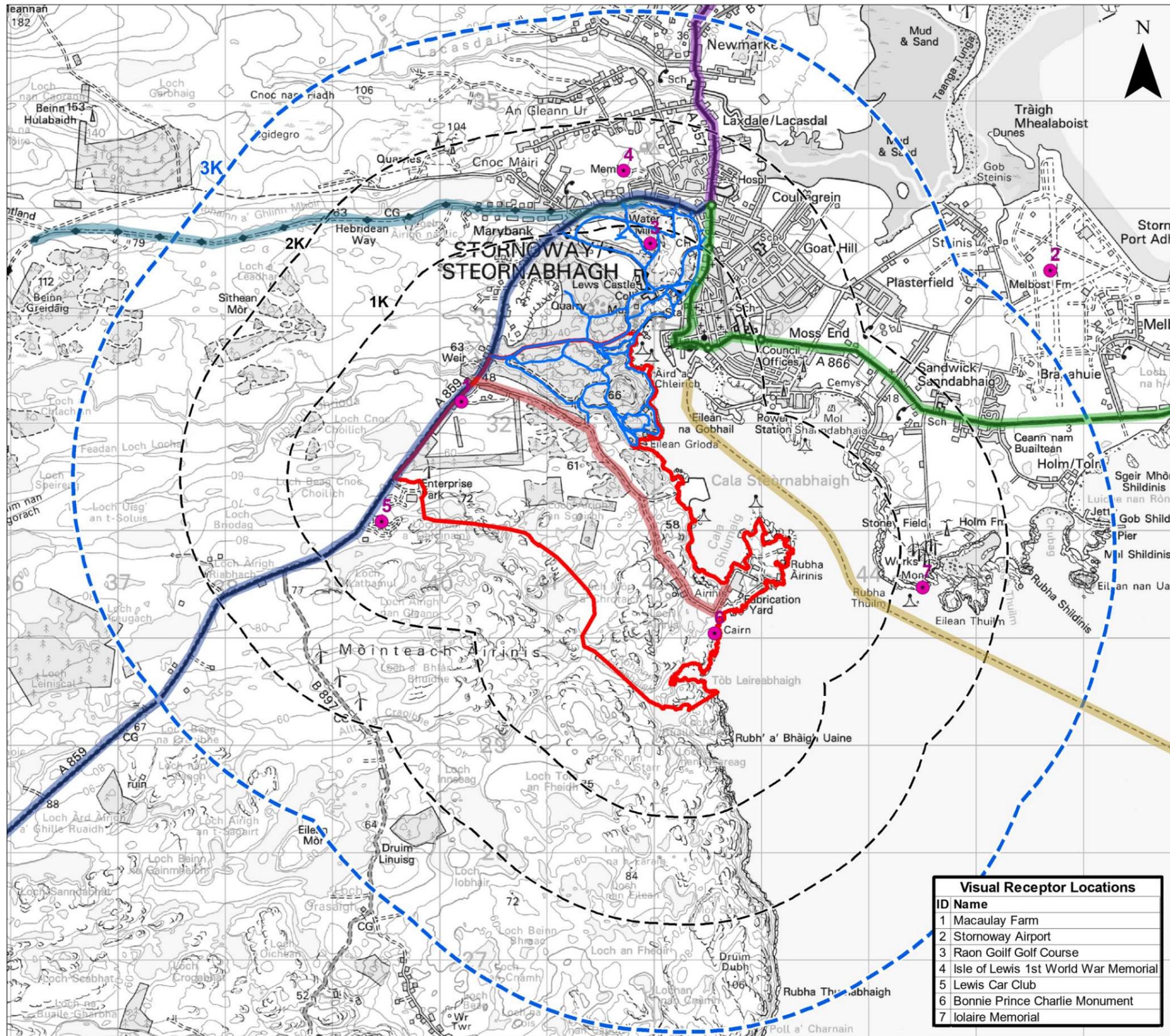


Figure 5-2 Visual Receptors

**Talisk**  
Scoping Report

**Visual Receptors**

**Legend**

- Scoping Study Area
  - 3km LVIA Scoping Study Area
  - Core Paths
  - Visual Receptor Locations
- Visual Receptors - Routes
- A857
  - A859
  - A866
  - Arnish Road
  - Ullapool to Stornoway ferry route
  - Hebridean Way walking route



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0 0.7 1.4 km

0 0.35 0.7 nm

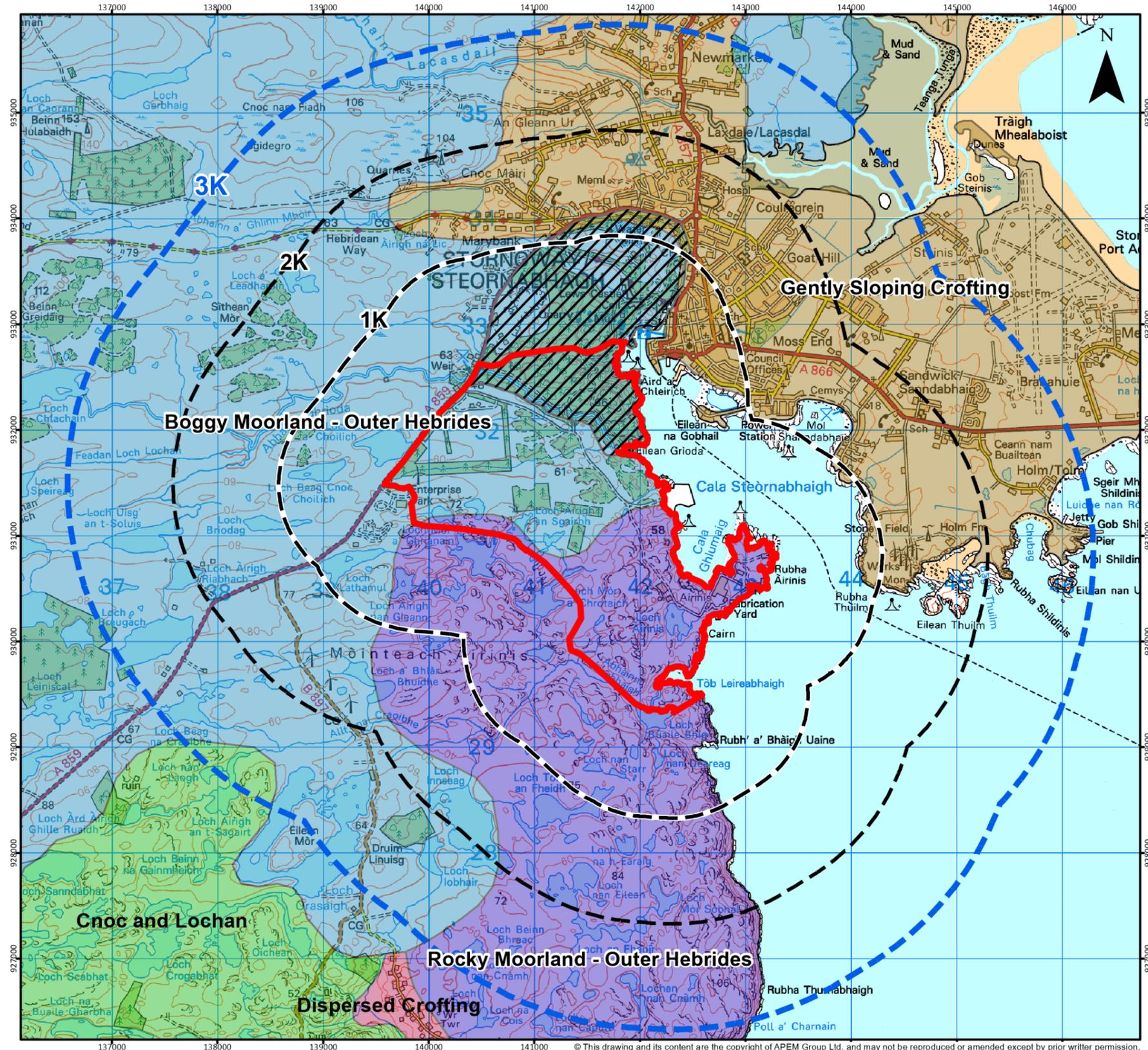
Scale: 1:35,000 @A3 Date: 2024-10-04 Drawn by: LD Checked by: MS Approved by: RB

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Figure 5.3

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**APEM Group**

**Magnora Talisk Onshore**

**Landscape Character and Designations**

**Legend**

- Scoping Study Area
- 3km LVIA Scoping Study Area
- Garden and Designed Landscape  
Lews Castle And Lady Lever Park

**Landscape Character Types**

- LCT 317 Gently Sloping Crofting
- LCT 319 Dispersed Crofting
- LCT 322 Boggy Moorland - Outer Hebrides
- LCT 323 Rocky Moorland - Outer Hebrides
- LCT 324 Cnoc and Lochan



**Notes**

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D18 E440  
www.macroworks.ie  
+353 (0) 1 230 3585



**Figure 5.4**

Figure 5-3 Landscape Character Designations

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## 5.6 Likely Significant Effects

### Project Specific Impacts Scoped In

5.6.1 Table 5-1 presents the impacts scoped into the Landscape and Visual Impact Assessment.

Table 5-1 Potential Impacts scoped into the Landscape and Visual Impact Assessment

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
Impact on landscape features.	Potential for short-term and long-term permanent impacts on landscape features.	Desk and field-based assessment, and other surveys pertaining to landcover and vegetation.	Construction O&M Decommissioning	HVAC UGC, UGC between the new substation and the SSEN HVDC converter station, and all above ground infrastructure.
Impact (daytime) on landscape character.	Potential for short-term, temporary impacts on perceived landscape character of LCTs as a result of construction activities and structures, and long-term impacts as a result of the presence of above ground infrastructure.	Desk and field-based assessment. To be informed by ZTV and visualisations.	Construction O&M Decommissioning	HVAC UGC, UGC between the new substation and the SSEN HVDC converter station, and all above ground infrastructure.
Impact (daytime) on visual receptors and views.	Potential for short-term, temporary impacts on views and visual amenity, arising from views of construction activities and structures, and long-term impacts arising from views of above ground infrastructure. Assessed in relation to representative viewpoints.	Desk and field-based assessment. To be informed by ZTV and visualisations.	Construction O&M Decommissioning	HVAC UGC, UGC between the new substation and the SSEN HVDC converter station, and all above ground infrastructure.
Cumulative impact (daytime) on landscape character.	Potential for cumulative short-term impacts on landscape character of LCTs as a result of construction activities and structures, and long-term impacts as a result of the presence of above ground infrastructure, when considered together with other existing, under construction or consented stage developments.	Desk and field-based assessment. To be informed by cumulative ZTV.	Construction O&M Decommissioning	HVAC UGC, UGC between the new substation and the SSEN HVDC converter station, and all above ground infrastructure.
Cumulative Impact (daytime) on visual receptors and views.	Potential for cumulative short-term impacts on views and visual amenity as a result of construction activities and structures and long-term impacts as a result of the presence of above ground infrastructure, when considered together with other existing, under construction or consented stage developments.	Desk and field-based assessment. To be informed by cumulative ZTV.	Commissioning O&M Decommissioning	HVAC UGC, UGC between the new substation and the SSEN HVDC converter station, and all above ground infrastructure.

## Project Specific Impacts Scoped Out

5.6.2 Table 5-2 presents the impacts proposed to be scoped out and the justification.

Table 5-2 Impacts proposed to be scoped out of Landscape and Visual Impact Assessment

Impact	Justification	Relevant Development Stage
Landscape and visual impacts of the Proposed onshore development outside the proposed LVIA Study Area..	The LVIA Study Area is defined to an outer limit of 3km beyond which the development parameters are not considered to have potential to generate significant landscape or visual effects given the landscape context and the degree to which any new built form would be visible.	Construction O&M Decommissioning
Impacts (night-time) of lighting on landscape character and visual receptors and views.	The influence of construction lighting would be short term and temporary, and subject to control measures.	Construction Decommissioning
Impacts (night-time) of lighting on landscape character and visual receptors and views.	Lighting would be limited to controlled operational and security lighting with minimal light spillage that will function for short periods in the event of infrequent maintenance or unplanned visits by operators. As such lighting is unlikely to give rise to significant effects. This assumption will be kept under review during the EIA process.	O&M

## 5.7 Approach to EIA

### Relevant Guidance

5.7.1 The following policy, legislation and guidance will be taken into consideration during the LVIA and is widely recognised and used by landscape professionals in undertaking LVIA work.

- European Landscape Convention (ELC);
- National Planning Framework 4 (NPF4);
- Directive 2014/52/EU (2014). The assessment of the effects of certain public and private projects on the environment. Official Journal of the European Union
- Scottish Statutory Instrument 2017/102 (2017). Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. Scottish Parliament.
- Outer Hebrides Local Development Plan (OHLDP) 2018;
- Carys Swanwick Department of Landscape University of Sheffield and Land Use Consultants for The Countryside Agency and NatureScot (2002). Landscape Character Assessment Guidance for England and Scotland;
- Landscape Institute with the Institute of Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment. Third edition;
- 'Notes and Clarifications of Guidelines for LVIA Third Edition' (LITGN-2024-01);
- Landscape Institute GLVIA3 Statement of Clarification 1/13 – Significance. Landscape Institute 10-06-13
- Landscape Institute (2019). Visual representation of Development Proposals: Landscape Institute Technical Guidance Note 06/19;
- Landscape Institute (2021). Assessing landscape value outside national designations; Technical Guidance Note 02/21;
- Landscape Institute (2017) Technical Information Note 01/17 – 'Tranquility – An Overview'; and
- Scottish Government (2022). Guidance for applicants on using the design envelope for applications under section 36 of the Electricity Act 1989.

## Anticipated Additional Data Sources at EIA

- 5.7.2 At EIA, based on developed proposals, the LVIA will be informed by a combination of a desk-based review of the data sources identified, a site visit to the site and the wider LVIA Study area, and by the preparation and interrogation of visualisations produced for a series of representative viewpoints.
- 5.7.3 The focus of this work will be informed by computer-generated ZTV mapping that indicates those parts of the landscape where visibility of the proposed onshore development is theoretically possible. Being based on Ordnance Survey Digital Terrain Model (DTM) information only, the ZTV map will not factor in features such as trees, hedges or buildings, which in reality may act to screen views or limit them significantly. The main value of this 'bare-earth' ZTV is to determine where in the landscape the proposed development will not be visible, to enable a focus to be placed on those parts of the landscape where it may be. In addition to the 'bare-earth' ZTV, a 'screened' ZTV may be produced which incorporates Scottish Remote Sensing Portal Light Detection and Ranging (LiDAR) datasets, to indicate the influence of vegetation and built form present in the wider landscape on visibility.
- 5.7.4 ZTV mapping is acknowledged to have limitations. ZTVs assume that climatic visibility is 100%, with mist, fog, rain, and snow all being common weather occurrences in this locality that would regularly restrict or influence visibility. They also do not reflect the 'degree' to which the development may be visible or noticeable, with this being an incrementally more significant factor with distance. In using LiDAR data, it is acknowledged that this publicly available data may not be up-to-date and may not reflect minor changes that have occurred in the landscape since it was obtained. However, any ZTV mapping will provide a tool by which to focus on those landscape and visual receptors that may be influenced by the proposals.
- 5.7.5 In addition to the desk-based work, the LVIA will be supported by a site visit that will enable the authors to verify the ZTV analysis and gain a full appreciation of the landscape and visual environment and the nature of any potential visibility towards the proposed onshore development from locations in the wider landscape.
- 5.7.6 During this site visit, all parts of the landscape within the LVIA Study Area will be explored, with a focus on those locations which are afforded potential visibility. Panoramic baseline photography will be undertaken from representative locations in the landscape to communicate the nature of the existing landscape and views experienced towards the site. These locations will be agreed in advance of a site visit.
- 5.7.7 The timing of the site visit will be coordinated alongside the project programme and consultation and will be subject to logistical constraints in terms of weather and travel. In identifying viewpoint locations, consideration will be given to the potential screening influence of trees and vegetation in the landscape, and the potential for increased visibility as a result of seasonal leaf drop. In the context of this landscape, open moorland and coniferous plantations will not notably influence the degree of seasonal visibility. Whilst change in the landscape will occur as a result of leaf drop, it is considered that representative locations can be identified that will not notably change in terms of the degree of potential visibility as a result of seasonal change. For assessment purposes, professional judgement will be used to outline the likely seasonal changes that would occur to visibility, to inform the assessment.
- 5.7.8 Following the site visit, visualisations will be prepared in accordance with the Landscape Institute (2019) Visual Representation of Development Proposals (TGN 06/19). The visualisations will provide a 'photo-real' depiction of the scheme within the view utilising a rendered three-dimensional model of the development, which has been geo-referenced to allow accurate placement and scale.

## Consultation

- 5.7.9 Subject to any matters raised in response to this Scoping Report, the LVIA will be informed by topic-specific consultations with key stakeholders, including NatureScot and CnES. Information will be gathered on particular sensitivities or receptors to consider, and agreement will be sought on representative viewpoints.

## Assessment Methodology

- 5.7.10 The LVIA will adopt a topic-specific methodology that is founded in best practice guidance GLVIA3 (Landscape Institute, 2013). GLVIA3 establishes guidelines and not a specific methodology, stating:  
*"This edition concentrates on principles and processes. It does not provide a detailed or formulaic 'recipe' that can be followed in every situation – it remains the responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand."*

- 5.7.11 The LVIA Methodology and assessment criteria outlined has been used to assess the landscape and visual effects of numerous onshore development proposals in similar contexts and are considered appropriate and fit for purpose. It can be summarised as undertaking the following key tasks:
- Desk study and site visits;
  - Defining the Baseline Landscape setting and conditions;
  - Identification and Evaluation of key components of the proposed development;
  - Consideration of Mitigation Measures;
  - Assessment of Landscape Effects;
  - Assessment of Visual Effects; and
  - Assessment of Cumulative Effects.
- 5.7.12 Assessment and identification of significant effects for Landscape and Visual Impact will follow the approach set out in Section 4.2.

### Visual Material and Photography

- 5.7.13 Visual material and photography will be undertaken with reference to LITGN 06/19, guidance which advocates proportionality regarding the production of technical LVIA visual material and appropriate levels of accuracy. Photography will be taken to a very high standard, with a full-frame sensor camera and 50mm fixed lens mounted on a tripod with a panoramic head.
- 5.7.14 LITGN 06/19 refers to different 'types' of visualisations, based on the anticipated purpose and users of the visual material, the anticipated level of effect and other relevant factors. With the purpose of the visual material being to accompany a planning application, the production of visual material will follow an accurate and verifiable process to communicate the scale, appearance, context, form, and extent of development, consistent with Type 3 and 4 in the guidance.
- 5.7.15 Visualisations will be presented without planting mitigation and (if relevant) with planting mitigation after a 15-year establishment period, assuming conservative growth rates and local growing conditions.
- 5.7.16 Whilst every effort will be made to ensure photography is taken in optimal weather conditions, given the extent of the study area, the logistics involved in a site visit to the Isle of Lewis and the changeable nature of weather conditions, photography will be captured during periods of high visibility, such that photography captures landscape context.
- 5.7.17 Locational information will be obtained via GPS equipment that affords a high degree of locational accuracy (under 1m).

## 5.8 Scoping Questions

- 5.8.1 The following scoping questions refer to the Landscape and Visual Impact chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

Do you agree with the data sources and site visit approach listed in Appendix A, and any additional anticipated data listed in Section 5.7, being used to inform the LVIA baseline?

Are there additional sources of information which should inform the baseline and assessment of potential effects on landscape/coastal/seascape character and designated landscapes?

Do you agree with the study area proposed to assess effects on landscape and visual receptors?

Do you agree that the landscape receptors related to the assessment of effects on landscape features and landscape character have been identified?

Do you agree that key visual receptors related to the assessment of effects on views and visual amenity have been identified?

Do consultees have any comments/suggestions on the proposed list of locations identified Section 5.4 that will be used as the basis of the identification of representative viewpoint locations?

Do you agree that all potential likely significant effects have been identified for the LVIA?

Do you agree with the Project impacts which have been scoped out of the LVIA?

Do you agree with the scoping in and out of impacts related to the LVIA?

Do you agree with the approach to cumulative assessment that will be used to assess cumulative effects on landscape and visual receptors?

Do you agree with the proposed assessment methodology related to the LVIA?

## 6. Ecology and Ornithology

### 6.1 Introduction

- 6.1.1 This chapter sets out the ecology and ornithology baseline conditions, the proposed surveys required to update the baseline conditions and the proposed approach to assessment of potential impacts on ecology and ornithology receptors within the EIA for the proposed onshore development.
- 6.1.2 Within this chapter are detailed ecological and ornithological records, a range of published available data and their interpretation to establish the existing baseline conditions, data gaps and further surveys required in order to undertake a robust impact assessment.
- 6.1.3 Records have been collected from national bodies, governmental organisations and local record centres. These records, along with aerial imagery, have been used to inform the further surveys required (where appropriate) and potential impacts on designated sites, habitats and species populations resulting from the proposed onshore development. No fieldwork has been undertaken to inform the Scoping Report.

### 6.2 Study Area

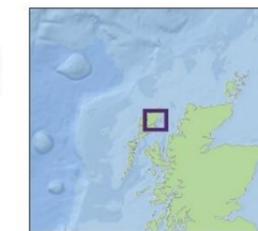
- 6.2.1 The Ecological Study Area is a 5km buffer of the Proposed Study Area and is based on the likely Zone of Influence of the proposed onshore development; it covers designated sites, habitats, and protected species populations (Figure 6-1). This encompasses all land associated with the proposed onshore development above Mean Low Water Springs (MLWS), including the potential landfall site, cable route and substation footprints collectively. Where potential connectivity to the Proposed Study Area exists, buffers may be extended beyond 5km.
- 6.2.2 The Ornithology Study Area is a 2km buffer of the Proposed Study Area and is based on the likely Zone of Influence of the proposed onshore development in relation to avian receptors disturbance distances (Goodship and Furness, 2022). In addition, a wider search for Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Ramsar sites and Sites of Special Scientific Interest (SSSIs) within 10km (extended to 20km for geese) has been undertaken to determine designated sites with potential functional linkage to the Ornithology Study Area (Figure 6-1).

**Talisk**  
Scoping Report

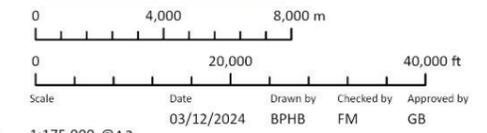
**Study Areas and  
Designated Sites**

**Legend**

-  Onshore Scoping Boundary
-  Ornithology Study Area (2km Buffer)
-  Ecological Study Area (5km Buffer)
-  10km Buffer from Onshore Scoping Boundary
-  20km Buffer from Onshore Scoping Boundary
-  Site of Special Scientific Interest (SSSI)
-  Special Area of Conservation (SAC)
-  Special Protection Area (SPA)
-  Ramsar Site



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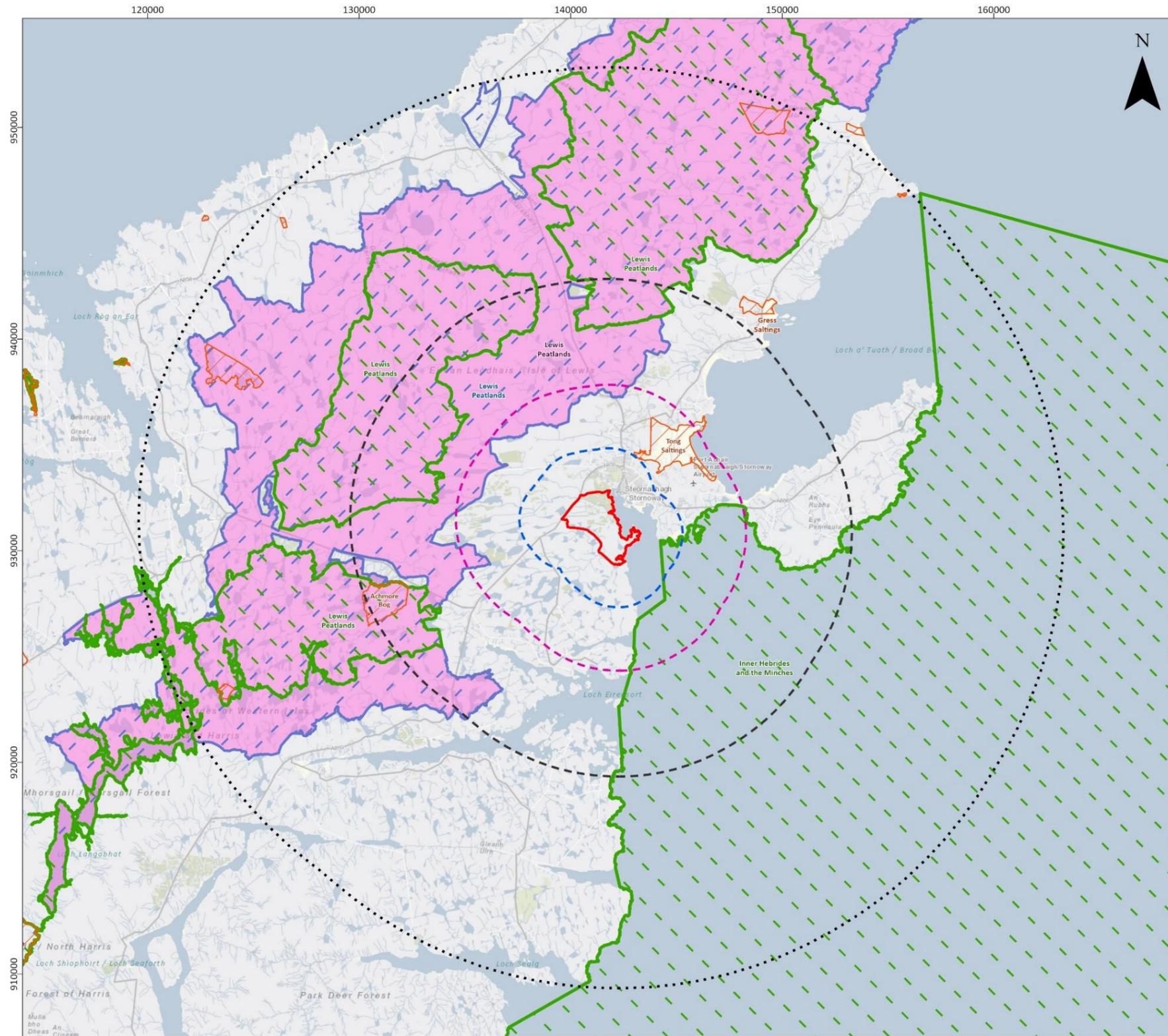


Figure Reference: Talisk\_Fig6.1\_DesignationSites\_v1

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Figure 6-1 Ecology and Ornithology Study Areas and Designated Sites

## 6.3 Data Sources at Scoping

- 6.3.1 Appendix A lists the data sources used to inform this ecology and ornithology scoping chapter. In addition, requests for data from the Outer Hebrides Biological Recording group were submitted, but no response has been received at the time of writing.
- 6.3.2 A data request was submitted to the Royal Society for the Protection of Birds (RSPB) for records of breeding or roosting birds within the Ornithology Study Area. Additionally, ornithology surveys within the Ornithology Study Area have been undertaken on behalf of SSEN for the Harris to Stornoway 132 kV overhead line (OHL) Replacement EIA and the resultant EIA Report (which is in the public domain) is included as a data source in Appendix A.

## 6.4 Description of Baseline Characteristics

### Current Baseline

- 6.4.1 An initial desk-based study was undertaken to establish the ecology and ornithology baseline, including a search for any designated sites with relevant ecological and/or ornithological features with potential connectivity to the proposed onshore development. In addition, the data outlined in Appendix A were used to inform this assessment.
- 6.4.2 To date, no surveys have been undertaken. The baseline will be updated through additional desk study and field surveys to inform the EIA.

### Ecological Baseline

- 6.4.3 The 5km buffer used for the ecological desk study includes the following designated sites: Lewis Peatlands Ramsar, Inner Hebrides and the Minches Special Area of Conservation (SAC), and North-east Lewis Marine Protected Area (MPA). Inner Hebrides and the Minches SAC and North-east Lewis MPA are designated for the protection of marine species and habitats and are therefore screened out as part of the onshore desk study. Lewis Peatlands Ramsar site is designated for its blanket bog and may have connectivity to the Study Area. Figure 6-1 presents the Designated Sites relevant to the Ecological and Ornithological Study Areas.
- 6.4.4 The Ecological Study Area is characterized by heath or peatland habitat, a majority of which is classified as Class 1 on the Carbon and Peatland 2016 map, with pockets of conifer plantation immediately adjacent to the footprint of the works. Class 1 peatland is defined as:  
*“Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas likely to be of high conservation value”* (Carbon and peatland map, 2016).
- 6.4.5 The desk study area covers a 5km buffer around the Site, which includes several lochs and lochans, areas of woodland, major and minor roads, quarries, the town of Stornoway and the Lewis coast.
- 6.4.6 A number of protected species records were returned during the desk study from the sources listed in Appendix A, including the following protected and/or notable species: slow worm (*Anguis fragilis*), Eurasian otter (*Lutra lutra*), common pipistrelle (*Pipistrellus pipistrellus*), anomalous bristle-moss (*Orthotrichum anomalum*), pyramidal bugle (*Ajuga pyramidalis*), Scottish scurvygrass (*Cochlearia officinalis scotica*), Atlantic salmon (*Salmo salar*), and European eel (*Anguilla anguilla*). Records were also returned for hedgehog (*Erinaceus europaeus*), which is considered an invasive non-native species (INNS) on Lewis.

### Ornithological Baseline

- 6.4.7 The Stornoway Harbour (Lewis) Wetland Bird Survey sector falls within the Ornithology Study Area, however as the most recent data dates from 1992, this has not been used to inform the current baseline.
- 6.4.8 Based on the habitats present, records provided by the RSPB (of three confidential breeding species), NBN records and the results of ornithology surveys for the Harris to Stornoway 132 kV OHL Replacement EIA, it is considered likely that the following ornithological receptors could be present within the Ornithology Study Area:
- breeding raptor species, particularly golden eagle (*Aquila chrysaetos*), white-tailed eagle (*Haliaeetus albicilla*), hen harrier (*Circus cyaneus*) and merlin (*Falco columbarius*);
  - breeding wader species, which could include Schedule 1 (Wildlife and Countryside Act, 1981) and Annex I (Habitats and Birds Directives, 2017) species;
  - breeding corncrake (*Crex crex*);

- breeding diver species (*Gavia* sp.);
- breeding great skua (*Stercoraria skua*); and
- intertidal and nearshore birds during the breeding and non-breeding seasons.

## Designated Sites

6.4.9 Table 6-1 details sites designated for ornithological features present within 10km of the Proposed Study Area (extended to 20km for geese), and sites designated for ecological features present within 5km, as presented in Figure 6-1. Details are taken from NatureScot’s SiteLink website (NatureScot, 2024).

Table 6-1 Relevant nature conservation sites designated for the protection of Ecology and Ornithology Receptors

Designated Site Name	Distance from Proposed Onshore Development (km)	Reason for Designation
Tong Saltings SSSI	2km north	Breeding bird assemblage
Lewis Peatlands SPA	4km west	Black-throated diver ( <i>Gavia arctica</i> ) – breeding Dunlin ( <i>Calidris alpina schinzii</i> ) – breeding Golden eagle – breeding Golden plover ( <i>Pluvialis apricaria</i> ) – breeding Greenshank ( <i>Tringa nebularia</i> ) – breeding Merlin – breeding Red-throated diver ( <i>Gavia stellata</i> ) – breeding
Lewis Peatlands Ramsar	4km west	Black-throated diver – breeding Dunlin – breeding Golden eagle – breeding Golden plover – breeding Greenshank – breeding Merlin – breeding Red-throated diver – breeding Blanket bog Depressions on peat substrates Subalpine wet heath

## 6.5 Embedded Mitigation and Design Assumptions

6.5.1 As part of the initial design process, embedded mitigation measures will be implemented in order to reduce the potential environmental effects of development. It is assumed that as part of the iterative design process, impacts on ecological and ornithological receptors will be limited as much as possible following the mitigation hierarchy including:

- avoidance of any identified ecological and/or ornithological constraints at the design stage and sensitive timing of works to avoid the core breeding season, where possible;
- production of protection plans (e.g., a Breeding Bird Protection Plan), and specific mitigation may be required dependent on the results of targeted surveys (e.g., no works exclusion zones applied to safeguard sensitive populations);
- where this is not possible specific compensation measure will be applied, based on the final design and survey results; and
- over and above the aforementioned, opportunities for enhancement and to secure positive effects for biodiversity (as per National Planning Framework 4 (NPF4) Policy 3) will be applied.

## 6.6 Likely Significant Effects

### Project Specific Impacts Scoped In

6.6.1 Ecological and ornithological impacts scoped into the assessment will be determined based on pathways for impacts, relevant guidance (e.g., NatureScot, 2018), baseline data recorded during surveys and professional judgement. These are detailed in .

Table 6-2 Potential Impacts scoped into the assessment of Ecology and Ornithology

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
Habitat loss	Permanent loss of habitat used for breeding, roosting, shelter and foraging	Surveys will be undertaken to assess presence/ absence and population status of key ecological and ornithological species to determine baseline conditions and inform the ES, BNG and HRA assessments.	Construction	Landfall of the Talisk offshore cables, substation, converter station, underground cable
Dust causing activities	Temporary disturbance and displacement of protected species.	Surveys will be undertaken to assess presence/ absence and population status of key ecological and ornithological species to determine baseline conditions and inform the impact assessment.	Construction	As above
Noise, vibration, and visual disturbance	Permanent and temporary disturbance and displacement of protected species	Surveys will be undertaken to assess presence/ absence and population status of key ecological and ornithological species to determine baseline conditions and inform the impact assessment.	Construction O&M	As above
Barrier effects	Effects where the proposed onshore development creates an obstacle to regular movements of birds (for example, to and from breeding locations) or during migration	Surveys will be undertaken to assess presence/ absence and population status of key ecological and ornithological species to determine baseline conditions and inform the impact assessment.	O&M	As above

## Project Specific Impacts Scoped Out

6.6.2 At this stage no impact pathways, or ecological or ornithological receptors have been scoped out of the assessment. It is proposed that impacts of decommissioning are scoped out of the EIA, as the lifespan of the proposed onshore development is likely to be unknown at the time of planning submission. The impacts of decommissioning would likely be consistent with those at construction, and it is likely that further surveys would be required to update the ornithological baseline to inform an assessment of decommissioning.

## 6.7 Approach to EIA

### Relevant Guidance

- 6.7.1 Ecological and ornithological surveys will be undertaken in line with current guidance and best practice to establish the baseline conditions within the Study Areas. Field surveys will be undertaken in accordance with NatureScot’s Standing Advice for Planning Consultation – Birds (NatureScot, 2024).
- 6.7.2 The ecological and ornithological impact assessment will be conducted in accordance with the current guidance produced by CIEEM (2018).
- 6.7.3 In addition, measures to comply with NPF4 policies, including Policy 3 aimed at securing positive effects for biodiversity will follow relevant available guidance (e.g., NatureScot’s Consultation – Developing with Nature guidance (NatureScot, 2023)), where appropriate.

### Anticipated Additional Data Sources at EIA

#### Proposed Scope of Desk Study

- 6.7.4 A detailed desk study will be undertaken to determine the ecological and ornithological baseline and inform the EIA. As a minimum, the following consultees will be contacted to request relevant ecological and/or ornithological records:
- Outer Hebrides Biological Recording;
  - the local Raptor Study Group;
  - NatureScot; and
  - British Trust for Ornithology.
- 6.7.5 In addition, any relevant scientific literature will be used to establish the baseline and inform the impact assessment.

#### Proposed Scope of Field Surveys

- 6.7.6 Targeted ecological and ornithological surveys will be undertaken to establish the baseline and inform the ES, BNG and HRA assessments. The proposed scope of surveys has been informed by the site location, features of nearby designated sites, habitats present and species records from the desk study undertaken. Survey Areas are based on the potential impacts from the proposed onshore development, guidance and the disturbance distance of species which could be present. It is proposed that a single year of ornithology surveys are undertaken to establish the ornithological baseline.
- 6.7.7 The final scope of surveys will be determined following further desk study, however at this stage Table 6 3 details the proposed surveys to inform the EIA.

Table 6–3 Proposed ecology and ornithology surveys to inform the EIA

Topic	Proposed surveys
Ecology	Habitat assessment covering the footprint of the proposed onshore development, referred to as the “Survey Area” (e.g., phase 1 habitat assessment of UK Habitat Classification surveys, UK Habs assessment to inform BNG), with additional National Vegetation Classification surveys consider where the potential for priority and/or Groundwater Dependent Terrestrial Ecosystems is identified; Protected and notable species constraint walkover survey. Additional species-specific surveys will be undertaken for:

Topic	Proposed surveys
	<ul style="list-style-type: none"> <li>• Otter following the methodology of Chanin (2003) 200 m upstream and downstream of watercourses or shorelines with potential to be impacted by works;</li> <li>• slow worm following the methodology of Froglife (2015) covering suitable habitat within the Proposed Study Area;</li> <li>• bats following the methodology of Collins (2023) up to a maximum of 50m from the Proposed Study Area where suitable habitat is present);</li> </ul> Where deemed appropriate and informed by initial site visits River Habitat Surveys, fish and freshwater invertebrate surveys may also be required; Consideration of further surveys for hedgehog (an invasive species on the island) and other species will be decided upon initial site work.
Ornithology	Moorland Breeding Bird Survey within the Site and a surrounding 500m buffer, following an adapted Brown and Shepherd methodology as detailed by Gilbert et al. (1998); Breeding Raptor Survey within the Site and a surrounding 2km buffer, following methods detailed by Hardey et al. (2013); Breeding Diver Survey within the Site and a surrounding 750m buffer, following methods detailed by Gilbert et al. (1998); Breeding Corncrake Survey within the Site and a surrounding 750m buffer, following methods detailed by Gilbert et al. (1998); and Through the Tide Cycle Counts covering intertidal habitat within 500m of the proposed landfall location, and nearshore habitats to 1.5km from the MLWS mark. Surveys would be undertaken monthly for a year. The survey method is based upon 'look-see' methods as outlined by Lewis and Tierney (2014).

## Assessment Methodology

6.7.8 The ecological and ornithology baseline and impact assessment results will be detailed in the combined Ecology and Ornithology Chapter of the EIA Report. As recommended by CIEEM (2018), this will include the following information:

- collation of baseline information obtained through desk-study, baseline field surveys and consultation to identify Important Ecological/Ornithological Features;
- identification and characterisation of potential impacts, including habitat loss, mortality, collision, disturbance and displacement from construction and operational phases;
- a comprehensive assessment of the potential impacts during the different phases of the proposed onshore development on important features, and considering any embedded mitigation;
- incorporation of mitigation measures to reduce identified impacts;
- assessment of significance of residual impacts following mitigation;
- identification of suitable compensation to offset any significant residual impacts; and
- identify further opportunities for enhancement and measures to ensure compliance with NPF4 Policy 3.

6.7.9 In accordance with the latest CIEEM guidance, the approach used for the EIA will consider the importance and sensitivity of a feature and the characteristics and severity of the impact and apply professional judgement to conclude whether the integrity of the feature will be affected. In line with CIEEM guidance, rather than implementing a matrix approach to determine significance, the assessment will consider the importance and sensitivity of receptors, characteristics and magnitude of potential impacts, and applying professional judgement to determine whether the integrity of the receptor would be affected.

6.7.10 For the purpose of the EIA, an impact that negatively affects the integrity of a feature will be considered to be significant. The significance of impacts will be assessed in an appropriate geographic context as stated in NatureScot guidance (NatureScot, 2018). The Site falls within Natural Heritage Zone (NHZ) – Coll, Tiree and the Western Isles.

6.7.11 Potential cumulative impacts on features arising from existing or proposed developments will also be considered as part of the EIA. In line with NatureScot (NatureScot, 2018) guidance, cumulative impacts will be assessed at a relevant biogeographical scale, such as the relevant NHZ.

- 6.7.12 The EIA Report will be additionally supported by Technical Appendices containing complete details of the surveys, analysis methods and results. Any data related to sensitive receptors (e.g., breeding Schedule 1 birds.) will be included in a separate Confidential Annex – which will not be available to the public.

### **Habitat regulations Assessment**

- 6.7.13 Due to the potential for impacts on European protected sites a Habitats Regulation Assessment (HRA) will be required. This will be undertaken in parallel with the assessments to inform the ES.

### **Biodiversity Net Gain Assessment (BNG)**

- 6.7.14 NPF4 requires all development projects to contribute to the enhancement of biodiversity, including where relevant restoring degraded habitats. For projects subject to an EIA, Policy 3b of NPF4 notes that these proposals will only be supported where it can be demonstrated that they will conserve, restore and enhance biodiversity, including nature networks, so they are in a demonstrably better state than without intervention. The policy requires that such proposals demonstrate significant biodiversity enhancement, in addition to any proposed mitigation.
- 6.7.15 Surveys will be undertaken to inform the BNG baseline. This baseline will be used to inform subsequent BNG calculations and BNG proposals.

## **6.8 Scoping Questions**

- 6.8.1 The following scoping questions refer to the Ecology and Ornithology chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:
- do you agree with the proposed scope of the desk study and field surveys proposed, and that a single year of ornithology surveys is sufficient to establish a suitably robust ornithological baseline?
  - do you agree that at this stage all receptors related to Ecology and Ornithology have been identified?
  - do you agree with the scoping in and out of impacts related to Ecology and Ornithology?
  - do you agree with the assessment of cumulative effects related to Ecology and Ornithology?
  - do you agree with the proposed assessment methodology related to Ecology and Ornithology?

# 7. Archaeology and Cultural Heritage

## 7.1 Introduction

- 7.1.1 This chapter provides an overview of the historic environment resource (that is, terrestrial archaeology and cultural heritage) resulting from the construction, O&M, and decommissioning of the proposed onshore development landward of the MLWS.
- 7.1.2 This chapter does not include an overview of marine archaeology as this is covered separately in the Offshore Scoping Report.
- 7.1.3 This chapter is based on the Proposed Study Area for the Scoping Report as presented in Section 3. Where 'the Site' is referenced below, this relates to the redline boundary to be considered in the ES as a specific preferred site for the substation and routes for the UGC is yet to be determined. It is assumed that the redline boundary will include the proposed landfall site, the cable corridor and the substation site.
- 7.1.4 It is assumed that the majority of the UGC can be accommodated within the upgrades to Arnish Road proposed as part of the Stornoway Deepwater Port upgrade Project, which is separate from this proposal, and which will be complete prior to the construction of this proposal. The accommodation of the UGC in this manner will reduce the extent to which new cabling would need to be routed through undisturbed land as part of the Proposed Development.

## 7.2 Study Area

*Two study areas have been considered for the purposes of this Scoping Report. These include a 500m study area (the '500m Study Area') surrounding the proposed onshore development and a 10 km study area (the '10km Study Area'). The study areas are presented in Figures*

- 7.2.1 Figure 7-1Figure 7-5.
- 7.2.2 The 500m Study Area has been used to identify the known historic environment baseline within and surrounding the proposed onshore development to determine the potential effects to such a resource and to understand the potential for as yet unknown buried archaeological remains. This study area is considered to be appropriate for the purposes of non-designated terrestrial archaeology as it provides a suitable context for the known terrestrial archaeological resource within the Site and allows assessment of the potential for as yet unknown archaeological remains. However, designated terrestrial archaeological assets, such as Scheduled Monuments, have been assessed as part of the wider 10km Study Area in this chapter.
- 7.2.3 The 10km Study Area has been used to provide an initial indication of possible setting impacts to designated heritage assets.
- 7.2.4 It must be noted that the study areas presented above are based on the proposed onshore development for the Scoping Report only to provide an initial indication of likely receptors and effects. For the purposes of the Historic Environment Desk-based Assessment (HEDBA), that is, the technical baseline report, and the Terrestrial Archaeology and Cultural Heritage EIAR Chapter, the same study areas are proposed; however, they will be based on the redline boundary of the Site (for the 500m Study Area) and the location of the proposed substation site (for the 10km Study Area). It may be possible to reduce the 10km Study Area, however, this depends on factors such as the redline boundary, the results of a Zone of Theoretical Visibility (ZTV) assessment to be produced by the LVIA Consultant and consultations with heritage consultees (see identification of consultees in 'Assessment Methodology' (paragraph 7.7.4)).

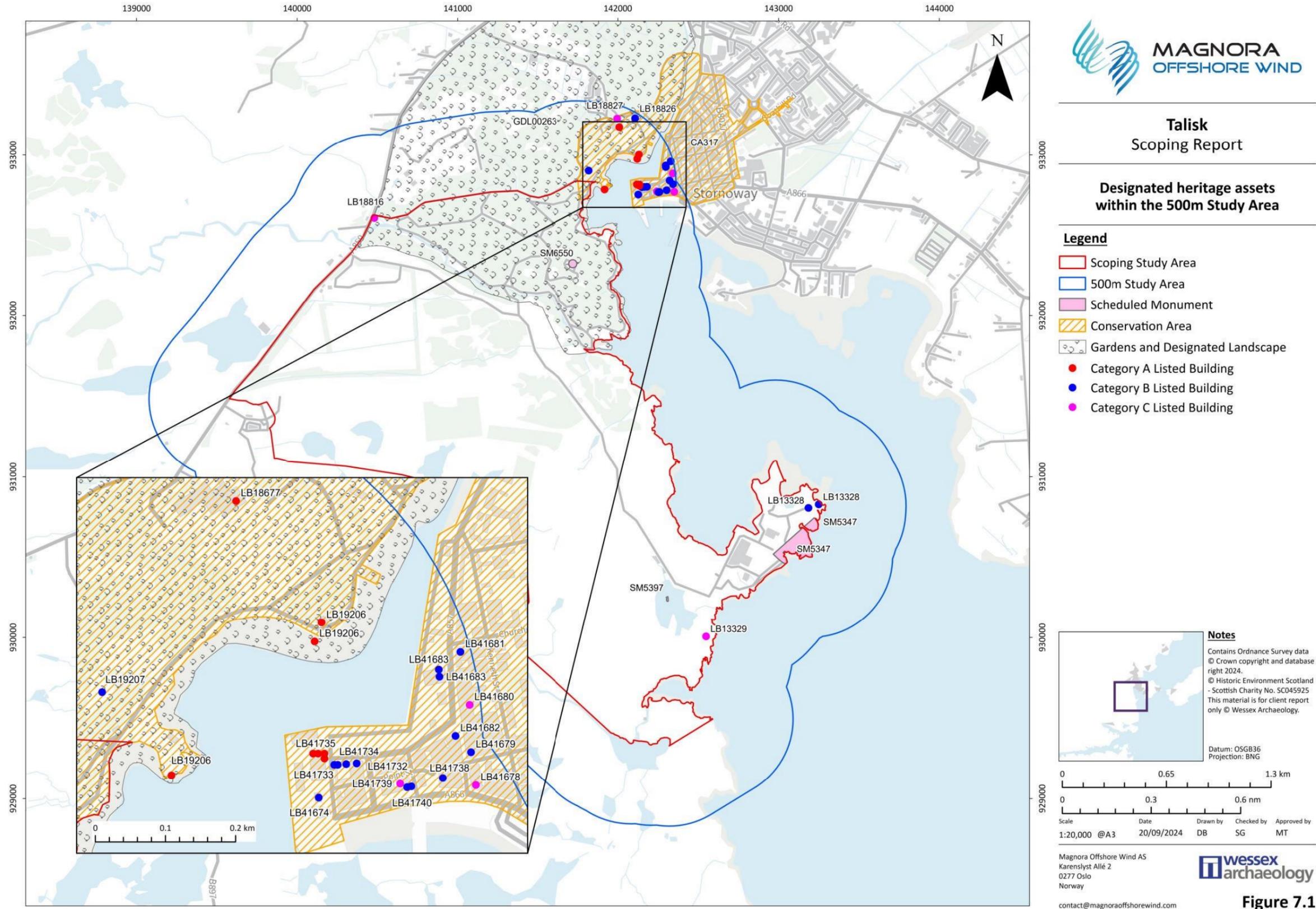


Figure Reference: Talisk\_HE\_Fig7.1\_DesHeritageAssets500m\_v1

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Figure 7-1 Designated heritage assets within the 500m Study Area

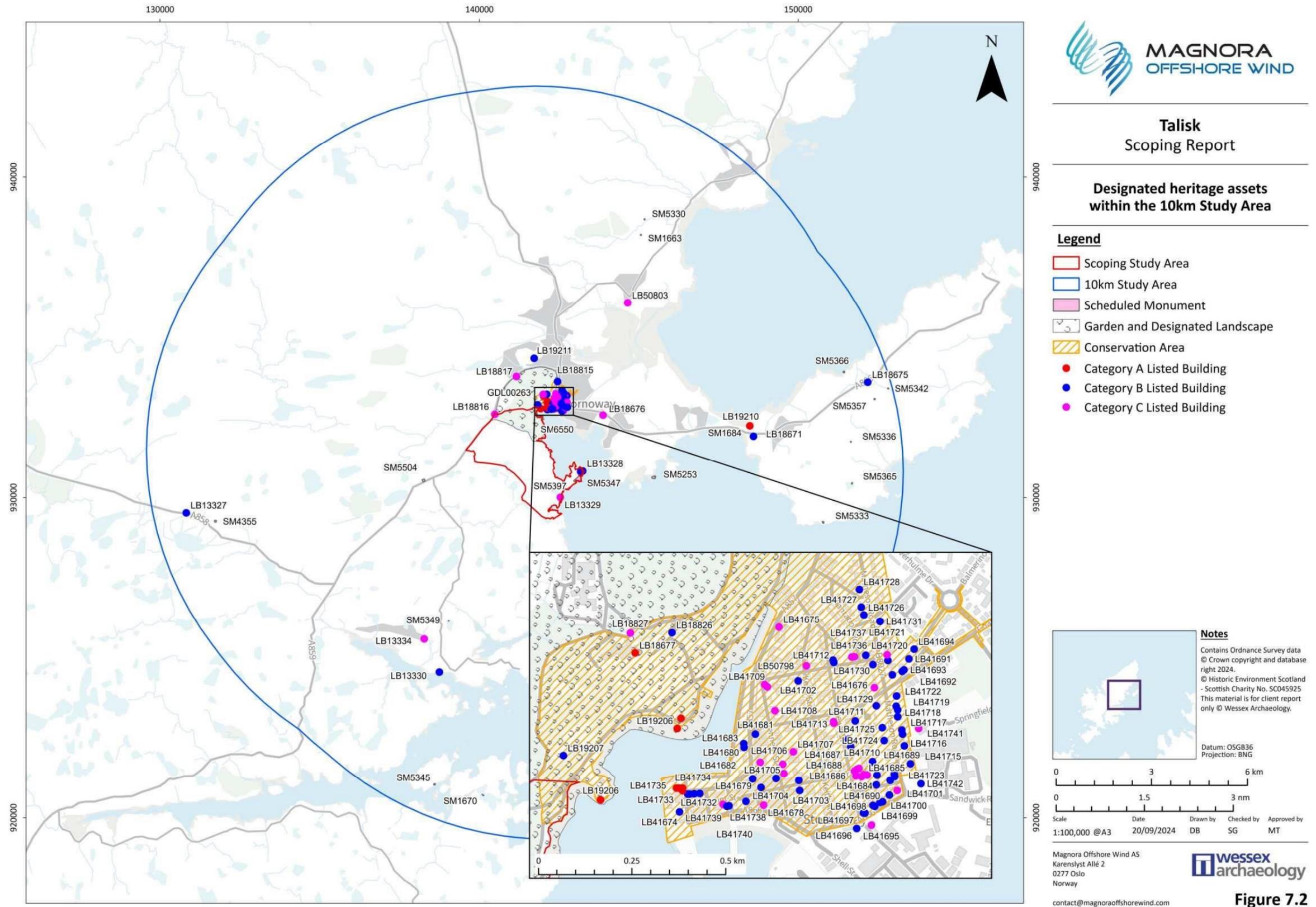


Figure 7-2 Designated heritage assets within the 10km Study Area

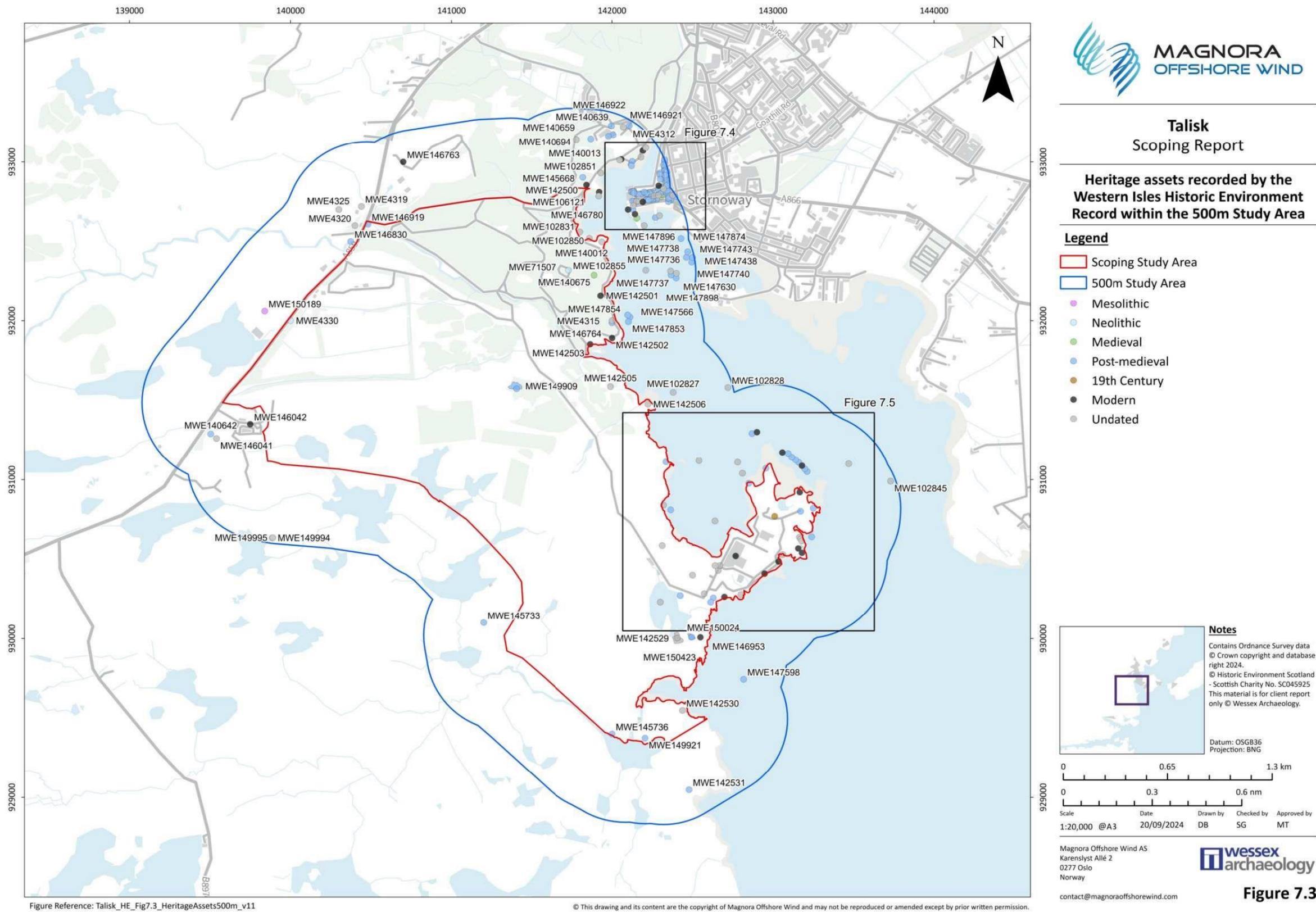


Figure 7-3 Heritage assets recorded by the Western Isles Historic Environment Record within the 500m Study Area



Figure 7-4 Heritage Assets in the north-east recorded by the Western Isles Historic Environment Record

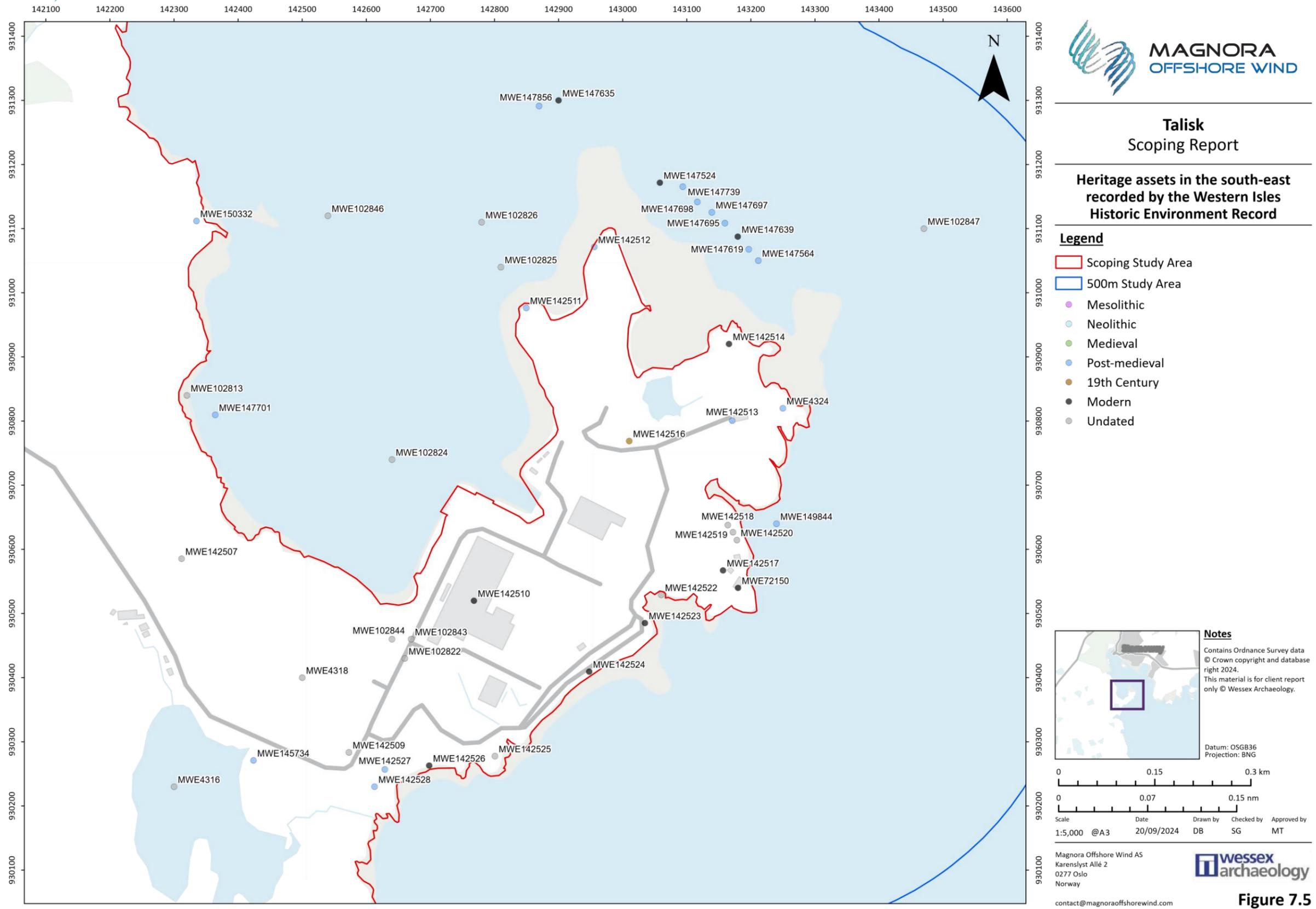


Figure 7-5 Heritage Assets in the south-east recorded by the Western Isles Historic Environment Record

### 7.3 Data Sources at Scoping

7.3.1 Data sources used to inform this scoping chapter are listed in Appendix A.

### 7.4 Description of Baseline Characteristics

#### Current Baseline

The proposed onshore development for the Scoping Report is located to the west, south-west and south of Stornoway, an area rich in archaeological remains spread across the numerous hills and surrounding multiple lochs stretching between Stornoway and Arnish Point (to the south of Stornoway) (see Figures

Figure 7-1,

Figure 7-2). The known archaeological resource is mixed with a general prevalence for post-medieval remains, however, known areas of prehistoric activity are also noted. Known prehistoric remains mainly relate to funerary practices and a few of these sites are designated as Scheduled Monuments (further discussed in 'Designated Heritage Assets') (Figures

Figure 7-1

7.4.1 Figure 7-2).

7.4.2 Known non-designated heritage assets are broadly scattered within known settlement areas such as Stornoway, or areas of historic fishing or industrial activities such as at Arnish Point. Further inland, the distribution of known archaeological assets is less dense and more scattered, presumably partly because there have been fewer previous investigations here.

The locations of known non-designated heritage assets are shown on Figures

7.4.3 Figure 7-3 Figure 7-5.

#### Designated Heritage Assets

There are three Scheduled Monuments, three Listed Buildings, one Conservation Area and one Inventory Garden and Designed Landscape within the proposed onshore development, as listed in Table 7-1 below and presented in

7.4.4 Figure 7-1.

There are a further 19 Listed Buildings within the 500m Study Area, the majority of which are sited within the Stornoway Conservation Area (see

Figure 7-1). There are no other additional designated heritage assets within the 500m Study Area. However, within the 10km Study Area there are further Scheduled Monuments and Listed Buildings (see

7.4.5 Figure 7-1). The majority of the buildings are of post-medieval to modern date, while the Scheduled Monuments mainly consist of prehistoric funerary monuments such as cairns and stone circles.

Table 7-1 Relevant designated heritage assets within the Scoping Area

Designated Site Name	Distance from Proposed Onshore Development (km)	Closest Project Component to Site	Reason for Designation
Arnish Point gun emplacements (SM5347)	Within Scoping Area	Potential landfall site	Nationally important wartime emergency coastal battery site
Loch Arnish dun (SM5397)	Within Scoping Area	Potential landfall site	Nationally important fortified island or dun of medieval date
Croc na Croich chambered cairn (SM6550)	Within Scoping Area	Potential to be within cable route or substation site	Nationally important remains of a prehistoric chambered cairn set on a hilltop overlooking Stornoway harbour

Designated Site Name	Distance from Proposed Onshore Development (km)	Closest Project Component to Site	Reason for Designation
Arnish Lighthouse and attendant buildings (LB13328), Category B	Within Scoping Area	Potential landfall site	19th century lighthouse and associated buildings by Alan Stevenson
Arnish Monument (LB13329), Category C	Within Scoping Area	Potential landfall site	19th century stone cairn built by the Mathesons of Lewis Castle
Lews Castle Creed Lodge including gateway and driveway bridge nearby (LB18816), Category C	Within Scoping Area	Potential to be within cable route or substation site	19th century lodge presumably designed by Charles Wilson and associated with Lews Castle
Lews Castle and Lady Lever Park (GDLOO263)	Within Scoping Area	Potential to be within cable route or substation site	A prime example of a 19th century ornamental and estate landscape which are rare on Lewis
Stornoway Conservation Area (CA317)	Within Scoping Area	Potential to be within cable route or substation site	The area encompasses the three separate character areas of Stornoway, namely, Lews Castle, the Harbour and Town Centre and the Residential Sprawl to the north and east

## 7.5 Embedded Mitigation and Design Assumptions

- 7.5.1 As part of the initial design process, embedded mitigation measures will be implemented as far as practicable to reduce the potential environmental effects of development. For example the provision of suitable buffer zones surrounding designated heritage assets to avoid direct and indirect physical impact to their historic fabric or archaeological integrity.
- 7.5.2 Further mitigation is likely to be required; however, the scope of this cannot currently be confirmed and will depend on the preferred design taken to EIA, scope of the proposed onshore development and the findings of the HEDBA and Terrestrial Archaeology and Cultural Heritage ES Chapter.

## 7.6 Likely Significant Effects

### Project Specific Impacts Scoped In

- 7.6.1 Based on the information presented in this Scoping Report, the proposed onshore development has the potential to lead to harm to the cultural significance of both designated and non-designated heritage assets due to its construction, O&M, and decommissioning.
- 7.6.2 The significance of effect and whether this would be Significant or Not Significant under the EIA Regulations cannot currently be determined. The HEDBA will aid in the identification of heritage assets to be scoped in for further assessment as part of the Terrestrial Archaeology and Cultural Heritage ES Chapter. The HEDBA will be accompanied by a site walkover survey of the Site and informed by the sources listed in Appendix A, as well as other documentary research.
- 7.6.3 In line with the 2018 EIA Handbook, cumulative impacts as a result of the proposed onshore development in combination with other schemes will also need to be assessed. The pertinent cumulative schemes will need to be identified by the project so that the details of such can be considered in the Terrestrial Archaeology and Cultural Heritage ES Chapter.

- 7.6.4 On account of the location of the proposed offshore development c. 35km to the north of the Isle of Lewis, it is currently unlikely that the offshore array would lead to harm to onshore archaeology or cultural heritage assets. As such, likely impacts caused by the offshore array are currently scoped out of further assessment.
- 7.6.5 Based on the above both terrestrial archaeology and cultural heritage receptors will be scoped in for further assessment. The impacts scoped in are listed in Table 7.2 below.

Table 7-2 Potential impacts scoped into the assessment of Terrestrial Archaeology and Cultural Heritage

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
Direct physical impact	<p>Direct physical harm to known non-designated heritage assets and as yet unknown buried archaeological remains</p> <p>Construction impacts have the potential to truncate or completely remove archaeological remains.</p> <p>In regard to archaeological remains (in particular buried remains with no above ground presence or appreciable setting), it is anticipated that there will be no further direct or indirect impact on such once the proposed development is operational. This especially applies where such have been truncated or removed as part of construction.</p> <p>Assuming that no additional land take or ground intrusive works outside of the areas previously impacted by the construction will be required, it is currently considered that decommissioning will unlikely lead to additional harm to archaeological remains.</p>	Identification and assessment of such assets in the HEDBA and Terrestrial Archaeology and Cultural Heritage ES Chapter.	Construction	Landfall of the Talisk offshore cables, substation, converter station, underground cable
Indirect physical impact	Indirect physical harm to known non-designated heritage assets and as yet unknown buried archaeological remains.	Identification and assessment of such assets in the HEDBA and Terrestrial Archaeology and Cultural Heritage ES Chapter	Construction	As above
Setting impact	<p>Harm to cultural significance of designated heritage assets due to setting impacts.</p> <p>Construction impacts have the potential to lead to temporary setting impacts, especially where assets fall within the redline boundary or where the redline boundary falls within the setting of a heritage asset.</p> <p>Temporary increases in vibration, air pollution, noise and traffic have the potential to cause setting impacts.</p> <p>While this depends on the final design of the proposed onshore development, it is considered that the substation element in particular has the potential to</p>	Identification and assessment of such assets in the HEDBA and Terrestrial Archaeology and Cultural Heritage ES Chapter	Construction O&M	As above (but substation proposal in particular)

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
	lead to setting impacts. Due to this, operational impacts are scoped in for further assessment. The decommissioning phase may once again lead to temporary setting impacts; however, these would likely be similar to those experienced as part of the construction phase meaning that detailed assessment might not be required here. Furthermore, it is likely that the landscape would be returned to a similar state to what it was prior to the proposed development			
Cumulative impacts	Harm to the historic environment resource as a result of the proposed development in combination with other cumulative schemes	Assessment of cumulative schemes in the Terrestrial Archaeology and Cultural Heritage ES Chapter	Construction O&M Decommissioning	All proposed onshore development works

7.6.6 Depending on the details of the redline boundary and the proposed onshore development details, it may be possible to scope out the construction and decommissioning phases in regard to setting impacts and purely focus on the operational phase.

## Project Specific Impacts Scoped Out

7.6.7 Table 7-3 provides a summary of the project specific impacts scoped out of the EIA.

*Table 7-3 Impacts proposed to be scoped out of further assessment for Terrestrial Archaeology and Cultural Heritage*

Impact	Justification	Relevant Development Stage
Setting impacts to onshore heritage assets due to the offshore array	Distance of offshore array to the coastline and preliminary consideration that long distance views (where possible) of the array from heritage assets along here would unlikely give rise to setting impacts.	Construction O&M Decommissioning

## 7.7 Approach to EIA

### Relevant Guidance

7.7.1 In addition to the legislation, policy and guidance presented in Section 2, the following are pertinent to historic environment and will also be considered in the production of the ES:

- Ancient Monuments and Archaeological Areas Act 1979 (as amended by the Historic Environment (Amendment) (Scotland) Act 2011);
- Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (as amended by the Historic Environment (Amendment) (Scotland) Act, 2011);
- The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the EIA Regulations');
- The Scottish Government, 2011. Planning Advice Note 2/2011 Planning and Archaeology;
- Historic Environment Scotland, 2016. Managing Change in the Historic Environment: Setting;
- The Scottish Government, 2016. The Development Plan for Comhairle nan Eilean Siar (Western Isles Council), including the 2018 Letter regarding adoption of supplementary guidance – Conservation Area Management Plans;
- Historic Environment Scotland, 2018. Environmental Impact Assessment Handbook Guidance for competent authorities, consultation bodies and others involved in the Environmental Impact Assessment process in Scotland ('the 2018 EIA Handbook');
- Chartered Institute for Archaeologists, 2014 rev. 2020. Standard and guidance for Historic Environment Desk-based Assessment; and
- The Scottish Government, 2023. The National Planning Framework 4, in particular Section 7 Historic assets and places.

### Anticipated Additional Data Sources at EIA

7.7.2 It is anticipated that the data sources presented in Appendix A will be the key data sources to be consulted; however, further research of online, primary and secondary sources will be undertaken for the purposes of the HEDBA. The HEDBA will include a full list of references.

### Assessment Methodology

7.7.3 The assessment methodology will follow the approach set out in section 4.2.

7.7.4 While the proposed scope of the HEDBA and Terrestrial Archaeology and Cultural Heritage ES Chapter is based on the initial review of the historic environment baseline (as presented in Section 7.4) and best practice guidance, it is anticipated that the scope of these assessments will further be defined in consultations with historic environment consultees following receipt of the EIA Scoping Opinion. It is currently anticipated that the key consultees will include:

- the Western Isles Archaeology and Built Heritage advisor(s);
- and Historic Environment Scotland.

7.7.5 To date, no consultations with these consultees have been undertaken.

## 7.8 Scoping Questions

7.8.1 The following scoping questions refer to the Archaeology and Cultural Heritage chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree with the scoping in and out of impacts in relation to terrestrial archaeology and cultural heritage?
- Do you agree with the proposed approach to the Historic Environment Desk-based Assessment?
- Do you agree with the proposed approach to implement buffer zones surrounding designated heritage assets for the purposes of avoiding construction activities?
- Do you agree with the identified Study Areas for assessment of Terrestrial Archaeology and Cultural Heritage?
- Do you agree with the proposed assessment methodology related to Terrestrial Archaeology and Cultural Heritage?

## 8. Geology & Peat

### 8.1 Introduction

8.1.1 This Section sets out the proposed approach to the assessment of likely significant effects on local geology and peat at the site and in the surrounding area of the site. In this section potential effects arising from the onshore proposed development on aspects of local geology and peat and nearby geologically sensitive sites will be assessed. Proposed embedded mitigations and design assumptions are outlined to prevent or reduce identified significant effects.

### 8.2 Study Area

8.2.1 The study area will primarily be based upon the land within the Onshore Scoping Boundary study area (Figure 1-1), and a wider search area of 2km from the study area is considered for geological receptors where relevant (Figure 8-1).

### 8.3 Data Sources at Scoping

8.3.1 The data sources used to inform this chapter are listed in Appendix A.

## 8.4 Description of Baseline Characteristics

### Current Baseline

#### Geology

8.4.1 Review of the British Geological Survey (BGS) onshore geoindex website shows the majority of the study area's underlying bedrock geology consists of Lewisian Complex Gneiss (Figure 8-2). The study area's western and eastern extents are situated above an area of Outer Hebrides Thrust Zone Mylonites Complex Protocataclasite and a small section of the far eastern extents are situated on Stornoway Formation Conglomerates.

8.4.2 Superficial geology at the study area's eastern and central extents are not currently mapped by the BGS onshore geoindex website (Figure 8-3). The western extents of the study area are shown to consist of peat.

8.4.3 Review of the online Scottish soils map shows the eastern extents of the study area to consist of Brown earths with humus-iron podzols derived from Lewisian gneiss. The central and western extents of the study area were seen to be Peaty gleys with dystrophic blanket peat, also derived from Lewisian gneiss.

#### Peat

8.4.4 Review of NatureScot's Carbon and Peatland 2016 Map indicates that the study area contains a mixture of peatland classifications. Class 1 peat accounts for approximately two thirds of the study area, with the rest of the study area classed as a mixture of class 2 and class 0. Small pockets of class 5 peat are also present (Figure 8-4).

8.4.5 NatureScot's Carbon and Peatland 2016 Map shows large areas of the central and western extent of the Site to be class 1 peat described as nationally important carbon-rich soils, deep peat and priority peatland habitat likely to be of high conservation value.

8.4.6 The eastern extent of the Site adjacent the Minches Strait are identified as class 2 peatland described as nationally important carbon-rich soils, deep peat and priority peatland habitat with potentially high conservation value and restoration potential. The outcrop of land northeast Loch Airinis is identified as class 0 peat described as mineral soils with no peat present.

8.4.7 Small pockets of class 5 peatland are within the site, described as an area where carbon rich peat soils or deep peat are present but no peatland vegetation/habitat has been observed, often indicating bare soil. These areas were seen to be located directly north of Loch Airigh an Sgaribh and directly north/northeast of Loch a'Chrotaich.

## Coal Mining

8.4.8 The interactive Coal Authority map (2023) shows that the site is not in a coal mining area. There is a negligible set of risks associated with coal mining and the onshore proposed development. As such, coal mining will not be considered further in the EIA Process.

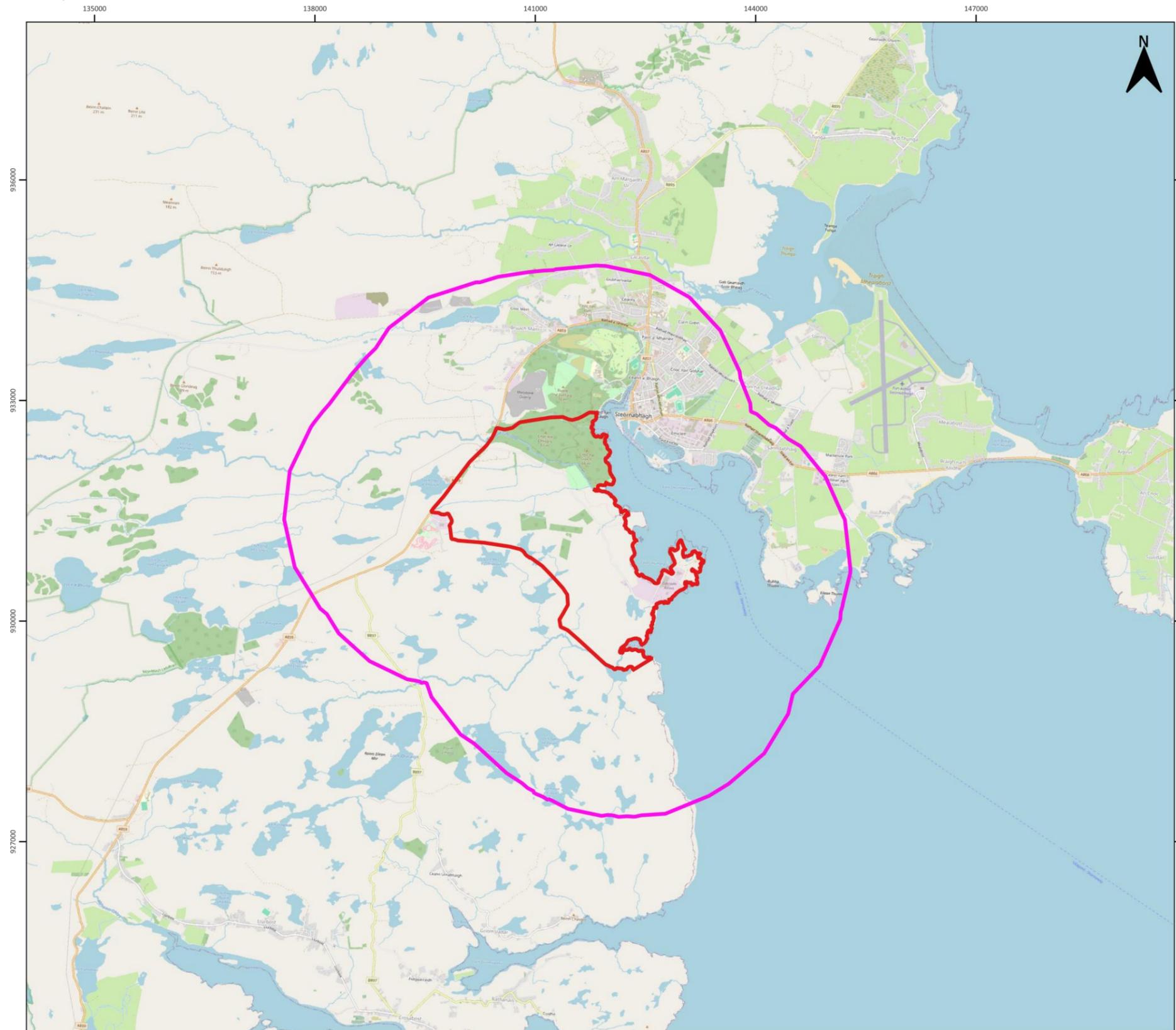
## Designated Sites

8.4.9 No designated sites with relevance to Geology and Peat have been identified within the site or the study area. The Lewis Peatlands SPA is located 3.8km west from the site (Figure 6-1) and upgradient of the site, therefore no effects are anticipated on this designated site.

## 8.5 Embedded Mitigation and Design Assumptions

8.5.1 As part of the design process, embedded mitigation measures will be implemented in order to reduce the potential environmental effects of the onshore proposed development. Examples of measures related to Geology and Peat which could be included are as follows:

- Agreement and Implementation of a Peat Management Plan.
- Avoid siting infrastructure in areas of deep Peat where possible.
- Identification of beneficial end-uses for any residual disturbed peat,
- Identifying areas for potential peatland habitat restoration and setting out strategy principles.

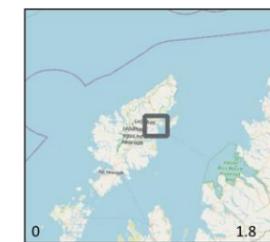


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**Geology and Peat Study Area**

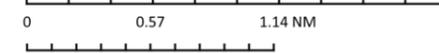
**Legend**

- Onshore Scoping Boundary - Study Area
- Geology and Peat Wider Search Area - 2km Buffer



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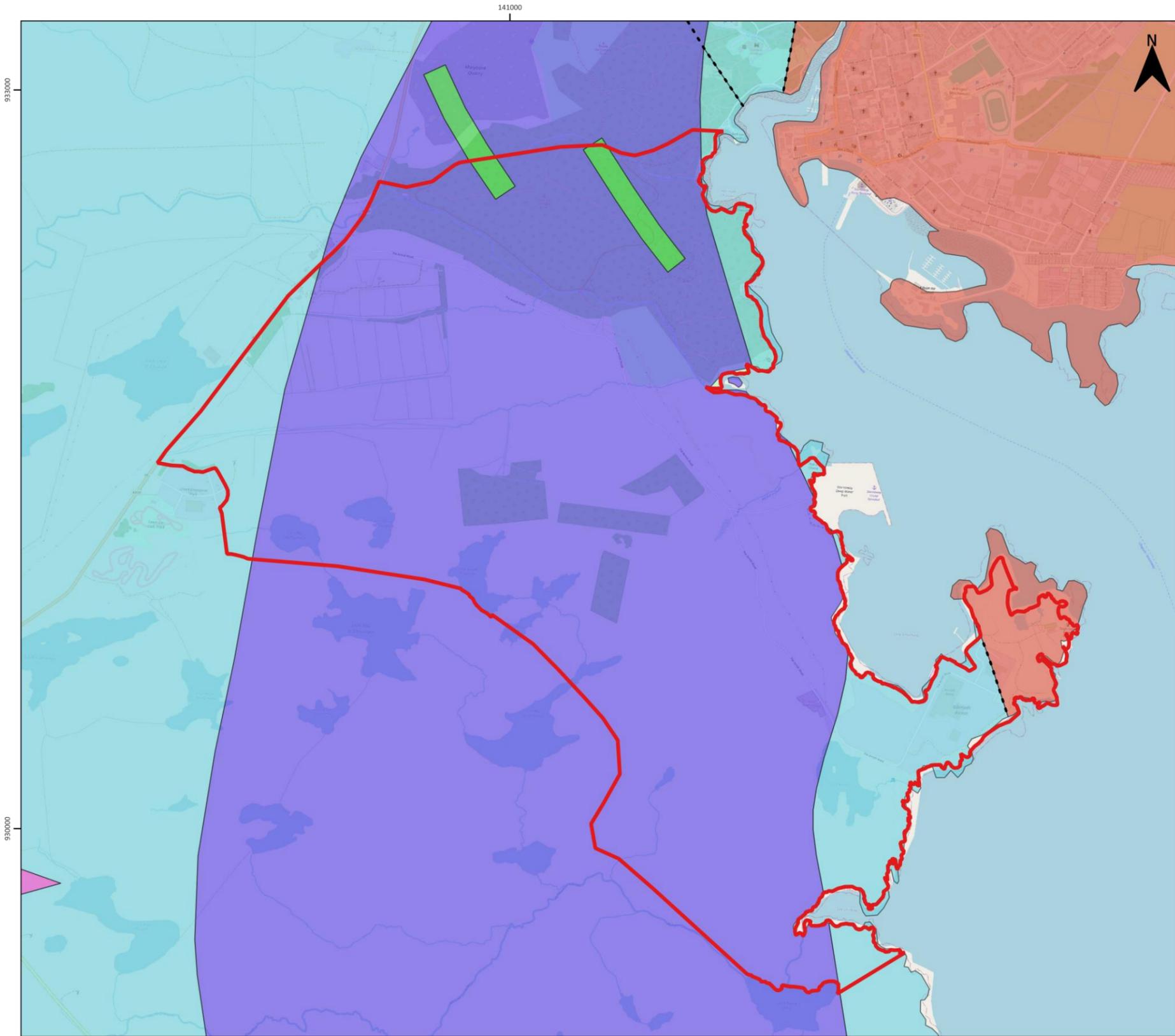


**Figure 1**

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Figure Reference: Talisk\_Fig8.1\_Geology&PeatStudyArea\_V1  
**Figure 8-1 Geology and Peat Study Area**



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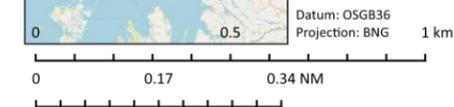
**Bedrock Geology**

**Legend**

- Onshore Scoping Boundary - Study Area
- Bedrock Geology**
- Lewisian Complex - Amphibolite
- Lewisian Complex - Gneiss
- Outer Hebrides Thrust Zone Mylonites Complex - Mylonite
- Outer Hebrides Thrust Zone Mylonites Complex - Protocataclasite
- Stornoway Formation - Conglomerate
- Linear Features**
- Fault, inferred, displacement unknown



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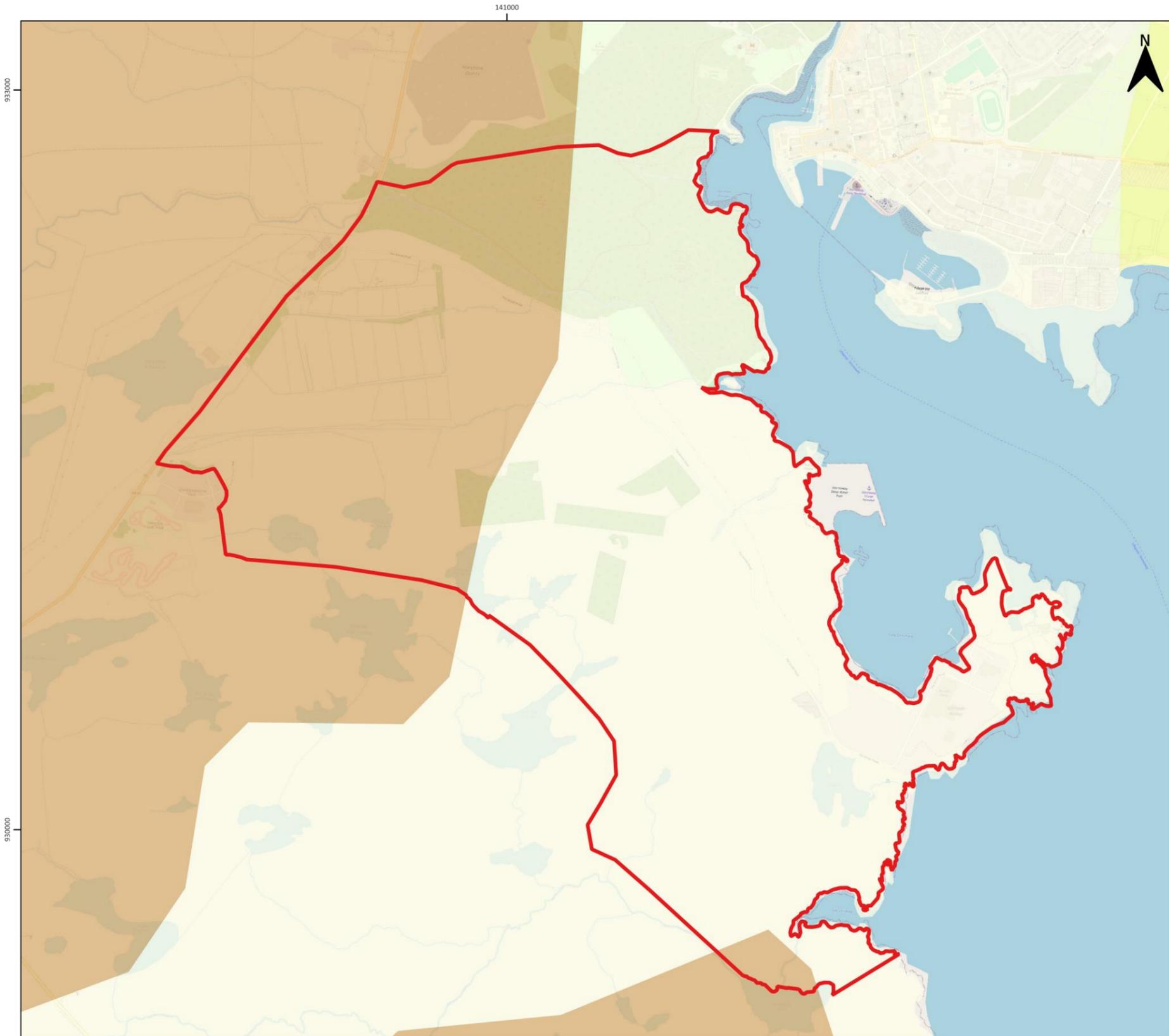
**Figure 8.2**

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Figure Reference: Talisk\_Fig8.2\_BedrockGeology\_V1

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Figure 8-2 Bedrock Geology

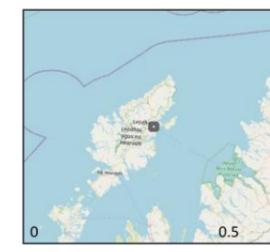


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**Superficial Geology**

**Legend**

- Onshore Scoping Boundary - Study Area
- Superficial Geology**
- Peat
- Alluvium - Clay, Silt, Sand and Gravel
- Superficial deposits not mapped



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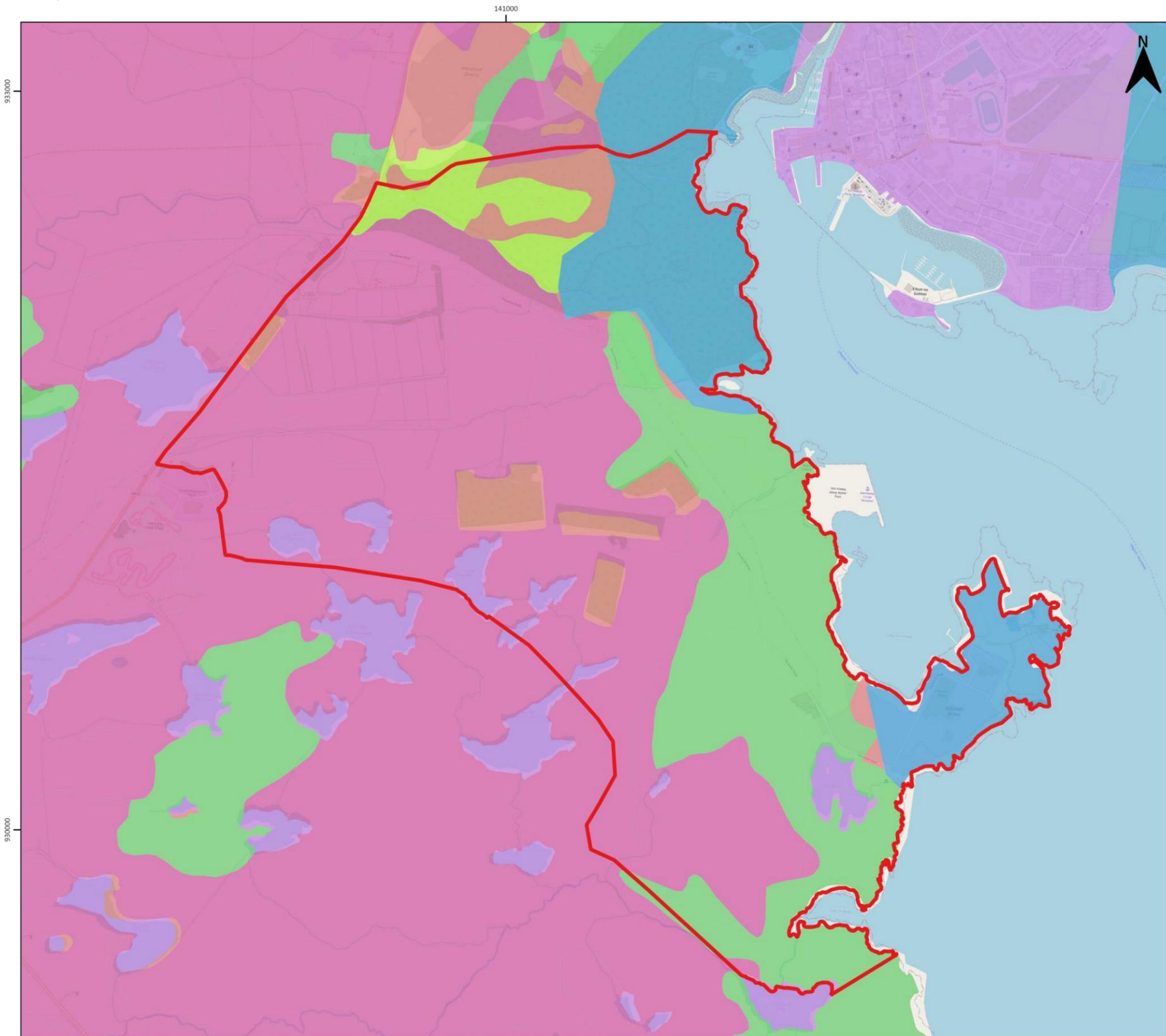


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Figure Reference: Talisk\_Fig8.3\_SuperficialGeology\_V1  
 Figure 8-3 Superficial Geology

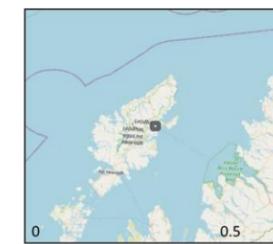


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**Carbon and Peatland 2016 Map Class**

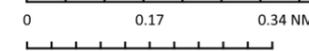
**Legend**

- Onshore Scoping Boundary - Study Area
- Carbon and Peatland 2016 Map Class
- Class 1
- Class 2
- Class 3
- Class 5
- Class 0
- Class -2



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Figure Reference: Talisk\_Fig8.4\_Carbon&Peatland2016Map\_V1  
 Figure 8-4 2016 Carbon and Peatland Class

## 8.6 Likely Significant Effects

### Project Specific Impacts Scoped In

8.6.1 Table 8-1 below summarises the impacts scoped into the assessment of Geology and Peat.

Table 8-1 Potential Impacts scoped into the assessment of Geology and Peat

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
Stability of peat deposits	Alterations to natural drainage patterns may dry out peat, causing decreases in the structural integrity of peat areas	A Peat Landslide Hazard Risk Assessment (PLHRA) will be undertaken, if required.	Construction Decommissioning	Landfall of the Talisk offshore cables, substation, converter station, underground cable
Loss of peat /peat habitat via excavation, physical disturbance or drying out	The physical disturbance of peat during construction operations and/or alterations to local drainage pathways may lead to the permanent loss of significant expanses of deep peat and peatland habitat	Phase 1 and 2 Peat Probing Survey to inform design and implementation of a Peat Management Plan, if required.	Construction Decommissioning	As above

## Project Specific Impacts Scoped Out

8.6.2 Table 8-2 details impacts proposed to be scoped out of further assessment.

Table 8-2 impacts proposed to be scoped out of further assessment for Geology and Peat

Impact	Justification	Relevant Development Stage
Impacts on superficial (non Peat) or solid geology	No geological designated sites have been identified that could be impacted by the Proposed Development	Construction O&M Decommissioning

## 8.7 Approach to EIA

### Relevant Guidance

8.7.1 Assessment of effects in relation to Geology and Peat will be undertaken in line with current guidance and best practice. The following legislation, guidance and published data sources will be used to inform the assessment including:

- NPF4 (Scottish Government, 2023);
- Regulatory Position Statement – Developments on Peat (SEPA, 2010);
- Guidance Note 31: Guidance on assessing the impacts of development proposals on groundwater abstractions and Groundwater Dependent Terrestrial Ecosystems (SEPA, 2017);
- Guidance on Developments on Peat (Peatland Survey 2017) (Scottish Government, Scottish Natural Heritage, SEPA, 2017);
- Developments on Peat and off-site uses of Waste Peat (WST-G-052) (SEPA, 2017);
- Advising on peatland, carbon-rich soils, and priority peatland habitats in development management (NatureScot, 2023); and
- Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments (Scottish Government, 2017).

### Anticipated Additional Data Sources at EIA

8.7.2 The following survey data will be used to inform the assessment:

- Phase 1 peat probing will be undertaken for the site on a 100 x 100m grid. Followed by a Phase 2 peat depth survey within infrastructure footprints (Table 8 1).
- Peat coring samples will be undertaken, and peat profile noted at key locations within the site.

### Assessment Methodology

8.7.3 The assessment methodology will follow the approach set out in Section 4.2.

## 8.8 Scoping Questions

8.8.1 The following scoping questions refer to the Geology and Peat chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree with the use of those data listed in Appendix A, and any additional anticipated data listed in Section 8.7, being used to inform the Onshore EIA?
- Do you agree that all receptors related to Geology and Peat have been identified?
- Do you agree with the scoping in and out of impacts related to Geology and Peat?
- Do you agree with the assessment of cumulative effects related to Geology and Peat?
- Do you agree with the proposed assessment methodology related to Geology and Peat?

# 9. Hydrology and Hydrogeology

## 9.1 Introduction

9.1.1 This Section sets out the proposed approach to the assessment of likely significant effects on hydrology and hydrogeology, including Private Water Supplies (PWS), Groundwater Dependent Terrestrial Ecosystems (GWDTE), flood risk and nearby sensitive sites. Proposed embedded mitigations and design assumptions are outlined to prevent or reduce identified significant effects.

## 9.2 Study Area

9.2.1 The study area will primarily be based upon the land within the Onshore Scoping Boundary study area (Figure 1-1), and a wider search area is considered where a hydrological connectivity exists up to 2km from the site (Figure 9-1).

## 9.3 Data Sources at Scoping

9.3.1 Data sources used to inform this chapter are listed in Appendix A

## 9.4 Description of Baseline Characteristics

### Current Baseline

#### Watercourses and Surface Water Hydrology

9.4.1 The study area and wider search area spans across multiple surface water catchments including the main catchments of the Bayhead River, Allt Nam Brog and Abhainn Ghrioda to the north and the catchment of the Leiravay River to the south, which is fed by Allt na Craoibhe (Figure 9-1). Minor catchments found within the study area and wider search area include the Allt Poll a'Choire in the east and a number of minor drainage ditches or watercourses.

9.4.2 A significant number of watercourses are present both within the study area and wider search area supplying all of the previously listed catchments which subsequently drain east to the North Minch strait.

9.4.3 Multiple surface water attenuations are present within the study area and further search area. Waterbodies found within the study area consist of Loch Mor na Cairteach, Loch Beag na Cairteach, Loch Airigh an Sgairbh, Loch a'Chrotaich and Loch Arnish, all of which are located on the study area's southern extents.

9.4.4 All of the previously listed lochs found within the study area with the exception of Loch Arnish, which forms its own catchment area, are part of a number of interlinked lochs which drain to the River Lieravay catchment south of the study area. A number of lochs are situated within the wider search area, the most significant include Loch Airigh na Lic to the north, Loch Mor a'ghrianain at the wider search area central extents and Loch Innseag to the south.

9.4.5 Hydrology within the study area and wider search area was not found to supply any surface water Drinking Water Protected Areas (DWPA's). The closest surface water DWPA is located 2.2km south west of the study area and is not hydrologically connected to the study area (Figure 9-1).

#### Hydrogeology

9.4.6 The entirety of the study area and associated infrastructure is part of the Lewis and Harris groundwater body (ID: 150695) and is 2108.9 km<sup>2</sup> in area. Review of SEPA's Water Environment Hub indicates the Water Framework Directive (WFD) status of the underlying groundwater body is 'good'.

9.4.7 Review of the 1:625,000 BGS Bedrock Hydrogeology Map from the BGS Onshore GeoIndex Viewer indicates the study area is characterised by the Lewisian Complex, which is a low productivity aquifer, summarised as having; "Groundwater only present in near surface weathered zone and secondary fractures" (Figure 9-2)

9.4.8 The study area and western extents of the wider search area are located within the Lewis and Harris groundwater DWPA. The northeastern extents of the wider search area which encapsulate the town of Stornoway are located within the Stornoway groundwater DWPA.

9.4.9 The sensitivity of groundwater is considered moderate, given the groundwater body is classed as 'good' but the aquifer is classed as having a low productivity.

### Flooding

9.4.10 Review of SEPA's online fluvial flood map (SEPA, 2024) shows the study area to contain multiple isolated pockets of low to high likelihood of fluvial flooding, pockets of flooding are observed to take place in topographically low-lying areas surrounding water courses and waterbodies (Figure 9-3). The observed flooding is confined to the immediate vicinity of these watercourses and waterbodies and is not considered to pose a flood risk to the onshore proposed development.

9.4.11 SEPA's online surface water flood map shows isolated pockets of surface water flooding within the study area, again following the extents of local watercourses and waterbodies and localised topographical low points. None of the identified surface water flood extents are considered to pose a flood risk to the onshore proposed development.

9.4.12 Depending on the depth of UGC trenches groundwater flooding may need to be considered. This will be determined when further detail of the design is available.

9.4.13 The online SEPA reservoir flood map indicates that in the event of reservoir failure of the Loch An Ois reservoir located west of the study area, the Abhainn Ghrioda may become inundated with flood waters. The flood map indicates that in the event of this occurring flood waters would again be confined to the extents of the watercourse and no flood risk would be posed to the study area.

9.4.14 Upon review of SEPA's online groundwater flood map the study area was shown not to be at risk of groundwater flooding.

9.4.15 The northeast corner of the study area has been identified as being a Potentially Vulnerable Area (PVA). This means that SEPA considers the site to have a significant flood risk likely to occur in the future. SEPA will therefore produce hazard and flood risk maps for the area and continue to assess the area.

9.4.16 The overall flood sensitivity of the study area is deemed to be low with no significant flood risk posed to the onshore proposed development.

### Private Water Supplies (PWS)

9.4.17 A Freedom of Information (FOI) request was made to CnES on 09/10/2024 regarding information on the location of private water supplies within proximity of the onshore proposed development. Three PWS were identified within the wider search area, one of which is located within the study area.

### Ground Water Dependent Terrestrial Ecosystems (GWDTE)

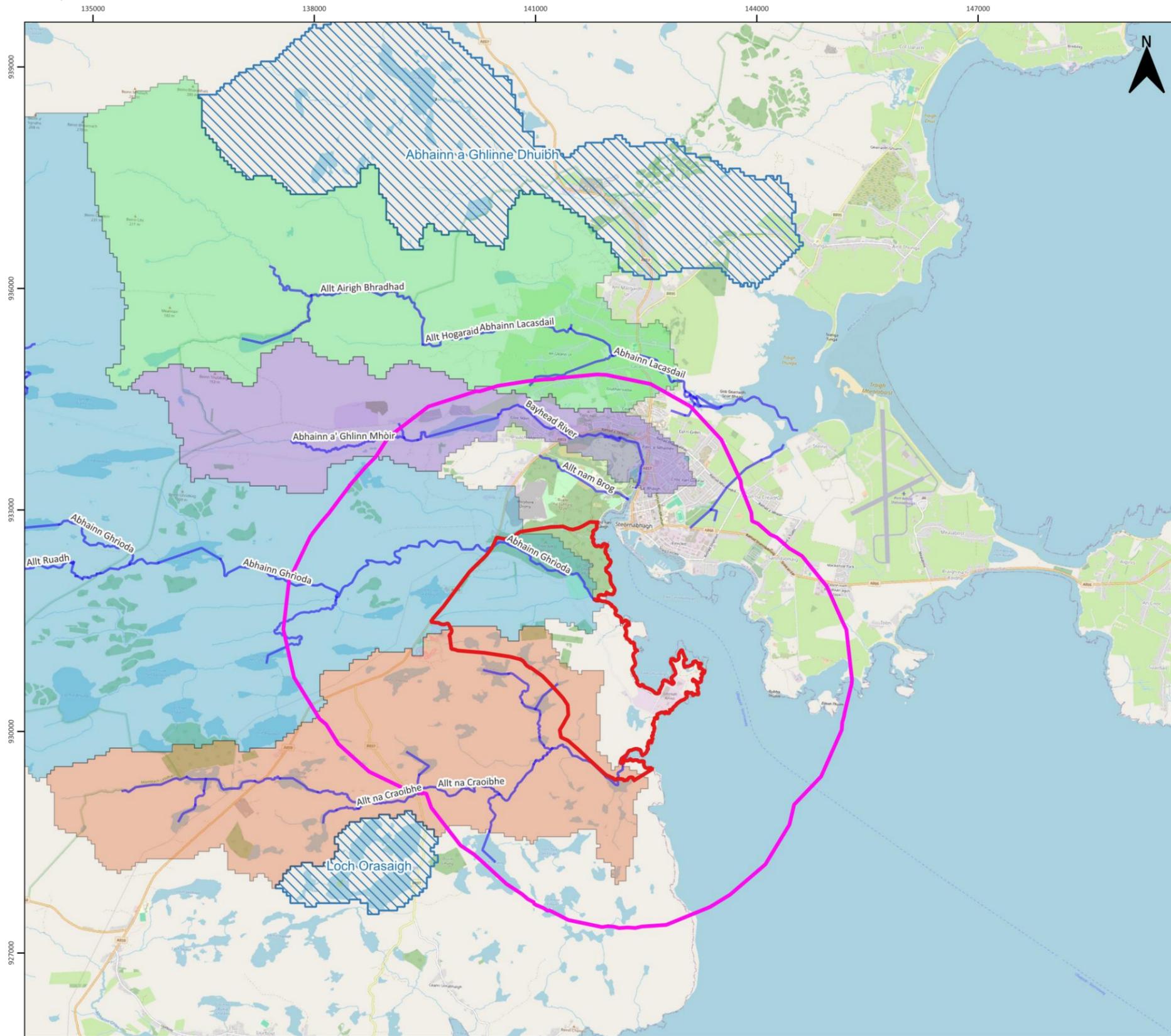
9.4.18 National Vegetation Classification (NVC) mapping will be carried out to indicate potential locations of potentially 'high' to 'moderate' value GWDTE habitats within the site. A detailed GWDTE appraisal, if required, will be undertaken to confirm potential dependency/ classifications and every effort will be made within the site layout evolution to avoid potentially high value habitats as far as practicable.

### Designated Sites

9.4.19 Designated nature conservation sites with relevance to Hydrology and Hydrogeology have been identified and provided in Table 9-1 and can be seen on Figure 6.1.

Table 9-1 Relevant nature conservation sites designated for the protection of Hydrological receptors

Designated Site Name	Distance from Proposed Onshore Development (km)	Closest Project Component to Site	Reason for Designation
Inner Hebrides and Minches SAC	1.2	-	Protection of Harbour Porpoises

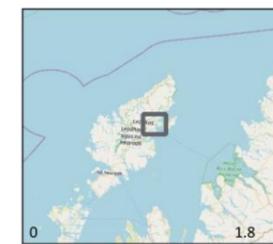


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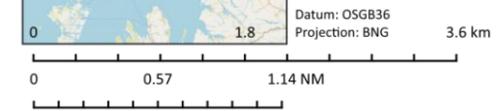
**Hydrological Overview**

**Legend**

- Onshore Scoping Boundary - Study Area
  - Hydrology and Hydrogeology Wider Search Area - 2km Buffer
  - Drinking Water Protected Area - Surface Water
  - Main Watercourse
- SEPA Main Catchments**
- Abhainn a Ghlinn Mhoir - Bayhead River
  - Abhainn Ghrioda
  - Abhainn Lacasdail
  - Allt na Craoibhe - Leiravay



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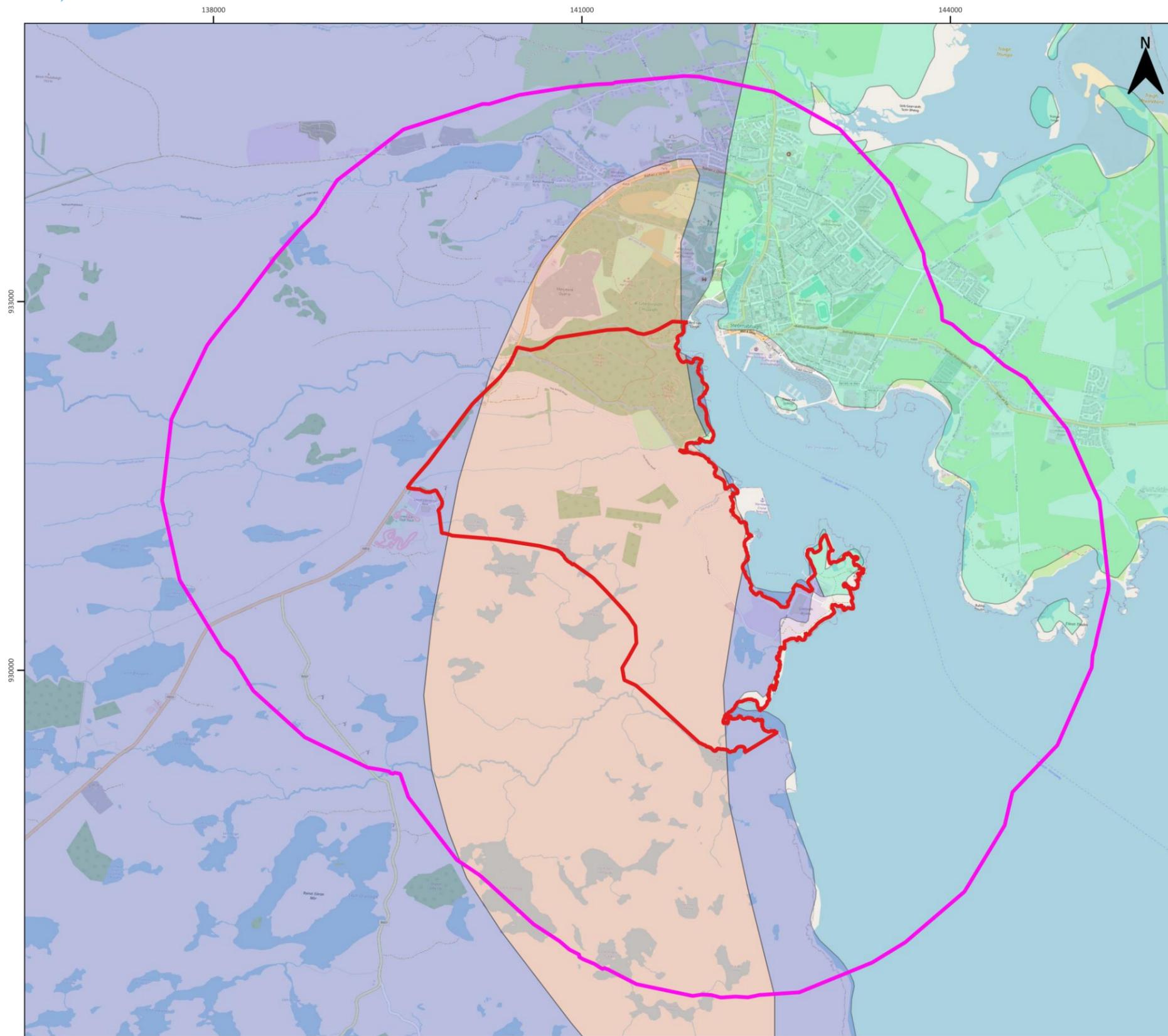
**Figure 9.1**

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Figure 9-1 Hydrological Overview



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**Hydrogeological Overview**

**Legend**

- ▭ Onshore Scoping Boundary - Study Area
- ▭ Hydrology and Hydrogeology Wider Search Area - 2km Buffer

**Hydrogeology**

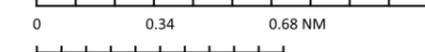
- ▭ Groundwater only present in near surface weathered zone and secondary fractures.
- ▭ Locally important sandstone and conglomerate aquifer up to 140 m thick in Grampian.
- ▭ Mylonitic rock and fault breccia yielding small amounts of groundwater.



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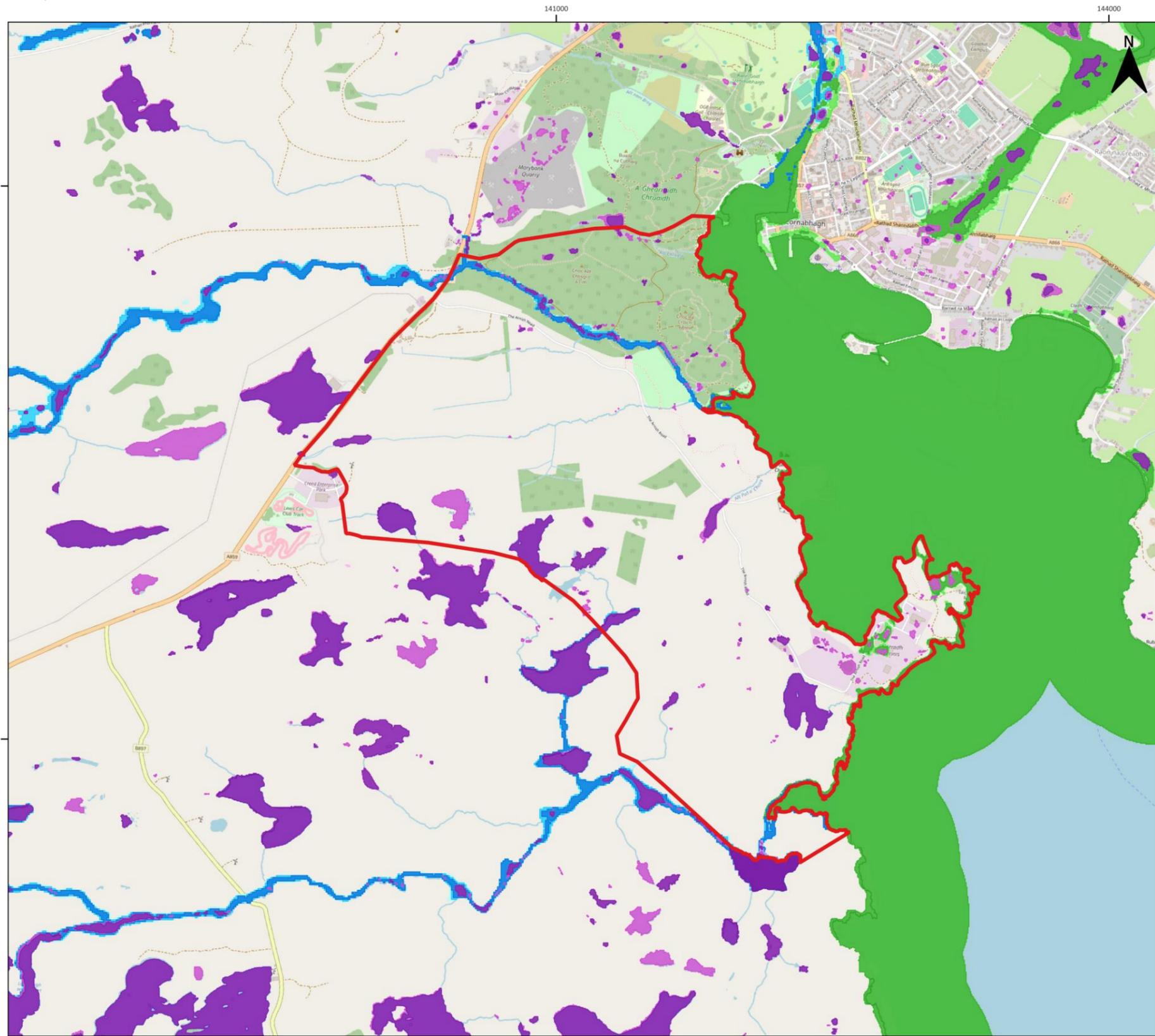


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Figure Reference: Talisk\_Fig9.2\_HydrogeologicalOverview\_V1  
**Figure 9-2 Hydrogeological Overview**



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**Flood Risk**

**Legend**

- Onshore Scoping Boundary - Study Area
- SEPA Surface Water Flooding Risk Extent
  - Low Likelihood
  - Medium Likelihood
  - High Likelihood
- SEPA Fluvial Flooding Risk Extent
  - Low Likelihood
  - Medium Likelihood
  - High Likelihood
- SEPA Coastal Flood Risk Extent
  - Low Likelihood
  - Medium Likelihood
  - High Likelihood

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**Figure 9.3**

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**Figure 9-3 Flood Risk**

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## 9.5 Embedded Mitigation and Design Assumptions

9.5.1 As part of the initial design process, embedded mitigation measures will be implemented in order to reduce the potential environmental effects of the Proposed Development. Examples of measures related to Hydrology which could be implemented are as follows:

- Maintaining a buffer of at least 50 m around any significant surface watercourses and water bodies;
- Avoiding siting infrastructure in areas of elevated flood risk where possible;
- Incorporation of suitable drainage design measures to ensure that discharge rates and water quality is controlled to appropriate standards prior to discharge to the water environment. This will ensure that the receiving water environment is not adversely affected by drainage and run off from the Proposed Development;
- Minimise watercourse crossings and judicious siting of cabling and proposed substation.

## 9.6 Likely Significant Effects

### Project Specific Impacts Scoped In

9.6.1 Table 9-2 below summarises the potential impacts scoped into the assessment of Hydrology and Hydrogeology. Some of these impacts may be able to be scoped out when design information is available, therefore this scoping will be revisited in the ES to update as necessary.

Table 9-2 Potential impacts scoped into the assessment of Hydrology and Hydrogeology

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
Pollution, high levels of suspended solids and turbidity in downstream watercourses	Local scale pollution to hydrological receptors can be caused by sedimentation from excavated/stockpile material during the construction phase of the Proposed Development	Inclusion of a CEMP and Construction phase Water Quality Monitoring Programme (WQMP)	Construction Decommissioning	Landfall of the Talisk offshore cables, substation, converter station, underground cable
Alteration of natural drainage patterns, changes in runoff rates and volumes due to increased areas of temporary and permanent hardstanding	Alterations to natural drainage patterns through the construction of temporary hard standing areas can lead to flooding on and downstream of the Proposed Development	Inclusion of a CEMP and Completion of robust Flood Risk and Drainage Assessment (FRDA) for the proposed substation	Construction O&M	As above
Localised flooding and erosion caused by impediments to flow	Impediment to natural drainage patterns can be created by alterations to site topography and material stockpiles, leading to knock on effects of flow patterns of local watercourses	Inclusion of a CEMP and Completion of robust Flood Risk and Drainage Assessment (FRDA) for the proposed substation	Construction O&M	As above
Pollution of surface water as a result of maintenance activities associated with the operation of the site.	Pollution may occur to local watercourses during maintenance periods of proposed infrastructure. Pollutants may arise in the form of oil/petrochemicals from machinery	Inclusion of an operational pollution prevention measures and Operational Phase Water Quality Monitoring Programme (WQMP)	O&M	As above
Changes in quality and quantity of PWS supplies	Alterations to natural drainage patterns and pollution of the local water environment from construction works and permanent infrastructure	An investigation to identify private water supplies, including supply pipework, which may be in hydraulic connectivity with the Proposed Development will be undertaken – informed by detailed site surveys and FOI data, if required.	Construction O&M	As above

## Project Specific Impacts Scoped Out

9.6.2 Due to the early design stage and site selection not having been confirmed, no hydrological and hydrogeological impacts are scoped out at this stage.

## 9.7 Approach to EIA

### Relevant Guidance

9.7.1 Assessment of effects in relation to Hydrology and Hydrogeology will be undertaken in line with current guidance and best practice. The following legislation, guidance and published data sources will be used to inform the assessment including:

- Water Framework Directive (WFD) (2000/60/EC) (European Parliament and of the Council, 2000);
- NPF4 (Scottish Government, 2023);
- Water Environment and Water Services (Scotland) Act 2003 (2003);
- Water Environment (Controlled Activities) Regulations 2011 (2011);
- The SuDS Manual C753 (Ciria, 2015);
- SEPA policy regarding culverts (SEPA, 2011);
- Regulatory Position Statement – Developments on Peat (SEPA, 2010);
- Guidance for Pollution Prevention (GPP) 1: Understanding your environmental responsibilities – good environmental practices (SEPA, 2021);
- GPP 5: Works and maintenance in or near water (SEPA, 2018); and
- Policy 19: Groundwater Protection Policy for Scotland (Version 3) (SEPA, 2009).

### Anticipated Additional Data Sources at EIA

9.7.2 The following survey data will be used to inform the assessment:

- PWS details provided through FOI request and PWS Supply survey data.
- Hydrological site walkover data and potential GWDTE survey data, if required.

### Assessment Methodology

9.7.3 The assessment will follow the methodology set out in Section 4.2.

9.7.4 Additionally, the following surveys will be undertaken to inform the assessment:

- PWS supply surveys will be undertaken in accordance with best practice.  
Hydrological Site walkover surveys will be conducted in accordance with the appropriate guidance.  
NVC mapping data and GWDTE survey data, if required  
Watercourse crossing surveys will be undertaken shall it be deemed necessary for site infrastructure to cross watercourses on site.

9.7.5 The surveys will be undertaken in two separate visits. The first visit will be used to obtain key information to inform the design layout, then a confirmatory visit would be undertaken around design freeze to inform this.

## 9.8 Scoping Questions

9.8.1 The following scoping questions refer to the Hydrology chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree with the use of those data listed in Appendix A, and any additional anticipated data listed in Section 9.7, being used to inform the Onshore EIA?
- Do you agree that all receptors related to Hydrology have been identified?
- Do you agree with the scoping in and out of impacts related to Hydrology?
- Do you agree with the assessment of cumulative effects related to Hydrology?



- Do you agree with the proposed assessment methodology related to Hydrology?

# 10. Noise and Vibration

## 10.1 Introduction

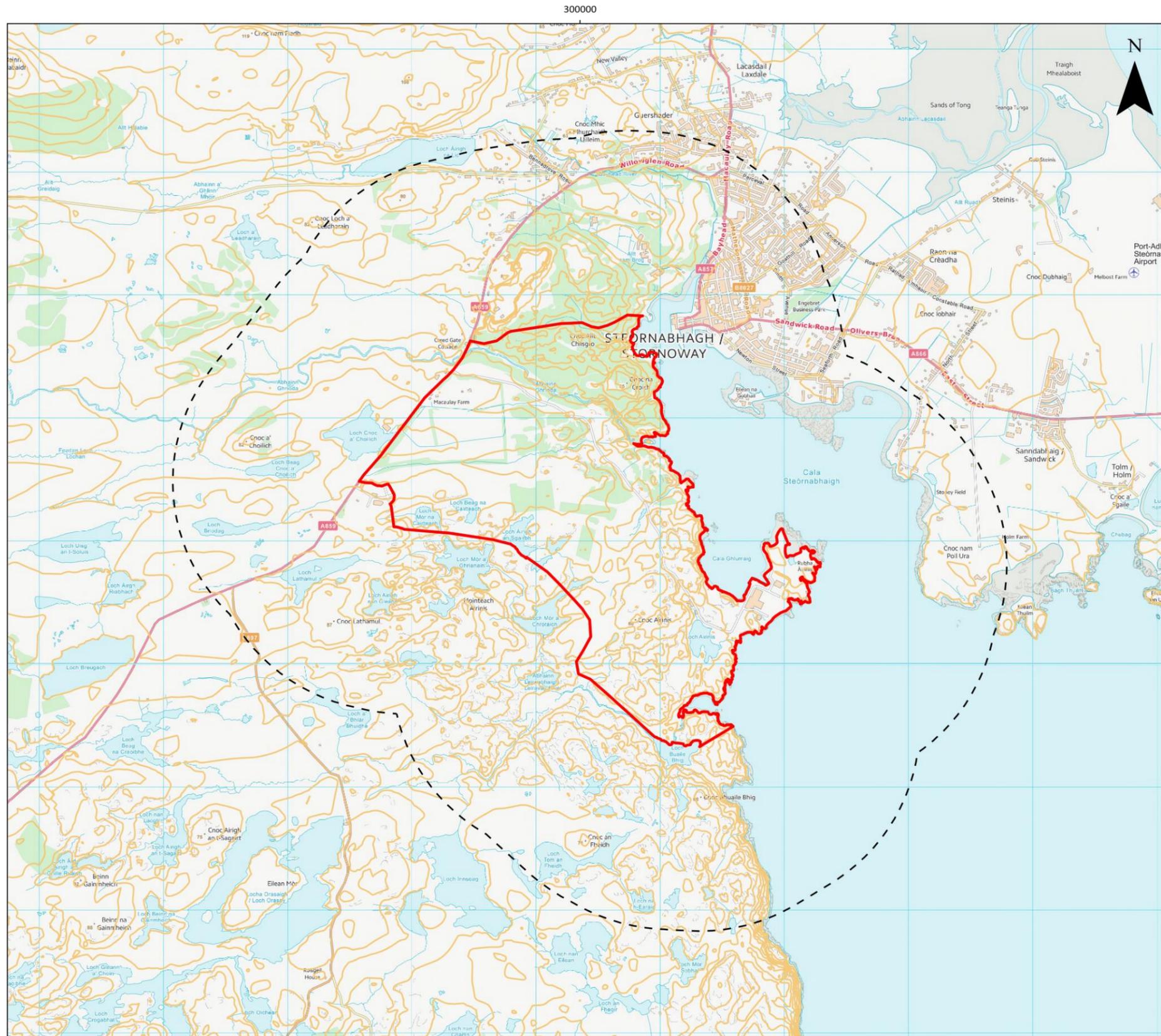
- 10.1.1 This chapter sets out the proposed approach to the assessment of potentially significant noise and vibration effects as a result of the construction, O&M, and decommissioning of the proposed onshore development.
- 10.1.2 This chapter identifies the noise and vibration receptors of relevance to the onshore aspects of the proposed onshore development, and considers the potential impacts from construction, operation, and decommissioning phases.
- 10.1.3 The importance of potential noise and vibration impacts are identified by consideration to the prevailing local noise environment, the proximity and sensitivity of local receptors, and the potential for the proposed onshore development to generate noise and/or vibration during the construction, O&M and decommissioning phases. The primary focus of the scoping assessment will be on the generation of noise and vibration and the potential impacts of this in terms of disturbance.

## 10.2 Study Area

- 10.2.1 For this Scoping Report, the noise study area for construction/ decommissioning and O&M noise is defined as the Onshore Scoping Area plus a 1.5km buffer (Figure 10-1). Vibration impacts are highly unlikely to be present beyond 30m of an HGV route on the site or the underground cable route. No vibration is expected from the operational aspect of the site. For the purposes of the EIA, the noise study area is likely to be as those described above. No specific guidance exists which explicitly states buffer areas as this depends on the number, nature and level of the noise sources. However, around 1.5km is generally considered best practice.
- 10.2.2 The study area of the construction and decommissioning noise assessment will be likely to include traffic routes and routes subject to significant changes in traffic flows (and/or percentage of HGV) due to proposed onshore development activities identified in Chapter 11: Traffic and Transport.
- 10.2.3 Figure 10-1 and Figure 10-2 illustrate the study area and sensitive receptors respectively, providing a clear visual context for the analysis presented in this section.

## 10.3 Data Sources at Scoping

- 10.3.1 The data sources used to inform this Scoping Report are shown in Appendix A and are proposed to inform the baseline characterization for Noise and Vibration in the EIA.
- 10.3.2 The publicly available noise data for 2021 provides a geographical representation of noise levels across Scotland, highlighting areas with high environmental noise exposure. However, its utility is limited as it does not include L90 data, a critical metric for assessing background sound in the context of operational impacts under BS4142.



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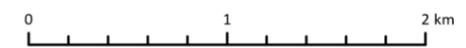
**Legend**

- Site boundary
- 1.5 km site buffer



**Notes**  
OceanWise, Esri, GEBCO, Garmin, NaturalVue

Datum: OSGB36  
Projection: BNG



Scale	Date	Drawn by	Checked by	Approved by
1:30,000 @A3	20/11/2024	TH	KM	JG

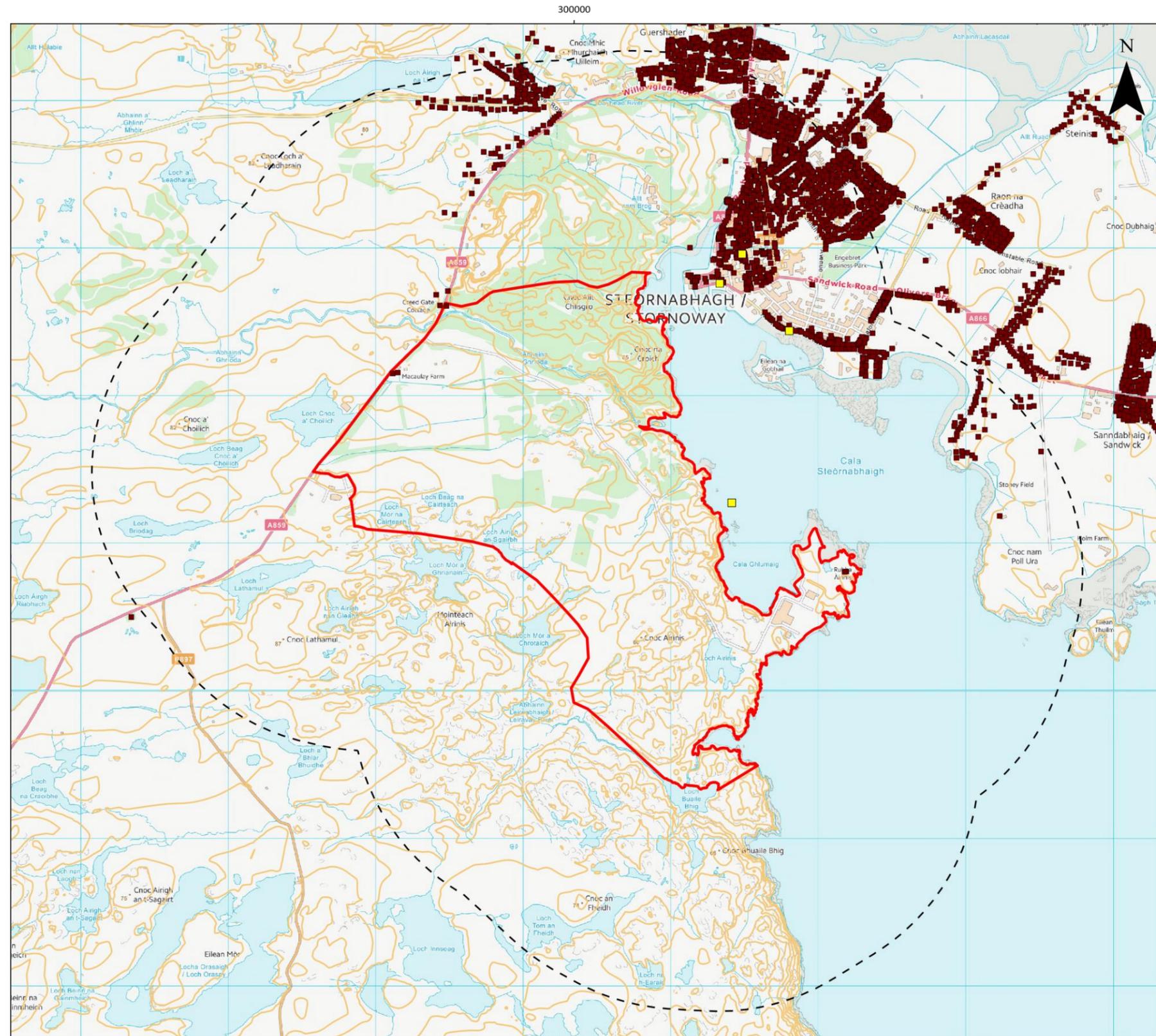
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**Figure 10-1**

Figure 10-1 Noise Study Area



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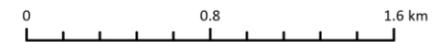
**Legend**

- Site boundary
- 1.5 km site buffer
- Residential address
- Commercial receptor



**Notes**  
OceanWise, Esri, Garmin,  
NaturalVue

Datum: OSGB36  
Projection: BNG



Scale	Date	Drawn by	Checked by	Approved by
1:25,000 @A3	19/11/2024	TH	KM	GB

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**Figure 10-2**

Figure 10-2 Noise Sensitive Receptors

## 10.4 Description of Baseline Characteristics

### Current Baseline

- 10.4.1 An initial desk-based review of literature and available data sources (see Appendix A) has been undertaken to support this Scoping Report. The findings of this research are presented below to provide an understanding of the proposed onshore development environment, including the presence of receptors sensitive to noise and vibration, and to inform the scoping process.
- 10.4.2 The overall baseline environment within the Onshore Scoping Area is primarily comprised of remote rural areas with occasional residential properties and industrial sites. Noise in this area is likely to be characterised by anthropogenic and non-anthropogenic noises. Such anthropogenic sounds are likely to be from traffic from the A859 running along the western site boundary and possible agricultural activity. There will also be some noise from nearby industrial sites such as the Harland & Wolff (Arnish) and the Upgraded Stornoway Deepwater Port. Therefore, any baseline noise sources for the study area would be primarily characterised as resulting from anthropogenic sources. Additionally, 'natural' sources of noise such as wind, wave, disturbed vegetation and animal noise from the adjacent terrain, are likely to also contribute to the baseline noise within the vicinity of the study area.
- 10.4.3 Within the scoping area, human receptors were identified that have the potential to be impacted by noise and vibration. The findings are shown in Figure 10-2 and summarised in Table 10-1.
- 10.4.4 Site visits will be undertaken and will involve a walkover of the noise and vibration study area to confirm desktop sources and identify noise sensitive receptors in the vicinity of the proposed onshore development once more information is available on the location of development infrastructure within the study area.
- 10.4.5 Background noise monitoring may be undertaken at residential properties in accordance with current guidance (See Section 10.7) where the potential for significant noise effects from the proposed onshore development are identified, and where needed to inform the noise assessment. The desk study will include identification of any existing noise measurements in the proposed onshore development scoping area. Any baseline noise surveys will be agreed in consultation with CnES and will be carried out for a sufficient period to allow typical sound levels to be established, taking account of different types of noise sources that occur. Noise surveys will be accompanied by the acquisition of supplementary non-acoustic data (rainfall and wind records) as required.

Table 10-1 Closest noise sensitive receptors within the scoping study area

Receptor type	Receptor name
Residential	Macaulay Farm
Residential	Old Farm House
Residential	Macaulay Farm Lodge
Residential	Creed Lodge
Residential	Creed Gate Cottage
Residential	Creed Cottage
Commercial / Residential	Stornoway Town / South Beach / Newton Street
Residential	Macaulay Farm

- 10.4.6 The noise sensitivity designation of any Cruise ship docking at the Stornoway Deepwater Port is not known at this time as receptors here will be temporary and the arrival of these receptors may not co-inside with the proposed cable route construction.
- 10.4.7 Depending on the buffer necessary and the location of the cable route, further receptors within the town of Stornoway itself may need to be included.

## 10.5 Embedded Mitigation and Design Assumptions

- 10.5.1 As part of the initial design process, embedded mitigation measures will be proposed to reduce the potential environmental effects of development. Measures related to Noise and Vibration which could be employed are as follows:

- BS: 5228 – Best Practise Noise Control – Construction Site;
- A Construction Noise Management Plan; and
- Investigation of noise complaints with follow up noise monitoring.

10.5.2 The requirement for additional mitigation measures will be dependent on the significance of effects on sensitive receptors and will be informed by consultation with consultees throughout the EIA process.

## 10.6 Likely Significant Effects

### Project Specific Impacts Scoped In

10.6.1 A number of potential impacts on onshore noise and vibration receptors have been identified which may occur during the construction, O&M, and decommissioning phases of the proposed onshore development. Details of potential impacts are proposed to be scoped in for the assessment and have been outlined in Table 10-2 with a scoping justification.

Table 10-2 Potential impacts scoped into the assessment of Noise and Vibration

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
Noise associated with construction and decommissioning phase	Due to the short term and localised nature of onshore construction and decommissioning processes, any temporary noise generated is likely to be minimal and concentrated to the study area.	Further study is required to understand the specific proposed route of the development and the effects of noise on sensitive receptors. Scoped into the EIA until confirmation of the route can be confirmed.	Construction Decommissioning	Substation, Cable Route
Operational phase associated noise generation	Noise impacts related to the onshore operational phase will be limited to noise from the substation.	Scoped into the EIA until confirmation of the location and noise generation of the substation can be confirmed.	O&M	Substation
Noise and ground-borne vibration associated with vehicle use	Vehicle use has the potential to give rise to noise and vibration issues on sensitive receptors.	Further study is required to understand the distance access routes are to residential receptors and the associated effects. Scoped into the EIA until confirmation of the route can be confirmed.	Construction Decommissioning	Substation, Cable Route Access Route
Construction and Decommissioning phase associated ground-borne vibration	Vibration impacts related to the onshore construction and decommissioning phase will be limited, unless piling is anticipated or the cable route is in close proximity to residential receptors.	Scoped into the EIA until confirmation of the location of the cable route and the location and noise generation of the substation can be confirmed	Construction Decommissioning	Substation, Cable Route
Operational phase associated ground-borne vibration	Vibration impacts related to the onshore operational phase will be limited to vibration from the substation. However, vibration from substation operation isn't anticipated.	Scoped into the EIA until confirmation of the location and vibration generation of the substation can be confirmed.	O&M	Substation

## Project Specific Impacts Scoped Out

10.6.2 No project specific impacts have been scoped out at this time. The scope of the noise and vibration assessment will be revisited once preferred site and design information is available.

## 10.7 Approach to EIA

### Relevant Guidance

10.7.1 The following legislation, policy and guidance will be taken into consideration as part of the assessment of potential impacts on noise and vibration receptors.

- Environmental Protection Act 1990;
- Control of Pollution Act 1974;
- Scottish Government (2011) – Planning Advice Note: PAN 1/2011 Planning and Noise;
- British Standards Institution (2014) – Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise (BS 5228-1);
- British Standards Institution (2014) – Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 2: Vibration (BS 5228-2);
- British Standards Institution (2014, amended 2019) – Methods for rating and assessing industrial and commercial sound (BS 4142);
- British Standards Institution (2003) Description and measurement of environmental noise – Part 1 Guide to quantities and procedures (BS 7445-1); and
- British Standards Institution (2014) Guidance on sound insulation and noise reduction for buildings (BS 8233).

10.7.2 The assessment of impacts arising from the proposed onshore development on noise and vibration sensitive receptors will utilize project-specific and publicly available data and will be augmented by consultation during the EIA phase.

10.7.3 Consultation will be undertaken with key stakeholders including CnES Environment Health Department, local landowners and communities.

10.7.4 The views and information gathered from these consultations will inform the development of the proposed onshore development and ensure that wherever possible, adverse effects on people, and the natural environment have been avoided or reduced, and where possible benefits have been delivered.

10.7.5 Noise and vibration issues associated with the construction of the proposed onshore development would be assessed using the guidance contained in BS 5228:2009+A1:2014 (British Standards Institution, 2014), which defines the most suitable accepted prediction methods and source data for various construction plant and activities. Noise impacts from construction and decommissioning would be based on the likely construction program and associated activities including substation works, cable laying using open trench and trenchless techniques, construction traffic and access routes. The type and number of vehicles, plant equipment and machinery required for construction and decommissioning to be detailed and the main sources of noise from the proposed onshore development will be identified.

10.7.6 The assessment will consider the worst-case design envelope, i.e., the vehicles and plant are located at the closest possible reasonable approach to a receptor. The study area of the construction and decommissioning noise assessment would include a 1.5km buffer zone from the proposed onshore development, where significant activities have the potential to affect noise sensitive receptors (including Core Paths).

10.7.7 Where identified as necessary, Operational impacts would include noise impacts associated with the substation. The guidance and methodology contained in BS 4142:2014+A1:2019 (British Standards Institution, 2019) would be used to assess noise impacts arising from the substation.

### Anticipated Additional Data Sources at EIA

10.7.8 Construction phasing, duration, proposed cable route, construction techniques, proposed equipment to be used during each phase, routes of construction equipment across the site and access route and HGV access numbers per day.

### Assessment Methodology

10.7.9 The assessment methodology will follow the approach set out in section 4.2 and additionally will follow BS 5228:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites' (Annex E).

## 10.8 Scoping Questions

10.8.1 The following scoping questions refer to the Noise and Vibration chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree with the use of those data listed in Appendix A, and any additional anticipated data listed in Section 10.7, being used to inform the Onshore EIA?
- Do you agree that all relevant legislation, policy and guidance documents have been identified for the onshore noise and vibration assessment, or are there any additional legislation, policy and guidance documents that should be considered?
- Do you agree that all receptors related to Noise and Vibration have been identified?
- Do you agree with the data sources which are suggested for the assessment of onshore noise and vibration, or are there any additional data and information sources that should be considered?
- Do you agree with the suggested embedded mitigation measures?
- Do you agree with scoping in and out of impacts related to Noise and Vibration?
- Do you agree with the assessment of cumulative effects related to Noise and Vibration?
- Do you agree with the approach to analysis and assessment that will inform the EIA?

# 11. Traffic and Transport

## 11.1 Introduction

- 11.1.1 This chapter will assess the potential effects on Traffic and Transport in relation to the construction phase of the proposed onshore development. Traffic associated with the O&M of the proposed onshore development will be negligible and is therefore proposed to be scoped-out of the EIA process. Traffic associated with decommissioning is anticipated to be significantly less than that generated during construction. Given the potential timescales involved and the likelihood for changes to the baseline situation during this period, the traffic and transport effects of decommissioning will not be assessed in this Chapter.
- 11.1.2 The assessment will be based on potential effects associated with Heavy Goods Vehicles (HGVs), delivery vehicles, and private car movements during the construction of the Proposed Development.
- 11.1.3 The traffic and transport chapter will:
- describe the current traffic and transport conditions in the area around the proposed onshore development;
  - identify and assess the potential environmental effects associated with increased traffic from the proposed onshore development;
  - identify and describe the mitigation measures proposed to address potential significant environmental effects; and
  - assess residual effects post mitigation implementation.

## 11.2 Study Area

- 11.2.1 The study area for the Traffic and Transport assessment has been based on the location of the proposed onshore development (Figure 1.1) access point and the public road routes that will be used by construction traffic to reach the proposed access point. The study area is therefore defined as:
- A859;
  - Arnish Moor Road (between A859 and Arnish Port / Stornoway Deep Water Port);
  - A858; and
  - A857.

## 11.3 Data Sources at Scoping

- 11.3.1 The data sources used to inform this scoping report chapter, and which will be used to inform the EIA chapter are shown in Appendix A. It is noted that no traffic data has been identified for Arnish Moor Road at this time, so it may be necessary to undertake a new traffic survey on the road route to identify its current traffic carrying characteristics.

## 11.4 Description of Baseline Characteristics

### Current Baseline

- 11.4.1 It is noted that the road links described in Section 11.2 effectively make up the study area for the traffic and transport assessment. The proposed onshore development lies to the south of Stornoway and will be accessed via the A859 so all construction traffic will require to use the A859 corridor in order to access the proposed onshore development. The A859 is the key north-south route on Lewis extending from the settlement and Port of Stornoway to the north of the Site and to Harris to the south (Figure 1.1).
- 11.4.2 The A858 runs in an east-west axis to the west of Stornoway before turning northwards and running to the north end of Lewis. It is likely that some construction materials and site staff will come from origins on this road corridor so a temporary uplift in traffic levels is anticipated on this route during the construction of the proposed onshore development.
- 11.4.3 The final road link included within the study area is the A857 through Stornoway. This road links to the A858 which in turn connects to the A859 and therefore provides the link between these roads and the

port facilities within Stornoway as well as other commercial areas of the settlement where some materials for the proposed onshore development are likely to be sourced from. It is also likely that a high proportion of the construction workforce would be drawn from Stornoway.

- 11.4.4 Arnish Moor Road is likely to be used to access parts of the proposed onshore development and will be upgraded as part of the development of the Stornoway Deep Water Port by others (and is not included in the Talisk Onshore Development). There are no particular sensitive receptors along this road which is effective the access road to the port.
- 11.4.5 The main sensitive receptors to increased traffic levels and associated environmental effects are likely to be residents of the isolated dwellings along the road corridors and those who use the road for leisure and recreational purposes (cyclists, etc.), as well as the settlement of Stornoway.

## **11.5 Embedded Mitigation and Design Assumptions**

- 11.5.1 As part of the initial design process, embedded mitigation measures will be implemented in order to reduce the potential environmental effects of development. The embedded mitigation related to Traffic and Transport which could be employed include:
- Implementation of a Construction Stage Traffic Management Plan (CTMP).

## **11.6 Likely Significant Effects**

### **Project Specific Impacts Scoped In**

- 11.6.1 Table 11.1 identifies the potential impacts that will be assessed within the EIA chapter along with the parameters for the assessment.

Table 11-1 Potential impacts scoped into the assessment of Traffic and Transport

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
Severance	Severance is the perceived division that can occur within a community when it becomes separated by major transport infrastructure	As provided in IEMA guidelines (IEMA, 2023)	Construction	Landfall of the Talisk offshore cables Substation Converter Station Underground Cables
Road Vehicle Delay	Some driver delay may be experienced when construction traffic is accessing the Site	As provided in IEMA guidelines	Construction	As above
Non-motorised Delay	The assessment of pedestrian delay serves as a proxy for the delay that other modes of non-motorised users may experience when crossing roads	As provided in IEMA guidelines	Construction	As above
Fear and Intimidation	Fear and intimidation created by all moving objects	As provided in IEMA guidelines	Construction	As above
Road Safety	Personal Injury accident risk calculated per million vehicle KM due to construction traffic	As provided in IEMA guidelines	Construction	As above
Hazardous/Large Loads	Movement of abnormal or hazardous loads	As provided in IEMA guidelines	Construction	As above

## Project Specific Impacts Scoped Out

11.6.2 Drawing on the experience of the EIA team and following a full review of the proposals, it is proposed to scope out certain elements from the assessment as per Table 11.2.

Table 11-2 Potential impacts proposed to be scoped out of further assessment for Traffic and Transport

Impact	Justification	Relevant Development Stage
Effect of Operational Vehicle Movements	Once the Development is operational, the amount of traffic associated with the development will be minimal, relating to maintenance only.	O&M
Effect of Decommissioning Vehicle Movements	At some point in the future, the Development may be decommissioned. Traffic associated with the decommissioning stage is anticipated to be significantly less than that generated during construction. Given the potential timescales involved and the likelihood for changes to the baseline situation during this period, the traffic and transport effects of decommissioning will not be assessed in this Chapter.	Decommissioning

## 11.7 Approach to EIA

### Relevant Guidance

11.7.1 The following policy and guidance documents will be used to inform the Traffic and Transport EIA Chapter:

- Guidelines for the Environmental Assessment of Traffic and Movement (IEMA, 2023);
- Transport Assessment Guidance (Scottish Government, 2012);
- Planning Advice Note 75: Planning for Transport (Scottish Government, 2005); and
- Design Manual for Roads and Bridges (DMRB) (Standards for Highways, 2024).

### Anticipated Additional Data Sources at EIA

11.7.2 Road traffic accident data for the study area will be sourced from crashmap.co.uk (CrashMap, 2020) database.

### Assessment Methodology

11.7.3 The effect of the increase in construction vehicle traffic movements will be quantified through comparison of existing traffic flows and vehicle composition (baseline data) with the flows predicted as a result of the construction of the proposed onshore development. Consideration of the potential effect on other road users will also be undertaken where road links are affected by construction traffic.

11.7.4 The traffic flows will be factored up where necessary to represent the anticipated year of construction using the National Road Traffic Forecast (NRTF) "low growth".

11.7.5 The assessment will explore whether effects on these are likely to be significant based upon two tests contained within IEMA Guidelines. The guidelines suggest that, in order to determine the scale and extent of the assessment and the level of impact that the development will have on the surrounding road network, the following two 'rules' should be applied:

- Rule 1 – Include highway links where flows are predicted to increase by more than 30% or where the number of HGVs is predicted to increase by more than 30%; and
- Rule 2 – Include any other specifically sensitive areas where traffic flows are predicted to increase by 10% or more.

11.7.6 These rules will be used as a screening exercise to determine whether a detailed assessment of effects on the routes within the study area is necessary. Where a detailed assessment is required, sensitivity and magnitude criteria will be used to determine the significance of effects.

11.7.7 Where a detailed assessment is required, sensitivity and magnitude criteria will be used to determine the significance of effects using a matrix approach.

## 11.8 Scoping Questions

11.8.1 The following scoping questions refer to the Traffic and Transport chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree with the use of those data listed in Appendix A being used to inform the Onshore EIA? Do consultees hold any traffic data for the study area?
- Do you agree that all receptors related to Traffic and Transport have been identified?
- Do you agree with the scoping in and out of impacts related to Traffic and Transport?
- Do you agree with the assessment of cumulative effects related to Traffic and Transport?
- Do you agree with the proposed assessment methodology related to Traffic and Transport?

# 12. Socio-economics

## 12.1 Introduction

12.1.1 This chapter sets out the proposed approach to the assessment of the likely significant socio-economic, tourism, recreation, and land use effects as a result of the construction, O&M, and decommissioning of the proposed onshore development.

12.1.2 Information that may be considered relevant to this chapter can be found in the following chapters:

- Chapter 10 Noise and Vibration
- Chapter 11 Traffic and Transport
- Chapter 13 Human Health
- Chapter 14 Air Quality

## 12.2 Study Area

12.2.1 The potential socio-economic, tourism, recreation, and land use impacts of the proposed onshore development are anticipated to extend beyond the immediate site boundary, with potential impacts considered at various levels, including the broader Scottish context.

12.2.2 The assessment of the likely significant socio-economic, tourism, recreation, and land use effects will utilise three study areas:

- Local: The site boundary intersects two electoral wards—Sgìre nan Loch and Steòrnabhagh a Tuath. Steòrnabhagh a Deas serves as the major city, defining the local demographics relevant to the proposed onshore development
- Regional: The assessment will utilise The Outer Hebrides as the regional framework, providing insights into the socio-economic context and dynamics of the area.
- National: The assessment will also consider the broader context of Scotland, enabling a comprehensive understanding of potential impacts at the national level.

12.2.3 Figure 12-1 illustrates the study area, providing a clear visual context for the analysis presented in this section.



## Legislation, Policy and Guidance

12.2.4 The most relevant policy concerning socioeconomics, tourism, recreation and land use that will inform the assessment comprises:

- National Strategy for Economic Transformation (Scottish Government, 2022);
- NPF4 (Scottish Government, 2023);
- Net Economic Benefits and Planning (Scottish Government, 2016);
- Onshore Wind Policy Statement (Scottish Government, 2022);
- Draft Energy Strategy and Just Transition Plan (Scottish Government, 2023)
- Regional Economic Strategy (Highlands and Islands Enterprise, 2023); and
- Tourism Scotland 2030 (Scottish Tourism Alliance, 2023).

## 12.3 Data Sources at Scoping

12.3.1 The existing data sets and literature that have been used to inform this chapter and are proposed to inform the baseline characterisation for the EIA Report are outlined in Appendix A.

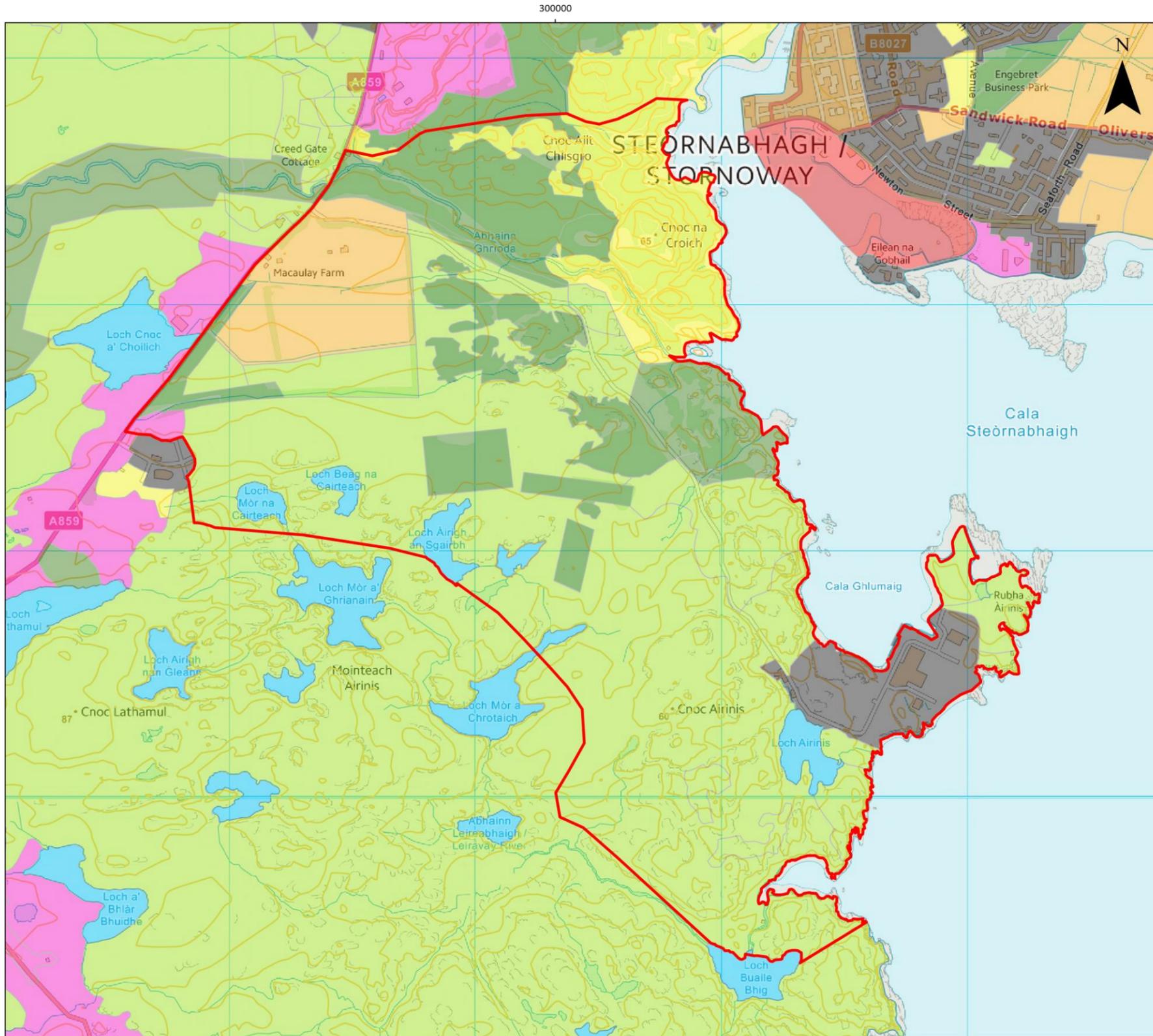
## 12.4 Description of Baseline Characteristics

12.4.1 A baseline review of the available data and literature (as identified in Appendix 2) has been undertaken and summarised in the following sections to inform the scoping process relating to the likely significant socio-economic, tourism, recreation, and land use effects of the proposed onshore development.

### Land-use

12.4.2 The current land use of the site is predominantly agricultural, characterised by extensive heathland and moorland primarily used for rough grazing. This type of land use covers the majority of the site, except for the northern region, where a more diverse pattern is observed. In this area, mixed-use land comprises plantation woodland, urban developments, and recreational spaces.

12.4.3 Industrial and urban development are concentrated primarily in the northeast and eastern parts of the site boundary, representing the dominant land use in these areas (HLA, 2024). Figure 12-2 depicts the current land use of the site, offering a clear visual overview of its spatial and functional characteristics.



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**Legend**

- Site boundary
- Agriculture and Settlement
- Built-up Area
- Energy, Extraction and Waste
- Leisure and Recreation
- Moorland and Rough Grazing
- Rural Settlement
- Spiritual and Ritual
- Transport
- Water Body
- Woodland and Forestry



**Notes**

OceanWise, Esri, Garmin, NaturalVue

Datum: OSGB36  
Projection: BNG

0 0.45 0.9 km

0 0.2 0.4 nm

Scale: 1:15,000 @A3 Date: 19/11/2024 Drawn by: TH Checked by: KM Approved by: GB

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**Figure 12-1**

Figure 12-2 Land use map

## Demographic Characteristics

- 12.4.4 Demographic distributions within the three study areas are presented in Table 12-1 and Table 12-2. This section should be read in conjunction with Chapter 13 – Human Health.
- 12.4.5 According to the 2022 census, the population of Sgìre nan Loch is estimated at 1,837, while Steòrnabhagh a Tuath and Steòrnabhagh a Deas have populations of 3,639 and 3,749, respectively. These figures reflect the observed land use patterns, with the majority of industrial and urban development concentrated in Steòrnabhagh a Tuath and Steòrnabhagh a Deas. Together, these two areas account for 13.9% and 14.5% of the total population within the council area. In contrast, Sgìre nan Loch, with a lower population density, represents only 7% of the council’s population, aligning with its more rural and less developed land use (Scotland’s Census, 2022).
- 12.4.6 According to the mid-year population estimates for Scotland in mid-2022, the total population of the Western Isles is 26,120. The median age in the region is 51 years, indicating an aging demographic (National Records of Scotland, 2022). Notably, 25% of the population is of pensionable age, while 15% falls within the youth demographic (NRS, 2022).
- 12.4.7 Scotland’s population has exhibited notable trends over the past decade. From 2011 to 2021, the population increased by 2.2%. Despite this growth, projections indicate that Scotland’s population may begin to decline in around ten years, with a predicted decrease below the mid-2020 levels by 2050. Scotland is expected to see minimal growth of 0.2% by mid-2045, significantly lower than the UK-wide projection of 6.9%. Additionally, the working-age population is projected to decline slightly by 2045, from 3.56 million in mid-2022 to 3.55 million, reflecting broader demographic challenges (Scottish Government, 2023a).

Table 12-1 Demographic distribution of population at regional and national levels

Study Area Specifics	Total Population	Male Population	Female Population	Working Age Population	Pensionable Age Population
Na h-Eileanan Siar	26,120	12,932	13,188	15,577	6,587
Scotland	5,447,700	2,646,659	2,801,041	3,526,330	1,029,478

Table 12-2 Demographic distribution of population at local level

Study Area Specifics	Total Population	Male Population	Female Population
Sgìre nan Loch	1,837	959	875
Steòrnabhagh a Tuath	3,639	1,799	1,840
Steòrnabhagh a Deas	3,749	1,778	1,970

## Economy and Labour Profile

### Labour Supply Potential

- 12.4.7 Real gross domestic product (GDP) for the UK increased by 4.3% in 2022, with the average growth in Scotland being 3.2% in 2022 (ONS, 2024a).
- 12.4.8 In 2022, the UK’s low carbon and renewable energy economy (LCREE) achieved its highest turnover and employment figures since 2015. Turnover grew by 28.0%, from £54.2 billion in 2021 to £69.4 billion, an increase of £15.2 billion. Employment also increased by 8.0%, rising from 252,300 full-time equivalents (FTEs) in 2021 to 272,400 FTEs, adding 20,100 jobs (ONS, 2024a).
- 12.4.9 The low carbon electricity sector reported the highest turnover at £29.0 billion, which is 41.8% of the total and represented a significant increase of 53.4%. The energy efficient products sector employed the most individuals, with 134,900 FTEs, accounting for 49.5% of total employment (ONS, 2024a).

- 12.4.10 The professional, scientific, and technical activities industry saw the largest employment increase, rising from 36,600 FTEs in 2021 to 46,200 FTEs in 2022, a growth of 26.2%. (ONS, 2024b).
- 12.4.11 The economic activity rate in Na h-Eileanan Siar stands at 81.9%, surpassing the rates for both Scotland and Great Britain. The latest data for the period from April 2023 to March 2024 indicates that 81.9% of the population in Na h-Eileanan Siar is economically active, compared to 77.1% for Scotland and 78.6% for Great Britain (NOMIS, 2024).

#### Size and Structure of the Local Business Base

- 12.4.12 Na h-Eileanan Siar has an unemployment rate lower than both Scotland and Great Britain. The latest figures for the period from April 2023 to March 2024 indicate an unemployment rate of 2.6% for Na h-Eileanan Siar, compared to 3.7% for Scotland and 3.9% for Great Britain (NOMIS, 2024).
- 12.4.13 The labour market profile of Na h-Eileanan Siar indicates a significant concentration of employment within specific industries. The human health sector accounts for 18.2% of total employment, while retail trade comprises 15.9%. Public administration and accommodation/food services are also notable contributors, each representing 11.4% of the region's economic distribution (NOMIS, 2024).

#### Tourism

- 12.4.14 Tourism is a key driver of Scotland's economy, supporting businesses and jobs nationwide. It is one of the Scottish Government's six Growth Sectors, with 14,145 registered enterprises in 2017, making up 8% of all Scottish businesses. The largest sub-sectors are restaurants (51%), pubs and clubs (20%), and hotels (11%) (Scottish Government, 2018). As per the latest published data, 229,000 people are employed in the tourism sector in Scotland in 2022 (Visit Scotland, 2023).
- 12.4.15 In 2017, Na h-Eileanan Siar welcomed 219,000 visitors, contributing £65 million annually to the local economy. Tourism supports over 1,000 FTE jobs and accounts for 10–15% of the economy, with a higher impact outside Stornoway. Retailers and restaurants in Stornoway generate up to 40% of sales from tourists (Outer Hebrides Tourism, 2024).

## 12.5 Embedded Mitigation and Design Assumptions

- 12.5.1 As part of the initial design process, embedded mitigation measures may be implemented in order to reduce the likely significant environmental effects of the proposed onshore development. Measures relating to socio-economics, tourism, recreation and land use will be developed as required when further information on site selection and design is available.

## 12.6 Likely Significant Effects

### Project Specific Impacts Scoped In

- 12.6.1 Table 12.3 summarises the project specific potential impacts scoped into the EIA.

Table 12-3 Potential impacts scoped into the assessment of Socioeconomic effects

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
Employment in the supply chain	The Proposed Onshore Development has the potential to enhance employment opportunities, benefiting local and national companies involved in service provision. It is expected to generate direct, indirect, and induced employment, along with new job opportunities in the regional study area, contributing to both local economic growth and workforce development.	A desktop socio-economic assessment will evaluate the potential direct and indirect effects of the Proposed Onshore Development on local and regional employment rates.	Construction O&M	Landfall of the Talisk offshore cables Substation Converter Station Underground Cables
Economic output effects in the supply chain	The Proposed Onshore Development has the potential to generate Gross Value Added (GVA) by engaging local and national companies in service provision. Additionally, GVA may be indirectly generated through associated supply chain activities, further contributing to the economic impact of the Proposed Onshore Development.	A desktop socio-economic assessment will calculate the economic effects of new job creation and the GVA per capita associated with civil engineering projects, examining both regional and national impacts.	Construction O&M	Landfall of the Talisk offshore cables Substation Converter Station Underground Cables
Potential change in land use	Given the nature of the Proposed Onshore Development, there is the potential for permanent impacts on land use during the construction phase.	A desktop socio-economic assessment will evaluate the potential impacts of the Proposed Onshore Development on land use. This will include an analysis of current land use patterns, anticipated changes, and the economic and social implications, ensuring a comprehensive understanding of the development's effects on the area.	Construction O&M	Substation Converter Station
Demography and migration	The Proposed Onshore Development has the potential to create direct, indirect, and induced employment during the construction phase, which may drive increased demand for local housing and services. This rise in employment opportunities could lead to a greater	A desktop socio-economic assessment will evaluate the potential demographic effects of the Proposed Onshore Development. This analysis will focus on changes in population size, age distribution, and community diversity. It will also consider factors such as	Construction	Landfall of the Talisk offshore cables Substation Converter Station Underground Cables

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
	need for accommodations, schools, healthcare, and other community resources, highlighting the importance of planning for these impacts.	migration patterns, housing demand, and shifts in local socioeconomic status.		
Tourism and recreation activities	The Proposed Onshore Development has the potential to impact tourism during the construction phase, which could also increase demand for local housing and services. As tourism grows, there may be heightened need for accommodations, restaurants, and recreational activities, leading to economic benefits for the community. This necessitates careful planning to ensure that infrastructure and services can support the anticipated influx of visitors.	An assessment of effects on tourism receptors will be conducted, incorporating published data on visitor numbers and the economic value of tourism to both the local and regional areas. This evaluation will also involve consultation with key stakeholders, including accommodation providers, tourism businesses, transport operators, and agencies like VisitScotland, as well as the Na h-Eileanan Siar council and other relevant organisations. By engaging with these consultees, the assessment will gather insights into the potential impacts of the Proposed Onshore Development on the tourism sector.	Construction	Landfall of the Talisk offshore cables Substation Converter Station Underground Cables

## Project Specific Impacts Scoped Out

12.6.2 Table 12 4 summarises the project specific potential impacts scoped out of the EIA.

Table 12-4 Impacts proposed to be scoped out of further assessment for Socioeconomic Effects

Impact	Justification	Relevant Development Stage
Demography and migration	Given the nature of the Proposed Onshore Development, it will require limited personnel on-site during the operation and maintenance phase. Efforts will be made to utilise the local workforce whenever possible, ensuring that community members can benefit from the job opportunities created by the Proposed Onshore Development. However, this is unlikely to result in a significant effect.	O&M
Tourism and recreation activities	Given the nature of the Proposed Onshore Development during the operation and maintenance phase, with limited activity on-site, this is unlikely to result in a significant effect on tourism and recreation activities within the study areas.	O&M
Employment in the supply chain; Economic output effects in the supply chain; Potential change in land use; Demography and migration; Tourism and recreation activities	The long-term impacts associated with the decommissioning phase of the Proposed Onshore Development are not assessed given the significant time lapse between planning and decommissioning phases.	Decommissioning

## 12.7 Approach to EIA

### Relevant Guidance

- 12.7.1 There is no established guidance for conducting a socio-economic, tourism and recreation assessment as part of the EIA process. It is therefore proposed that the assessment uses desk-based information sources to assess the likely scale of effects, supplemented by consultation with local stakeholders, and informed by professional judgement.
- 12.7.2 Cross-reference will be made to other technical assessments to consider potential effects on recreational and land use assets and other leisure and tourism attractions in the vicinity.
- 12.7.3 Socio-economic effects will be considered based on the guidance from the Environmental Impact Assessment Handbook (Version 5) (SNH and HES, 2018). A range of existing surveys and assessments of socio-economic and visitor profiles, land use and ownership, and public attitudes will be collated to provide background information against which to assess the potential for significant effects.
- 12.7.4 Socio-economic impacts associated with renewable energy development primarily relate to job creation, use of local services and income spent in the locality of a Proposed Onshore Development, and community benefit. These impacts can have both short and long term, direct beneficial effects for surrounding local communities. This aspect will be completed in line with NPF4 (Scottish Government, 2023b), which states in Policy 11c:

*“Development proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities.”*

- 12.7.5 The assessment will consider planning guidance provided by the Na h-Eileanan Siar council for energy development proposals, which emphasises the importance of achieving a positive net economic impact

from the development (Comhairle nan Eilean Siar, 2021). This holistic approach will ensure that the assessment also comprehensively addresses the potential socio-economic benefits of the Proposed Onshore Development.

## Anticipated Additional Data Sources at EIA

12.7.6 The following data sources are expected to be used to inform the EIA Chapter

- Scotland's National Strategy for Economic Transformation (Scottish Government, 2022);
- Energy Efficient Scotland: route map (Scottish Government, 2018);
- Scotland Outlook 2030 & The Tourism and Hospitality Industry Leadership Group (Scottish Government, 2020);
- Recovery on a Path to Net Zero: Climate Change Plan 2018–2032 – Update (Scottish Government, 2020);
- A fairer, greener Scotland: Programme for Government 2021–22 (Scottish Government, 2021);
- Sealladh/Outlook 2030: Tourism Strategy for the Outer Hebrides: Creating a Leading 21st Century Tourism Destination, (Outer Hebrides Tourism, 2021); and
- Scottish Index of Multiple Deprivation (Scottish Government, 2020).

## Assessment Methodology

12.7.7 The assessment will follow the approach set out in section 4.2 and will utilise desk-based information sources to evaluate the likely effects, supported by consultation with local stakeholders and informed by professional judgment.

## 12.8 Scoping Questions

12.8.1 The following scoping questions refer to this Socio-economics, Tourism, Recreation and Land Use chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree with the use of the data sets listed in Appendix A, and any additional anticipated data listed in Section 12.7, being used to inform the Onshore EIA?
- Do you agree that all receptors related to Socioeconomics, Tourism, Recreation and Land Use have been identified?
- Do you agree with the scoping in and out of impacts related to Socioeconomics, Tourism, Recreation and Land Use?
- Do you agree with the assessment of cumulative effects related to Socioeconomics, Tourism, Recreation and Land Use?
- Do you agree with the proposed assessment methodology related to Socioeconomic, Tourism, Recreation and Land Use?

# 13. Population and Human Health

## 13.1 Introduction

13.1.1 This chapter of the Scoping Report provides an overview of the baseline environment for Human Health within the Onshore Development Area of Search, followed by a review of potential likely significant effects on relevant receptors from the construction, O&M, and decommissioning phases of the Project.

13.1.2 Given the complexity of factors which may influence health and wellbeing (i.e., health determinants) and the range of factors which may influence an individual's ability to respond to changes in health determinants, a robust yet proportionate approach should be taken which accounts for overall population-wide health and the health of more vulnerable sub-populations.

13.1.3 It is considered that significant effects relating to human health are unlikely and as such this topic is 'SCOPED OUT' of the EIA. The following section:

- Provides a summary of the study area's baseline health conditions,
- Identifies relevant health determinants and vulnerable groups (sensitive receptors) to be considered in assessment based on this baseline data; and
- Defines why no likely significant effects are expected at both the population level and on identified vulnerable groups.

13.1.4 A number of key guidance documents relating to the consideration of human health as part of EIA have been published since the inclusion of this topic in the 2017 EIA Regulations. These papers indicate that consideration of human health as a topic should be proportionate and, in most cases, can be scoped out of the EIA:

- Health in Environmental Impact Assessment – A Primer for a Proportionate Approach (IEMA, May 2017): *"The scoping of population and human health issues into EIA should focus on whether the potential impacts are likely to be significant"*;
- Human health: Ensuring a high level of protection (IAIA, December 2020): *"Scoping health should be proportionate. Health effects that are not likely to significantly affect population health should be 'scoped-out'"*;
- Effective scoping of human health (IEMA, November 2022): These guidelines stipulate that EIA scoping should be proportionate, focusing on the project's likely and potentially significant effects on population health (noting this guidance was produced principally to help guide assessments for Nationally Significant Infrastructure Projects (NSIP)). Where all relevant wider determinants of health are scoped out, human health as an EIA technical topic can also be scoped out; and
- Determining significance for human health (IEMA, November 2022): *"Relevant population groups for each scoped-in wider determinant of health should consider both geographic populations and vulnerable sub-populations"*.

13.1.5 Scoping for this topic is divided into the following five categories to capture a range of health determinants on which impacts may be relevant to either the local population as a whole or to identified vulnerable groups:

- **Health conditions** including life expectancy and healthy life expectancy, medical conditions, lifestyle trends, and self-assessed health;
- The **social environment** including housing, and social services and community infrastructure;
- The **economic environment** including economic activity and unemployment, the strength and diversity of the local-economy, and educational attainment;
- The **built and natural environment** including living and working conditions, access to and conditions of areas of open and natural space, availability of transport infrastructure, air quality, noise and vibration, and climate change resilience); and
- **Health equity** including minimising impacts on minoritised or marginalised groups and promoting wellbeing equity and equality of opportunity.

## 13.2 Study Area

- 13.2.1 The site (Figure 1.1) is located across Sgìre nan Loch ward and Steòrnabagh a Tuath ward, within the administrative boundary of Comhairle nan Eilean Siar (CnES) (formerly the “the Council of the Western Isles”). The CnES in turn fall under the wider Highlands and Islands Scottish Parliament electoral region.
- 13.2.2 The CnES are very rural and Stornoway, located nearby to the site, is the only notable settlement in the area. Although CnES and Stornoway cover a large geographic area, the CnES have been selected as the appropriate study area for scoping for two primary reasons. Firstly, the CnES regional population is likely to pass through Stornoway, as it is the only town in the region and thus a hub for commercial and other activities. Secondly, health related data is not readily available for Stornoway and the next most reliable data is only available at the local authority level (i.e., the CnES).
- 13.2.3 While the CnES is the primary study area for assessment, data for the Highlands and Islands region, Scotland, Great Britain and the United Kingdom is also included in the baseline, where equivalent datasets are available, to provide context for more local conditions.

## 13.3 Data Sources at Scoping

- 13.3.1 Appendix A describes the data sources used to inform this scoping chapter.

## 13.4 Description of Baseline Characteristics

### Current Baseline

#### Population and Density

- 13.4.1 The population of the CnES is approximately 26,120 people (living across approximately 12,806 households), the 30th largest population of Scotland’s 32 council areas (ONS, 2024). CnES residents live at a density of 9 people per km<sup>2</sup>, which is somewhat lower than the population density for the Highlands and Islands (12 people per km<sup>2</sup>) and considerably lower than the overall population density in Scotland (70 people per km<sup>2</sup>) (ONS, 2022).
- 13.4.2 The site is situated next to Stornoway, which has a population of approximately 7,280 people, or about 28% of the population of the CnES (NRS, 2023). Other than this relatively small settlement, the area surrounding the site consists predominantly of boggy, undeveloped peatland.

#### Key Demographics

- 13.4.3 The CnES population is split fairly evenly between females (50.5%) and males (49.5%), which aligns with Scottish trends (51.4% females to 48.6% males) (ONS, 2024).
- 13.4.4 However, as shown in Figure 13-1 below, the population of the CnES tends to be older than the national average, with a higher proportion of the population being over 45 years than the average for Scotland.

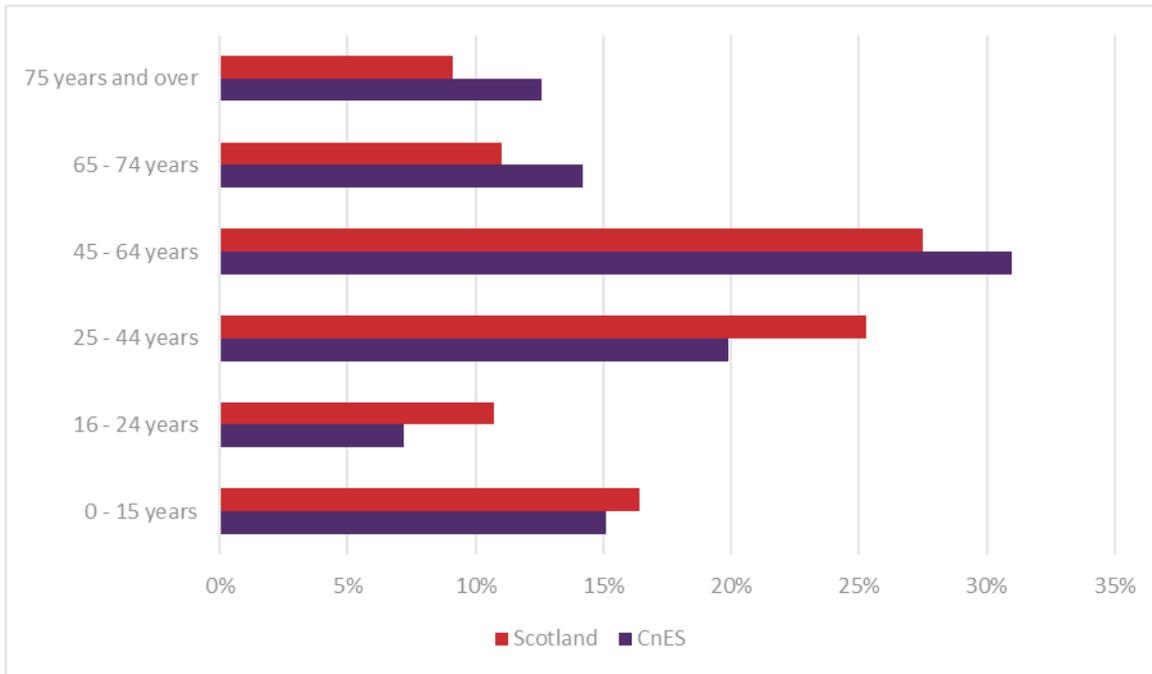


Figure 13-1 Population by age (source NRS, 2024)

13.4.5 The population of the CnES is largely ethnically homogenous, with 98.3% of residents identifying as ‘white’ (NRS, 2024). This is somewhat more homogenous than Scotland as whole, for which 92.9% of residents identify as ‘white’.

## Health Conditions

### Life Expectancy

13.4.6 Residents of the CnES have a slightly higher, but still comparable, life expectancy to Scotland more widely. Likewise, residents of the CnES have a slightly lower, but still comparable, life expectancy compared to the rest of the UK. These figures indicate that CnES residents, particularly women, have relatively healthy outlooks overall (Table 13-1).

Table 13-1 Life expectancy (NRS, 2023; ONS, 2024)

Indicator	The CnES	Scotland	United Kingdom
Life expectancy at birth (women)	81.6	80.7	82.6
Life expectancy at birth (men)	77.3	76.5	78.6

13.4.7 This trend is broadly consistent when considering healthy life expectancy (the number of years a person would expect to live in good health), with residents of the CnES again tending to have longer healthy life expectancies than their counterparts across Scotland. However, somewhat unusually, in the CnES men are more likely to have longer healthy life expectancies than women (Table 13-2).

Table 13-2 Healthy life expectancy (NRS, 2023; ONS, 2024)

Indicator	The CnES	Scotland
Healthy life expectancy at birth (women)	64.0	61.1
Healthy life expectancy at birth (men)	67.4	60.4

## Medical Conditions

13.4.8 Residents of the CnES exhibit a range of health conditions at rates which are comparable or slightly higher than the national average. The local rate of obesity amongst adults in particular is higher than is typical for Scotland, as is the rate of 'doctor-diagnosed high blood pressure'. However, it should be noted that these trends do not appear to disproportionately affect people in their day to day lives as the proportion of adults with 'limiting long-term conditions' is consistent across the CnES and Scotland (Table 13-3).

Table 13-3 Medical conditions (ONS, 2016-2022)

Indicator	The CnES	Scotland
Overweight (including obese) adults (2016-2019)	71%	65%
Obese (including severely obese) adults (2016-2019)	5%	4%
Adults with doctor-diagnosed diabetes (2018-2022)	11%	7%
Adults with doctor-diagnosed high blood pressure (2018-2022)	28%	22%
Adults with doctor-diagnosed heart conditions (2018-2022)	5%	3%
Adults with 'limiting long-term conditions' (2018-2022)	35%	35%

## Lifestyle Trends

13.4.9 A range of lifestyle factors influence the prevalence of medical conditions and life expectancy, with poor habits resulting in higher rates of disease, comorbid conditions, and shortened healthy life expectancy. The conditions included above are often linked to compounding factors including poor diet, lack of exercise, weight gain, smoking and alcohol consumption.

13.4.10 While CnES residents tend to demonstrate low consumption of whole fruits and vegetables, as well as poor levels of physical activity, they are less likely to engage in risky behaviours including smoking and drinking excessively compared to Scottish residents more widely (Table 13-4).

Table 13-4 Lifestyle trends (ONS 2016-2022)

Indicator	The CnES	Scotland
Adults consuming five or more portions of fruit or vegetables per day (2016-2019)	19%	22%
Adults meeting physical activity recommendations (2018-2022)	63%	66%
Adults engaging in very low levels of physical activity (2018-2022)	24%	20%
Adults identifying as current smokers (2018-2022)	14%	16%
Adults engaging in hazardous / harmful drinking (2018-2022)	15%	23%

## Self-Assessed Health

13.4.11 Most residents of the CnES identify as having 'Very Good / Good' general health, at rates which are comparable to the rest of the country (Table 13-5).

Table 13-5 Self-assessed general health (ONS 2018-2022)

Indicator	The CnES	Scotland
Very Good / Good	70%	72%
Fair	22%	19%
Bad / Very Bad	8%	9%

## Social Environment

### Housing

13.4.12 The site and its immediate surrounds do not currently provide housing, nor are there proposals for the introduction of housing on-site or nearby. While Stornoway offers a nearby residential cluster, urban growth appears to be concentrated on the town's northern and eastern edges, rather than to the south-west (towards the site).

### Social Services and Community Infrastructure

13.4.13 Without existing or proposed residential uses in the immediate area, there is also not a clear need for related social infrastructure such as primary healthcare services, schools or community centres. Current or future needs relating to such infrastructure should be assessed in closer proximity to relevant residential areas.

## Economic Environment

### Economic Activity and Unemployment

13.4.14 Although the CnES has a smaller working-age (16 – 64 years) population than is typical for Scotland or Great Britain, a larger proportion of these individuals are economically active than in other areas (Table 13-6). The CnES also has a proportionally smaller unemployed population than either Scotland or Great Britain (Table 13-6).

Table 13-6 Economic activity and unemployment (ONS, 2021)

Indicator	The CnES	Scotland	Great Britain
<b>Working Age residents</b>			
Total Number of Working Age Residents (aged 16 – 64 years)	58%	65%	63%
<b>Economic activity (residents)</b>			
Economically Active	82%	77%	79%
Unemployed	3%	4%	4%

### The Local Economy

13.4.15 Residents of the CnES work in a range of occupations representing varied industries, with nearly half of residents holding 'management / professional / technical' roles. The healthcare industry is the most prevalent sector in the CnES, representing approximately one in five local jobs (Table 13-7).

Table 13-7 The local economy (ONS, 2021)

Indicator	The CnES	Scotland	Great Britain
<b>Employment by occupation</b>			
Management / Professional / Technical	41%	51%	53%

Indicator	The CnES	Scotland	Great Britain
<b>Employment by occupation</b>			
Admin / Skilled Trades / Services	27%	19%	18%
Sales / Process / Elementary	21%	15%	14%
Process Plant and Machine Operatives	12%	15%	15%
<b>Key employment sectors</b>			
Total Jobs	11,000	-	-
Health	18%	16%	14%
Professional, Scientific & Technical	4%	7%	9%
Education	9%	9%	9%
Construction	7%	6%	5%

## Educational Attainment

13.4.16 Although CnES residents achieve further and higher education at rates which are somewhat lower than is typical for Scotland, they are still more likely to achieve these qualifications than is typical for Great Britain overall. Local residents are also more likely to achieve GCSE or A Level equivalents than their counterparts across Scotland or Great Britain (Table 13-8).

Table 13-8 Educational attainment (ONS, 2021)

Indicator	The CnES	Scotland	Great Britain
<b>Highest level of qualification (residents)</b>			
No Formal Qualifications	-	8%	7%
GCSEs and A Level equivalent	76%	74%	68%
Further and Higher Education (including apprenticeships)	51%	55%	47%
Other Qualifications	-	4%	5%

## The Built and Natural Environment

### Living and Working Conditions

13.4.17 As outlined above, the site and its immediate surrounds do not currently provide a notable residential or employment hub. Although residential and employment uses are situated in and around Stornoway, these are not directly relevant to the site and urban growth appears to be concentrated on the town's northern and eastern edges, rather than to the south-west (towards the site).

13.4.18 Additional information, relevant to this chapter, on the open and natural space, transport infrastructure, air quality and climate change resilience in and surrounding the site are provided in chapters:

- Chapter 5 – Landscape and Visual Impact
- Chapter 11 – Traffic and Transport
- Chapter 14 – Air Quality
- Chapter 15 – Climate Change

### Health Equity

13.4.19 The following vulnerable groups have been identified through the baseline:

- Individuals with a "limiting long-term condition";
- Individuals diagnosed as overweight or with a comorbid medical condition; and

- Older residents.

13.4.20 To minimise impacts on these sensitive receptors and make healthy outcomes more equitable, particular consideration should be given to these groups when determining whether significant effects on these groups are likely (see section 13.6 Likely Significant Effects).

### **Designated Sites**

13.4.21 There are no relevant nature conservation sites designated for the protection of human health receptors. Rather, all nature conservation sites in the area surrounding the proposed site are focused on habitat conservation or are classed as sites of geomorphological importance (Figure 6.1).

13.4.22 There is an abundance of open space surrounding the site and the settlement of Stornoway which is accessible for public use and thus may be relevant to the maintenance of local people's health and wellbeing, however these are not formally designated sites (Figure 1.1).

## **13.5 Embedded Mitigation and Design Assumptions**

13.5.1 As part of the initial design process, embedded mitigation measures could be implemented in order to reduce the potential environmental effects of development. Examples of measures related to human health which could be employed include:

- Provision of a Construction Environmental Management Plan (CEMP);
- Integration of low-emission and energy efficient construction techniques and designs;
- Implementation of appropriate alternative routes should local walking paths be temporarily closed during construction;
- Provision of a Training and Employment Strategy;
- Provision of an Operational Traffic Management Plan; and
- Location of noise-generating elements including plant away from local residential and leisure activities.

## **13.6 Likely Significant Effects**

### **Project Specific Impacts Scoped In**

13.6.1 No impacts are considered likely to be significant in terms of human health, and thus no impacts have been scoped in. This includes consideration for both the health of the general population and of identified vulnerable groups.

### **Project Specific Impacts Scoped Out**

13.6.2 Table 13-9 provides a summary of the impacts scoped out of further assessment.

Table 13–9 Potential impacts proposed to be scoped out of further assessment for Human Health

Impact	Justification	Relevant Development Stage
Changes to average life expectancy	There are no elements of the Proposed Development which are likely to cause immediate risk to the health of construction workers or local residents. All elements of the Proposed Development will align with relevant planning policy and health and safety guidance during both construction and operation.	Construction O&M Decommissioning
Changes to rates of common medical conditions	There are no elements of the Proposed Development which are likely to increase risk of disease or doctor–diagnosed ill–health. While the local population demonstrates higher than average rates of obesity and high blood pressure, neither of these are expected to be influenced by the Proposed Development.	Construction O&M Decommissioning
Changes to health–related lifestyle trends	The Proposed Development does not include the provision of retail or food and beverage infrastructure which may negatively impact local people’s dietary, smoking or drinking habits. It will occupy open and natural space (temporarily during construction and permanently during operation), however there are suitable and abundant alternatives in the local area for people to exercise outdoors.	Construction O&M Decommissioning
Changes to self–assessed health	The Proposed Development is not located near to a notable residential receptor, nor will it provide public services which may be visited by local people. Therefore, it is unlikely to have any influence on the self–assessed health of local residents.	Construction O&M Decommissioning
Changes to the availability or quality of housing	The site does not provide residential uses, nor does the Proposed Development offer new dwellings, thus the Proposed Development will have no impact on the availability or quality of housing.	Construction O&M Decommissioning
Changes to the availability or capacity of social services and community infrastructure	The site does not provide social or community uses, nor does the Proposed Development offer new such facilities. The Proposed Development also does not introduce new residents which would increase demand on these uses. Thus, the Proposed Development will have no impact on the capacity of social services and community infrastructure.	Construction O&M Decommissioning
Changes to educational attainment	The site does not provide educational uses, nor does the Proposed Development offer new such facilities, thus the Proposed Development will have little impact on educational attainment amongst children. There may be opportunities for training which would benefit young adults and the wider workforce, however the amount of training which may be available is not expected to have a significant impact within the context of baseline educational levels.	Construction O&M Decommissioning
Changes to living and working conditions	As discussed above, without a residential element the Proposed Development will have no impact on existing living conditions. As a commercial scheme, the Proposed Development will deliver a safe and comfortable working environment, however the number of employees expected to operate on–site is too low to have a significant impact on the local workforce.	Construction O&M Decommissioning
Changes to the availability or quality of open and natural space	As discussed above, the Proposed Development will occupy open and natural space (temporarily during construction and permanently during operation), however there are suitable and abundant alternatives in the local area for people to access such areas for exercise, socialising or mental health reasons.	Construction O&M Decommissioning

Impact	Justification	Relevant Development Stage
Changes to the availability or capacity of transport infrastructure	The Proposed Development does not include the provision of elements which may alter, remove or add to local transport infrastructure such as a major road, bridge, port or railway. During construction, it may temporarily alter traffic flows on surrounding roads which may impact people's ability to reach Stornoway and thus impact their access to health and other services. However, this is expected to be managed appropriately by the Applicant to avoid any significant impacts on local people.	Construction O&M Decommissioning
Changes to air quality	The Proposed Development does not provide any elements which may significantly impact human health in terms of air quality. During construction, any temporary impacts on local people are expected to be minimal given the location of relevant receptors and to be suitably managed to avoid any significant impacts on local people (also see Chapter 14 – Air Quality)	Construction O&M Decommissioning
Changes to ambient noise and vibration	The Proposed Development includes elements such as construction vehicles and plant which may produce noise and vibration above existing levels (noting that the site is currently vacant and existing levels are very low), however any impacts on local people are expected to be minimal given the proximity of relevant receptors. During construction, any temporary impacts on local people are expected to be minimal given the proximity of relevant receptors and to be suitably managed to avoid any significant impacts on local people (also see chapter 10 – Noise and vibration).	Construction O&M Decommissioning
Changes to local climate change resilience	The Proposed Development is expected to contribute to climate change resilience by contributing to a renewable energy source and the renewables-based economy. While beneficial, this impact is not considered significant within the context of the climate crisis.	Construction O&M Decommissioning

## 13.7 Scoping Questions

13.7.1 The following scoping questions refer to this Human Health chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree Human Health can be scoped out of further assessment in the EIA?

# 14. Air Quality

## 14.1 Introduction

- 14.1.1 An assessment will be undertaken of the likely significant effects of the proposed onshore development on the environment with respect to air quality. This will include construction phase, O&M effects, and where necessary, mitigation measures will be recommended to meet appropriate air quality requirements for the scheme. Decommissioning effects are assumed to be broadly similar to construction effects.
- 14.1.2 This section describes the scope of the assessment for air quality. The chapter should be read in conjunction with the following chapters where common receptors have been considered and where there is an overlap or relationship:
- Chapter 3 Proposed Project Development Description; and
  - Chapter 11 Traffic and Transport.
- 14.1.3 It is considered that significant effects relating to Air Quality are unlikely and as such this topic is '**SCOPED OUT**' of the EIA. The following section:
- Provides a summary of the study area's baseline air quality conditions,
  - Identifies relevant air quality baseline data; and
  - Defines why no likely significant effects are expected at all stages of the proposed development.

## 14.2 Study Area

- 14.2.1 The spatial extent of the study area has been informed by the project description in Chapter 3, Figure 1.1. Due to the uncertainty of the final substation and landfall location, all the areas encompassed by the red line boundary will be assessed as shown in Figure 1.1. The nearest existing human receptors are industrial sites. There are few scattered individual residential properties located within the red line boundary (Figure 10.2).
- 14.2.2 The temporal scope of the assessment of air quality is consistent with the period over which the proposed onshore development will be carried out and therefore covers the construction and O&M periods. The construction phase assessment considers the peak year of construction, whilst the O&M assessment considers the first complete opening year of the proposed onshore development.

## 14.3 Data Sources at Scoping

- 14.3.1 Data sources used to inform this Air quality scoping chapter are presented in Appendix A.

## 14.4 Description of Baseline Characteristics

### Current Baseline

- 14.4.1 The site falls within the domain of the CnES council. The latest Annual Air Quality Progress Report (APR) available is of 2022 (CnES, 2022). Based on this report, the air quality within the local authority area is considered good and there are no Air Quality Management Areas (AQMA) declared (<https://uk-air.defra.gov.uk/agma/maps/>). The site does not fall within any AQMA and there have been no previous exceedances of the Air Quality Objectives (AQOs).
- 14.4.2 CnES works closely with the Scottish Environment Protection Agency (SEPA) and has in place a Development Strategy which considers environmental impacts on the local authority area and transport infrastructure (CnES, 2022). As part of the Volcanic Emission Network (VEN, <https://www2.sepa.org.uk/volcanicemissionsnetwork/>) SEPA has a monitoring station approximately 2km north of the Site at the UHI College buildings (Figure 14-1). The monitoring station monitors for Particulate Matter (PM) and Sulphur Dioxide (SO<sub>2</sub>) but the data can only be classed as indicative as the PM monitors have not been certified and the SO<sub>2</sub> data has not been verified.

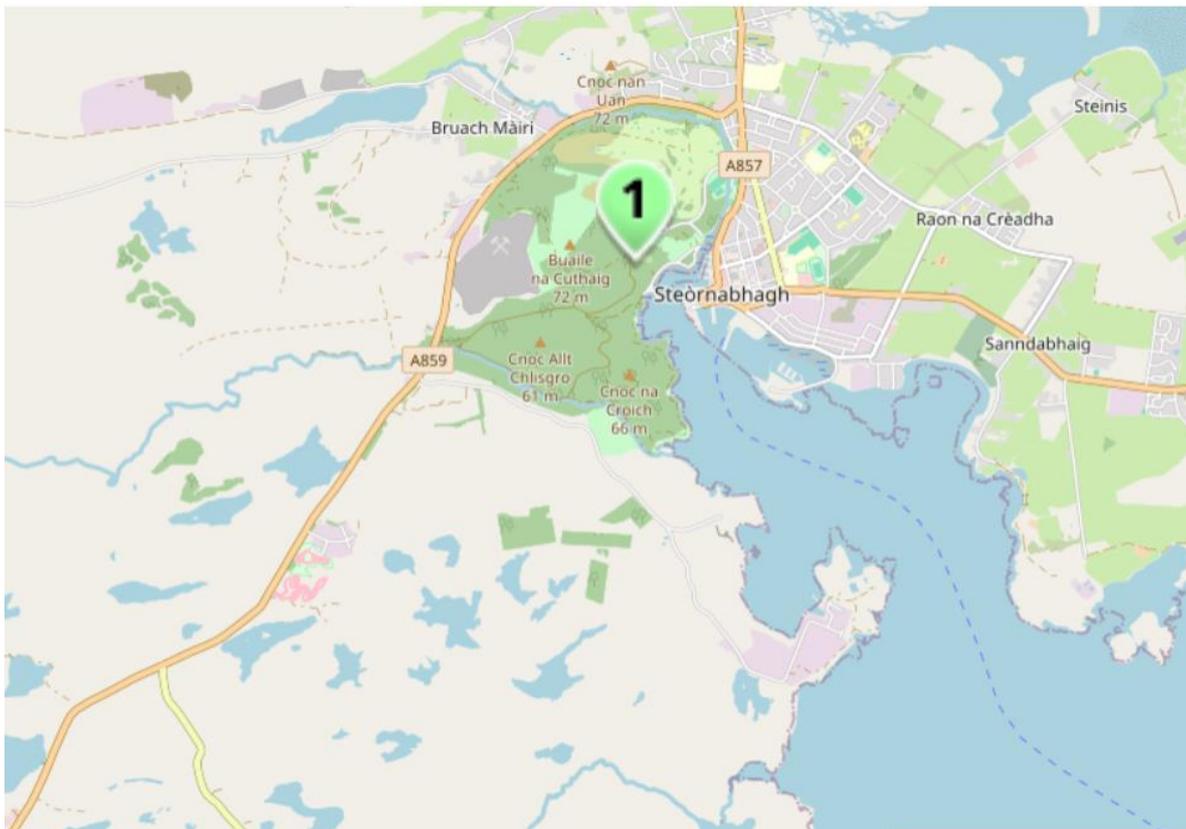


Figure 14-1 Location of Volcanic Emissions Network monitoring station (green pin)

14.4.3 Based on the recent 2022 APR, there was no new monitoring data for 2021. The latest available monitoring data is from 2016. Table 14-1 shows the most recent monitoring data for diffusion tubes sites located within the boundaries of CnES.

14.4.4 The monitoring carried out in 2015/2016 did not identify any potential or actual exceedances at the chosen locations shown in table 14.2. As no exceedances were identified and subsequent progress reports have not shown any new developments or changes to warrant concerns, there was no further monitoring carried out in 2021 and it was concluded that a detailed assessment was not required.

Table 14-1 NO<sub>2</sub> Annual mean concentration (µg/m<sup>3</sup>) for monitoring sites located within CnES

Site ID	Site name	X OS grid reference	Y OS grid reference	2015	2016
B1	Barony Square	143142	933490	5.1	8.8
K1	South Beach Carpark	142372	932726	14.9	12.4
K2	South Beach	142232	932739	26.6	14.9
K3	Perceval Square	142309	932867	20.3	12.9

## Designated Sites

14.4.5 No Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs) or Ramsar Sites are located within the study area (Figure 6.1).

14.4.6 As there are no ecological designations within the Study Area that are highly sensitive to air quality they will not be assessed further.

## 14.5 Embedded Mitigation and Design Assumptions

14.5.1 As part of the initial design process, embedded mitigation measures may be implemented in order to reduce the potential environmental effects of development.

14.5.2 In relation to Air Quality any impact is likely to be a temporary, short-term impact and can be controlled through a suitably worded Construction Environmental Management Plan (CEMP).

## 14.6 Likely Significant Effects

- 14.6.1 Receptors potentially affected by the proposed onshore development include the individuals working at the nearby industrial sites.
- 14.6.2 Guidance from Defra in LAQM.TG16 (DEFRA, 2018) establishes that exceedances of the human health-based objectives should only be assessed at outdoor locations where members of the general public are regularly present over the averaging time of the objective. Table 14-2 below provides an indication of those locations that may be relevant for different averaging periods, as extracted from LAQM.TG16.

Table 14-2 Air quality objectives based on averaging periods

Averaging period	Objectives should apply	Objectives should not apply
Annual mean	All locations where members of the public might be regularly exposed. Building facades of residential properties, schools, hospitals, care homes, etc.	Building facades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. Gardens of residential properties. Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.
24-hour mean, and 8-hour mean	All locations where the annual mean objectives would apply, together with hotels. Gardens of residential properties.	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.
1-hour mean	All locations where the annual mean and 24 and 8-hour mean objectives would apply. Kerbside sites (e.g., pavements of busy shopping streets). Those parts of car parks, bus stations and railway stations, etc. which are not fully enclosed, where the public might reasonably be expected to spend one hour or more. Any outdoor locations at which the public may be expected to spend one hour or longer.	Kerbside sites where the public would not be expected to have regular access.
15-min mean	All locations where members of the public might reasonably be expected to spend a period of 15 minutes or longer.	

- 14.6.3 The human receptors proposed to be included in the assessment have been chosen based on the above guidance by identifying places where people may be located, judged in terms of the likely duration of their exposure to pollutants, and proximity to the proposed development.
- 14.6.4 In line with the IAQM's guidance, receptors within 350m of dust generating activities (including those associated with the main Site) will be considered (for biodiversity receptors this is reduced to 50m).
- 14.6.5 Table 14-3 provides a list of receptors and potential effects to be considered in relation to air quality. No effects are expected for the O&M phase due to no dust generating activities on site and only minimal small vehicle movements on made roads.

Table 14-3 Air quality potential construction phase effects and receptors

Receptor	Potential effects
Existing Residential Receptors	Construction dust

Receptor	Potential effects
Local Park and garden area	Dust generated during the construction phase of the proposed onshore development will be assessed using the IAQM's Guidance on the assessment of dust from demolition and construction to assess the dust risk and recommend appropriate mitigation measures.
Existing Residential Receptors	Construction traffic The IAQM's Land-Use Planning & Development Control: Planning for Air Quality will be used to screen the requirement for a more detailed assessment of construction traffic emissions using the criteria established by this guidance.

## Project Specific Impacts Scoped In

14.6.6 No impacts are proposed to be scoped in for further assessment. As described above Air Quality impacts are considered to be limited to construction traffic and dust generation during the construction phase. It is considered that this can be managed through the implementation of traffic and dust management plans within the CEMP.

## Project Specific Impacts Scoped Out

14.6.7 Table 14-4 provides a summary of the project specific impacts scoped out of the EIA.

*Table 14-4 Impacts proposed to be scoped out of further assessment of Air Quality*

Impact	Justification	Relevant Development Stage
Operational dust	No dust generation activities are planned during the operation. Therefore, dust generated during the O&M phase of the Proposed Development will not be assessed.	O&M
Operational traffic	No frequent movement of Heavy-Duty Vehicles (HDVs) is expected during the O&M phase. Therefore, impacts from operational traffic are scoped out	O&M
Construction Dust	Dust generated during the construction phase of the Proposed Development will be assessed using the IAQM's Guidance on the assessment of dust from demolition and construction. The CEMP will ensure appropriate mitigation measures are in place.	Construction Decommissioning
Construction Traffic	Monitoring and management of construction traffic will be set out in the CTMP and appropriate mitigation set out in the CEMP.	Construction Decommissioning

## 14.7 Scoping Questions

14.7.1 The following scoping questions refer to the Air Quality chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree the Air Quality topic can be scoped out of the EIA?

# 15. Climate Change

## 15.1 Introduction

15.1.1 This Chapter of the Scoping Report identifies the climate receptors of relevance to the proposed onshore development. This Chapter also presents the proposed methodology, and an overview of the potential impacts and likelihood for significant effects to arise from the construction, O&M, and decommissioning of the proposed onshore development landward of Mean Low Water Spring (MLWS).

15.1.2 Three individual climate change related assessments will be undertaken:

**Greenhouse Gas (GHG) Emissions assessment** (i.e., carbon assessment) – this will identify the estimated GHG emissions associated with construction, O&M, and decommissioning of the proposed onshore development, comparing current and future baseline GHG emissions. It will also identify mitigation measures to reduce GHG emissions through the lifecycle of the proposed onshore development. The term ‘carbon’ is used interchangeably throughout the chapter to refer to GHG emissions;

**Climate Change Resilience (CCR) assessment** – this will identify what climate changes are expected to occur in the future, and the vulnerability of the proposed onshore development to those identified changes in climate; and

**In-combination Climate Change Impact (ICCI) assessment** – this will identify where a changing climate will combine with environmental impacts arising from the proposed onshore development, resulting in significant effects on environmental receptors within the scope of the Environmental Impact Assessment (EIA) which are not present under current climate conditions.

## 15.2 Legislative and Policy Context

15.2.1 The following key international and national legislation and policy requirements are relevant to this assessment:

- The Kyoto Protocol (UNFCCC, 1997): an international treaty which extends the United Nations Framework Convention on Climate Change (UNFCCC) and commits state parties to reduce GHG emissions;
- The Paris Agreement (UNFCCC, 2015): a legally binding treaty that pledges to limit the increase in global average temperature to well below 2°C, and to aim for 1.5°C, above pre-industrial levels;
- EIA Directive (2014/52/EU): provides an update to the EIA directive to include climate change (both mitigation of GHGs and adaptation/vulnerability of projects) within assessment and decision-making processes;
- The Climate Change Act 2008: the UK legislative basis to address climate change. In relation to climate change mitigation, it commits the UK to GHG emissions reductions and reporting. On climate change adaptation it sets the requirement for a national adaptation programme and associated publication of a climate change risk assessment every five years;
- The Climate Change (Scotland) Act 2009: the Scottish legislative basis to address climate change. The act commits Scotland to GHG emissions reduction and reporting, creation of and update to a climate adaptation programme, and regular updates to both GHG and adaptation reporting;
- The Climate Change Act 2008 (2050 Target Amendment) Order 2019: an update to the Climate Change Act 2008 above, stating the UK’s net zero target by 2050;
- The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019: the update to the Scottish Climate Change Act, in line with the objectives and targets of the Paris Agreement. It commits Scotland to a net zero target of 2045 in line with the recommendations of the Climate Change Committee (CCC);
- Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017: provides the requirement of including a climate change assessment within an EIA, in line with EIA Directive (2014/52/EU); and

- Planning (Scotland) Act 2019: provides the requirement to assess a proposed development's GHG emissions to achieve the targets as set out in the Climate Change (Scotland) Act 2009 and have taken account of the programme for adaptation to climate change.

15.2.2 Other national and local level policies will be considered as part of the Climate assessment, including:

- National Planning Framework 3 (NPF3) (2014): aims to make Scotland "a low carbon" and "resilient place", providing requirements for GHG emissions reduction and climate change adaptation;
- National Planning Framework 4 (NPF4) (2023): the framework addresses climate change throughout the document as an integral part of future planning requirements;
- Scotland's Climate Change Plan (2020): builds on the commitments of the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 to provide the vision for 2045, a road map for climate priorities to 2032 and requirements for monitoring and reporting progress;
- Scottish Climate Change Adaptation Programme (SCCAP)(2019): a requirement of the Climate Change (Scotland) Act 2009, this addresses the UK climate resilience risks published in the Climate Change Risk Assessment (Climate Change Committee, 2017) to ensure Scotland is adaptable to future changes in climate;
- Outer Hebrides Local Development Plan (2018): Aligning with the National Planning Framework, the adopted plan was published in November 2018 has a main aim of taking on the challenges of sustainable development and climate change; and
- Comhairles Climate Change Strategy (2022): This policy commits the Western Isles to reducing GHG emissions in line with published carbon budgets and improve resilience to future climate changes by identifying the risks and producing subsequent actions to limit the negative impacts

15.2.3 The following best practice guidance will inform the assessment:

- Institute of Environmental Management and Assessment (IEMA) (2022) Environmental Impact Assessment Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance provides an approach to undertaking assessments of a project's GHG emissions within the EIA process in the UK; and
- IEMA (2020) Environmental Impact Assessment Guide to Climate Change Resilience and Adaptation, provides an approach to undertaking assessments of climate change resilience within the EIA process in the UK.

## 15.3 Study Area

### GHG Assessment

15.3.1 For both scoping and ES assessments, the spatial study area for the GHG emissions assessment includes sources and removals of GHG emissions arising from Construction, O&M, and decommissioning of the proposed onshore development, as set out below:

- For the assessment of GHG emissions associated with construction, the study area is defined by the emissions sources identified. This includes emissions associated with the extraction, manufacture, and transportation of materials to the Onshore Transmission Infrastructure (which may be sourced at a notable distance depending on availability) as well as emissions associated with construction processes on site (such as fuel/energy use, and construction waste management); and
- For the assessment of operational GHG emissions associated with the proposed onshore development over a 30-year appraisal period, emissions arising from maintenance and replacement of development will be estimated. In addition, GHG emissions associated with operational energy consumption will be considered.

15.3.2 Aligning with PAS 2080: Carbon Management in Infrastructure, IEMA (2022) guidance and best practice, a summary of GHG emission sources included within the lifecycle assessment informing this assessment can be found in Appendix A.

15.3.3 The temporal scope for GHG emissions assessment (2027–2073) constitutes the construction phase (assumed to commence in 2027 for a duration of approximately two and a half years) and operational phase (assumed to be 40 years) and decommissioning phase (assumed to be 3 years).

### CCR Assessment

15.3.4 For both scoping and ES assessments, the study area for the CCR assessment is based on the Onshore Scoping Area as described in Chapter 3 and Figure 1-1. The study area includes temporary and permanent works associated with the proposed onshore development. The assessment includes all potential climate hazards for infrastructure and assets associated with the proposed onshore development and the assessment of climate effects are assessed over an assumed 30-year appraisal period for the proposed onshore development.

15.3.5 The spatial boundary for the proposed onshore development includes:

- the Onshore Cable Corridor,
- Onshore Substation and
- Landfall Site (Figure 1-1).

15.3.6 The primary source of information to identify future changes in climate for the assessment locations will be the Met Office (2022) UKCP18 climate projections. These projections are developed to reflect likely climate change for land and coastal areas.

### ICCI Assessment

15.3.7 The study area for the ICCI Assessment reflects the study area for each environmental discipline as described in the individual topic chapters.

## 15.4 Data Sources at Scoping

15.4.1 Data sources used to inform this Climate Change scoping chapter are listed in Appendix A.

## 15.5 Description of Baseline Characteristics

### Current Baseline

#### GHG Assessment

15.5.1 Aligning with IEMA (2022) guidance, the baseline (Do-minimum (DM) scenario) is the reference against which the impact of the proposed onshore development will be compared and assessed. Assumptions are made on the projected cumulative GHG emissions over the temporal scope under this DM scenario. The DM scenario comprises the cumulative GHG emissions within the study area without implementation of the proposed onshore development.

15.5.2 The GHG baseline has been taken as a continuation of the current situation in which the proposed onshore development is not delivered. Therefore, as there are currently no activities ongoing, the baseline emissions associated with the proposed onshore development (both current and future) are assumed to be zero.

#### CCR Assessment

The Met Office (2016) generates climatologies for different areas of the UK, known as climate regions, including historical regional climate information. The proposed onshore development is located within the Na h-Eileanan Siar climate region (Met Office, 2024). High-level climate observations for the climate region over a 30-year averaging period between 1991–2020 are presented in Table 15-1.

Table 15-1 Climatic observations for the climate region over a 30-year averaging period (Met Office, 2024)

Climatic conditions	Climatic observations 1991 – 2020
Temperature	Mean annual temperatures over the region varied from less than 6°C to 12°C. January (winter) mean daily temperature was 2°C, whilst July (summer) mean daily maximum temperature was 16°C.
Sunshine	Average annual sunshine totalled less than 1300 hours
Rainfall	Annual average rainfall was 1200mm, with wettest month being in December and the driest being June, rainfall tends to be generally evenly distributed throughout the year.
Snowfall	Snow usually occurs between November and April, and rarely lies at lower levels outwith this time. It is more common at higher altitudes than in coastal areas.
Wind	Western Scotland is one of the windier parts of the UK and Northern Scotland is the windiest part of the UK, with the windiest season in winter months, especially from December to February. This is due to Atlantic depressions moving across the

Climatic conditions	Climatic observations 1991 – 2020
	UK, starting with winds from south/south-west and later comes from the west or north-west as the depression moves away. Spring has the highest frequency of winds from the north-east.
Air Frost	Air frost occurs when the temperature at 1.25m above the ground falls below 0°C. The average number of days with air frost was 22 days per year.

## ICCI Assessment

15.5.3 The baseline for the ICCI Assessment reflects the baseline as described in each environmental discipline chapter.

## 15.6 Embedded Mitigation and Design Assumptions

15.6.1 As part of the initial design process, embedded mitigation measures may be implemented to reduce the potential environmental effects of development. Examples of measures related to Climate Change which could be implemented include:

- Development of an Outline Construction Environmental Management Plan (CEMP). The CEMP will be implemented to avoid, minimise, or mitigate effects on the environment during the construction and decommissioning phases of the proposed onshore development.
- If required, development of and adherence to a Project Environmental Monitoring Programme (PEMP), which will set out commitments to environmental monitoring in pre-, during and post-construction phases.

## 15.7 Potential Impacts

15.7.1 This Section identifies the potential impacts in relation to the construction, O&M, and decommissioning of the proposed onshore development.

## GHG Assessment

15.7.2 The proposed onshore development will lead to the generation of GHG emissions during construction. However, the proposed onshore development will support the generation and transmission of low carbon electricity during operation, which will (assuming it reduces or avoids fossil fuel use) provide a net benefit against a future baseline in the absence of the proposed onshore development.

15.7.3 The potential sources of GHG emissions during the proposed onshore development lifecycle are outlined in Table 15-2

Table 15-2 Potential sources of GHG emissions during project lifecycle

Sub-stage of PAS2080 Lifecycle		Potential source of GHG emissions
Construction	Product stage; including raw material supply, transport and manufacture (A1-3)	Embodied GHG emissions associated with the required raw materials. Vehicle emissions for transportation prior to factory gate. Energy use for fabrication of onshore project elements (e.g., substation equipment). Industrial and energy emissions in the manufacture of materials.
	Construction process stage: including transport to and from works site as well as construction and installation processes (A4-A5)	Vehicle and shipping emissions for transportation of materials to site. Energy and fuel use in construction processes.
Operation	Operation and maintenance (including repair and replacement) (B2-B4)	Energy consumption for infrastructure operation and activities of organisations conducting routine maintenance including extraction, manufacture, transportation and installation energy use.

Sub-stage of PAS2080 Lifecycle		Potential source of GHG emissions
		Embodied carbon associated with materials used for repair and replacement activities.
End of Life	Decommissioning (C1-C4)	Energy consumption in deconstruction processes. Vehicle and shipping emissions for transportation of materials away from site. Waste management of decommissioning materials.

## CCR Assessment

15.7.4 During both the construction phase (currently assumed 2027–2030) and operational phase of the proposed onshore development, there is potential for the anticipated changes to the climate (such as extreme weather events) to negatively impact the proposed onshore development.

15.7.5 The potential weather events during the proposed onshore development lifecycle are outlined in Table 15–3.

*Table 15–3 Summary of weather events and the potential impacts on the proposed onshore development across the full project lifecycle*

Climatic conditions	Potential impacts
Heavy rain	Delay to construction programme.
High winds and gales	Delay to construction programme.
Increased temperatures and prolonged periods of hot weather	Health impacts of workers from breathing problems and sunstroke.
	Heat stress on electronic equipment.
	Increased frequency of maintenance and repair/replacement.
Increased frequency of extreme weather events	Increased requirement for maintenance and repair.
	Increased costs (e.g., associated with increased frequency of maintenance and repair).
Lightning	Structural damage to infrastructure.
	Power surges and tripping electricity breakers.
	Fires.
	Health impacts from direct strikes.
Snow and ice	Health impacts from slipping on ice and chest illnesses.
Fog	Danger to workers due to reduced visibility.

## 15.8 Likely Significant Effects

### Project Specific Impacts Scoped In

15.8.1 Table 15–4 outlines the potential impacts proposed to be included within the climate change assessment.

Table 15-4 Potential impacts scoped into the assessment of climate change

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
Greenhouse Gases	The proposed onshore development will lead to the generation of GHG emissions during all development stages e.g., embodied carbon, manufacturing, energy and fuel use etc.	Identification of estimated GHG emissions associated with construction, O&M, and decommissioning of the proposed onshore development, comparing current and future baseline GHG emissions. Identification of mitigation measures to reduce GHG emissions through the lifecycle of the proposed onshore development	Construction O&M Decommissioning	Landfall of the Talisk offshore cables Substation Converter Station Underground Cables
CCR	During both the construction phase and operational phase of the proposed onshore development, there is potential for anticipated changes to the climate to negatively impact the proposed onshore development.	Identification of climate changes expected to occur in the future, and the vulnerability of the proposed onshore development to those identified changes in climate	Construction O&M Decommissioning	As above
ICCI	ICCI impacts would occur where climate change impacted upon other environmental receptors, which were themselves at risk from cumulative impacts. It is expected these cases are likely to be minimal but risks of ICCI cumulative impacts will remain scoped in as part of the main review of ICCI risks and reported (where applicable) in each EIA topic chapter.	Identification of where a changing climate will combine with environmental impacts arising from the proposed onshore development, resulting in significant effects on environmental receptors within the scope of the Environmental Impact Assessment (EIA) which are not present under current climate conditions.	Construction O&M Decommissioning	As above

## Project Specific Impacts Scoped Out

15.8.2 Due to the uncertainty of the location of the preferred site no project specific impacts have been scoped out for Climate Change at this stage.

## 15.9 Assessment Methodology

15.9.1 Assessment of significant effects will broadly follow the approach set out in section 4.2. Additional details on the approach for GHG, CCR and ICCI is provided below.

### GHG Assessment

15.9.2 The GHG assessment will be consistent with the best practice approach set out in the IEMA guidance on assessing GHG emissions and evaluating their significance.

15.9.3 The GHG assessment will quantify and report the GHG emissions anticipated to be generated or avoided by the proposed onshore development (i.e., GHG emission factor × Activity data = GHG emission or removal). This will be reported in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e), a single metric of the Global Warming Potential (GWP) of the main GHGs.

15.9.4 The methodology focuses on assessing the impact of the proposed onshore development on GHG emissions by quantifying the net emissions arising from each lifecycle stage. Emissions associated with the proposed onshore development will be compared with the baseline DM scenario (as described under 'Baseline Conditions' above) to quantify the net impact of the proposed onshore development.

### CCR Assessment

15.9.5 The CCR assessment relates to the resilience of the proposed onshore development to climate change impacts. This will be reported in the form of potential hazards to development assets. The study period for assessment of climate risks will be 30 years (2027–2057).

15.9.6 The CCR assessment will be qualitative. It will identify likely future climate hazards and will consider potential impacts and risks arising from these for the proposed onshore development. A qualitative appraisal of the significance of impacts will be carried out based on consideration of the likelihood and consequence of each impact in line with the approach set out in the IEMA (2020) guidance on Climate Change Resilience and Adaptation.

15.9.7 Key issues related to climate change include extreme weather events, sea level rise and storm surges. These will need to be taken into consideration during construction, O&M and decommissioning of the proposed onshore development.

### ICCI Assessment

15.9.8 Following consideration of potential climate change impacts, professional judgement will be used by environmental discipline experts to produce high-level, qualitative statements about potential topic-specific impacts resulting from projected climate change (i.e., changes and trends in climate averages and extreme weather events) for receptors and resources in the area surrounding the proposed onshore development. These will include recommendations for any required mitigation measures as well as allowances for future monitoring to ensure the identification of unexpected impacts on environmental receptors and resources. In-combination climate change impacts for each EIA topic will be presented in the relevant ES Chapter.

15.9.9 The potential significance of in-combination climate change impacts will be assessed qualitatively, based upon the professional judgement of relevant environment and climate change specialists.

15.9.10 All environmental topics within the ES may be affected by changes in climatic conditions. The proposed onshore development will be designed to be resilient to forecasted changes in climate and the in-combination impacts will be assessed for all topics. In-combination climate change impacts for each EIA topic will be presented in the relevant ES Chapter.

## 15.10 Scoping Questions

15.10.1 The following scoping questions refer to the Climate Change chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree with the proposed assessment methodology related to Climate Change?



- Do you agree with the use of those data listed in Appendix A, being used to inform the Onshore EIA?
- Do you agree that all receptors related to Climate Change have been identified?
- Do you agree with the scoping in and out of impacts related to Climate Change?
- Do you agree with the assessment of cumulative effects related to Climate Change?

# 16. Major Accidents and Disasters

## 16.1 Introduction

16.1.1 This Chapter of the Onshore Scoping Report identifies major accidents and disasters receptors of relevance to the proposed onshore development. This Chapter also presents an overview of the potential impacts and likelihood for significant effects to arise from the construction, operation and maintenance (O&M), and decommissioning of the proposed onshore development landward of Mean Low Water Spring (MLWS).

16.1.2 IEMA Guidance for the assessment of major accidents and disasters provides the following definitions:

- Major Accident: an event “that threatens immediate or delayed serious environmental effects to human health, welfare and/or the environment and requires the use of resources beyond those of the client or its appointed representatives (i.e., contractors) to manage”; and
- Disaster: a “man-made/external hazard (such as an act of terrorism) or a natural hazard (such as an earthquake) with the potential to cause an event or situation that meets the definition of a major accident”.

16.1.3 The vulnerability of the proposed onshore development to major accidents and disasters has been considered in terms of the likelihood of the proposed onshore development itself to cause a major man-made accident (e.g., major road traffic accident), and in terms of the proposed onshore development being affected by an external man-made accident (e.g., act of terrorism) or by a natural disaster (e.g., earthquake). It has also been considered whether the design, construction or operation of the proposed onshore development could increase impacts on nearby receptors.

16.1.4 It is proposed that a major accidents and disasters assessment is **scoped out** of the Environmental Impact Assessment (EIA). The justification for this is included in the scoping assessment in this Onshore Scoping Report Chapter.

## 16.2 Study Area

16.2.1 The Major Accidents and Disasters study area is defined by the Onshore Scoping Area for the purposes of identifying potential sources, pathways, and receptors for major accidents and disasters.

16.2.2 This chapter considers external sites holding hazardous materials such as sites with Hazards Substance Consent (including Control of Major Accident Hazards (COMAH) sites) and Major Accident Control Regulations (MACR) sites which could potentially influence the proposed onshore development.

## 16.3 Data Sources at Scoping

16.3.1 Appendix A presents the data sources used to inform this scoping chapter.

## 16.4 Description of Baseline Characteristics

### Current Baseline

16.4.1 The proposed onshore development is located approximately 1.5km southwest of Stornoway on the Isle of Lewis and is contained by the Onshore Scoping Boundary shown in Figure 1-1. Land use in the surrounding area includes occasional residential properties, farms and agricultural land and smaller areas of amenity forestry and Ancient Woodland Inventory (AWI) (see chapter 5 – Landscape and Visual and Figure 12-2).

16.4.2 Baseline major accident and disaster risks have been established through the UK Government’s National Risk Register (UK Government, 2020).

16.4.3 There are no sites regulated under the Control of Major Accident Hazards (COMAH) Regulations 2015 within the Onshore Scoping Area (Health and Safety Executive, 2015), and there are no existing features of the site that are likely to pose a significant major accidents and disasters risk to or as a result of the proposed onshore development.

16.4.4 There are no Hazardous Development Consultation Zones and HSE: Pipeline Consultation Zones identified in the Local Development Plan within the area, although there are safeguarding consultation zones covering Stornoway Airport, MOD and Health and Safety Executive matters for Offshore Islands.

16.4.5 The Onshore Scoping Area does not encroach into any Coal Mining Reporting Area or Development High Risk Area. There are no mining records (e.g., coal outcrops, probable or past shallow coal mine workings or mine entries) present within the study area.

The key receptors that could be affected by major accidents and disasters are described in other chapters of this Scoping Report, in particular those outlined in Table 16-1.

Table 16-1 Key receptors that could be affected by Major Accidents and Disasters

Topic	Receptor
Chapter 5 Landscape and Visual	Residential settlements; protected viewpoints
Chapter 6 Ecology and Ornithology	Designated Sites (International, National and Other); particular species including protected and priority species
Chapter 7 Archaeology and Cultural Heritage	Designated buildings / sites (listed buildings, Scheduled Monuments, Conservation Areas); buried archaeology
Chapter 9 Hydrology and hydrogeology	Surface waterbodies, groundwater bodies and groundwater source (drinking water bodies); private water supplies
Chapter 11 Traffic and Transport	Core paths and recreational routes, local road network.
Chapter 12 Socio-economics	
Chapter 13 Human Health	Population and human health receptors (workers, operations and maintenance workers, settlements, vulnerable receptors such as schools).

## 16.5 Embedded Mitigation and Design Assumptions

16.5.1 As part of the initial design process, embedded mitigation measures may be implemented to reduce the potential environmental effects of development. Examples of measures related to Major Accidents and Disasters which could be implemented include:

- Good design of the proposed onshore development in accordance with industry best practice and taking account of the anticipated environmental conditions and receptors to minimise potential for harm.
- Good design of electrical systems to the relevant safety standards, and adhering to safe systems of work will ensure the avoidance of major accidents and disasters risk because of the proposed onshore development;
- Adherence to the Construction (Design and Management) Regulations 2015 and the Management of Health and Safety at Work Regulations 1999;

16.5.2 Where appropriate, relevant environmental aspects, as part of the EIA, will assess the likely risks to the proposed onshore development in relation to potential areas of vulnerability. For example, any flood risk concerns are considered within the Hydrology and Hydrogeology assessment and will be addressed as part of a subsequent Flood Risk Assessment.

## 16.6 Likely Significant Effects

### Project Specific Impacts Scoped In

16.6.1 No potential impacts are proposed to be scoped in to further assessment of Major Accidents and Disasters.

### Project Specific Impacts Scoped Out

16.6.2 Table 16-2 describes the potential impacts of the project and the justification of why they are proposed to be scoped out of EIA assessment.

Table 16–2 Impacts proposed to be scoped out of further assessment for Major Accidents and Disasters

Impact	Justification	Relevant Development Stage
Major accidents	There are no natural or man-made hazardous areas within the Study Area. Embedded mitigation will minimise the risk of impact to environmental receptors. It is assumed that any risks associated with construction, O&M, and decommissioning will be covered by the relevant topic chapters (e.g., Traffic management in Chapter 11 – Traffic and Transport).	Construction O&M Decommissioning
Disasters	There are no natural or man-made hazardous areas within the Study Area. Embedded mitigation will minimise the risk of impact to environmental receptors. It is assumed that any risks associated with construction, operation and maintenance and decommissioning will be covered by the relevant topic chapters (e.g., Flood risk in Chapter 9 – Hydrology and Hydrogeology).	Construction O&M Decommissioning

## 16.7 Approach to EIA

### Relevant Guidance

16.7.1 The key legislation, policy and guidance used to inform the EIA includes:

- The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017
- Health and Safety at Work etc. Act 1974 (HSWA) and regulations made thereunder.
- Construction Design and Management (CDM) 2015 Regulations

### Assessment Methodology

16.7.2 The potential effects for major accidents and disasters have been screened against criteria in the guidance notes detailed in Section 16.7 and in line with IEMA definitions outlined in 16.1.2.

## 16.8 Scoping Questions

16.8.1 The following scoping questions refer to the Major Accidents and Disasters chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree with the proposed approach to scope out further assessment of Major Accidents and Disasters?

# 17. Other Issues

## 17.1 Introduction

17.1.1 This chapter outlines the proposed approach to the assessment of likely significant effects regarding other issues as a result of the construction, O&M, and decommissioning phases of the Proposed Onshore Development. This chapter addresses:

- Electromagnetic fields (EMFs);
- Telecommunications, and;
- Unexploded Explosive Ordnance (UXO).

17.1.2 It is considered that significant effects relating to EMFs and Telecommunications are unlikely and as such these are '**SCOPED OUT**' of the EIA.

17.1.3 There is potential for significant impacts from UXO and therefore this is included for further consideration in the ES.

## 17.2 Study Area

### EMF

17.2.1 EMFs are generated through the processes of electricity generation, transmission, distribution, and utilisation. Electric fields are produced by voltage, which is the pressure behind the flow of electricity and which depends on the operating voltage of the equipment. Magnetic fields are produced by current, which is a measure of the flow of electricity and depends on the electrical current.

17.2.2 The proposed onshore development includes electrical infrastructure that, when operational, would produce EMFs, namely underground cabling and substation infrastructure. The intensity of EMFs diminishes with increasing distance from these sources.

17.2.3 Therefore, the study area of the assessment will encompass all areas surrounding the assets where EMF exposure could be significant, ensuring comprehensive evaluation of potential impacts on both the environment and public health.

### Telecommunications

17.2.4 The study area for the consideration of the potential effects on existing telecommunication links is the Site boundary. The assessment will consider the operational performance of these telecommunication systems, ensuring that the infrastructure design and construction activities do not adversely impact signal integrity or transmission capabilities.

### UXO

17.2.5 The study area for the risk assessment pertaining to the proposed onshore development encompasses the immediate construction footprint, which includes the foundations, access roads, and ancillary facilities. Furthermore, the assessment will extend to adjacent areas that may be affected by ground disturbance activities, recognizing that such disturbances could potentially expose or mobilize UXO remnants from historical military operations.

## 17.3 Legislation, Policy and Guidance

17.3.1 The most relevant policy and guidance concerning EMF, UXO, and Telecommunication that will inform the assessment comprise:

- Power Lines: Demonstrating compliance with EMF public exposure guidelines – a Voluntary Code of Practice, Department of Energy & Climate Change (Department for Energy and Climate Change, 2012);
- International Commission on Non-Ionizing Radiation Protection Guidelines: For limiting exposure to time-varying electric, magnetic and electromagnetic field (up to 300GHz), Health Physics 74 (4): 494-522. (International Commission on Non-ionizing Radiation Protection, 1998);

- Recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) (1999/519/EC) (European Union Council, 1999);
- Review of the scientific evidence for limiting exposure to electromagnetic fields (0–300 GHz) (National Radiological Protection Board, 2004);
- Unexploded ordnance (UXO) A guide for the construction industry (C681) (CIRIA, 2009); and
- Guidance For Unexploded Ordnance in Infrastructure Activities (Defence Infrastructure Organisation, 2016).

## 17.4 Data Sources at Scoping

17.4.1 Data sources used to inform this Other Issues scoping chapter are listed in Appendix A.

## 17.5 Description of Baseline Characteristics

### Current Baseline

#### Electromagnetic Fields

- 17.5.1 Electromagnetic fields (EMFs) are generated from both natural and anthropogenic sources. Natural sources include the Earth's magnetic field, which is static and operates at a frequency of 0 Hz. In contrast, human-made sources predominantly arise from electricity generation and distribution, with the UK's electricity system operating at a frequency of 50 Hz, producing alternating current (AC) fields.
- 17.5.2 The Earth's magnetic field, which is caused mainly by currents circulating in the outer layer of the Earth's core, is approximately 50  $\mu\text{T}$  in the UK. This field may be distorted locally by ferrous minerals or by steelwork such as in buildings. At the Earth's surface there is also a natural electric field, created by electric charges high up in the ionosphere, of approximately 100 V/m in fine weather and more in stormy weather.
- 17.5.3 In homes in the UK that are not close to high-voltage overhead lines or underground cables, the average "background" power-frequency magnetic field (the field existing over the whole volume of the house) ranges typically from 0.01 – 0.2  $\mu\text{T}$  with an average of approximately 0.05  $\mu\text{T}$ , normally arising from currents in the low voltage distribution circuits that supply electricity to homes. The highest magnetic fields to which most people are exposed in the home arise close to domestic appliances that incorporate motors and transformers. For example, close to their surface, fields can be 2000  $\mu\text{T}$  for electric razors and hair dryers, 800  $\mu\text{T}$  for vacuum cleaners, and 50  $\mu\text{T}$  for washing machines. The electric field in most homes is in the range 1 – 20 V/m, rising to a few hundred V/m close to appliances.
- 17.5.4 Along the proposed cable circuit route there is existing electrical infrastructure which will produce localised 50 Hz EMF.
- 17.5.5 17.4.5 Third-party projects in the vicinity may influence the proposed onshore development in terms of EMF; these include:
- The proposed Western Isles Connection Project: Delivered by SSEN Transmission, this project involves the construction of a new High Voltage Direct Current (HVDC) converter and AC substation, along with UGC connecting the converter and substation to a landfall point at Arnish Point. Subsequent subsea cables will provide the connection to the mainland.

#### Telecommunications

- 17.5.6 There are three fixed telecommunication links crossing the Site boundary. The Developer will undertake consultation with the operators of the links to ensure that no interference will occur as a result of the proposed onshore development.

#### Unexploded Ordnance

- 17.5.7 While there is no explicit legal requirement or specific legislation mandating a UXO risk assessment for construction projects in the UK, the need for such consideration is inherent within the Construction (Design and Management) Regulations 2015.
- 17.5.8 Furthermore, the Health and Safety at Work etc. Act 1974 imposes a duty of care on those responsible for intrusive works, such as archaeology, site investigations, drilling, piling, or excavation, requiring them to conduct a thorough risk assessment and implement mitigation measures to address any identified hazards.
- 17.5.9 In 2009, the Construction Industry Research and Information Association (CIRIA) issued "Unexploded Ordnance (UXO): A Guide for the Construction Industry," which outlines best practices for UXO risk

management. This guidance underscores the importance of considering UXO risks at the earliest possible stage in a project's lifecycle and highlights the critical need for a comprehensive risk assessment during the initial phases of project planning.

- 17.5.10 A desk-based Preliminary UXO Risk Assessment has been conducted to evaluate the likelihood of UXO contamination on the Site (Appendix B). The assessment indicates that during World War II (WWII), the Site was located within the Ross and Cromarty Local Authority area, which experienced a 'very low' level of bombing, with fewer than one high-explosive (HE) bomb strike per 100 hectares. Luftwaffe reconnaissance identified Stornoway, including the Hebrides Landing Place, as a primary bombing target, with partial overlap to the north-east of the Site. Archival research and post-war mapping did not reveal evidence of bombing or bomb damage on or near the Site. Notably, a WWI-era unexploded bomb (UXB) was discovered 700 m north-east of the Site in April 2023.
- 17.5.11 Further investigation revealed that during WWII, Lews Castle, located 340 m to the north-east of the Site, was used as accommodation for personnel of the 700 Naval Air Squadron (HMS Mentor). The castle grounds likely extended onto the Site and may have housed military equipment. The Isle of Lewis was fortified with a coastal artillery battery at Arnish Point and an anti-aircraft gun battery 800 m north-east of the Site.
- 17.5.12 The most probable UXO threat identified on-site includes WWII-era British AXO/LSA/SAA and AAA projectiles, with a residual risk of German HE bombs and incendiary bombs (IBs). Based on the historical military activity documented in the area, it is reasonable to conclude that a UXO contamination threat exists.
- 17.5.13 The Preliminary Unexploded Ordnance (UXO) Threat Assessment report is included as Appendix B of this Scoping Report.

## 17.6 Embedded Mitigation and Design Assumptions

- 17.6.1 As part of the initial design process, embedded mitigation measures may be implemented in order to reduce the potential environmental effects of Proposed Onshore Development measures related to EMFs, UXO and Telecommunications will be developed once a preferred site is identified and further design information is available.

## 17.7 Potential Effects

### EMF

- 17.7.1 The Proposed Development includes electrical infrastructure that, when operational, would produce EMFs, namely underground cabling. EMFs arise from the generation, transmission, distribution, and use of electricity. Electric fields are produced by voltage, which is the pressure behind the flow of electricity and which depends on the operating voltage of the equipment. Magnetic fields are produced by current, which is a measure of the flow of electricity and depends on the electrical current.
- 17.7.2 EMFs can have both direct and indirect effects on human health and ecological receptors. Direct impacts include effects on the central nervous system. To prevent these known effects the International Commission on Non-Ionizing Radiation Protection (ICNIRP), published updated health protection guidelines in 2020 (ICNIRP, 2020).

### UXO

- 17.7.3 As set out in the Preliminary Unexploded Ordnance (UXO) Threat Assessment (Appendix B), there is a probable UXO threat on-site relating to WWII-era British AXO/LSA/SAA and AAA projectiles, with a residual risk of German HE bombs and incendiary bombs (IBs). This is likely to pose a hazard at the Site during the construction phase of the Proposed Onshore Development.
- 17.7.4 UXOs pose significant risks to both civilians and workers, including potential injury or fatality, as well as displacement due to hazardous conditions. Environmentally, they can contaminate soil and water, adversely affecting ecosystems and wildlife. Economically, UXOs render land unsuitable for agriculture, development, or tourism, and the costs associated with their clearance are substantial. Furthermore, the presence of UXOs creates psychological stress within communities, instilling a constant fear of detonation.
- 17.7.5 The second phase of UXO risk assessment, the Development Impact Assessment, will examine potential impacts of the proposed development on soils and near-surface geological deposits. This assessment will

account for physical disturbances and pollution risks during the construction, O&M, and decommissioning stages.

- 17.7.6 The assessment process will leverage a comprehensive range of historical data sources, including both local and national archives. This will ensure a thorough investigation into the site's history, the nature and scale of any recorded bombing, the extent of bomb-related damage, and any specific military activities associated with the site.
- 17.7.7 The assessment will also factor in any post-war developments at the site and evaluate the potential impact of the proposed intrusive works.
- 17.7.8 Where significant risks are identified during construction and operation, appropriate mitigation measures will be developed through the application of advanced technologies. A site-specific UXO risk management plan will be established to outline the steps for managing identified risks and addressing unexpected UXO discoveries.

### **Telecommunications**

- 17.7.9 Consultation will be undertaken with relevant stakeholders to confirm that no links are affected.
- 17.7.10 The potential for adverse effects on domestic television reception is greatly diminished post digital switchover, which completed across the UK in 2012 and therefore the likelihood of significant effects is minimal.

### **Project Specific Impacts Scoped In**

- 17.7.11 Table 17-1 below presents the potential impacts scoped in for further assessment in the ES.

Table 17-1 Potential impacts scoped in for further assessment for Other Issues

Potential Impact	Description	Proposed Assessment Approach	Relevant Development Stage	Relevant Project Infrastructure
UXO	Based on the historical military activity identified on-site, it is confirmed that a UXO (Unexploded Ordnance) contamination threat exists.	A detailed standalone UXO Threat and Risk Assessment will be undertaken and a framework strategy will be developed to reduce and mitigate the risk throughout the construction and decommissioning phases of the Onshore Proposed Development. A description of any relevant proposed mitigation measures and safety considerations of the Onshore Proposed Development will be included within the Onshore Proposed Development description chapter of the EIA Report.	Construction O&M Decommissioning	Landfall of the Talisk offshore cables Substation Converter Station Underground Cables

## Project Specific Impacts Scoped Out

17.7.12 Table 17-2 summarises the potential impacts described in this chapter and provides a justification for why it is proposed these are scoped out of EIA assessment.

Table 17-2 Impacts proposed to be scoped out of further assessment for Other Issues

Impact	Justification	Relevant Development Stage
EMFs	<p>All infrastructure associated with the Proposed Onshore Development will comply with ICNIRP and Public Health England (PHE) guidelines. The ICNIRP reference levels for public exposure are set at 100 <math>\mu</math> T for magnetic fields and 5000 V/m for electric fields. The permitted exposure limits, which allow for higher tolerances, are 360 <math>\mu</math> T for magnetic fields and 9000 V/m for electric fields. The design of the onshore development will ensure compliance with these guidelines, thereby safeguarding public health and safety.</p> <p>Therefore, given the nature of the Proposed Onshore Development, further impact assessment studies relating to EMF effects are not necessary.</p>	Construction O&M Decommissioning
Telecommunications	<p>Given the nature of the Proposed Onshore Development, it is anticipated that no adverse impacts will result from the Proposed Onshore Development in relation to telecommunications.</p> <p>Consultation will be undertaken with relevant stakeholders to confirm that no links are affected.</p> <p>The potential for adverse effects on domestic television reception is greatly diminished post digital switchover, which completed across the UK in 2012 and therefore the likelihood of significant effects is minimal and therefore, excluded (scoped-out) from detailed assessment. It is therefore proposed that the assessment of likely significant effects on telecommunications be scoped out of the EIA Report.</p>	Construction O&M Decommissioning

## 17.8 Scoping Questions

17.8.1 The following scoping questions refer to the Other Issues chapter and are designed to focus the scoping exercise and inform the Scoping Opinion:

- Do you agree with the proposed assessment methodology related to UXO?
- Do you agree with the proposed approach to scope out further assessment of EMF and Telecommunications?

# 18. Summary

## 18.1 Scoped Into the Environmental Impact Assessment (EIA)

18.1.1 The topics that have been included within this Onshore Scoping Report have addressed the potential impacts that will arise as a result of the proposed development. As a result of the scoping assessments the following topics and impacts are proposed for inclusion in the Onshore EIA Report (Table 18-1).

Table 18-1 Topics and impacts proposed to be scoped into the EIA

Topic impacts	C	O&M	D
<b>Landscape and Visual</b>			
Impact on landscape features.	x	x	x
Impact (daytime) on landscape character.	x	x	x
Impact (daytime) on visual receptors and views.	x	x	x
Cumulative impact (daytime) on landscape character.	x	x	x
Cumulative Impact (daytime) on visual receptors and views.	x	x	x
<b>Ecology and Ornithology</b>			
Habitat loss	x		x
Dust causing activities	x		x
Noise, vibration, and visual disturbance	x	x	x
Barrier effects		x	
Habitat loss	x		x
<b>Archaeology and Heritage</b>			
Direct physical impact	x		
Indirect physical impact	x		
Setting impact	x	x	x
Cumulative impacts	x	x	x
<b>Geology and Peat</b>			
Stability of peat deposits	x		x
Loss of peat /peat habitat via excavation, physical disturbance or drying out	x		x
<b>Hydrology and Hydrogeology</b>			
Pollution, high levels of suspended solids and turbidity in downstream watercourses	x		x
Alteration of natural drainage patterns, changes in runoff rates and volumes due to increased areas of temporary and permanent hardstanding	x	x	
Localised flooding and erosion caused by impediments to flow	x	x	
Pollution of surface water as a result of maintenance activities associated with the operation of the site.		x	
Changes in quality and quantity of PWS supplies	x	x	
<b>Noise and Vibration</b>			
Noise associated with construction and decommissioning phase	x		x
Operational phase associated noise generation		x	
Noise and ground-borne vibration associated with vehicle use	x		x
Construction and Decommissioning phase associated ground-borne vibration	x		x
Operational phase associated ground-borne vibration		x	
<b>Traffic and Transport</b>			
Severance	x		
Road Vehicle Delay	x		
Non-motorised Delay	x		
Fear and Intimidation	x		
Road Safety	x		

Topic impacts	C	O&M	D
Hazardous/Large Loads	x		
<b>Socioeconomics, tourism and Landuse</b>			
Employment in the supply chain	x	x	
Economic output effects in the supply chain	x	x	
Potential change in land use	x	x	
Demography and migration	x		
Tourism and recreation activities	x		
<b>Climate Change</b>			
Greenhouse Gases	x	x	x
Climate Change Resilience (CCR)	x	x	x
In-combination Climate Change Impact	x	x	x
<b>Other Issues: EMF, UXO, Telecommunications</b>			
UXO	x	x	x

## 18.2 Scoped out of the Environmental Impact Assessment (EIA)

18.2.1 As a result of the scoping assessment a number of impacts have been identified which it is proposed are scoped out of the EIA these are summarised in Table 18-2.

Table 18-2 Topics and impacts proposed to be scoped out of the EIA

Topic impacts	C	O&M	D
<b>Landscape and Visual</b>			
Landscape and visual impacts of the Proposed onshore development outside the proposed LVIA Study Area.	x	x	x
Impacts (night-time) of lighting on landscape character and visual receptors and views.	x	x	x
<b>Archaeology and Heritage</b>			
Setting impacts to onshore heritage assets due to the offshore array	x	x	x
<b>Geology and Peat</b>			
Impacts on superficial (non Peat) or solid geology	x	x	x
<b>Traffic and Transport</b>			
Effect of Operational Vehicle Movements		x	
Effect of Decommissioning Vehicle Movements			x
<b>Socioeconomics, tourism and Landuse</b>			
Demography and migration		x	
Tourism and recreation activities		x	
Employment in the supply chain; Economic output effects in the supply chain; Potential change in land use; Demography and migration; Tourism and recreation activities			x
<b>Other Issues: EMF, UXO, Telecommunications</b>			
EMF	x	x	x
Telecommunications	x	x	x

18.2.2 Additionally, some whole topics are proposed to be scoped out of the EIA; these are:

- Population and Human Health
- Air Quality
- Major Accidents and Disasters

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- The Climate Change (Scotland) Act 2009. Available at: <https://www.legislation.gov.uk/asp/2009/12/contents> (Last accessed 27 September 2024)
- The Climate Change Act 2008 (2050 Target Amendment) Order 2019. Available at: <https://www.legislation.gov.uk/ukdsi/2019/978011187654> (Last accessed 27 September 2024)
- The Climate Change Act 2008. Available at: <https://www.legislation.gov.uk/ukpga/2008/27/contents> (Last accessed 27 September 2024)
- The Comhairle nan Eilean Siar (CnES) council (2022) Annual Air Quality Progress Report [Available at <https://www.scottishairquality.scot/sites/default/files/publications/2023-09/Comhairle-apr-2022-submitted.pdf>] Accessed 16/09/2024
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- The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. Available at: <https://www.legislation.gov.uk/asp/2019/15/enacted> (Last accessed 27 September 2024)
- UK Government (2013), Construction 2025: strategy. [Available at: <https://www.gov.uk/government/publications/construction-2025-strategy>] (Last accessed 27 September 2024)
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- UK Government, (2017). The Conservation of Habitats and Species Regulations 2017. (<https://www.legislation.gov.uk/uksi/2017/1012/contents/made>) (accessed: 23rd–27th Sept 2024)
- UNFCCC (1997) Kyoto Protocol. Available at: [https://unfccc.int/kyoto\\_protocol](https://unfccc.int/kyoto_protocol) (Last accessed 27 September 2024)
- UNFCCC (2015) Paris Agreement. Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement> (Last accessed 27 September 2024)

# Appendix A – Data Sources

## Landscape and Visual Impact

Title	Source	Year	Author
Ordnance Survey 1:25,000 scale mapping	Central Lewis & Stornoway / Meadhan Leodhais agus Steornabhagh 459	2022	Ordnance Survey
Ordnance Survey 1:50,000 scale mapping	Stornoway & North Lewis map – OS Landranger 8	2016	Ordnance Survey
Google Earth Pro	Available online at: <a href="https://earth.google.com/web/@0,-2.683,0a,22251752.77375655d,35y,0h,0t,0r/data=CgRCAGgBOgMKATA">https://earth.google.com/web/@0,-2.683,0a,22251752.77375655d,35y,0h,0t,0r/data=CgRCAGgBOgMKATA</a>	2024	Google
National Coastal Character Types	Available online at: <a href="https://www.nature.scot/professional-advice/landscape/coastal-character-assessment">https://www.nature.scot/professional-advice/landscape/coastal-character-assessment</a>	2010	NatureScot
Scottish Landscape Character Types Map and Descriptions	Available online at: <a href="https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions">https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions</a>	2019	NatureScot
Wild Land Areas Map & Description – Harris – Uig Hills	Available online at: <a href="https://www.nature.scot/doc/wild-land-areas-map-and-descriptions-2014">https://www.nature.scot/doc/wild-land-areas-map-and-descriptions-2014</a>	2017	NatureScot
Gardens and Designed Landscapes.	Available online at: <a href="https://www.historicenvironment.scot/advice-and-support/listing-scheduling-and-designations/gardens-and-designed-landscapes/">https://www.historicenvironment.scot/advice-and-support/listing-scheduling-and-designations/gardens-and-designed-landscapes/</a>	2024	Historic Environment Scotland
Outer Hebrides Local Development Plan	Available online at: <a href="https://cne-siar.gov.uk/wp-content/uploads/2024/01/Outer-Hebrides-Local-Development-Plan-2018.pdf">https://cne-siar.gov.uk/wp-content/uploads/2024/01/Outer-Hebrides-Local-Development-Plan-2018.pdf</a>	2018	CnES
Scotland's Environment Map	Available online at: <a href="https://map.environment.gov.scot/sewebmap/">https://map.environment.gov.scot/sewebmap/</a>	2024	The Scottish Government
Map of the National Cycle Network.	Available online at: <a href="https://www.sustrans.org.uk/national-cycle-network/">https://www.sustrans.org.uk/national-cycle-network/</a>	2024	Sustrans

\* All websites were accessed October 2024.

## Ecology and Ornithology

Title	Source	Year	Author
Outer Hebrides Local Development Plan	Outer Hebrides Local Development Plan– Adopted Plan	2018	Comhairle nan Eilean Siar
National Biodiversity Network Trust (NBN) Atlas	<a href="https://scotland.nbnatlas.org/">https://scotland.nbnatlas.org/</a>	Accessed 2024	National Biodiversity Network
Sitelink	<a href="https://sitelink.nature.scot/home">https://sitelink.nature.scot/home</a>	Accessed 2024	NatureScot
DEFRA MAGIC Website	<a href="https://magic.defra.gov.uk/MagicMap.aspx">https://magic.defra.gov.uk/MagicMap.aspx</a>	Accessed 2024	DEFRA
Royal Society for the Protection of Birds (RSPB) Local Records	RSPB	2024	RSPB
British Trust for Ornithology (BTO) Wetland Birds Surveys (WeBS) Data	<a href="https://app.bto.org/webs-reporting/numbers.jsp?locid=LOC657189">https://app.bto.org/webs-reporting/numbers.jsp?locid=LOC657189</a>	1992	BTO

Title	Source	Year	Author
Bird Atlas 2007-11	Balmer, D. E., Gillings, S., Caffrey, B. J., Swann, R. L., Downie, I. S., & Fuller, R. J. (2013). Bird Atlas 2007-11: the breeding and wintering birds of Britain and Ireland. Thetford: BTO.	2013	Balmer <i>et al.</i>
Carbon and Peatland 2016 map	<a href="https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/">https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/</a>	2016	Scotland's Soils
Outer Hebrides Bird Report	<a href="https://www.the-soc.org.uk/pages/online-scottish-bird-report">https://www.the-soc.org.uk/pages/online-scottish-bird-report</a>	Most recent report dated 2016	Scottish Ornithologists' Club
Harris to Stornoway 132 kV OHL Replacement EIA	Harris to Stornoway 132 kV Overhead Line Replacement Environmental Impact Assessment Report Volume 2: Main Report: Chapter 9: Ornithology	2022	SSE

## Archaeology and Cultural Heritage

Title	Source	Year	Author
Non-designated heritage asset data	Western Isles Historic Environment Record	2024	N/A
Designated heritage asset data	Historic Environment Scotland	2024	N/A

## Geology and Peat

Title	Source	Year	Author
BGS Onshore Geoindex Website	<a href="https://mapapps2.bgs.ac.uk/geoindex/home">https://mapapps2.bgs.ac.uk/geoindex/home</a>	2020	British Geological Survey
Peatland and Carbon 2016 Map	<a href="https://www.nature.scot/landforms-and-geology/scotlands-rocks-landforms-and-soils/scotlands-soils">https://www.nature.scot/landforms-and-geology/scotlands-rocks-landforms-and-soils/scotlands-soils</a>	2016	NatureScot
Scottish Soils Maps	<a href="https://soils.environment.gov.scot/">https://soils.environment.gov.scot/</a>	2017	Scottish Environmental Protection Agency (SEPA), The James Hutton Institute, NatureScot, The Scottish Government, Scottish Forestry
The Interactive Coal Authority Map	<a href="https://datamine-cauk.hub.arcgis.com/">https://datamine-cauk.hub.arcgis.com/</a>	2023	The Coal Authority

## Hydrology and Hydrogeology

Title	Source	Year	Author
SEPA Online Flood Maps	<a href="https://map.sepa.org.uk/floodmaps">https://map.sepa.org.uk/floodmaps</a>	2023 (Last Updated)	SEPA (Scottish Environment Protection Agency)
Flood Estimation Handbook Web Service	<a href="https://fehweb.ceh.ac.uk/Map">https://fehweb.ceh.ac.uk/Map</a>	2019	UK Centre for Ecology and Hydrology
SEPA Nested Catchments Data Set	Scottish Government SpatialData.gov.scot	2024	SEPA
SEPA Water Environment Hub	<a href="https://informatics.sepa.org.uk/RBMP3/">https://informatics.sepa.org.uk/RBMP3/</a>	2021	SEPA
Groundwater Drinking Water Protected Areas Data sets	Water Framework Directive	2024 (Last Updated)	European Parliament & Council
Rivers and Catchments Drinking Water Protected Areas Data sets	Water Framework Directive	2024 (Last Updated)	European Parliament & Council

## Noise and Vibration

Title	Source	Year	Author
Google Earth	<a href="https://www.google.co.uk/intl/en_uk/earth/">https://www.google.co.uk/intl/en_uk/earth/</a>	2024	Google
OS Property Data	<a href="https://osmaps.ordnancesurvey.co.uk/">https://osmaps.ordnancesurvey.co.uk/</a>	2024	Ordnance Survey

## Traffic and Transport

Title	Source	Year	Author
Traffic Data A859	Department for Transport (DfT)	Most Recent Available	DfT ( <a href="#">Road traffic statistics – Local authority: Comhairle nan Eilean Siar</a> )
Traffic Data A858	DfT	Most Recent Available	DfT
Traffic Data A857	DfT	Most Recent Available	DfT

## Socio-economics

Title	Source	Year	Author
Demography and Migration	<a href="https://www.nrsotland.gov.uk/news/2024/increase-in-net-migration">https://www.nrsotland.gov.uk/news/2024/increase-in-net-migration</a>	2024	National Records of Scotland
Electoral Ward 2022 by Economic Activity	<a href="https://www.scotlandscensus.gov.uk/search-the-census#/location/topics/list?topic=Education%20labour%20market%20and%20travel%20to%20work&amp;categoryId=6">https://www.scotlandscensus.gov.uk/search-the-census#/location/topics/list?topic=Education%20labour%20market%20and%20travel%20to%20work&amp;categoryId=6</a>	2022	National Records of Scotland
Labor Market Profile	<a href="https://www.nomisweb.co.uk/reports/lmp/la/1946157417/report.aspx#tabempunemp">https://www.nomisweb.co.uk/reports/lmp/la/1946157417/report.aspx#tabempunemp</a>	2024	NOMIS
Land Use	<a href="https://map.hlamap.org.uk/#zoom=7&amp;lat=930383.14327&amp;lon=141975.38233&amp;layers=BTTTTTTT">https://map.hlamap.org.uk/#zoom=7&amp;lat=930383.14327&amp;lon=141975.38233&amp;layers=BTTTTTTT</a>	2015	Historic Land-use Assessment
Low carbon and renewable energy economy	<a href="https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalesimates/2022">https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalesimates/2022</a>	2024	Office for National Statistics
Mid-2022 Population Estimates Scotland	<a href="https://www.nrsotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-estimates/mid-year-population-estimates/mid-2022">https://www.nrsotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-estimates/mid-year-population-estimates/mid-2022</a>	2022	National Records of Scotland
National Planning Framework 4	<a href="https://www.gov.scot/publications/national-planning-framework-4/">https://www.gov.scot/publications/national-planning-framework-4/</a>	2023	Scottish Government
Outer Hebrides Local Development Plan - Supplementary Guidance for Wind Energy Development	<a href="https://cne-siar.gov.uk/home/planning-building-standards/planning-policy-and-guidance/the-development-plan/">https://cne-siar.gov.uk/home/planning-building-standards/planning-policy-and-guidance/the-development-plan/</a>	2021	Comhairle nan Eilean Siar
Population Projection	<a href="https://www.gov.scot/publications/building-new-scotland-migration-scotland-independence/pages/7/">https://www.gov.scot/publications/building-new-scotland-migration-scotland-independence/pages/7/</a>	2023	Scottish Government
Regional Economic activity	<a href="https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/regionaleconomicactivitybygrossdomesticproductuk/latest">https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/regionaleconomicactivitybygrossdomesticproductuk/latest</a>	2024	Office for National Statistics
Tourism Insights in the Outer Hebrides	<a href="https://www.visitouterhebrides.co.uk/industry/information-resources/tourism-in-the-outer-hebrides">https://www.visitouterhebrides.co.uk/industry/information-resources/tourism-in-the-outer-hebrides</a>	2024	Outer Hebrides Tourism
Tourism employment in Scotland	<a href="https://www.visitscotland.org/research-insights/about-our-industry/tourism-employment#statistics">https://www.visitscotland.org/research-insights/about-our-industry/tourism-employment#statistics</a>	2023	Visit Scotland
Tourism in Scotland: the economic contribution of the sector	<a href="https://www.gov.scot/publications/tourism-scotland-economic-contribution-sector/pages/4/">https://www.gov.scot/publications/tourism-scotland-economic-contribution-sector/pages/4/</a>	2018	Scottish Government

## Population and Human Health

Title	Source	Year	Author(s)
<b>Policy Sources</b>			
Human Health: Ensuring a High Level of Protection	International Association for Impact Assessment (IAIA)	2020	Cave, B.; Claßen, T.; Fischer-Bonde, B.; Humboldt-Dachroeden, S.; Martín-Olmedo, P.; Mekel, O.; Pyper, R.; Silva, F.; Viliani, F.; and Xiao, Y.
Health in Environmental Impact Assessment – A Primer for a Proportionate Approach	IEMA	2017	Cave, B.; Fothergill, J.; Pyper, R.; Gibson, G.; and Saunders, P.
Determining Significance for Human Health	IEMA	2022	Pyper, R.; Waples, H.; Beard, C.; Barratt, T.; Hardy, K.; Turton, P.; Netherton, A.; McDonald, J.; Buroni, A.

Title	Source	Year	Author(s)
			Bhatt, A.; Phelan, E.; Scott, I.; Fisher, T.; Christian, G.; Ekeremawi, R.; Devine, K.; McClenaghan, R.; Fenech, B.; Dunne, A.; Hodgson, G.; Purdy, J.; and Cave, B.
Effective Scoping of Human Health	IEMA	2022	Pyper, R.; Lamming, M.; Beard, C.; Waples, H.; Birley, M.; Buroni, A.; Douglas, M.; Turton, P.; Hardy, K.; Netherton, A.; McClenaghan, R.; Barratt, T.; Bhatt, A.; Fenech, B.; Dunne, A.; Hodgson, G.; Gibson, G.; Purdy, J.; and Cave, B.
Health Impact Assessment for Practitioners	Scottish Health Inequalities Impact Assessment Network (SHIAN)	2016	Douglas, M.
Health Impact Assessment of Rural Development: A Guide	Public Health Scotland	2015	Higgins, M.; Arnot, J.; Farman, P.; Wares, J.; Aboud, S.; and Douglas, M. J.
National Planning Framework (NPF4)	Scottish Government	2023	Scottish Government
Outer Hebrides Local Development Plan	CnES	2018	CnES
The Future of Energy in Scotland: The Scottish Energy Strategy	Scottish Government	2017	Energy and Climate Change Directorate
The Renewable Energy Directive	European Commission	2023	European Parliament and Council
Low Carbon Economic Strategy for Scotland	Scottish Government	2010	Scottish Government
The Onshore Wind Policy Statement	Scottish Government	2022	Energy and Climate Change Directorate
LAQM Technical Guidance (TG22)	Scottish Government	2022	Department for Environment Food & Rural Affairs (DEFRA)
Scottish Government Policy Guidance for LAQM	Scottish Government	2024	Environment and Forestry Directorate
The Land Reform (Scotland) Act	Scottish Government	2003	Cabinet Secretary for Rural Affairs, Land Reform and Islands

## Data Sources

Mid-Year Population Estimates	Office for National Statistics (ONS)	2022	ONS
Air Quality Annual Progress Report	CnES	2022	CnES
Life Expectancy in Scotland, 2020-2022 Provisional Figures	National Records of Scotland (NRS)	2023	NRS
Na h-Eileanan Siar Council Area Profile	ONS	2024	ONS
Scotland's Census 2022 – Council Area 2019 by Ethnic Group, by Individuals.	NRS	2024	NRS
Life Expectancy in Scotland 2020- 2022	NRS	2023	NRS
National Life Tables – Life Expectancy in the UK: 2020 – 2022	ONS	2024	ONS
Scottish Health Survey – Local Area Level Data	ONS	2016-2019, 2018-2022	ONS
Labour Market Profile – Na H-Eileanan Siar	ONS	January-December 2022; January 2023-December 2023; April 2023-March 2024	ONS

## Air Quality

Title	Source	Year	Author
The Comhairle nan Eilean Siar (CnES) council Annual Air Quality Progress Report 2022	<a href="https://www.scottishairquality.scot/laqm-reports/comhairle-nan-eilean-siar">https://www.scottishairquality.scot/laqm-reports/comhairle-nan-eilean-siar</a> (last accessed Dec, 2024)	2022	CnES
Magic maps by Department for Environment, Food and Rural Affairs (DEFRA)	DEFRA Magic Map ( <a href="https://magic.defra.gov.uk/magicmap.aspx">https://magic.defra.gov.uk/magicmap.aspx</a> ) (last accessed Dec, 2024)	2024	DEFRA
Scoping Study Area Figure	Chapter 3, Figure 1-1	2024	Magnora Offshore Wind

## Climate Change

Title	Source	Year	Author
Kyoto Protocol	<a href="https://unfccc.int/kyoto_protocol">https://unfccc.int/kyoto_protocol</a>	1997	UNFCCC
Paris Agreement	<a href="https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement">https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement</a>	2015	UNFCCC
EIA Directive (2014/52/EU)	<a href="https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0052">https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0052</a>	2014	The European Parliament and The Council
The Climate Change Act	<a href="https://www.legislation.gov.uk/ukdsi/2019/9780111187654">https://www.legislation.gov.uk/ukdsi/2019/9780111187654</a>	2008	UK Government
The Climate Change (Scotland) Act	<a href="https://www.legislation.gov.uk/asp/2009/12/contents">https://www.legislation.gov.uk/asp/2009/12/contents</a>	2009	Scottish Government
The Climate Change Act	<a href="https://www.legislation.gov.uk/ukpga/2008/27/contents">https://www.legislation.gov.uk/ukpga/2008/27/contents</a>	2008	UK Government
The Climate Change (Emission Reduction Targets) (Scotland) Act	<a href="https://www.legislation.gov.uk/asp/2019/15/enacted">https://www.legislation.gov.uk/asp/2019/15/enacted</a>	2019	Scottish Government
The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations	<a href="https://www.legislation.gov.uk/asp/2019/15/enacted">https://www.legislation.gov.uk/asp/2019/15/enacted</a>	2017	Scottish Government
Planning (Scotland) Act	<a href="https://www.legislation.gov.uk/asp/2019/15/enacted">https://www.legislation.gov.uk/asp/2019/15/enacted</a>	2019	Scottish Government
Scottish Government National Planning Framework 3	<a href="https://www.gov.scot/publications/national-planning-framework-3/">https://www.gov.scot/publications/national-planning-framework-3/</a>	2014	Scottish Government
Scottish Government Draft National Planning Framework 4	<a href="https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2022/11/national-planning-framework-4-revised-draft/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4-revised-draft.pdf">https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2022/11/national-planning-framework-4-revised-draft/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4-revised-draft.pdf</a>	2022	Scottish Government
Scottish Government Securing a green recovery on a path to net zero: climate change plan 2018-2032	<a href="https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/">https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/</a>	2020	Scottish Government
Scottish Government Climate Ready Scotland: climate change adaptation programme 2019-2024	<a href="https://www.gov.scot/publications/climate-ready-scotland-second-scottish-climate-change-adaptation-programme-2019-2024/">https://www.gov.scot/publications/climate-ready-scotland-second-scottish-climate-change-adaptation-programme-2019-2024/</a>	2019	Scottish Government
Climate Change Committee UK Climate Change Risk Assessment	<a href="https://www.theccc.org.uk/publication/uk-climate-change-risk-assessment-2017/">https://www.theccc.org.uk/publication/uk-climate-change-risk-assessment-2017/</a>	2017	UK Government
Outer Hebrides Local Development Plan (adopted)	<a href="https://cne-siar.gov.uk/wp-content/uploads/2024/01/Outer-Hebrides-Local-Development-Plan-2018.pdf">https://cne-siar.gov.uk/wp-content/uploads/2024/01/Outer-Hebrides-Local-Development-Plan-2018.pdf</a>	2018	Comhairle nan Eilean Siar
Comhairles Climate Change Strategy	<a href="https://cne-siar.gov.uk/wp-content/uploads/2023/12/cnes_climate_change_strategy_2022-27.pdf">https://cne-siar.gov.uk/wp-content/uploads/2023/12/cnes_climate_change_strategy_2022-27.pdf</a>	2022	Comhairle nan Eilean Siar
Environmental Impact Assessment Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance	<a href="https://s3.eu-west-2.amazonaws.com/iema.net/documents/knowledge/policy/impact-assessment/J35958_IEMA_Greenhouse_Gas_Guidance-1.pdf">https://s3.eu-west-2.amazonaws.com/iema.net/documents/knowledge/policy/impact-assessment/J35958_IEMA_Greenhouse_Gas_Guidance-1.pdf</a>	2022	IEMA
Environmental Impact Assessment Guide to Climate Change Resilience and Adaptation	<a href="https://www.iema.net/resources/reading-room/2020/06/26/iema-eia-guide-to-climate-change-resilience-and-adaptation-2020">https://www.iema.net/resources/reading-room/2020/06/26/iema-eia-guide-to-climate-change-resilience-and-adaptation-2020</a>	2020	IEMA
Embodied Carbon Primer	<a href="https://www.leti.london/ecp">https://www.leti.london/ecp</a>	2020	LETI
PAS 2080: Carbon Management in Infrastructure	<a href="https://knowledge.bsigroup.com/products/carbon-management-in-infrastructure/standard">https://knowledge.bsigroup.com/products/carbon-management-in-infrastructure/standard</a>	2016	BSI
Whole life carbon assessment for the built environment	<a href="https://www.rics.org/globalassets/rics-website/media/news/whole-life-carbon-assessment-for-the-built-environment-november-2017.pdf">https://www.rics.org/globalassets/rics-website/media/news/whole-life-carbon-assessment-for-the-built-environment-november-2017.pdf</a>	2017	RICS

Title	Source	Year	Author
Clean Growth Strategy	<a href="https://www.gov.uk/government/publications/clean-growth-strategy">https://www.gov.uk/government/publications/clean-growth-strategy</a>	2018	UK Government
Construction 2025: strategy	<a href="https://www.gov.uk/government/publications/construction-2025-strategy">https://www.gov.uk/government/publications/construction-2025-strategy</a>	2013	UK Government
UKCP 18	<a href="https://ukclimateprojections-ui.metoffice.gov.uk/ui/home">https://ukclimateprojections-ui.metoffice.gov.uk/ui/home</a>	2022	Met Office

## Major Accidents and Disasters

Title	Source	Year	Author
Construction (Design and Management) Regulations 2015	<a href="https://www.legislation.gov.uk/ukxi/2015/51/contents/made">https://www.legislation.gov.uk/ukxi/2015/51/contents/made</a>	2015	UK Government
Major Accidents and Disasters in EIA: A Primer	<a href="https://www.iema.net/resources/blog/2020/09/23/iema-major-accidents-and-disasters-in-eia-primer">https://www.iema.net/resources/blog/2020/09/23/iema-major-accidents-and-disasters-in-eia-primer</a>	2020	IEMA
National Risk Register 2020	<a href="https://www.gov.uk/government/publications/national-risk-register-2020">https://www.gov.uk/government/publications/national-risk-register-2020</a>	2020	UK Government
The Control of Major Accident Hazards Regulations	<a href="https://www.legislation.gov.uk/ukxi/2015/483/contents/made">https://www.legislation.gov.uk/ukxi/2015/483/contents/made</a>	2015	UK Government
Outer Hebrides Local Development Plan	<a href="https://cne-siar.gov.uk/wp-content/uploads/2024/01/Outer-Hebrides-Local-Development-Plan-2018.pdf">https://cne-siar.gov.uk/wp-content/uploads/2024/01/Outer-Hebrides-Local-Development-Plan-2018.pdf</a>	2018	Comhairle nan Eilean Siar
Risk Maps	<a href="https://zeticauxo.com/">https://zeticauxo.com/</a>	2022	Zetica UXO
Management of Health and Safety at Work Regulations	<a href="https://www.legislation.gov.uk/ukxi/1999/3242/contents/made">https://www.legislation.gov.uk/ukxi/1999/3242/contents/made</a>	1999	UK Government

## Other Issues

Title	Source	Year	Author
RF EMF Guidelines 2020	<a href="https://www.icnirp.org/en/activities/news/news-article/ef-guidelines-2020-published.html">https://www.icnirp.org/en/activities/news/news-article/ef-guidelines-2020-published.html</a>	2020	International Commission On Non-Ionizing Radiation Protection
Power Lines: Demonstrating compliance with EMF public exposure guidelines	<a href="https://assets.publishing.service.gov.uk/media/5a796799ed915d07d35b5397/1256-code-practice-emf-public-exp-guidelines.pdf">https://assets.publishing.service.gov.uk/media/5a796799ed915d07d35b5397/1256-code-practice-emf-public-exp-guidelines.pdf</a>	2012	Department of Energy and climate change
Code of Practice	<a href="https://assets.publishing.service.gov.uk/media/5a796799ed915d07d35b5397/1256-code-practice-emf-public-exp-guidelines.pdf">https://assets.publishing.service.gov.uk/media/5a796799ed915d07d35b5397/1256-code-practice-emf-public-exp-guidelines.pdf</a>	2012	Department of Energy & Climate Change
Surveyor's guide to unexploded ordnance	<a href="https://ww3.rics.org/uk/en/journals/land-journal/surveyors-guide-to-unexploded-ordnance.html">https://ww3.rics.org/uk/en/journals/land-journal/surveyors-guide-to-unexploded-ordnance.html</a> <a href="https://ww3.rics.org/uk/en/journals/land-journal/surveyors-guide-to-unexploded-ordnance.html">https://ww3.rics.org/uk/en/journals/land-journal/surveyors-guide-to-unexploded-ordnance.html</a>	2019	RICS
electric and magnetic fields- the facts	<a href="https://www.emfs.info/sites/g/files/atxybb296/files/2024-03/EMF_The_Facts_250917.pdf">https://www.emfs.info/sites/g/files/atxybb296/files/2024-03/EMF_The_Facts_250917.pdf</a>	2017	Energy Network Association
Undergrounding high voltage electricity transmission lines - The technical issues	<a href="https://www.nationalgrid.com/sites/default/files/documents/39111-Undergrounding_high_voltage_electricity_transmission_lines_The_technical_issues_INT.pdf">https://www.nationalgrid.com/sites/default/files/documents/39111-Undergrounding_high_voltage_electricity_transmission_lines_The_technical_issues_INT.pdf</a>	2015	National Grid

Title	Source	Year	Author
Power-frequency fields and people	Engineering Science and Education Journal p71	1994	J. Swanson & D.C. Renew

## Appendix B – UXO report



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