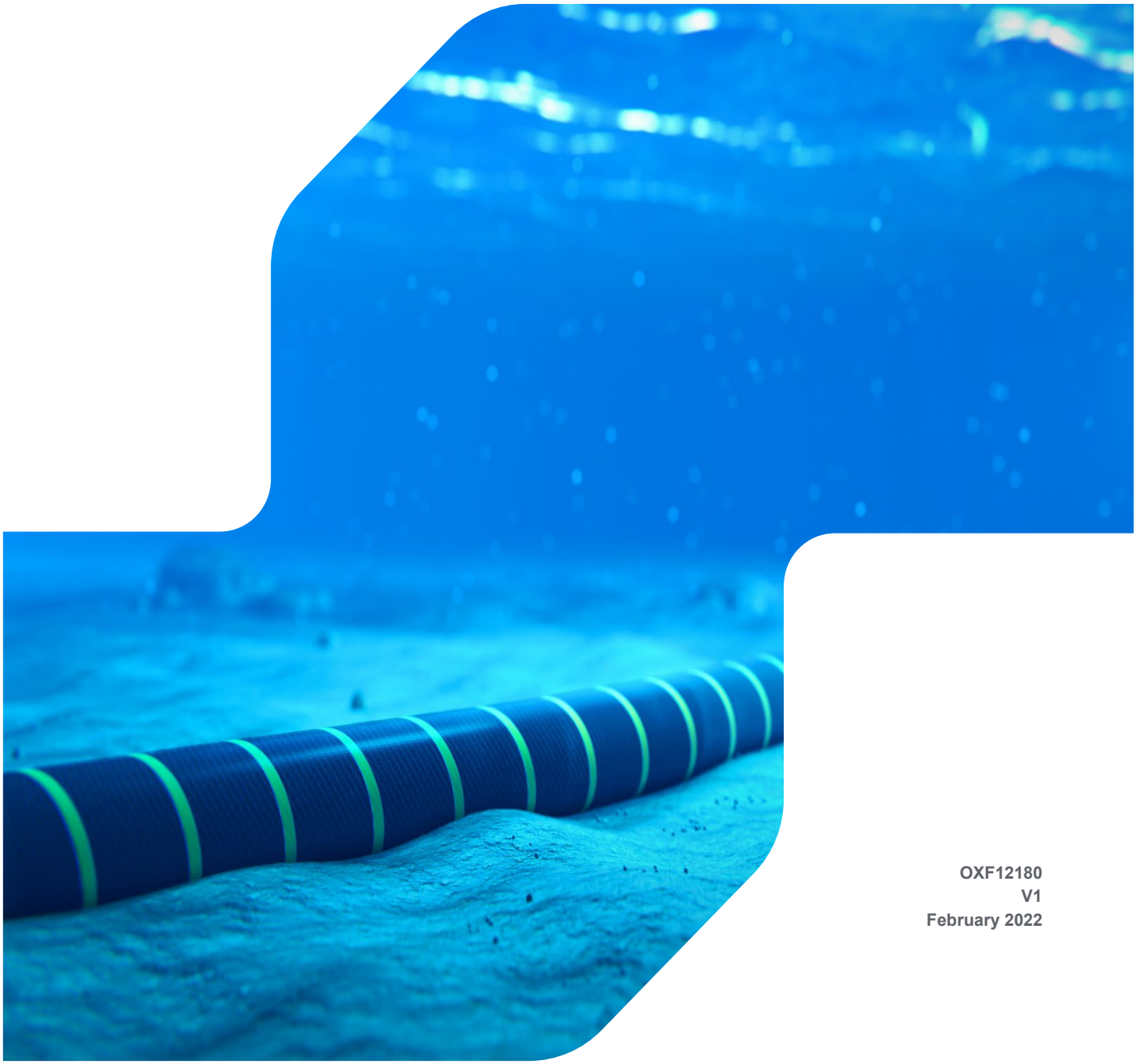
XLCC CABLE FACTORY - HUNTERSTON

Appendix 4.1: Scoping Report



OXF12180
V1
February 2022

rpsgroup.com

XLCC CABLE FACTORY - HUNTERSTON

EIA SCOPING REPORT

Request for Scoping Opinion under Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017

On Behalf of XLCC Limited

NP12180
XLCC Hunterston
V6.0
November 2021

rpsgroup.com

Quality Management

Version	Status	Authored by	Reviewed by	Approved by	Date
01	Draft	Mark Barrett			11/08/2021
02	Client comments	Mark Barrett			06/09/2021
03	Landowner comments	Mark Barrett			05/10/2021
04	Legal review	Mark Barrett			26/10/2021
05	Client approval	Mark Barrett			03/11/2021
06	Landowner approval	Mark Barrett			09/11/2021

Approval for issue

A Robinson	10 November 2021

This report was prepared by RPS within the terms of RPS' engagement with its client and in direct response to a scope of services. This report is supplied for the sole and specific purpose for use by RPS' client. The report does not account for any changes relating the subject matter of the report, or any legislative or regulatory changes that have occurred since the report was produced and that may affect the report. RPS does not accept any responsibility or liability for loss whatsoever to any third party caused by, related to or arising out of any use or reliance on the report.

Prepared by:

RPS

Mark Barrett
Associate

20 Western Avenue, Milton Park
Abingdon, Oxfordshire OX14 4SH

T 01235 821888
E BarrettM@rpsgroup.com

Prepared for:

XLCC

David Kelly
UK Development Manager

Kingfisher House, Radford Way,
Billericay, Essex, CM12 0EQ

T 07907813786
E

GLOSSARY

Term	Definition
AADT	Annual Average Daily Traffic
AIL	Abnormal Indivisible Loads
AVRA	Abnormal Vehicle Route Assessment
BGS	British Geological Survey
BoCC	Birds of Conservation Concern
CEMP	Construction Environmental Management Plan
CH4	Methane
CIBSE	Chartered Institution of Building Services Engineers
CIEEM	Chartered Institute of Ecology and Environmental Management
CoCP	Code of Construction Practice
CTMP	Construction Traffic Management Plan
DMRB	Design Manual for Roads and Bridges
EcIA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
EEA	European Economic State
EIA	Environmental Impact Assessment
FAT	Factory Acceptance Tests
FRA	Flood Risk Assessment
FTE	Full Time Employees
GHG	Greenhouse Gas
GVA	Gross Value Added
GWDTEs	Groundwater Dependant Terrestrial Ecosystems
HER	Historic Environment Record
HES	Historic Environment Scotland
HGV	Heavy Goods Vehicles
HMP	Habitat and Species Management Plan
HV	High Voltage
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IAQM	Institute of Air Quality Management
IEF	Important Ecological Features
IEMA	Institute of Environmental Management & Assessment
IOF	Important Ornithological Features
LCT	Landscape Character Types
LGV	Light Goods Vehicles
LNR	Local Nature Reserve
NAC	North Ayrshire Council
NPF	National Planning Framework
NSR	Noise Sensitive Receptors
OS	Ordnance Survey
PAC	Pre-application Consultation Report
PAN	Planning Advice Notes
PAN	Proposal of Application Notice
PARC	Port and Resource Centre
PVA	Potentially Vulnerable Area
SAC	Special Area of Conservation
SEPA	Scottish Environment Protection Agency
SFRA	Strategic Flood Risk Assessment
SLL	Society of Light and Lighting
SMP	Shoreline Management Plan
SPA	Special Protection Area
SPP	Scottish Planning Policy
SSSI	site of Special Scientific Interest
UKBAP	UK Biodiversity Action Plan
UKCP18	UK Climate Projections 2018
WFD	Water Framework Directive
XLCC	XLCC Limited
XLPE	Cross-linked polyethelyne
ZTV	Zone of Theoretical Visibility

Contents

Tables

Plates

Figures

Appendices

1 INTRODUCTION

1.1 Background

1.1.1 This Scoping Report has been prepared by RPS on behalf of XLCC Limited (XLCC). It proposes the scope of environmental assessment for the proposed High-Voltage Cable Manufacturing Facility at Hunterston Port (referred to in this report as 'the Project').

1.1.2 Environmental Impact Assessment (EIA) is the process of identifying and assessing the significant effects likely to arise from a proposed development. EIA is not required for all developments. Where there is justification for not conducting EIA, a screening opinion can be requested from the relevant planning authority. However, in this case, XLCC has identified the need for EIA and seeks to confirm the scope of EIA prior to submitting an application for planning permission.

1.1.3 This report sets out the proposed scope of the Environmental Impact Assessment Report (the report of the EIA process) which will be prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (S.I. 2017 No.102) (referred to hereafter as the EIA Regulations). The Environmental Impact Assessment Report (EIA Report) will accompany a full planning application to be submitted to the local planning authority, North Ayrshire Council (NAC).

1.1.4 The aim of this report is to provide information to NAC to enable a Scoping Opinion to be made under Regulation 17 of the EIA Regulations. A letter to the Council requesting such an opinion accompanies this report.

1.2 Overview of the Project

1.2.1 XLCC aim to construct a state-of-the-art high-voltage cable manufacturing facility at Hunterston Port. The factory will manufacture High Voltage (HV) cables for use in distributing renewable energy from a variety of sources.

1.2.2 At this time there are only four certified plants in Europe manufacturing HV cable of this type, with none located in the United Kingdom. XLCC anticipate a growing demand for specialist cables to serve the expanding renewable energy transmission/distribution needs of the UK.

1.2.3 Cable manufacturing facilities require immediate access to a deep-water port and a large skilled workforce, both of which are satisfied by the choice of location at Hunterston Port.

1.2.4 The above key drivers of the Project are discussed further below under Need and Alternatives. The Project is described in further detail at section **Error! Reference source not found.** below.

1.3 The Applicant

1.3.1 XLCC is a UK company and a new entrant to the HV cable manufacture market.

1.3.2 XLCC will provide a number of different services that will help to provide the connectivity required for renewable power deployment crucial to meeting climate goals.

1.4 Need and Alternatives

1.4.1 Increasing demand for HV cable has resulted in long lead-in timelines that risks delivery of renewable energy at the pace and scale required to meet climate change objectives. XLCC will address this issue by producing UK manufactured HV cable suitable for interconnectors and offshore wind farms, enabling projects to procure the critical HV cable in a more expedient manner.

1.4.2 The need for HV cable manufacturing is described in Plates 1 to 3 below.

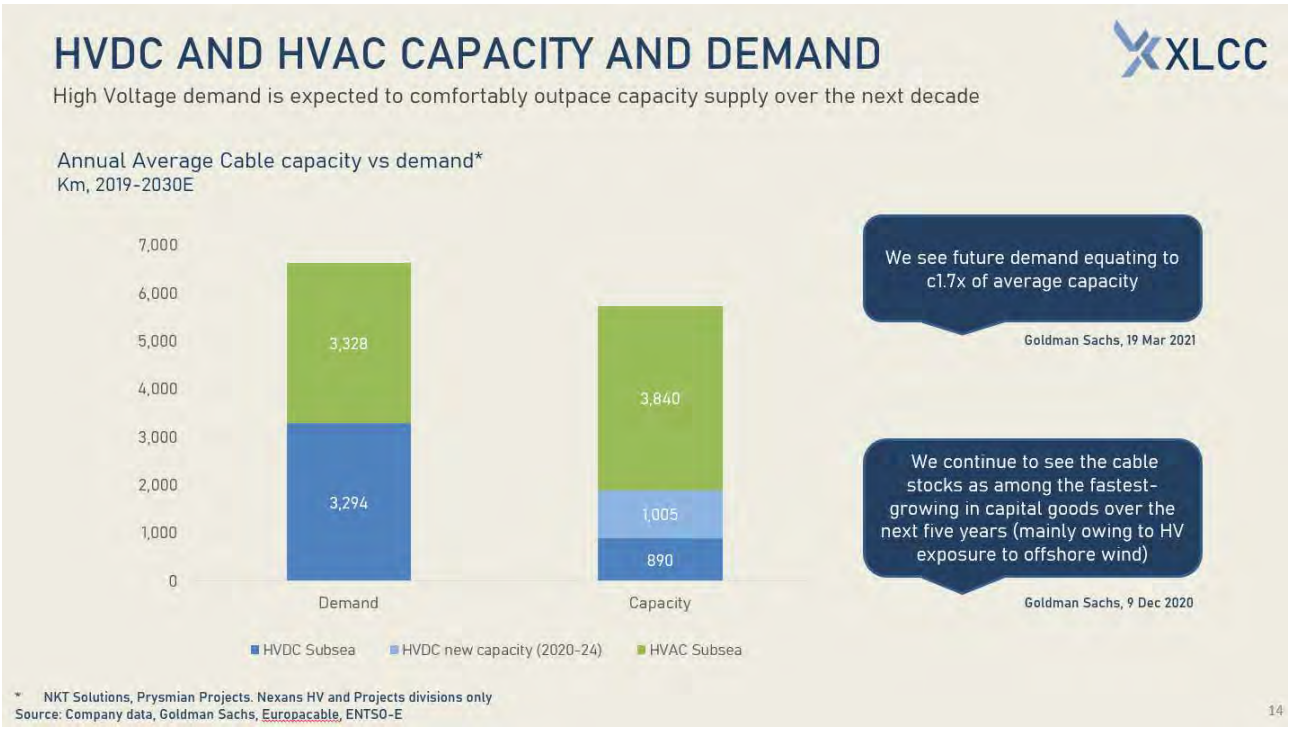


Plate 1 HVDC and HVAC Capacity and Demand

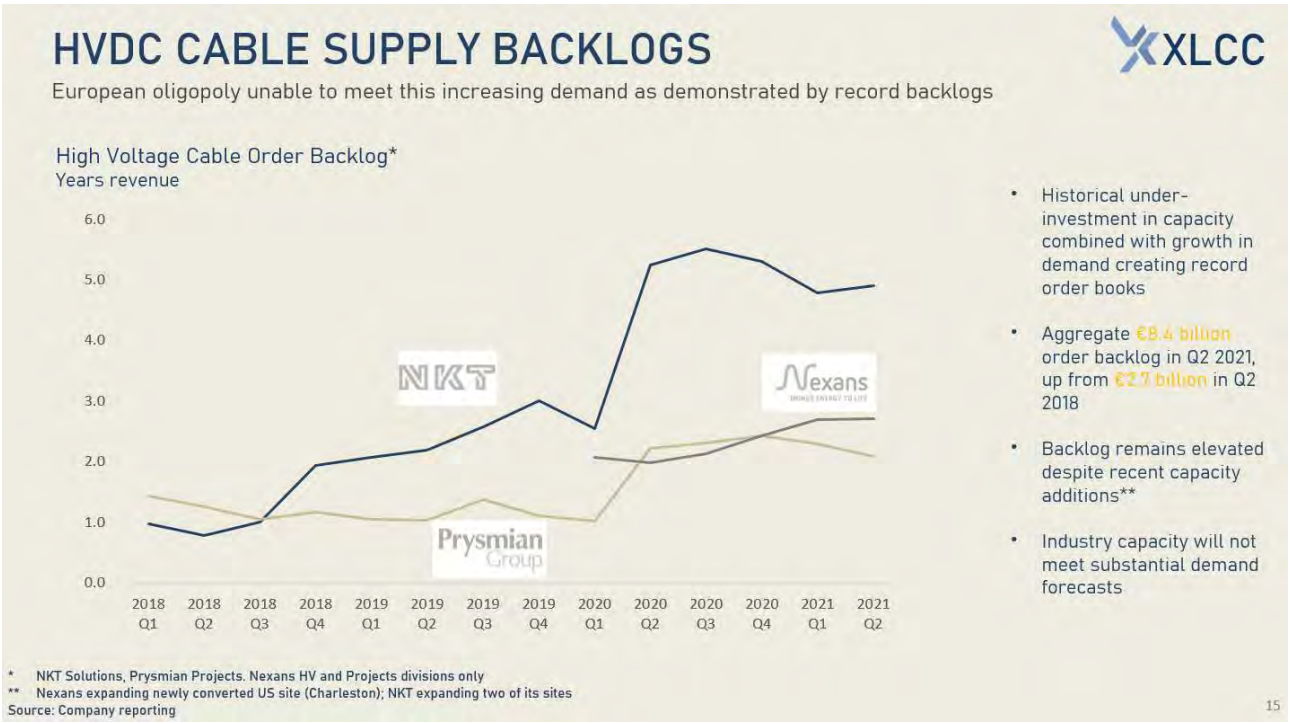


Plate 2 HVDC Cable Supply Backlogs

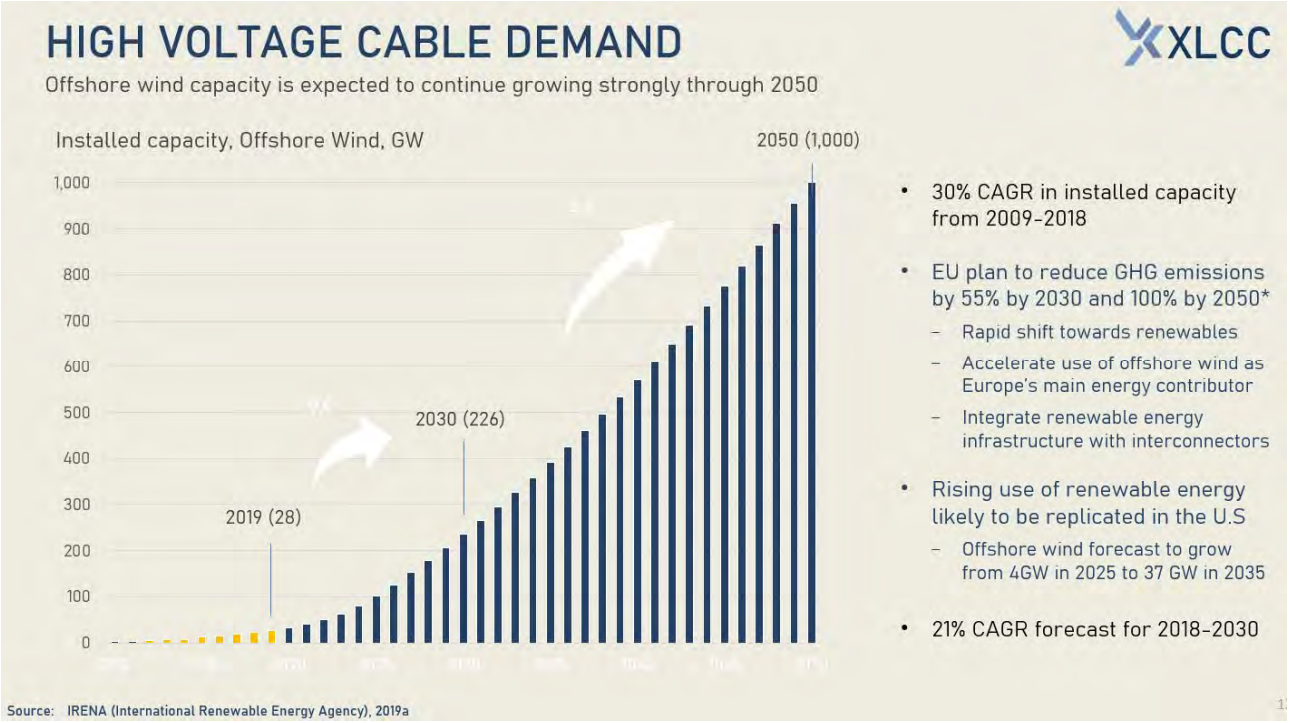


Plate 3 High Voltage Cable Demand

1.4.3 In anticipation of the above stated demand, XLCC seeks to develop two separate UK cable manufacturing facilities at strategic locations.

1.4.4 XLCC conducted an exhaustive search of available ports in the UK that were capable of complying with the fundamental Project parameters.

1.4.5 A cable manufacturing facility of the type proposed requires a significant area of available development land adjacent to a high-quality port facility with deep water access for the cable laying vessels which will have a 10m draft, 40m beam and 200m length.

1.4.6 The site must be proximal to a power source capable of delivering the c.40MW electrical loads that the facility will demand. Excellent road and rail access for materials delivery as well as proximity to a highly skilled workforce were also important factors in site selection.

1.4.7 There are a very small number of ports in the UK that would be capable of hosting the XLCC development whilst meeting all of its requirements, two of which are being pursued.

1.4.8 XLCC will set out in its application how the search for suitable sites demonstrates that the proposed development cannot be delivered elsewhere.

1.5 Statutory Framework and Purpose of the Environmental Statement

Purpose of EIA

1.5.1 EIA is the process of identifying and assessing the significant effects likely to arise from a proposed development. This requires consideration of the likely changes to the environment, where these arise as a consequence of the proposed development, through comparison with the existing and likely future baseline conditions in the absence of the proposed development.

Purpose of Scoping

1.5.2 The process of identifying the issues to consider within an EIA Report (establishing the scope of the assessment) is known as scoping. Scoping is not a mandatory requirement under the EIA Regulations. However, it is recognised as a useful part of the assessment process which helps to identify the main effects that a project is likely to have on the environment.

1.5.3 The scoping of an EIA by which these main or significant effects are identified is, therefore, an important preliminary procedure, which sets the context for the study. Through the scoping exercise, the key environmental issues are identified at an early stage, which permits subsequent work to concentrate on those environmental topics for which significant effects may arise as a result of a proposed development.

Purpose of this Scoping Report

1.5.4 This document sets out details of the proposed development at Hunterston Port, the proposed EIA methodology and the proposed scope of technical assessments and invites comments from North Ayrshire Council and its consultees regarding the scope of works. The intention of this scoping exercise is to gain agreement from all key parties regarding the proposed methodology and scope of assessment.

1.5.5 This Scoping Report has been informed by the following:

- Information provided by Peel Ports, the site owners;
- Desk-top studies, site visits and surveys;
- Review of relevant websites, such as those provided by statutory consultees;
- Local and Scottish planning policy;
- The EIA Regulations and EIA good practice guidance; and
- Experience of other similar developments.

Public Consultation

1.5.6 As part of the consultation process, the applicant will engage with the local community in order to inform local people about the proposals, to explain the development and its likely effects and to take on board any concerns or issues. The EIA Report will include a summary of the pre-application public consultation carried out.

1.5.7 In terms of engaging with the local community and consulting on the proposed development the following has been undertaken:

- A Proposal of Application Notice (PAN) was submitted to North Ayrshire Council on 9th July 2021 in relation to a proposal to seek planning permission for the erection of a high voltage cable production facility including the construction of up to a 185m extrusion tower with associated factories, research and testing laboratories, offices with associated stores, transport, access, parking and landscaping with on-site generation and electrical infrastructure and cable delivery system at a site at Hunterston Coal Yard, North Ayrshire. A location plan of the site concerned was also enclosed. A copy of the PAN was also sent to Fairlie, West Kilbride, Cumbrae, Largs and Skelmorlie Community Councils as well as local councillors, MP and MSP.
- An online public exhibition (comprising 11 display boards containing information on the proposal) was held between 23rd August and 3rd September and was accessible via the following website: http://www.mcinally-associates.co.uk/hcf/index.html
- A live webchat was hosted on http://www.mcinally-associates.co.uk/hcf/index.html between 3pm and 7pm on 25th August 2021.

- Reminder letters were sent (via email) to all those on the original notification list advising of arrangements for the public exhibition.
- The online public exhibition was advertised in the Ardrossan and Salcoats Herald and Largs and Millport Herald on 11th August 2021.
- The webpage hosting the public exhibition contained functions to leave comments on the proposals and also ask questions on the proposals. Any questions received were responded to within 48 hours of receipt.
- The online public exhibition received some 266 unique visits, and 11 detailed responses / comments were received and responded to.
- Further to the above, and prior to the online exhibition, representatives of XLCC met with local interested parties / community councils to present and discuss proposals.

1.5.8 A full Pre-application Consultation Report (PAC) is currently being prepared and will be submitted with the planning application. This report will detail the public consultation process and will include all responses received / reply's given and details of how these responses have been considered in the preparation of the application.

2 THE SITE AND THE PROPOSED DEVELOPMENT

2.1 The site and its Surroundings

2.1.1 The project site is located on part of the former Hunterston Coal Yard within the wider Hunterston Port and Resource Centre, located on the coast of the West of Scotland, south of the settlement of Fairlie, and north of the EDF Hunterston Power Station. The project site centre point grid reference is approximately NS 20238 53343 and is approximately 50.7 hectares in size.

2.1.2 Primary vehicular access to the site can be gained from the existing site access to the Hunterston Yard via Irvine Road (A78).

2.1.3 The area surrounding the project site is dominated by port infrastructure. In fact, the principal factor for selection of the site was the availability of a deep-water port with sufficient nearby road, sea and rail infrastructure, and the availability of potential staff with similar skillsets which will be available post Hunterston B closing.

2.1.4 To the west of the site is the location of the former SSE National Offshore Wind Turbine Test Facility, which was decommissioned in 2018.

2.1.5 Hunterston Nuclear Power Station is located approximately 2.7km to the south west of the project site. A number of electrical substations and a HVDC converter station lie adjacent to the Nuclear Power Station.

2.1.6 The nearest residential property is located approximately 157m east of the project site, on the other side of the A78 on Fairlie Moor Road.

2.1.7 In terms of ecology, the project site itself comprises a former coalfield in the first stages of succession with infrequent stands of vegetation dominated by sea buckthorn (*Hippophae rhamnoides*), with occasional birch (*Betulasp*), goat willow (*Salix caprea*) and some small butterfly bush (Buddleja davidii) with a field layer comprising mainly birds foot trefoil (*Lotus corniculatus*) with stands of viper's bugloss (Echium vulgare), the habitats to the south are similar though slightly more vegetated, and to the north there is car parking and office facilities associated with the former coalfield site.

2.1.8 To the east a stretch of semi-mature woodland approximately 20m in height comprising a mix of sycamore (Acer pseudoplatanus; dominant), with stands of birch and goat willow. To the west there is a thin strip of coastal scrub dominated by sea buckthorn with some gorse (Ulex sp.) and goat willow and beyond that the Firth of Clyde.

2.1.9 Southannan Sands site of Special Scientific Interest (SSSI) lies immediately to the west. Designated for its intertidal sand flats, the site has particular interest as a host for nationally scarce dwarf eelgrass *Zostera noltei*. Mussel beds are also present.

2.1.10 The Scottish Environmental Protection Agency (SEPA) Flood Map identifies that the site lies outwith any areas at risk from river or coastal flooding with only small, localised areas within it identified as being at high risk of surface water flooding.

2.1.11 Information was provided by Peel Ports concerning a previous major application made in 2009 for a site to the immediate south.

2.2 Project Description

Description of a typical HVDC submarine cable

2.2.1 A typical construction of 1-core submarine HVDC cables comprises the following elements laid-down in concentric layers as follows:

- Stranded round compacted conductor (longitudinally water blocked).

- Semi-conducting conductor screen.
- cross linked polyethylene (XLPE) insulation.
- Semi-conducting insulation screen.
- Longitudinal water penetration barrier.
- Lead alloy sheath.
- Polyethylene sheath.
- Armor bedding.
- Optical fiber element
- Galvanized steel wire armouring.
- Overall serving (yarn sleave).

2.2.2 A cross section of these layers is shown in the inset below:

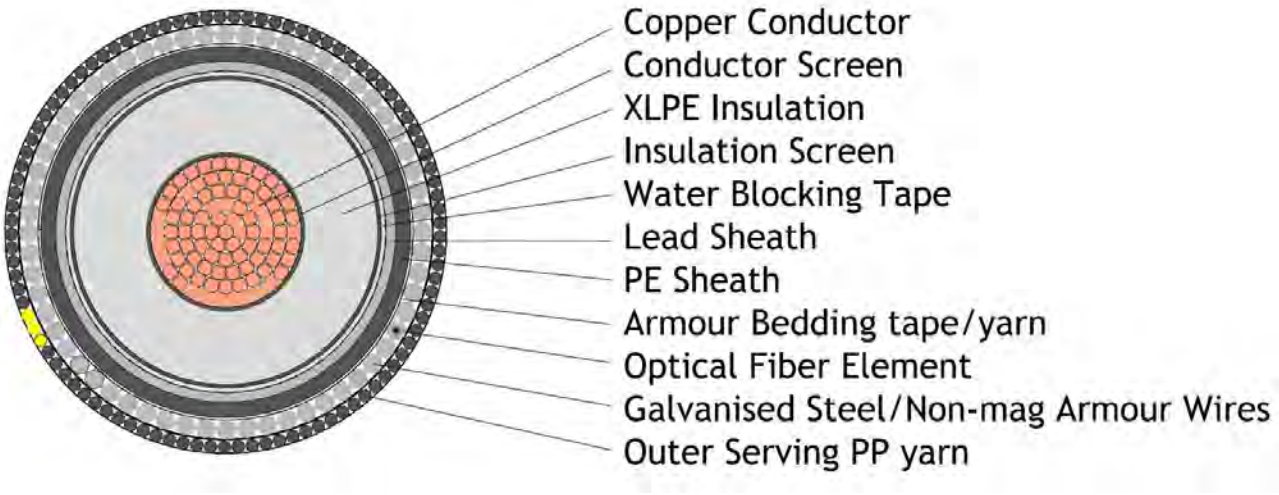


Plate 4: Cross-section of a typical single-core HVDC cable structure

2.2.3 The cable components are described in sequence as follows:

Conductor: The conductors are of compacted circular design, constructed of annealed copper or aluminium wires and longitudinally water sealed to reduce the water migration within the conductor in case of cable damage. Water blocking is made with strand filling thermoplastic compound.

Conductor screen: Extruded semi-conductive layer.

Insulation: Extruded XLPE insulation suitable for AC-cables.

Insulation screen: Extruded bonded semi-conductive layer.

Longitudinal water barrier: Between the insulation screen and the metallic sheath a longitudinal water barrier composed of semi-conductive water swelling tape is applied. This barrier is limiting water penetration along the cable core in case of cable damage. The tape is applied longitudinally over the cable core.

Lead sheathing: Extruded lead alloy sheath is applied over the water swelling tape. The lead sheathing creates radial water barrier for the cable. Letter E type alloys are recommended.

Polyethylene sheath: Extruded polyethylene compound is applied over the lead sheath. This layer prevents direct contact between the metallic sheath and water, thus prevents corrosion of

lead and dissolution of lead contaminates into the water. One layer of insulating compound is used.

Armour bedding: A layer of PP strings or textile tapes is applied over assembled core as bedding for the armour wires.

Armouring: One or two layers of galvanized steel wires are applied over the bedding. Bitumen is provided over each armouring layer as corrosion protection and to improve adhesion of the overall serving layer. Fibre optic elements are integrated between the armouring wires.

Serving: Serving is a layer of fibrous materials to provide a woven sheath over the armouring. One or two layers of polypropylene strings are applied over armour as cable serving to provide abrasion protection and to reduce cable skid friction during laying of cable to the seabed. The polypropylene serving is of double colour pattern in order to give better visibility of the cable.

Fibre Optic Element: The fibre optic element is typically assembled at the armouring line. The fibres are protected by a longitudinally welded steel tube.

Description of cable manufacturing process

2.2.4 The Hunterston Cable Manufacturing Facility will produce High-Voltage submarine cables for specialised applications that require very high reliability of manufacture quality given the difficulty presented by any repairs to cable faults.

2.2.5 The process takes raw materials of conductor wire, XLPE plastic pellets and steel armouring etc to produce high quality cable in a continuous process.

2.2.6 The manufacturing process can be simplified for description into the following stages:

Drawing Conductor Wires: Copper or aluminium conductor wire is drawn from a rod break-down machine that draws wires of the required dimensions from solid metal rods. Wires of different dimensions are drawn for both the conductor and the screen.

Conductor Stranding: Drawn conductor wires are stranded around the central conductor core.

Insulation: The XLPE insulation layers are extruded over the conductor and cross-linked inside a catenary form tube. The tube is filled with nitrogen to the pressure of 10 bars. The tubes are heated electrically to a temperature of 400 degrees Celsius and the cross-linking process takes place due to heat radiation. The pressurized nitrogen atmosphere inside the heating tube prevents bubbles and cavities inside the insulation. A pre-heater is used for heating the conductor to the temperature of 120 degrees Celsius.

XLPE is applied as cable is drawn up the extrusion tower. The high tower is needed for the cooling of the cable which is hanging in a vertical position to prevent uneven ‘drooping’ of the plastic before it is cured.

The cable travels through the factory at 1m per minute, and requires 185 minutes to cure, so a tower of up to 185m is required. If curing in a horizontal plane, the XLPW will drop to the bottom of the cable and cause a faulty cable which cannot be used.

Degassing of Subsea Cables on Turntables: Degassing is an essential process after insulation where the bi-products of cross-linking (including methane) are driven-off to ensure that no voids remain in the XLPE insulation. It also serves as an intermediate storage phase between the insulation and armouring processes.

Degassing takes place on specially constructed degassing chambers with turntables. The cable stack is heated by air flow from a perforated bottom plate of the chamber and the methane content of the recirculated air is monitored.

Lead Sheathing of Subsea Cables: A horizontal lead extruder is used to apply a lead sheath over the cable. The process starts with solid lead ingots which are fed in the heated melting pot of

the machine. The pot consists of three compartments for heating regulation in two zones. After being melted, the lead is conducted to the extrusion screw which transfers lead at high pressure to the die block of the extrusion head. In the die block, lead is applied over the cable. After the lead is applied over the cable it is immediately cooled to avoid damaging of the cable insulation.

Wire Armouring: The galvanised steel wire armouring is stranded over the cable. A bitumen armour bedding layer is applied as corrosion protection and to improve adhesion of the overall serving (see below). Fibre optic elements are integrated between the armouring wires in single-core cables.

Turntables (Carousels) and Cable Tracks: Submarine cables are typically shipped in long lengths where the cable can contain one or several factory joints. Cable laying vessels take up completed cable onto their onboard turntable directly from the loading jetty.

Factory turntables are motor driven rotating platforms carrying between 300 to 12,000 tonnes of cable ready for delivery to the cable-laying vessels.

Roller tracks are used to transport the subsea cable between processes inside the cable factory and from the factory area to the loading jetty.

Testing of Subsea Cables: The subsea cable testing includes routine testing, type testing and pre-qualification testing. Factory Acceptance Tests (FAT) both of the integrity of the cable and any cable joints are carried out prior to delivery.

Summary of indicative proposal parameters

2.2.7 Although current details are indicative, the Hunterston Cable Manufacturing Facility will comprise the construction and/or operation of:

- Preparation of a suitable development platform and provide suitable topography for landscape and drainage purposes;
- erection of steel portal framed buildings, with a total approx. Internal floor area of 150,000m^2 with the tallest being 40m to eaves and the average 9m, the main centeral building is 20m to eaves:
  - cable winding and XLPE extrusion equipment;
  - reseach and development laboratory;
  - control rooms, welfare facilities and cooling plant, located within the main building;
- cable extrusion tower up to 30 x 65 x 185m AGL;
- external plant comprising of switchgear and transformers, 12 no. 50m diameter carousels and 12 no. cable carrying conveyors, stacked and feeding to 2 conveyors from the 50m diameter carousels to the end of the jetty;
- access from the internal port road, internal access and circulation roads; and
- drainage infrastructure, landscape and ecological planting.

2.2.8 The current design of the Project will provide a maximum storage capacity of approx. 2000km of cable for delivery, storage and testing purposes. The factory will be capable of producing approx. 167km of cable per month.

2.2.9 It is proposed that access will be gained from the existing port access road via Irvine Road (A78) for both the construction and operational phases.

2.2.10 The Project will be designed to operate for up to 25 years, after which time ongoing operation and market conditions will be reviewed. If it is not appropriate to continue operating after that time, the Project may be decommissioned in full or in part.

2.2.11 An indicative zoning of the site is shown in Figure 2 attached which identifies the likely geographical extent of the main manufacturing activities on the site.

Buildings

2.2.12 The buildings will consist of a steel portal frame clad with composite panels, the colour pallet for which will be considered in more detail but will reflect, and be sympathetic to, the surrounding landscape. The extrusion tower will consist of a concrete core with a metal clad outer.

External Infrastructure

2.2.13 Externally the proposal will have a number of storage areas for smaller reels, parking for factory and office staff, a scrap handling area and a scheme of landscape planting to soften the visual impact.

2.2.14 Cable drums and conveyors will be arranged to efficiently utilise the existing jetty infrastructure and will likely be housed in a three-sided composite panel cladding, the sides which will be covered are the west, north and south only.

Access, Logistics and Transport Management

2.2.15 site access will be achieved via a single point of access from existing port access road via Irvine Road (A78) for both the construction and operational phases.

2.2.16 Traffic required during normal operation will comprise deliveries of materials and staff. It is envisaged that there will be approx. 700 FTE employees based at Hunterston working in three shifts.

2.2.17 Materials required by the plant include metals, XLPE pellets and chemicals.

2.2.18 Access and logistics arrangements are likely to make best use of existing rail and sea modes. However, for the purposes of environmental assessment, it will be assumed that minimal delivery of materials is achieved by rail or sea which would represent a reasonable worst case (for transportation by road) for the purposes of the Transport Assessment.

Landscape, Ecology and Drainage

2.2.19 It is planned that a significant number of trees will be retained around the perimeter of the project site, only clearing those needed to facilitate the construction of the buildings, external components and associated service areas. Additional planting will be implemented to bolster the boundary planting. A landscape and ecology mitigation and monitoring plan will be developed for the application.

2.2.20 An outline drainage scheme will be developed for the project site that will incorporate all necessary flood alleviation and resilience measures required to protect key infrastructure on site and to avoid increased downstream flood risk.

Lighting

2.2.21 External lighting will be designed to allow for night-time safety and security when required, incorporating XLCC's operational requirements. The exterior lighting scheme design will aim to minimise lighting spillage into surrounding areas and discourage trespass, to comply with the Dark Skies Campaign and recommendations in the Society of Light and Lighting (SLL) Lighting Handbook (Chartered Institution of Building Services Engineers (CIBSE), 2018).

Operation and Maintenance

2.2.22 The operation and maintenance phase of the Project will last 25 years, following the first operation of the Project.

Hours of operation

2.2.23 The cable manufacturing facility is likely to operate 24hrs a day achieved through three shifts.

Employment

2.2.24 The facility is expected to employ a total of 700 FTE staff during its operation and 200 associated staff for its wider operations.

Materials

2.2.25 The main inputs to the process will include:

- Lead
- Aluminium
- XLPE
- Steel Wire
- Copper bar
- Tapes and yarns

Use of natural resources

2.2.26 The Project will require a supply of mains water for cooling.

Emissions

2.2.27 The XLPE cross-linking process will give-off methane (CH4) as a bi-product.

Wastes

2.2.28 The cable manufacturing process does not generate significant sources of operational waste that is not capable of being recycled.

2.3 Construction and Decommissioning

Construction Programme and Phasing

2.3.1 Subject to being granted planning permission and subsequent Final Investment Decision, the earliest date that construction could start work will be April 2022. Advance enabling works that do not require consents or licences may be required to establish the prevailing site conditions such as geo-environmental and archaeological excavations may take place beforehand.

2.3.2 The factory will be constructed in one phase.

2.3.3 The duration of the construction phase is anticipated to be approximately 24 months and will include all works required for access and cable loading infrastructure out to the jetty.

Construction Environmental Management

2.3.4 Construction of the Project will be managed through a Code of Construction Practice (CoCP) that sets out the principles of good environmental management to be followed in order to avoid or

minimise environmental impacts. This includes principles for management of construction noise, dust, traffic, materials storage and wate management, drainage and ecological protection.

2.3.5 The CoCP will be supported by detailed Construction Method Statements to be produced by the lead construction contractor, which will provide method statements for construction activities detailing how the requirements for the CoCP are met.

2.3.6 An Outline Construction Traffic Management Plan (CTMP) will also be produced.

Construction Activities and Plant

2.3.7 Construction activities at the Project site will comprise:

- pre-construction work to provide a suitable development platform;
- construction of access and temporary laydown area(s);
- site clearance and provision of temporary/permanent drainage;
- earthworks and construction of foundations;
- construction of the extrusion tower and steel portal frame buildings;
- erection and mechanical and electrical fit-out of buildings and enclosures;
- installation of pre-manufactured equipment / components;
- landscape planting and habitat creation, secure fencing, restoration of temporary construction areas and ongoing habitat creation and management; and
- commissioning.

2.3.8 Typical construction plant to be used will include excavators, drilling rigs, graders and haulage vehicles, mobile and tower cranes, heavy and light goods vehicles.

2.3.9 Piling may be required for foundations of structures on the Project site and may use impact/driven or vibratory techniques.

Construction Working Hours

2.3.10 Normal construction working hours will be Monday to Friday 08:00-18:00 and Saturday 08:00-13:00. No Sunday, bank holiday or night working is proposed as described below.

2.3.11 Up to an hour before and after the normal construction working hours, the following activities may be undertaken:

- arrival and departure of the workforce at the site and movement around the project site that does not require the use of plant;
- site inspections and safety checks; and
- site housekeeping that does not require the use of plant.

2.3.12 Non-noisy activities such as fit-out within buildings may be undertaken outside of those hours where these will not cause disturbance off-site.

2.3.13 It is possible that certain construction activities that cannot be interrupted, such as a continuous concrete pour, may be required for the foundation slabs of the buildings.

Construction Working Areas and Laydown

2.3.14 The main construction working, and laydown areas will be contained adjacent to the project site within the existing curtilage of Clydeport's landholding.

Construction Workforce and Access

2.3.15 Construction traffic will use the primary access route via the port access road off the A78. Access to the project site will be required for HGVs, Abnormal Indivisible Loads (AILs) for certain items (steel work for the battery buildings, transformers, large cranes or construction plant) and for construction workforce traffic.

Construction Waste

2.3.16 The Project will largely be assembled from components that have been pre-manufactured off-site, such as the steel portal frame building and carousels. Construction waste from assembling and installing these components on-site will be minimal.

2.3.17 The CoCP will include good practice measures for managing waste generated during construction. All waste generated will be disposed of by a suitably licensed waste contractor.

2.3.18 Foundation excavations at the project site are estimated to require the excavation of spoil, depending on the final site arrangement and foundation design. This is expected in part to be accommodated on site, as part of site cut/fill balance. If this cannot be accommodated on site, some material may need to be transported away from the site; if this is the case, an allowance will be made for that in the assessment of construction traffic effects.

Construction Lighting

2.3.19 Directional lighting may be required during normal construction hours in winter. Outside normal construction working hours, motion-activated directional security lighting may be used at the Project site.

2.3.20 As far as possible task lighting will be used for specific works to direct light towards the working areas during the night-time. Such task lighting will be positioned at low level on posts around the site and directed at the most frequently used areas of work. However, some floodlighting will be required for accesses and walking routes. Solid fencing will be used to limit light escaping beyond the boundaries. site offices will be lit internally, and shutters could be closed at night.

Drainage

2.3.21 The construction phase will incorporate pollution prevention and flood response measures to ensure that the potential for any temporary effects on water quality or flood risk are reduced as far as practicable.

2.3.22 Such measures will be implemented through the CoCP and subsequent Construction Method Statements, which will require the following:

- installation of wheel washing facilities at the entrance to the construction compounds;
- use of sediment fences along existing watercourses/waterbodies when working nearby to prevent sediment being washed into them;
- covers for lorries transporting materials to/from site to prevent releases of dust/sediment to watercourses/drains;
- bulk storage areas to be secured and provided with secondary containment (in accordance with the Oil Storage Regulations and best practice);
- storage of oils and chemicals away from existing watercourses, including drainage ditches or ponds;
- concrete to be stored and handled appropriately to prevent release to drains;
- treatment of any runoff water that gathers in the trenches will be pumped via settling tanks or ponds to remove any sediment;

- obtain consent for any works (e.g. discharge of surface water) that may affect an existing watercourse. The conditions of the consent will be specified to ensure that construction does not result in significant alteration to the hydrological regime or an increase in fluvial risk;
- use of a documented spill procedure and use of spill kits kept in the vicinity of chemical/oil storage;
- storage of stockpiled materials on an impermeable surface to prevent leaching of contaminants and use of covers when not in use to prevent materials being dispersed and to protect from rain; and
- stockpiles to be kept to minimum possible size with gaps to allow surface water runoff to pass through.

2.4 Decommissioning

2.4.1 The Project has an initial design lifetime of 25 years. Extension of its operation beyond this timescale will be dependent on prevailing market conditions at the time. The assets, if in continuing use, will most likely be upgraded and follow any necessary approvals process in place at that time.

2.4.2 Should the facility be decommissioned, all above ground structures will be removed from the Project site, with the maximum value being recovered from materials and equipment via re-use or recycling at the time. The decision on how much of the below ground infrastructure (including foundations and concrete pads) will be retained will be agreed with the landowner and any other interested parties, accounting for decommissioning methods and timescales at the time.

2.4.3 Decommissioning activities are therefore expected to give rise to types of potential impact that are similar to construction and which will be no greater in terms of magnitude or duration.

3 CONSENTING FRAMEWORK

3.1.1 The Project comprises the construction and operation of an electricity cable manufacturing facility over a site of 50.7ha. The Project requires planning permission from North Ayrshire Council.

3.2 Planning Context

UK CONTEXT

3.2.1 The UK government has committed to legally binding targets of reducing greenhouse gas emissions by 78% by 2035 compared to 1990 levels on a pathway to reaching 'net zero' emissions by 2050. In working towards these targets, reducing carbon emissions will require the use of lower carbon energy that is highly efficient, and meets consumer needs.

3.2.2 Prior to commitments emerging from COP26[1] which is ongoing at the time of writing, the UK government's commitments include:

The Paris Agreement on Climate Change 2015 - the UK is a party to the treaty to limit increases in global temperatures to well below 2°C above pre-industrial levels by 2050 and pursue efforts to limit the increase to 1.5°C.

The UK Clean Growth Strategy 2017 – in the context of the UK's legal requirements under the Climate Change Act, the UK's approach to reducing emissions aims to meet those requirements at the lowest possible net cost to UK taxpayers, consumers and businesses; and to maximise the social and economic benefits for the UK from this transition. The strategy includes a commitment to taking action to reduce emissions from heating the 850,000 off-grid homes in England that currently use oil for heating. The government also aims to phase out the installation of high carbon fossil fuel heating using oil and coal in new and existing off-grid buildings.

The Sixth Carbon Budget – In line with the recommendation from the Climate Change Committee, the UK has committed to reducing emissions by 78% by 2035 compared to 1990 levels.

NATIONAL PLANNING FRAMEWORK 3[2]

3.2.3 The National Planning Framework (NPF) for Scotland is prepared by the Scottish Government (Scottish Government, 2014a). It is the spatial expression of the Government's economic strategy and plans for infrastructure investment. It also provides a framework for the spatial development of Scotland as a whole. The current National Planning Framework is NPF3 and sets out the Scottish Government's strategic development priorities over the next 20-30 years. It has a focus on supporting sustainable economic growth which respects the quality of the environment, place and life in Scotland and the transition to a low carbon economy.

3.2.4 Scottish Planning Policy (SPP) (Scottish Government, 2014b) aligns itself with NPF3 and one of its policy principles states that the planning system should set out a vision for vibrant rural areas with growing sustainable communities supported by new opportunities for employment.

[1] COP26 is the 26th United Nations UN Climate Change 'Conference of the Parties'

[2] The Draft Fourth National Planning Framework (NPF4) detailing the long-term plan for Scotland by 2045 was laid in Parliament on 10th November 2021 and is now out for consultation until March 2022. The NPF4 should therefore be given weight in the determination of these propsals.

3.2.5 The site at Hunterston is identified within Scotland's National Planning Framework 3 document as an area of co-ordinated action where a flexible strategy to development is supported. National Planning Framework 3 notes the following at paragraph 3.41:

"Hunterston has long been identified as a priority for industrial and employment use. It benefits from good transport connections, and close proximity to the cities network. North Ayrshire Council and its partners are exploring future options for the site. Links with ongoing regeneration at Irvine through the Irvine Bay Urban Regeneration Company and its Life Sciences Enterprise Area will continue to be important. Future development at Hunterston should aim to make sustainable use of its key assets, including its deep water access. Activities which could align with our national strategy include manufacturing and servicing support for offshore renewable energy development, building on the success of the onshore test facility for offshore wind turbines. There is local support for coastal tourism development in the area, and the site owner, Clydeport, has its own ambitions. Given its existing infrastructure, Hunterston will be an important landfall for strategic grid connections, including the link from Carradale in Argyll and the ISLES Project."

SCOTTISH PLANNING POLICY

3.2.6 Scottish Planning Policy (SPP) sets out the Scottish Ministers' national planning policy priorities. The SPP sits alongside the NPF.

3.2.7 The SPP introduces a presumption in favour of development that contributes to sustainable development, requiring the planning system to support economically, environmentally and socially sustainable places by enabling development that balances the costs and benefits of a proposal over the longer terms. This means that decisions should be guided by principles that include, inter alia (para.29);

- Giving due weight to net economic benefit;
- Responding to economic issues, challenges and opportunities;
- supporting good design and the six qualities of successful places;
- making efficient use of existing capacities of land, buildings and infrastructure including supporting town centre and regeneration priorities;
- supporting delivery of accessible housing, business, retailing and leisure development;
- supporting delivery of infrastructure, for example transport, education, energy, digital and water;
- supporting climate change mitigation and adaptation including taking account of flood risk;
- improving health and well-being by offering opportunities for social interaction and physical activity, including sport and recreation;
- having regard to the principles for sustainable land use set out in the Land Use Strategy;
- protecting, enhancing and promoting access to cultural heritage, including the historic environment;
- protecting, enhancing and promoting access to natural heritage, including green infrastructure, landscape and the wider environment;
- reducing waste, facilitating its management and promoting resource recovery; and
- avoiding over-development, protecting the amenity of new and existing development and considering the implications of development for water, air and soil quality.

3.2.8 SPP recognises the clarity expressed in the NPF that planning must facilitate the transition to a low carbon economy (para. 152). The spatial strategy is to facilitate the development of generation technologies that will help reduce greenhouse gas emissions from the energy sector. It also

recognises that terrestrial and marine planning facilitate development of renewable energy technologies, link generation with consumers and guide new infrastructure to appropriate locations (para. 153). Furthermore, it states that renewable energy also presents a significant opportunity for associated development, investment and growth of the supply chain, particularly for ports and harbours identified in the National Renewables Infrastructure Plan.

OTHER RELEVANT NATIONAL POLICY

3.2.9 Reference will also be made to the following documents in so far as they are relevant:

- Relevant Planning Advice Notes (PAN);
- Web-based Scottish Government energy policy/guidance;
- The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019
- Scottish Climate Change Plan (Scottish Government, 2020);
- Scotland's Energy Strategy Position Statement March 2021; and
- Scottish Government's Energy Strategy (Scottish Government 2017).

NORTH AYRSHIRE LOCAL DEVELOPMENT PLAN 2 (2019)

3.2.10 The development site is zoned as a Strategic Development Area (of national importance) under Strategic Policy 3: Strategic Development Areas within the North Ayrshire Local Development Plan 2. The site at Hunterston is also designated for Business and Industry under Schedule 5 of Policy 7- Business and Industry Employment Locations. There are a wide range of diverse uses identified as appropriate at Hunterston which include the following:

- Renewables generation, manufacture, maintenance, research and development, testing and training (including support for a renewables skills academy).
- Strategic grid connections recognising its importance as a landfall to support the offshore renewable energy sector.

THE HUNTERSTON PARC - THE NATURAL CHOICE FOR THE BLUE AND GREEN ECONOMIES DOCUMENT

'The Hunterston PARC (Port and Resource Centre): The natural development choice for the Blue and Green economies' document was produced by North Ayrshire Council in conjunction with Scottish Enterprise, Ryden, JLL and Peel Ports. The vision of the document is to bring together "energy intensive industries with low cost, on-site power and heat generation, offering a unique opportunity to development, innovative, self-sustaining and cost-effective operations." As part of the Hunterston Port and Resource Centre (PARC) there is desire to "create a nationally significant Energy and Marine campus. Bringing together leading industry operators, world class universities and the latest innovators to deliver technological advances in areas such as power generation and aquaculture".

3.2.11 The document also notes that the site at Hunterston provides opportunity to support the development of new technologies. Potential uses included the following:

- Develop and integrate international and UK research and development activity on site.
- Develop skills and training facilities including parallel research programmes with Strathclyde University.
- Support links with wider Ayrshire skills, productivity and innovation programmes.
- Build a leading international centre for advanced technology.

3.2.12 Furthermore, the document notes that *"Hunterston PARC's vision is to bring together energy intensive industries with low cost, on-site power and heat generation, offering a unique opportunity to develop innovative, self-sustaining and cost-effective net zero operations aimed at supporting the delivery of Scotland's 2045 climate change targets."*

3.2.13 It is considered that the development proposals will assist in the delivery of the aims and visions outlined within the Hunterston PARC: The natural development choice for the Blue and Green economies document. The proposed development will:

- Create a world-class UK industry linked to the green revolution.
- Bring HVDC cable manufacturing to the UK for the first time.
- Provide jobs for our post-industrial communities.
- Participate in the transformational growth of the renewable energy ecosystem.

THE HUNTERSTON PARC DEVELOPMENT FRAMEWORK 2021

3.2.14 The draft Hunterston PARC Development Framework, Oct. 2021 will become a material consideration for the Project if it is adopted by the NAC Planning Committee. It is expected that the Hunterston PARC development framework will be adopted in advance of the XLCC application submission. XLCC will therefore work closely with Peel Ports to align the Project masterplan with the objectives of the PARC development framework.

Planning History

3.2.15 Hunterston Port has a long history of industrial development, including more recently the location of an offshore wind turbine test facility which was operated by SSE on the Hunterston Marine Yard. The proposed development will be located on a former coal yard. The yard ceased operation in 2016 and coal removal has been ongoing. The site is part of the wider Hunterston Port operated by Peel Ports

3.2.16 In 1971 following a public local inquiry, the Secretary of State for Scotland allocated around 900 hectares at Hunterston for “industrial development requiring the unique facilities of the site, in particular deep water capable of accommodating the very largest of vessels” at that time. An order under the Town and Country Planning (Reference of Applications) (Ayr County Council) Direction 1971 required all planning applications for industrial development within the site to be referred to the Secretary of State. The reservation of the site for this purpose was included in the 1981 National Planning Guidelines for Large Industry.

3.2.17 The Hunterston site has remained protected as a site of National Importance for industrial / business development via a series of National Planning Framework Documents and North Ayrshire Local Plans / Local Development Plans. The site remains zoned for such purposes via National Planning Framework 3 and the North Ayrshire Local Development Plan 2 as outlined in Section 3.2.3 to 3.2.10 of this report.

3.2.18 Apart from the iron ore / coal terminal, comprising jetty, conveyors, and stockyards; and the marine construction yard no large-scale industry has been attracted to the site.

Planning Consents

3.2.19 Notable Planning Consents that have been obtained on the wider Hunterston site include:

- Planning Consent N/17/01273/PP : Hunterston Construction Yard use for construction, repair and decommissioning of large marine structures.
- Planning Consent N/20/00942/PP : Installation of synchronous compensator and ancillary infrastructure.

- Planning Consent N/18/00134/PP : Replacement and enlargement of existing jetty (Hunterston Construction Yard).
- Planning Consent N/18/00132/PP : Erection of caisson gates and subsequent removal of existing bund (Hunterston Construction Yard).
- Planning Consents N/17/00034/PPPM and N/14/00164/PPPM : National off-shore wind turbine testing facility – for the erection of up to three wind turbines (Marine Construction Yard Hunterston) (NB. Two turbines were constructed and stood for six years at some 177m and 194m tall).

4 GENERAL APPROACH TO EIA

4.1 Requirement for Environmental Impact Assessment

4.1.1 EIA is the process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.

4.1.2 The current legislative framework for EIA has its origins in European Directive 2011/92/EU and amended by Directive 2014/52/EU (collectively referred to as the EIA Directive). For Town and Country Planning applications made in Scotland post Brexit, relevant legislation is the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017, as amended, (referred to in this report as the EIA Regulations).

4.1.3 The process of identifying whether or not EIA is required for a development is known as screening. Projects of the type listed in Schedule 1 of the Regulations require EIA in all cases. Projects of the type listed in Schedule 2 may require EIA in certain circumstances.

4.1.4 Schedule 2 development requires EIA to be undertaken where a project is likely to have significant effects on the environment by virtue of factors such as its nature, size or location. Taking into account the nature and scale of the development proposed, together with its location, EIA is proposed to be undertaken for the Project.

4.1.5 The proposed development would fall within the category 10(a) of Schedule 2 of the Regulations 'Industrial Estate development projects'. Schedule 2 also provides an indicative development site area threshold of 0.5ha where relevant projects are considered more likely to be EIA development.

4.1.6 Schedule 2 development requires screening against the criteria set out in Schedule 3 of the Regulations. The criteria include the characteristics of the development, location of development and characteristics of the potential impact.

4.1.7 The development site is not within a ‘sensitive area’ as defined by the EIA Regulations but lies adjacent to Southannan Sands SSSI.

4.1.8 The proposed development will be a major cable manufacturing facility which in of itself does not necessarily qualify it as EIA development. However, a key aspect of the Project is the planned up to 185m extrusion tower that is required for curing of cable.

4.1.9 The visual impact of the extrusion tower will require detailed assessment to investigate the potential for significant environmental effects.

4.1.10 XLCC has considered the screening criteria set out in Schedule 3 of the EIA Regulations and elected to submit an Environmental Impact Assessment Report (EIA Report) with its application to North Ayrshire Council.

4.2 Information Required

4.2.1 Although there is no statutory provision as to the form of an EIA Report, it must contain the information specified in Regulation 5(2), including any relevant information specified in Schedule 4 of the EIA Regulations. A summary of the information specified in Schedule 4 is provided at Appendix 1.

4.2.2 The information supplied in the EIA Report will provide a clear understanding of the likely significant effects of the Project upon the environment. The following sections outline the overall approach to EIA in order to meet these legal requirements.

4.3 Structure of the EIA Report

4.3.1 The EIA Report will be structured logically, enabling all relevant environmental information to be found quickly and easily. The EIA Report will describe the EIA process and its findings, and will include the following sections:

- Non-Technical Summary (as a stand alone document);
- Written Statement;
- Figures; and
- Appendices.

4.4 EIA Methodology

Relevant EIA Guidance

4.4.1 The EIA process will take into account relevant guidance or institute guidance, including:

- Scottish Government (2013 and 2017 update) Planning Advice Note 1/2013: Environmental Impact Assessment at https://www.gov.scot/publications/planning-advice-note-1-2013-environmental-impact-assessment/pages/1/;
- Scottish Natural Heritage and Historic Environment Scotland (2018) Environmental Impact Assessment Handbook;
- Highways England *et al.* (2020) Design Manual for Roads and Bridges, Sustainability and Environmental Appraisal. LA 104 Environmental assessment and monitoring;
- Institute of Environmental Management and Assessment (2004) Guidelines for Environmental Impact Assessment;
- Institute of Environmental Management and Assessment (2011) The State of Environmental Impact Assessment Practice in the UK. Special Report;
- Institute of Environmental Management and Assessment (2015a) Environmental Impact Assessment: Guide to Shaping Quality Development;
- Institute of Environmental Management and Assessment (2015b) Climate Change Resilience and Adaptation;
- Institute of Environmental Management and Assessment (2016) Environmental Impact Assessment: Guide to Delivering Quality Development;
- Institute of Environmental Management and Assessment (2017a) Environmental Impact Assessment: Assessing Greenhouse Gas Emissions and Evaluating their Significance;
- Institute of Environmental Management and Assessment (2017b) Health in Environmental Impact Assessment: A Primer for a Proportional Approach;
- Institute of Environmental Management and Assessment (2020a) IEMA Guide to Waste in Environmental Impact Assessment; and
- Institute of Environmental Management and Assessment (2020b) Digital Impact Assessment: A Primer for Embracing Innovation and Digital Working.

4.4.2 Other topic specific specialist methodologies and good practice guidelines will be drawn on as necessary.

Key Elements of the General Approach

4.4.3 The assessment of each environmental topic will form a separate chapter of the EIA Report. For each environmental topic, the following will be addressed:

- Methodology and assessment criteria;
- Description of the environmental baseline (existing conditions);
- Identification of likely effects;
- Evaluation and assessment of the significance of identified residual effects, taking into account any measures designed to reduce or avoid environmental effects which form part of the Project and to which the developer is committed;
- Assessment of potential cumulative or in-combination effects with other proposals; and
- Identification of any further mitigation measures envisaged to avoid, reduce and, if possible, remedy adverse effects (in addition to those measures that form part of the Project).

Methodology and Assessment Criteria

4.4.4 Each topic chapter will provide details of the methodology for baseline data collection and the approach to the assessment of effects. Details of the proposed approach for each topic are provided in Section 5 of this Scoping Report. Each identified environmental topic will be considered by a specialist in that area. The identification and evaluation of effects will take into account relevant topic-specific guidance where available.

Description of the Environmental Baseline

4.4.5 The existing and likely future environmental conditions in the absence of the Project are known as 'baseline conditions'. Each topic based chapter will include a description of the current (baseline) environmental conditions. The baseline conditions at the site and within the study area form the basis of the assessment, enabling the likely significant effects to be identified through a comparison with the baseline conditions.

4.4.6 The baseline for the assessment of environmental effects will primarily be drawn from existing conditions during the main period of the EIA work. Consideration will also be given to any likely changes between the time of survey and the future baseline for the construction and operation of the Project. In some cases, these changes may include the construction or operation of other planned developments in the area. Where such developments are built and operational at the time of writing and data collection, these will be considered to form part of the baseline environment. Where sufficient and robust information is available, such as expected traffic growth figures, other future developments will be considered as part of the future baseline conditions. In all other cases, planned future developments will be considered within the assessment of cumulative effects.

4.4.7 The consideration of future baseline conditions will also take into account the likely effects of climate change, as far as these are known at the time of writing. This will be based on information available from the UK Climate Projections project (UKCP18), which provides information on plausible changes in climate for the UK (Environment Agency and Met Office, 2018) and on published documents such as the UK Climate Change Risk Assessment 2017 (Committee on Climate Change, 2016).

Assessment of Effects

4.4.8 The EIA Regulations require the identification of the likely significant environmental effects of the Project. Each topic chapter will take into account both the sensitivity of receptors affected and the magnitude of the likely impact in determining the significance of the effect.

Rochdale envelope

4.4.9 The 'Rochdale Envelope' approach to EIA most commonly employed in applications sought in principle (or outline) was coined where the nature of the proposed development means that all design details have not been confirmed and/or where the application requires a degree of flexibility.

4.4.10 EIA best practice demands that parameters of assessment and any flexibility sought is clearly set out and is consistently applied across the assessment inclusive of consultation and mitigation.

4.4.11 The XLCC assessment will be conducted against a set of cautious but reasonable 'worst-case' parameters that will not be exceeded but that provides sufficient information to identify the 'main' or 'likely significant' effects of the proposals to be identified.

Sensitivity or Importance of Receptors

4.4.12 Receptors are defined as the physical resource or user group that would be affected by a proposed development. The baseline studies will identify potential environmental receptors for each topic and will evaluate their sensitivity to the proposed development. The sensitivity or importance of a receptor may depend, for example, on its frequency or extent of occurrence at an international, national, regional or local level.

Magnitude of Impact

4.4.13 Impacts are defined as the physical changes to the environment attributable to the Project. For each topic, the likely environmental impacts will be identified. The magnitude of the impact will be described using defined criteria within each topic chapter.

4.4.14 The categorisation of the impact magnitude may take into account the following four factors:

- Extent;
- Duration;
- Frequency; and
- Reversibility.

4.4.15 Impacts will be defined as either adverse or beneficial. Depending on discipline, they may also be described as:

- Direct: Arise from activities associated with the Project. These tend to be either spatially or temporally concurrent;
- Indirect: Impacts on the environment which are not a direct result of the Project, often produced away from the project site or as a result of a complex pathway.

4.4.16 Impacts will be divided into those occurring during the construction phase and those occurring during operation. Where appropriate, some chapters may refer to these as temporary and permanent impacts.

Significance of Effects

4.4.17 Effect is the term used to express the consequence of an impact (expressed as the 'significance of effect'), which is determined by correlating the magnitude of the impact to the sensitivity of the receptor or resource.

4.4.18 The magnitude of an impact does not directly translate into significance of effect. For example, a significant effect may arise as a result of a relatively modest impact on a resource of national value, or a large impact on a resource of local value. In broad terms, therefore, the significance of

the effect can depend on both the impact magnitude and the sensitivity or importance of the receptor.

4.4.19 Levels of significance that will be used in the assessment include, in descending order:

- Substantial;
- Major;
- Moderate;
- Minor;
- Neutral.

4.4.20 Where an effect is described as 'negligible/neutral' this means that there is either no effect or that the effect is not considered to be significant for the purposes of the EIA. All other levels of significance will apply to both adverse and beneficial effects. These significance levels will be defined separately for each topic within the methodology sections. In all cases, the judgement made as to significance will be that of the author of the relevant chapter with reference to appropriate standards/guidelines where relevant.

Cumulative Effects

4.4.21 The cumulative effects of the proposed development in conjunction with other proposed schemes will be considered. The cumulative effects assessment will consider any developments that are formally in the planning system at the time of submission. Developments that are built and operational at the time of assessment will be considered as part of the baseline. A list of proposed developments and planning policy allocations to be included within the cumulative assessment will be agreed with NAC. NAC will be consulted on the development types that might have an effect in combination with the proposed scheme.

4.4.22 In addition to planning applications, a number of adopted Local Plan allocations have been identified (further information and allocations are provided at Section **Error! Reference source not found.** above).

Mitigation Measures

4.4.23 The EIA Regulations require that where significant effects are identified 'a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce or, if possible, offset likely significant adverse effects on the environment' should be included in the EIA Report.

4.4.24 The development of mitigation measures is part of an iterative EIA process. Therefore, measures will be developed throughout the EIA process in response to the findings of initial assessments. The Project that forms the subject of the planning application will include a range of measures designed to reduce or prevent significant adverse environmental effects arising, where practicable. In some cases, these measures may result in enhancement of environmental conditions. The assessment of effects will therefore take into account all measures that form part of the Project and to which XLCC are committed.

4.4.25 The topic chapters will therefore take into account all measures that form part of the proposed development, including:

- Measures included as part of the Project design (sometimes referred to as primary mitigation);
- Measures to be adopted during construction to avoid and minimise environmental effects, such as pollution control measures. These measures would be implemented through the Code of Construction Practice; and

- Measures required as a result of legislative requirements.

4.4.26 Where required, further mitigation measures will be identified within topic chapters. These are measures that could further prevent, reduce and, where possible, offset any residual adverse effects on the environment.

4.4.27 In some cases, monitoring measures may be appropriate, for example, to ensure that proposed planting becomes established. Where appropriate, monitoring measures will be set out.

Summary Tables

4.4.28 Summary tables will be used to summarise the effects of the Project for each environmental topic.

5 SCOPE OF ASSESSMENT

5.1 Work Undertaken to Date

5.1.1 The following studies have been undertaken or are currently ongoing in relation to the proposed development.

- Preliminary Ecological Appriasal – June 2021.
- Over-wintering coastal bird surveys – September 2021 onwards.

5.2 Topics Scoped Out of Assessment

5.2.1 Taking into account the findings of the above studies, together with knowledge of the site and surrounding area, it is proposed that the following topics are not included in the scope of the EIA Report.

Planning Policy Context

5.2.2 The EIA Report will provide an overview of relevant legislative and planning policy context within each topic chapter. The assessment will have regard to national and local policy documents, where relevant. However, it is not proposed to include a separate chapter on Planning Policy Context in the EIA Report. The draft guidance on EIA from the Department for Communities and Local Government 'EIA: A Guide to Good Practice and Procedures' (DCLG 2006) (paragraph 155) states that there is no requirement to provide chapters on planning and sustainability in Environmental Statements. A separate Planning Statement will be submitted with the planning application and the environmental topic chapters within the EIA Report will each set out the policy context relevant to that topic.

Material Assets

5.2.3 The EIA Regulations refer to 'material assets', including architectural and archaeological heritage. The phrase 'material assets' has a broad scope, which may include assets of human or natural origin, valued for socio-economic or heritage reasons. Material assets are in practice considered across a range of topic areas within an EIA Report, in particular the socio-economic and historic environment chapters. These topics are proposed to be included within the EIA Report (see Table 4.1). Therefore, no separate consideration of material assets is considered necessary.

Radiation and Heat

5.2.4 The Project will generate heat as part of the extrusion process. The technical specification of the building will take into account the heat generated and provide suitable measures to prevent overheating. This could be in the form of air cooling or air conditioning units in the buildings and the use of nitrous oxide. With these measures in place, it is not considered likely that significant effects in relation to heat will occur and therefore, it is not proposed that heat effects are considered further.

Daylight, Sunlight and Microclimate

5.2.5 Due to the location of the proposed works and the nature of the surrounding infrastructure and land use, it is not considered likely that the Project will have significant effects in relation to daylight and sunlight. In addition, the nature of the Project is not likely to result in microclimate changes and therefore this topic is also scoped out of the assessment. The effects of the Project on climate change will be considered in the Climate Change and Carbon chapter of the EIA Report, as described in Section 6.12.

Sustainability

5.2.6 There are no specific requirements to address sustainability in an EIA Report. Therefore, sustainability is not considered further in this Scoping Report.

Transboundary Effects

5.2.7 The EIA Regulations highlight that where a project in Scotland is the subject of an EIA and is likely to have significant effects on the environment of any European Economic Area (EEA) State (other than the UK), Scottish Ministers must consult with the other EEA States and allow for them to participate in the procedures if they wish to do so.

5.2.8 Due to the nature and location of the Project, no significant effects on another EEA State are likely to occur. Therefore, transboundary effects are not considered further in this Scoping Report.

Waste

5.2.9 Schedule 4 of the EIA Regulations requires consideration of the production of waste during the construction and operational phases. Details of the broad types of waste produced as a result of the Project will be included within Chapter 2 (Project Description) of the EIA Report.

5.2.10 The topography of the coal yard is flat. There is a slight reduction in elevation towards the railway line and then to the beach. Cut material will be generated by the excavation of a basement for the tower. A cut/fill balance calculation has not been completed to date but due to the small volumes involved and the ability to re-use material onsite, it is not likely there will be large amounts of waste material to be disposed of offsite. This is subject to confirmation by intrusive surveys.

5.2.11 Therefore, a separate waste chapter is not considered necessary. A Code of Construction Practice (CoCP) will be produced and appended to the EIA Report which will include waste disposal measures for the construction period. The estimated waste types and volumes likely to be generated during the construction phase of the Project will be identified in further detail within a waste management plan prior to construction. The plan will also include a series of measures to manage waste in accordance with best practice and the waste management hierarchy.

Major Accidents and Disasters

5.2.12 The EIA Regulations require consideration of the Projects' vulnerability to major accidents and/or disasters. The development is not of a type to give rise to potential for any unusual accidents or disasters.

5.2.13 Due to its location, it is not likely that the Project will be at risk of a major disaster from extreme flood or rainfall events. The drainage design for the Project will take into account an increase in rainfall as a result of climate change and therefore will be designed to accommodate higher flows. A Flood Risk Assessment will be prepared to support the application and will form part of the EIA Report. Further details on the risk of flooding at the Project site are provided in Section 6.8.

5.2.14 The design and construction of the buildings will comply with Building (Scotland) Regulations, which are enforced by local building control bodies. The design will therefore take into account relevant legislation and guidance including the following (or their replacement versions at the time of construction) to reduce the risk of fire:

- Building Regulations 2004; and
- Building Standards Technical Handbook 2019: Non-domestic Buildings (Section 2: Fire) (Scottish Government, 2013).

5.2.15 In addition, each of the factory buildings include fire sprinkler systems.

5.2.16 The design of the internal access road and junction with the existing road network will be in accordance with standards and dimensions agreed with the Roads Authority. No new junctions onto the public highway will be required.

5.2.17 During construction, normal construction good practice will be followed to ensure on site safety of the workforce in accordance with the Construction (Design and Management) Regulations 2015. Independent health and safety advisors will be employed by the contractor/s during construction to report on the site's safety. It will be required that these reports take place monthly with the reports being provided to XLCC.

5.2.18 The risk of major accidents and disasters will be considered in the project description chapter of the EIA Report, therefore a separate chapter assessing the risk of major accidents and disasters is not considered necessary.

Content of the Environmental Statement

5.2.19 Table 5.1 identifies the chapters that are proposed for inclusion in the EIA Report. Further details of the approach to the assessment and its scope are provided in Section 5 of this Scoping Report.

Table 5.1: Structure of the EIA Report

Structure of EIA Report	
Non-Technical Summary	Summary of the EIA Report using non-technical terminology
Volume 1: Text	
	Glossary
Chapter 1	Introduction
Chapter 2	Project Description
Chapter 3	Need and Alternatives Considered
Chapter 4	Environmental Assessment Methodology
Chapter 5	Ecology and Nature Conservation
Chapter 6	Historic Environment
Chapter 7	Landscape and Visual Effects
Chapter 8	Hydrology and Flood Risk
Chapter 9	Hydrogeology, Geology and Ground Conditions
Chapter 10	Traffic and Transport
Chapter 11	Noise and Vibration
Chapter 12	Climate Change
Chapter 13	Socio-Economics
Volume 2: Figures	
Including all figures and drawings to accompany the text.	
Volume 3: Appendices	
Including specialist reports forming technical appendices to the main text.	
Code of Construction Practice	Technical Appendix
Air Quality (construction dust)	Technical Appendix
Human Health	Technical Appendix

6 TECHNICAL ASSESSMENTS

6.1 Chapter 1: Introduction

6.1.1 This chapter will provide the introduction to the EIA Report, including details of the application, need for EIA and the structure of the EIA Report.

6.2 Chapter 2: Project Description

6.2.1 The EIA Report will include a description of the Project. The EIA Regulations require:

'A description of the development comprising information on the site, design and size and other relevant features of the development.'

6.2.2 The project description chapter of the EIA Report will include details of the site, together with a description of the key components of the Project. The description will include the following information, as far as practicable at the time of writing:

- construction phase – a description of the key works, activities and processes that will be required during the construction phase; and
- operational phase – a description of the completed development and its use.

6.2.3 Where options remain at the time of the assessment (with regard to construction techniques, for example), the EIA Report will provide a clear explanation of the assumptions made. Where appropriate, the realistic worst-case scenario will be assessed.

6.2.4 Where mitigation measures have been identified and developed through the EIA process and have been incorporated as part of the Project, details of these measures will be set out within the project description chapter.

6.2.5 Finally, the project description will give consideration of the effects on the environment deriving from the vulnerability of the Project to risks from major accidents and/or disasters, where these are relevant to the Project.

6.3 Chapter 3: Need and Alternatives Considered

6.3.1 This chapter will briefly set out the need for the Project. In addition, the EIA Regulations require the alternatives considered by the applicant to be set out in the EIA Report:

'A description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.'

6.3.2 This chapter will summarise the reasons for the selection of the project site and provide an outline of the alternatives considered during the EIA process, including a description of the alternative design and layout options that have been considered and the main reasons for their selection.

6.4 Chapter 4: Environmental Assessment Methodology

6.4.1 Details of the overall approach to EIA will be set out in this chapter, together with details of the scoping process, consultation undertaken and the overall approach to the assessment of significance. Topic specific methodologies, such as survey methods, will be provided in each topic chapter.

6.5 Chapter 5: Ecology and Nature Conservation

Legislation and Guidance

6.5.1 All surveys and assessments will be completed in cognisance of the relevant policy, legislation and guidance. The following legislation and guidance will be considered during the assessment.

- Chartered Institute of Ecology and Environmental Management (CIEEM) (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (V1.1);
- The Wildlife and Countryside Act 1981 (as amended);
- The Protection of Badgers Act 1992;
- Nature Conservation (Scotland) Act 2004 (as amended);
- The Wildlife and Natural Environment (Scotland) Act 2011;
- The UK Biodiversity Action Plan (UKBAP) 1994;
- Conservation of Habitats and Species (Amendment) (EU Exit) regulations 2019;
- SEPA (2017). Guidance Note 31 - Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems (GWDTE);
- Collins (2016). Bat Conservation Trust's Bat Surveys for Professional Ecologists. Good Practice Guidelines;
- Directive 2009/147/EC on the Conservation of Wild Birds (the Birds Directive);
- Scottish Planning Policy (2020);
- Planning advice Note (PAN) 1/2013 – Environmental Impact Assessment (Scottish Government 2013);
- PAN 51: Planning Environmental Protection and Regulation (revised 2006);
- PAN 60: Planning for Natural Heritage (Scottish Government 2008);
- Nature Conservation: Implementation in Scotland of the Habitats and Birds Directives: Scottish Executive Circular 6/1995 as amended (June 2000);
- Assessing connectivity with Special Protection Areas (SPAs) (NatureScot 2016);
- Birds of Conservation Concern (BoCC) 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man (Eaton *et al.* 2015); and
- Scottish Biodiversity List.

Baseline Information

6.5.2 Ecological surveys have been completed at the proposed development site for a number of previous schemes. The information collected to inform these has been considered in compiling the baseline information to support the proposed development's impact assessment; previous schemes include:

- Project Phoenix (2007 and 2011) – the proposed development of a multifueled (coal and biomass power station with carbon capture); and
- Hunterston Bulk Terminal - works and surveys completed through 2018 in support of development of a port and resource centre at the site.

6.5.3 Consideration has similarly been given to potential ecological and ornithological receptors which might use the site, along with statutory and non-statutory designated sites with relevant ecological or ornithological features.

6.5.4 All surveys and assessments will follow the relevant industry standard guidance, policy and legislation as provided above. Where novel or the approaches differ from those recommended within this literature, these will be discussed with the relevant statutory consultee at the outset. The following sections detail the proposed approach to the assessment, including both that of compiling the ecological baseline for the development along with the subsequent assessment of effects from potential impacts of construction, operation and decommissioning phases.

Baseline studies

Desk Study

6.5.5 The following resources will be considered in compiling desk study baselines for the proposed development:

- Information collected from previous surveys for the both the Project Phoenix and Hunterston Bulk Terminal developments;
- A data search with the Local Biological Record Centre for records of protected and notable species within 2km for terrestrial protected species, 10km for bats, and 20km for relevant ornithological receptors and designated sites;
- Review of the Magic Map application and Scotland Environment Map for relevant project related constraints; and
- Liaison with relevant stakeholders and local interest groups which might include but is not limited to the RSPB Scotland, South Strathclyde Raptor Study Group, British Trust for Ornithology, local bat, badger, reptile or mammal interest groups.

6.5.6 The above list is not exhaustive, and where further investigation highlights species, habitats, nature conservation sites, or areas which lack data, additional resources will be investigated to increase the background knowledge regarding the site.

6.5.7 In completing this Scoping Report, RPS have considered sites of nature conservation importance in proximity to the site (20km) which are notified for either the ecological or ornithological features present. These are provided in the Table 5.1 below and are provided in Figure 3.

Table 5.1: site of Nature Conservation Importance Within 20km of the Proposed Development

Sites of Nature Conservation Importance				
site Name	**site Designation**	**Distance from site (km)**	**Designating Features**	**Potential to be Affected by Proposed Development**
Southannan Sands	SSSI	0.1	Intertidal marine habitats and saline lagoons: Sandflats	Y
Portencross Woods	SSSI	2.7	Woodlands: Upland mixed ash woodland	N
Ballochmartin Bay	SSSI	3.0	Woodlands: Upland mixed ash woodland	N

Sites of Nature Conservation Importance				
			Woodlands: Lowland mixed broadleaved woodland	N
Shielhill Glen	SSSI	18.5	Fens: Fen meadow	
Skelmorlie Glen	SSSI	12.1	Woodlands: Upland mixed ash woodland	N
Barmufflock Dam	SSSI	19.7	Fens: Basin fen	N
Western Gailes	SSSI	19.4	Coastlands: Sand dune Invertebrates: Invertebrate assemblage	N
Dykeneuk Moss	SSSI	14.7	Bogs: Raised bog	N
Bankhead Moss, Beith	SSSI	14.1	Bogs: Raised bog	N
Ashgrove Loch	SSSI	10.9	Freshwater habitats: Mesotrophic loch Freshwater habitats: Open water transition fen	N
Renfrewshire Heights	SSSI	8.9	Aggregations of breeding birds: hen harrier	N
Kames Bay	SSSI	3.2	Habitat: Coastland	N
Castle Semple and Barr Lochs	SSSI	14.4	Freshwater habitats: Eutrophic loch Birds: Breeding bird assemblage	N
Cockinhead Moss	SSSI	15.4	Bogs: Raised Bog	N
Central Lochs, Bute	SSSI	13.8	Birds: Greylag goose *Anser anser*, non-breeding	N
Bogside Flats	SSSI	14.4	Intertidal marine habitats: Mudflat Coastlands: Saltmarsh	N
Arran Moors	SSSI	19.6	Upland habitats: Upland assemblage Birds: Breeding bird assemblage Birds: Hen harrier *Circus cyaneus*, breeding	N
Renfrewshire Heights	SPA	8.9	Breeding population of European importance of the Annex 1 species hen harrier (an average of 10 breeding females annually between 1998 and 2004, 2% of GB).	N
Arran Moors	SPA	19.6	Breeding population of European importance of the Annex 1 species hen harrier (an average of 21	N

Sites of Nature Conservation Importance				
			breeding females between 1994 and 1998, 4% of GB).	
Stevenston Beach	LNR	13.0	Sand dune system	N
Ardeer Quarry	LNR	12.7	Mixture of wetland, woodland, scrub, and grassland habitats.	N
Wemyss Bay Woodland	LNR	16.6	Broadleaved and mixed woodland.	N
Cockinhead Moss	SAC	15.4	Active and degraded raised bogs	N
Dykeneuk Moss	SAC	14.7	Active and degraded raised bogs	N
Bankhead Moss, Beith	SAC	14.1	Active raised bog	N

Table Note: SSSI – site of Special Scientific Importance, SPA – Special Protection Area, SAC – Special Area of Conservation, LNR – Local Nature Reserve.

6.5.8 Of the above listed designated sites, and following our review, it is judged on the basis of potential impact pathways and the nature of the development that, only the Southannan Sands SSSI may be affected by the proposed development. The risk of any effects, their magnitude and significance will be considered in detail within the development's Ecological Impact Assessment. Avoidance of significant effects will be sought using the mitigation hierarchy (i.e. avoidance, minimisation and mitigation).

6.5.9 It is therefore considered that there is no risk of 'likely significant effects' to internationally designated sites for nature conservation.

Field Surveys

6.5.10 The following field surveys are proposed to be completed to compile a robust baseline on the ecology and ornithology interests present at the location of the proposed development, building on the information to be collected during the desk-based assessment.

Ecology

6.5.11 A Baseline Ecological Constraints Assessment was completed for the proposed development site by RPS Consulting Services Ltd in June 2021. The surveys sought to provide a description of the site, review the existing Phase 1 Habitat survey information held for the site and highlight any alterations to this since such surveys were completed for previous developments (2018). Surveys also sought to highlight the potential for protected species to be present in and surrounding the area of proposed development which would require additional survey.

6.5.12 The site was found to comprise of a former coalfield in the first stages of succession with infrequent stands of vegetation dominated by sea buckthorn, with occasional birch, goat willow and some small butterfly bush with a field layer comprising mainly birds foot trefoil with stands of viper's bugloss. The habitats to the south are similar though slightly more vegetated, and to the north there is car parking and office facilities associated with the former coal yard. To the east there is a stretch of semi-mature woodland approximately 20m in height comprising a mix of sycamore, with stands of birch and goat willow. To the west there is a thin strip of coastal scrub dominated by sea buckthorn with some gorse and goat willow and beyond which is the Firth of Clyde. This has not altered since previous field surveys for the Hunterston Bulk Terminal were completed.

6.5.13 Habitats suitable to support a number of protected species were identified including badgers, otters, reptiles, and terrestrial invertebrates. Although a number of ponds were identified on site, these were not deemed to offer suitable habitat to support populations of great crested newts. No watercourses are present within the proposed development site, with the closest watercourse 60m to the east of the site boundary. The Constraints Report concluded that the watercourse was unlikely to be affected by any development within the site boundary although previous surveys of the Project Phoenix development suggested the watercourse offered suitable habitat for salmon species.

6.5.14 No signs of otters were identified within the site boundary, however they may venture onto the site whilst foraging from nearby watercourses. Similarly, the site itself offers limited suitable habitat for foraging, commuting or roosting bat species with areas most likely to be utilised by the species restricted to woodland edges on the boundary of the proposed development. This concurs with the findings of the bat surveys completed for the Project Phoenix development which identified low levels of bat activity from pipistrelle species in this area.

6.5.15 Taking the above into account, it is proposed to complete further species specific surveys for the following receptors to assess their utilisation of the proposed development area and an appropriate surrounding buffer:

- Otter survey of areas of suitable habitat within the site and a 250m buffer;
- Badger survey in areas of suitable habitat within the site and a 250m buffer;

6.5.16 No further surveys for fish, bats, amphibians, water voles or reptiles are proposed as the site offers limited habitat suitability to support these species. Similarly, given the timing of the proposed application no further surveys would be completed for invertebrates. However, all of the above species will be considered when compiling an outline Habitat and Species Management Plan (HMP) for the development. At the pre-construction stage, the HMP will inform a Construction Environmental Management Plan (CEMP) that will be developed to ensure during both the construction and operational phases of the development their requirements are considered in a robust manner.

Ornithology

6.5.17 Ornithology surveys were completed for both the Project Phoenix and the Hunsterston Bulk Terminal development. Surveys found the area of the proposed development to be used by birds associated with the esturine habitats and mudflats during periods of high tide.

6.5.18 Breeding bird surveys completed for the previous developments recorded no Schedule 1 bird species breeding within the survey area, although four Red-listed Birds of Conservation Concern (BoCC) were recorded; lapwing, song thrust, linnet and starling (Eaton *et al.* 2015*)*.

6.5.19 Winter surveys of the proposed development found the site to be used by a number of species including oystercatcher, curlew, redshank, dunlin, ringed plover. However, no species were recorded at nationally significant numbers.

6.5.20 Taking into account the scope of the proposed development and to ensure a robust baseline of data is available to support the associated impact assessment, further surveys for coastal over-wintering birds and breeding birds will be completed of the site and an appropriate buffer to map and count bird activity on the site and up to 500m on the adjacent SSSI habitats. The winter surveys would be once a month from September to March inclusive.

Assessment of Effects

6.5.21 The assessment of ecological and ornithological effects associated with the proposed development will be undertaken in accordance with the Ecological Impact Assessment (EcIA)

guidelines published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018).

6.5.22 In accordance with the CIEEM guidance, the purpose of the assessment will be to focus on those features that are most likely to be affected. These are termed Important Ecological Features (IEFs) and Important Ornithological Features (IOFs) and are either protected or are of sufficient value to merit consideration in the EIA process, rather than to consider effects upon every feature that may be present, many of which will be common, widespread and robust.

6.5.23 The likely impacts of the proposed development will be identified, including likely positive and negative impacts on the IEF/IOFs present. Such impacts may include direct habitat loss, changes in habitat quality or disturbance.

6.5.24 The likely magnitude of the impacts will be assessed during the construction and operational stages. Those for decommissioning would be considered to be similarly in nature or a lesser extent to those from construction and would not be considered in detail at this time. Both the magnitude of the predicted impact and the value of the feature will be taken into consideration in determining the significance of the effect. The assessment will consider any measures that form part of the proposed development and to which the applicant is committed.

6.5.25 Embedded mitigation may be devised to avoid any significant impacts associated with the construction and operation of the proposed development on IEF/IOFs. All mitigation proposed will follow the mitigation hierarchy: avoidance, minimisation and mitigation. Following any mitigation measures considered appropriate, the impacts remaining once they are taken into account will be identified (the 'residual impact'). Where appropriate, opportunities for ecological enhancement will be considered, in liaison with stakeholders.

Zone of Influence

6.5.26 The following Zones of Influence will be used for the relevant receptors identified as IEF/IOFs following completion of baseline surveys:

- all IEF/IOFs within the land directly impacted and a 200m buffer (except where set out below);
- construction impacts to hydrologically sensitive habitats, notably the adjacent SSSI;
- Groundwater Dependant Terrestrial Ecosystems (GWDTEs) – 300m out with the footprint of the development;
- 10km for records of bat species;
- 2km for records of otters;
- obstruction of migration, commuting and foraging of mobile species; and
- the relevant potential connectivity distance for bird species associated with Special Protection Areas that are recorded on site (or for which there is suitable habitat on site), or that use the adjacent inter-tidal and nearshore habitat.

6.5.27 This list may be expanded depending on records received or information gained from additional sources as the development progresses.

Design and Mitigation

6.5.28 The following inbuilt mitigation for the proposed development would seek to reduce any potential effects to IEFs during both the construction and operational phases of the proposed development:

- Infrastructure design would seek to avoid areas of ground water dependent terrestrial ecosystem habitat if identified as present within the proposed development area;

- A Construction Environment Management Plan (CEMP) would be provided which would detail mitigation plans to protect environmental receptors during the construction phase of the proposed development;
- Pre-construction surveys would be completed prior to commencement of the construction phase to ensure an up-to-date baseline is available of protected species utilisation of the proposed development area and immediate surroundings to minimise disturbance to sensitive species and to inform the CoCP and its Construction Method Statements.
- If pre-commencement surveys indicated it would be necessary, an Ecological Clerk of Works (ECoW) would be present throughout the relevant period of the construction phase of the proposed development to oversee compliance with all environmental commitments;
- Clearance of vegetation in the site would be undertaken outwith the breeding bird season (April – July). Where this is not possible, surveys would be completed ahead of clearance works and an ECoW would oversee vegetation clearance to ensure their would be no damage to active bird nests or disturbance to protected species.

6.5.29 In addition to the above mitigation, additional species-specific mitigation or protection plans may be required to ensure suitable protection is afforded to relevant IEF/IOFs. These will be designed based on up-to-date information collected during pre-construction surveys of the development area.

Potential Effects during Construction

6.5.30 The following potential effects to IEF/IOFs during the construction phase of the proposed development have been identified:

- Permanent loss or disturbance of habitats from construction;
- Temporary loss or disturbance of habitats from construction of temporary components (construction compound);
- Disturbance to otter and badger during crepuscular activities;
- Disturbance to bat species from construction lighting if night-time working is required;
- Visual and noise disturbance to birds, including the effects of lighting;
- Pollution of the aquatic environment during construction affecting watercourses and their associated species (including the SSSI); and
- Traffic related mortalities to protected species.

Potential Effects during Operation

6.5.31 The following potential effects caused during the operational phase of the proposed development have been identified:

- Fragmentation of species ranges or habitats;
- Pollution of the aquatic environment during operational maintenance (including the SSSI); and,
- Disturbance from site traffic and increased human presences.

6.5.32 The extent of the disturbance and potential effects will be dependent upon a variety of factors including the location of the works, timing, duration and whether permanent or temporary.

Issues Proposed to be Scoped Out of the Assessment

6.5.33 Based on the initial desk study and field work undertaken to date, it is proposed to scope out the following species from specific or group surveys and further assessment in the EIA Report:

- Amphibians, fish and water voles due to the lack of suitable habitat to support such species;
- Green-listed Birds of Conservation Concern (BoCC) (Eaton *et al.* 2015). Populations of green listed BoCC are stable within the UK and the potential impact of the proposed development will be at a local level and therefore will not jeopardise the long-term survival of these species.

6.5.34 In addition to the above, should any of the species surveys confirm likely absence of a species or group of species, they will not be included in the EcIA.

6.6 Chapter 6: Historic Environment

Legislation and Guidance

6.6.1 All surveys and assessments will be completed in cognisance of the relevant policy, legislation and guidance. The following legislation and guidance will be considered during the assessment:

- Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997;
- Ancient Monuments and Archaeological Areas Act 1979;
- Standard and Guidance for Historic Environment Desk-Based Assessment (Chartered Institute for Archaeologists 2020);
- EIA Handbook (NatureScot & HES 2018);
- Planning Advice Note 2/2011: Planning and Archaeology (Scottish Government 2011);
- Historic Environment Policy for Scotland (Historic Environment Scotland 2019); and
- Managing Change in the Historic Environment: Setting (Historic Environment Scotland 2020);

Baseline Information

6.6.2 An initial review of readily available information, including studies undertaken to support previous planning applications, has been undertaken to inform the Scoping Report. This has drawn primarily upon Historic Environment Scotland (HES) data and work undertaken in connection with previous proposals for the site.

6.6.3 There are no designated heritage assets within the site.

6.6.4 No heritage assets are recorded within the site. The site occupies land that for the most part lay in the intertidal zone until it was reclaimed in the latter part of the 20th century for the construction of the Hunterston Coal Terminal. The potential for hitherto unrecorded heritage assets to be present in the intertidal area appears very low. That part of the site not reclaimed for the coal terminal may have greater archaeological potential, but the degree to which this area may have been disturbed is at present uncertain.

6.6.5 There are numerous designated heritage assets in the surrounding area. Within 5km of the site these comprise:

- Ten Scheduled Monuments;
- 13 Category A Listed Buildings;
- 59 Category B Listed Buildings;
- 67 Category C Listed Buildings;
- One Inventory Gardens and Designed Landscape; and
- Two Conservation Areas.

6.6.6 There are no World Heritage Sites or Inventory Battlefields within 5km.

6.6.7 The above designated assets are concentrated along the coastal strip and on the islands of Great and Little Cumbrae. The coastal strip is relatively built up and wooded. As a result, views from these assets, including the Category A-listed Kelburn Castle, are curtailed. The key exceptions to this are the Category A-listed Hunterston Castle (LB14313) and Category B-listed Hunterston House (LB14286); the site is clearly visible from Hunterston House and the Proposed Development may be visible in views from Hunterston Castle to Hunterston House.

6.6.8 The designated assets on the higher parts of Great and Little Cumbrae or their eastern shore tend to have clearer views towards the site. Views from Millport Conservation Area and the Listed Buildings therein tend to be curtailed by Craigengour Hill. Some views towards the site are, however, available from the western end of the Conservation Area.

6.6.9 Views towards the site from designated heritage assets beyond the islands on Bute and Arran tend to be curtailed to some degree by Great and Little Cumbrae, though the hills beyond the site are visible.

Proposed Approach

Baseline Studies

6.6.10 The initial appraisal of the site's archaeological potential will be augmented through the review of cartographic sources, any geotechnical data that may be available for the site and Historic Environment Record (HER) data from West of Scotland Archaeology Service. In addition, the site will be visited as will selected heritage assets in the surrounding area. The results of the baseline studies will be presented in a technical appendix.

Assessment of Effects

6.6.11 The assessment of effects will be undertaken with reference to the guidance provided in the EIA Handbook (NatureScot & HES 2018). In line with the guidance, the magnitude of impact will be assessed in terms of change in cultural significance and sensitivity will be assessed based on the importance of the asset. The assessment of effect significance will take into account the magnitude of impact and sensitivity of receptor.

Scope of the Assessment

6.6.12 The following effects will be assessed:

- Construction effects upon as yet unrecorded heritage assets within the site;
- Operational effects upon:
  - Hunterston Castle (LB14313);
  - Hunterston House (LB14286);
  - Old Lighthouse Little Cumbrae (SM418);
  - Little Cumbrae Castle (SM2195);
  - Fairlie Castle (SM317); and
  - Millport Conservation Area.
- Cumulative operational effects.

6.6.13 The list of assets to be considered in respect of operational effects is based on the results of previous assessments and consultation for previous planning applications, including the operational Hunterston wind turbines neighbouring the site.

6.6.14 The assessment of setting effects will be supported by visualisations. These will be wireframes in the first instance, except for Hunterston House, for which a photomontage will be produced.

Issues Proposed to be Scoped Out

6.6.15 It is proposed to scope out construction phase effects relating to setting. As such effects are temporary and often transitory, they are unlikely to be significant.

6.6.16 It is proposed to scope out operational effects upon heritage assets aside from those identified specifically above. Whilst there is potential for the proposed development to be seen from other assets this will be in the context of the developed coastal strip and there is negligible potential for this to result in significant effects.

6.7 Chapter 7: Landscape, Seascape and Visual Effects

Legislation and Guidance

6.7.1 All Landscape, Seascape and Visual Resources surveys and assessments will be completed in cognisance of the relevant policy, legislation and guidance. The following legislation and guidance will be considered during the assessment:

- An Approach to Landscape Character Assessment, Natural England (2014);
- Coastal Character Assessment Guidance Note Version 1a, SNH (2018);
- Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3), published by the Landscape Institute and Institute of Environmental Management and Assessment (2013);
- Guide to Best Practice in Seascape Assessment, Maritime Ireland/Wales INTERREG Report No. 5. Published by Countryside Council for Wales, Brady Shipman and Martin, University College Dublin (2001);
- Landscape Character Assessment: Guidance for England and Scotland, published by Scottish Natural Heritage and the Countryside Agency (2002);
- Landscape Institute Technical Guidance Note 06/19: Visual Representation of Development Proposals (September 2019);
- Seascape/Landscape Assessment of the Firth of Clyde, Firth of Clyde Forum, (2013);
- The European Landscape Convention, Council of Europe, ETS No. 176 (2000, ratified 2006); and
- The Siting and Design of Aquaculture in the Landscape: Landscape and Visual Considerations (SNH) (2011).

Baseline Information

Study Area

6.7.2 To establish the baseline environment for the Project a preliminary Zone of Theoretical Visibility (ZTV) has been prepared. The Project includes a cable extrusion tower up to 185m high. Relevant UK guidance on the landscape and visual effects of tall structures has been developed for the wind energy industry. A study area of a 50 km radius for turbines 150 m high to blade tip and taller is recommended. This reflects the distance that turbines of this height would potentially be visible to the human eye. A preliminary ZTV has been prepared to a 50 km radius from the proposed extrusion tower structure to ensure that all landscape, seascape and visual receptors that may experience significant effects are identified, see Figure 5.1

Desktop Study

6.7.3 An initial desk-based review of literature and data sources to support this Scoping Report has identified a number of baseline landscape character and landscape designations datasets (See Figures 5.1 and 5.2).

site-specific Survey Data

6.7.4 No site-specific field surveys have been undertaken to inform the Scoping Report for Landscape, Seascape and Visual Resources. This is because viewpoint photography will be undertaken following consultation, to confirm appropriate candidate viewpoint locations and receptors. Consultation with key stakeholders to identify potential visual receptors is a standard approach to Landscape, Seascape and Visual Resources assessments and would include SNH and local authorities. This will also be used to inform the baseline and assessments included within the EIA Report.

Proposed Approach

6.7.5 The Landscape, Seascape and Visual Resources EIA report will follow the methodology set out in Section 4.4 The following approach will be taken:

- The baseline stage will evaluate the sensitivity or nature of receptors through the analysis of their susceptibility to change as a result of the Proposed Development, and value;
- The nature or magnitude of impact on receptors will be evaluated using current best practice guidance; and
- Significance of effect will be assessed through a combination of sensitivity/susceptibility and magnitude to establish which are significant. Professional judgement informed by best practice guidance and consultation will be used to determine significance.

Baseline studies

Baseline Characterisation

6.7.6 The following forms a summary of the data collated and work undertaken to date and is illustrated in Figures 5.2 and 5.3.

- Preliminary review of legislative and policy context;
- Review of landscape designations;
- Preliminary review of national, regional and local landscape/coastal character assessments including landscape character areas and types; and
- Preparation of preliminary proposed ZTV.

National Character

6.7.7 At a national scale NatureScot undertook to republish, in 2019, Landscape Character Types (LCT) identified by SNH in regional studies undertaken in the 1980 and 1990's. The site is located in an LCT 59: Raised Beach Coast and Cliffs.

6.7.8 SNH also define 13 National Coastal Character Types. The site and immediate surroundings are located in Type 10: Outer Firth with Islands.

Regional Landscape Character

6.7.9 SNH appointed Land Use Consultants to undertake a landscape characterisation of Ayrshire. The *Ayrshire Landscape Character Assessment: No 111* was published in 1998. The Proposed Development site is located within the Inner Firth of Clyde landscape character area. This is a

semi-sheltered stretch of water with steeply rising shorelines, often backed by wooded slopes. Many of the coastal fringes are settled and pleasure craft and commercial shipping are a typical feature.

6.7.10 At a local level the site is located within the Raised Beach Coast landscape character type which extends around large parts of the coastline of the mainland and islands of the Firth of Clyde. This character type occurs where areas of higher ground reach the coast and where the raised beach is visible as a level shelf backed by steep sometimes craggy escarpments, representing the former cliff line.

Local Landscape Character

6.7.11 The local landscape has a long history of industrial and commercial uses. The Development site occupies approximately 60ha of disused and derelict land formerly part of the Hunterston Coal Yard. The industrial/commercial character of the locality extends to the Hunterston Nuclear Power Station and the decommissioned SSE National Offshore Wind Turbine Test Facility.

Designated Landscapes

6.7.12 The following designated landscapes are located within the study area:

- North Arran National Scenic Area - associated with the landscape and coastal seascapes of the northern half of the Isle of Arran. This designation also contains the North Arran Wild Land Area associated with the mountainous landscapes of the northern half of the Isle of Arran.
- Kyles of Bute National Scenic Area – associated with the landscapes and sea lochs of the northern tip of the Isle of Bute.
- Area of Panoramic Quality - associated with the sea lochs of the mainland to the north of the Isle of Bute.
- Clyde Muirshiel Regional Park - upland landscape immediately east of the Development site which extends north to Greenock. The majority of this area is also designated as an Area of Sensitive Landscape Character. This designation also contains the Waterhead Moor Muirshiel Wild Land Area located in the heart of the Regional Park.
- Kellburn Garden and Designed Landscape – associated with the Kellburn Castle estate north of the nearest settlement at Fairlie.

Key Visual Receptors

6.7.13 Land-based receptors on the mainland or on the Isle of Bute, Isle of Arran or Great Cambrae within the coastal landscape of the ZTV likely to have views of either the construction, operation and maintenance or decommissioning activities are as follows:

- Walkers, equestrians and cyclists using the public rights of way network including the Ayrshire Coastal Path;
- Users of beaches, public open space;
- Occupiers of residential properties at Fairlie, Largs, West Kilbride, Dunoon and Broddick;
- Tourists and visitors using facilities such as hotels and cafes within settlements;
- Tourists and visitors at coastal caravan and camping sites;
- Tourists and visitors at attractions including Hunterston Catle and House and Kelburn Estate;
- Occupiers of vehicles travelling on the A78 Irvine Road;
- Passengers on trains on the west coast railway line;
- Passengers on ferries to Cambrae and Isle of Arran; and

- Residents and walkers at high points at Goldenberry Hill, Clyde Muirshiel Regional Park and Goat Fell Isle of Arran.

Marine Receptors

6.7.14 The sea area is relatively busy and is used by both commercial and recreational vessels. Extensive recreational boating occurs in the area of sea associated with the coastline and ferry route crossings are located between the mainland and the Isle of Arran and Great Cambrae. Other recreation activities, including canoeing, kayaking, windsurfing, kite surfing and scuba diving can be found along the coast with activities expected to stay within 1 km of shore.

Approach to Mitigation, Enhancement and Monitoring

6.7.15 The provision of suitably designed strategic green infrastructure will be considered to mitigate effects on landscape, seascape and visual resources and enhance the post-industrial location. Proposals will complement and extend the existing green estate, linking with the surrounding rural landscape and coastal and marine environment. Hard and soft landscape proposals together with a vegetation retention strategy will seek to integrate the Project with existing and proposed buildings and infrastructure to improve the coastal character and quality and mitigate any effects on resources within the study area. Opportunities for advanced planting in the early stages of construction will be sought, where practicable. The vegetation retention strategy and soft landscape mitigation will be designed in consultation with the ecological consultant to ensure a co-ordinated approach to biodiversity for the Project.

Assessment of Effects

6.7.16 It is proposed that the findings of the assessment of effects on landscape, seascape and visual resources would be set out as a topic chapter within the EIA report, supported by technical appendices where appropriate.

6.7.17 The likely significant effects within the EIA Report will be described covering type (i.e. direct, indirect or cumulative) and temporal nature (short, medium and long term, permanent or temporary).

Visualisations

6.7.18 Wirelines/photomontages will be used to illustrate the potential seascape, landscape and visual impact of the Project, and it is proposed that the photomontages would follow recognised UK guidance for the visualisation of development. Photomontages would illustrate Year 1 when the development is operational and landscape planting proposals are immature (worst case scenario) and Year 15 when landscape planting proposals have matured, providing effective mitigation.

Scope of the Assessment

6.7.19 The landscape, seascape and visual impact assessment will include a determination of the landscape character of the site and character of the wider landscape and seascape of the study area, the quality, condition and value of the landscape and seascape, the existing land cover and the site's existing topography. This will be undertaken through a desk study and site visits. A detailed study of the visual setting of the site and the potential visual receptors that may be affected by the Proposed Development will also be undertaken through desk study and site visits which will inform the extent of the study area.

6.7.20 Representative viewpoints will be established and agreed with SNH and local authority Landscape Officer. Photographs will be taken at each viewpoint and used to create a panorama of the view. The precise locations (Ordnance Survey grid reference), date, time of day and weather conditions will be described for each photograph viewpoint taken.

6.7.21 Measures to maximise beneficial landscape, seascape and visual effects, and to avoid, reduce, remedy or compensate for adverse effects will be identified, as part of an iterative design process.

6.7.22 Sequential effects on receptors using linear routes within the study area will be assessed.

6.7.23 Cumulative effects on landscape, seascape and visual resources arising from the proposed development and in combination with other projects within the study area will be included in the assessment. The impacts assessed for visual receptors will include simultaneous, successive and sequential cumulative effects.

Potential Significant Effects

6.7.24 The Project has the potential to result in the following landscape and visual effects during construction and operation:

- Landscape features: the proposed scheme would result in a change in existing land cover and land use.
- Landscape character: the proposed scheme would result in a change in character to the existing site, and therefore the nature of the changes, both in the context of the site and its immediate surroundings, and the wider landscape and seascape character will be considered.
- Views: new built form would result in a change in views experienced by visual receptors, principally from the immediate vicinity of the site, but also from the wider landscape and seascape as a result of the cable extrusion tower up to 185m high.

Issues Proposed to be Scoped Out

6.7.25 All landscapes and seascapes located outside of the ZTV and all visual receptors within these locations are proposed to be scoped out of the assessment as the Project would not be visible from these locations and no change to views or character would occur.

6.8 Chapter 8: Hydrology and Flood Risk

Legislation and Guidance

Legislative Context

6.8.1 The following key legislation and policy documents relevant to hydrology and flood risk will be considered within the assessment process:

- Flood Risk Management (Scotland) Act 2009: Delivering Sustainable Flood Risk Management;
- Flood Risk Management (Scotland) Act 2009: Surface Water Management Planning Guidance ;
- The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) A Practical Guide;
- The Water Environment (Miscellaneous) (Scotland) Regulations 2017; and
- Flood Risk Management (Scotland) Act 2009.

Planning Policy Context

National Planning Policy

- The National Planning Framework (NPF) for Scotland (Scottish Government, 2014); and
- Scottish Planning Policy (SPP) (Scottish Government, 2020).

Local Planning Policy

- North Ayrshire Local Development Plan 2 (LDP2) (2019).

Relevant Guidance

6.8.2 This chapter has been produced in accordance with the principles outlined in the following key guidance documents:

- Development Management Guidance: Flood Risk (SEPA 2017);
- Natural Flood Management Handbook (Scottish Environmental Protection Agency (SEPA) 2015);
- SEPA Guidance Note 8 standing advice for planning authorities and developers on development management consultations (SEPA 2012);
- Regulatory Position Statement – Developments on Peat (SEPA 2010a);
- Developments on Peatland; Guidance on the Assessment of Peat Volumes, reuse of excavated peat and the minimisation of waste (Scottish Renewables 2012);
- Policy No. 19, Groundwater protection policy for Scotland (SEPA 2009);
- WAT-SG-25, Good practice guide - river crossings (SEPA 2010b);
- Climate Change Allowances for flood risk assessment in land use planning (SEPA 2019);

6.8.3 The design and construction of the Project would also adhere to the relevant regulatory and industry best practice guidance, including, but not limited to:

- Guidance for Pollution Prevention (GPP) 1: A general guide to preventing pollution (SEPA *et al* 2020)
- GPP 2: Above ground oil storage tanks (SEPA *et al* 2017a);
- GPP 4: Treatment and disposal where there is no connection to the public foul sewer (SEPA *et al* 2017b);
- GPP 5: Works and maintenance in or near water (SEPA *et al* 2018a);
- GPP 8: Safe storage and disposal of used oils (SEPA *et al* 2017c);
- Pollution Prevention Guidelines (PPG18): Managing Fire Water and Major Spillages (SEPA *et al* June 2000);
- GPP 20: Dewatering of underground Ducts and Chambers (SEPA *et al* 2018b);
- GPP 21: Pollution incident response Plans (SEPA *et al* 2017d);
- GPP 22: Dealing with spills (SEPA *et al* 2018c); and
- GPP 26: Safe storage of drums and Intermediate Bulk Containers (IBCs) (SEPA *et al* 2018d).

6.8.4 Working at Construction and Demolition Sites: PPG 6 Pollution Prevention Guidelines (SEPA *et al* 2012) was withdrawn in December 2015. However, it still provides useful best practice guidance to inform this assessment.

Baseline Information

Study Area

6.8.5 A 1 km buffer around the converter site for data collection has been selected primarily to allow for variance in the final location and to identify any existing assets or infrastructure that might affect or be affected by the project. A 1 km radius is considered appropriate for data collection taking into account the nature of the development and likely zone of influence on hydrological receptors. Given

the landscape surrounding the development and ongoing anthropogenic activities it will be difficult to ascertain the exact source of any impacts on water quality beyond 1 km.

6.8.6 A 250 m buffer for associated cable connections has been selected for data collection purposes to allow for variance in final location and alignments and to identify any existing assets or infrastructure that might affect or be affected by the project. A 250 m radius is considered appropriate for data collection taking into account the nature of the development and likely zone of influence on hydrological receptors. Given the landscape surrounding the development and ongoing anthropogenic activities it will be difficult to ascertain the exact source of any impacts on water quality beyond 250 m.

Baseline Conditions

6.8.7 The baseline conditions presented below has been gathered through a desk study using publicly available data within the 250 m study area. Initial searches were conducted using the following sources:

- Ordnance Survey (OS) Mapping (Ordnance Survey 2021);
- BGS Geology of Britain Viewer: 1:50,000 Geological Mapping (British Geological Society 2021a);
- SEPA Flood Hazard and Risk Information Mapping (Scottish Environment Protection Agency 2021a);
- SEPA Scotland's Environment Data Centre (Scottish Environment Protection Agency 2021b);
- SEPA Water Environment Hub (Scottish Environment Protection Agency 2021c);
- SEPA Reservoir Flood Map (Scottish Environment Protection Agency 2021d);
- Nature Scot site Link (Designated Sites) Mapping (Scotland's Nature Agency 2021);
- Scotlands Environment – Scotland's Soils (Scottish Government 2021);
- North Ayrshire Council Strategic Flood Risk Assessment (2018);and
- North Ayrshire Council Flooding webpage (North Ayrshire 2021).

Hydrological Setting

6.8.8 The Project site is located on land 50m to the west of the Ayrshire Coastal path, adjacent to the Largs Channel, approximately 950 to the south west of Fairlie Railway Station. It is part of the Hunterston port.

6.8.9 The Burn Grill runs along the south boundary of the site. The Burn Grill catchment covers an area of 8.99 km^2 and flows from West Kilbride in the south to the south of the site, discharging to the sand. A tributary of the Burn Gill, known locally as the Kilruskin Burn drains the east of the catchment.

6.8.10 The Glenn Burn runs along the east boundary of the site. Its catchment covers an area of 4,9 km^2 flowing west before passing under the A78 at Glenburn Bridge, where it is diverted north, around the Hunterston Terminal, before finally flowing out onto Southannan Sands.

Surface Water Body Status

6.8.11 The SEPA Water Environment Hub (SEPA, 2021) indicates that one surface water body is present adjacent to the west boundary of the Project site. The surface water body is allocated a WFD groundwater classification which is outlined in **Error! Reference source not found.**4.

Table 6.2: WFD Surface Water Classification

Name (SEPA ID)	Water Body Type	Classification (2019)
Largs Channel (Fairlie Roads) (ID: 200026)	Coastal Water Body (approximately 29.9 km^2 in area)	Overall – Good

Name (SEPA ID)	Water Body Type	Classification (2019)
		Physical condition & barriers – Good Water Quality – Good

Geology and Hydrogeology

6.8.12 British Geological Survey (BGS) online mapping (1:50,000 scale) indicates that the site is situated on Marine Beach Deposits comprising of sand and gravel. This is underlain by bedrock geology classified as Kelly Burn Sandstone Formation. The bedrock is classified as a Secondary A Aquifer, defined as 'formations formed of permeable layers capable of supporting water supplies at a local scale, in some cases forming an important source of base flow to rivers'.

6.8.13 There are two designated site of Special Scientific Interest (SSSI)) within close proximity to the site indicated as Southannan Sand and Hunterston Sand to the west and southwest of the site respectively.

6.8.14 A number of BGS publicly available borehole records are available within the Project site boundary. Boreholes record reference no. NS25SW73 indicate the following:

- Loose brown clayey fine to medium sand up to 2.45m bgl;
- Medium dense brown clayey fine to medium sand with fine to coarse gravel-size fragments of sandstone up to 3.65m bgl;
- Medium dense brown clayey fine to medium sand up to 6.40m bgl;
- Firm brown very sandy silty clay up to 6.7m bgl;
- Medium dense fine to coarse gravel-size fragments of sandstone with traces of sand below up to 8.55m bgl;
- Red-brown fine to medium grained sandstone up to 9.45m bgl.

6.8.15 The soils beneath the site are described as 'Raised beach sands and gravels derived from Carboniferous rocks with some Old Red Sandstone material' by the National Soils of Scotland Map (Scottish Government, 2021).

6.8.16 According to the BGS Aquifer Designation Mapping (BGS 2021, online), the bedrock is classified as a moderately productive aquifer.

Groundwater Body Status

6.8.17 The SEPA Water Environment Hub (SEPA, 2021c) indicates that one groundwater body is present within or in close proximity to the Project site. The groundwater body is allocated a WFD groundwater classification which is outlined in **Error! Reference source not found.**5.

Table 6.3: WFD Groundwater Classification

Name (SEPA ID)	Water Body Type	Classification (2019)
West Kilbride (ID: 150534)	Groundwater (approximately 61.2 km^2 in area)	Overall – Good Water flows and levels – Good Water Quality – Good

Existing Flood Risk

6.8.18 SEPA and Scottish Planning Policy identify four specific flood risk categories to assess the potential risk of flooding at a site. These four categories are set out below:

- High likelihood (risk): A flood event is likely to occur in the defined area on average once in every ten years (1:10). Or a 10% chance of happening in any one year.
- Medium likelihood (risk): A flood event is likely to occur in the defined on average once in every two hundred years (1:200). Or a 0.5% chance of happening in any one year.

- Low likelihood (risk): A flood event is likely to occur in the defined area on average once in every thousand years (1:1000). Or a 0.1% chance of happening in any one year.
- Little or no risk: A flood event is likely to occur in the defined area on average less than once in every thousand year (1:1000). Or <0.1% chance of happening in any one year.

6.8.19 Review of the SEPA Flood Map for Planning identifies that the majority of the site will remain dry during all modelled fluvial scenarios. Only the access road to the north east of the site will witness flooding during 'low', 'medium' and 'high' risk fluvial scenarios.

6.8.20 The site does not lie within the tidal extent for any of the modelled scenarios, as shown by the SEPA Flood Maps with the exception of the pier in the north east of the site which lies within the tidal range of the Firth of Clyde during all modelled scenarios.

6.8.21 Review of the SEPA's surface water map indicates the site is predominantly at 'very low risk' of surface water flooding. Areas of the site at 'high risk', whereby each year these areas have a chance of flooding of greater than 3.3%, correspond with the access road to the north east of the site and linear areas throughout the centre of the site, likely to be associated with local depressions within the site area.

6.8.22 The access road to the site and the area along the east boundary lie within the extent from reservoir flooding. The map shows that the potential source of flooding in this instance is the Glenburn reservoir which is located at approximately 1.8Km to the southeast of the site.

Strategic Flood Risk Assessment (SFRA) and Local Flood Risk Management Plan

6.8.23 The North Ayrshire SFRA provides a strategic overview of flood risk management issues in North Ayrshire. It was produced in February 2018.The study area was identified to lie within 'Largs to Stevenson' Potentially Vulnerable Area (PVA) reference no. 12/03 by SEPA's National Flood Risk Assessment within the Ayrshire Local Plan District in 2011

6.8.24 Along the coastline there may be an additional level of risk due to wave overtopping which was not taken into account at the modelling stage of this assessment. As a consequence, areas at risk of flooding may not have been identified.

6.8.25 The Ayrshire Shoreline Management Plan (SMP) has been completed by North and South Ayrshire Councils. It was adopted by North Ayrshire Council on 4 September 2018. The majority of the shoreline in the close vicinity to the site is composed of hard or artificial material. Sediment movement is relatively limited, with the net drift being in a northerly direction and only a minor element of southerly drift movement between Cloch Point and Ardgowen Point.

Proposed Approach

6.8.26 The study area will also include any surface water features and resources elsewhere, which could be potentially be affected within the confines of the defined study area via hydrological connectivity.

6.8.27 A detailed baseline study will be undertaken to establish the current conditions of the water environment. Information will be drawn from a variety of sources as detailed above.

6.8.28 The assessment of impacts on water resources will be undertaken using a source-pathway-receptor model and a risk-based assessment. This will be based on combining assessments of both the likelihood and consequence of any potential impact in line with the Scottish EIA Regulations. This approach embraces principles of the WFD.

6.8.29 The evaluation of the significance of potential effects on the water environment will be in accordance with the EIA methodology set out in Section 1 of this report.

6.8.30 Flood risk will be assessed in line with Scottish Planning Policy as well as local planning policy. The assessment will include a desk study of maps and published information.

6.8.31 A Flood Risk Assessment (FRA) for the site will be prepared, to take into account the impact that the scheme may have on the surface water run-off regime. This will look at the vulnerability to flooding from other sources as well as from river and sea flooding and the potential to increase flooding risk elsewhere.

Likely Significant Environmental Effects

Overview

6.8.32 The baseline characterisation set out above enables the identification of the nature and likely significance of effects. The hydrological and flood risk environmental assessment will consider the potential impacts to environmental receptors and the pathways by which the receptors may be affected. The following terms have the following meanings in this section:

- Source: potential contaminant sources, ground/channel disturbance;
- Pathway: the mechanism by which the source may affect a receptor; and
- Receptor: identified features that may be affected, based on the sensitivity of the site.

6.8.33 This includes consideration of the probability of harm occurring, taking into account potential sources of contamination and receptors that may be affected by such contamination.

6.8.34 The significance of potential effects likely to occur during construction and operation of the project has been determined by consideration of the sensitivity of the key attributes of the hydrology and flood risk that may be affected and the magnitude of the potential impact.

6.8.35 An initial assessment of potential effects associated with the project has been undertaken for each stage of the development on hydrology and flood risk in the study area. A summary of the anticipated likely significance impacts upon hydrology and flood risk receptors as a consequence of each of development is given below.

Construction effects

6.8.36 The identified potential impacts on water resources resulting from the construction of the project are as follows:

- Sediment mobilisation in surface runoff from exposed soil surfaces during construction;
- Potential contamination of surface water features or groundwater by oils, lubricants and fuels originating from construction vehicles or store areas;
- Impacts on the quality of private water supplies;
- Changes to groundwater movement; and
- Longer term impacts on surface water abstractions.

6.8.37 The identified potential impacts on flood risk resulting from the construction of the project are temporary changes to natural surface water drainage patterns and run-off rates and resultant potential for flooding on or arising from construction of above ground infrastructure.

Permanent and operational effects

6.8.38 The identified potential impacts on flood risk resulting from the operation and maintenance of the project are as follows:

- Permanent increase in surface run-off as a result of increased impermeable surface areas and resultant potential for flooding on or arising from above ground infrastructure; and
- Temporary changes to natural surface water drainage patterns and run-off rates and resultant potential for flooding on, or arising from maintenance of above ground infrastructure.

Opportunities for Mitigation

6.8.39 To minimise effect of watercourses, any temporary haul roads required will be located at least 10 m from watercourses where practicable.

6.8.40 Pollution control measures will be put into place during the construction phase of the development in order to minimise the risk posed to receiving surface water features.

6.8.41 Good practice mitigation measures that will be considered include:

- Minimising areas of exposed soil;
- Temporary storm water management system;
- Provision of specific bunded storage area; and
- Development of pollution incident reaction plan.

6.8.42 Appropriate measures will be put in place to mitigate potential adverse impacts on flood risk. These may include use of sustainable drainage techniques, ensuring that the development will not lead to an increased risk of flooding, either onsite or downstream.

Summary

Potential Impact

6.8.43 The assessment will consider whether the likely impacts of the project on hydrology and flood risk are significant. This will include the potential risk of contaminated water run-off, impacts on water quality and run-off rates during construction and operation.

6.8.44 The assessment of the project impacts on the hydrological environment would include those on water resources, surface water drainage, flooding and water quality environments.

6.8.45 This would include:

- Baseline data collection.
- site reconnaissance.
- Identification of potential impacts.
- Identification of an appropriate drainage design strategy for the converter station location (e.g. sustainable drainage techniques where feasible).
- Consultation with SEPA and North Ayrshire Council will be sought on the level of flood risk.
- An FRA for the converter station.
- Development of a mitigation strategy (if required).
- Consideration of flood attenuation measures, where required.

6.8.46 The impact that the scheme may have on identified hydrological features and flood risk will be described. Any likely significant impacts of the proposed scheme will be assessed with suitable mitigation measures incorporated into the development design, where practicable.

Consultation

6.8.47 Following the acceptance of this scoping assessment, initial consultation will be undertaken with the Scottish Environment Protection Agency (SEPA) and Local Authority (North Ayrshire Council) to determine suitable data sets and discuss potential engineering techniques used.

6.9 Chapter 9: Hydrogeology, Geology and Ground Conditions

Legislation and Guidance

Legislative Context

6.9.1 The following key legislation and policy documents relevant to hydrogeology, geology and ground conditions will be considered within the assessment process:

- Groundwater (England and Wales) Regulations 2009;
- The Water Supply (Water Quality) Regulations 2016;
- The Private Water Supplies (England) Regulations 2016, as amended;
- The Water Resources Act 1991 (as amended);
- The Water Act 2014;
- The Environment Act 1995;
- Environmental Protection Act (EPA) 1990 (as amended);
- Contaminated Land (England) Regulations 2006 (as amended);
- Environmental Permitting (England and Wales) Regulations 2016 (as amended);

Guidance Documents

6.9.2 Guidance documents relevant to hydrogeology, geology and ground conditions that will be considered within the assessment process include the following:

- Contaminated Land (Scotland) Regulations 2005 (as amended);
- Environmental Protection Act 1990: Part 2A - Contaminated Land Statutory Guidance, Natural Scotland (2006);
- Environment Agency (2020) Land Contaminated: Risk Management (LCRM 2020);
- National Planning Policy Framework / National Planning Framework (Scotland);
- Construction Industry Research and Information Association (CIRIA) Document C665: Assessing Risks Posed by Hazardous Ground Gases to Buildings (CIRIA, 2007);
- British Standard requirements for the 'Investigation of potentially contaminated sites - Code of practice' (ref. BS10175:2011+A2:2017);
- British Standard requirements for the 'Code of practice for ground investigations' (ref. BS5930:2015+A1:2020);
- British Standard requirements for the 'Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings' (ref BS8485:2015+A1:2019); and
- Defra Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance (Defra, 2012).

Baseline Information

Data Collated to Date

6.9.3 For the purposes of this scoping assessment, preliminary desk based research has been undertaken using freely accessible publicly available sources. These include Geology of Britain viewer (British Geological Survey) and MAGIC map. No existing Phase 1 Preliminary Risk Assessment reports or Phase 2 site Investigation reports which cover the application site have been reviewed as part of this assessment.

Existing Baseline Conditions

6.9.4 British Geological Survey (BGS) mapping (1:50,000-scale) indicates that the stratigraphic sequence beneath the site comprises Made Ground (artificial deposits) in the northern area of the site only.

6.9.5 Superficial deposits of Marine Beach Deposits (sand and gravel) are indicated to be present beneath the northern area of the site and Raised Marine Deposits (clay, silt, sand and gravel) beneath the southern area of the site.

6.9.6 The underlying Bedrock is indicted to comprise of the Kelly Burn Sandstone Formation (Sandstone). This strata is classified as a Moderately productive aquifer and represents a low to moderately sensitive receptor.

6.9.7 Southannan Sands SSSI is located immediately to the west of the site. It is understood to be designated for its biological importance relating to the intertidal sandflats and not its geological importance. The SSSI and associated foreshore including the Clyde Estuary represent sensitive receptors.

Proposed Approach

Scope of Baseline Studies

6.9.8 A desk-based Phase 1 Preliminary Risk Assessment will be undertaken to inform the hydrogeology, geology and ground conditions chapter and will be included as a technical appendix. This will include an assessment of potential sources of contamination associated with any historical and current land uses both on site and in the surrounding area. A preliminary conceptual site model will be produced, indicating how contamination may impact the identified receptors via pollutant linkages.

6.9.9 The assessment will include an evaluation of ground conditions and the nature of any contamination potentially present. A generic quantitative risk assessment will be carried out in accordance with current guidance and best practice. The conceptual site model will be developed to identify potentially active source-pathway-receptor pollutant linkages. If the conceptual site model identifies a potential for significant harm to sensitive receptors through active pollutant linkages, a Phase 2 site Investigation will be designed and implemented to enable a more detailed risk assessment. If residual risk remains, then remediation or mitigation measures may be recommended.

6.9.10 The study area for data collection will be based on a 250 metre buffer around the site. However, the spatial scope of the baseline assessment will include the wider area considered to be in direct hydraulic continuity with the project.

Approach to Assessment of Effects

6.9.11 The likely adverse and beneficial impacts of the Project on hydrogeology, geology and ground conditions will be identified. Such impacts may include the risk of introducing new sources of contamination and/or remediation of any existing contamination.

6.9.12 The likely magnitude of the impacts will be assessed during the construction and operational stages. Both the magnitude of the predicted impact and the value of the feature will be taken into consideration in determining the significance of the effect.

6.9.13 The assessment will follow the approach set out in Section 4.4 with regard to identification of receptor sensitivity, impact magnitude and evaluation of significance of effects. The evaluation of significance will be underpinned by a narrative approach, based on professional judgement.

Approach to Mitigation and Monitoring

6.9.14 The ES will make recommendations, where required, based on the assessment of the baseline conditions and the identification of any potential impacts. This is likely to include measures to be employed by contractors to control spillage, runoff and effects associated with existing

contamination, together with a procedure to be followed should any previously unidentified contamination be encountered during the construction phase.

6.9.15 A number of mitigation measures are likely to be embedded into the design of the Project. It is envisaged that this will include standard construction practices implemented through the CoCP, e.g. appropriate stockpiling of soils, segregation of contaminated material, dust suppression measures and appropriate storage of hazardous materials.

Effects Proposed to be Assessed

6.9.16 The following potential effects will be considered within the EIA process.

Table 6.4: Potential Effects to be Considered – Hydrogeology, Geology and Ground Conditions

Activity	Potential Effects
Construction of proposed development	Temporary effects on adjacent SSSI and Clyde estuary.
	Runoff from construction areas to soils (and subsequent leaching into groundwater, including effects on private water supplies and surface waters.
	Creation of new pathways relating to existing contamination and associated impact on controlled waters and human health receptors.
	Contamination risk to construction workers, including dermal contact and ingestion of existing soil or groundwater contamination, or inhalation of any accumulated ground gases / vapours.
	Contamination risk to the public, e.g. airborne migration and subsequent dermal contact, and ingestion of soil and/or groundwater contaminants, or inhalation of any accumulated ground gases / vapours.
Operation of the proposed development	Long-term effects on adjacent SSSI and Clyde estuary.
	Ongoing migration of existing contaminants /ground gas via active pathways and associated impact on controlled waters and human health.
	Accidental spillages /leaks during routine operation and maintenance of the converter station resulting in new contamination sources.

6.10 Chapter 10: Traffic and Transport

Legislation and Guidance

6.10.1 The potential traffic and transport impacts associated with the development at both the operational and construction phase will be assessed in accordance with the relevant local and national policy and guidance, with specific reference to the following documents:

- Scottish Planning Policy (SPP) (Scottish Government, 2020);
- Guidelines for the Environmental Assessment of Road Traffic (IEMA, 1993) (the IEMA Guidelines);
- Transport Assessment Guidance (Transport Scotland, 2012); and
- Design Manual for Roads and Bridges (DMRB).

Baseline Information

6.10.2 The Traffic and Transport chapter of the EIA will consider the impacts of construction and operational vehicle movements on the surrounding local and trunk road network during the lifespan of the proposed cable manufacturing facility. With this type of development, the construction phase is where the greatest potential for environmental impact lies as the type and number of associated vehicle movements significantly reduces during the operational phase of the facility.

6.10.3 Vehicle movements associated with construction of the site are likely to comprise Abnormal Indivisible Loads (AILs), Heavy Goods Vehicles (HGVs), Light Goods Vehicles (LGVs) and cars associated with the general construction site workforce traffic. During operation, vehicle movements will be primarily associated with workforce traffic and materials deliveries as the majority of the factory production output will be carried by ship.

6.10.4 Access to the site is gained via the Southannan Roundabout which connects the internal port road of Clydeport Road directly to the trunk road network at the A78.

6.10.5 A proposed access route for vehicles during construction and operation phases will be identified within the assessment, with access to the site from the A78. This will involve determining the most appropriate routes for both construction and operation phases and will assess any impacts imposed on local sensitive receptors as a result. Proposed routing may involve increased traffic through or bypassing the towns of Irvine, Ardrossan and West Kilbride to the south of the site and the towns of Largs and Fairlie to the north of the site.

6.10.6 The access route will be assessed for any abnormal loads should these be required during the construction stage of the project. It is to be expected that the majority of construction traffic will consist of standard HGVs and LGVs.

6.10.7 The area surrounding the site has a history of industrial and manufacturing use and as such, the local road network currently supports access by HGV. Whilst this provides some sanction that the environmental impacts of the development on the surrounding road network can be satisfactorily mitigated, this will be reviewed in consideration with the specific parameters of this development project.

Baseline studies

Desk Study

6.10.8 In order to inform an assessment of baseline conditions on the road network surrounding the development site, as well as the proposed access route, existing traffic flow data will be sourced from Transport Scotland and North Ayrshire Council. This can be supplemented with data from previous planning proposals as required, and traffic growth factors will be agreed upon to determine approximate traffic flows associated with the development during the construction period.

Traffic Surveys

6.10.9 Traffic surveys may be undertaken to support the establishment of baseline conditions on the road network should suitable data not be available. This data will be used to inform in the determination of the most appropriate routes for construction and operational vehicle traffic.

6.10.10 The traffic flow information gathered during the baseline assessment will be used to indicate the appropriate AADT (Annual Average Daily Traffic) flows on the relevant routes, including a representation of baseline HGV percentages, and will also provide baseline information for other study areas such as noise and air quality.

Abnormal Vehicle Route Assessment (AVRA)

6.10.11 If it is concluded that a specific route is required for AILs, a supporting Abnormal Vehicle Route Assessment (AVRA) will be undertaken in order to assess the suitability of a proposed route for AILs and will detail any improvement works required to be undertaken.

Assessment of Effects

6.10.12 The assessment of traffic and transport effects associated with the proposed development will be undertaken in accordance with the Guidelines for the Environmental Assessment of Road Traffic publishes by the IEMA (IEMA, 1993), which remains the most recent specific guidance in this regard.

6.10.13 In accordance with the IEMA guidance, the purpose of the assessment will be to focus on environmental impacts which could be considered as potentially significant where the new development will likely result in rises to changes in traffic flows. This involves the identification of the sensitive receptors which would be affected following the changes to traffic conditions resultant of the development.

Zone of Influence

6.10.14 The Zones of Influence related to transport will be primarily linked to sensitive receptors along the proposed main access route to the site from the trunk road network. This includes drivers on the A78 trunk road and developments/settlements through which the A78 passes.

Design and Mitigation

6.10.15 The following design and mitigation strategies for the proposed development would be implemented to reduce any potential impacts imposed by traffic and transport during the construction phase of the proposed development:

- Details of specific routing and timing of construction traffic will be established in a CEMP and agreed with the project manager, Transport Scotland and North Ayrshire Council as required.
- Details of directional signage will be established in a CEMP to mitigate any impact on the local road network as a result of construction vehicles visiting the site. This advisory signage will be in place prior to the commencement of works.
- Segregation of pedestrian and vehicle routes within construction site of development to increase safety

Scope of the Assessment

6.10.16 With the above being considered, the following environmental impacts will be considered within the Traffic and Transport EIA chapter:

- Severance
- Driver Delay
- Accidents and Safety

6.10.17 Where relevant, consideration of noise impacts from construction and operational phase traffic would be included within the Noise and Vibration EIAR Chapter, and any air quality impacts will likewise be considered in the Air Quality EIAR Chapter.

6.10.18 In addition to the list of impacts identified above, the overall carrying capacity of the determined access route will be considered, although it is not expected that road capacity will be a significant issue.

6.10.19 The access to the proposed development is designed to take place immediately off the A78, which forms part of the Trunk Road Network. Therefore, in terms of the hierarchy of the local road network, the changes in traffic resulting from the proposed construction and operation of the proposed development is likely to be of a scale that is commensurate with the ability of the road to cater for variation in strategic traffic.

Potential Effects During Construction

6.10.20 The main transport constraints associated with the proposed development relate to the impact of construction traffic consisting of HGVs, LGVs and AILs on sensitive receptors along the main access route.

6.10.21 Overall traffic volumes will be profiled for the development throughout the anticipated construction period, which will allow a consideration of daily changes in traffic flow against the established baseline. To quantify the significance of changes in traffic flows, the following IEMA criteria will be used to determine a screening process (IEMA Guidelines, 1993):

- 'Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)'; and;
- 'Include any other specifically sensitive areas where traffic flows will increase by 10% or more.'

6.10.22 Changes to traffic flow, composition and the number of anticipated movements associated with construction of the development along the Trunk Road Network will contribute to determining if severance is likely to be an impact of significance.

6.10.23 Driver delays to non-development traffic could occur at several points on the network surrounding the site including the Southannan Roundabout where there will be an increase in construction vehicle movements exiting to the port access road to the site.

6.10.24 During construction, the level of significance in the change of traffic composition and flow could contribute to an increase in accident levels.

6.10.25 Potential environmental impacts including severance, driver delay and accidents and safety are to be considered on a case-by-case basis using professional judgement and reasoned argument. The significance of the impacts assessed will be determined by the magnitude and likelihood of the impact occurring.

Potential Effects During Operation

6.10.26 The potential impacts associated with the operational stage of the development are the same as those which will be considered for the construction stage.

6.10.27 Details of operational vehicles movements will be provided and again routing will be identified so that the impact can be measured against the local traffic baseline conditions. This will also include consideration of likely staff movements associated with site shifts.

6.10.28 Operation performance of the local road network and its ability to accommodate the proposed development will be considered separately through the planning application, likely within a Transport Assessment or Statement.

Issues to be Scoped Out

6.10.29 Visual impacts relating to obstruction and intrusion are to be scoped out as the impacts imposed by traffic will be limited, particularly as the local road network contains the A78 Trunk Route.

6.10.30 There are no pedestrian facilities within the vicinity of the site, and no likelihood of pedestrian movements that would be impacted by the proposed development. Part of the Ayrshire Coastal Path runs parallel to the A78 Irvine Road. However, this is segregated from the road and therefore,

any increase in traffic flow or change in traffic composition would not significantly impact pedestrian movements. Therefore, pedestrian delay and amenity can be scoped out of the EIA.

6.10.31 Following the intended operational period of 35 years, market conditions will be reviewed to determine if operation is to continue. In the circumstance where the facility is to be decommissioned and the site is to be reinstated, traffic associated with this process would include HGVs, LGVs, ALVs and cars. It is anticipated that vehicles associated with decommissioning would be significantly less than those associated with construction. At this early stage of the process, it is not possible to quantify the traffic associated with decommissioning, nor is it possible to determine the impact of this traffic as the baseline will change over time. Therefore, the traffic and transport impacts associated with the process of decommissioning will be scoped out of the EIA.

6.11 Chapter 11: Noise and Vibration

Legislation and Guidance

6.11.1 The chapter will consider the potential construction and operational noise and vibration effects of the project at noise sensitive receptors (NSRs) identified as being potentially affected by the development. The assessment will identify where significant effects may occur, what mitigation measures may be necessary, what residual effects there may be and what post commissioning monitoring will be undertaken.

6.11.2 All surveys and assessments will be completed in cognisance of the relevant policy, legislation and guidance. The following legislation and guidance will be considered during the assessment.

- Control of Pollution Act 1974 (CoPA);
- PAN 01/2011 Planning and Noise and associated Technical Advice Note (Scottish Government, 2011);
- BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise (British Standards Institution, 2014);
- BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration (British Standards Institution, 2014); and
- BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound (British Standards Institution, 2019).

Baseline Information

6.11.3 The project site is in a rural location with the majority of surrounding land being agricultural; an area of wetland to the west and scattered wetland. The Ayrshire Coastal path runs alongside the east of the site at around 50 m from the project site boundary.

6.11.4 The nearest NSRs to the project site are residential properties to the east of the site on the opposite side of the A78 Irvine Road, ranging between around 100 m and 150 m from the project site boundary. The village of Fairlie lies to the north-east of the site, with the nearest houses on the Southannan Estate at around 270 m from the site boundary. The tourist attraction Hunterston House is around 800 m to the south-west of the project site.

6.11.5 The main existing source of noise in the vicinity of the project site and NSRs is likely to be from road traffic on the A78 Irvine Road and other local roads. There is also likely to be some noise from vessels in the Clyde estuary. There are other industrial uses in the vicinity, in particular, Hunterston Power Station to the south-west of the project site. However, these are unlikely to contribute significantly to the prevailing noise climate at the nearest NSRs, which are mainly to the north-east of the project site.

6.11.6 Baseline studies were carried out in connection with the EIA that was prepared for the proposed development of the site for a Power Station in 2009/2010. However, the information is limited and out of date, so it is expected that a new baseline study will be required in connection with this project.

Proposed Approach

Baseline studies

6.11.7 A baseline noise survey would be undertaken to quantify the existing noise environment at the relevant NSRs likely to be affected during the construction and operation of the project. Locations for the monitoring would be discussed and agreed with the appropriate Environmental Health Officer at North Ayrshire Council.

6.11.8 Having reviewed the area there are unlikely to be significant sources of vibration in the vicinity of the project site and closest NSRs, so a baseline vibration survey should not be required.

Assessment of Effects

6.11.9 The construction of the project may result in noise and vibration impacts to NSRs in the vicinity. An assessment of construction noise effects would be undertaken in accordance with the guidance contained within BS 5228:2009+A1:2014: Code of Practice for Noise and Vibration Control on Construction and Open sites, Part 1: Noise and Part 2: Vibration (BS 5228).

6.11.10 The available detail on anticipated construction working areas, phases, methods and anticipated plant will be summarised in relation to noise and vibration, and a qualitative assessment of likely compliance with the derived assessment criteria will be undertaken. Where the exact construction details are not known at the time of preparing the EIA Report, assumptions will be made based on professional judgement and experience of similar developments.

6.11.11 An assessment of operational noise effects from the plant associated with the development would be carried out in accordance with the guidance contained within BS 4142:2014+A1:2019 Methods for Rating and Assessing Industrial and Commercial Sound (BS 4142).

6.11.12 An assessment of potential noise impacts arising from any changes in traffic flows as a result of the construction or operation of the project will also be undertaken where applicable.

6.11.13 Where necessary, appropriate levels of mitigation would be identified, in accordance with best practice, to ensure that noise levels are acceptable during both the construction and operational phase.

Scope of the Assessment

6.11.14 The assessment would consider the following impacts:

- noise and vibration from construction activities;
- noise from the operation of the development; and
- noise from construction and operational phase traffic, if applicable.

Issues Proposed to be Scoped Out

6.11.15 Operational plant is not likely to produce substantial levels of vibration. Therefore, an assessment of vibration effects during the operational phase has been scoped out of the assessment.

6.11.16 Noise and vibration impacts during decommissioning are likely to be similar or less significant than the impacts during construction. Therefore, a separate assessment decommissioning impacts should not be required.

6.11.17 Only noise and vibration impacts on human receptors would be provided within the Noise and Vibration EIA Report. If required noise and vibration impacts on ecology would be considered within the Ecology EIA Report.

6.12 Chapter 12: Climate Change

Legislation and Guidance

6.12.1 All surveys and assessments will be completed in cognisance of the relevant policy, legislation and guidance. The following legislation and guidance will be considered during the assessment:

- North Ayrshire Council (2019): Adopted Local Development Plan: Your Plan Your Future;
- North Ayrshire Council (2021): Environmental Sustainability & Climate Change Strategy 2021 – 2023;
- Scottish Government (2014): The National Planning Framework (NPF) for Scotland;
- Scottish Government (2020): Scottish Planning Policy (SPP);
- IEMA (2017): Assessing Greenhouse Gas Emissions and Evaluating their Significance;
- WRI & WBCSD (2004): The Greenhouse Gas Protocol; and
- BEIS & Defra (2019): Environmental Reporting Guidance.

Baseline Information

6.12.2 The site baseline, as a former industrial site now comprised of hardstanding, is not a significant source or sink of GHG emissions.

6.12.3 As a brownfield site comprised of hardstanding there is no existing soil or vegetation cover, so soil and woodland carbon stocks are not likely to be significant.

Proposed Approach

Baseline studies

6.12.4 No additional baseline studies are required for the climate change assessment. Baseline studies of the vegetation and ground conditions will be undertaken as required for the applicable environmental assessments.

Assessment of Effects

6.12.5 The magnitude of impact will be expressed as tonnes of carbon dioxide equivalent (tCO_2e), using 100 year global warming potential values for non-CO_2 GHGs from the Intergovernmental Panel on Climate Change's Sixth Assessment Report or as otherwise defined in literature sources used.

6.12.6 The sensitive receptor will be defined as the global atmospheric concentration of GHGs and it will be characterised as having a 'high' sensitivity, given the severe consequences of climate change.

6.12.7 There are no clear, generally agreed thresholds or methods for evaluating the significance of GHG impacts in EIA. The IEMA guidance referenced above recommends contextualising a development's GHG impacts, for example on a sectoral basis or compared to the UK's national carbon budget.

6.12.8 It is considered that broadly speaking, the significance of the proposed development's GHG emissions can be contextualised in one or more of the following ways:

- with reference to the absolute magnitude of net GHG emissions as a percentage of the UK and Scotland's national carbon budgets and local carbon budget (if available);

- through considering any increase/reduction in absolute GHG emissions and GHG intensity compared with the baseline scenario without the proposed development;
- with reference to whether the proposed development itself and GHG reduction measures in its design contribute to and are in line with the UK and Scotland's national carbon budget sectoral goals for GHG emissions reduction, which are consistent with science-based commitments to limit global climate change to an internationally-agreed level.

6.12.9 Taking these factors into account, where applicable, the evaluation of significance will ultimately be a matter of professional judgement, as it is not considered that a fixed numerical threshold can be defined.

6.12.10 Construction phase GHG emissions will be estimated based on published lifecycle assessment data for materials used in the proposed development's design (where available) and estimates of direct GHG emissions from the use of onsite construction plant.

6.12.11 Operational phase GHG emissions from activities on site will be calculated based on estimated electricity consumption and fuel use by plant on site, based on process data provided by the developer. GHG emissions from transportation of goods to and from the site (via rail, road or sea) will also be calculated.

Scope of the Assessment

6.12.12 GHG emissions would contribute to the effect of global climate change. Assessment guidance (IEMA, 2017) indicates that in principle, any GHG emissions may be considered to be significant, and advocates as good practice that GHG emissions should always be reported at an appropriate, proportionate level of detail in an ES.

6.12.13 The three main sources of GHG emissions associated with the proposed development would be:

- the 'embodied carbon' of construction materials used in the development (caused by their manufacturing and delivery) and fuel/energy use in construction plant on site;
- operational energy/fuel use in the HVDC sub-sea cable manufacturing facility; and
- fuel used in transporting goods to and from the proposed development.

Issues Proposed to be Scoped Out

Climate Risk

6.12.14 Risks to the proposed development from climate change are proposed to be scoped out of the climate change chapter, as these are not considered likely to be significant during the development's operating lifetime, and will be addressed through other topic assessments as set out in the EIA methodology chapter.

6.12.15 The main climatic risk is flooding due to increased rainfall, sea level rise and coastal change, which will be assessed (including an allowance for climate change, following Environment Agency guidance) in the hydrology and flood risk chapter.

6.12.16 Increased peak temperatures or prolonged heatwave conditions have the potential to increase ventilation/cooling demands, however this is not expected to be significant in the context of the development's total annual operational energy use.

6.12.17 The development will not have a substantial potable water demand or any river or groundwater abstraction, so is not at significant risk from increased summer drought conditions.

6.12.18 Due to the height of the extrusion tower, it would be at risk from increases in the intensity of storm events, specifically higher peak or sustained wind speeds. While broadly speaking a trend towards increased frequency and intensity of storm events is expected to be associated with more severe climate change scenarios, probabilistic climate projection data published by the Met Office for the

UK is inconclusive with regard to whether increases in wind speed or gust intensity are likely in the UK.

6.12.19 The extrusion tower would be designed for structural integrity in high winds, with an appropriate engineering safety factor, and it is not considered that the available climate projections data supports any meaningful further risk assessment as part of the EIA.

6.12.20 The development in this location is not considered to be at significant risk from any other extreme weather events affected by climate change.

GHG emissions from land use change (vegetation)

6.12.21 As discussed in the baseline section above, the proposed development site does not have significant soil or woodland carbon stocks as it is a brownfield site within the port.

6.12.22 It is expected that compensation or net gain for any habitat lost will be provided as part of the ecological mitigation for the proposed development. Assessment of GHG emissions from land use change are therefore considered to be likely neutral or beneficial and, in any event, non-significant, so are proposed to be scoped out of the climate change chapter.

Lifecycle GHG emissions from cable product

6.12.23 GHG impacts from the upstream supply chain of materials used to manufacture the cable product and downstream supply chain of the product's use would lie outside the boundary of the assessment.

6.12.24 The scope of the EIA assessment will, as set out above, comprise the construction and energy use in operation of the facility itself and the traffic/transportation movements associated with it, as these are the relevant effects of the proposed development in land-use planning and EIA terms.

6.12.25 The assessment will not be a full lifecycle analysis of HVDC cable manufacturing nor of the use of HVDC cables.

6.13 Chapter 13: Socio-Economics

Legislation and Guidance

6.13.1 All surveys and assessments will be completed in cognisance of the relevant policy, legislation and guidance. The following legislation and guidance will be considered during the assessment.

6.13.2 There is no specific guidance on the socio-economic impact assessment of manufacturing facilities in Scotland. However, the socio-economic assessment shall follow the general guidance provided in:

- Scottish Government (2016) Draft Advice on Net Economic Benefit and Planning.

In accordance with the 'Draft Advice on Net Economic Benefit and Planning' the economic impact assessment will provide estimates of net economic benefits, these consist of the economic impacts following the realisation of the proposed project net of the economic impact that would occur if the project did not go ahead.

It is also important that the socio-economic chapter takes account of the relevant local and national policy objectives. The most relevant objectives for this are expected to be included in the following strategies:

- Hunterston Strategic Development Area (2021) North Ayrshire Council;
- Offshore Wind Sector Deal (2019) UK Government;
- Manufacturing Action Plan (2016) Scottish Government; and

- National Performance Framework (2018) Scottish Government.

Baseline Information

6.13.3 The study areas of the assessment will be selected to meet the interests of key stakeholders. The assessment of economic impacts shall focus on the following study areas:

- North Ayrshire;
- Scotland; and
- the UK.

6.13.4 The assessment will include a description of the current socio-economic baseline within the local area. This will include a summary of economic performance data for each study area and a description of any relevant. In particular the socio-economic baseline will cover:

- the demographic and economic profile of the local area within the context of the regional and national demographic trends, including employment and economic activity;
- the industrial structure of the local area within the context of regional and national economies;
- wage levels within the regional economy compared to the national level; and
- the role of the tourism sector in the local and regional economy.

6.13.5 An overview of the key socio-economic metrics that will be discussed in the baseline is given below.

Population

6.13.6 Between 2010 and 2020, the population of North Ayrshire has decreased from 138,100 to 134,300, a decline of 2.8%. In the same time period, the population of Scotland increased by 3.1% and the population of the UK increased by 6.0%. The majority of this decline is within the working age population, which has declined by 7.4% in North Ayrshire between 2011 and 2020.

6.13.7 The working age population of North Ayrshire has consistently fallen over the past 10 years. From 2011 to 2020 the working age population (aged 16-64) has fallen by 7.4%, whereas in Scotland it has increased by 0.2%, and by 2.2% in the UK.

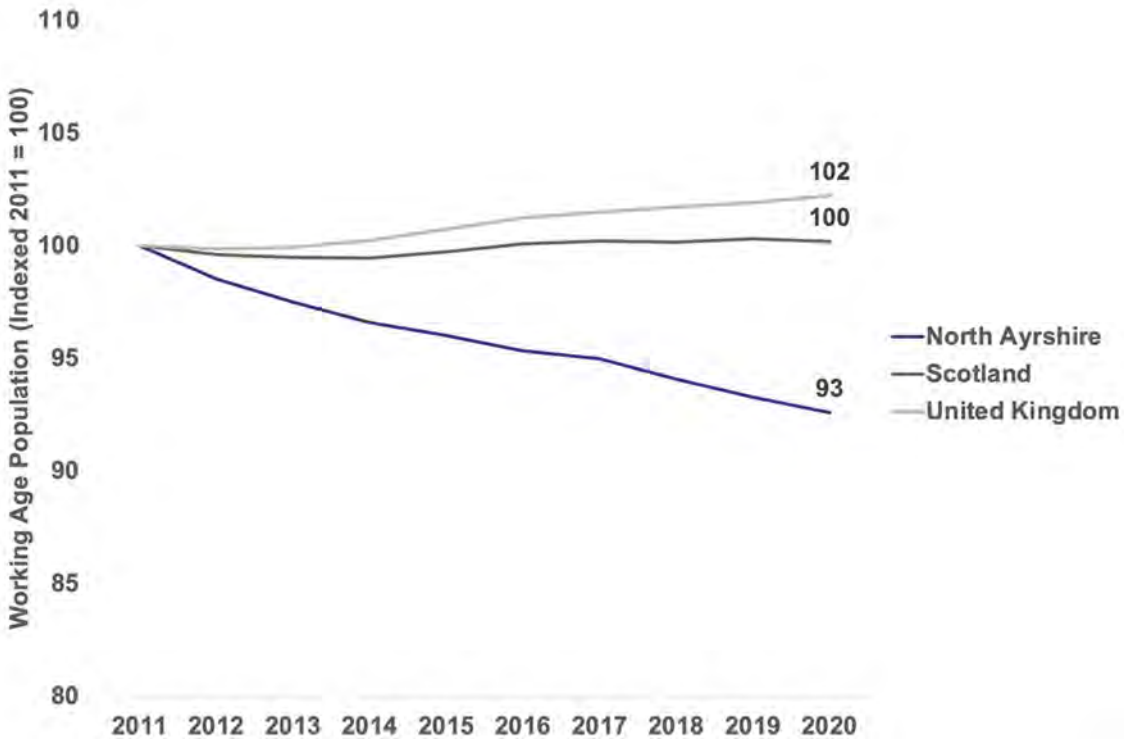


Plate 5 Working Age Population Over Time

Industrial Structure

6.13.8 The industries which have the highest levels of employment in North Ayrshire are broadly similar to those in Scotland and the UK. Health is the largest employer in North Ayrshire, with 14.3% of the total employment, similar with Scotland and the UK (15.4% and 12.8% respectively). Manufacturing makes a larger percentage of the employment in North Ayrshire (10.7%), which it does not in the Scotland and in the UK, (6.5% and 7.8% each respectively).

Table 6.5 Top 5 Industries by Employment in North Ayrshire, 2019

Sector	North Ayrshire	Scotland	United Kingdom
Health	14.3%	15.4%	12.8%
Retail	11.9%	9.0%	9.2%
Manufacturing	10.7%	6.5%	7.8%
Accommodation & Food Services	9.5%	8.2%	7.6%
Education	8.3%	7.9%	8.4%

6.13.9 The manufacturing sector in North Ayrshire has consistently made up a large percentage of the employment in the area, having only fallen by 1.0% over the past 10 years. The manufacturing sector has fallen by 9.0% on average across Scotland, and by 1.1% across the whole of the UK.

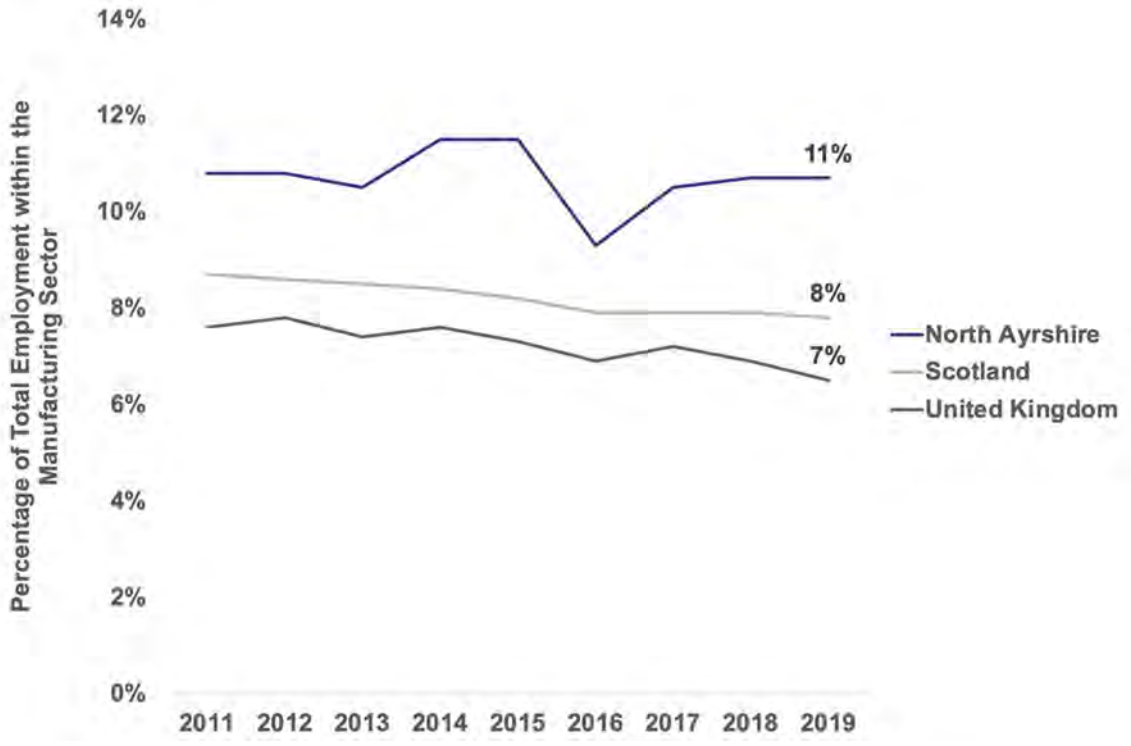


Plate 6: Percentage of Employment within the manufacturing sector over time

Source: ONS (2021) Business register and Employment Survey

Income

6.13.10 The level of pay in North Ayrshire is less than that in either Scotland or the UK. In 2020, the average gross weekly pay for all workers based in North Ayrshire was £496.80. This is 10% lower than the equivalent value for Scotland (£554.80) and 13% lower than the value for the UK (£572.70).

Table 6.6 Gross Weekly Pay – Workplace Analysis, 2020

	Gross Weekly Pay – All Workers
North Ayrshire	£496.80
Scotland	£554.80
United Kingdom	£572.70

Source: ONS (2021) Annual Survey of Horus and Earnings

Tourism Economy

6.13.11 The employment and gross value added (GVA) of the Sustainable Tourism sector is given **Error! Reference source not found.** for both North Ayrshire and Scotland. This shows that the sector supported 4,500 jobs and £80 million GVA in North Ayrshire in 2018. Across Scotland, the sector supported 218,000 jobs in 2018 and over £4.1 billion GVA (Scottish Government, 2019).

Table 6.7: Sustainable Tourism GVA and Employment 2018

	North Ayrshire	Scotland
Employment (Jobs)	4,500	218,000
GVA	£80m	£4,127m

6.13.12 The number of visitors to North Ayrshire is shown by type in Table 12.8 below.

6.13.13 Data on the number of overseas visitors to North Ayrshire is not provided in the International Passenger Survey. North Ayrshire is included as part of the Ayrshire and Arran geography and data is provided at that level. This shows that in 2018, there were 103,000 international visitors to Ayrshire and Arran who spent an estimated £73 million in the area (ONS, 2019e). North Ayrshire accounted for 37% of domestic overnight visitors in Ayrshire and Arran and therefore this proportion was applied to the number of international visitors and spend to estimate the international visitor market in North Ayrshire.

6.13.14 In total, there were approximately 3.5 million visitor trips to North Ayrshire and 154 million visitor trips to Scotland (Kantar TNS, 2019a) (Kantar TNS, 2019b).

Table 6.8: Visitors by Type

	North Ayrshire	Scotland
Day Visitor Trips	3,250,000	138,910,000
GB Overnight Trips	246,000	11,660,000
Overseas Trips	40,000	3,538,000
Total Trips	**3,536,000**	**154,108,000**

6.13.15 The expenditure of visitors to North Ayrshire and Scotland is shown in **Error! Reference source not found.** (Clyde Muirshiel Regional Park, 2018) by type of visitor. The visitors to North Ayrshire spent a total of £187 million during 2018. The majority of this expenditure, is associated with day visitors who spent £105 million. Domestic overnight visitors spent £55 million and Overseas visitors spent £27 million. The share of international expenditure in the North Ayrshire tourism sector is lower than the rate across Scotland. Across Scotland, visitors spent over £10 billion in the tourism economy.

Table 6.9: Visitor Spend by Type

	North Ayrshire	Scotland	North Ayrshire as share of Scotland
Day Visitor Spend	£105m	£5,474m	1.9%
GB Overnight Visitor Spend	£55m	£2,888m	1.9%
Overseas Visitor Spend	£27m	£2,206m	1.2%
Total Visitor Spend	**£187m**	**£10,568m**	**1.8%**

6.13.16 The level of tourism activity is not evenly distributed across North Ayrshire. As shown in the figure below, the largest concentration of tourism activity is on the island of Arran. The proposed Hunterston HVDC development is located in the Fairlie and Rural area of North Ayrshire. Approximately 280 people are employed in accommodation and food services in this area.

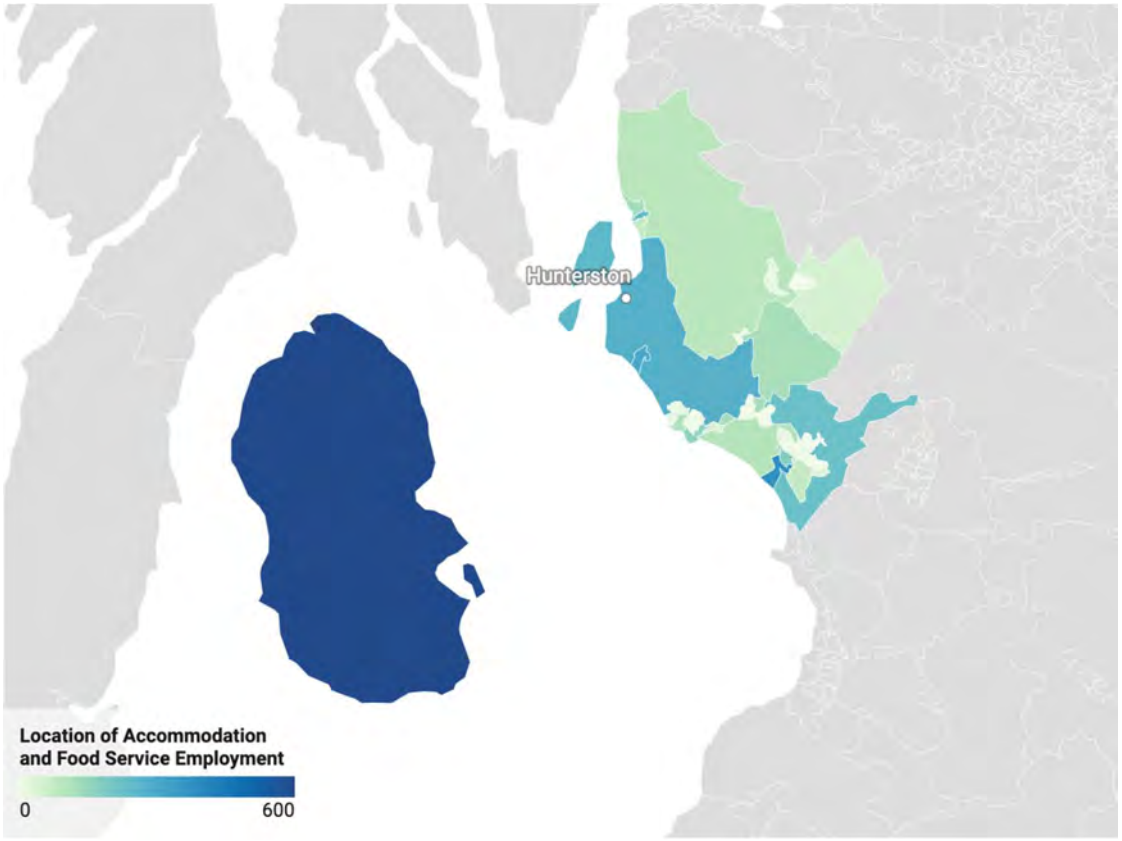


Plate 7: Accommodation and Food Service Employment Distribution within North Ayrshire

Summary

6.13.17 The falling working age population of North Ayrshire is one of the key issues for the local economy. It has a high level of manufacturing employment and overall, the level of pay in North Ayrshire is low, compared to other areas of Scotland. This will be relevant for the development of the site. The tourism economy is predominantly focused on the domestic market and is most concentrated on the island of Arran.

6.13.18 These issues will be explored in more detail in the EIA.

Proposed Approach

Baseline studies

6.13.19 No additional primary baseline studies will be carried out for socio-economics. The socio-economic and tourism baseline will be completed based on published data.

Assessment of Effects

Measures of Economic Impact

6.13.20 As standard practice for similar assessments, the economic benefits associated with the project will be measured with respects to the following measures:

- Gross Value Added (GVA): a measure of economic output, it is generally estimated as the difference between an organisation's turnover and its non-staff operating costs;
- Years of Employment: a measure of the short-term employment supported by a project. A year of employment is equivalent to the work inputs from a worker involved full-time in the project

for a year. For instance, a job lasting for 18 months, would be reported as 1.5 years of employment; and

- Employment: this measure is used when considering impacts on employment over longer time periods, it focuses on the annual employment supported by a project.

6.13.21 In addition, the economic analysis will consider the extent to which the local area can accommodate a substantial increase in employment associated with the operation of the proposed development.

Study Areas

6.13.22 The study areas of the assessment will be selected to meet the interests of key stakeholders. While not all of the impact values will be included in the EIA Chapter, the values will be provided to the client in an appendix to support its stakeholder engagement. The assessment of economic impacts shall focus on the following study areas:

- North Ayrshire;
- Scotland; and
- the UK.

6.13.23 The economic impact from the Hunterston HDVC manufacturing facility will be assessed through a bespoke Excel economic model. The analysis will cover the three stages of each project, namely:

- development impacts (DEVEX);
- construction impacts (CAPEX); and
- operational impacts (OPEX).

6.13.24 Impact will be reported in such a way that the UK and local content can be compared to other developments, such as offshore wind projects. Therefore, the impacts reported will include both an expenditure assessment, (% of TOTEX secured) and a value assessment (direct and indirect GVA as % of TOTEX).

6.13.25 The assessment will also cover any benefits in terms of public sector revenue from non-domestic rates and the wider benefits associated with the project. This will include estimates on the impact of the development of this facility for the share of Scottish content in for offshore wind farms and how this relate to the relevant strategic aims of both the Scottish and UK Governments.

6.13.26 An economy's ability to respond to the opportunities presented by the development of this project will mainly be determined by the presence of key industrial sectors and services with the required specialist skills to support the needs of the sector. From our experience with previous assignments, the percentage of local content varies quite significantly between the different stages involved in creating a manufacturing project of this nature from the early development and consent stage through to constructing the infrastructure and throughout the operation and maintenance phase. These different stages result in demand for very different skills, some of which will be available in the study areas of interest and some not.

6.13.27 To assess the proportion of contracts that could be secured for each area we shall consider:

- the industrial baseline in each study area; and
- the proportion of expenditure associated with established technologies, for which there is data available (this will include areas such as site preparation, transportation and general construction costs).

6.13.28 This evidence will be complemented with sectoral data from the Annual Business Survey and with evidence on inter-sectoral spending from the Scottish Government's Input-Output Tables.

Scope of the Assessment

6.13.29 It is anticipated that the contents of the assessment chapter will include:

- Introduction including scope of assessment and methodology;
- Economic development strategic context;
- Baseline socio-economic context;
- Baseline tourism context;
- Socio-economic assessment;
- Tourism impact assessment;
- Proposed measures and actions to maximise local economic and community impacts;
- Proposed measures and actions to mitigate any harmful effects (if required); and
- Summary of findings and conclusions.

6.14 Cumulative Effects and Inter-relationships

6.14.1 As set out in Section 4 of this report, each topic chapter will consider the potential for significant cumulative effects with other major proposed developments in the area. As part of the cumulative assessment developments to be considered are those that are:

- under construction;
- permitted, but not yet implemented;
- submitted, but not yet determined; and
- identified in the relevant Development Plan (and emerging development plans – with appropriate weight of consideration as they move closer to adoption) recognising that in depth information on relevant proposals will be limited.

6.14.2 An indicative list of other proposed developments and allocations to be considered within the EIA process will be discussed and agreed with Fife Council. Each topic author will review the overall agreed list of developments and allocations and identify those relevant to their topic. Following this, the topic chapters of the EIA Report will include an assessment of the potential for significant cumulative effects with the relevant developments.

6.15 Supporting Technical Assessments

6.15.1 Each of the EIA Report chapters as outlined above may be supported by a range of technical appendices, including details of any data collated and the outcomes of modelling where it is required and assessments.

6.15.2 In addition, the following technical assessments are proposed. Where relevant within the Project Description chapter and in other relevant sections/chapters of the EIA Report these will be clearly signposted.

Air Quality

Scope of Assessment

6.15.3 The risk of dust and emissions during construction works at the site will be assessed, having regard to the IAQM (2014) '*Guidance on the assessment of dust from demolition and construction*'. The risks will be assessed at human-health and ecological receptors.

6.15.4 Construction-related vehicle movements will be compared with the relevant threshold criteria in the EPUK/IAQM (2017) *'Land-Use Planning & Development Control: Planning For Air Quality'* document for determining when an air quality assessment is required. At this stage, it is anticipated that the number of construction-related vehicle movements will not exceed the threshold and a detailed air quality assessment will not be required.

6.15.5 Mitigation measures designed to control dust nuisance effects and emissions during construction, consistent with the level of risk, will be recommended. These will be drawn from the IAQM (2014) *'Guidance on the assessment of dust from demolition and construction'.*

6.15.6 Once the Project is operational, low levels of vehicle movements are expected. Operational vehicle movements will be compared with the relevant threshold criteria in the EPUK/IAQM (2017) *'Land-Use Planning & Development Control: Planning For Air Quality'* document for determining when an air quality assessment is required. It is anticipated that the number of operational vehicle movements will not exceed the threshold and a detailed air quality assessment will not be required.

6.15.7 No combustion plant likely to generate operational emissions are proposed as part of the Project. Therefore, no assessment of operational plant emissions is required.

6.15.8 It is therefore proposed that the scope of the assessment will be limited to the risk of dust impacts during construction.

Population and Health

6.15.9 Consideration has been given to the potential health determinants associated with the construction and operation of the Project.

6.15.10 The following health determinants with the potential to influence health (either negatively or positively) have been identified:

- changes in local air quality during construction (nuisance dust);
- changes in traffic flows, noise levels and air quality during both construction and operation;
- employment opportunities.

6.15.11 With the implementation of best practice measures in accordance with the CoCP, significant adverse health effects from air quality, noise and traffic impacts during the construction phase are not considered likely.

6.15.12 It is proposed that a population and human health scoping statement will be produced to accompany the application. The scoping statement will investigate the potential construction/operational activities and health determinants with the potential to influence health (air quality, noise, traffic, employment), setting out the justification for an appropriate scope of work for the Project.

6.15.13 The population and human health scoping statement will be provided as an appendix to the EIA Report; therefore, a separate chapter assessing population and health effects associated with these determinants is not considered necessary.

6.16 Summary of Issues Proposed to be Scoped Out of Topic Chapters

6.16.1 The table below provides a summary of the main issues to be scoped out as detailed above in each topic section.

Table 6.10: Issues Proposed to be Scoped Out of Topic Chapters

Chapter Title	Scoped Out
Ecology and Nature Conservation	Habitats and protected species not present within the site or not likely to result in significant effects.
Historic Environment	Physical loss of designated heritage assets.
	Assets located outside of the ZTV.
Landscape and Visual	None
Hydrology and Flood Risk	None
Geology and Ground Conditions	The risk of contamination or any additional effects during operation.
Air Quality	Air quality effects related to operational traffic.
	Air quality emissions from the operational factory.
Noise and Vibration	Noise effects related to operational traffic.
	Operational vibration effects.

7 REFERENCES

BEIS & DEFRA (2019) Environmental Reporting Guidance.

British Geological Society (2021) BGS Aquifer Designation Mapping. [Online] Available at: https://www.bgs.ac.uk/datasets/hydrogeological-maps-of-scotland/

British Geological Survey (BGS) (2020) Geology of Britain Viewer. [Online] Available at: https://mapapps.bgs.ac.uk/geologyofbritain/home.html

British Geological Survey (BGS) (2021) Geology of Britain Viewer. [Online] Available at: https://mapapps.bgs.ac.uk/geologyofbritain/home.html

British Standards (2014) Code of practice for noise and vibration control on construction and open sites – Part 1: Noise & Part 2: Vibration.

British Standards Institution (BSI) (2011) BS 10175:2011+A2:2017. Investigation of potentially contaminated sites. Code of practice. Code of practice. London, BSI.

British Standards Institution (BSI) (2015) BS8485:2015+A1:2019. Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings. London, BSI.

Chartered Institute for Archaeologists (2020) Standard and Guidance for Historic Environment Desk-Based Assessment

Chartered Institute of Ecology and Environmental Management (CIEEM) (2018) Guidelines for Ecological Assessment in the UK and Ireland: Terrestrial, Coastal and Marine.

Chartered Institution of Building Services Engineers (CIBSE) (2018) Society of Light and Lighting (SLL) Lighting Handbook.

Collins J. (ed.) (2016). Bat surveys for Professional Ecologists: Good practice guidelines (3rd Edition). Bat Conservation Trust, London.

Committee on Climate Change (2016) UK Climate Change Risk Assessment 2017.

Construction Industry Research and Information Association (CIRIA) (2001) Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors CIRIA (C532).

Construction Industry Research and Information Association (CIRIA) Document C665: Assessing Risks Posed by Hazardous Ground Gases to Buildings (CIRIA, 2007);

Construction Industry Research and Information Association (CIRIA) (2006a) Control of Water Pollution from Linear Construction Projects – Technical Guidance (C648). London, CIRIA.

Construction Industry Research and Information Association (CIRIA) (2006b) Control of Water Pollution from Linear Construction Projects – site Guide (C649). London, CIRIA.

Construction Industry Research and Information Association (CIRIA) (2007a) Assessing risks posed by hazardous ground gases to buildings (C665). London, CIRIA.

Construction Industry Research and Information Association (CIRIA) (2007b) Assessing risks posed by hazardous ground gases to buildings (C665). London, CIRIA.

Construction Industry Research and Information Association (CIRIA) (2010) Environmental Good Practice on site (third edition) (C692). London, CIRIA.

Construction Industry Research and Information Association (CIRIA) (2015a) SuDS Manual (C753).

Construction Industry Research and Information Association (CIRIA) (2015b) Environmental good practice on site guide (C741).

Countryside Agency in conjunction with Scottish Natural Heritage (2002) Landscape Character Assessment Guidance for England and Scotland.

Countryside Council for Wales, Brady Shipman and Martin, University College Dublin (2001) Guide to Best Practice in Seascape Assessment, Maritime Ireland/Wales INTERREG Report No. 5.

Department for Communities and Local Government (2006) Environmental impact assessment: a guide to good practice and procedures.

Department for Food and Rural Affairs (Defra) (2009) Code of Construction Practice for the Sustainable Use of Soils on Construction Sites

Department for Food and Rural Affairs (Defra) (2012) Environmental Protection Act 1990: Part 2A – Contaminated Land Statutory Guidance. [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/223705/pb13735cont-land-guidance.pdf

Eaton *et al*. (2015) Birds of Conservation Concern (BoCC) 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man.

Environment Agency (2018) Environment Agency Groundwater Protection Policy.

Environment Agency (2019) Land Contamination Risk Management [Online] Available at: https://www.gov.uk/guidance/land-contamination-how-to-manage-the-risks

Environmental Protection UK and Institute of Air Quality Management (EPUK/IAQM) (2017) Land-Use Planning and Development Control: Planning for Air Quality. January 2017.

Firth of Clyde Forum (2013). Seascape/Landscape Assessment of the Firth of Clyde.

Highways England, Transport Scotland, Welsh Government, Department for Infrastructure Northern Ireland (2019) Design Manual for Roads and Bridges (DMRB) LA109 Geology and Soils.

Highways England, Transport Scotland, Welsh Government, Department for Infrastructure Northern Ireland (2020) Design Manual for Roads and Bridges (DMRB) LA104 Environmental Assessment and Monitoring.

Highways England, Transport Scotland, Welsh Government, Department for Infrastructure Northern Ireland (2020a) Design Manual for Roads and Bridges (DMRB) LA104 Environmental Assessment and Monitoring.

Highways England, Transport Scotland, Welsh Government, Department for Infrastructure Northern Ireland (2020b) Design Manual for Roads and Bridges (DMRB) LA 113 - Road drainage and the water environment

Historic Environment Scotland (2019) Historic Environment Policy for Scotland.

Historic Environment Scotland (2020) Managing Change in the Historic Environment: Setting.

IAQM Guidance on the assessment of dust from demolition and construction (2014)

Institute of Environmental Assessment (1993) Guidelines for the Environmental Assessment of Road Traffic.

Institute of Environmental Management and Assessment (2004) Guidelines for Environmental Impact Assessment.

Institute of Environmental Management and Assessment (2011) The State of Environmental Impact Assessment Practice in the UK. Special Report.

Institute of Environmental Management and Assessment (2015a) Environmental Impact Assessment: Guide to Shaping Quality Development.

Institute of Environmental Management and Assessment (2015b) Climate Change Resilience and Adaptation.

Institute of Environmental Management and Assessment (2016) Environmental Impact Assessment: Guide to Delivering Quality Development.

Institute of Environmental Management and Assessment (2017a) Environmental Impact Assessment: Assessing Greenhouse Gas Emissions and Evaluating their Significance.

Institute of Environmental Management and Assessment (2017b) Health in Environmental Impact Assessment: A Primer for a Proportional Approach.

Institute of Environmental Management and Assessment (2020a) IEMA Guide to Waste in Environmental Impact Assessment.

Institute of Environmental Management and Assessment (2020b) Digital Impact Assessment: A Primer for Embracing Innovation and Digital Working.

Landscape Institute and Institute for Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment 3rd Edition.

Landscape Institute and Institute for Environmental Management and Assessment (2019) Landscape Institute Technical Guidance Note 06/19: Visual Representation of Development Proposals.

Met Office (2020) UKCP18. UK Climate Change Predictions. [Online] Available at: https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/index

NatureScot (2014) An Approach to Landscape Character Assessment.

NatureScot (2016) Assessing connectivity with Special Protection Areas (SPAs).

North Ayrshire Council (2018) North Ayrshire Council Strategic Flood Risk Assessment.

North Ayrshire Council (2019): Adopted Local Development Plan: Your Plan Your Future.

North Ayrshire Council (2021): Environmental Sustainability & Climate Change Strategy 2021 – 2023.

Ordnance Survey (2021) Ordnance Survey Mapping. [Online] Available at: https://osdatahub.os.uk/downloads/open

Scotland's Nature Agency (2021) Nature Scot site Link (Designated Sites) Mapping. [Online] Available at: https://sitelink.nature.scot/map

Scottish Environment Protection Agency (2009) Policy No. 19, Groundwater protection policy for Scotland

Scottish Environment Protection Agency (2010a) Regulatory Position Statement – Developments on Peat

Scottish Environment Protection Agency (2010b) WAT-SG-25, Good practice guide - river crossings

Scottish Environment Protection Agency (2012) SEPA Guidance Note 8 standing advice for planning authorities and developers on development management consultations

Scottish Environment Protection Agency (2015) Natural Flood Management Handbook

Scottish Environment Protection Agency (2017) Development Management Guidance: Flood Risk

Scottish Environment Protection Agency (2019) Climate Change Allowances for flood risk assessment in land use planning

Scottish Environment Protection Agency (2021a) SEPA Flood Hazard and Risk Information Mapping. [Online] Available at: https://www.sepa.org.uk/environment/water/flooding/flood-maps/

Scottish Environment Protection Agency (2021b) SEPA Scotland's Environment Data Centre. [Online] Available at: https://map.environment.gov.scot/sewebmap/

Scottish Environment Protection Agency (2021c) SEPA Water Environment Hub. [Online] Available at: https://www.sepa.org.uk/data-visualisation/water-environment-hub/

Scottish Environment Protection Agency (2021d) SEPA Reservoir Flood Map. [Online] Available at: https://map.sepa.org.uk/reservoirsfloodmap/Map.htm

Scottish Environment Protection Agency, Environment Agency and Environment and Heritage Service Northern Ireland (2000) Pollution Prevention Guidelines (PPG18): Managing Fire Water and Major Spillages.

Scottish Environment Protection Agency, Environment Agency and Northern Ireland Environment Agency (2012) The Working at Construction and Demolition Sites: PPG 6 Pollution Prevention Guidelines

Scottish Environment Protection Agency, Natural Resources Wales and Northern Ireland Environment Agency (2017a) GPP 2: Above ground oil storage tanks.

Scottish Environment Protection Agency, Natural Resources Wales and Northern Ireland Environment Agency (2017b) GPP 4: Treatment and disposal where there is no connection to the public foul sewer.

Scottish Environment Protection Agency, Natural Resources Wales and Northern Ireland Environment Agency (2017c) GPP 8: Safe storage and disposal of used oils

Scottish Environment Protection Agency, Natural Resources Wales and Northern Ireland Environment Agency (2017d) GPP 21: Pollution incident response Plans

Scottish Environment Protection Agency, Natural Resources Wales and Northern Ireland Environment Agency (2018a) GPP 5: Works and maintenance in or near water

Scottish Environment Protection Agency, Natural Resources Wales and Northern Ireland Environment Agency (2018b) GPP 20: Dewatering of underground Ducts and Chambers

Scottish Environment Protection Agency, Natural Resources Wales and Northern Ireland Environment Agency (2018c) GPP 22: Dealing with spills

Scottish Environment Protection Agency, Natural Resources Wales and Northern Ireland Environment Agency (2018d) GPP 26: Safe storage of drums and Intermediate Bulk Containers (IBCs)

Scottish Environment Protection Agency, Natural Resources Wales and Northern Ireland Environment Agency (2020) Guidance for Pollution Prevention (GPP) 1: A general guide to preventing pollution

Scottish Government (2011) PAN 01/2011 Planning and Noise and associated Technical Advice Note.

Scottish Government (2011 and 2013 update) Energy Storage: Planning Advice at https://www.gov.scot/publications/energy-storage-planning-advice/

Scottish Government (2013 and 2017 update) Planning Advice Note 1/2013: Environmental Impact Assessment at https://www.gov.scot/publications/planning-advice-note-1-2013-environmental-impact-assessment/pages/1/

Scottish Government (2013) Building Standards Technical Handbook 2019: Non-domestic Buildings (Section 2: Fire).

Scottish Government (2014) The National Planning Framework (NPF) for Scotland.

Scottish Government (2014a) Ambition Opportunity Place: Scotland's Third National Planning Framework.

Scottish Government (2014b) National Planning Framework.

Scottish Government (2016) Draft Advice on Net Economic Benefit and Planning

Scottish Government (2017) Scottish Government's Energy Strategy

Scottish Government (2018 & 2019) Scottish Climate Change Plan.

Scottish Government (2019) Building Standards Technical Handbook 2019: Non-Domestic.

Scottish Government (2020) Scottish Planning Policy (SPP)

Scottish Government (2021) Scotland's Environment – Scotland's Soils. [Online] Available at: https://soils.environment.gov.scot/

Scottish Natural Heritage (2002) Landscape Character Assessment: Guidance for England and Scotland.

Scottish Natural Heritage (2011) The Siting and Design of Aquaculture in the Landscape: Landscape and Visual Considerations

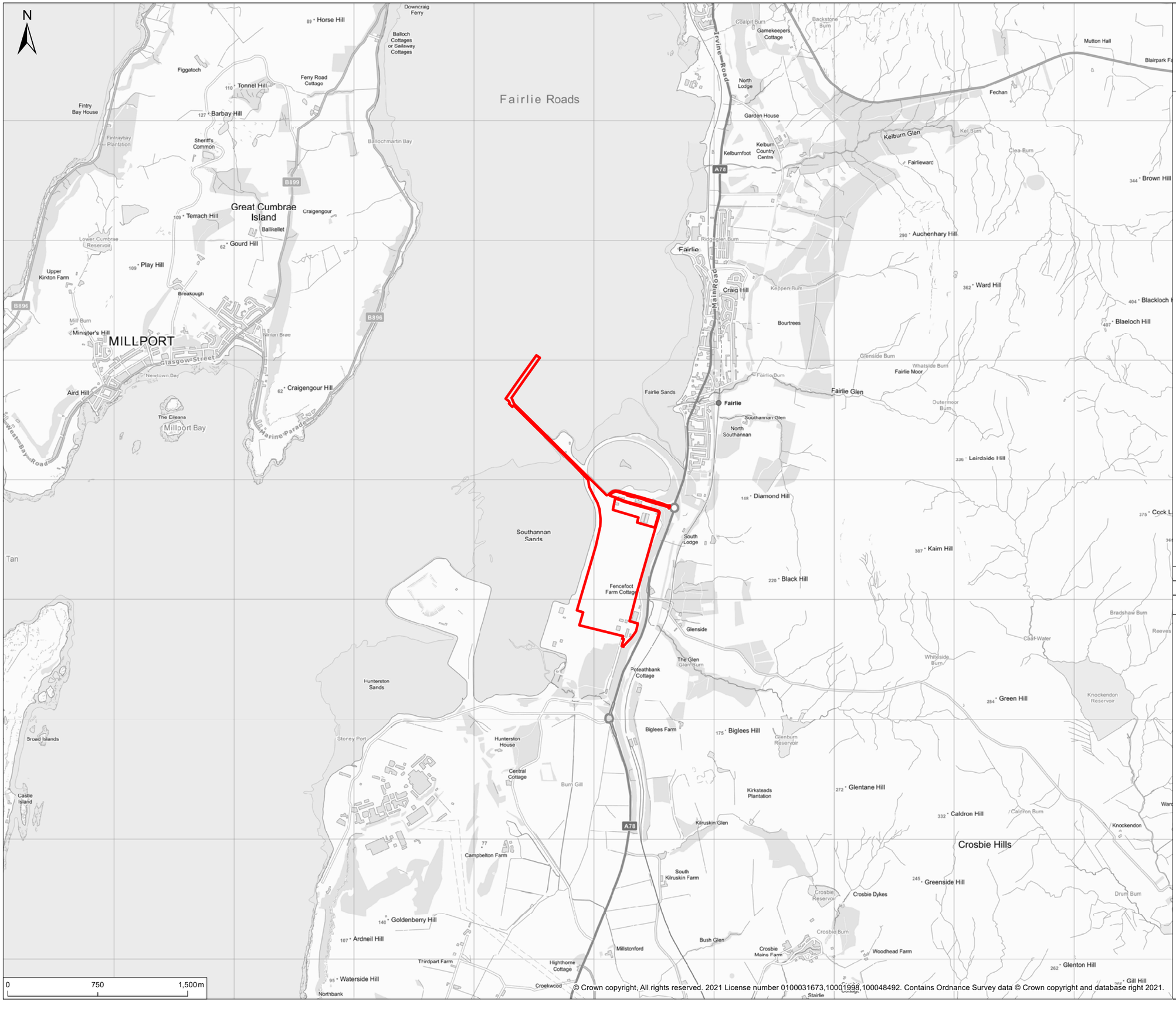
Scottish Natural Heritage (SNH) & Historic Environment Scotland (2018) EIA Handbook.

Scottish Renewables (2012) Developments on Peatland; Guidance on the Assessment of Peat Volumes, reuse of excavated peat and the minimisation of waste

Transport Scotland (2012) Transport Assessment Guidance.

WRI & WBCSD (2004) The Greenhouse Gas Protocol

FIGURES



Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

Site Boundary

Rev	Description	By	CB	Date

20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 821 888 E: rpsox@rpsgroup.com

Client: XLCC Ltd

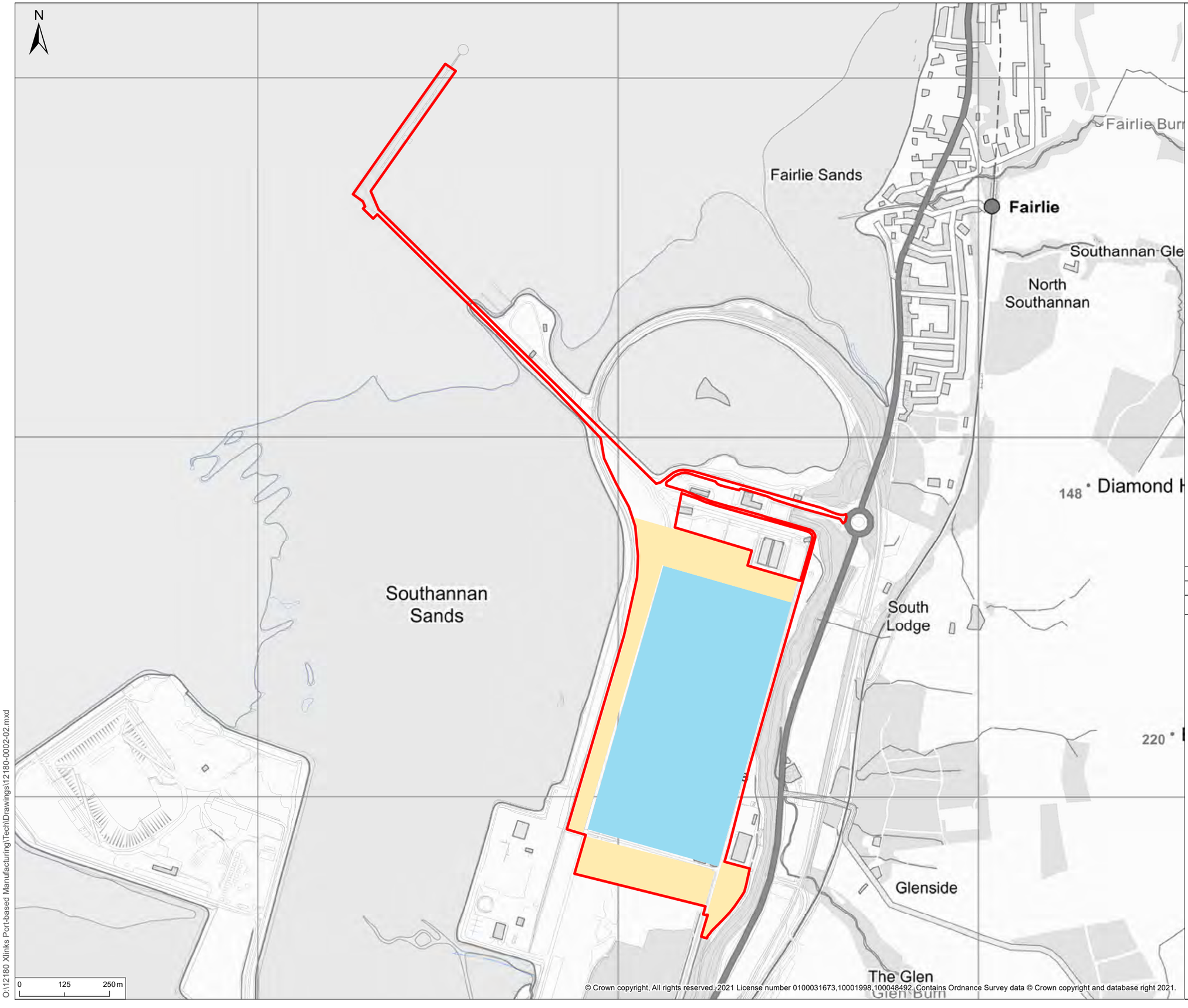
Project: Xlinks Cable Factory, Hunterston

Title: Site Location Plan

Status	Drawn By	PM/Checked By
DRAFT	MP	MB
Project Number	**Scale @ A3**	**Date Created**
NP12180	1:30,000	OCT 2021
Figure Number		**Rev**
1		-

rpsgroup.com

O:\12180 Xlinks Port-based Manufacturing\Tech\Drawings\12180-0001-02.mxd



Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

- Site Boundary
- Construction Laydown and Welfare (Illustrative)
- Manufacturing Facility Parameter Envelope (Illustrative)

Rev	Description	By	CB	Date

20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 821 888 E: rpsox@rpsgroup.com

Client: XLCC Ltd

Project: Xlinks Cable Factory, Hunterston

Title: Indicative Development Zones

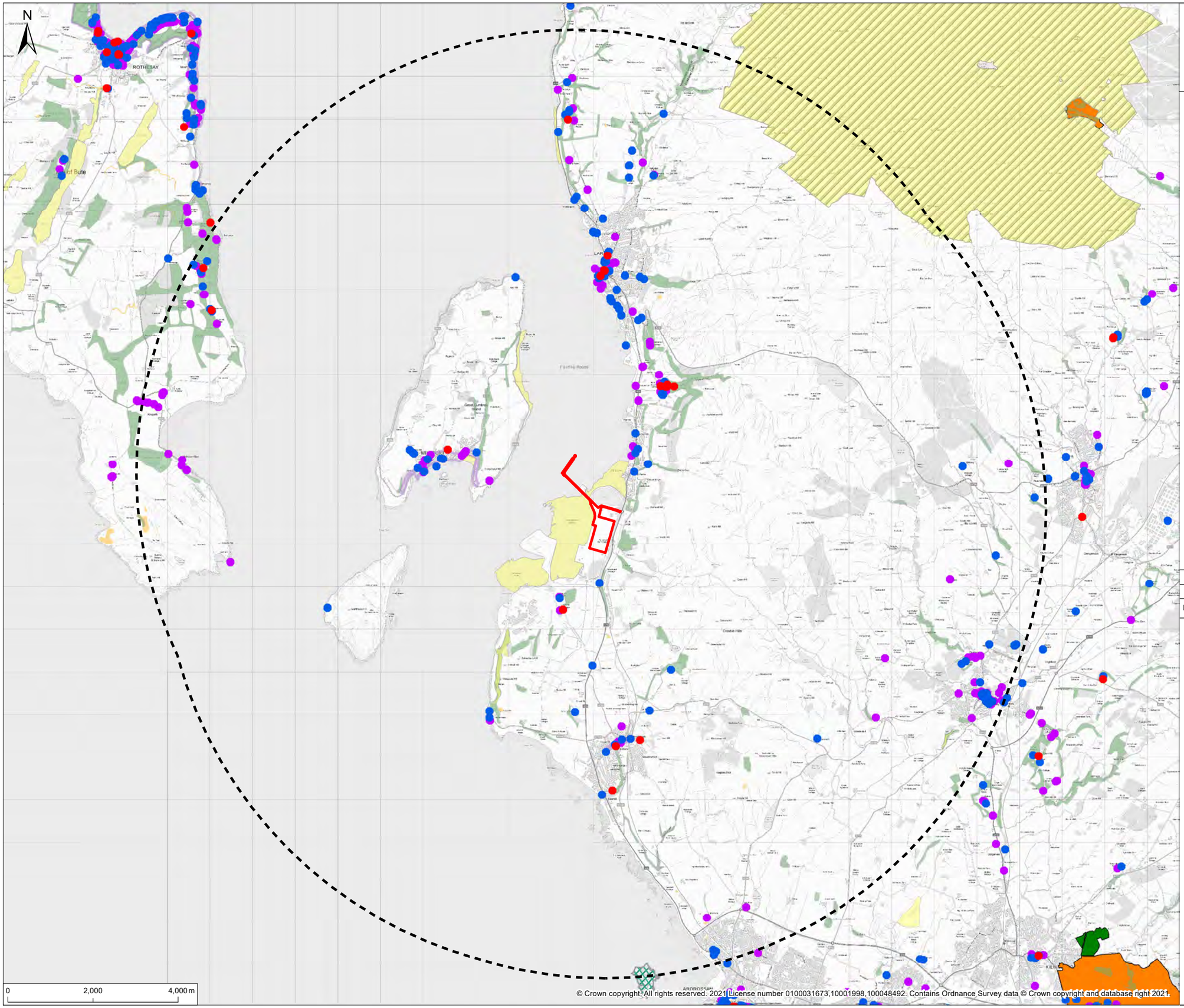
Status	Drawn By	PM/Checked By
DRAFT	MP	MB
Project Number	**Scale @ A3**	**Date Created**
NP12180	1:10,000	OCT 2021

Figure Number: **2**

Rev: **-**

rpsgroup.com

O:\12180 Xlinks Port-based Manufacturing\Tech\Drawings\12180-0002-02.mxd



Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

- Site Boundary
- 10km Buffer
- RSPD Reserves UK
- Country Park
- Scheduled Monument
- Scottish Wildlife Trust Reserve Boundary
- Site of Special Scientific Interest
- Special Protection Area
- Ancient Woodland
- Conservation Area

Listed Buildings by Category

- A
- B
- C

Rev	Description	By	CB	Date

20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 821 888 E: rpsox@rpsgroup.com

Client: XLCC Ltd

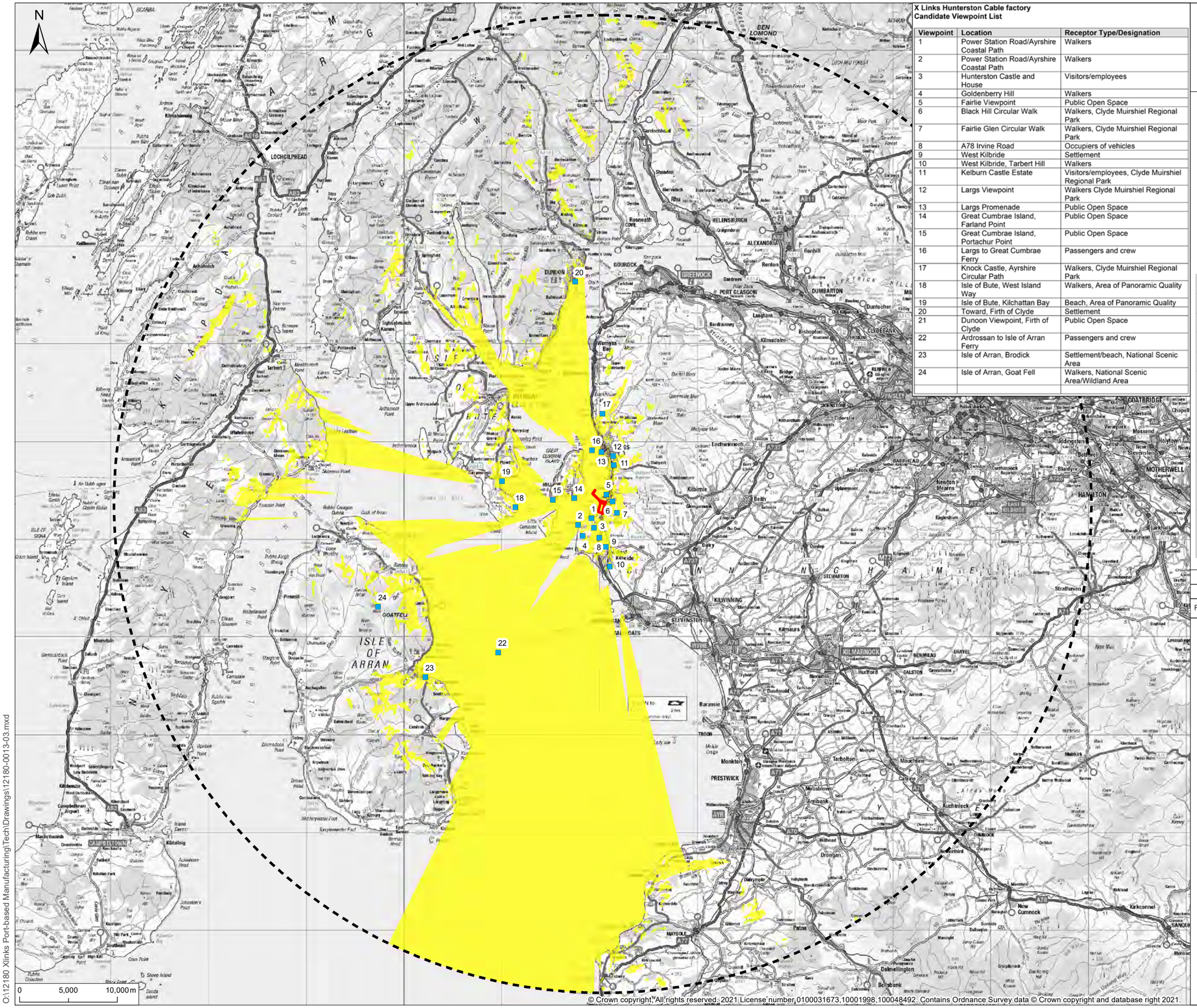
Project: Xlinks Cable Factory, Hunterston

Title: Environmental Constraints Plan

Status	Drawn By	PM/Checked By
DRAFT	MP	MB
Project Number	**Scale @ A3**	**Date Created**
NP12180	1:85,000	OCT 2021
Figure Number		**Rev**
3		-

rpsgroup.com

O:\12180 Xlinks Port-based Manufacturing\Tech\Drawings\12180-0003-02.mxd



X Links Hunterston Cable factory
Candidate Viewpoint List

Viewpoint	Location	Receptor Type/Designation
1	Power Station Road/Ayrshire Coastal Path	Walkers
2	Power Station Road/Ayrshire Coastal Path	Walkers
3	Hunterston Castle and House	Visitors/employees
4	Goldenberry Hill	Walkers
5	Fairlie Viewpoint	Public Open Space
6	Black Hill Circular Walk	Walkers, Clyde Muirshiel Regional Park
7	Fairlie Glen Circular Walk	Walkers, Clyde Muirshiel Regional Park
8	A78 Irvine Road	Occupiers of vehicles
9	West Kilbride	Settlement
10	West Kilbride, Tarbert Hill	Walkers
11	Kelburn Castle Estate	Visitors/employees, Clyde Muirshiel Regional Park
12	Largs Viewpoint	Walkers Clyde Muirshiel Regional Park
13	Largs Promenade	Public Open Space
14	Great Cumbrae Island, Farland Point	Public Open Space
15	Great Cumbrae Island, Portachur Point	Public Open Space
16	Largs to Great Cumbrae Ferry	Passengers and crew
17	Knock Castle, Ayrshire Circular Path	Walkers, Clyde Muirshiel Regional Park
18	Isle of Bute, West Island Way	Walkers, Area of Panoramic Quality
19	Isle of Bute, Kilchattan Bay	Beach, Area of Panoramic Quality
20	Toward, Firth of Clyde	Settlement
21	Dunoon Viewpoint, Firth of Clyde	Public Open Space
22	Ardrossan to Isle of Arran Ferry	Passengers and crew
23	Isle of Arran, Brodick	Settlement/beach, National Scenic Area
24	Isle of Arran, Goat Fell	Walkers, National Scenic Area/Wildland Area

Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

- Site Boundary
- Candidate Photographic Viewpoint Location
- Zone of Theoretical Visibility

Data source	OS Terrain 50
Date sourced	2013
Coverage	Within 50km of the site
Original cell size	50m
Ground cover is modelled using indicative heights of 9m for buildings, and 12m for woodland blocks. Ground cover is located using OS Open Maps.	ZTV calculated using a height of 185m for the cable tower.
ZTV is not calculated beyond 50km from the tower location.	Viewer height is 2m.
ZTV calculation does not use mathematically approximate methods	The effects of earth curvature and light refraction are considered.

Rev	Description	By	CB	Date

20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 821 888 E: rpsox@rpsgroup.com

Client: XLCC Ltd

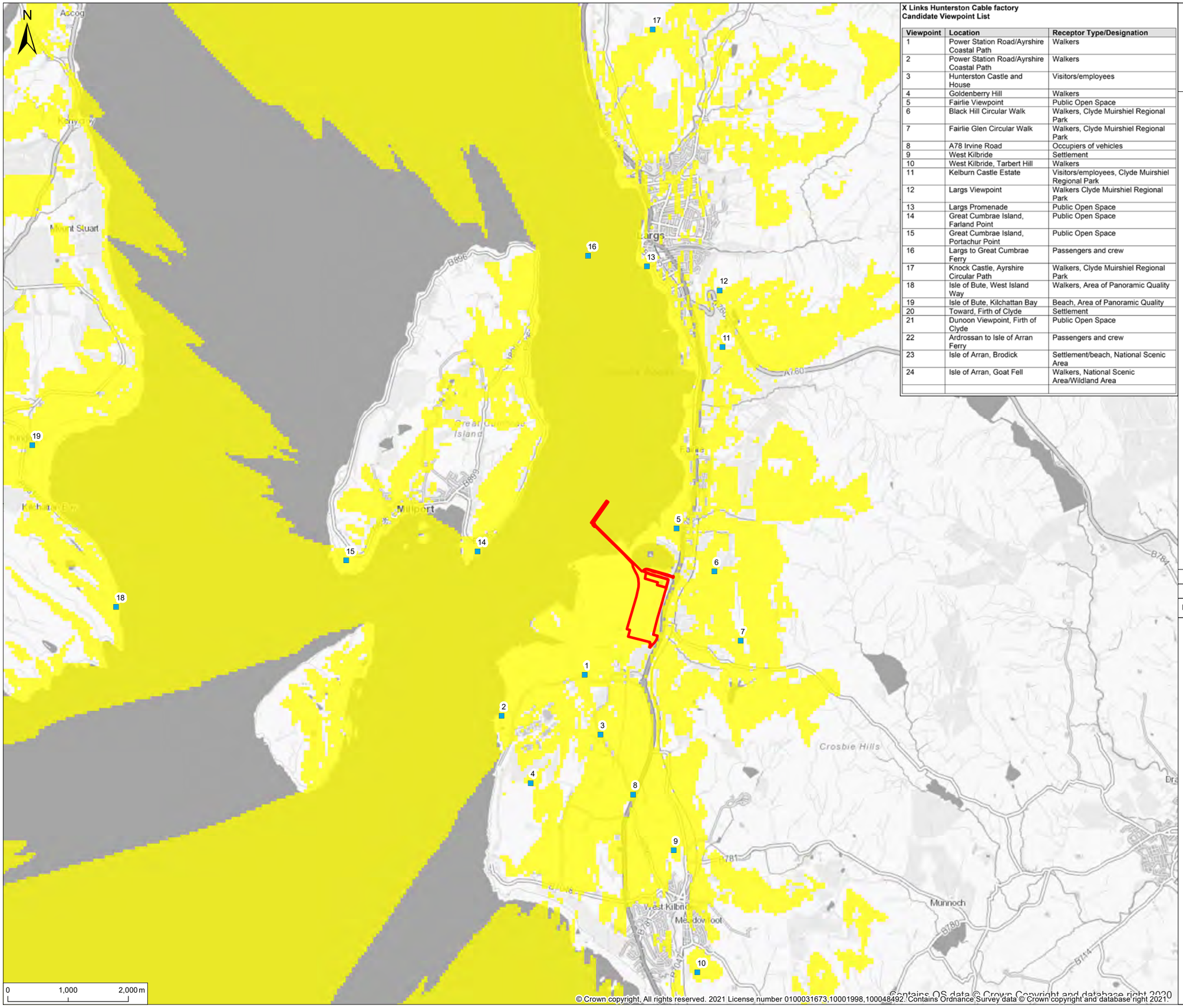
Project: Xlinks Cable Factory, Hunterston

Title: Preliminary Zone of Theoretical Visibility (ZTV) - 50km Extent

Status	Drawn By	PM/Checked By
DRAFT	MP	MB
Project Number	**Scale @ A3**	**Date Created**
NP12180	1:370,000	NOV 2021
Figure Number		**Rev**
5.1a		-

rpsgroup.com

O:\12180 Xlinks Port-based Manufacturing\Tech\Drawings\12180-0013-03.mxd



X Links Hunterston Cable factory
Candidate Viewpoint List

Viewpoint	Location	Receptor Type/Designation
1	Power Station Road/Ayrshire Coastal Path	Walkers
2	Power Station Road/Ayrshire Coastal Path	Walkers
3	Hunterston Castle and House	Visitors/employees
4	Goldenberry Hill	Walkers
5	Fairlie Viewpoint	Public Open Space
6	Black Hill Circular Walk	Walkers, Clyde Muirshiel Regional Park
7	Fairlie Glen Circular Walk	Walkers, Clyde Muirshiel Regional Park
8	A78 Irvine Road	Occupiers of vehicles
9	West Kilbride	Settlement
10	West Kilbride, Tarbert Hill	Walkers
11	Kelburn Castle Estate	Visitors/employees, Clyde Muirshiel Regional Park
12	Largs Viewpoint	Walkers Clyde Muirshiel Regional Park
13	Largs Promenade	Public Open Space
14	Great Cumbrae Island, Farland Point	Public Open Space
15	Great Cumbrae Island, Portachur Point	Public Open Space
16	Largs to Great Cumbrae Ferry	Passengers and crew
17	Knock Castle, Ayrshire Circular Path	Walkers, Clyde Muirshiel Regional Park
18	Isle of Bute, West Island Way	Walkers, Area of Panoramic Quality
19	Isle of Bute, Kilchattan Bay	Beach, Area of Panoramic Quality
20	Toward, Firth of Clyde	Settlement
21	Dunoon Viewpoint, Firth of Clyde	Public Open Space
22	Ardrossan to Isle of Arran Ferry	Passengers and crew
23	Isle of Arran, Brodick	Settlement/beach, National Scenic Area
24	Isle of Arran, Goat Fell	Walkers, National Scenic Area/Wildland Area

Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

- Site Boundary
- Candidate Photographic Viewpoint Location
- Zone of Theoretical Visibility

Data source	OS Terrain 50
Date sourced	2013
Coverage	Within 50km of the site
Original cell size	50m
Ground cover is modelled using indicative heights of 9m for buildings, and 12m for woodland blocks. Ground cover is located using OS Open Maps.	ZTV calculated using a height of 185m for the cable tower.
ZTV is not calculated beyond 50km from the tower location.	Viewer height is 2m.
ZTV calculation does not use mathematically approximate methods	The effects of earth curvature and light refraction are considered.

Rev	Description	By	CB	Date

20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 821 888 E: rpsox@rpsgroup.com

Client: XLCC Ltd

Project: Xlinks Cable Factory, Hunterston

Title: Preliminary Zone of Theoretical Visibility (ZTV) - Close Viewpoints (10km Extent)

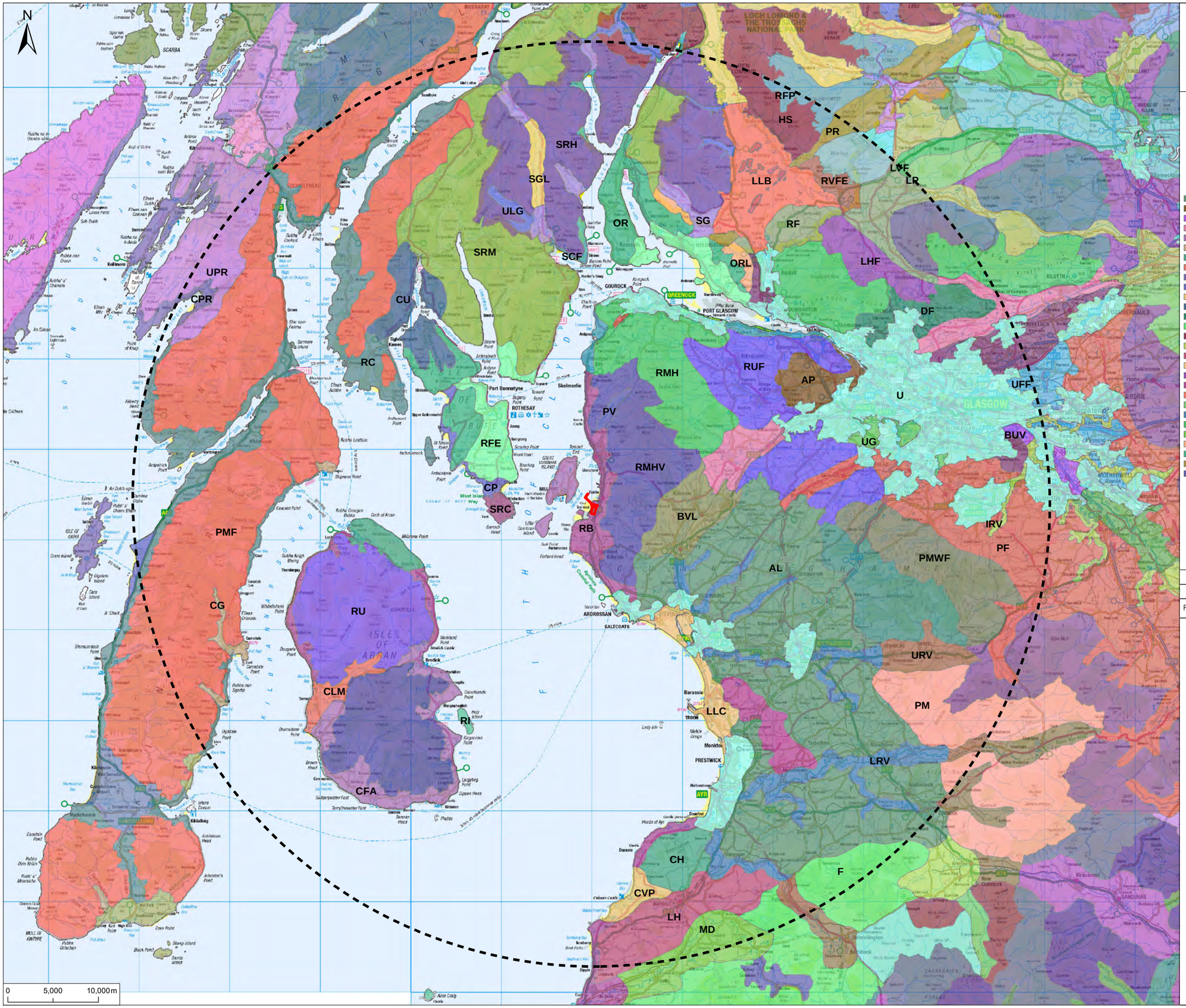
Status	Drawn By	PM/Checked By
DRAFT	MP	MB
Project Number	**Scale @ A3**	**Date Created**
NP12180	1:60,000	NOV 2021

Figure Number: **5.1b**

Rev: **-**

rpsgroup.com

O:\12180 Xlinks Port-based Manufacturing\Tech\Drawings\12180-0014-03.mxd



O:\12180 Xlinks Port-based Manufacturing\Tech\Drawings\12180-0004-04.mxd

Notes

1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

- Site Boundary
- 50km Study Area

- AL: Agricultural
- AP: Agricultural
- BUV: Broad Urban Valley
- BVL: Broad Valley Lowland
- CFA: Coastal Fringe with
- CG: Coastal Glens
- CH: Coastal Headlands
- CLM: Coastal Lowland Moor
- CPR: Coastal Parallel Ridges
- CP: Coastal Plain
- CVP: Coastal Valley with Policies
- CU: Craggy Upland
- DF: Drumlin Foothills
- F: Foothills
- HS: Highland Summits
- IRV: Incised River Valleys
- LH: Low Hills
- LLC: Low-Lying Coast
- LHF: Lowland Hill Fringes
- LH: Lowland Hills
- LLB: Lowland Loch Basin
- LP: Lowland Plateaux
- LRV: Lowland River Valleys
- LVF: Lowland Valley Fringes
- MD: Middle Dale
- ORL: Open Ridgeland
- OR: Open Ridges
- PR: Parallel Ridges
- PV: Pastoral Valleys
- PF: Plateau Farmland
- PMF: Plateau Moor and Forest
- PM: Plateau Moorland
- PMWF: Plateau Moorland with Windfarms
- PM: Plateau Moorlands
- RB: Raised Beach
- RBCC: Raised Beach Coast and Cliffs
- RVFE: River Valley Farmland and Estates
- RC: Rocky Coastland
- RI: Rocky Islands
- RF: Rolling Farmland
- RFE: Rolling Farmland with Estates
- RFP: Rolling Forested Plateau
- RMH: Rugged Moorland Hills
- RMHV: Rugged Moorland Hills and Valleys
- RU: Rugged Upland
- RUF: Rugged Upland Farmland
- SCF: Settled Coastal Fringe
- SRH: Steep Ridges and Hills
- SRM: Steep Ridges and Mountains
- SRC: Stepped Rocky Coastlands
- SG: Straths and Glens
- StSGL: raths and Glens with Lochs
- ULG: Upland Glens
- UPR: Upland Parallel Ridges
- URV: Upland River Valley
- U: Urban
- UFF: Urban Fringe Farmland
- UG: Urban Greenspace

Rev	Description	By	CB	Date

20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 821 888 E: rpsox@rpsgroup.com

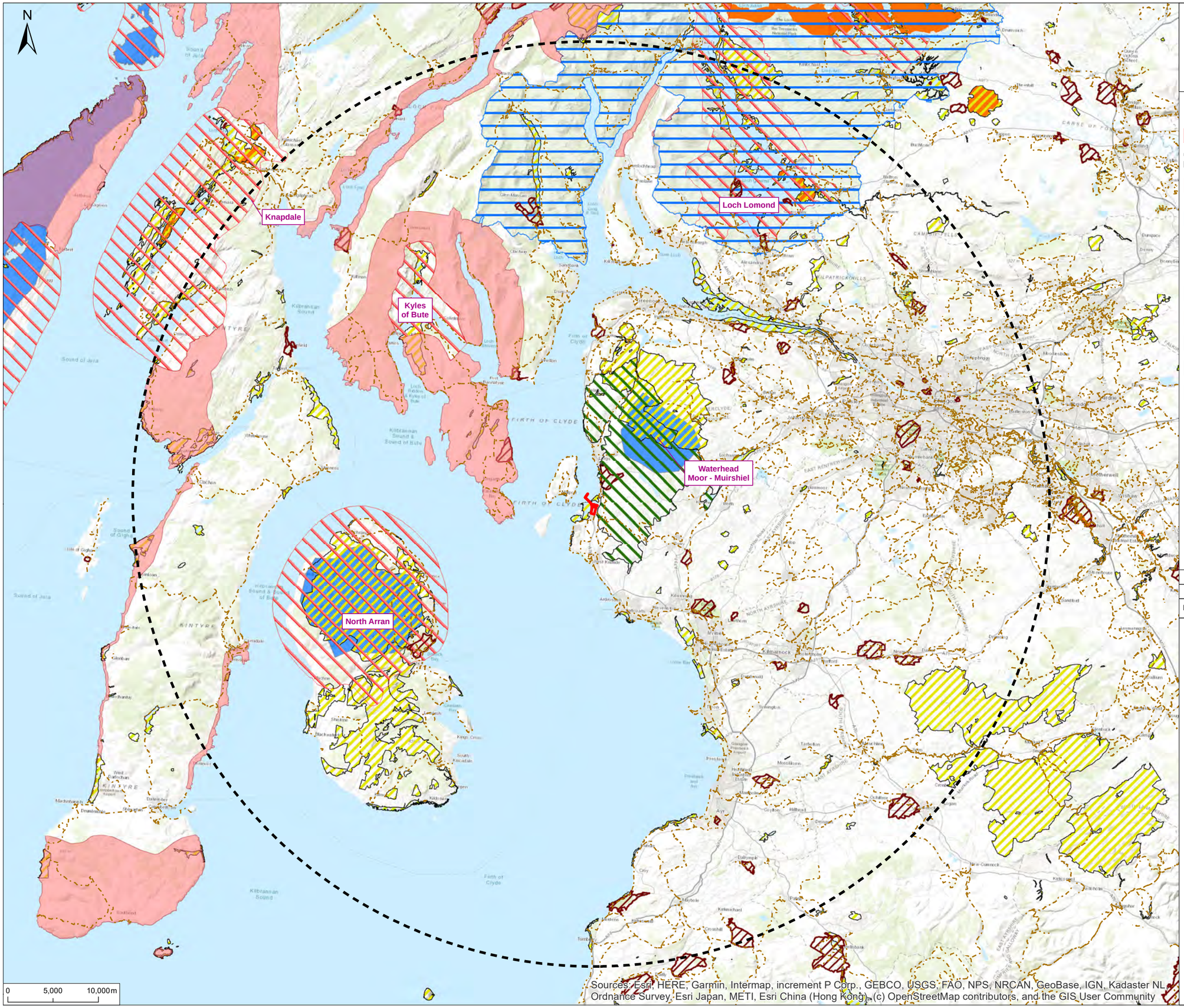
Client: XLCC Ltd

Project: Xlinks Cable Factory, Hunterston

Title: Landscape Character Plan

Status	Drawn By	PM/Checked By
ISSUE	RD	PE
Project Number	**Scale @ A3**	**Date Created**
NP12180	1:400,000	OCT 2021
Figure Number		**Rev**
5.2		-

rpsgroup.com



Notes
1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.

Legend

- Site Boundary
- 50km Study Area
- National Scenic Area
- Loch Lomond & Trossachs National Park
- Gardens & Designed Landscapes
- Areas of Panoramic Quality
- National Nature Reserve
- Clyde Muirshiel Regional Park
- Site of Special Scientific Interest
- Wildland Area
- Core Paths

Rev	Description	By	CB	Date

20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 821 888 E: rpsox@rpsgroup.com

Client: XLCC Ltd

Project: Xlinks Cable Factory, Hunterston

Title: Landscape Designations Plan

Status	Drawn By	PM/Checked By
ISSUE	RD	PE
Project Number	**Scale @ A3**	**Date Created**
NP12180	1:400,000	OCT 2021
Figure Number		**Rev**
5.3		-

rpsgroup.com

O:\12180 Xlinks Port-based Manufacturing\Tech\Drawings\12180-0005-04.mxd

APPENDICES

Appendix 1: EIA Report Requirements (extract from Schedule 4 of the EIA Regulations)

1. A description of the development, including in particular

    2. *a description of the location of the development;*

    3. *a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;*

    4. *a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;*

    5. *an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases*

6. *A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.*

7. *A description of the relevant aspects of the current state of the environment (the "baseline scenario") and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of relevant information and scientific knowledge.*

8. *A description of the factors specified in regulation 4(3) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.*

9. *A description of the likely significant effects of the development on the environment resulting from, inter alia:*

    10. *the construction and existence of the development, including, where relevant, demolition works;*

    11. *the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;*

    12. *the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;*

    13. *the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);*

    14. *the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;*

    15. *the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;*

    16. *the technologies and the substances used.*

    The description of the likely significant effects on the factors specified in regulation 4(3) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium- term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives

established at Union or Member State level which are relevant to the project including in particular those established under Council Directive 92/43/EEC3 and Directive 2009/147/EC.

17. *A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.*

18. *A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.*

19. *A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to legislation of the European Union such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.*

20. *A non-technical summary of the information provided under paragraphs 1 to 8.*

21. *A reference list detailing the sources used for the descriptions and assessments included in the EIA report.*