

Hunterston Construction Yard EIA: Non - Technical Summary



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Contents

1	Introduction	1
1.1	Background	1
1.2	Consenting Process	1
1.3	The Site	1
1.4	Structure of this Non-technical Summary	1
2	The Proposed Development	3
2.1	Need for the Proposed Development	3
2.2	The Proposed Development	3
2.3	Construction Timescales and Working Hours	3
3	Planning Context	4
3.1	Land Use Planning	4
3.2	Land Use Planning Policy	4
3.3	Marine Planning	5
3.4	Conclusions	6
4	EIA Methodology & Scoping	7
4.1	General EIA Methodology	7
4.2	The Scoping as part of the EIA Process	7
4.3	Consultation	7
4.4	Scope of the Environmental Impact Assessment (EIA)	8
5	Biodiversity	9
5.1	Introduction	9
5.2	Impact Assessment and Significance of Effects	9
5.3	Proposed Mitigation Measures	11
6	Seascape, Landscape And Visual	12
6.1	Introduction	12
6.2	Impact Assessment and Significance of Effects	12
6.3	Proposed Mitigation Measures	13
7	Terrestrial Noise	14
7.1	Introduction	14
7.2	Impact Assessment and Significance of Effects	14
7.3	Proposed Mitigation Measures	14
8	Traffic Assessment	15
8.1	Introduction	15
8.2	Impact Assessment and Significance of Effects	15
8.3	Proposed Mitigation Measures	15
9	Water Environment and Coastal Processes	16
9.1	Introduction	16
9.2	Impact Assessment and Significance of Effects	16
9.3	Proposed Mitigation Measures	17
10	Socioeconomic and Human Health	18
10.1	Introduction	18
10.2	Impact Assessment and Significance of Effects	18
10.3	Proposed Mitigation Measures	20
11	Accidents and Natural Disasters	21
11.1	Introduction	21
11.2	Impact Assessment and Significance of Effects	21
11.3	Proposed Mitigation Measures	21
12	Navigation	23
12.1	Introduction	23
12.2	Impact Assessment and Significance of Effects	23
12.3	Proposed Mitigation Measures	23

- 13 Supporting Assessments 26
 - 13.1 Air Quality 26
 - 13.2 Material Assets and Waste 26
 - 13.3 Carbon, Climate Change and Greenhouse Gas Emissions Assessment 27
- 14 EIAR Conclusion 29
 - 14.1 Schedule of Mitigation 29
 - 14.2 Summary of Significance of Effects 29

1 INTRODUCTION

1.1 Background

Clydeport Operations Ltd. (Clydeport), a subsidiary of Peel Ports Ltd., proposes to upgrade their existing Hunterston Construction Yard (HCY), on the Firth of Clyde, into a harbour facility with a large working platform suitable for renewable industries. The proposed development will be used to support the offshore wind industry for activities potentially including gravity-based structure construction, jacket construction, turbine assembly, and associated activities including the storage of components. The proposed project site has the deepest sea entrance on the west coast of the UK which gives it a strategic advantage of accommodating the largest capacity sea vessels and handling bulk cargoes such as gravity base structures used by the offshore wind industry. The proposed project aligns with the strategic planning as per the local development plan adopted by North Ayrshire Council and more recently National Planning Framework 4.

1.2 Consenting Process

The Environmental Impact Assessment (EIA) was undertaken under both the Town & Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 and the Marine Works (Environmental Impact Assessment (Scotland) Regulations 2017 ('the Marine EIA Regulations').

The purpose of this Non-Technical Summary (NTS) is to provide a summary of the findings of the EIA. The purpose of the EIA is to determine whether the proposed quay development at Hunterston Construction Yard, including infilling the existing dry dock, will have significant effects on the environment. Where significant effects are predicted, the EIA considers the scale and magnitude of these effects and measures to mitigate them. This NTS sets out the scope of the EIA, the methods used and the findings of the assessment.

The EIA Report (EIAR) will be submitted to North Ayrshire Council Planning Committee (NACPC) and Marine Directorate – Licensing Operations Team (MD-LOT) for consideration as part of the respective applications for consent. Members of the public may make representations to these organisations during the formal consultation process for each consent. The period for representations for each consenting regime will be determined by the respective consenting bodies.

1.3 The Site

HCY extends out into the Firth of Clyde with Hunterston Power Stations ~1km to the south, Fairlie village ~1.9km to the northeast, the island of Great Cumbrae ~1.4 km to the northwest and the redundant Hunterston Coal Terminal ~500m to the east. The Southannan and Hunterston Sands Sites of Special Scientific Interest (SSSI) bound the site to the northeast, east and southeast.

1.4 Structure of this Non-technical Summary

The NTS is set out in the same order as the EIA Report, to facilitate cross-referencing and to offer a summary of the environmental findings that will be submitted. The sections within this NTS are therefore as follows:

1. Introduction

2. Proposed Development
3. Planning Context
4. EIA Methodology and Scoping
5. Biodiversity
6. Seascape, Landscape and Visual
7. Terrestrial Noise
8. Traffic Assessment
9. Water Environment and Coastal Processes
10. Socioeconomic and Human Earth
11. Accidents and Natural Disasters
12. Navigation
13. Supporting Assessments
14. Schedule of Mitigations
15. Summary of Effects

The overall suite of documents associated with the applications comprises the following:

- The Environmental Impact Assessment Report (EIAR) – this reports the potentially significant environmental effects of the proposed development on the environment, and is made up of the following:
 - Volume 1: Written Statement – this includes the written assessment and contains discussion of potentially significant environmental effects and proposed mitigation measures.
 - Volume 2: Figures – this volume includes figures, drawings and diagrams which support Volume 1.
 - Volume 3: Technical Appendices – this volume contains the technical background reports written and used to derive the environmental assessment.
- Pre-Application Consultation (PAC) Report: this provides information on the community engagement which has been undertaken prior to this submission with regards to the proposed development and details public engagement initiatives and attitudes towards the proposed development.
- Non-Technical Summary (NTS) (this document).

2 THE PROPOSED DEVELOPMENT

2.1 Need for the Proposed Development

Clydeport is considering their options for developing Hunterston Construction Yard (HCY) to support the long-term future of offshore wind and other commercial ventures at the site. The company has identified that upgrading the HCY into a harbour facility with a large working platform will better support the needs of future tenants.

The proposed project site has a strategic advantage of having the deepest sea entrance on the west coast of the UK allowing it to accommodate the largest capacity sea vessels and handle bulk cargoes.

2.2 The Proposed Development

The proposed development assessed within the EIA incorporates the following key elements:

- Demolition of existing structures;
- Infilling of the dry dock to form a working platform;
- Formation of 570m quay wall 500mm back from MHWS i.e. in the terrestrial environment;
- Formation of a temporary working platform;
- Removal of the existing rock armour on the western boundary;
- Removal of the existing bund on the western boundary;
- Installation of sub-surface revetments for the new quay wall;
- Installation of fenders and other quay wall infrastructure i.e. drainage outfalls, mooring bollards, safety ladders and navigational aids ;
- Erection of port infrastructure including lighting columns, substations, drainage, security fencing, access gates, access road improvements (including resurfacing) and CCTV; and
- Erection of temporary site offices and staff welfare buildings to accommodate site workforce.
- Installation of sub-surface revetments for the new quay wall;
- Capital Dredging to a depth of -12m CD to enable access to the 570m quay wall;
- Disposal of dredging spoil to a licensed marine spoil disposal site;
- Construction of up to 5 mooring dolphins;
- Installation and removal of a temporary grounding pad to facilitate vessel birthing as required;
- Installation of navigational aids.

2.3 Construction Timescales and Working Hours

It is anticipated that construction works will take up to two years to complete. During this period, demolition, piling and earthworks to place and compact materials to create the quay and infill the dock is estimated to last one year. The land-based piling which will incorporate piling in areas of the site to facilitate elements required for the subsequent operation of the site including piling to create a stable foundation in the area of the infilled dry dock is estimated to be completed within approximately 1 year. Construction timelines are currently estimated based on similar schemes undertaken in recent years. Timelines also assume no restrictions on vessels, plant, manpower or equipment.

The normal working hours for construction are expected to be Monday – Saturday 7 am to 7 pm and Sunday 7 am until 2 pm. Dredging and drilling would be 24 hours, 7 days a week.

3 PLANNING CONTEXT

This chapter considers relevant planning policy and guidance from National Planning Policy documents, the Development Plan and other relevant statutory documents.

3.1 Land Use Planning

The National Planning Framework 4 (NPF4) sets out the long-term vision for the development of Scotland and the policies which reflect Scottish Ministers' priorities for the operation of the planning system and for the development and use of land, which seek to move towards a sustainable, low carbon, resilient and connected Scotland.

3.2 Land Use Planning Policy

3.2.1 National Planning Framework 4 (NPF4)

NPF4 sets out six overarching principles to support the Scottish Government's planning of future places. In applying these principles, the national spatial strategy, as set out in NPF4, will support the planning and delivery of:

- Sustainable places, where we reduce emissions, restore and better connect biodiversity;
- Liveable places, where we can all live better, healthier lives; and
- Productive places, where we have a greener, fairer and more inclusive wellbeing economy.

The above spatial strategy goes on to define eighteen national developments within NPF4, including Hunterston Strategic Asset which supports re-use (of) the port and wider site, engaging in new technologies and creating opportunities from nuclear decommissioning to make best use of existing infrastructure and provide local benefits.

NPF4 defines the Hunterston Strategic Asset national development as comprising Hunterston Port, the former nuclear power station sites and marketable employment land at Hunterston Estate.

With regards to the narrative around the National development status of Hunterston Strategic Asset, NPF4 states:

This national development supports the repurposing of Hunterston Port as well as the adjacent former nuclear power station sites and marketable business land of the Hunterston Estate. Hunterston has long been recognised as a strategic location for the port and energy sectors given its deepwater access and existing infrastructure. Hunterston is a key site, anchoring other opportunities around the Firth of Clyde.

The location and infrastructure offers potential for electricity generation from renewables, and a variety of commercial uses including port, research and development, aquaculture, the circular economy, and environmental and economic opportunities around nuclear decommissioning expertise.

As a point of principle, the proposed development is defined as having National Development status under NPF4 due to the inclusion of Hunterston Strategic Asset within NPF4. The proposed works within the current planning application therefore benefit from the support within NPF4 and accord with the requirements of NPF4.

The proposed development will also be assessed against other NPF4 Policies, more importantly Policy 3 in relation to Biodiversity, Policy 9 Brownfield, Vacant and Derelict Land and Empty Buildings, Policy 10 Coastal Development and Policy 26 Business and Industry. The supporting Planning Statement considers these policies in more detail and finds that the proposed development is in accordance with NPF4.

3.2.2 Local Development Plan

The adopted Local Development Plan Strategic Policy 3 includes the Hunterston site as one of a number of Strategic Development Areas.

Under Strategic Policy 3, the Council states that:

We recognise the strategic national importance of Hunterston as an energy hub and deep water port. We strongly support the inclusion of Hunterston in the National Planning Framework 4. In particular we will support the following uses in relation to the Hunterston Deep Water Port:

- *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,*
- *Maritime construction and decommissioning (including oil and gas structures),*
- *Bulk handling facilities for importing, processing and distributing all dry and bulk liquid cargoes,*
- *Local scale Bio-mass energy generation developments as per Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009, and*
- *Other storage, processing and distribution uses and general light industrial activities where they would not undermine the strategic importance of, and unique assets of Hunterston as a deep water port.*

There are a number of environmental and development management policies within LDP2 that the proposed planning application will need to address through its assessment of the development and its potential effects. These are set out in the supporting Planning Statement and discussed in more detail with reference to the degree that the development accords with policy.

The proposed development is clearly supported by specific policies within the adopted LDP2 and the proposals are consistent with the aims and vision set out in LDP2. There is considerable synergy between the focus of LDP2 in relation to the importance of Hunterston as an economic asset and its status within NPF4.

3.3 Marine Planning

3.3.1 Clyde Marine Planning Partnership

With regards to Marine Planning, the Clyde Marine Planning Partnership (CMPP) was one of the first marine partnerships established with the objective of taking forward regional marine planning in the Clyde through a regional marine plan. The plan has not yet been developed; when it is, it will aim to balance environmental protection with economic growth on the Clyde. The local level regional marine plan must comply with Scotland's National Marine Plan. The Clyde Marine Planning Partnership would nevertheless be a consultee with regards to the proposed works.

3.3.2 National Marine Plan

The National Marine Plan was published in 2015 and lays down policies for sustainable development within the marine environment. The Plan specifically recognises the interface between marine and terrestrial planning and acknowledges that in most cases development within the marine environment will also have terrestrial planning implications.

The Plan lays out a core set of General Policies which apply across all developments and use of the marine environment. These General Policies are intended to represent the characteristics against which the sustainability of development and use is considered. The General Policies apply to all plan making and decision making in the marine environment. The policies provide a clear overarching framework for all activity. More detailed policies in the sector chapters of the Plan are subject to the General Policies.

3.3.3 Marine Planning Policy

The Shipping, Ports, Harbours and Ferries sector of the Marine Plan sets out a number of objectives, none of which the proposed development is in conflict with. It also defines the following marine planning policies.

In assessing the proposed development activity in the context of the National Marine Plan, there is not considered to be conflict with the objectives, General Policies or sector policies within the Plan. In principle the Plan supports sustainable development that has an economic and social benefit.

We would also note that the Plan states in para 2.16, that it should be applied proportionately, taking account of the potential scale of impact of any proposal as well as the sensitivity of the environment and/or any potential social or economic effect under consideration.

3.4 Conclusions

In conclusion, we find that the proposed development does not conflict with either terrestrial planning policies contained within LDP2 and NPF4 or marine planning policies as set out in the National Marine Plan.

4 EIA METHODOLOGY & SCOPING

4.1 General EIA Methodology

The purpose of an EIA is to identify and evaluate the likely significant effects of a proposed development on the environment, both direct and indirect, and then identify measures to mitigate or manage any significant adverse effects before a planning application is determined.

The EIA process provides an opportunity to 'design out' adverse effects wherever possible by making alterations to the design of the proposed development before the application is submitted and based upon feedback from consultees.

Where adverse effects cannot be designed out, mitigation measures can be proposed to avoid, compensate, or reduce significant environmental effects to an acceptable level.

The environmental information gathered during the EIA is derived through a methodical process of identification, prediction, and evaluation of the likely significant environmental effects of the proposed development. This process includes: -

- identifying the sensitivity of the baseline conditions/receptors;
- predicted the magnitude of potential impacts;
- predict the significant effect of the impacts;
- detailing mitigation measures to limit impacts;
- predicting the potential residual effects as well as the potential cumulative impacts.

The results and findings are presented in full within the EIAR and summarised in this document.

4.2 The Scoping as part of the EIA Process

A request for a formal Scoping Opinion was submitted to NAC and MD-LOT on 6th October 2023 under Regulation 17(1) of the Town & Country Planning (EIA) (Scotland) Regulations 2017 and Regulation 14(1) of the Marine Works (EIA) (Scotland) Regulations 2017. This was accompanied by an EIA Scoping Report provided to assist the NAC, MD-LOT, statutory and non-statutory consultees to form an opinion upon the likelihood of potentially significant environmental effects and hence the topics to be assessed in the EIA (i.e. those topics where significant environmental effects could potentially result if unmitigated). The Scoping Report also provided an opportunity for consultees to comment upon suggested methodologies for technical assessment.

A Scoping Opinion was determined by NAC dated 1st December 2023 and a Scoping Opinion was determined by MD-LOT dated 23rd February 2024.

4.3 Consultation

Consultation responses were obtained from the following organisations in respect of the Scoping Reports issued to NACPC and MD-LOT:

- North Ayrshire Council
- NatureScot
- Historic Environment Scotland

- Marine Invasive Species Team
- Maritime and Coastguard Agency
- Ministry Of Defence (MOD)
- Northern Lighthouse Board
- Office for Nuclear Regulation
- RSPB Scotland
- Royal Yachting Association (RYA)
- Transport Scotland
- Marine Directorate

Three public consultation events were undertaken including:

1. Community Consultation Event 1: 18th October 2023 at Fairlie Village Hall.
2. Community Consultation Event 2: 8th November 2023 at Fairlie Village Hall. This event included a closed session for Local Councillors from 14:00 to 15:00.
3. Community Consultation Event 3: 16th January 2024 held at Garrison House, Millport.

The applicant also undertook additional stakeholder consultations to inform on the wider Hunterston PARC project via the Hunterston PARC Liaison Group

4.4 Scope of the Environmental Impact Assessment (EIA)

Based on the consultation undertaken and responses received to date, a view was reached on the key topics to be assessed as part of the EIA. These were:

1. Introduction
2. Proposed Development
3. Planning Context
4. EIA Methodology and Scoping
5. Biodiversity
6. Seascape, Landscape and Visual
7. Terrestrial Noise
8. Traffic Assessment
9. Water Environment and Coastal Processes
10. Socioeconomic and Human Earth
11. Accidents and Natural Disasters
12. Navigation
13. Supporting Assessments
14. Schedule of Mitigations
15. Summary of Effects

5 BIODIVERSITY

5.1 Introduction

The biodiversity assessment considered the impact of the proposed HCY on designated sites, marine and terrestrial habitats and protected wildlife, including birds, marine mammals, fish, otter, inter-tidal habitats and sub-tidal habitats. The assessment was carried out according to the latest guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM) by experienced and competent ecologists who are all Members of CIEEM and follow its Code of Professional Conduct.

A number of studies were conducted to gather baseline information regarding sensitive features within the site and wider area. This included a review of desk-based information available from biological records and bodies such as NatureScot and Marine Directorate. Field surveys were also conducted to identify marine and terrestrial habitats, determine how birds use the site, and if there were protected species such as otter present. Computer modelling was used to determine how noise generated through construction activities would travel underwater.

Designated sites in proximity to the development include:

- Southannan Sands Site of Special Scientific Interest (SSSI);
- Kames Bay SSSI; and
- Ballochmartin Bay SSSI.

Habitats on and in close proximity to the development include:

- Sparsely vegetated formerly developed land;
- Seagrass beds; and
- Blue mussel bed.

Species/species groups that could be impacted include:

- Otter;
- Birds;
- Seal;
- Harbour Porpoise;
- Minke Whale;
- Killer Whale;
- Bottlenose Dolphin;
- Fish, and
- Basking Sharks.

5.2 Impact Assessment and Significance of Effects

In order to assess the significance of impacts, consideration was given to the predicted duration, frequency, timing, geographical extent and reversibility of impacts, as well as the number of individual animals in a population who would be exposed, or the area of habitat affected.

The proposed works are outside of all the designated sites, the Southannan Sands SSSI is immediately adjacent to the development and comprises three separated coastal sections of inter-tidal

sandflats habitats (designated feature) along the Clyde coastline. The Southannan Sands SSSI contains priority marine features including Seagrass beds and a Blue Mussel Bed.

The construction and operational phase may result in impacts to the SSSI, terrestrial and marine mammals, birds and the habitats present via release of suspended sediments during dredging (capital and maintenance) and construction, noise and activity associated with the works, potential accidental release of pollutants via spills and accidental release of marine invasive species (miNNS) during the works and movement of vessels to site.

Impacts on the Southannan Sands SSSI and the seagrass beds during the construction phase will be temporary and are considered to be **negligible to moderate** in magnitude with the receptor being of **negligible to high sensitivity**. The confidence level for the assessment is considered to be high. Impacts on the Blue Mussel Bed during the construction phase will be temporary and are considered to be **negligible to moderate** in magnitude with the receptor being of **negligible to medium sensitivity**. The confidence level for the assessment is considered to be high.

Impacts on the Southannan Sands SSSI and seagrass beds during the operational phase are considered to be **negligible to moderate** in magnitude with the receptor being of **negligible to high sensitivity**. The confidence level for the assessment is considered to be high. Impacts on the Blue Mussel Bed during the operational phase are considered to be **negligible to moderate** in magnitude with the receptor being of **negligible to medium sensitivity**. The confidence level for the assessment is considered to be high.

For, otters marine mammals and fish, the main impacts arising from construction are from underwater noise generated by activities such as piling, dredging and/or pollution events. Underwater noise can result in changes in behaviour, disturbance, injury or even death when experienced at close range. For piling there is a requirement to undertake a soft start process. A Marine Mammal Observer (MMO) will also be required to be present to observe for presence of marine mammals and basking sharks during the works and liaise with the construction contractor to manage the site operations to ensure the receptors are protected. As these species can all swim freely within the water, as long as they are not too close to the source of the noise when it commences (to be assessed by the MMO), they will be able to move away before it causes an issue.

Once operational, the main impact on marine mammals and large fish such as basking shark is from the increased risk of vessel strikes, however, mitigation will reduce the overall risk.

Wintering birds may be impacted during the construction phase from disturbance caused by noise and vehicle movement. An ornithological clerk of works (OCOW) will be present on site during specific phases of the works to assess the potential for disturbance and inform the working methodology to mitigate impact to birds. During operation of the site there will be a speed limit in place on the access road to mitigate disturbance to birds as a result of vehicle movement.

Once mitigation has been taken into consideration no significant effects on Important Ecological Features are predicted. Whilst there are some uncertainties or limitations in the assessments and/or mitigation proposed, it is anticipated that monitoring both during construction and through operation will allow for mitigation to be adapted as necessary. There is a possibility of a small number of individual birds, otter, marine mammals or basking sharks experiencing disturbance or being displaced from a small area of their habitat but this is not considered likely to affect the favourable conservation status of populations in a local, national or international context. A derogation licence will be required for disturbance to cetaceans and basking sharks. If successfully implemented, the biodiversity enhancements should provide benefits to the local biodiversity, creating habitats suitable for a variety of floral and faunal terrestrial and intertidal species.

5.3 Proposed Mitigation Measures

A plan detailing all the mitigation requirements for the project will be drawn up ahead of construction, and its implementation during construction will be audited independently. This will include a detailed biosecurity plan to avoid the spread of marine invasive species as well as pollution prevention measures.

Prior to works commencing on site (including any site clearance or preparatory works) a Construction Environment Management Plan (CEMP) detailing site-specific mitigation and monitoring will be agreed with the planning authority and implemented to avoid and reduce negative impacts

An independent Ecological/Environmental Clerk of Works (ECOW) will be employed to audit and report on adherence to the CEMP as well as any other relevant planning consents, environmental permits, legislation and mitigation.

An OCOW will undertake disturbance monitoring during the construction phase, particularly during potential sensitive activities such as piling on the eastern side of the marine yard and access road resurfacing works.

A Marine Mammal Protection Plan (MMPP) will be implemented to reduce the risk of underwater noise causing injury to marine mammals (and basking shark). This will involve the use of MMOs. The MMPP also details protocols to be implemented to reduce collision risk. Vessels will adhere to the protocols presented within the MMPP in relation to avoiding collision with marine mammals and fish.

A site-specific biosecurity plan has been produced for the proposed development. This is a working document and will be updated to reflect development in the site operation, use and knowledge with respect to marine non-native invasive species.

During the operational phase of the development a biosecurity plan will be adhered to and reviewed at regular intervals in line with operational needs and available data on mINNS present.

A speed limit of 15 miles per hour will be in place on the access road to the site to mitigate disturbance to birds during the construction and operation phase.

Permanent lighting will be fitted with shades to reduce light spill to habitats within the Southannan Sands SSSI.

6 SEASCAPE. LANDSCAPE AND VISUAL

6.1 Introduction

A seascape, landscape and visual impact assessment (SLVIA) has been undertaken which considers the potential landscape (including townscape) and visual effects of the proposed development.

6.2 Impact Assessment and Significance of Effects

Chapter 6 has assessed that significant seascape, landscape and visual effects resulting from the proposed development would be contained within a very localised area around the application site, with significant seascape and landscape character, and visual amenity effects assessed as occurring within distances of up to ~3km from the proposed development (depending on the presence of intermittent urban and industrial built form, transport corridors, and tree and vegetation cover).

The localised presence of settlement and large-scale infrastructure elements on the fringes of the surrounding urban landscapes diminishes the potential for significant effects from the surrounding seascape and landscape environments by limiting/restricting visibility of the proposed construction works and activities, and associated operational infrastructure, or assisting with their visual integration.

In certain views in the proximity of the application site, the increased volume of construction works, activities and shipping/vehicle movements would be apparent (principally from the Hunterston estate, Great Cumbrae Island, and Little Cumbrae Island). The temporary presence of taller elements such as high mast lighting columns, cranes, and cargo movements from larger ships would also present a noticeable contrast in scale with existing elements, particularly when viewed at close distances when their presence would be amplified by their closer proximity to the viewer. In contrast, the natural perspective would aid the viewers perception of scale difference from more distant locations, particularly in instances when the taller elements would accord with existing urban and industrial built forms and vertical structures against the sky.

When considering the operational cumulative context, the addition of the proposed development would only slightly increase the presence of construction works and activities in the immediately surrounding landscape.

When considering the consented and planning application stage cumulative scenarios, construction works and activities undertaken for the other planning application stage developments delivered as part of the Hunterston PARC masterplan would influence the extent of cumulative effects.

Given the proximity of all the planning application stage developments under consideration, the significant effects identified in the SLVIA are considered to occur as a result of the proposed development in its own right (i.e., introduced to the 'host' Coastal Character Areas (CCA), Landscape Character Type (LCT) or proximity views) and cumulatively with the baseline and planning application stage scenarios.

Whilst the results of this SLVIA has assessed that the proposed development would result in significant seascape, landscape and visual effects the works are not considered to reach unacceptable levels, particularly when considering the type of construction works and activities required to modernise the site into a facility suitable for use by the offshore renewable industries.

6.3 Proposed Mitigation Measures

Opportunities to mitigate adverse landscape and visual effects are limited due to the scale of the proposed development, and the visually open character of the proposed site.

The specific nature of the proposed development means that its design must principally respond to future operational and functional requirements. The existing land uses on the application site, and in the immediate surroundings, provide an opportunity for the construction works to be experienced in the context of similar operational activities occurring in the immediate surroundings, which can provide visual continuity.

The biggest contribution to mitigating potential seascape, landscape and visual effects can be made during the layout design process. Screening the proposed development is not feasible due to the exposed coastal location and topographical context. Nevertheless, careful thought and consideration has been given towards, for example, the placement and height of the proposed 3m high perimeter fencing, the placement and height of lighting, the placement and siting of temporary welfare facilities and laydown areas etc.

Given the location of the application site, it is acknowledged that traditional enhancement methods, such as the promotion of new tree planting, are unlikely to be effective as soil and climactic conditions suggest that new tree planting may be difficult to establish.

There may however be an opportunity to incorporate some small tree or shrub planting along the access road.

7 TERRESTRIAL NOISE

7.1 Introduction

A Noise Impact Assessment (NIA) was carried out for the proposed development. Noise from the proposed development has the potential to impact surrounding existing residential receptors. Assessment of both construction noise and operational noise has been included in the EIA.

7.2 Impact Assessment and Significance of Effects

A construction Noise Impact Assessment (NIA) has been carried out for the proposed upgrade to Hunterston Construction Yard (HCY) into a harbour facility with a large working platform suitable for renewable industries. The NIA has been undertaken in accordance with Planning Advice Note (PAN) 1/2011 on Planning and Noise, and the corresponding Technical Advice Note (TAN) 1/2011 on Assessment of Noise.

Changes to noise levels have been predicted for a number of noise-sensitive receptors (NSRs) under the worst-case combined construction activity scenarios using Computer Aided Noise Abatement (CadnaA) modelling software.

While day-time noise levels have been predicted for most construction activity scenarios, there is the potential for dredging activity to be carried out over 24 hours, therefore, evening and nighttime noise levels have been predicted for this scenario.

The NIA predicted neutral impacts for all construction activity scenarios at all NSRs during the daytime and evening. In accordance with TAN 1/2011, neutral impacts are not significant, and noise need not be considered as a determining factor in the decision-making process.

The NIA also predicted a moderate adverse effect for dredging activity using a backhoe dredger at one NSR during the night-time. In accordance with TAN 1/2011, moderate impacts, if adverse, while important, are not likely to be key decision-making issues.

This impact may be mitigated by means of an adjusted dredging schedule whereby backhoe dredging is prioritised during the day-time and only carried out during night-time in close proximity to the HCY site and, therefore, at the furthest distance from the NSR. It should be noted that the NIA predicts a neutral impact for dredging activity using alternative dredging plant (i.e., a trailing suction hopper dredger) during both the daytime and night-time.

7.3 Proposed Mitigation Measures

A Construction Noise Management Plan (CNMP) has been prepared to minimise any potential construction noise impacts. Following the implementation of the CNMP and with appropriate planning and scheduling of night-time dredging activities, there should be no significant adverse effects on any NSRs.

8 TRAFFIC ASSESSMENT

8.1 Introduction

This chapter of the EIAR examines the environmental impacts with regard to access traffic and transportation for the upgrade of the existing HCY into a harbour facility with a large working platform suitable for renewable industries.

The data underpinning this assessment is based on recently collected traffic data and construction traffic data estimates provided by the client, which will include the likely phasing of the construction works.

8.2 Impact Assessment and Significance of Effects

The EIAR details the Traffic Assessment. In terms of traffic impacts, a maximum of 11% uplift in HGV movements is expected to be experienced on the A78 (N) but the overall impact of construction vehicles is relatively low on the A78 in terms of AADT.

The impact on Severance is considered to be insignificant considering the fact that the construction traffic will arrive at the site using the A78 on the trunk road network and there are no residential areas on the route to the site or within the vicinity of the site. Also, the existing pedestrians and cyclists using Power Station Road should not be affected due to the low level of traffic generated during the construction phase, on that route.

Given the low level of construction traffic generation, the potential impact on Driver Delay on the surrounding road network, Non-motorised User Delay, Non-motorised User Amenity is considered to be insignificant.

The level of fear and intimidation is currently moderate and there will be no change in the level of fear and intimidation on the A78 due to the low level of construction traffic and Oilrig Road. Re-opening Power Station Road / Oilrig Road (site access) to traffic may increase the level of fear and intimidation on this road, however, due to the low level of construction traffic expected, the impact on fear and intimidation will likely be negligible.

In terms of road safety, there are no historical road safety issues associated with the road network surrounding the development.

It is not anticipated that there will be any hazardous load / large load vehicle movements associated with the development. Therefore, the impact will be insignificant.

8.3 Proposed Mitigation Measures

No mitigation measures are required to support the proposed development.

9 WATER ENVIRONMENT AND COASTAL PROCESSES

9.1 Introduction

This section of the EIA considered potential impacts of the proposed development on water quality, groundwater, tides, waves and sediment transport. The assessment was undertaken in accordance with relevant best practice guidance, by experienced hydrologists and coastal modellers.

The assessment process involved an initial desk-based review of level surveys of the land and seabed, review of literature, ordnance survey, geological mapping, nautical charts, ground investigation and sediment sampling. Consultation was undertaken with key stakeholders to obtain relevant information and to ensure any concerns were addressed within the study.

Computer modelling of tides and waves was undertaken, for both existing and future conditions.

9.2 Impact Assessment and Significance of Effects

The potential impacts on the Water Environment were identified as:

- Hydrology;
- Water and sediment quality;
- Tidal regime;
- Wave climate; and
- Sediment transport.

Hydrology, Water and Sediment Quality

During the construction phase, due to the coarse nature of the sediment and weak tidal currents, the impact of proposed dredging activities was found to be low within the immediate vicinity of the works, and negligible outwith the works.

The coastal modelled assessment has indicated no significant deposits of sediment in Largs Channel and the wider Firth of Clyde (<0.001m thickness of material).

There is noted to be an increase in suspended solids (leading to a potential increase in turbidity of the water) for a period of 8 weeks during the capital dredging works, however, this is noted to return to baseline levels shortly following the completion of the activity (<10 days).

The potential for the operation of the proposed development to impact the water environment found that due to the small contributing catchment and the coastal location, potential impacts on the water environment and coastal processes, with appropriate mitigation in place, would be negligible.

The modelled assessment has indicated no significant deposits of sediment in the Southannan Sands SSSI (<0.001m thickness of material).

During both phases of the development, there is a risk of accidental pollution incidences affecting the water environment (i.e. coastal waters and sediment). The effect of the potential pollution incidences during construction on water quality would be dependent on the scale and nature of the incident, therefore the magnitude of impact prior to mitigation may range from low to high, giving rise to effects of moderate to major significance prior to mitigation.

Tidal Regime, Wave Climate and Sediment Transport.

The results of computer modelling of tides and waves indicate that the impact of the proposed development on coastal processes will be negligible. Given the negligible impact on tidal velocities and limited localised impact to the wave climate, it is considered that there will be a negligible impact on sediment transport giving rise to effects of negligible significance prior to mitigation.

9.3 Proposed Mitigation Measures

During the construction phase, a Construction Environmental Management Plan (CEMP) will be developed to ensure that the mitigation measures outlined in the EIAR are followed. The CEMP will include surface water management and pollution prevention measures which follow best practices and comply with SEPA guidance.

A suitably qualified Environmental Clerk of Works (EnvCoW) will monitor the construction works to ensure that the CEMP and associated mitigation measures are being implemented effectively.

During the operational phase, an Operational Environmental Management Document (OEMD) will be in place, and this will include surface water management and pollution prevention measures, which follow best practices and comply with SEPA guidance.

The Applicant shall undertake a planned programme of compliance monitoring to verify the effectiveness of the project's environmental management. Monitoring plans will be established and implemented with the agreement of SEPA, NatureScot and Marine Scotland.

With the implementation of mitigation measures, the overall effects of the proposed development on the water environment and coastal processes are not considered to be significant.

10 SOCIOECONOMIC AND HUMAN HEALTH

10.1 Introduction

This chapter provides an assessment of the potential socio-economic and health impacts associated with the Proposed Hunterston Marine Yard.

The purpose of the assessment is to examine how the Proposed Development will impact local communities and the local & regional economy. In this context, community impacts refer to the consequences of the Proposed Development on human populations relating to the ways in which people live, work, play, and relate to one another and their health. The economic impacts cover issues in terms of businesses, employment and direct spending that may arise as a consequence of the proposed development. The proposed development comprises works that are both marine-based and terrestrial-based (requiring planning permission and marine works licence). This chapter covers terrestrial activities because these are defined with consideration of marine impact in terms of the inclusion of a stakeholder group.

10.2 Impact Assessment and Significance of Effects

Other chapters cover socio-economic related issues and so significant findings that could affect the socioeconomic assessment are identified. The following summarises the main reports of note:

- Construction dust risk assessment,
- Seascape, Landscape and Visual Assessment (Chapter 6 of the EIAR),
- Terrestrial Noise (Chapter 7 of the EIAR) and
- Traffic Assessment (Chapter 8 of the EIAR)

The assessment of socio-economic and population & human health has been summarised below.

Assessment of Socio-Economic Impact Assessment and Population & Health

Subject	Scope	Receptor	Sensitivity of Receptor	Short / Long term	Magnitude of impact	Potential Positive or negative	Effect
Socio-economic Impact	Direct economic	Future employees	Negligible	Short-term during construction but potential for long-term based on future use on site	Low	Positive – job creation in the area as none on site at present	Minor
	Indirect / induced / wider economic expenditure	Supply chain, other businesses in the area	Negligible	Short-term during construction but potential for long-	Low	Positive – supply chain economic expenditure in supported	Negligible

				term based on future use on site		manufacturing sector	
	Community resources	Recreational users, Tourist accommodation, Local residents, Marine users	Low	Long term potential	Low	Positive – the population has been decreasing so any in-migration would be positive	Negligible
			Low	Short-term noise during construction	Medium	Negative – potential for noise impact from dredging on tourism on Millport	Minor
Population & Human Health	Population characteristics	Local residents, local road users	Low	Short-term during construction but potential for long-term based on future use on site	Low	Negative – a number of studies have been undertaken but none have identified the potential for effect on socio-economic receptors	Negligible
	Population perception	Local residents, future employees	Low	Short term	Low	Negative – a change in use can always have the potential for perception to change	Negligible
	Health risk assessment	Local residents, Community Council etc	Negligible	Short-term during construction but potential for long-term based on future use on site	Low	Negative – introduction of use on-site has the potential to affect people physically and mentally	Negligible

Based upon the assessment there are no negative significant effects from the proposed development in terms of socioeconomic and population & health

The table below provides a summary of the Health Risk Assessment (HRA).

Health Risk Assessment

	Healthy lifestyles	Crime and community safety	Air quality and neighbourhood amenity	Social cohesion and social capital
Potential nature of the impact	Neutral	Neutral	Neutral	Neutral
Degree of certainty	Unlikely	Probable	Unlikely	Unlikely
Duration	Short term	Short-term (may be long-term)	Short term	Short term

		depending on future use)		
Phase of Project	Construction (no effect during operation)	Construction and operation	Construction	Construction (may be long-term depending on future use)
Pathways	Dust, noise	Visible equipment	Dust during construction	Incoming residents
Stakeholder group	Local residents, tourists	Local residents	Local residents	Local residents
Significance	None	None	None	None

The HRA concludes that there are no likely significant effects on the physical health or mental health from the proposed development.

10.3 Proposed Mitigation Measures

No significant effects associated with Socio-Economic Impact Assessment and Population & Human Health are predicted. However, there are some suggestions made as a result of baseline investigations and noted within the application documents.

1. Minimise dredging at night near the Millport Field Studies Centre (particularly during their peak season June to August)
2. Maintain a management plan (construction management plan and during operation) that minimises any risk of crime on the site and ensures cycleways and footpaths nearby are not interrupted.
3. A number of apprenticeship schemes were identified such as Skills Development – Ayrshire: <https://www.skillsdevelopmentscotland.co.uk/local-national-work/north-ayrshire> the use of these resources to encourage local apprenticeships through direct and suppliers should be encouraged.
4. It is noted that West Kilbride Community Council are keen for companies operating in the area to sign up to the Considerate Constructors Scheme.

11 ACCIDENTS AND NATURAL DISASTERS

11.1 Introduction

Major accidents and/or disasters should be considered where the development has the potential to cause loss of life, permanent injury and/or temporary or permanent destruction of an environmental receptor. This section considered the potential for such eventualities.

11.2 Impact Assessment and Significance of Effects

The potential for major accidents and/or disasters was considered in accordance with the recent Institute of Environmental Management and Assessment (IEMA) guidance document "Major Accidents and Disasters in EIA: A Primer", hereafter referred to as "The Primer". Informed by The Primer, the assessment considered the following:

- The development itself was considered in regard to being a source of major accidents or vulnerability to disasters;
- Interactions with external hazards or associated activity; and
- If a major accident or disaster occurred would the existence of the development increase the risk of significant effects to environmental receptors.

The Site is not located within an area of significant seismic activity, nor are climatic factors prone to creating natural disasters such as tsunamis, hurricanes or catastrophic fluvial flooding.

The assessment, conducted in accordance with The Primer, concluded that:

1. The development itself is not a source of a hazard that could result in a major accident and/or disaster.
2. The development does interact with external sources of hazard as a result of additional vessel movements. Vessel movement hazards were therefore assessed further in Chapter 12 of the EIAR.
3. The development will not increase the risk of significant effects due to other hazards occurring.

Regarding the potential hazards associated with vessel operations, a Navigation Risk Assessment (NRA) was undertaken to take into account the proposed development. Construction and operational phase hazards identified were assessed and no hazards were found to be in the High Risk or Significant Risk band.

11.3 Proposed Mitigation Measures

Construction Phase

The mitigation measures relevant to each environmental factor outlined in chapters 5 – 12 of the EIAR, as well as in the Schedule of Mitigation, will be implemented during the construction phase of the development and will collectively mitigate the risk of major accidents and disasters during this time. In addition, The Construction (Design and Management) Regulations (CDM Regulations) will ensure that health and safety issues are properly considered during a project's development, with a strong focus on managing risks and ensuring health and safety. The CDM Regulations include every aspect of the

construction process, from the initial concept, design, and planning to the construction, maintenance, and eventual demolition or decommissioning of a structure.

Operational Stage

Standard operational procedures and protocols will be implemented to reduce the risk of major accidents/disasters during operation. In addition, it is anticipated that the site will be covered by various permits and licences such as Pollution Prevention and Control permits, Car Licence (under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) etc. which will require routine monitoring and reporting to the appropriate statutory regulator.

12 NAVIGATION

12.1 Introduction

The Navigation Risk Assessment (NRA) presents a baseline that includes marine traffic information, drawn from 14 days of data collected in the summer and 14 days of data collected in the winter, which characterises marine traffic for a busy and quiet period. The NRA also presents marine incidents, collated from Clydeport Operations Limited (COL), the Marine Accident Investigation Branch (MAIB) and the Royal National Lifeboat Institute (RNLI). Baseline information in the NRA provided context to the Hazard Identification (HAZID) workshop and risk assessment workshop.

12.2 Impact Assessment and Significance of Effects

This NRA has considered 15 hazard scenarios for the construction phase and 9 hazard scenarios for the operational phase. The NRA process included a HAZID workshop attended by local stakeholders and subject matter experts. After consideration of the 'most likely' and 'worst credible' hazard scenario descriptions, the causes and embedded controls have been assessed and the associated risk outcomes (scores) at the embedded stage (i.e., if the activities were to occur with no further controls) applied. In addition, attendees at the HAZID workshop were asked to suggest future controls which the Statutory Harbour Authority (SHA) could consider implementing if they considered that a risk was not already 'As Low As Reasonably Practicable' (ALARP).

Of the 24 hazards considered, one hazard was assessed to remain significant after the application of future controls. In accordance with the Peel Ports Group procedures, this hazard will require review and determination by the Group Harbour Master (GHM) before construction operations commence. The suggested future controls for this hazard are:

- Contractor Risk Assessment Method Statement (RAMS);
- Adherence to Construction (Design and Management) Regulations 2015;
- Project Liaison Officer and Marine Management Plan (MMP); and
- Safety boat (vessel capable of conducting a recovery from water, deployed in line with operational mitigation identified in contractor RAMS and MMP).

The 24 hazard scenarios within this NRA, following implementation of the identified potential future controls by COL as the SHA, can be deemed both tolerable and 'As Low As Reasonably Practicable' (ALARP), as per the requirements the Peel Ports Group Marine Safety Management system (MSMS) procedures.

12.3 Proposed Mitigation Measures

The mitigation for this proposed development during the construction and operational phases in the form of future controls, which the SHA can implement are described in this section. It must be noted that as none of the risks presented in the NRA have resulted in an outcome that is 'intolerable', the SHA needs to apply controls as they deem necessary for the risk to be considered 'As Low As Reasonably Practicable'. Mitigation strategies for navigation and port operations associated with the proposed development will be implemented through a comprehensive set of controls to minimize risks and ensure safe operations. These include:

- **Vessel Traffic Management (VTM) Review:** A Vessel Traffic Management review will be conducted by. PPG to review the provision of VTM, specifically with consideration to their LPS resource to monitor marine construction/ dredge craft as well as future marine activity during the operational phase.
- **Project Liaison Officer and Marine Management Plan:** Appointing a Project Liaison Officer and developing a Marine Management Plan will ensure effective communication and coordination among stakeholders. This proactive approach will help identify and address potential risks in real time.
- **Contractor Risk Assessment Method Statement (RAMS):** Requiring contractors to submit detailed Risk Assessment Method Statements will ensure that all construction risks are identified and managed effectively before work commences, reducing the likelihood of incidents.
- **Education:** Providing education and training sessions for personnel involved in recreational navigation and will enhance awareness of safety protocols and best practices, fostering a safety-conscious culture.
- **Clyde Leisure Navigation Guide:** Updating and disseminating the Clyde Leisure Navigation Guide will inform recreational vessels users of recommended routes and safety precautions, reducing the risk of collisions and navigational incidents.
- **AtoN Review:** Conducting regular reviews of Aids to Navigation (AtoN) will ensure that these markers remain effective and accurate, enhancing navigational safety.
- **Leisure Vessel Recommended Routes:** Establishing recommended routes for leisure vessels will minimize interference with commercial traffic and reduce the risk of accidents in high-traffic areas.
- **Review COL Towing Guidelines and Pilotage Directions:** Regularly reviewing and updating towing guidelines and pilotage directions will ensure that vessels receive appropriate assistance in challenging navigation areas, reducing the risk of incidents.
- **Notice to Mariners:** Issuing regular Notices to Mariners will keep stakeholders informed of changes and hazards in the area, promoting safer navigation practices, especially during the construction phase.
- **Safety Boat:** Deploying a safety boat during the construction phase will provide immediate response capabilities in case of emergencies or incidents on the water.
- **Adherence to CDM Regulations:** Adhering to the Construction (Design and Management) Regulations (CDM) will ensure that safety considerations are integrated into the project design and execution.
- **Flow Monitoring:** Continuous monitoring of vessel traffic flows will enable proactive management of congestion and risks associated with navigation.
- **Prior Notice of Dredge Campaign:** Providing prior notice of dredging activities to mariners will mitigate risks associated with changes to navigation channels and the risk of collision in confined waters.
- **Simulation:** Conducting simulation exercises for navigation and port operations will allow for the testing of emergency response plans and identification of potential weaknesses in planned operations.
- **Emergency (Controlled) Vessel Departure:** Implementing protocols for controlled emergency vessel departures will ensure swift response capabilities during critical situations, such as if winds are too excessive to remain berthed safely alongside.
- **Port Emergency Plan:** Developing and implementing a Port Emergency Plan will establish clear procedures and responsibilities for responding to emergencies effectively.
- **PPG Quayside Audits and Inspections:** Regular audits and inspections of quaysides in accordance with Pollution Prevention Guidelines (PPG) will maintain safety standards and prevent environmental hazards as well as help prevent trips slips and falls.

- **Review Mooring and Berthing Guidelines:** Reviewing and updating mooring and berthing guidelines will enhance safety during docking and departure operations.
- **Safety Area:** Designating safety areas on the quayside will help provide a visual indication to workers as to where it may be unsafe to stand unless actively engaged in activities such as mooring a vessel.
- **Storm Moorings:** Using storm moorings (usually made from steel wire) will secure vessels during severe weather events, reducing the risk of damage or accidents.

By implementing these controls and mitigation strategies, the proposed development can effectively manage risks associated with navigation and port operations, ensuring the safety of personnel, vessels, and the environment.

13 SUPPORTING ASSESSMENTS

13.1 Air Quality

Introduction

A construction dust risk assessment was completed to allow for mitigation measures to be identified during the construction phase. Likely changes to local air quality, owing to the Proposed Development, have also been considered.

Impact Assessment and Significance of Effects

The main concern in relation to air quality impacts is considered to be from construction-generated dust emissions. As the site is not located within an Air Quality Management Area (AQMA) and there are no residential receptors immediately adjacent to the proposed construction works it is considered that there will not be significant effects associated with construction dust.

The risk of impacts for dust soiling and the health effects of PM₁₀ were assessed at six human-sensitive receptors in the vicinity of the site. The assessment results in the determination of a Low risk of dust soiling impacts and a Low risk of health impacts for Demolition, Earthworks, Construction and Trackout activities.

The risk of impacts for dust soiling was assessed at two ecologically sensitive receptors in the vicinity of the site. The assessment results in the determination of a Medium risk of dust soiling impacts for Demolition, Earthworks and Construction activities.

The results of the assessment of the risk of impacts indicate that mitigation measures to control dust emissions that may arise due to demolition, earthworks, construction and trackout activities are adopted for the duration of the development in order to protect human-sensitive receptors from dust impacts.

Proposed Mitigation Measures

A site-specific Construction Dust Management Plan (CDMP) with respect to construction dust has been produced.

13.2 Material Assets and Waste

Construction Phase

The waste hierarchy will be employed throughout the construction works and will aim to avoid, or minimise waste production where possible, re-use material where possible, segregate waste which cannot be reused for recycling where available, and implement the correct methods of disposal should none of the aforementioned methods be feasible.

As part of the development works a total of approximately 1.5 million m³ of material requires to be dredged from areas adjacent to the site. A BPEO that assesses this material is provided as Technical Appendix 9.2 in Volume 3 of this EIAR. The BPEO concludes that where this material is geotechnically suitable and available at a suitable time in the project programme then the best practicable environmental option for its disposal is reuse as part of the dry dock infill at the site. Should the material not meet the requirements to allow for its beneficial reuse then it will be disposed of at a

licensed spoil ground. It is considered that other waste materials generated as part of this development will be minor compared to the dredge volume generated. It is not expected that hazardous waste will be generated as part of the works

The infilling of the dry dock itself requires approximately 1.3 million m³ of imported material which is principally proposed to be formed of waste dredge arisings. This beneficial reuse of dredge arisings is considered to be in line with Policy 12 of NPF 4 to "... support the circular economy and meet identified needs in a way that moves waste as high up the waste hierarchy as possible".

Operational Phase

The need for and frequency of maintenance dredging campaigns will depend on the future rate of sediment accretion and the draught of vessels using HCY. Clydeport will undertake routine bathymetric surveys to monitor seabed levels and determine the need for maintenance dredging. Maintenance dredging campaigns for HCY are likely to be coordinated with campaigns undertaken at Clydeport's other locations. The current BPEO for Clydeport's maintenance dredge campaigns identifies beneficial reuse as the preferred disposal option where appropriate projects are available.

Proposed Mitigation Measures

Please refer to Chapter 9 Water Environment and Coastal Processes (Volume 1 of this EIAR) in relation to mitigation measures with respect to the proposed dredging and disposal activities.

Chapter 8 (Traffic Assessment) and Chapter 12 (Navigation) (Volume 1 of this EIAR) detail mitigation requirements with respect to Traffic and Navigation. Chapter 13 details considerations with respect to Carbon Impact

13.3 Carbon, Climate Change and Greenhouse Gas Emissions Assessment

Introduction

The purpose of this assessment was to establish the carbon emissions associated with the proposed development.

PAS 2080 - Carbon Management in Infrastructure is a specification for whole-life carbon management within the infrastructure sector (transport, energy, water, waste and communications) and sets out the general principles of a carbon management process, to promote carbon and cost reduction in infrastructure delivery. The framework looks to reduce carbon and cost through more intelligent design, construction, and use.

Impact Assessment and Significance of Effects

The Capital Carbon emission total for the development during the construction phase and maintenance dredging is **250,975 tCO₂e**.

Embodied carbon emissions from construction materials are the main contributor to climate change impacts during the construction phase, with additional emissions arising from the direct use of plant and transport of materials to the site. The total capital carbon of the construction, capital and maintenance (dredging) of the development was **250,975 tCO₂e**.

Climate change projections suggest a general trend of warmer, drier summers and milder, wetter winters. With the development in close proximity to the coastline, it is likely that sea level rise and

storm surges, as an indirect impact to the projected changes in climate, will become more of a threat. The development has therefore been designed at a height that sustains current high tide and projected sea level rise height.

Proposed Mitigation Measures

Carbon mitigation measures can be summarised as follows:

Construction

- **Materials:** Using materials with a lower carbon impact (for example, low-carbon concrete or recycled steel) would significantly reduce emissions. The proposed development will aim to use site-won material and will only import materials from further afield where absolutely necessary. Doing so will minimise emissions associated with transporting materials to the site during the construction phase.
- **Material efficiency:** Only use the necessary quantity and type of materials. Build efficiently and optimise the use of materials through design, procurement, and the construction phase.
- **Construction site management:** Sourcing energy efficient plant, regular vehicle maintenance and putting in place good practice site procedures (for example, reducing vehicle/plant idling) to make operations more efficient.
- **Site Waste Management Plan:** Promoting the reduction and effective management of waste during construction, following the waste mitigation hierarchy and relevant national waste reduction policies. This will fall within the Construction Environmental Management Plan that will be produced.

Operation

Once the proposed development becomes operational, consideration of measures of emission reduction during the operational phase can follow the Energy Hierarchy. The 'Energy Hierarchy' is a widely adopted method to identify opportunities to reduce energy demand and therefore decrease the related carbon emissions. This hierarchy suggests the use of a four-tiered approach to reducing operational energy consumption, **Be Lean, Be Clean, Be Green and Be Seen** stages.

A brief explanation of each stage of the energy hierarchy is given below:

- **Be Lean:** This stage focuses on being energy efficient. This involves reassessing any architectural layouts of the development based on internal parameters (i.e., daylighting requirement, function of the space, thermal characteristics of the space) and external factors such as surrounding buildings, site morphology, and local weather data.
- **Be Clean:** The second step in the optimization process entails an analysis of the site's available energy sources and the evaluation of alternative technologies to deliver the required energy most sustainably.
 - This will be necessary to meet the national requirements of net zero by 2045.
- **Be Green:** The strategy will seek to maximize the provision of low and zero-carbon energy capture and generation to meet the remaining demands of the development.
- **Be Seen:** The final stage of the process would aim to optimize the performance of the development and verify performance against the design intent through monitoring of consumption. This stage would seek to close any performance gaps and reporting on actual energy performance and lessons learned.

14 EIAR CONCLUSION

14.1 Schedule of Mitigation

The mitigation and enhancement measures identified by the specialist environmental studies throughout the EIA process are compiled to form a Schedule of Mitigation. The Schedule is designed to provide a comprehensive summary of all mitigation measures that would require to be carried out in the construction and operation of the proposed development, to ensure that the environmental assessment outcomes discussed throughout this EIAR are reached, e.g. to ensure that significant adverse effects are avoided where applicable and possible.

The Schedule of Mitigation would form the basis of the subsequent Construction Environmental Management Document (CEMD).

The CEMD would be a working document which would be updated throughout the construction phase of the project. It would also provide a clear roadmap of the key roles and responsibilities during construction works. An Environmental Manager would be identified who would be responsible for the implementation of the CEMD ensuring that all measures identified within the Schedule of Mitigation are applied and adhered to.

14.2 Summary of Significance of Effects

This NTS reports upon the findings of the EIAR, which has been shaped by survey, consultation and assessment. The purpose of the EIAR, and the EIA process, is to establish potentially significant environmental effects and avoid or mitigate these where applicable.

The table below details the residual effects of the proposed development after the mitigation measures outlined in the Schedule of Mitigation have been applied.

Summary of Significance of Effects (Residual Post-Mitigation)

Topics	Construction Phase Impact	Operational Phase Impacts
Biodiversity	Not Significant	Not Significant
Seascape, Landscape and Visual	Significant (Acceptable)	Significant (Acceptable)
Terrestrial Noise	Not Significant	Not Significant
Traffic Assessment	Not Significant	Not Significant
Water Environment and Coastal Processes	Not Significant	Not Significant
Socioeconomic and Human Earth	Not Significant	Not Significant
Accidents and Natural Disasters	Not Significant	Not Significant
Navigation	Not Significant	Not Significant
Supporting Assessments	Not Significant	Not Significant