

# Stranraer Marina Expansion Project

## Marine Planning Supporting Statement

August 2025



**FAIRHURST**

**CONTROL SHEET**

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## **Marine Planning Statement**

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## 1.0 Introduction and Background

- 1.1 This Marine Planning Supporting Statement has been prepared by Fairhurst Group LLP ('the Agent') on behalf of Dumfries and Galloway Council (DGC) Economy and Infrastructure Team, ('the Applicant'), to support two applications for marine licences from Marine Directorate – Licensing Operations Team (MD-LOT) under the Marine (Scotland) Act 2010<sup>1</sup> for licensable activities below Mean High Water Springs (MHWS) for the proposed expansion and redevelopment of Stranraer Marina (hereafter referred to as the "Proposed Development").
- 1.2 The applicant is seeking consent for: *Marina upgrades and expansion works, which include: an additional 185 new berths, associated maintenance and capital dredging, creation of new reclaimed land area utilising dredge material, construction of a new breakwater as well as the extension of the existing breakwater, new quay walls, public slipway upgrades, and floating marina facilities.*
- 1.3 This Marine Supporting Statement covers the following key issues:
- Site Description;
  - Proposed Works;
  - Marine Planning History;
  - Marine Policy Assessment;
  - Technical Considerations; and
  - Summary and Conclusions
- 1.4 It is noteworthy that a planning application has been submitted to Dumfries and Galloway Council as the Local Planning Authority (LPA) for the elements of the Proposed Development above MHWS.
- 1.5 This Marine Planning Supporting Statement sets out all of the relevant information that should be taken into account by Marine Scotland (MS) in the determination of this Marine Licence application.
- 1.6 Fairhurst consider that all material considerations have been addressed within this Marine Planning Supporting Statement and all additional information required for determining the

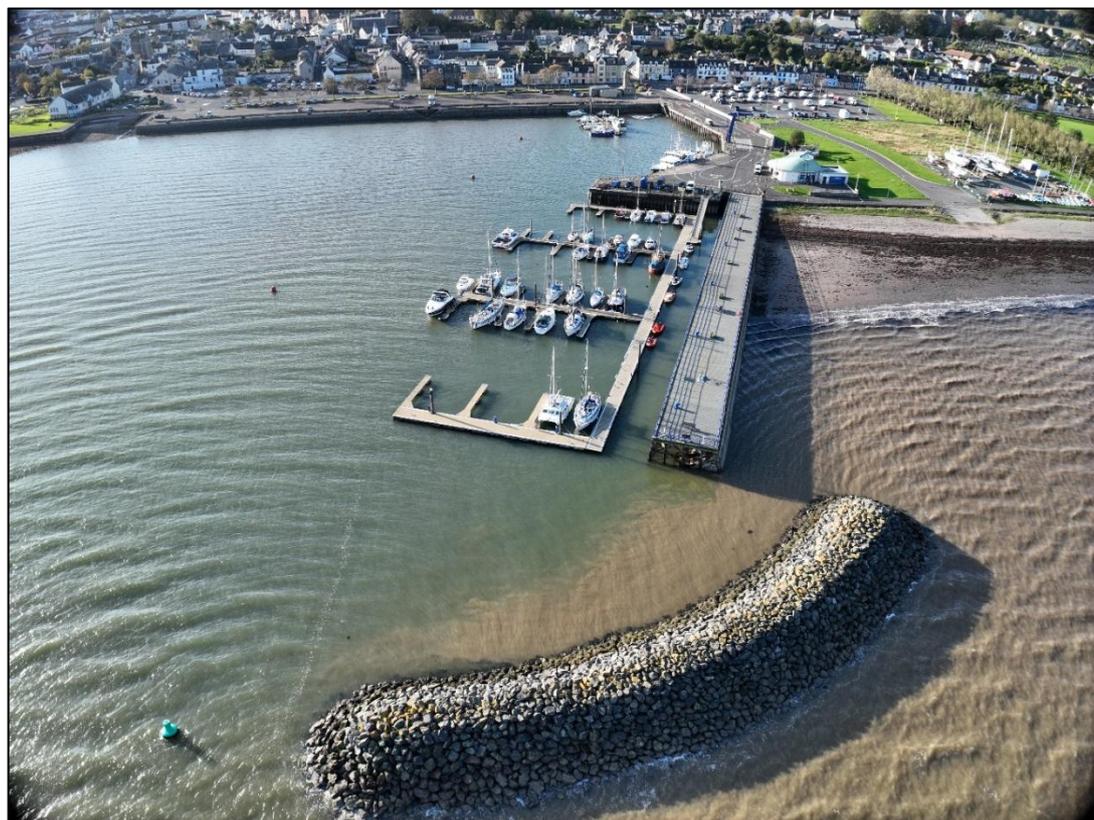
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<sup>1</sup> Marine (Scotland) Act 2010

application has been provided within the submitted drawings and other application documents.

## 2.0 Site and Surroundings

- 2.1 Stranraer is located in Dumfries and Galloway in southwest Scotland and lies at the south of Loch Ryan. The site is situated to the north of the town centre. The site is adjacent to Market Street, with access into the marina from the junction off Market Street and Agnew Crescent.



*Photograph 2-1: View of existing Marina, West Pier and Breakwater*

- 2.2 The site of the Proposed Development will comprise of both land (terrestrial) and marine development. The existing marina is located in the north of the town of Stranraer and is operated by the applicant, Dumfries and Galloway Council. All of the areas that are part of the marina that are not 'on land' are owned by Crown Estate Scotland.
- 2.3 The existing marina serves the southern end of Loch Ryan and has historically been one of the busiest harbours in the region. The marina itself currently consists of dogleg quay, and a finger pontoon, which is used by smaller fishing vessels, excursions and recreational craft. The current marina has approximately 70 berths over two locations within the harbour. One area is mainly set aside for commercial operators and there are 7 dedicated berths for visitors. The existing harbour also includes a number of larger commercial and fishing vessel berths against the harbour wall. Ferry terminals are also located north of the harbour in Cairnryan, giving

access to the Clyde, the Solway, Isle of Man and the North Channel, and beyond to the Irish Sea.

- 2.4 Public access through the harbour and along the promenade is via the Coastal Walkway path, which forms part of the Rhins of Galloway Coast Path Core Path (No: 544)<sup>2</sup>
- 2.5 Land within the western section of the site, includes the existing boat yard, and adjacent grassed areas, which now benefits from planning permission (LPA Reference: 23/0976/FUL) for the erection of a boat shelter, extension of boat yard area, and instructor platform, etc.



*Photograph 2-2: View towards Existing Boat Yard to the west of the site*

- 2.6 Further north-east in this area, is an existing public pier and pontoon, alongside the Harbourmaster and Coastguard building and Fisherman's compound. Land within this part of the site also benefits from planning permission (LPA Reference: 23/0970/FUL) for the erection of a new watersports centre, formation of an additional parking area with associated hard and soft landscaping.

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<sup>2</sup> Dumfries and Galloway Council: [Core paths | Dumfries and Galloway Council \(dumgal.gov.uk\)](https://www.dumgal.gov.uk)

- 2.7 Vehicular access into this area is via an existing road, providing access to a public carpark, the West Pier and boat yard.



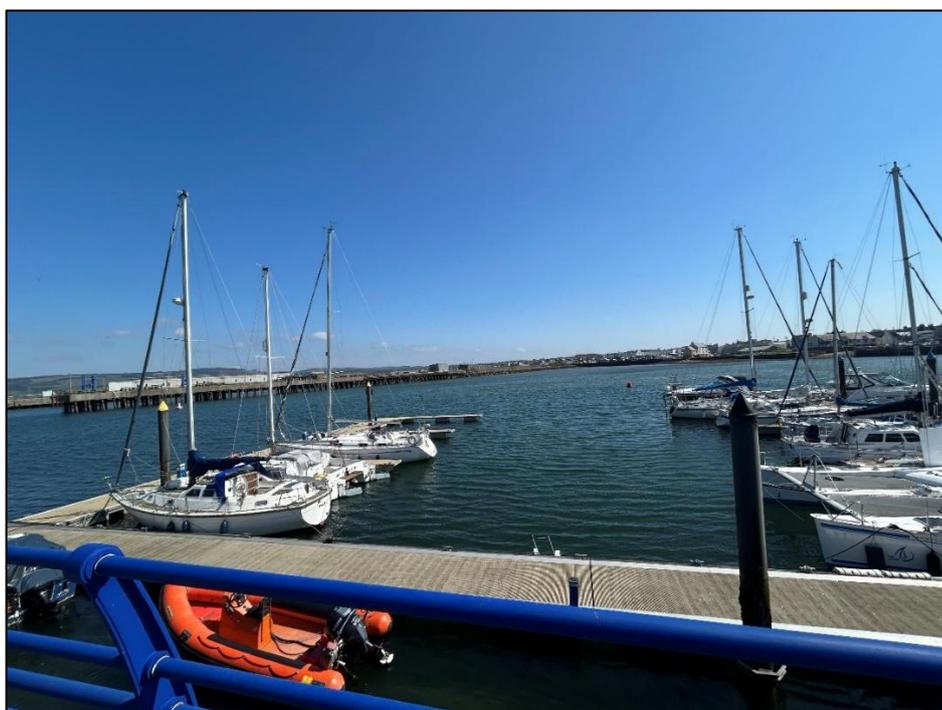
*Photograph 2-3: views from access road towards existing Pillar Crane and Harbourmaster and Coastguard building*



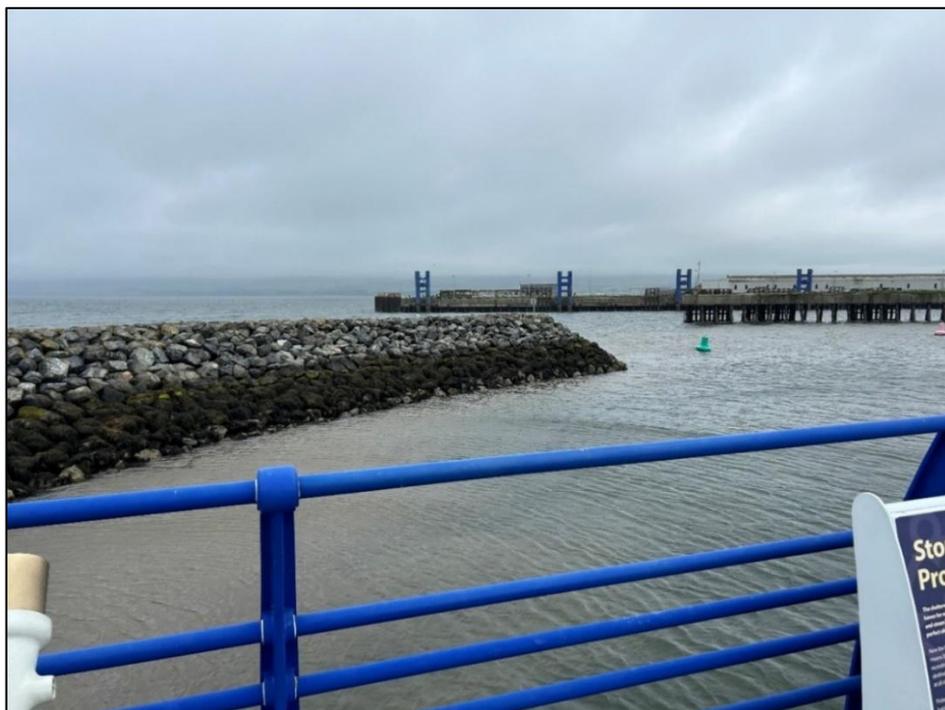
*Photograph 2-4: View from Coastal Walkway path towards the beach and existing slip way to the west of the existing Marina*



*Photograph 2-5: View from Coastal Walkway path towards the existing West Pier and existing Breakwater*



*Photograph 2-6: Boats in the Marina*



*Photograph 2-7: View from West Pier towards existing Breakwater and East Pier*



*Photograph 2-8: View from West Pier back towards Harbourmaster building*

- 2.8 To the south of the marina is the Breastworks public car park, which includes the 1930s harbour office (former Harbourmaster's office) and weighbridge, which is a Category C Listed Building. Two slipways provide access into the water in this part of the site.



*Photograph 2-9: View of Listed Harbour Office (former harbourmaster's office) within Breastworks Car Park*

- 2.9 Whilst the site of the Proposed Development is located within the existing townscape associated with Stranraer, it lies adjacent to two landscape character types, identified from NatureScot<sup>3</sup> as Peninsula (LCT 156) and Coastal Flats – Dumfries and Galloway (LCT 158). Both of these identified LCT's are influenced by the existing built form of Stranraer at a local level.
- 2.10 No international or nationally designated sites are located within 2km of the Proposed Development boundary. The open water within Stranraer Marina is part of a Marine Consultation Area which denotes an area identified as deserving particular distinction in respect to the quality and sensitivity of the marine environment within them.

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<sup>3</sup> NatureScot: Landscape Character Types 2019

- 2.11 The southern and western parts of the site fall within Stranraer Conservation Area<sup>4</sup>. Immediately to the south-east of the site are the Category B-listed 28 and 30 Harbour Street. The setting of all of these Listed Buildings is dominated by the existing numerous car parks.
- 2.12 The geological map<sup>5</sup> evidence has recorded the presence of Made Ground within the on-shore area of the site, which is considered to relate to the former reclamation in this area.
- 2.13 The southern on-shore area is recorded to be underlain by Raised Marine Beach deposits comprising gravel, sand and silt. The British Geological Survey (BGS) online Geo-index<sup>6</sup> records the off-shore superficial deposits as Marine Beach deposits. It is expected that both on and off shore the Marine Deposits will be underlain by Glacial Deposits.
- 2.14 The British Geological Survey (BGS) online Geo-index viewer records the bedrock underlying both the onshore and offshore areas as belonging to the Loch Ryan Formation of Permian Age.
- 2.15 Potential sources of contamination have been recorded within the boundaries of the site, including the material used in the land reclamation exercise and the historical warehouses. Potential off-site sources of contamination have been noted, including the activities on the East Pier (including Ross Pier), the gas works and the slaughterhouse. The East Pier is leased by Stena from Crown Estate Scotland, and owned in part by Network Rail.
- 2.16 Due to its harbourside location, the proposed site is located within an area identified as being at risk of coastal flooding.

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<sup>4</sup> Historic Environment Scotland: Listed Building search maps

<sup>5</sup> Map reference – BGS Map Sheet NX06SE 1:10,000 date 1986

<sup>6</sup> BGS Geology Viewer (BETA)

### **3.0 The Proposed Development**

#### **Need for the Proposed Development**

- 3.1 The Proposed Development will provide a series of upgrades and expansion works to the existing infrastructure at Stranraer Marina, to accommodate more and larger vessels, and will contribute to the local economy, whilst providing a facility to be used by the community as well as visiting tourists.
- 3.2 Stranraer has an extensive maritime history based around fishing, the armed forces, and an historic long-standing ferry service to and from Northern Ireland. The relocation of the ferry terminal to Cairnryan has reduced the flow of visitors to the town which has had a significant effect. However, these proposed changes create a great opportunity to re-imagine the waterfront and reconnect the town centre to Loch Ryan through new development in and around the harbour area.
- 3.3 The principle of expanding the marina as part of growing the offer of Stranraer as a destination for maritime tourism is a matter that has been part of plans for the town since Stena's ferry operations moved to Cairnryan. An opportunity has emerged for the development of the existing Stranraer Marina, a key element in the regeneration of Stranraer waterfront, within the Borderlands Inclusive Growth Deal (a major funding initiative for the South of Scotland and North of England). This is a joint initiative to secure investment for priority projects that will deliver accelerated economic growth for the benefit of individuals, businesses and communities across the Borderlands region. The Stranraer Marina Expansion project aims to promote tourism as a priority sector. Stranraer Marina has a provisional Growth Deal funding allocation, subject to approval of the Full Business Case.

#### **One Waterfront – Embracing and Unlocking the Area**

- 3.4 The area presents a transformative opportunity to instil positive change and deliver upon the wider ambition of a 'One Waterfront' approach for Stranraer. Embracing the Waterfront, arguably Stranraer's greatest natural asset, has the potential to unlock economic, social and environmental opportunities for both locals, visitors and wildlife. Positively planned and implemented change could transform it into a people-centric destination that is lively, diverse, accessible and well-connected, with links to the Marina, the wider waterfront and Rhins of Galloway, Stranraer Town Centre, and surrounding communities.
  - 3.5 Dumfries and Galloway Council commissioned the Waterfront Engagement work. The Stove and Creative Stranraer's work has helped gather thoughts from communities across the town and celebrate the past, present and future of Stranraer's Waterfront. Reflecting the views
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gathered, the proposals are intended to reimagine and reconnect the Waterfront to the heart of Stranraer and its people, enabling the area to become a multifunctional, high quality, vibrant and representative public space. The area of reclaimed land could become a place to play, reconnect with the water, and socialise through improved public realm, art installations, and space for mixed community uses.

### EIA Screening

- 3.6 In respect of the Proposed Development comprising of both marine and terrestrial development, an EIA Screening Opinion request was submitted to Marine Scotland - Licensing Operations Team (MS-LOT) (now Marine Directorate - Licensing Operations Team (MD-LOT)). The requests for EIA Screening Opinions were submitted in accordance with the relevant requirements, as set out in the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 and the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017.
- 3.7 An EIA Screening Opinion was received from MS-LOT in February 2021. It was determined by MS-LOT that the “proposed works are an EIA project under the 2017 MW Regulations and, therefore, an EIA is required”.

### EIA Scoping

- 3.8 The main function of the EIA scoping exercise is to identify potentially significant issues for detailed assessment and those that can be ‘scoped out’ of future assessments.
- 3.9 An EIA Scoping Report (March 2021)<sup>7</sup> setting out the proposed scope of the EIA for the Proposed Development was submitted to MS-LOT, and received in June 2021. In accordance with regulation 14 of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (“2017 MW Regulations”), the Scottish Ministers considered the content of the Scoping Report as sufficient and issued their Scoping Opinion, (February 2023)<sup>8</sup>, which has been used to help inform the contents of the accompanying EIA Report (EIAR) in support of the applications.

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<sup>7</sup> RPS Group: Environmental Impact Assessment Scoping Report – Stranraer Marina (March 2021)

<sup>8</sup> Marine Scotland: Scoping Opinion adopted by the Scottish Ministers under Part 4 of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 Dumfries and Galloway Council Stranraer Marina Development: February 2023

### Pre-Application Consultation

- 3.10 The Proposed Development falls within the prescribed class of licensable activities, which require pre-application consultation (PAC), in accordance with The Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013<sup>9</sup>.
- 3.11 Public consultation events were therefore undertaken at the Stranraer Millennium Centre on the 28<sup>th</sup> November 2024 and 24<sup>th</sup> April 2025.
- 3.12 A PAC report, which summarises the consultation exercises undertaken to date and responses received has been prepared in support of both the planning application and applications for marine licences, as mentioned above.

### The Project

- 3.13 The description of development comprises:
- 3.1 *Marina upgrades and expansion works, which include: an additional 185 new berths, associated maintenance and capital dredging, creation of new reclaimed land area - utilising dredge material, construction of a new breakwater as well as the extension of the existing breakwater, new quay walls, public slipway upgrades, and floating marina facilities.*
- 3.2 The revised marina layout will include up to an additional 185 new berths, in addition to the 45 existing berths. It is considered that circa 14 of these berths will be for commercial use.
- 3.3 The revised marina layout will also provide for superyachts, and large vessel visitor berthing.
- 3.4 The addition to these berthing numbers is in relation to the existing marina. Currently this is located to the north of the harbour area. Aspects of this existing area will be reconfigured in order to allow use of this area, alongside the new expanded berths. Commercial berths will be identified and the interface between the commercial and leisure users is to be minimised through the layout proposed.
- 3.5 Following inspections of the existing harbour and quay walls, repairs have been identified to specific areas, and a replacement wall proposed for the Breastworks quay wall. It is envisioned that the repairs and replacement wall will be undertaken as part of the overall marina works
- 3.6 It is considered that the overall construction period of the project will be up to 24 months, with a forecast year/ year of opening to be 2028.

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<sup>9</sup> The Marine Licensing (Pre-application consultation) (Scotland) Regulations 2013

- 3.7 Temporary Construction Platform is proposed to be included as part of the construction phase related to the construction of the South Quay wall. It is a non-permanent structure designed to support heavy construction equipment such as cranes, piling rigs, and tracked excavators. It will also provide safe access across soft ground sea bed conditions during construction operations.
- 3.8 The current marina was last dredged in 2013. Since then, no maintenance dredging has taken place. A dredging plan has been developed for the marina expansion project.
- 3.9 Maintenance dredging will then occur to keep the access channels and berths at their designed depths. It involves removing recently accumulated sediments such as mud, sand and gravel.
- 3.10 The proposed dredging will provide a general depth of water of 2.5m with additional 0.5m margin in all states of the tide (measures from LAT, lowest astronomical tide). In the area where larger vessels such as superyachts can berth, the provided depth will be 4.0m with an additional 0.5m margin.
- 3.11 It is anticipated that dredging would be undertaken using a grab or cutter suction dredger with a split hull hopper, or a similar configuration. Dredging is to various depths between -2.0m CD to -4.5m CD, with over dredge allowance for each dredging activity to suit the method to achieve the design bed levels.
- 3.12 Material might be placed on land for dewatering or further treatment if required prior to re-use. The disused Stena Line ferry terminal on the East Pier may offer an area of land and quayside that may facilitate such transfer of materials, away from the existing working harbour, as well as a large area of flat land to accommodate stockpiles of materials. 'Rainbowing' of dredged materials directly into the deposit area could also be considered if circumstances allow.
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- 3.15 It is hoped that some of the dredge material will be able to be reused to form the reclaimed land. However, It is anticipated that any surplus material, or material that is deemed geotechnically unsuitable for land reclamation, is subject to offshore sea disposal. Moreover, if it is determined that the land reclamation exercise is not viable for whatever reason, then all the dredged material would be subject to offshore sea disposal. If material re-issue can be undertaken, it is anticipated that the dredged material will be disposed of by a combination of disposal to create the reclaimed land (up to 48,340 cubic metres) and at off shore sea disposal (the balance of the total dredge but not less than 84,276 cubic metres). For a total of 132,616 cubic metres of dredged material with a tolerance for over dredge to meet design level for the method used.
- 3.16 The primary licensed sea disposal site is located to the east of Stranraer within the North Channel (MA010 – North Channel Scotland) – located approximately 38km by sea from the dredge area. An alternative disposal site (MA025 Girvan), located to the north of Stranraer, approximately 47km by sea from the dredge area, is also included within this application. This site would serve as a back-up option which will assist in managing weather / sea condition risk during dredging operations
- 3.17 The following dredging parameters for the Proposed Development comprise:
- |                              |                       |
|------------------------------|-----------------------|
| •Total dredging volume       | 132,616m <sup>3</sup> |
| •Use in reclamation          | 48,340m <sup>3</sup>  |
| •Disposal at Beaufort's Dyke | 84,276m <sup>3</sup>  |
- 3.18 The reclaimed land profile will consist of a base layer of imported material if the dredge material cannot be used for this layer, subject to testing to confirm this. Following this, the remaining area to be made up will be through use of treated dredge material.
- 3.19 The indicative extent of the proposed new dredging areas are:
- General depth of dredge to -3.0mCD (below chart datum) giving nominal depth in all conditions of 2.5m with a 0.5m total provision for wave-induced boat movement and sedimentation measured below LAT;
  - Local area dredged to -4.5mCD for vessels with deeper draft including superyachts (4m nominal depth). Access to this area for vessels between 2.5 and 4.0m draft will be tidally constrained at certain times;
  - Fuel berth area within existing pontoon area dredged to -3.5mCD;
  - Channel between new marina area and former ferry channel dredged to -3.5mCD;
  - Gradient of change between depths is typically 1:5, with the area around the existing breakwater extension being 1:4;
-

- Existing operational areas in south-west corner and existing pontoons notionally dredged to -3.0mCD.
- 3.20 At the time of writing this Marine Planning Supporting Statement, the specific details of the dredging operations are not fully known, and would be confirmed at the dredging contract stage, and contractors outline which plant they propose to use.
- 3.21 Inputs from the project team's ecologists in terms of timing of works for dredging and piling activities were discussed with the pre-construction contractor. This considered potential impacts on: Marine Mammals; Breeding Bird Species; and Fish species. It is therefore considered that the following calendar months will be avoided for piling and dredging, where possible:
- February;
  - March;
  - April;
  - May; and
  - June.
- 3.22 In relation to overwintering birds, the most sensitive periods are identified as October to March. Where the programme cannot avoid the overwintering period, tidal restrictions will be in place to avoid or minimise impacts on roosting or feeding birds.
- 3.23 Therefore, to help inform the EIA process, a range of parameters were used, to allow for an assessment of worst case. For example, in terms of the coastal processes assessment, the percentage spill has been set at an upper bound to cover the range of dredging techniques applicable for capital dredging and reclamation works, i.e. cutter suction, backhoe, grab bucket etc. The topic specialists have also used the upper bound dredging rate for the types of plant that may be used at the site. Their assessment is therefore applied to the maximum design scenario related to the impacts they are assessing.
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## 4.0 Marine Planning History

- 4.1 Fairhurst have reviewed Marine Scotland's online case management system register for relevant Marine Licence applications and licences relating to the application site and its immediate surroundings. Relevant recent marine related planning history includes the following:

[Reference – 00010825 – Marine Construction](#)

- 4.2 The application above refers to the construction of a permanent concrete instructor platform as well as the removal of nearby obstructions submitted by Stranraer Watersports Association. The site is located to the immediate west of Stranraer Marina. The application was pending determination at the time this document was written.

[Reference - 00010841– Marine Construction & Pontoon Deposit](#)

- 4.3 The application above refers to the construction of 8 no. pontoons and 3no. racing markers submitted by Stranraer Watersports Association. The site is located to the immediate west of Stranraer Marina. The application was pending determination at the time this document was written.

[Reference – 00010772 - Moorings](#)

- 4.4 The application above refers to the construction of 18 no. rowing moorings by Stranraer Watersports Association. The site is located to the immediate west of Stranraer Marina. The application is pending determination at the time this document is written.

[Marine Licence ID –00008983 – Maintenance Dredging and Sea Deposit](#)

- 4.5 The subject of this Marine Licence was for Maintenance Dredging at Stranraer Marina and Sea Deposit. This Licence was granted for the works to occur over the period 04/11/2020 – 03/11/2021.

### **Surrounding Area**

- 4.6 The online case management system register also contained the following Marine Licence application within the surrounding area which is considered to be relevant to the Proposed Scheme:

[Marine Licence ID – MS – 00009930](#)

- 4.7 The subject of this Marine Licence was for Capital Dredging and Sea Deposit at Loch Ryan Port near Cairnryan. This Licence was granted for the works to occur over the period 15/12/2022 – 14/12/2025.

[Marine Licence ID – 07059/20/0](#)

- 4.8 The subject of this Marine licence was for the deposit of Oyster Shells in the east section of Loch Ryan. The licence was granted for the works to occur over the period 18/06/2020 to 31/07/2024.

[Marine Licence ID – 06758/19/0](#)

- 4.9 The subject of this Marine Licence was for Capital Dredging and Sea Disposal within Port Cairnryan, Loch Ryan. The Licence was granted for the works to occur over the period 01/03/2019 – 28/02/2022.
- 4.10 Following this Marine Licence review, it is considered that the Proposed Development is in keeping with ongoing and previous activities that have taken place within the surrounding area, and will assist in the approval and execution of this application.
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## 5.0 Marine Policy Context

5.1 This chapter provides an assessment against the policies and vision of the UK wide Marine Policy Statement (MPS)<sup>10</sup> and Scotland's National Marine Plan (NMP)<sup>11</sup>.

5.2 The MPS is the Framework for preparing Marine Plans and making decisions affecting the marine environment. Decisions must be made in accordance with the MPS unless relevant considerations indicate otherwise. Scotland's National Marine Plan was adopted in 2015 and became Scotland's Framework for Managing their Seas.

### UK Marine Policy Statement (UK MPS)

5.3 As the primary framework for preparing and deciding proposals affecting the marine environment, the Marine and Coastal Access Act 2009 states that decisions must be made in accordance with the MPS unless relevant considerations indicate otherwise.

5.4 The UK vision for the marine environment is for "*clean, healthy, safe, productive and biologically diverse oceans and seas*". There are a number of UK high-level marine objectives which set out the broad outcomes for the marine area and reflect the principles of sustainable development. The objectives include:

- Achieving a sustainable marine economy;
- Ensuring a strong, healthy and just society;
- Living within environmental limits;
- Promoting good governance; and
- Using sound science responsibly.

5.5 The UK Marine Policy Statement states "*authorisation decisions that affect or might affect the UK marine area must be made in accordance with the relevant marine policy documents unless relevant considerations, such as advances in scientific knowledge and technology for example, indicate otherwise. This means that decisions on activities in the UK marine area will be planned once Marine Plans are in place.*"

5.6 Chapter 2 of the UK MPS sets out the following key consideration for marine development, which are listed as:

- Economic, Social and Environmental Considerations;
- Marine Ecology and Biodiversity;
- Air Quality;

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<sup>10</sup> [UK marine policy statement - GOV.UK](#)

<sup>11</sup> [Scotland's National Marine Plan - gov.scot](#)

- Noise;
- Ecological and Chemical Water Quality;
- Seascape;
- Historic Environment;
- Climate Change Adaptation and Mitigation; and
- Coastal Change and Flooding.

### Scotland National Marine Plan

- 5.7 The Scotland National Marine Plan (SNMP) covers the management of both Scottish inshore waters (out to 12 nautical miles) and offshore waters (12 to 200 nautical miles). It also applies to the exercise of both reserved and devolved functions.
- 5.8 The SNMP sets out the overarching principle of *“Achieving a sustainable economy, promoting good governance and using sound science responsibly are essential to the creation and maintenance of a strong, healthy and just society capable of living within environmental limits.”*
- 5.9 The key policies of the SNMP relevant to this application are as follows:
- GEN 1 (General planning principle);
  - GEN 2 (Economic benefit);
  - GEN 3 (Social benefit);
  - GEN 4 (Co-existence);
  - GEN 5 (Climate change);
  - GEN 6 (Historic environment);
  - GEN 7 (Landscape/seascape);
  - GEN 8 (Coastal processes and flooding);
  - GEN 9 (Natural heritage);
  - GEN 12 (Water quality and resource);
  - GEN 13 (Noise);
  - GEN 14 (Air Quality);
  - GEN 21 (Cumulative impact);
  - FISHERIES 1;
  - REC & TOURISM 1;
  - REC & TOURISM 2;
  - REC & TOURISM 5; and
  - TRANSPORT 6.
-

### **Marine (Scotland) Act 2010<sup>12</sup>**

- 5.10 Framework for managing Scotland's seas through marine planning, licensing, and conservation, with the goal of achieving sustainable development and protection of the marine environment;

### **Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017<sup>13</sup>**

- 5.11 Regulations requiring environmental impact assessments for certain marine works to ensure potential environmental effects are considered before development consent is granted.

### **The Harbour Works (Environmental Impact Assessment) Regulations 1999<sup>14</sup>**

- 5.12 Legislation mandating environmental impact assessments for harbour-related developments that may significantly affect the environment, aiming to minimize harm through early-stage planning.

### **Wildlife and Countryside Act 1981<sup>15</sup>**

- 5.13 Legislation for the protection of native species, habitats, and Sites of Special Scientific Interest, in addition to supporting biodiversity conservation and the control of invasive species.

### **Conservation of Habitats and Species Regulations 2010 (commonly referred to as the Habitats Regulations)<sup>16</sup>**

- 5.14 Regulations to transpose the EU Habitats and Birds Directives into UK law, protecting important habitats and species through designated sites and legal safeguards.

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<sup>12</sup> Scottish Government: Marine (Scotland) Act 2010: February 2010.

<sup>13</sup> Scottish Government: Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017: May 2017

<sup>14</sup> UK Government: The Harbour Works (Environmental Impact Assessment) Regulations 1999: February 2000

<sup>15</sup> UK Government: Wildlife and Countryside Act, 1981: November 2019

<sup>16</sup> UK Government: Conservation of Habitats and Species Regulations 2010 (commonly referred to as the Habitats Regulations): March 2010

## 6.0 Technical Considerations

6.1 Fairhurst have considered the acceptability of the Proposed Development in relation to the following matters:

- Principle of Development;
- Water Environment;
- Biodiversity and Ecology: Fish, Shellfish, Birds and Marine Mammals;
- Benthic Ecology;
- Underwater Noise;
- Coastal Processes;
- Navigation and Safety;
- Major Disasters and Accidents;
- Climate Change and Sustainability;
- Seascape, Landscape and Visual Impact;
- Residential Amenity;
- Socioeconomics; and
- Cultural Heritage.

### Principle of Development

- 6.2 The UK Marine Planning Statement 2011 (UKMPS) Paragraph 2.5.2 states *“Properly planned developments in the marine area can provide environmental and social benefits as well as drive economic development, provide opportunities for investment and generate export and tax revenues. The marine planning system will help to promote these benefits in contributing to the achievement of sustainable development. There will therefore be a presumption in favour of sustainable development in the marine planning system”*.
- 6.3 Scotland’s National Marine Plan (2015) (SNMP) GEN 1 seeks to ensure that there is a presumption in favour of sustainable development. Policies GEN 2 and GEN 3 seek to encourage sustainable development with economic and social benefits, respectively.
- 6.4 SNMP policy FISHERIES 1 seeks to ensure that *“existing fishing opportunities and activities are safeguarded wherever possible”*.
- 6.5 SNMP REC & TOURISM 4 seeks to ensure *“Marine and terrestrial planners, marine decision makers and developers should give consideration to the facility requirements of marine recreation and tourism activities, including a focus on support for participation and development in sport. Co-operation and sharing infrastructure and/or facilities, where appropriate, with*
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*complementary sectors should be supported as should provision of low carbon transport options.”*

- 6.6 Stranraer Marina currently hosts berths for leisure craft and a small commercial fleet for fishing and tourism. Historically, Stranraer hosted the Stranraer to Belfast Ferry until it was moved from Stranraer to Cairnryan in November 2011. The loss of the ferry service from Stranraer has had a significant detrimental impact on the town's tourism economy and associated businesses. However, the relocation of the ferry terminal has presented a regeneration opportunity to redevelop the waterfront area around Stranraer Marina.
- 6.7 The proposed works are considered to be a significant redevelopment of Stranraer Marina in an area allocated for a mixed use development around the waterfront. The proposal would result in an increase in waterfront leisure and commercial marine development. The increased marina size, dredging and additional facilities would provide an improved capacity for more visitors and larger vessels, leading to enhanced tourism and commercial fishing provision and overall regeneration of the Stranraer waterfront.
- 6.8 Whilst the existing marina has some commercial fishing berths, the proposal would provide additional berths for commercial fishing vessels, separated from leisure and recreational craft, improving the quality and number of commercial berths available to the benefit of the local fishing industry.
- 6.9 It is acknowledged that planning permission was granted for a watersports centre and ancillary development on the 6<sup>th</sup> October 2023 on an area of land to the west of the application site under (LPA Reference: 23/0970/FUL) The previous approval and the Proposed Development are considered to be complimentary land uses that would not conflict with each other and would contribute to the social and economic enhancement of the Stranraer waterfront, and provide enhanced sport, recreation and tourism facilities. As such, the proposal would follow the national aims for co-operation and sharing infrastructure/facilities as stipulated in SNMP REC & TOURISM 4.
- 6.10 Having regard to the above, the proposal is considered to be sustainable economic development supporting both the local tourism, leisure and fishing industries and as such, the proposal is deemed to comply with paragraph 2.5.2 of the UK Marine Planning Statement.
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## Water Environment

- 6.11 Policy Gen 12 (Water Quality and Resource) states that development should not result in a deterioration of the quality of waters, in accordance with the Water Framework Directive (WFD), Marine Strategy Framework Directive or other related Directives apply. GEN 12 further states marine planning should ensure it takes into account Shellfish Growing Waters.
- 6.12 The Proposed Development will require a capital dredge to four areas. The Marina Entrance, the proposed Deeper Draft Berths, the General Marina Basin, and the Outer Easter Basin. The proposal would dredge a total of 121,230 cubic metres of material.

**Table 6.1 - Estimated Dredge Volumes.**

| Area   | Target Dredge Depth (mCD) | Estimated Dredge Volume (m <sup>3</sup> ) |
|--|---------------------------|---|
| Marina Entrance  | -3.5                      | 30,023                                    |
| Deeper Draft Berths  | -4.5                      | 16,916                                    |
| General Marina Basin   | -3.0                      | 52,980                                    |
| Outer Eastern Marina   | -2.0                      | 13,629                                    |
| <i>Note – this does not include for slope areas (19,068 m<sup>3</sup>)</i> |                           |   |
| <b>TOTAL</b>   |                           | <b>132,616</b>                            |

- 6.13 Construction phase dredging and land reclamation could temporarily increase suspended sediment concentrations, reduce water clarity, and release contaminants from disturbed sediments. Vessel movements, pile installation, and reclamation works also pose a risk of accidental spills and localised water quality changes.
- 6.14 The proposed dredging requires a separate Marine Dredging License regulated by the Marine Directorate. The licensing conditions require representative samples to be collected and the nature (*i.e.* physical composition), quality and contamination status to be determined. The results of the 2025 sediment analysis have then been used to compare the best practicable environmental options (BPEO) for each of the available potential disposal options for the dredged materials. A BPEO Report has been produced by Envirocentre.
- 6.15 The Stranraer Marina BPEO report was commissioned to assess and recommend the most suitable approach for managing sediments arising from a proposed capital dredging operation, with the primary aim to identify disposal and/or re-use solutions that balance environmental protection, regulatory compliance, technical feasibility, and sustainability.
- 6.16 Sediment samples were collected in April 2025 from multiple stations and depths across the proposed dredge footprint. Analysis was conducted for a suite of physical and chemical

parameters, including metals, polycyclic aromatic hydrocarbons (PAHs), total hydrocarbons (THC), organotins, PCBs, and grain size distribution. Results were compared against regulatory action levels (RAL1 and RAL2) and international guideline values such as BAC, ERL, and PEL.

The dataset revealed:

**RAL1 exceedances** for various metals (including nickel, chromium, copper), PAHs, and THC in individual samples.

**One RAL2 exceedance** for nickel, linked to a stiff glacial clay horizon (glacial till).

**Average concentrations** exceeding RAL1 for nickel and certain PAHs, but no average breaches of RAL2.

No averaged or individual results exceeded the PEL, and no exceedances of RAL2 were found beyond the single nickel instance.

Historical data from 2021 and 2024 sampling campaigns showed similar contaminant profiles, suggesting that sediment quality is stable over time. Geological context indicates that elevated nickel in glacial till is naturally occurring and not due to anthropogenic contamination.

6.17 In terms of Disposal and Re-use Options the assessment considered multiple management routes, including:

**Sea Disposal** at the North Channel Scotland disposal site (MA010).

**Beneficial Re-use** for adjacent land reclamation, requiring geotechnical suitability.

**Alternative terrestrial disposal or recovery** options, which were discounted due to logistical or environmental constraints.

6.18 The potential for re-using dredged sediment for a local land reclamation project offers notable sustainability benefits, reducing demand for imported fill and minimising transport emissions. Any surplus or unsuitable material would be directed to sea disposal.

6.19 A Water Framework Directive (WFD) assessment evaluated potential impacts on hydromorphology, habitats, fish, water quality, and protected areas. The findings concluded:

**Low risk** to ecological or chemical status from either sea disposal or land reclamation.

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No significant long-term marine impacts anticipated from sea disposal at the licensed site.

Re-use in reclamation adjacent to the dredge site would have localised benefits and reduced waste output.

The chemical risk review supported the conclusion that naturally elevated nickel and low-level exceedances of certain organics would not lead to significant adverse environmental effects.

6.20 The BPEO assessment (Appendix 11.1 – Volume 2 of the EIAR) recommends a **dual strategy**:

**Primary Option:** Beneficial re-use of geotechnically suitable dredged sediment for nearby land reclamation.

**Secondary/Contingency Option:** Sea disposal at North Channel Scotland (MA010) for any surplus or unsuitable material.

6.21 This approach is consistent with regulatory guidance, offers sustainability benefits, and minimises environmental risk. Sea disposal remains a technically and environmentally viable route if reclamation proves impractical.

6.22 This strategy positions Stranraer Marina's dredging project as an example of integrating environmental management with infrastructure development. By prioritising beneficial re-use and limiting offshore disposal, the project aligns with circular economy principles and supports regional coastal development while safeguarding marine and coastal environments.

6.23 Paragraph 2.6.4 of the UK Marine Policy Statement (2011) states that "development and other activities at the coast and at sea can have adverse effects on transitional waters, coastal waters and marine waters". This section of the marine statement lists the impacts on water demand, discharges to water, and ecological impacts that can result from development through construction, operation and decommissioning. Scotland's National Marine Plan seeks to ensure that any development would not cause the deterioration of any bodies of water subject to a Water Framework Directive.

6.24 Scotland's National Marine Plan (2015) (SNMP 2015) policy GEN 8 Coastal process and flooding states "Developments and activities in the marine environment should be resilient to coastal change and flooding, and not have unacceptable adverse impact on coastal processes or contribute to coastal flooding".

6.25 SEPA classified the Loch Ryan coastal water body as "high" for overall water quality and "pass" for specific pollutants. No classification is provided for priority substances. Loch Ryan is also

identified as Shellfish Waters Protected Area. No other designated WFD protected areas are present within, or within 2km of either the proposed dredge, reclamation or sea disposal sites.

- 6.26 The nature of the proposed use requires the Proposed Development to be located in a coastal area, and by virtue of the marine nature of the development, the proposal is resilient to flooding and considered to be appropriately sited on the edge of Loch Ryan.
- 6.27 The Scottish Environment Protection Agency (SEPA) flood maps indicate that the entire application site and its immediate surroundings are at risk of coastal flooding in the 1 in 200 year plus climate change (+ CC) event: the flood maps show complete inundation of the site in this scenario.
- 6.28 The Proposed Development includes an area of reclaimed land; an extension to the existing breakwater at the end of the West Pier; a new floating breakwater as part of the superyacht berth in the harbour; a new quay wall along the Breastworks car park; slipway development works; and dredging of the harbour to facilitate access. The final placement, finished levels, profiling and design of marine elements has been informed by the coastal modelling, which has allowed for the development of a design capable of providing acceptable wave heights at all the proposed pontoon berths and of avoiding adverse impacts on coastal processes from proposed physical modifications.
- 6.29 The grading within terrestrial areas is planned to remain comparable to existing, and the reclaimed land design should be appropriately profiled to allow this area to drain towards the coast / avoid impeding existing drainage routes.
- 6.30 Assessment of the potential effects of the Proposed Development on flood risk to the existing environment was carried out for the operational phase of the development within the accompanying EIAR. With consideration of embedded mitigation within the design – including the siting / design of scheme elements and a surface water drainage strategy designed to represent the existing drainage discharge rates on a like for like basis or discharge directly to coastal waters - the level of potential operational effects on flood risk has been assessed as Negligible and no additional mitigation is required.
- 6.31 Overall, no significant adverse effects have been identified on flood risk as a result of the Proposed Development, with some betterment identified in regards existing coastal flood risk as a result of local reductions in wave heights in the Marina. The Proposed Development would not require any further coastal defences or works to existing coastal defences outside of the proposal site other than the proposed extension to the breakwater to the mouth of the harbour that forms part of this application.
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- 6.32 The inherent nature of the Proposed Development requires engineering activities within the marine environment and so operational phase impacts on hydromorphology are unavoidable. However, with consideration of mitigation embedded within the design – including appropriate siting and design, informed by coastal modelling – the level of potential operational effects has been assessed as Negligible for water quality and Slight/Moderate for hydromorphology.
- 6.33 Overall, no significant effects have been identified on the water quality or hydromorphology and as such the proposal is deemed to comply with Chapter 2.6.4 of the UK Marine Policy Statement (2011) and policies GEN8 and GEN12 of the Scottish Marine Plan (2015).

### **Biodiversity and Ecology – Fish, Shellfish, Birds and Marine Mammals**

- 6.34 Paragraph 2.6.1.1 of the UK Marine Policy Statement states *“Marine plan authorities should be mindful that, consistent with the high level marine objectives, the UK aims to ensure:*
- *A halting and, if possible, a reversal of biodiversity loss with species and habitats operating as a part of healthy, functioning ecosystems; and*
  - *The general acceptance of biodiversity’s essential role in enhancing the quality of life, with its conservation becoming a natural consideration in all relevant public, private and non-governmental decisions and policies.”*
- 6.35 SNMP (2015) policy GEN 9 (Natural Heritage) states *that “development and use of the marine environment must:*
- (a) Comply with legal requirements for protected areas and protected species.*
  - (b) Not result in significant impact on the national status of Priority Marine Features.*
  - (c) Protect and, where appropriate, enhance the health of the marine area.”*
- 6.36 SNMP (2015) policy GEN 10 (Invasive non-native species) *“Opportunities to reduce the introduction of invasive non-native species to a minimum or proactively improve the practice of existing activity should be taken when decisions are being made”.*
- 6.37 As noted in section 2.0 of this Statement, no international or nationally designated sites are located within 2km of the Proposed Development boundary. The Loch Ryan Important Bird Area (IBA) overlaps with the application site boundary. The IBA was designated as such as it supports the only commercial native oyster beds in Scotland. The IBA supports an important number of wintering waterbirds.
- 6.38 Outside 2km from the application site, a number of designated sites identified for breeding bird interests are present. These include Glenn App and Galloway Moors Special Protection Area
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(SPA), which is located >4km away at the nearest point and is designated for its important population of breeding Hen Harrier.

- 6.39 A chapter on Marine Mammals supports the accompanying EIAR, and given the marine nature of the site, a search for statutory designated sites related to marine mammals was extended to a minimum 30km buffer. Data collected from MAGIC shows that there are two Special Areas of Conservation (Marine Components GB) within 30km of the site. Of these, only the North Channel SAC is designated for marine mammals.
- 6.40 The North Channel (Northern Ireland) is located approximately 25km west of the site, and approx. 50km if measured over water. The North Channel has been designated SAC for its important population of Harbour Porpoise Phocoena. While the search area for marine species can often extend to several hundred kilometres due to the extensive foraging ranges of some species, the search was contained to 40 km on a proportional basis, given the very coastal nature of the Proposed Development.
- 6.41 Habitats Data collected from SWSEIC shows that in the last 10 years, no marine mammals have been officially reported within 2km of the site, however this seems more down to a lack of reporting than due to a lack of presence.
- 6.42 Extending the scope of the data search beyond the last 10 years, the most recent recording of a marine mammal was a common dolphin in 2014. Beyond that, records of bottle-nosed dolphin, common porpoise, grey seal, and harbour seal have all been recorded within 2km of the site. Further details are provided within the EIAR.
- 6.43 Data collected from MarLIN shows that the distribution of short-beaked common dolphin, Risso's dolphin, Atlantic white-sided dolphin, white-beaked dolphin, harbour porpoise, common bottlenose dolphin, Northern bottlenose whale, pygmy sperm whale, and grey seal all encompass Loch Ryan, and therefore potentially the site.
- 6.44 There are three Sites of Special Scientific Interest (SSSI) located within 5km of the application site. Auchrochar Wetlands is located circa 3km south east of the proposed site. White Loch – Lochinch SSSI is located circa 4km east of the site and is also a Special Protection Area (SPA).
- 6.45 Glen App and Galloway Moors is a SSSI and SPA, covering an area of approximately 9000 hectares (ha). The southernmost parcel of this designation, is located circa 4.6km north east of the application site.
- 6.46 A desk study was carried out as part of the EIAR, to ascertain the fish communities expected to be present within the vicinity of Stranraer and the wider Loch Ryan area. Several species of

commercial fish are found in Loch Ryan, including herring, hake, cod and mackerel, of which herring, cod and mackerel are also listed as Scottish Priority Marine Features (PMFs). Multiple species use Loch Ryan as a spawning and/or nursery area, including sprat, hake, plaice, anglerfish, spurdog, cod, whiting, mackerel, blue skate, flapper skate and ling. Both Atlantic salmon and sea trout are found in the Loch Ryan area; Atlantic salmon is protected under Annex II of the Habitats Directive, and both are PMF species.

- 6.47 Loch Ryan and the adjacent Solway Firth area provide spawning and nursery grounds for multiple shellfish species, principally Native oysters, which form the largest extant native oyster bed in Scotland. Native oysters are a PMF and listed under OSPAR Annex V.
- 6.48 Fish and shellfish populations within the vicinity of the project have been assessed as being of high sensitivity to potential impacts arising from the proposed works. This is due to the potential presence of a number of fish species which are listed as PMFs or are migratory species.
- 6.49 The EIAR acknowledges that the construction phase of the development will utilise potentially harmful construction methods that will require sufficient mitigation throughout the construction process, to ensure the development will not have an unacceptable impact on local ecology and biodiversity. This includes works that could emit significant noise during the construction phase, which could impact on fish species.
- 6.50 Dredging during the construction phase has the potential to release contaminants including heavy metals, PAHs (polycyclic aromatic hydrocarbon), and PCBs (polychlorinated Biphenyl) into the water column by disturbing sediments. The EIAR states all contaminants identified within the sediments at Stranraer were however present at relatively low levels. The short-term activity and low ecotoxicological risk therefore present an impact on fish assessed as being negligible.
- 6.51 The Proposed Development has the potential to increase habitat for epibenthic communities on underwater hard substrates, which can in turn lead to fish aggregations. Literature has shown that increasing fish aggregations has the potential to promote juvenile populations by providing food and shelter. However, this may also alter communities, increase nutrient loading and introduce new species. When considering the amount of existing structures, some increases in fish populations may be expected but these are unlikely to have a large effect on natural population dynamics.
- 6.52 Where possible, significant works such as dredging or piling will avoid the over-wintering period October – March inclusive.
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- 6.53 Piling and dredging operations will avoid the period April – July inclusive (much of this period will also be avoided for fish spawning reasons). This will avoid the main breeding period for Black Guillemot, which breed in cavities of existing structures.
- 6.54 Soft start methods will be applied to all piling operations. This method will allow a progressive response and for Fauna to move away from the source of noise over a period of time this will include bird species (marine mammals) and prey species (fish).
- 6.55 During the construction phase of the development, small areas of marine habitat within the marina are likely to be occupied by marine plant and the temporary construction platform. Given the absence of records or observations within the marina and limited suitability of the site, the impact of temporary loss of habitats which are considered to be of low value to marine mammals, over a construction phase of circa 2 years would be negligible adverse and of negligible significance in EIA terms. Permanent habitat loss is considered in relation to the operational phase.
- 6.56 It is acknowledged that the underwater noise from piling operations could have a significant impact on marine mammals and it is therefore recommended that the mitigation measures identified in the underwater noise section of this report are implemented.
- 6.57 Given the extensive requirement for working in, over and adjacent to water, the work presents a risk of accidental fuel, oil, cementitious materials or other construction chemicals entering the marine environment. The extent of this effect on ornithological receptors is very variable but at work would be expected to have a medium level of magnitude, and comprise a moderate significant effect in the absence of mitigation. As such, a Construction Environment Management Plan is recommended to ensure that the construction phase impacts are kept to a minimum, and risks (such as fuel spillage) are minimised.
- 6.58 Operational disturbance will arise from a predicted increase in boat use and traffic within Loch Ryan. This effect is difficult to quantify as it will arise through a range of different crafts and users and affect a wide range of species at different times of year. In order to minimise any effect during operation, information will be provided through interpretative boards designed for marina users, setting out the nature of the species present throughout the year and behaviours which will help to minimise operational disturbance.
- 6.59 In line with the recommendations of the EIAR, an ecological clerk of works (ECoW) will be appointed to monitor compliance with the requirements of the EIA and any Construction Environmental Management Plan developed for the construction phase. The ECoW will monitor bird usage of the area and any reactions to construction operations to monitor the effectiveness of construction stage mitigation.
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- 6.60 Preconstruction surveys for protected or notable species will be required and are recommended 3 months in advance of planned construction work, notably in relation to the otter. If required, an otter licence and associated mitigation plan will be implemented to mitigate any effects on otters should they be present occupying the study area at the time of works.
- 6.61 The construction phase of works will entail extensive over water work involving a range of marine plant. This inevitably introduces construction stage pollution risks, and a Construction Environmental Management Plan will be prepared to define parameters for biosecurity, pollution spill prevention, spill containment and emergency response.
- 6.62 While no invasive species have been recorded on site, there is potential for invasive species to be introduced through contaminated construction plant. As such a CEMP would be necessary to minimise the potential contamination.
- 6.63 With the mitigation measures discussed above imposed by means of condition, the proposal would be deemed to comply with paragraph 2.6.1.1 GEN 9 and GEN 10 of Scotland's National Marine Plan.

#### **Benthic Ecology**

- 6.64 Paragraph 2.6.1.1 of the UK Marine Policy Statement states "*Marine plan authorities should be mindful that, consistent with the high level marine objectives, the UK aims to ensure:*
- *A halting and, if possible, a reversal of biodiversity loss with species and habitats operating as a part of healthy, functioning ecosystems; and*
  - *The general acceptance of biodiversity's essential role in enhancing the quality of life, with its conservation becoming a natural consideration in all relevant public, private and non-governmental decisions and policies."*
- 6.65 SNMP (2015) policy GEN 9 (Natural Heritage) states that "*development and use of the marine environment must:*
- (a) Comply with legal requirements for protected areas and protected species.*
  - (b) Not result in significant impact on the national status of Priority Marine Features.*
  - (c) Protect and, where appropriate, enhance the health of the marine area."*
- 6.66 The Proposed Development will occupy subtidal and intertidal areas of Loch Ryan that provide habitat for benthic communities, and as such, this application is accompanied by an EIAR with
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a chapter on Benthic ecology. A benthic survey of Stranraer Marina and the surrounding environment was undertaken in late May 2025 in order to inform the EIAR.

- 6.67 Benthic habitats, including sedimentary seabeds, intertidal shorelines, and biogenic features, are an essential part of Loch Ryan's ecological network, contributing to local biodiversity, providing feeding and nursery grounds for fish, and supporting shellfish and other marine life. The works proposed will directly interact with these habitats, both physically through construction and indirectly through potential changes in water quality, sediment dynamics, and ecological connectivity.
- 6.68 The benthic ecology study area was defined using: The footprint of direct disturbance (e.g. dredge footprint, quay wall and reclamation areas), and the potential zone of indirect impact, informed by hydrodynamic and sediment plume modelling (covering sediment dispersal during dredging and reclamation works).
- 6.69 The area covers intertidal habitats east and west of the harbour and subtidal habitats within and immediately adjacent to the dredge footprint. This includes potential PMF habitats such as seagrass beds and native oyster (*Ostrea edulis*) grounds, as well. Following consultation with NatureScot, field surveys were timed for late May 2025 to coincide with peak seagrass growth, maximising detection potential for seasonal habitats. Surveys included:
- Drop-down video (DDV) transects across the dredge footprint and adjacent habitats to characterise seabed type and biota.
  - Benthic grab sampling for faunal identification and sediment analysis.
  - Intertidal walkover surveys of areas potentially affected by reclamation and marine access works.
- 6.70 The quay wall construction, land reclamation, and capital dredging associated with the development will interact with benthic habitats in both direct and indirect ways. The most immediate effect will be the physical removal or alteration of seabed and intertidal substrate within the construction footprint.
- 6.71 Capital dredging will temporarily remove surface sediments and the benthic organisms within them. Dredging and reclamation will suspend fine sediments into the water column, increasing turbidity and creating short-lived plumes of elevated suspended sediment concentrations. A further consideration is the resuspension of contaminants bound within sediments. Predicted sediment deposition beyond the dredge footprint is similarly limited.
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6.72 The potential impacts of the Proposed Development on benthic ecology will be assessed following completion of the analysis of the results from the benthic and intertidal survey. It is intended that this will form an addendum to the main EIAR and will be submitted in August 2025. This will include assessment against the potential impacts identified in this chapter. As part of the assessment, embedded mitigation will be assessed, alongside operational mitigation and the potential for cumulative effects when considered alongside other committed and reasonably foreseeable projects.

### **Underwater Noise**

6.73 UK Marine Policy Statement (2011) paragraph 2.6.3.1 states *“Noise resulting from a proposed activity or development in the marine area or in coastal and estuarine waters can have adverse effects on biodiversity although knowledge of the extent of impacts is limited and there are few systematic monitoring programmes to verify adverse effects. Man-made sound emitted within the marine environment can potentially affect marine organisms in various ways. It has the potential to mask biologically relevant signals; it can lead to a variety of behavioural reactions, affect hearing organs and injure or even kill marine life”*.

6.74 Policy GEN 13 states that *“development and use in the marine environment should avoid significant adverse effects of man-made noise and vibration, especially on species sensitive to such effects.”*

6.75 The sediment within the area is mainly silty, gravelly clay overlying a bedrock of sandstone. Water properties in the area are relatively stable, given the lack of major river outflows and good mixing due to tidal actions.

6.76 The Proposed Development includes a range of noisy activities, where especially dredging, vibro piling and impact pile driving can pose a risk to the integrity of the auditory systems of fish and aquatic mammals.

6.77 The accompanying EIAR has a chapter on Underwater noise, which provides an overview of the potential effects due to underwater noise from the Proposed Development on the surrounding marine environment based on the Southall et al. 2019, NMFS/NOAA 2024 and Popper et al. 2014 frameworks for assessing impact from noise on marine mammals and fish.

6.78 The primary purpose of the underwater noise assessment within the EIAR is to predict the likely range of onset for potential physiological and behavioural effects due to increased anthropogenic noise because of the Proposed Development. The EIAR calculates that there is potential harm from Underwater Noise on fish and marine mammals, and as such, mitigation measures are required.

- 6.79 To determine the potential spatial range of injury and disturbance, assessment criteria have been developed based on a review of available evidence including national and international guidance and scientific literature.
- 6.80 Underwater noise can affect marine life in different ways depending on its level and characteristics. Assessment criteria generally separate sound into two types. Impulsive sounds are transient, momentary, broadband, and consist of high peak sound pressure with rapid rise time and decay. This category includes seismic surveys, impact piling and underwater explosions, as well as sounds under one second in duration with a weighted kurtosis over forty. Non-impulsive sounds can be broadband, narrowband or tonal, momentary, brief or prolonged, continuous or intermittent and typically lack the high peak sound pressure with rapid rise and decay. This includes continuous vibro-piling, running machinery, some sonar equipment and vessels, as well as sounds over one second in duration with a weighted kurtosis under forty.
- 6.81 There is scope for some sounds to be classified as both impulsive and non-impulsive depending on the criteria applied. Pulses from sonar-like sources may have rapid rise times, sweep a large frequency range and have high kurtosis. The scientific work carried out to identify impulsive thresholds has used pure impulses from near-instantaneous events, while the non-impulsive thresholds have been based on narrowband, slowly rising pulses. Impulsive sound's tendency to become less impulsive with increased range allows a minimal range to be established where the noise is no longer impulsive. This is established using raytracing, though the effect varies with frequency, depth, seabed type and other environmental conditions.
- 6.82 The modelling for the Proposed Development has therefore considered both impulsive and non-impulsive noise sources. For piling, both impact piling and vibro piling have been assessed. Impact piling generates short, high-energy pulses that are highly impulsive, while vibro piling produces continuous noise with much lower peak levels. Dredging, particularly when using trailing suction hopper dredgers or backhoe dredgers, generates predominantly non-impulsive continuous noise, although specific components such as winches or pumps can produce tonal elements. The breakwater extension will involve construction activities that may include both impulsive and non-impulsive elements depending on the methods and equipment used.
- 6.83 Propagation modelling has been carried out to determine the likely range to thresholds for both injury (permanent threshold shift) and disturbance (temporary threshold shift or behavioural response) for key receptor groups, specifically marine mammals and fish. Modelling parameters included site-specific bathymetry, sediment type, water depth, and seasonal sound speed profiles to ensure results were representative of local conditions. The model outputs indicate that for impact piling, ranges to the onset of potential injury for high-frequency
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cetaceans may extend to several hundred metres, while behavioural disturbance could occur over several kilometres depending on ambient noise levels and the animals' hearing sensitivity. For fish, particularly those with swim bladders involved in hearing, injury ranges are generally smaller but behavioural responses could still be detected over hundreds of metres.

- 6.84 For vibro piling, predicted injury ranges are much smaller, typically within tens of metres for both marine mammals and fish, with behavioural responses expected to be similarly localised. Dredging noise is predicted to be detectable over greater distances due to its continuous nature, but the levels are not expected to exceed injury thresholds except within a few metres of the dredger. However, behavioural responses such as avoidance or changes in swimming patterns may occur over several hundred metres.
- 6.85 These modelling results inform the ecological impact assessments, guiding the development of mitigation measures such as soft-start procedures for piling, scheduling noisy activities to avoid sensitive periods for key species, and implementing exclusion zones monitored by marine mammal observers. The combination of site-specific modelling and established guidance frameworks ensures that potential underwater noise impacts from the Proposed Development are robustly assessed and that mitigation can be appropriately targeted to protect marine ecological receptors.
- 6.86 Sediment properties for the site are based on EMODnet Geology data, borehole samples from the British Geological Survey, and two ground investigation reports for the project. These were used to determine acoustic characteristics relevant for noise modelling. Source noise levels are expressed in decibels referenced to  $1\mu\text{Pa}$  at one metre from the source. In practice, such a point is theoretical for large sources, but the metric enables comparison between sources. For impact piling, the "Taranis" model, validated against field data from piles between 0.5 m and 9 m in diameter, was applied. The loudest blows during piling were used as the basis for assessment, providing a conservative estimate.
- 6.87 Dredging was modelled using a generic dredging vessel scenario with a broadband level of 191 dB SPL and energy primarily between 10–2,500 Hz. Impact piling broadband levels were modelled at 212 dB SEL for a single blow, with peak pressure at 244 dB LP and main energy from 10–4,000 Hz. Rock dumping was considered acoustically negligible compared to dredging. Sheet piling data were based on over 80 vibratory piling recordings, using the 90th percentile band values.
- 6.88 Sound propagation modelling was carried out using the "Rogers" model, suitable for depths to 200 m and soft sediments. Conservative assumptions were made, including animals fleeing at constant speeds, soft starts for piling, and transitions from impulsive to non-impulsive noise
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beyond 1.5 km for impact piling. Results were presented as geographical “risk ranges” for auditory injury (AUD INJ), temporary threshold shift (TTS), and behavioural disturbance.

- 6.89 For impact piling, behavioural disturbance could extend to 4.6 km for marine mammals and 4.2 km for fish. Without mitigation, TTS risk ranges extended up to 1.6 km for harbour porpoises, with soft starts reducing this substantially. Auditory injury risk without mitigation reached 880 m for porpoises but was reduced to below 200 m with a 30-minute soft start. For dredging, behavioural disturbance was predicted to 4.4 km for marine mammals, with TTS and injury risk confined to within 30 m and 10 m respectively. Vibratory piling could cause behavioural disturbance up to 4.7 km for marine mammals, with TTS extending to 230 m for porpoises and injury risk limited to 10 m.
- 6.90 Mitigation measures recommended include a minimum 15-minute soft start for impact piling, with no marine mammals observed within 250 m before commencement. No specific mitigation is required for dredging, rock dumping, or vibratory piling. Cumulative effects are not expected to be significant due to the dominance of impact piling in noise contribution and the similarity of dredging and vibratory piling noise to existing vessel traffic.
- 6.91 Operational noise following completion of the marina is expected to increase only marginally despite the rise in berthing capacity from around 70 to 250 vessels. Most additional vessel movements will be low-speed leisure craft, which are much quieter than the commercial ferries already operating in the area. Occasional superyacht visits are predicted to have noise levels below those of dredging activities. Consequently, the long-term contribution to biologically relevant underwater noise from marina operations is anticipated to be negligible.
- 6.92 In summary, the assessment concludes that with appropriate mitigation during impact piling, there will be negligible risk of auditory injury to marine mammals and fish. Temporary hearing effects may occur for harbour porpoises within 1.5 km of impact piling, but these will be mitigated by soft start procedures and exclusion zones. Dredging, rock dumping, and vibratory piling present very low risk, with potential impacts limited to the immediate vicinity of the works. Operational noise from the completed marina will be insignificant compared to existing commercial vessel activity in Loch Ryan.
- 6.93 With the recommended mitigation measure in place, the proposal is considered to comply with UK Marine Policy Statement (2011) Paragraph 2.6.3.1 and policy GEN 13 of Scotland’s National Marine Plan.
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## Coastal Processes

- 6.94 The application site refers to an existing commercial and leisure marina located to the south of Loch Ryan protected by an existing former ferry pier to the east, a pier wall to the west and a breakwater to the harbour mouth.
- 6.95 The coastal processes assessment states that in terms of the physical presence of infrastructure and associated changes in bathymetry influencing tides, waves and sediment transport, impacts will escalate from the baseline condition (no infrastructure or impact) to the completed development through the course of the construction phase. The provision of infrastructure is designed to alter the wave climate within the harbour to facilitate berthing, therefore, the assessment focused on potential impacts beyond those intended changes to coastal processes. No effects which are significant in EIA terms have been identified therefore, in terms of coastal processes, no specific monitoring or additional mitigation is recommended.
- 6.96 The baseline description of coastal processes is based on a combination of desk-based review, analysis of historical data, and numerical modelling. The desk-based review considered hydrographic charts, tidal data, historical aerial imagery, and previous site investigations. Field data collection included bathymetric survey, sediment sampling, and current measurements. Numerical modelling was carried out to simulate tidal currents, waves, and sediment transport, using models calibrated with local data. This modelling provided predictions of existing conditions and the potential changes arising from the Proposed Development.
- 6.97 The tidal regime in Loch Ryan is semi-diurnal, with two high waters and two low waters each day. The tidal range at Stranraer is typically less than 2 metres, and tidal currents are generally weak, particularly in the southern part of the loch where the development is located. The wave climate is dominated by wind waves generated within the loch, with significant wave heights typically less than 0.5 metres in the harbour area. Occasional larger waves may be generated during strong northerly winds, but these are infrequent.
- 6.98 Sediment transport in the vicinity of the development site is limited, with seabed sediments consisting predominantly of silts and clays, with some sandy areas. There is no evidence of significant longshore sediment transport, and sediment movement is primarily due to local resuspension and settling during wind and tidal events. The shoreline adjacent to the harbour is largely artificial, comprising quay walls and reclaimed land, with limited natural intertidal habitat.
- 6.99 Numerical modelling of the Proposed Development considered the construction of new quay walls, reclamation, and dredging works. The modelling assessed changes to tidal currents, wave conditions, and sediment transport patterns during both construction and operation.
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Results indicated that the proposed structures would have only localised effects on tidal currents, with negligible changes beyond a few hundred metres from the site. Wave modelling showed minor reductions in wave heights within the immediate lee of the new structures, with no measurable change at the wider loch scale. Sediment transport modelling predicted localised increases in deposition within the sheltered areas created by the new structures, and localised increases in resuspension near dredged areas during strong wind events.

- 6.100 Potential impacts on designated coastal features and pathways were considered. Given the limited changes predicted in hydrodynamics and sediment dynamics, no significant impacts are expected on nearby designated sites, including Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs). The modest increases in deposition are confined to areas already subject to low-energy conditions and fine sediment accumulation.
- 6.101 During construction, temporary increases in suspended sediment concentrations are predicted due to dredging and reclamation works. These increases are expected to be localised and short-lived, with concentrations returning to baseline levels within hours after cessation of activity. Modelling indicated that suspended sediment plumes would dissipate rapidly, with no measurable effect at designated sites.
- 6.102 In the operational phase, the presence of new structures will slightly modify local current patterns, but these changes are minor and are not expected to alter the sediment regime beyond the immediate vicinity of the harbour. The creation of sheltered berthing areas may result in gradual infilling with fine sediments over time, requiring periodic maintenance dredging. This is a common feature of sheltered harbour basins and will be managed as part of routine operations.
- 6.103 In conclusion, the coastal processes assessment indicates that the Proposed Development will have only localised and minor effects on tidal currents, waves, and sediment transport within Loch Ryan. There will be no significant impacts on designated coastal features or sediment pathways. Temporary construction impacts will be managed through best practice measures to control sediment release. The overall effect of the development on coastal processes is assessed as negligible.
- 6.104 The Proposed Development encompasses a range of embedded mitigation measures including:
- provision of offshore infrastructure designed to reduce the wave climate and enhance berthing facilities within the confines of the harbour;
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- a floating breakwater with dual purpose for berthing super yachts during calm conditions reducing the requirement for additional infrastructure;
- the reuse of dredged material in reclaimed land area, rather than having to dispose and move it off site; and
- driven piles that will not give rise to significant increases in SSC as material is consolidated within the seabed.

6.105 As such, it is concluded that there will be no significant effects arising from the Proposed Development during the construction and operational phases. It is also concluded that there will be no significant cumulative effects from the Proposed Development alongside other projects/plans.

### Navigation and Safety

- 6.106 Scotland's National Marine Plan policy TRANSPORT 1 seeks to protect navigational safety in areas used by shipping. This includes *"The extent to which the locational decision interferes with existing or planned routes used by shipping, access to ports and harbours and navigational safety. This includes commercial anchorages and defined approaches to ports"*.
- 6.107 A Navigational Risk Assessment (NRA) has been carried out as part of the accompanying EIAR. The main goal is to identify any likely significant impacts on marine users and the surrounding environment from the construction work and the new marina design. The NRA looked at both the construction phase and future operation of the expanded marina.
- 6.108 The baseline review shows that the existing marina and harbour facilities operate under established navigation protocols, with local byelaws and harbour regulations in place to manage vessel traffic. Loch Ryan is a busy waterway with a mix of commercial, leisure, and fishing vessel traffic. Commercial ferry services operate from nearby Cairnryan, and fishing vessels and leisure craft use Stranraer Harbour and surrounding waters. The harbour is sheltered and benefits from navigational aids, but activity levels can vary seasonally, with peaks during summer recreational boating months.
- 6.109 The NRA considered marine traffic data, incident records, and environmental factors such as tidal currents, wind patterns, and visibility. Consultation was undertaken with stakeholders including harbour authorities, commercial operators, local yacht clubs, fishing interests, and maritime regulators. This process identified key navigation issues, such as interaction between small craft and commercial traffic, safe access to berths during adverse weather, and the need for clear communication between harbour users.
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- 6.110 Modelling and risk assessment identified that the introduction of new breakwaters and changes to marina layout would alter local current patterns, potentially affecting vessel manoeuvring in confined areas. During construction, the presence of plant, dredgers, and construction vessels will require temporary exclusion zones and navigation management measures to avoid conflict with passing traffic. These measures will be coordinated through the harbour authority and notified to mariners via Notice to Mariners and local information channels.
- 6.111 Operationally, the expanded marina will increase the number of vessel movements, particularly in the peak summer period. The risk assessment concluded that, with appropriate management measures, the increased traffic can be accommodated without significant adverse effects on navigation safety. Key measures include maintaining navigational aids, ensuring adequate turning and manoeuvring space, and implementing berth allocation systems that reduce congestion.
- 6.112 Special attention was given to the interaction between marina users and commercial ferry routes in Loch Ryan. The NRA found that while ferry traffic operates on a predictable schedule and route, there is potential for small craft to inadvertently impede large vessels if unaware of movements. Education and awareness campaigns for marina users, along with clear signage and communication protocols, are recommended to mitigate this risk.
- 6.113 In relation to fishing activity, the assessment concluded that the marina expansion will not materially impact access to traditional fishing grounds, but temporary disruption may occur during construction due to exclusion zones. Coordination with fishing vessel operators will be necessary to ensure safe passage and access to landing facilities during these periods.
- 6.114 Emergency access and response were also assessed. The marina design incorporates access for lifeboats and emergency vessels, and emergency plans will be updated to reflect the expanded facility layout. Search and Rescue (SAR) capability is provided locally, and no significant impediments to SAR operations are anticipated.
- 6.115 The overall conclusion of the Navigation and Safety assessment is that, with the recommended mitigation measures, the Proposed Development will not have significant adverse effects on navigational safety. The design and operational measures proposed will maintain or enhance safe navigation for all users, while supporting the increased activity levels anticipated from the expanded marina.
- 6.116 With these additional measures in place, the assessment concluded that the initial slight risks are reduced to negligible levels. Therefore, the assessment found no significant environmental effects in terms of navigation and safety resulting from the Proposed Development, provided
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the existing safety measures are maintained and the suggested additional measures are implemented.

- 6.117 Having regard to the above, the proposal is considered to comply with policy TRANSPORT 1 of Scotland's National Marine Plan.

#### **Major Disasters and Accidents**

- 6.118 This application is accompanied by an EIAR with a chapter assessing the risk of major disasters and accidents that may be caused by the Proposed Development, and where the Proposed Development is vulnerable to hazards resulting from a major accident and/or disaster.

- 6.119 Based on professional judgement, major accidents or disasters are events or situations that have the potential to affect the Proposed Development causing immediate or delayed serious damage to one or more of the following human health, welfare, and the environment. This EIAR assessment considers the risks of major accidents and disasters (hereafter referred to as major events) during construction and operation caused by natural hazards or manmade hazards (including operational failure).

- 6.120 *A review was undertaken of baseline conditions to identify existing facilities or natural features or scenarios (such as flooding) which could lead to risk events with associated major accident or hazard in combination with the Proposed Development. These developments were then screened to identify if any specific risk events required further consideration. This process also identified those, which could be screened out as not having a significant risk to retained proportionality and focus within the assessment.*

- 6.121 The baseline assessment sought to identify features (or sources of risk) within the existing environment that could be sources for major accidents and hazards comprising:

- local features external to the order limits that contribute a potential source of hazard to the Proposed Development;
- existing infrastructure and the built environment;
- baseline major accident and natural disaster risks (that exist with or without the Proposed Development).

- 6.122 The wider EIA topic baselines have been used to consider sensitive receptors at risk from the effects of the Proposed Development deriving from its vulnerability to major accidents or disasters, for instance:

- members of the public and local communities;
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- the natural environment, including ecosystems, land and soil quality, air quality, surface and groundwater resources and landscape.

6.123 The main risk sources identified have been divided into the following categories:

- Existing infrastructure and facilities (on both how they may impact the Proposed Development and how the Proposed Development may impact them); and,
- Wider natural disaster and hazard risks – for instance, flood risk.

6.124 There are no offshore gas pipelines directly linked to the Proposed Development location. The nearest is SNIP (Scotland to Northern Ireland Pipeline), which is 135 kilometres long and runs from Twynholm in Scotland to Ballylumford in Northern Ireland. The SNIP is owned by Premier Transmission Limited which is part of the Mutual Energy Ltd. group of companies. This pipeline runs south and west of Stranraer.

6.125 There are no onshore gas utilities within close proximity to the Proposed Development. There are no overhead lines within the direct Proposed Development area, with the nearest being Medium Voltage 33kV Overhead Line infrastructure located to the east, south and west. One underground cable runs into the south eastern portion of the Proposed Development site. Located approximately 4km south west of the Proposed Development is North Rhins Wind Farm.

6.126 Scotland has already experienced changes in climate, and these are projected to continue and intensify. Extreme weather is typically categorised as a weather event that significantly differs from usual or average weather patterns. The term “storm” is typically applied to severe atmospheric events, currently, however, there is no official meteorological definition. Met Office records show that these events are becoming more frequent.

6.127 Stranraer is a coastal town located on the shores of Loch Ryan. The area is located within the Dumfries and Galloway local authority area. The main source of flooding in Stranraer is coastal flooding, however there are also risks from river and surface water flooding. There are approximately 1,000 people and 630 homes and businesses currently at risk from flooding. This is likely to increase to 1,300 people and 820 homes and businesses by the 2080s due to climate change.

6.128 Using the British Geological Survey (BGS) National Landslide Database, no landslides have been recorded in close proximity to the Proposed Development site. The nearest landslide event recorded was in 2014 named A77 Cairnryan located just north of the ferry terminal, Dumfries and Galloway, Scotland. However this site has been recognised as being low or

negligible risk. The trigger of this geohazard event is unknown, with no apparent impact recorded. The environs of the Proposed Development is not considered to be at risk from geohazards such as landslides and Scotland in general is not prone to seismic activity.

- 6.129 With respect to the risk of major disasters and / or accidents, the 'Do Nothing' scenario means that there are no changes to existing infrastructure or utilities as a result of the Proposed Development. Therefore, there would be a Neutral impact on the risk of major disasters and / or accidents under the 'Do Nothing' scenario.

### Socio-economics

- 6.130 Chapter 2.5.2 of the UK Marine Policy Statement (2011) states "Properly planned developments in the marine area can provide environmental and social benefits as well as drive economic development, provide opportunities for investment and generate export and tax revenues. The marine planning system will help to promote these benefits in contributing to the achievement of sustainable development. There will therefore be a presumption in favour of sustainable development in the marine planning system."
- 6.131 Policies GEN 2 and GEN 3 of Scotland's National Marine Plan (SNMP) seeks to ensure and promote sustainable economic and social development. Policy GEN 3 states *"the social benefit of proposed developments and increasing use should be considered carefully and taken into account, appropriately and proportionately, in marine decision making. Consideration should be given where industries and developers assist in supporting the development of onshore infrastructure, helping to achieve community cohesion and reducing social disparity. The impact of proposed development on existing activities, including those which promote health and wellbeing, should also be taken into account in decision making."*
- 6.132 SNMP GEN 3 further states the *"social benefits include those directly associated with economic growth such as increased wealth, improved quality of life and community regeneration. However, benefits of an intrinsic nature such as health and wellbeing associated with the natural and historic environment, a choice of location and lifestyle, sport and recreation are also important."* These benefits are not limited to local residents but include those who would travel to use the coastal facilities.
- 6.133 SNMP Policy REC & TOURISM 1 seeks to support sustainable marine recreation and tourism.
- 6.134 During the construction phase of the development, there would be an increase in direct employment skills at the construction of the Proposed Development, and it would create further employment and economic opportunities in the support and supply chains of the development.
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- 6.135 The proposal would result in an increase in berths for both leisure and commercial craft, which would make a contribution to the local fishing and tourism economies and the local supply lines supporting both industries, and improve the local economy.
- 6.136 The proposed expansion of the marine is focused on capitalising on Stranraer's relationship with Loch Ryan and the Irish Sea, following the move of the Loch Ryan to Belfast Ferry operations from Stranraer to Cairnryan. The relocation of the ferry services had a significant detrimental impact on the local economy in Stranraer, and the proposed expanded services seek to reverse this economic decline and once again make Stranraer an attractive and vibrant tourist attraction.
- 6.137 The proposed works include additional open space on reclaimed land, which would provide additional recreational resources for local residents and visitors, therefore, providing a small but welcome contribution to quality of life.
- 6.138 Having regard to the above, the proposal would lead to an increase in employment in the tourism, leisure and fishing industries and their associated supply lines through the expansion of the Marina, and the associated improvements to both open space and the car park improvements would make a small but welcome contribution to quality of life. As such, the proposal is deemed to comply with policies GEN 2, GEN 3 and REC & TOURISM 1 of SNMP.

#### **Climate Change and Sustainability**

- 6.139 Paragraph 2.6.7.7 of the UK Marine Policy Statement (2011) states that *"In marine planning and decision making consideration will need to be given to how the marine environment can adapt to the impacts of climate change"*.
- 6.140 Policy GEN 5 of Scotland's Marine Plan seeks to ensure that planning decisions act in a way best calculated to mitigate and adapt to climate change.
- 6.141 The EIAR, considers both: the potential impact of changes in climate on the Proposed Development, which could affect it directly or could modify its other environmental impacts; and the impact of greenhouse gas emissions (GHGs) caused directly or indirectly by the Proposed Development, which contribute to climate change.
- 6.142 The EIAR, considers both: the potential impact of changes in climate on the Proposed Development, which could affect it directly or could modify its other environmental impacts; and the impact of greenhouse gas emissions (GHGs) caused directly or indirectly by the Proposed Development, which contribute to climate change.
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- 6.143 As noted within the accompanying EIAR, embedded mitigation measures incorporated into the design of the Proposed Development have been identified prior to the impact assessment. Such measures largely comprise climate resilient design informed by flood modelling, alongside appropriate management plans to enable climate resilience during the operation of the Proposed Development. Additionally, the installation of all-electric heating and hot water systems, mechanical ventilation and heat recovery, low energy lighting, and solar has been included within the design of the coastguard and marine research facility which enable the reduction of operational energy use, and therefore associated emissions.
- 6.144 Regarding the assessment of the impact of climate on the Proposed Development, a climate change risk assessment has identified key hazards to the Proposed Development and its users during its operation. These largely arise from flooding, extreme weather and temperatures and may lead to impacts such as damage to the Proposed Development, and health risks to its users. Accounting for embedded mitigation measures, no impacts on the Proposed Development and its users from climate change have been identified as significant, in EIA terms. The assessment of climate risk during the construction and decommissioning of the Proposed Development has been scoped out on the basis that it is anticipated that work practices will evolve with time to adapt to any future climatic conditions.
- 6.145 With regards to the assessment of GHGs caused by the Proposed Development during its construction, associated emissions have been calculated to total 28,469 tCO<sub>2</sub>e (arising from the emissions associated with the construction materials and fuel consumed from construction plant, vehicle movements, and dredging activities). In the absence of any embedded mitigation measures to reduce such emissions, it cannot be considered that the construction of the Proposed Development aligns with national decarbonisation policy, and as such has been assessed to have a moderate adverse effect, which is significant in EIA terms.
- 6.146 Additional mitigation has been identified to reduce such construction phase emissions, and will be undertaken by the appointed construction contractor throughout the construction phase. Emissions reduction measures include the consideration of lower carbon materials when procuring construction materials, re-using dredged material on-site within the reclaimed land to avoid the sourcing of virgin materials, completing a pre-demolition audit to identify existing materials that could be re-used on site, co-operation with the wider material supply chain, and efficient construction practices.
- 6.147 While the above measures cannot be quantified at this stage, it is considered that they align with good practice and national decarbonisation policy, and as such emissions arising from the construction of the Proposed Development have been assessed to have a minor adverse residual effect, which is not significant in EIA terms.
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- 6.148 Operational emissions arising from the use of energy and fuel (i.e. within buildings on site, and from vessels and vehicles travelling to and from the Proposed Development) have been quantified, with annual emissions totalling 336 tCO<sub>2</sub>e (additional to the quantified baseline of 9 tCO<sub>2</sub>e). This value is likely to decrease throughout the Proposed Development's lifetime, as national policy targets for decarbonisation enable a reduction in emissions associated with electricity and fuel consumption. Accounting for the embedded mitigation measures outlined above, it is considered that the operation of the Proposed Development aligns with national decarbonisation policy, and as such emissions associated with the operation of the Proposed Development have been assessed to have a minor adverse effect, which is not significant in EIA terms.
- 6.149 Emissions associated with the decommissioning of the Proposed Development arise from the disassembly of the features on site, transport to a waste facility, and ultimate disposal. Such emissions have been estimated to total 19,777 tCO<sub>2</sub>e. However, this likely presents a large overestimate, as emissions associated with fuel consumption are expected to have achieved good levels of decarbonisation by the decommissioning phase, in line with national decarbonisation targets. As such, work practices undertaken during the decommissioning phase will align with national decarbonisation policy, and have been assessed to have a minor adverse effect, which is not significant in EIA terms.
- 6.150 Having regard to the above, the proposal is deemed to comply with paragraph 2.6.7.7 of the UK MPS and policy GEN 5 of SNMP.

#### **Seascape, Landscape and Visual Impact**

- 6.151 Policy GEN 7 of Scotland's National Marine Plan (SNMP) seeks to ensure that planners and decision makers take seascape, landscape and visual impacts into account.
- 6.152 SNMP Policy REC & TOURISM 5 states "*decision makers should support enhancement to the aesthetic qualities, coastal character and wildlife experience of Scotland's marine and coastal areas, to the mutual benefit of the natural environment, human quality of life and the recreation and tourism sectors.*".
- 6.153 The proposed site does not lie within any international, national, or local landscape designations.
- 6.154 Loch Ryan is a Marine Consultation Area, identified by Scottish Natural Heritage (SNH) (now NatureScot) due to the quality and sensitivity of the marine environment. Loch Ryan lies within the northernmost part of the proposed site boundary. A description regarding the importance of biodiversity within the Loch Ryan is provided below.
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- 6.155 *“Loch Ryan is a site of national importance for six species of wetland birds, including scaup and Canadian pale-bellied brent geese. Wintering scaup rely on feeding sites in the oyster beds in the deep water of the southern basin of Loch Ryan. Numbers of Canadian pale-bellied brent geese are increasing and can be found in significant numbers on the exposed mudflats and eelgrass beds in the southern basin of Loch Ryan to the east of Stranraer. Marine Consultation Area is a non-statutory designation by SNH to highlight nature conservation priorities in the near shore marine environment.”*
- 6.156 Stranraer Conservation Area covers an area around the core of the old town. This includes an area that lies within the site boundary, including the Marina boatyard, Workshops and Breastworks car park. The proposed new car park and new and existing berths are outwith the Conservation Area.
- 6.157 *“The burgh of Stranraer was established in 1595 on the site of an existing clachan which had grown up around the Adair family’s tower house. Four centuries of development followed, creating a town where the street pattern of the early burgh has survived along with interesting, high-quality buildings from a range of periods. These features provide the distinctive historic character which is the backdrop to people’s daily lives.”*
- 6.158 Stranraer Conservation Area was first designated in 1977 and the boundary amended in 2014. It includes the core of the old town, the waterside areas along Agnew Crescent and the later extension of the old town along Lewis Street.
- 6.159 There are several listed buildings within the Conservation Area, as well as directly east of this. Only one lies within the proposed site boundary, Market Street, Harbour Office with Weighbridge, Category C.
- 6.160 Garden and Designed Landscape Castle Kennedy is located 3.7km west of the proposed site at its closest point. The area is an outstanding surviving example of an early 18th century formal garden. The gardens are within a wider landscape of parkland and woodland, mostly established in the 19<sup>th</sup> century.
- 6.161 There are several Scheduled Monuments (SM) within the 5km study area. The closest is Mid Ochtrelure, 1.4km south west of the proposed site.
- 6.162 There are two identified Landscape Character Types identified in the accompanying EIAR, the Coastal Flats Landscape 158 Character Type and Landscape Character Type 156 Peninsula.
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6.163 The Coastal Flats Landscape Character Type (LCT) encompasses the south western coast of Loch Ryan. This LCT continues inland and extends to Luce Sands in the south. The easternmost part of the site, located closest to the existing East Pier lies within this LCT.

6.164 Key characteristics are listed below, with those relevant to the site and immediate surroundings denoted in **bold**.

- **Coastal flats are generally extremely flat and low-lying, although the coastal plain and coastal parkland have some gentle undulations;**
- More varied topography in the Nith Estuary;
- **Exposed with long views over the flats, as they merge with the Solway waters out to sea and offer distant views of the opposite coastline;**
- A more intimate feel to coastal parkland enhanced by the minor road network, abundant trees, and the generally well-managed appearance;
- Large to medium-sized fields of improved pasture, more lush in parkland areas, with some arable cultivation. Fields are enclosed by hedgerows or fences, or a combination of both, although sheep-grazed salt marsh is traditionally unenclosed;
- Predominantly rural character with generally sparse, isolated settlements and occasional caravan/camping parks, contrasting with occasionally larger towns such as Annan;
- Policy landscapes around large houses and farmsteads in coastal parkland;
- Varied tree cover, with generally few woodlands or shelterbelts, except in coastal parkland where trees and small woodlands create intimacy. Some coastal moss areas contain large, dominating coniferous forests, creating dark green bands on the skyline (others are being restored to moss moorland);
- Wet vegetation in areas of coastal moss;
- Telegraph poles, power lines, and farm structures are very evident as they break the flat horizon in flat estuarine areas;
- **Major communication routes for road, rail, and power lines on the coastal plain;**
- Man-made drainage features in coastal parkland; and
- Open network of small burns dissecting merge areas.

6.165 The Peninsula LCT covers the western half of Dumfries and Galloway, extending along the main peninsulas and coastal promontories. The westernmost parcel of the site lies within this LCT including two of the existing car parks and the west pier.

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6.166 Key characteristics are listed below, with those relevant to the site and immediate surroundings denoted in **bold**.

- Medium-scale landscape rising from boggy hollows to rolling pastureland, up to gorsey moorland;
- **Narrow intertidal range with an abrupt end to inland land use;**
- **Intimate sheltered bays with stony beaches or occasional narrow strips of exposed flat land used for transport routes;**
- Medium-scale field systems enclosed by drystone dykes or hedgerows, although the Mull of Galloway has distinctive shore turf on flat land, no field boundaries, and steep cliffs to the sea;
- Few, but well-developed, policy landscapes;
- Numerous evenly spaced farmsteads and few small settlements;
- Old forts and castles defending rocky western coasts;
- Early Christian settlements and abbeys; and
- Inland areas less influenced by the sea.

6.167 Within Loch Ryan, the site extends to the existing breakwater, and includes the existing marina infrastructure, meeting the east pier at its closest point. The existing piers screen some of the seascape (loch) views directly north from the centre of the site. The shape of the loch, which is orientated on a north-south axis and approximately 8 miles long, conceals wider long-distance views of the North Atlantic Ocean and Firth of Clyde. The undulating landscape rises up to the east and west around Loch Ryan, forming a backdrop beyond the sea loch.

6.168 The topography is low lying and generally flat around the marina. To the south west of Stranraer this rises up steadily to Broad More. To the north east, the topography rises more steeply to Beoch Hill and Braid Fell.

6.169 Due to the siting within the existing bay in relation to the existing east pier and the existing west pier to either side of the proposal, and the town to the south, the proposal would have a limited and insignificant impact on the views from the from the long and medium range given that the low lying nature of Loch Ryan, limiting views of Stranraer.

6.170 The proposed works are limited to within the existing bay/marina and would have limited impact on the views of the sea scape from within the town and waterfront, and views from Loch Ryan. It is acknowledged that the proposed works would allow for larger vessels to be moored in the marina, which would have a temporary and limited impact on views to and from the marina. The views of Stranraer waterfront from the waterfront path (Core Path STRA/544/1) present open views along the Stranraer waterfront and are susceptible to change.

6.171 The EIAR chapter on Seascape, Landscape and Visual Impact Embedded Mitigation is anticipated to be incorporated into the Proposed Development at both construction and operation phases. This is set out below.

6.172 During Construction, the following mitigation measures will be undertaken:

- A detailed Construction Environment Management Plan ('CEMP') will be implemented;
- Identification of construction traffic routes and construction access points; and
- All existing trees to be retained will be safeguarded during construction works through use of tree protective fencing in accordance with BS5837:2012 'Trees in Relation to Design, Demolition and Construction'.

6.173 During Operation the following embedded mitigation measures are recommended

- Retention of existing landscape framework around the site;
- Reclaimed land to have areas of soft landscape including specimen planting (native and semi- native) to soften increased areas of hard landscape/ new built form to provide partial screening for visual receptors to the east;
- Specimen planting between Marine Lake car park and the extended compound/ workshop area to provide partial screening of increased areas of hard landscape and built form from receptors to the south, as well as tying into the existing landscape framework of Agnew Park;
- Enhanced areas of soft landscape within Marine Lake Car Park around the proposed coach parking including low level planting; and
- Breastwork car park to be reworked to allow for planting area to the north, as well as some seating areas to look onto the marina.

6.174 During the Construction phase During construction landscape/ seascape receptors are likely to be affected by:

- Removal of grassed areas for temporary stockpiles and permanent works; and
- Changes to the shoreline as a result of creating the reclaimed land area.

6.175 During construction visual receptors are likely to be affected by:

- Temporary stockpiles of materials;
  - Temporary hoarding;
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- Temporary lighting;
- Increase vehicle movement in and around the site;
- Increased vessel activity within the Loch during dredging activities;
- Piling rig within Loch for construction of the new berths and linkspan; and
- Earth movement around the shoreline to form the new reclaimed land area.

6.176 During construction, it is predicted that access to certain areas would be restricted during certain operations, such as public access to the car parks, pier and Core Path. Dredging materials will be moved across site and used to form the reclaimed land area, which will form a permanent change to part of the land use of the site. Vegetation, which primarily includes a framework of established trees to the periphery of the site, will be retained and protected during this time, although other grassed areas will be lost to construction of the proposals. Construction activities will also introduce new features within the loch, such as dredging vessels and piling rigs mounted on vessels, altering the seascape character during this time. It is considered that the magnitude of change would be medium during construction. A landscape receptor with a low sensitivity and medium magnitude of change would result in a Slight adverse effect on the site character during the construction phase.

6.177 The EIAR stipulates that through the operation phase of the development the land use of the site will generally remain the same, increasing the size of the Marina and providing additional areas and enhanced built features for the boat yard and workshops. Car parking will also be retained as well as pedestrian access along the coastal routes, a Core Path. An area of open water situated between the east pier and Port Rodie car park will be created from reclaimed materials. Vegetation, which primarily include a framework of established trees to the periphery of the site, will be retained. Grassed areas will be lost to the workshops and increased boat yard, but this is minimal. It is considered that the magnitude of change is low, due to the majority of site features being retained and enhanced. A landscape receptor with a low sensitivity and low magnitude of change would result in a Negligible effect on the site character at operation. There are also opportunities for localised beneficial effects on site character through good design and improvements to car parking, inclusion of green infrastructure and improving links to the coastal path.

6.178 Having regard to the above, the proposed works would not be considered to have an unacceptable impact on the landscape or seascape of surrounding area. As such, the proposal is deemed to comply with policies GEN 7 and REC & TOURISM 5 of Scotland's National Marine Plan.

## Residential Amenity

- 6.179 UK Marine Policy Statement (2011) paragraph 2.6.2.1 states “Activities and developments in the marine and coastal area can have adverse effects on air quality at various stages. The construction, operation and decommissioning phases of projects can involve emissions to air which could lead to adverse impacts on human health, biodiversity, or on the wider environment.”
- 6.180 Paragraph 2.6.3.1 states “Noise resulting from a proposed activity or development in the marine area or in coastal and estuarine waters can have adverse effects on biodiversity, although knowledge of the extent of impacts is limited and there are few systematic monitoring programmes to verify adverse effects. Man-made sound emitted within the marine environment can potentially affect marine organisms in various ways. It has the potential to mask biologically relevant signals; it can lead to a variety of behavioural reactions, affect hearing organs and injure or even kill marine life”.
- 6.181 Policy GEN 4 of Scotland’s National Marine Plan seeks developments that enable coexistence between proposed and existing uses, promoting the efficient use of land.
- 6.182 Policy GEN 13 states that *“development and use in the marine environment should avoid significant adverse effects of man-made noise and vibration, especially on species sensitive to such effects.”*
- 6.183 The proposed marina expansion is located to the north of the existing Stranraer town centre, though separated by a public highway, the nearest dwellings are located to the south of the red line boundary (Agnew Crescent). While the proposal would lead to an intensification of the marina for leisure and commercial uses, the proposed operations would not have such an intensification or introduce any further uses that would have any unacceptable impact on the nearby residential dwellings in terms of noise, odour or omissions. As such, the proposal is deemed to comply with policy GEN 4 of the SNMP.
- 6.184 The proposed construction phase, including the extension of the wave breakwater, has the potential to cause harm to air quality through dust and noise emissions.
- 6.185 With the appropriate mitigation measures in place for both the construction and operation periods in place, the worst impacts would be time-limited in nature, and the operational impacts would not be significant in terms of residential amenity and ecological impact.
- 6.186 With suitable mitigation measures in place, the proposed works would be considered to be acceptable in terms of air quality and noise impact, with particular regard to the impact on the
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amenity of the neighbouring uses, and the impact on ecology. As such, the proposal is considered to comply with paragraphs 2.6.2.1 and 2.6.3.1 of the UK MPS, policies GEN 4 and GEN 13 of the SNMP.

### Cultural Heritage

- 6.187 Paragraph 2.6.4 of the UK Marine Policy Statement (2011) states that *“The view shared by the UK Administrations is that heritage assets should be enjoyed for the quality of life they bring to this and future generations, and that they should be conserved through marine planning in a manner appropriate and proportionate to their significance.”*
- 6.188 Policy GEN 6 of Scotland’s National Marine Plan states *“development and use of the marine environment should protect and, where appropriate, enhance heritage assets in a manner proportionate to their significance”*.
- 6.189 As noted earlier in this Statement, there is one designated heritage asset within the application site. This is the Harbour Office with weighbridge (LB49655), which is a Category C Listed Building.
- 6.190 The Site lies partially within the Stranraer Conservation Area.
- 6.191 There are a further 65 Listed Buildings in the Study area. These comprise; three Category A Listed Buildings; 28 Category B; and 34 Category C.
- 6.192 As noted in the accompanying EIAR, there are no predicted construction phase impacts in respect of known heritage assets and there is low potential for isolated artefacts and such to be disturbed during dredging operations. This potential will be addressed through the enactment of a protocol for the reporting of archaeological discoveries during dredging. This would allow for their recovery, but there remains some potential for loss of data.
- 6.193 The EIAR concludes that onshore ground disturbance will be contained with modern made ground and it is considered that there is no potential for terrestrial heritage assets to be affected.
- 6.194 The EIAR also concludes that once the Proposed Development is operational, it will for the most part result in a neutral change in the Conservation Area and its setting. However, the new sheet pile wall will obscure one of the last elements of the 19<sup>th</sup> century harbour that remains, resulting in a loss of historic character, and the substation and compound may be experienced as detracting from the Conservation Area’s character and appearance. The former will be offset through a programme of historic building recording and the latter prevented by the implementation of sensitive detailed design. In addition, larger vessels using the facility may
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interfere with significant views that contribute to the cultural significance of the Stranraer Conservation Area. No mitigation is possible, and it is considered that there will be a slight adverse effect (not significant in EIA terms) upon the Conservation Area.

- 6.195 Larger vessels will also affect views from the Category C-listed 10 and 11 Market Street resulting in residual effects of negligible significance. The EIAR concludes that this is not significant in EIA terms.
- 6.196 Having regard to the above, the proposal is considered to comply with paragraph 2.6.4 of the UK Marine Policy Statement (2011) and policy of GEN 6 of Scotland's National Marine Plan.

## **7.0 Summary and Conclusions**

- 7.1 This Marine Licence Supporting Statement has been prepared by Fairhurst, on behalf of Dumfries and Galloway Council, to accompany Marine Licence applications for the Stranraer Marina Expansion Project.
- 7.2 This Marine Licence Supporting Statement has identified a number of contributing factors in support of the proposal and illustrates a number of benefits to be derived from the granting of a Marine Licence for the proposal. This Statement also sets out that, with appropriate mitigation, the Proposed Development will not result in any adverse impacts on the marine environment of the area.
- 7.3 As such, Fairhurst considers that the principle of development is acceptable and the development is in accordance with policies of the MPS and Scotland's National Marine.
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