SINCLAIR WHARF

OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Belfast Harbour Commissioners

19 August 2026

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SINCLAIR WHARF STRENGHTENING WORKS

OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Belfast Harbour Commissioners

19 August 2026

Job no	Prepared by	Checked by	Approved by	Status	Rev	Date
251103	[redacted]	[redacted]	[redacted]	DRAFT	P01	10/08/2026
251103	[redacted]	[redacted]	[redacted]	FINAL	P02	19/08/2026

Doran Consulting Limited
Registered Office
Flax House
83 - 91 Adelaide Street
Belfast BT2 8FE

T 028 9033 3443
E mail@doran.co.uk
W www.doran.co.uk

NI Reg No. NI055181

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1.0 INTRODUCTION

1.1 Outline CEMP Overview

The information contained within this outline Construction Environmental Management Plan (CEMP) has been prepared by Doran Consulting on behalf of Belfast Harbour Commissioners and specifies the minimum requirements to be carried out by the appointed Contractor to ensure safe and secure construction with the minimum possible environmental harm.

This outline CEMP provides the management framework required for the planning and implementation of construction activities in accordance with the environmental commitments identified as part of environmental assessments and to reduce the risk of adverse impacts on the environmental resources, local residents and businesses.

This document describes the checking, monitoring and audit processes that should be implemented by the appointed Contractor to ensure works are undertaken in accordance with these requirements, together with measures to enable appropriate corrective actions or mitigation measures to be taken.

This document in an outline CEMP and as such, activities described should be integrated with other Quality, Sustainability and Health & Safety Management processes set up by the Contractor. Prior to the commencement of works the appointed Contractor will be required to produce a finalised CEMP that complies with this document and all Statutory Consent Conditions. The final document will also detail the exact mitigation measures and controls which will be used during the works. The final CEMP will also detail the exact methodology for different aspects of the work.

1.2 Description of the Project

The site is located within the Belfast Harbour Estate, Along Herdman Channel. The site is currently used as a commercial shipping yard, comprising of an approximately 420m long concrete wharf with various dry storage bays.

Significant deterioration and damage has occurred to the deck soffit and supporting precast and steel box piles. A contributing factor is the lack of energy absorption in the fendering system leading to excessive vessel berthing forces being transferred directly to the wharf structure. The following works aim to repair the damage and strengthen the wharf. A replacement fendering system will mitigate the effect of excess forces transferring from mooring ships through the structure.

The proposed works comprise concrete repairs to the deck soffit; concrete repairs and strengthening to pile heads; concrete encasement of steel box piles; plate repairs to the sheet pile wall and box piles; and the installation of 25 No. new fender systems.

In support of a future drainage scheme, it is proposed to construct a new precast concrete headwall at the southern end of the wharf and a new outlet pipe through the existing sheet pile wall at the northern complete with a non-return valve.

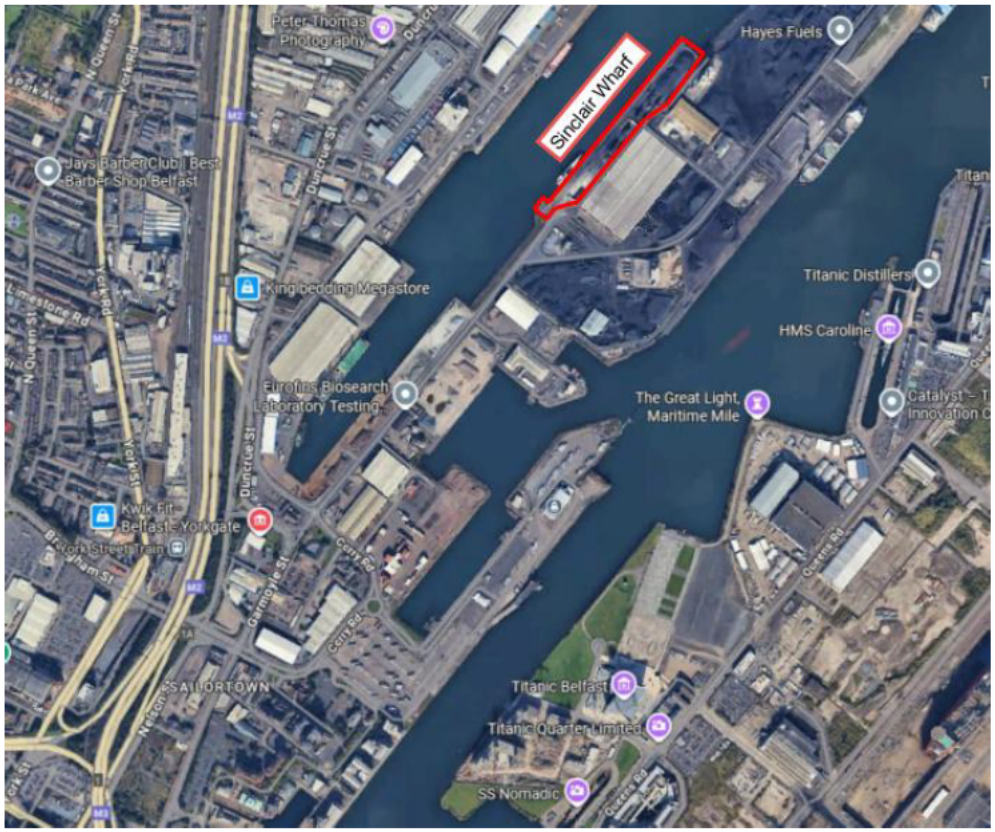


Figure 1: Site Location (from Google Maps)

1.3 Supporting Documentation

The following documents are referred to in the Outline CEMP and should be read in conjunction with this document:

- Habitat Regulations Assessment (HRA) - Stages 1 and 2

2.0 RELEVANT LEGISLATION

As a minimum, works shall be carried out in accordance with the following legislation and guidance:

Subject	Legislation / Guidance
Marine Licence	• Marine & Coastal Access Act 2009 • The Marine Licensing (Exempted Activities) Order (NI) 2011
DAERA 'Standing Advice' *Development that may have an effect on the Water Environment*	• Discharge to the Water Environment • Pollution Prevention Guidance • Marine Litter
DAERA 'Standing Advice' *Development that may effect Natural Heritage Interests*	• Invasive Alien Species • Priority Habitats • Priority Species
DAERA Guidance	• Marine Non-native Species • Marine Mammal Disturbance
Air Quality	• The Air Quality Standards Regulations (NI) 2010 as amended to 2017 • Clean Air Act 1993
Noise	• Environmental Noise Regulations (NI) 2006 • Control of Noise (CoP for Construction and Open Sites) Order (NI) 2002 • The Construction Plant & Equipment (Harmonization of Noise Emission Standard) (Amendment) Regulations 1995
Climate Change	• Climate Change Act (NI) 2022
Archaeological	• Historic Monuments and Archaeological Objects (NI) Order 1995
Waste Management	• Controlled Waste & Duty of Care Regulations (NI) 2013 as amended to 2014 • Hazardous Waste Regulations (NI) 2005 as amended to 2015 • Registration of Carriers & Seizure of Vehicles Regulations (NI) 1999 • GPP 4: Treatment & Disposal of Wastewater • DAERA RPS: Construction/Demolition Waste & Recycled Aggregate 2016
Water & Pollution Control	• Water (NI) Order 1999 as amended to 2004) • Water & Sewerage Services (NI) Order 2006 • Control of Pollution (Oil Storage) Regulations 2010 • GPP 2: Above Ground Oil Storage • GPP 5: Works & Maintenance in or Near Water • GPP 6: Working on Construction & Demolition Sites • GPP 21: Pollution Incident Response Planning • GPP 22: Dealing with Spills • GPP 26: Safe Storage: Drums & IBCs
Nature Conservation	• Wildlife (NI) Order 1985 • Nature Conservation & Amenity Lands (NI) Order 1985 as amended to 1989 • Environment (NI) Order 2002 • Wildlife and Natural Environment Act (NI) 2011 • Conservation (Natural Habitats, etc.) Regulations (NI) 1995 • The Invasive Alien Species (Enforcement & Permitting) Order (NI) 2019

Table 1: Key Environmental Legislation and Guidance Document

3.0 METHODOLOGY

The proposed works will comprise the following activities:

- Procurement and delivery to site of 25 No. steel tubular piles and associated fender components.
- Mobilisation of the piling plant, access systems and other construction equipment required to undertake the works.
- Pitching and driving of 25 No. steel tubular piles at the proposed fender locations.
- Installation of 25 No. energy-absorbing fender systems and associated facing panels and connections.
- Demobilisation of the piling plant, access systems and associated construction equipment.
- Removal of defective concrete from the deck soffit using hydro-demolition.
- Preparation and protection of the existing soffit reinforcement, including the installation of sacrificial anodes.
- Reinstatement of the deck soffit using dry-sprayed concrete.
- Application of a surface-applied corrosion inhibitor to the full deck soffit.
- Removal of defective concrete from the existing pile heads using hydro-demolition.
- Preparation of the existing pile-head reinforcement and installation of additional reinforcement and sacrificial anodes.
- Recasting and strengthening of the pile heads.
- Reinforced-concrete encasement of the upper sections of the existing Larssen No. 4B steel box piles, extending from the deck soffit to the top of the waler beam.
- Installation of replacement aluminium galvanic (sacrificial) anodes on sheet piles to prevent the progression of further corrosion damage and protect against Accelerated Low Water Corrosion (ALWC).
- Plate repairs to patch holes and reinforce thinned areas on sheet piles.

Future Drainage Outfall Provision

- Construction of proposed precast concrete headwall as part of these works to facilitate connection of the future drainage outfall.
- Installation of proposed outlet pipe through the sheet pile wall at Northern end of wharf, complete with Non-return valve, to facilitate future drainage scheme

4.0 MANAGEMENT OF THE WORK

4.1 Management Structure

Prior to the works commencing the Contractor shall provide details of the management structure and responsibilities. It is anticipated that the management structure and responsibilities will comprise:

1. Project Director
2. Health and Safety Manager
3. Environmental Compliance Manager
4. Contract Manager
5. Project Manager
6. Site Manager
7. Project MMO

4.2 Competence of Staff

The appointed Contractor shall deliver this project with a minimum negative impact on the environment as is reasonably practicable to achieve. This shall be accomplished through implementing appropriate mitigation measures, seeking advice from specialist advisors and suitable training of employees, sub-contractors and third parties.

The appointed Contractor should be responsible for overseeing all ecological and environmental aspects while constructing the Works.

Trainings of site staff shall be undertaken by an experienced Site Manager or by specialist advisors as necessary. Training shall take the form of Site Inductions, Briefings and Tool Box Talks. The Site Manager shall be responsible for ensuring that all personnel engaged in activities that may have an effect on the environment receive suitable training and are competent to carry out their duties.

All staff and contractors are to be made aware of the requirements set out in the CEMP. All staff must be briefed on their roles in the event of an environmental incident.

Training shall include:

- Risk Assessment and Method Statement (RAMS) site specific procedures, requiring all personnel to be aware of and sign off the appropriate RAMS for the task(s) in which they are engaged.
- Ecological precautionary working method statements to protect sensitive ecology during the works.
- Full Health and Safety induction with emphasis on the correct PPE which is to be provided by the Contractor.
- Awareness of the potential for harm to both personnel and the environment from the works.
- Awareness of the sensitivity of the environment surrounding the site.
- General public relations and the need for courtesy.

4.3 Risk Assessments and Method Statement

Risk Assessments and Method Statements (RAMS) shall be written by the appointed Contractor in consultation with environmental specialists (where necessary) and must include a review of the environmental risks and commitments so that appropriate control measures can be developed and included within the construction process. Risk assessments shall:

- Identify the significant environmental effects that can be anticipated;
- Assess the risk from these effects;
- Identify the control measures to be taken and re-calculate the risk; and
- Report where and inappropriate level of residual risk is identified so that actions can be taken through design changes, or alternative method of working to reduce the risk to an acceptable level.

The appointed Contractor's RAMS shall be submitted prior to works commencing. If the method of works is changed from the approved method, then works shall cease until suitable authorisation is obtained.

4.4 Programme

A detailed programme of works shall be developed by the appointed Contractor and submitted to Belfast Harbour Commissioners (BHC) for approval prior to works commencing.

It is envisaged that the proposed Works will take approximately 37 weeks. It is anticipated that piling activities will occur over approximately 15 weeks. It should be noted that piling is not continuous during this time period as a large percentage of time during 'piling activities' is in pitching and set up.

4.5 CDM Management Structure

The following table shall be completed by the Contractor prior to the work commencing.

Role	Company and Address	Contact	Telephone	e-mail
Client	Belfast Harbour Commissioners			
Principal Contractor	TBC			
Contractor(s)	TBC			
Principal Designer	Doran Consulting			
Designer(s)	Doran Consulting			

Table 2: CDM Management Structure – Key Contacts

5.0 SITE ENVIRONMENT DETAILS

5.1 Site Location

The site is located within the Belfast Harbour Estate, Along Herdman Channel. Refer to the Site Location Plan included in Appendix A.

5.2 Protected Areas

Relevant Protected Areas and their distance to the site are listed below. A plan showing Protected Areas within 15km of Sinclair Wharf is included in Appendix B.

5.2.1 Designated Special Area of Conservation (SACs)

- The Maidens SAC: approx. 30 km north-east
- North Channel SAC: approx. 20 km north-east
- Strangford Lough SAC: approx. 14 km east

5.2.2 Special Protection Areas (SPAs)

- Belfast Lough SPA: approx. 0.6 km north
- Belfast Lough Open Water SPA: approx. 1.5 km north
- Strangford Lough SPA: approx. 14 km east
- Outer Ards SPA: approx. 13 km north-east
- Copeland Islands SPA: approx. 24 km north-east
- East Coast (NI) Marine SPA: approx. 3 km north-east

5.2.3 Area of Special Scientific Interest (ASSI)

- Inner Belfast Lough ASSI: approx. 0.6 km North / 1.5 km East
- Outer Belfast Lough ASSI: approx. 4.5 km north-east
- Belvoir ASSI: approx. 6 km south
- Craigantlet Woods ASSI: approx. 6 km east
- Outer Ards ASSI: approx. 13 km north-east
- Strangford Lough ASSI Part 1: approx. 14 km east

5.2.4 Ramsar Sites

- Belfast Lough Ramsar Site: approx. 0.6 km north
- Strangford Lough Ramsar Site: approx. 14 km east
- Outer Ards Ramasar Site: approx.13 km north-east

5.2.5 Marine Conservation Zones

- Strangford Lough MCZ: approx. 14 km east

5.3 Archaeology and Cultural Heritage

Sinclair Wharf itself is not recorded as a site of Significant of Areological Interest, Industrial Heritage and does not have Historic Buildings situated on the Wharf.

6.0 ENVIRONMENTAL CONTROL MEASURES

6.1 Marine Mammals

The potential impact of underwater noise from piling will be mitigated by adopting a Piling protocol as described below.

6.1.1 Marine Mammal Observation Protocol

The Marine Mammal Observation Protocol (MMOP) will be implemented so that the piling works (vibro & impact) do not cause injury or unnecessary disturbance to harbour porpoise, grey seal (and other marine mammals not a qualifying feature of any of the European designated sites considered within the HRA). This MMOP has been designed with reference to current JNCC guidance '*Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise*' (JNCC, 2010).

6.1.2 Marine Mammal Observer

A suitably qualified Marine Mammal Observer (MMO), competent in the identification of marine mammals, will be present during the piling works. The MMO will undertake observation for marine mammals within the mitigation zone before and during impact and vibro piling. The MMO will advise the contractors and crews on the implementation of the procedures set out in the agreed protocol, to ensure compliance with those procedures. The MMO will be land based and trained (attended JNCC recognised course). The identity and credentials of the MMO will be agreed with DAERA.

6.1.3 MMO Equipment

The MMO will be equipped with binoculars (10X42 or similar), a copy of the agreed protocol and the Marine Mammal Recording Form (MMRF), which is a Microsoft Excel spreadsheet containing embedded worksheets named Cover Page, Operations, Effort and Sightings. A Microsoft Word document named Deck forms is also available, and the MMO may prefer to use this when observing before transferring the details to the Excel spreadsheets. Although these forms were developed for seismic surveys, they can be used for piling operations, although many columns will not be applicable. The ability to determine the range of marine mammals is a key skill for MMOs, therefore a hand-held GPS device or rangefinder will be used to verify the range.

6.1.4 Communication

The contractor will be responsible for the communication channels between those providing the mitigation service and the crews working on the piling. A formal chain of communication from the MMO to the contractor, who will start/stop piling, will be established. In order to confirm the chain of communication and command the MMO will attend any relevant pre-mobilisation meetings.

6.1.5 Mitigation Zone

The JNCC guidance defines the mitigation zone as a pre-agreed radius around the piling site prior to any piling. This is the area where a MMO keeps watch for marine mammals (and delays the start of activity should any marine mammals be detected). The extent of this zone represents the area in which a marine mammal could be exposed to sound that could cause injury and will be determined by factors such as the pile diameter, the water depth, the nature of the activities (for example, whether drilling will also take place) and the effect of the substrate on noise transmission. The radius of the mitigation zone should be no less than 500 metres, and this is measured from the pile location. The MMO should be located on the most appropriate viewing platform to ensure effective coverage of the mitigation zone. To provide a level of mitigation appropriate to the risk and more accurate monitoring, a mitigation zone of 500m around the piling activity is proposed. The MMO Observation point will be confirmed when a suitably qualified Marine Mammal Observer (MMO) has been appointed. Figure 2 below shows indicative location.

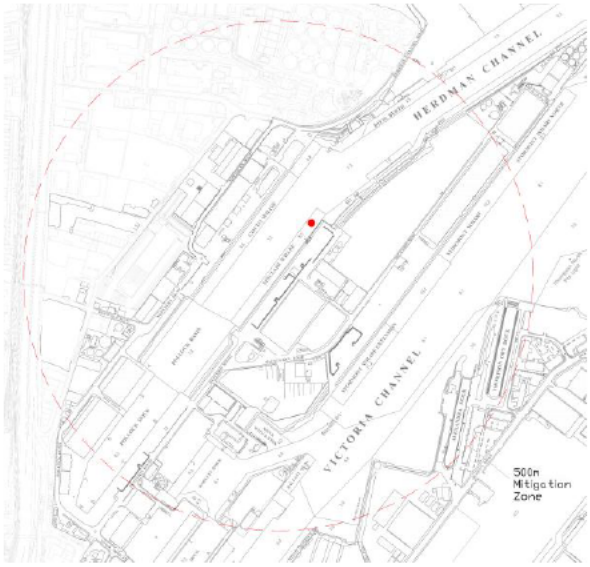


Figure 2: MMO Observation Point

6.1.6 Piling Protocol

The following protocol shall be followed:

1. Piling will not commence during periods of darkness or poor visibility (such as fog), or during periods when the sea state is not conducive to visual mitigation (above sea state 4 is considered not conducive, however as porpoises have a small dorsal fin, anything above sea state 2 should be considered in this instance), as there is a greater risk of failing to detect the presence of marine mammals.

2. The mitigation zone will be monitored visually by the MMO for an agreed period prior to the commencement of piling. This will be a minimum of 30 minutes.

3. The MMO will scan the waters using binoculars or a spotting scope and by making visual observations. Sightings of marine mammals will be appropriately recorded in terms of date, time, position, weather conditions, sea state, species, number, adult/juvenile, behaviour, range etc. on the JNCC standard forms. Communication between the MMO and the contractor and the start/end times of the activities will also be recorded on the forms.

4. Piling will not commence if marine mammals are detected within the mitigation zone or until 20 minutes after the last visual detection. The MMO will track any marine mammals detected and ensure they are satisfied the animals have left the mitigation zone before they advise the crew to commence piling activities.

5. A soft-start will be employed, with the gradual ramping up of piling power incrementally over a set time period until full operational power is achieved. The soft-start duration will be a period of not less than 20 minutes. This will allow for any marine mammals to move away from the noise source.

6. If a marine mammal enters the mitigation zone during the soft-start then, whenever possible, the piling operation will cease, or at least the power will not be further increased until the marine mammal exits the mitigation zone and there is no further detection for 20 minutes.

7. Piling at full power will continue if a marine mammal is detected in the mitigation zone (as it is deemed to have entered the mitigation zone voluntarily).

8. If there is a pause in the piling operations for a period of greater than 10 minutes, then the pre-piling search and soft-start procedure will be repeated before piling recommences. If a watch has been kept during the piling operation, the MMO should be able to confirm the presence or absence of marine mammals, and it may be possible to commence the soft-start immediately. However, if there has been no watch, the complete pre-piling search and soft-start procedure will be undertaken.

6.2 Chemicals and Hazardous Materials

Chemicals and hazardous materials may be stored on site during the construction phase. These may include Fuels, Oils and Paints/Coatings. The site layout plan will show the storage location of the bunded fuel store and storage facilities for other small volume packaged material.

Strict adherence to relevant Guidelines for Pollution Prevention (GPP) is required:

- GPP2 (Above Ground Oil Storage)
- GPP5 (Works and Maintenance in or Near Water)
- GPP6 (Working on Construction and Demolition Sites)
- GPP21 (Pollution and Response Planning)
- GPP22 (Dealing with Spills)
- GPP26 (Safe Storage/Drums and Intermediate Bunk Containers)

6.3 Fuelling Procedures

The appointed Contractor shall be responsible for ensuring that fuelling procedures are strictly adhered to. As a minimum the following shall apply:

- Only authorised personnel permitted to refuel plant & vehicles
- All fuel deliveries to be supervised by authorised personnel
- Locate fuelling point at least 10 m from any watercourse
- Provide fully stocked Spill Kit with Spill Procedure (Figure 5.1)
- Ensure fuel tank is protected from accidental damage, collision or vandalism
- Ensure distribution hose is fitted with a shut-off type filling nozzle and lock
- Ensure a drip tray is in place below the hose and nozzle when not in use
- Record fuel tank level on daily basis



Figure 3: Spill Response Procedure Template

6.4 Biosecurity Control Measures

It is the responsibility of the contractor to make every effort to reduce the risk of spreading harmful invasive non-native species. Clear and concise biosecurity protocols shall be implemented to minimise the risks of spreading invasive non-native species. The biosecurity protocols shall be supported by comprehensive training and with the necessary equipment and/or facilities.

The routine maintenance and the movement of vehicles, equipment and plant, can facilitate the spread of invasive species that are already present in or adjacent to the working environment. The rigorous implementation of good biosecurity practice will limit the introduction and spread of harmful invasive species.

The Contractor shall refer to standing advice and guidance from DAERA and Invasive Species Ireland:

- Marine Invasive Non-native Species - DAERA Guidance
- Invasive Species Ireland - Biosecurity Guidelines

Plant and equipment will be subject to the following prior to leaving its previous location:

6.4.1 Land based activities:

- CHECK: Plant & equipment, clothing for mud, aquatic animals or plant material. Remove anything you find and leave it at the site.
- CLEAN: Clean everything thoroughly as soon as possible, paying attention to areas that are damp or hard to access. Use hot water if possible.
- DRY: Dry everything for as long as you can before using elsewhere as some invasive plants and animals can survive for over two weeks in damp conditions.

6.4.2 Marine-based Activities:

- INSPECT all equipment that has been in a waterbody (boats, trailers, engines, outboards, dredgers, weed cutting or harvesting boats, cruisers or even clothing) or terrestrial site for attached vegetation, contaminated soil or obvious animal life before moving to another waterway, catchment or site.
- REMOVE any adhering plant, soil or animal material from your equipment for disposal before relocating to another watercourse, section of waterway or site. Ensure that all water is drained

from your boat and equipment before transportation to another site and all soil is removed from machinery, as this may contain seed or plant fragments.

- CLEAN all equipment with a power hose away from the waterbody. Use hot water (>60 degrees centigrade) where possible on site.
- DISPOSE of all plant and animal material in bags or containers for disposal in bins. Do not throw them back into the water or leave them lying at the water's edge. Any biofoul material will be disposed of in landfill sites away from the marine environment (including hydrological links).
- REPORT and take photos of species you think may be an INNS on the Invasive Species NI website

6.5 Waste Management Plan

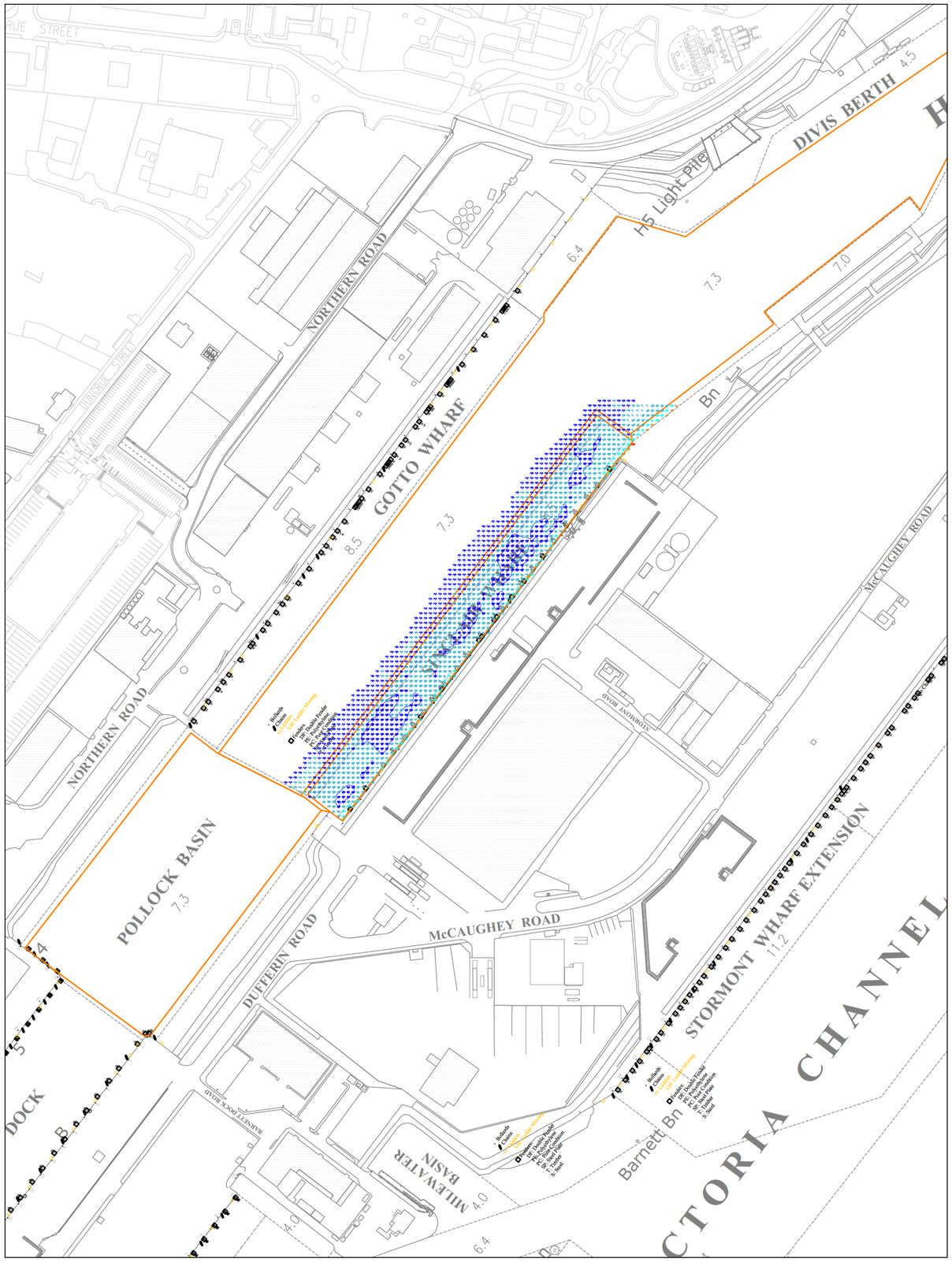
The following general best practices shall be adopted by the appointed Contractor:

- Waste management procedure in accordance with 'Duty of Care;
- The waste hierarchy shall be adhered to;
- Any waste materials arising from the works which are suitable for reuse on the proposed development shall be retained and stockpiled where possible to incorporate such materials into the subsequent remediation and construction process;
- Stockpiles shall be sealed or covered as far as reasonably practicable;
- Waste segregation shall be in place to help maximise the reuse and recycling rates;
- The site shall be assessed on a regular basis for the presence and accumulation of litter. The foreshore shall be assessed at the end of each shift and prior to the high tides; and
- Fires and the burning of waste shall be strictly prohibited at the work site.

APPENDICES

APPENDIX A: SITE PLAN

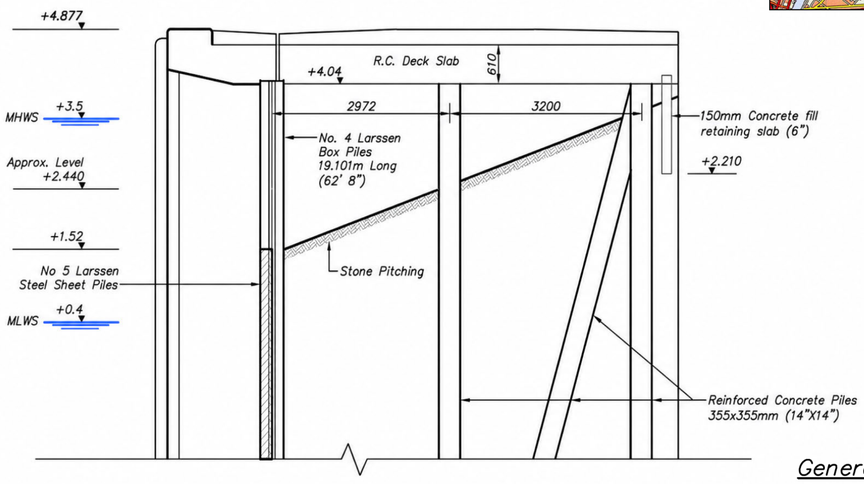
Rev.	Date	By	Check	Details	Appr.
P01				First Issue	



Site Location
Scale 1:2000



Site Location
Scale 1:50,000



Note:
Levels are to Harbour Datum

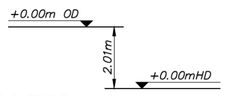
Sinclair Wharf
Cross section

General Notes

1. All levels in metres to Harbour Datum (HD).
2. All dimensions in mm unless noted otherwise.
3. Harbour datum at Belfast Harbour is 2.01m below Ordnance Datum (OD).

Tide Levels CD:

HAT	= +3.90mHD
MHWS	= +3.50mHD
MLWS	= +0.40mHD
LAT	= +0.00mHD



PRELIMINARY DRAWING

Project Title:
SINCLAIR WHARF
STRENGTHENING WORKS

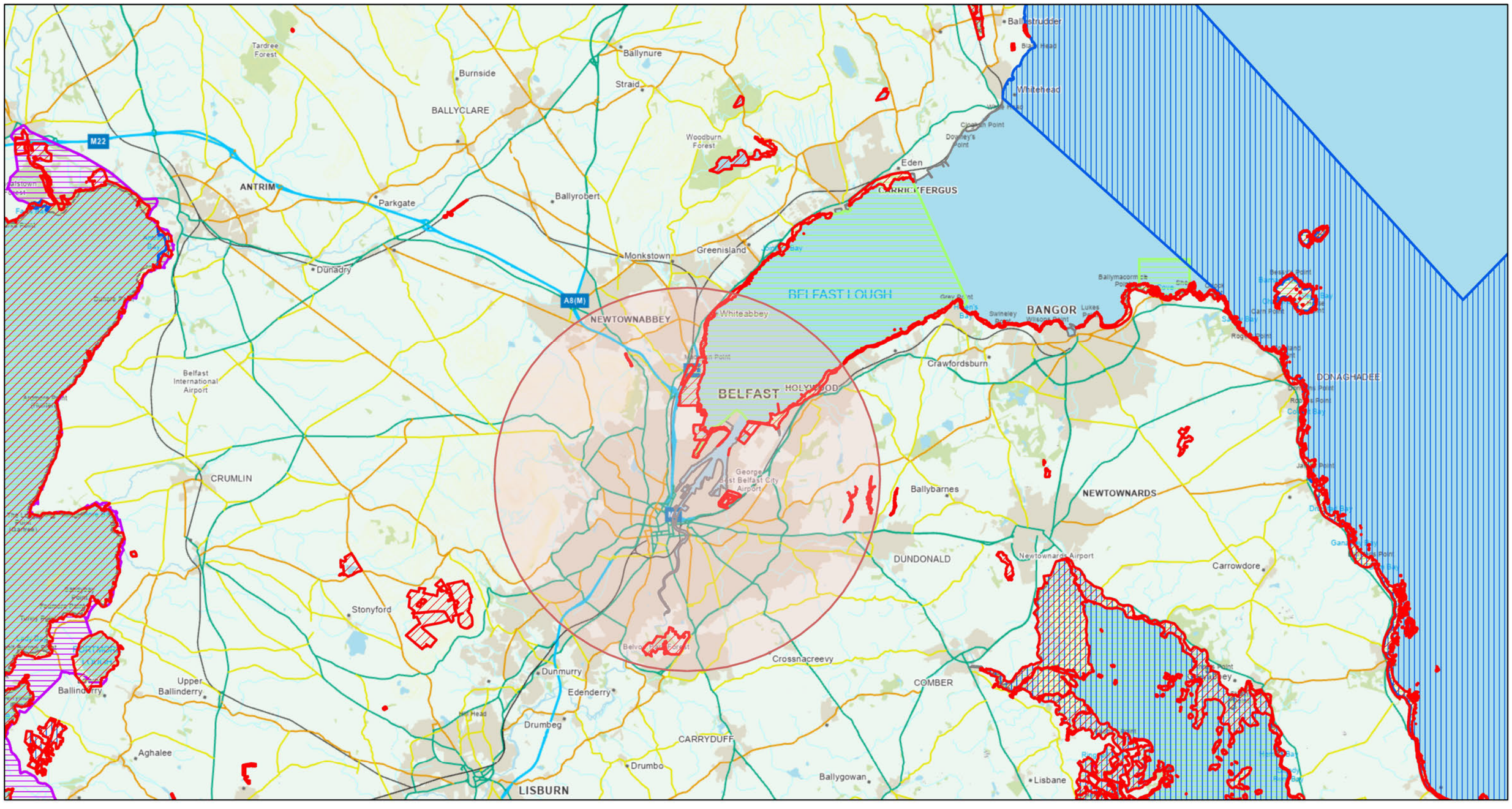
Drawing Title:
SITE LOCATION PLAN

Client: BELFAST HARBOUR COMMISSIONERS	Drawn by:	Date: DECEMBER 2025	
Project Number:	Checked by:	Scales: 1:20	
Doran Project Number: 251103	Approved by:	Sheet Size: A1	Uniclass: PM_40_40
Drawing Number: (Project-Orig-FB-SB-F-DISC-NUMBER) 251103-DCL-ZZ-ZZ-D-C-0001		Revision: P01	STATUS: S1

Doran CONSULTING
DELIVERING ENGINEERING EXCELLENCE
FLAX HOUSE
83-91 Adelaide Street,
Belfast, BT2 8FE
T 028 90333443
E mail@doran.co.uk
W www.doran.co.uk

APPENDIX B: PROTECTED AREAS

Sinclair Wharf



8/6/2026, 2:53:06 PM

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- Areas of Special Scientific Interest
- Special Areas of Conservation
- Special Protection Areas
- Ramsar Sites
- NI Outline
- OSNI Fusion Basemap

0 1.75 3.5 7 mi

0 3 6 12 km

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