Belfast Harbour



Belfast Harbour
Sinclair Wharf Remedial Works

Habitats Regulations Assessment

August 2026

Ref: JN 355.33 2026

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1.0 INTRODUCTION

Sinclair Wharf is located within the Belfast Harbour Estate, along Herdman Channel, Irish Grid Reference (IGR) J 35069 76356 (Figure 1.1 & Figure 1.2). The site is currently used as a commercial shipping yard, ~420 m long with various dry storage bays. Significant deterioration and damage has occurred to the deck soffit and supporting precast and steel box piles. The proposed 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. A new precast concrete headwall at the south end of the wharf and an outlet pipe through the existing sheet pile wall at the north end (complete with a non-return valve), will also be constructed.

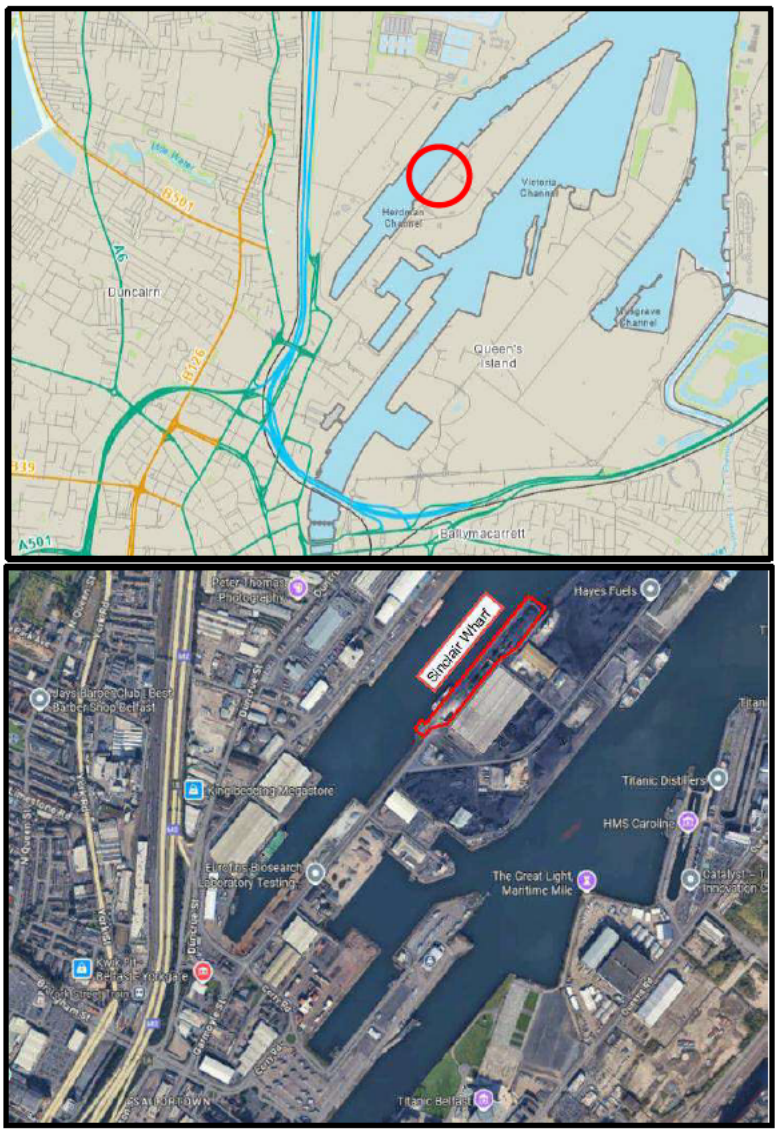


Figure 1.1: Site Location, Belfast Harbour Sinclair

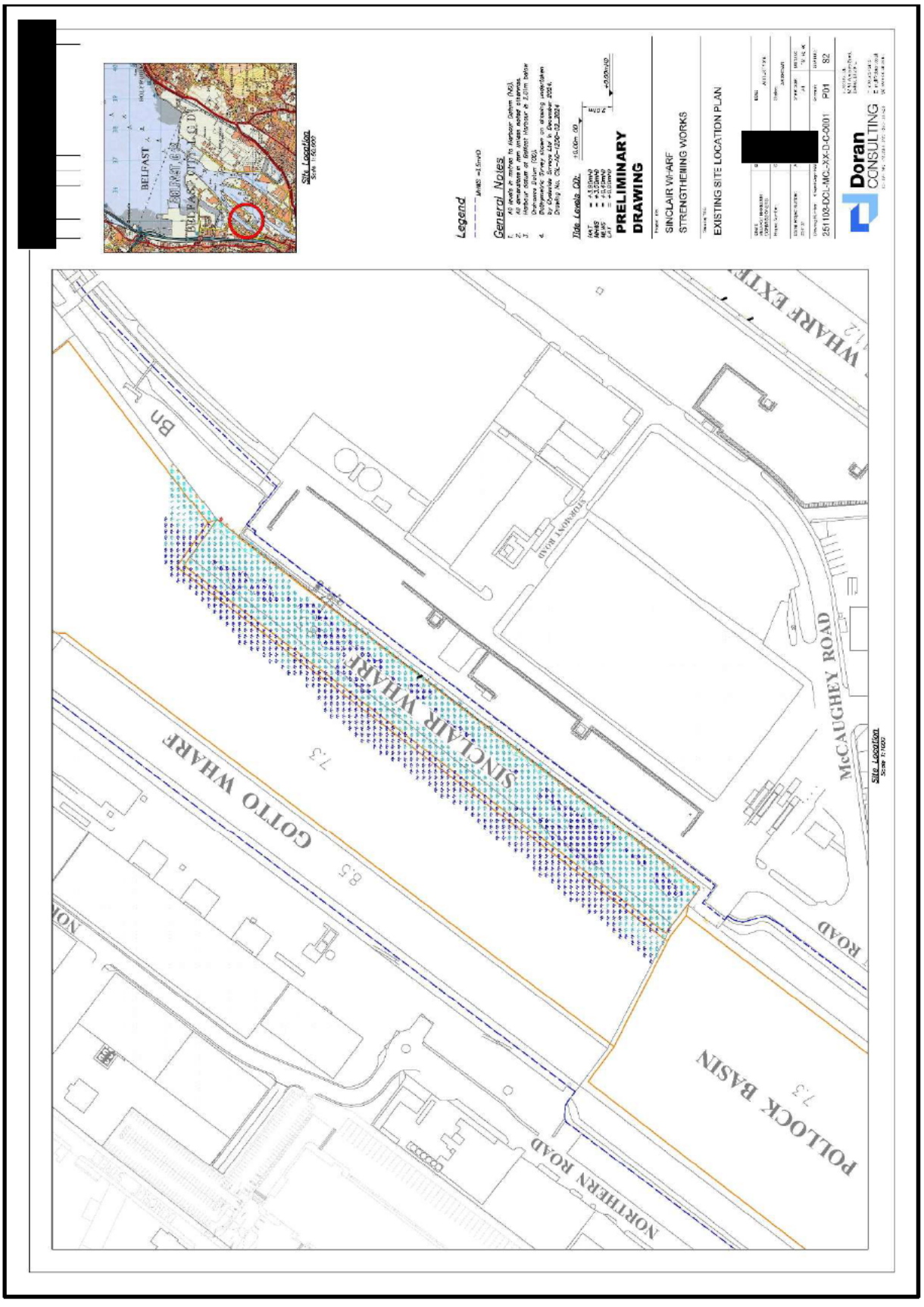


Figure 1.2: Site Location Plan

This report includes the HRA and takes cognisance of the Outline CEMP prepared specifically for this project (Section 6.0). The appointed approved Contractor will work to the requirements of the CEMP that takes into account the following DAERA 'Standing Advice' and Guidance:

- Development that may have an Effect on the Water Environment
  - Discharge to the Water Environment
  - Pollution Prevention Guidance
  - Marine Litter
- Development that may effect Natural Heritage Interests
  - Invasive Alien Species
  - Priority Habitats
  - Priority Species
- Marine Non-Native Species
- Marine Wildlife Disturbance

The HRA will be submitted in support of a Marine Licence Application for the proposed essential remedial works. The HRA is supported by the following summary methodology for the essential remedial works at the Belfast Harbour Sinclair Wharf (Figure 1.3). In addition, relevant engineering drawings are presented in Section 6.0.

BELFAST HARBOUR SINCLAIR WHARF REMEDIAL WORKS: SUMMARY METHODOLOGY

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. A new precast concrete headwall at the south end of the wharf and an outlet pipe through the existing sheet pile wall at the north end (complete with a non-return valve), will also be constructed. The following activities will be undertaken:

1. Procurement and delivery to site of 25 No. steel tubular piles and associated fender components.
2. Mobilisation of the piling plant, access systems and other construction equipment required to undertake the works.
3. Pitching and driving of 25 No. steel tubular piles at the proposed fender locations.
4. Installation of 25 No. energy-absorbing fender systems and associated facing panels and connections.
5. Demobilisation of the piling plant, access systems and associated construction equipment.
6. Removal of defective concrete from the deck soffit using hydro-demolition.
7. Preparation and protection of the existing soffit reinforcement, including the installation of sacrificial anodes.
8. Reinstatement of the deck soffit using dry-sprayed concrete.
9. Application of a surface-applied corrosion inhibitor to the full deck soffit.
10. Removal of defective concrete from the existing pile heads using hydro-demolition.

11. Preparation of the existing pile-head reinforcement and installation of additional reinforcement and sacrificial anodes.
12. Recasting and strengthening of the pile heads.
13. 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.
14. 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).
15. Plate repairs to patch holes and reinforce thinned areas on sheet piles.
16. Construction of proposed precast concrete headwall as part of these works to facilitate connection of the future drainage outfall.
17. 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

Piling works will involve plant working from land; a work boat will be utilised to attach fenders and sheet pile repairs & anode replacement will be undertaken by divers. A Marine Construction Licence will be applied for.

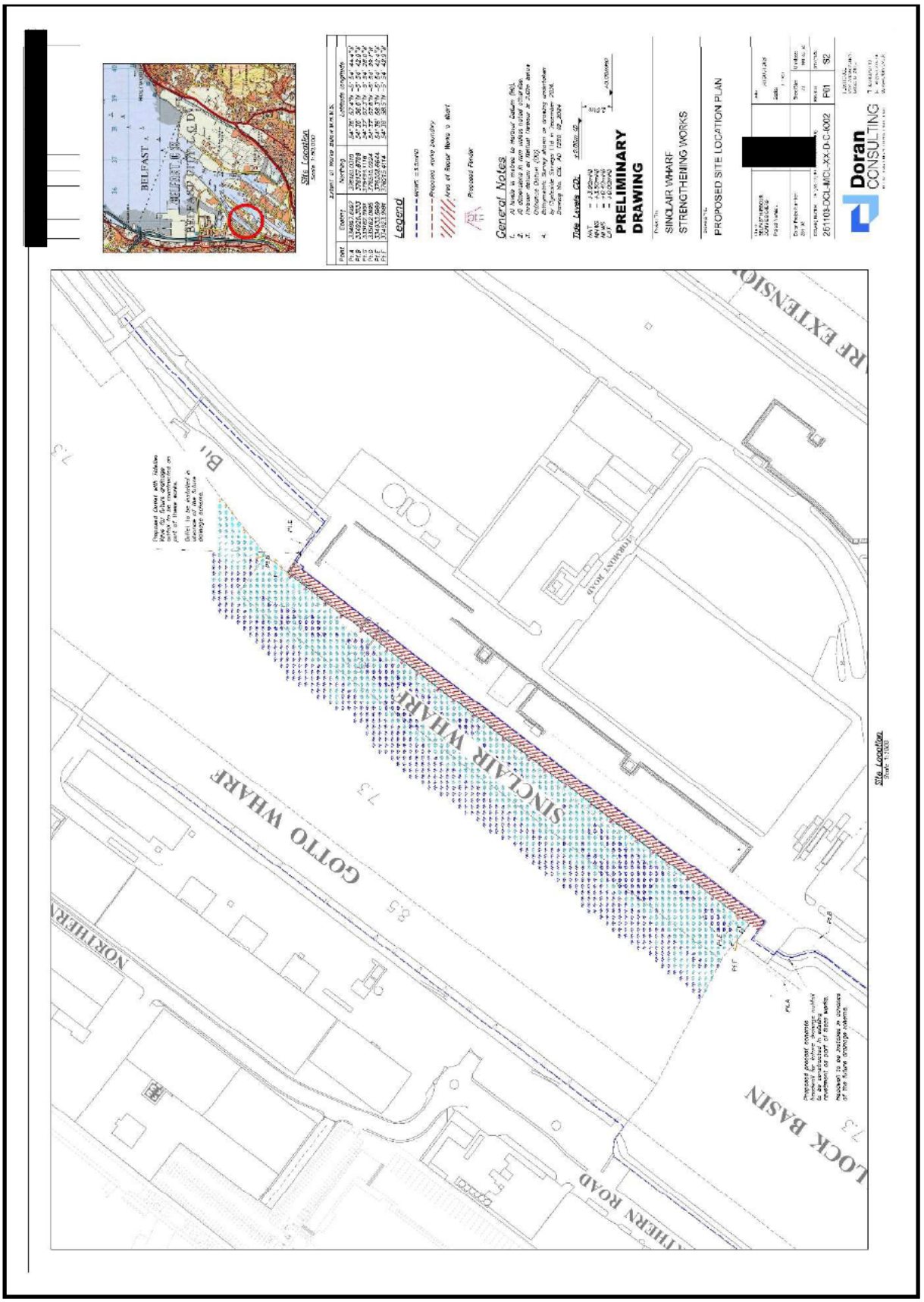


Figure 1.3: Proposed Remedial Works

2.0 HRA PROCESS

Where a proposal involves a project with potential to affect an area that contributed to the UK National Site Network, such as a Special Area of Conservation (SAC) or Special Protection Area (SPA), the appointed competent authority is legally obliged to carry out a HRA. SACs and SPAs contribute to a UK National Site Network on land and at sea, including both the inshore and offshore marine areas.

A HRA is a tool put in place to ensure that a project will not have an adverse effect on the integrity of any SAC and SPA sites and must be undertaken if there is any potential for the designated site to be affected. The outcome of the assessment is the responsibility of the competent authority.

In respect of this proposed project, the developer is a designated competent authority and therefore this submission is a HRA.

The first step under the HRA procedure is what is commonly referred to as The Test of Likely Significance or Screening Test and this is presented in Section 3.0. Where the competent authority deems a project not likely to have a significant effect on any SAC or SPA, either alone or in combination with other plans or projects, then the HRA procedure is complete. Where the competent authority deems that a project is likely to have a significant effect on any SAC or SPA then a further stage in the HRA process must take place. This involves conducting an Appropriate Assessment (AA) where the implications of the project must be considered in respect of the relevant designated sties' conservation objectives. The competent authority may then agree to the project if it decides that it will not adversely affect the integrity of the relevant SAC and SPA sites, having considered the mitigation measures proposed by the developer. For this proposed project an AA is presented in Section 4.0

This HRA has been prepared in accordance with Regulation 43(1) of the Conservation (Natural Habitats, etc.) (Northern Ireland) 1995 (as amended). It takes cognisance of the HRA requirement to take into account mitigation measures along with all legally enforceable obligations designed to avoid environmental effects. It also reflects the requirement for the competent authority to apply the precautionary approach set out in Commission Guidance: Managing Natura 2000 Sites and as required by the European Court of Justice in C 127/02 (Waddenzee).

3.0 STAGE 1: TEST OF LIKELY SIGNIFICANCE (SCREENING)

Screening Matrix

Name of Project or Plan:

Belfast Harbour Sinclair Wharf Remedial Works

Sinclair Wharf is located within the Belfast Harbour Estate, along Herdman Channel, Irish Grid Reference (IGR) J 35069 76356 (Figure 1.1 & Figure 1.2, Section 1.0). The site is currently used as a commercial shipping yard, ~420 m long with various dry storage bays. Significant deterioration and damage has occurred to the deck soffit and supporting precast and steel box piles. The proposed 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. A new precast concrete headwall at the south end of the wharf and an outlet pipe through the existing sheet pile wall at the north end (complete with a non-return valve), will also be constructed. The works will be undertaken by an approved contractor, in accordance with Marine Licence conditions, who will be required to prepare and implement a robust CEMP that takes into account the following DAERA 'Standing Advice' and Guidance: *Development that may have an Effect on the Water Environment (Discharge to the Water Environment; Pollution Prevention Guidance; Marine Litter); Development that may effect Natural Heritage Interests (Invasive Alien Species; Priority Habitats; Priority Species); Marine Non-Native Species; Marine Wildlife Disturbance*. In respect of potential water pollution risk, the appointed approved Contractor will work to strict protocols in respect of chemicals, hazardous materials and fuelling arrangements. An Outline CEMP has been prepared (Section 6.0).

Recognising that there are currently approximately 100 invasive non-native freshwater and marine species established in Northern Ireland, strict protocols will be in place in respect of plant and equipment used on-site. These protocols will be based on the 'Inspect, Remove, Clean, Dispose & Report' approach promoted by DAERA and Invasive Species NI. Plant and equipment will be subject to the following prior to leaving its previous location:

- **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
- **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
- **Report** and take photos of species you think may be an INNS on INNI website

The above will also be applied to plant and equipment prior to removal from site on completion of works.

Name and Location of National Site Network site:

East Coast (NI) Marine pSPA
Belfast Lough SPA & Ramsar
Belfast Lough Open Water SPA
Maidens SAC (Grey Seal only)
North Channel SAC (Harbour Porpoise only)

In respect of the features, conservation objectives and connection distances no conceivable effects on the following designated sites are envisaged: Outer Belfast Lough MCZ; Outer Ards SPA; Outer Ards Ramsar; Strangford Lough SPA; Strangford Lough Ramsar; Strangford Lough SAC; Copeland Islands SPA

National Site Network site features (Figure 2.1 – 2.5):

East Coast (NI) Marine pSPA
Great Crested Grebe
Red-throated Diver
Sandwich Tern
Common Tern
Arctic Tern
Manx Shearwater
Eider Duck

Belfast Lough SPA
Redshank
Common Tern
Artic Tern
Bar-tailed Godwit
Black-tailed Godwit

Belfast Lough Open Water SPA
Great Crested Grebe

Maidens SAC
Grey Seal

North Channel SAC
Harbour Porpoise

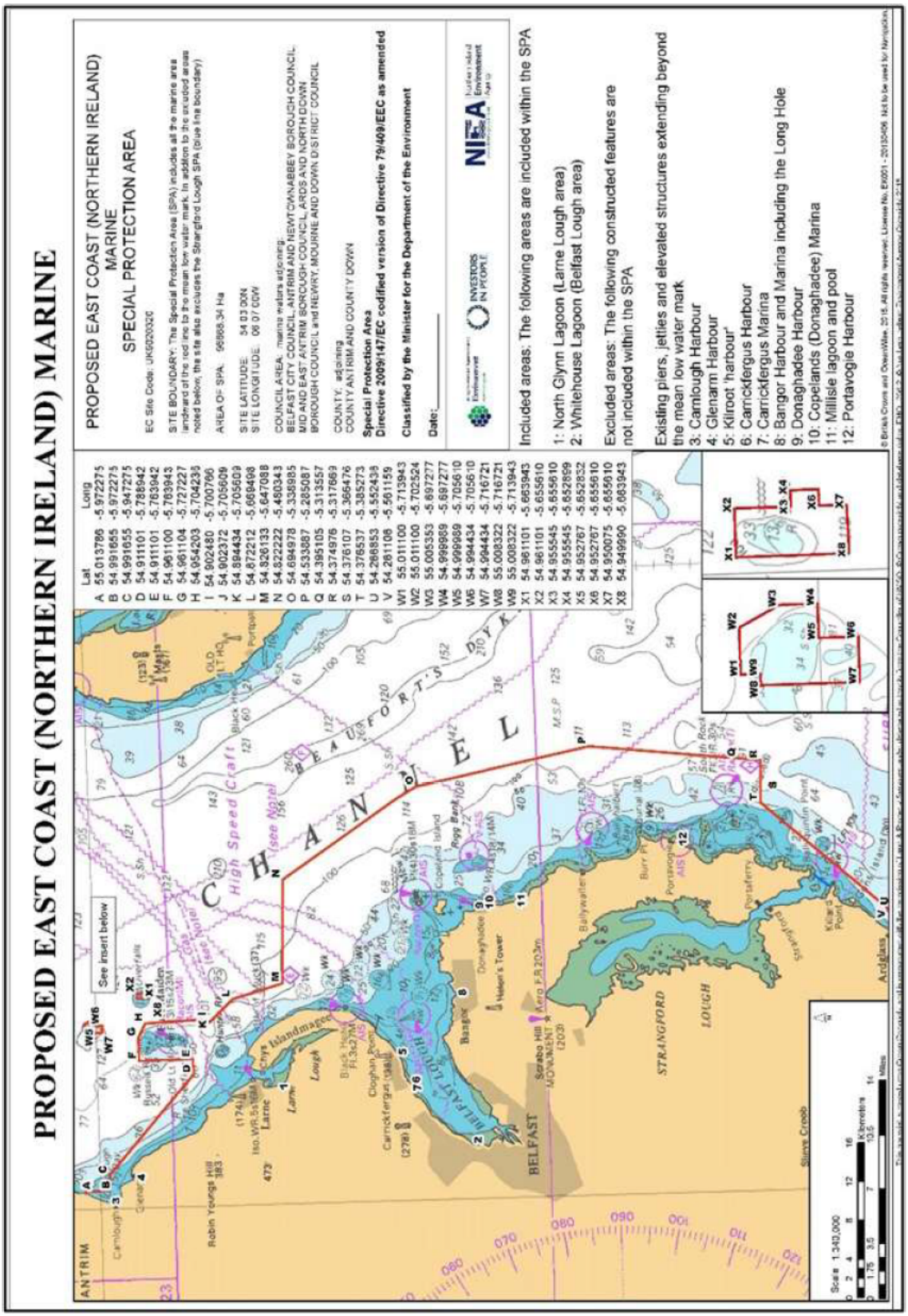


Figure 2.1: East Coast (NI) Marine pSPA Boundary (DAERA)

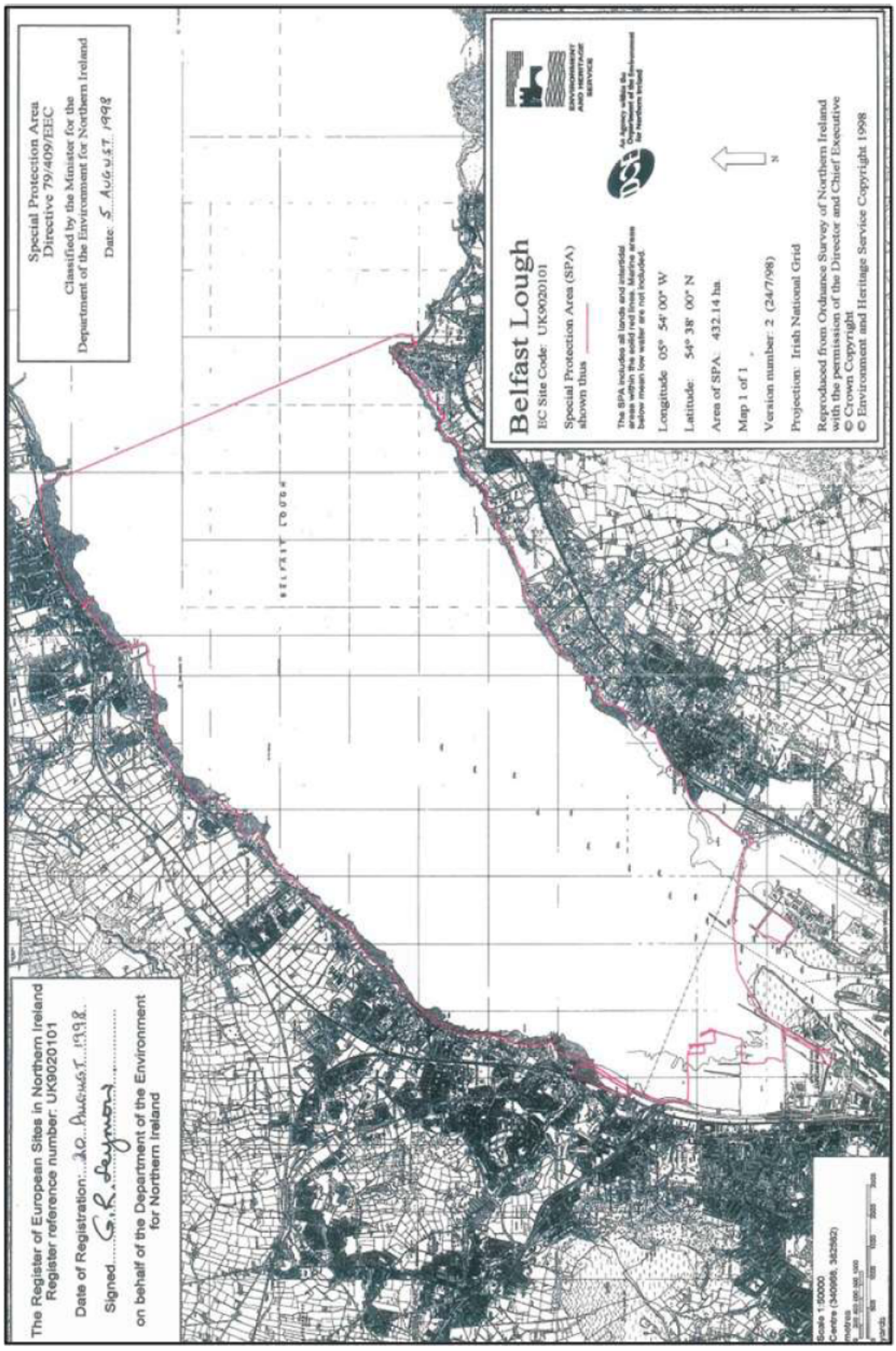


Figure 2.2: Belfast Lough SPA Boundary (DAERA)

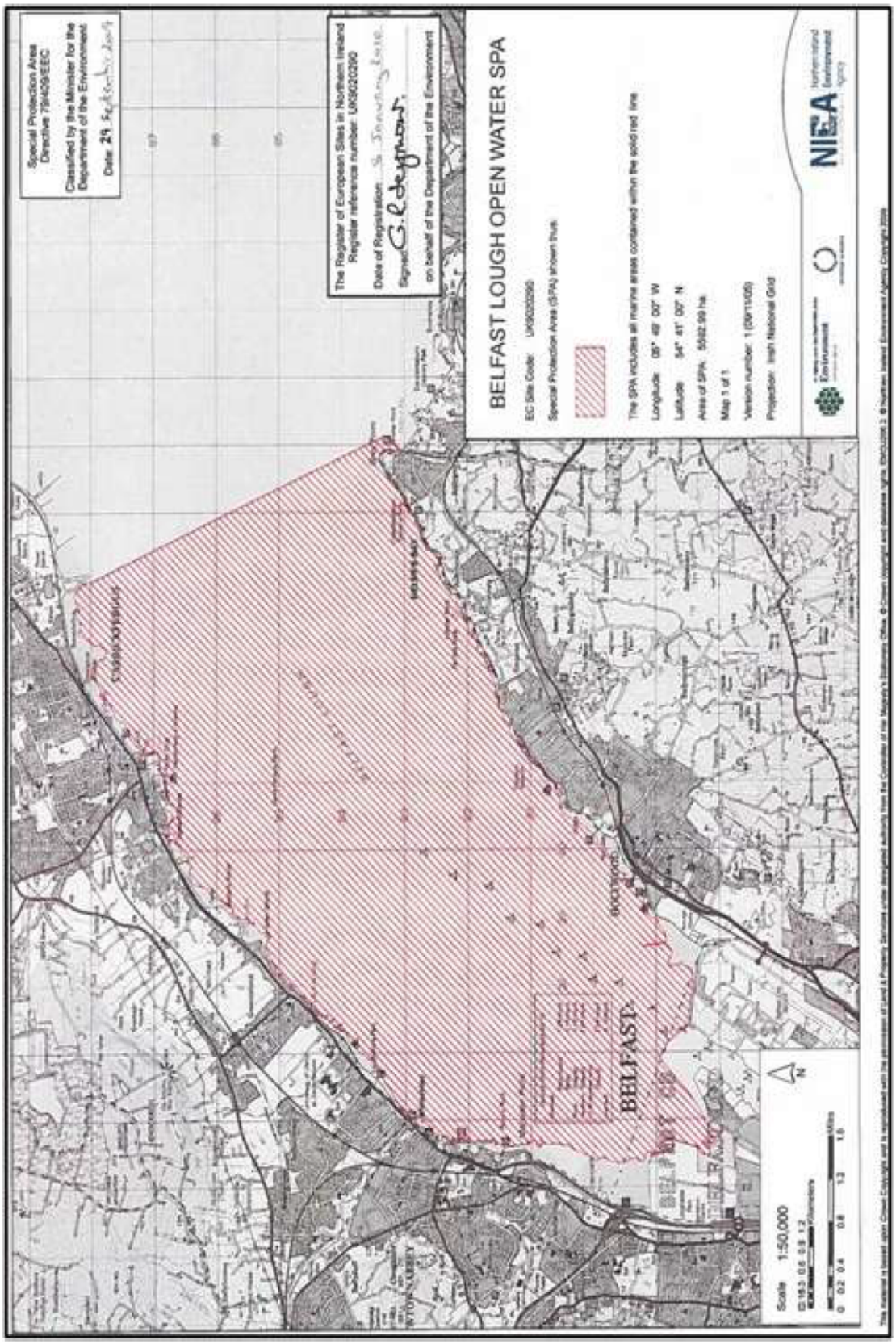


Figure 2.3: Belfast Lough Open Water SPA Boundary (DAERA)

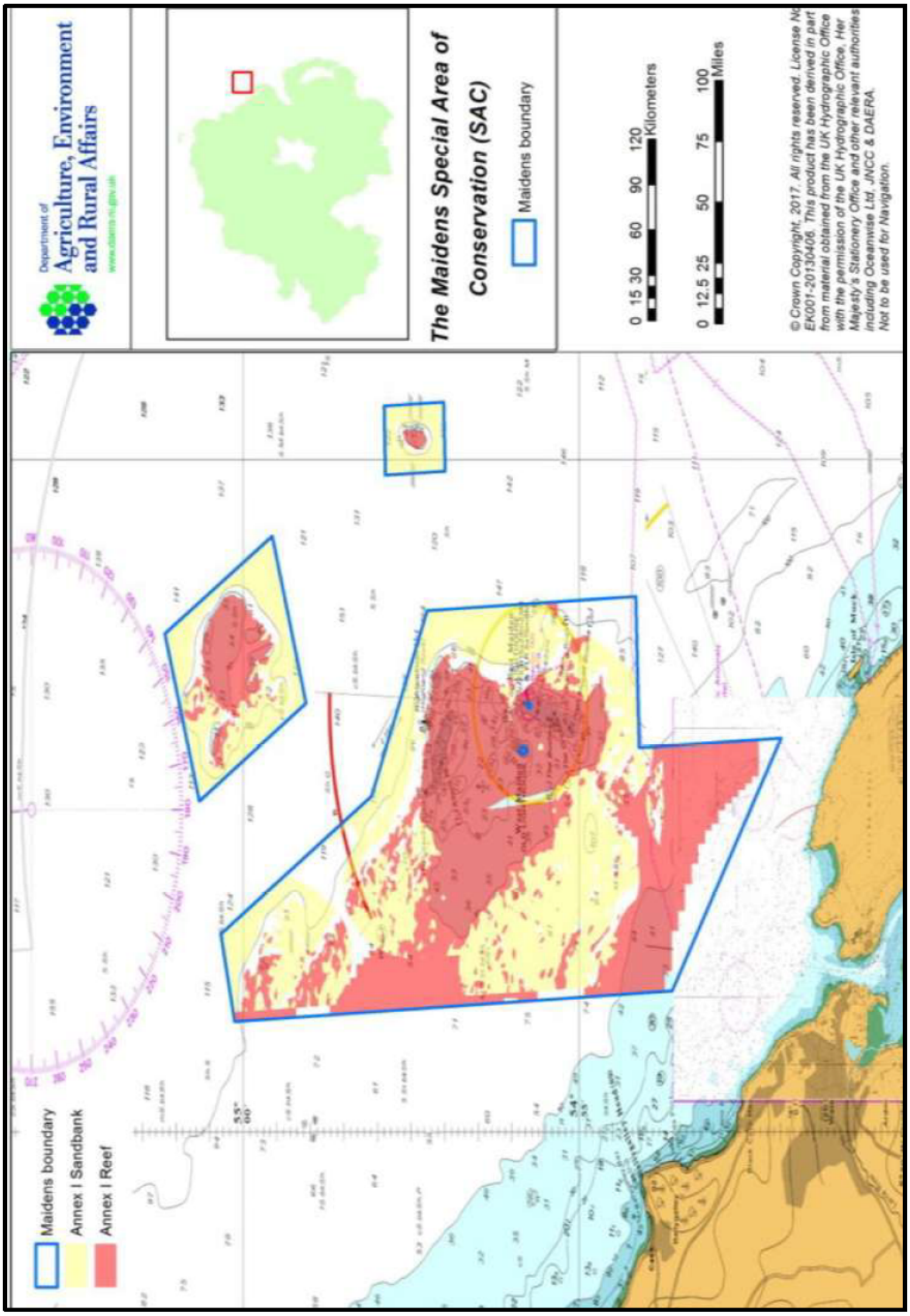


Figure 2.4: The Maidens SAC Boundary (DAERA)

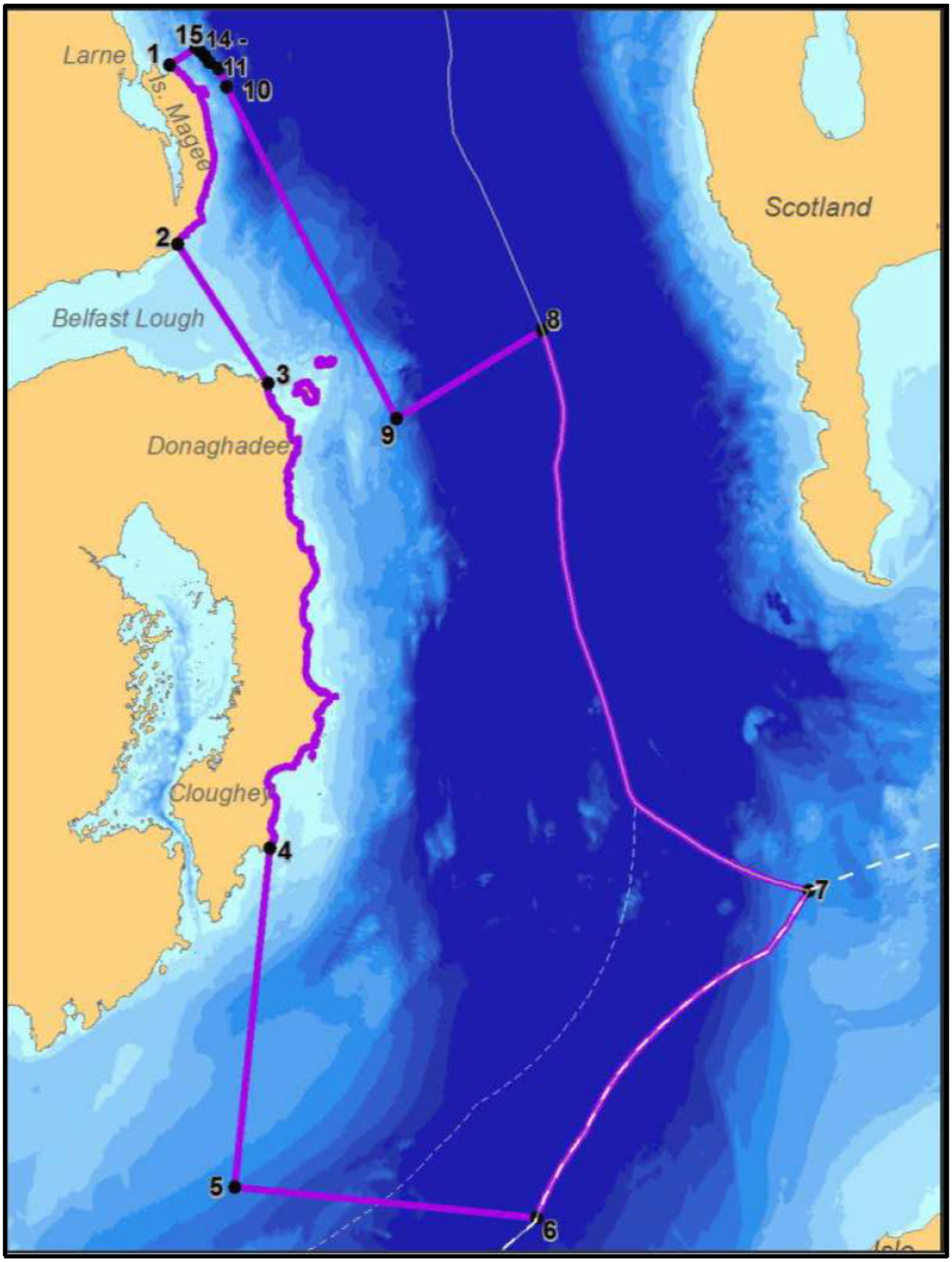


Figure 2.5: North Channel SAC (DEFRA & JNCC)

Birds

The East Coast (NI) Marine pSPA has been selected because of the important populations of Sandwich, Common and Arctic Tern that feed there during the breeding season, flying from adjoining designated breeding colonies in Larne Lough, Belfast Lough, Outer Ards, Copeland Islands and Strangford Lough SPAs. The Tern species are migratory visitors, coming to these east coast sites to breed. The area is also of importance for the Manx Shearwater population breeding on Copeland Islands SPA. Outside the breeding season, the area supports important populations of Red-throated Diver, Great Crested Grebe and Eider Duck.

Belfast Lough SPA qualifies because of the important populations of breeding Common and Arctic Tern, together with non-breeding populations of Bar-tailed Godwit. Black-tailed Godwit and Redshank. The SPA provides suitable habitat to meet the various needs of these species including sites for breeding (for the Tern species), feeding and roosting.

Belfast Lough Open Water SPA qualifies as it supports the main part of the internationally important wintering population of Great Crested Grebe. While the main roosting area for this species is in the Inner Lough area, the entire site is of importance for feeding and loafing activities. In addition, these waters host nationally important wintering populations of a number of other species.

Given the nature and scale of the proposed remedial works and the hydrological distance of approximately 2.2 km to nearest SPA boundary (Belfast Lough SPA) the impact on the SPA features is insignificant.

Marine Habitats

Although there are no designated SACs in proximity to the proposed remedial works, Annex 1 marine habitats are located within Belfast Lough: mudflats & sandflats not covered by seawater at all times (~4.2 km); saline lagoons (~3.1 km); large shallow inlets and bays (~2.8 km).

Given the nature and scale of the proposed remedial works and the distance to the nearest Annex 1 marine habitats, impact is deemed insignificant. In addition, the fact that the CEMP takes cognisance of DAERA 'Standing Advice on Marine Non-Native Species', renders the potential for non-native species release negligible.

Marine Mammals

Harbour porpoise is a selection feature of North Channel SAC (~20 km) and grey seal is a selection feature of Maidens SAC (~35 km). There is a known seal haul-out location at the entrance to the Musgrave Channel (~1.2 km to the north east). The JNCC, NRW, DAERA and Natural England '*Guidance for assessing the significance of noise disturbance against Conservation Objectives of Harbour Porpoise SACs* recommends an Effective Deterrent Radius (EDR) of 26 km centred on the works location. Given that the works are located ~20 km from the SAC; the works are located within an operational harbour; and the extensive size of the SAC (1605 km^2), there is no possibility that any associated exclusion area will exceed the threshold of 20% on any given day or 10% exclusion over the season.

However, given the use of piling and the proximity of the seal haul-out site at the entrance to the Musgrave Channel, there is potential for disturbance to marine mammals as a result of the remedial works.

Coastal Processes & Climate Change

These remedial works are required to ensure the integrity of the structure. The area is designated as 'low' in respect of the NI Coastal Erosion Risk Appraisal (DAERA Marine Map Viewer). There will be no land-take or impact on flood risk. Therefore, the proposed works are deemed not to represent a detrimental impact on coastal processes, taking into account future sea level rise and coastal erosion.

Other Relevant Designations

Belfast Lough Ramsar Site qualifies under Criterion 3c by regularly supporting internationally important numbers of redshank in winter. The site also regularly supports nationally important numbers of shelduck, oystercatcher, purple sandpiper, dunlin, black-tailed godwit, bar-tailed godwit, curlew and turnstone. Belfast Lough as a whole is also used by several other waterfowl species including great crested grebe, scaup, eider, goldeneye and red-breasted merganser. Potential impact on the Ramsar site is assessed as an integral element of this HRA.

Given the nature and scale of the proposed remedial works and the hydrological distance of approximately 2.2 km to Ramsar site boundary, the impact on the site features is insignificant. Similarly, the impact on Inner & Outer Belfast Lough ASSIs is deemed insignificant.

Description of the Project or Plan:

Size and scale

A draft methodology has been prepared for the proposed remedial works at Belfast Harbour Sinclair Wharf as detailed below:

BELFAST HARBOUR SINCLAIR WHARF REMEDIAL WORKS: SUMMARY METHODOLOGY

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6. Removal of defective concrete from the deck soffit using hydro-demolition.
7. Preparation and protection of the existing soffit reinforcement, including the installation of sacrificial anodes.
8. Reinstatement of the deck soffit using dry-sprayed concrete.
9. Application of a surface-applied corrosion inhibitor to the full deck soffit.
10. Removal of defective concrete from the existing pile heads using hydro-demolition.
11. Preparation of the existing pile-head reinforcement and installation of additional reinforcement and sacrificial anodes.
12. Recasting and strengthening of the pile heads.
13. 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.
14. 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).
15. Plate repairs to patch holes and reinforce thinned areas on sheet piles.
16. Construction of proposed precast concrete headwall as part of these works to facilitate connection of the future drainage outfall.
17. 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

Piling works will involve plant working from land; a work boat will be utilised to attach fenders and sheet pile repairs & anode replacement will be undertaken by divers. A Marine Construction Licence will be applied for. Relevant engineering drawings are presented in Section 6.0 Supporting Documentation.

Land-take
There will be no land-take within any designated site.

Distance from National Site Network site or key features of the site
Hydrological distance from the site of the proposed remedial works are ~2.2 km south of Belfast Lough SPA, ~2.9 km south west of East Coast (NI) Marine pSPA, ~3.0 km south west of Belfast Lough Open Water SPA, ~20 km south west of North Channel SAC and ~35 km south of The Maidens SAC.

Resource requirements (water abstraction etc.)
There are no resources required for the proposed works.

Emission (disposal to land, water or air)
There will be no emissions during the construction phase of the project.

Excavation requirements
There will be no excavation in any designated site. Excavation works will be restricted to removal of defective concrete from the deck soffit and from the existing pile heads. Any material not suitable for re-instatement will be disposed of in accordance with Duty of Care Regulations.

Transportation requirements
There will be no transportation issues in any designated site. Construction traffic will access from the local road network and will operate exclusively within the project boundary, which is located within an operational harbour.

Duration of construction, operation, decommissioning etc.
The project works will take place in the period beginning Q4 2026 until end Quarter 3 2027. Work is expected to be completed over 35 weeks, with piling over approximately 4 weeks.

Other: N/A

Is the Project or Plan directly connected with or necessary to the management of the site (provide details)?
No The proposed works are essential remedial woks at Belfast Harbour Sinclair Wharf.

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to effects on the SAC/SPA site:		
Feature affected:	**Likely direct, indirect effects to the feature arising as a result of:**	**Significant/Not Significant (inc. explanation):**
Great Crested Grebe	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: No disturbance	Not Significant: feature not impacted
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	Not Significant (Contractor to adhere to appropriate CEMP)
Red-throated Diver	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: No disturbance	Not Significant: feature not impacted
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	Not Significant (Contractor to adhere to appropriate CEMP)
Sandwich Tern	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: No disturbance	Not Significant: feature not impacted
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	Not Significant (Contractor to adhere to appropriate CEMP)
Common Tern	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: No disturbance	Not Significant: feature not impacted
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	Not Significant (Contractor to adhere to appropriate CEMP)
Arctic Tern	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: No disturbance	Not Significant: feature not impacted
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	Not Significant (Contractor to adhere to appropriate CEMP)
Manx Shearwater	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: No disturbance	Not Significant: feature not impacted
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	Not Significant (Contractor to adhere to appropriate CEMP)

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to effects on the SAC/SPA site:		
Feature affected:	**Likely direct, indirect effects to the feature arising as a result of:**	**Significant/Not Significant (inc. explanation):**
Eider Duck	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: No disturbance	Not Significant: feature not impacted
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	Not Significant (Contractor to adhere to appropriate CEMP)
Redshank	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: No disturbance	Not Significant: feature not impacted
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	Not Significant (Contractor to adhere to appropriate CEMP)
Bar-tailed Godwit	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: No disturbance	Not Significant: feature not impacted
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	Not Significant (Contractor to adhere to appropriate CEMP)
Black-tailed Godwit	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: No disturbance	Not Significant: feature not impacted
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	Not Significant (Contractor to adhere to appropriate CEMP)
Grey Seal	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: Potential disturbance	**Potentially Significant due to piling**
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	**Potentially Significant: Contractor required to adhere to CEMP**
Harbour Porpoise	**Reduction of habitat area:** None	Not Significant: feature not impacted
	Disturbance: Potential disturbance	**Potentially Significant due to piling**
	Habitat or species fragmentation: None	Not Significant: feature not impacted
	Reduction in species density: None	Not Significant: feature not impacted
	Changes in key indicators of conservation value (e.g. water quality, climate change): Water Quality	**Potentially Significant: Contractor required to adhere to CEMP**

Describe any potential effects on the National Site Network site as a whole in terms of: interference with the key relationships that define the structure or function of the site	**Effect considered significant/non-significant: Finding of No significant effects Matrix**	
Potential impact from construction activities in respect of marine mammal disturbance, pollution risk and spread of invasive species due to proximity to open water taking cognisance of hydrological linkage.	Potentially significant - due to risk of disturbance to marine mammals, pollution and spread of invasive species.	
Provide details of any other projects or plans that together with the project or plan being assessed could (directly or indirectly) affect the site.	**Provide details of any likely in-combination effects and quantify their significance -**	
Project / Plans in Belfast Harbour & impounded River Lagan were reviewed including: *ML2025013: Belfast Harbour Pontoon Reconfiguration* *ML2024005 & MLVAR2025029: Lagan Pedestrian/Cycle Bridge (River Lagan)* *ML2025053; 054 & 055: Cruise Berthing Facilities at D3* *ML2025060: Outfall Valve Replacement at Donegal Quay* *ML2026049: Belfast Harbour Maintenance Dredge*	*Given the location, nature and scale of the works and taking cognisance of hydrological connectivity, no significant in-combination effects were identified.*	
Is the potential scale or magnitude of any effect likely to be significant?		
Alone?		**No** ☐ **Yes** ☒
In-combination with other projects of plans?		**No** ☒ **Yes** ☐
List of Agencies Consulted: Provide contact name and telephone or email address.	General consultation with DAERA through Marine Licensing Team	
Summary of response to consultation received	No specific environmental comments received	
Conclusion: Is the proposal likely to have a significant effect on an NSN site?	**No** ☐ **Yes** ☒	

4.0 STAGE 2: APPROPRIATE ASSESSMENT

Assessment of Effects of the Project or Plan on the Integrity of the Site	
Describe the elements of the project or plan (alone or in combination with other projects or plans) that are likely to give rise to significant effects on the site (from screening assessment)	Construction activities present potential risk of marine mammal disturbance, pollution and spread of invasive species.
Set out the Conservation Objectives of the site	From *THE NORTH CHANNEL SAC UK0030399 CONSERVATION OBJECTIVES & ADVICE ON OPERATIONS, DAERA March 2019:* *For Harbour Porpoise:* *To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters:* 1. *Harbour porpoise is a viable component of the site.* 2. *There is no significant disturbance of the species.* 3. *The condition of supporting habitats and processes, and the availability of prey is maintained.* From *THE MAIDENS SAC UK0030384 CONSERVATION OBJECTIVES, DAERA 20th March 2017:* *For Grey Seal:* *To maintain (or restore where appropriate) to favourable condition and to:* 1. *Maintain (and if feasible enhance) population numbers and distribution of Grey Seal.* 2. *Maintain and enhance, as appropriate, physical features used by Grey Seals within the site.*

Describe how the project or plan will affect key species, key habitats and the integrity of the site (determined by structure and function and conservation objectives). Acknowledge uncertainties and any gaps in information.	Potential impact from construction activities in respect of marine mammal disturbance, pollution risk and spread of invasive species due to proximity to open water taking cognisance of hydrological linkage to North Channel SAC and Maidens SAC.
Describe what mitigation measures are to be introduced to avoid or reduce the adverse effects on the integrity of the site. Acknowledge uncertainties and any gaps in information.	1. Full adherence to Marine Licence 2. Full adherence to CEMP, ensuring the following DAERA 'Standing Advice' and Guidance is fully considered: • *Development that may have an Effect on the Water Environment (Discharge to the Water Environment; Pollution Prevention Guidance; Marine Litter)* • *Development that may effect Natural Heritage Interests (Invasive Alien Species; Priority Habitats; Priority Species)* • *Marine Non-Native Species* • *Marine Wildlife Disturbance* 3. Full adherence to Marine Non-Native Species 'Inspect, Remove, Clean, Dispose & Report' approach 4. Full adherence to Piling Protocol and Marine Mammal Observation Protocol

Appropriate Assessment: Mitigation Measures			
List measures to be introduced	**Explain how the measures will avoid the adverse effects on the integrity of the site.**	**Explain how the measures will reduce the adverse effects on the integrity of the site.**	**Provide evidence of how they will be implemented and by whom.**
(i) Full adherence to Marine Licence	Marine Licence will impose appropriate conditions to protect SAC site designation features during construction phase.	Conditions will minimise potential for adverse impacts.	Contractor will be required to adhere to all statutory licence conditions.
(ii) Full adherence to CEMP	Comprehensive CEMP established to maintain an ethos of environmental best practice throughout the project.	Procedural control over identified potential environmental risks.	Project Contractor will be required to retain evidence that CEMP is fully implemented and that appropriate 'Tool-Box Talks' have been delivered.
(iii) Full adherence to Marine Non-Native Species 'Inspect, Remove, Clean, Dispose & Report' approach	CEMP will include specific reference to marine non-native species.	Specific procedural control over marine non-native species risks.	Project Contractor will be required to retain evidence that CEMP is fully implemented and that appropriate 'Tool-Box Talks' have been delivered (including in relation to marine non-native species).
(iv) Full adherence to Piling Protocol & Marine Mammal Observation Protocol	CEMP will include specific reference to Piling Protocol and Marine Mammal Observation Protocol.	Procedural control over piling activity in respect of marine mammal sensitivities.	Project Contractor will be directed by independent Marine Mammal Observer.

Appropriate Assessment: Mitigation Measures			
List mitigation measures (as above)	**Provide evidence of the degree of confidence in their likely success**	**Provide time-scale, relative to the project of plan, when they will be implemented**	**Explain the proposed monitoring scheme and how any mitigation failure will be addressed**
(i) Full adherence to Marine Licence	Statutory compliance will be a key requirement for Project Contractor.	Clear instruction on all statutory compliance issues will be delivered prior to commencement of works and will be audited during construction phase. Statutory Agencies will conduct site inspections at their discretion.	Project Contractor will be audited by Design Engineers. Issues identified will be subject to immediate corrective action.
(ii) Full adherence to CEMP	The specific CEMP procedures for pollution control and invasive species, including mitigation, represent current best practice techniques for pollution prevention.	The CEMP has been established prior to commencement of works.	The CEMP will be subject to appropriate review. Issues identified will be subject to immediate corrective action.
(iii) Full adherence to Marine Non-Native Species 'Inspect, Remove, Clean, Dispose & Report' approach	This approach is recommended by DAERA to ensure the risk of spread of marine non-native species is negligible.	This approach will be embedded in the CEMP which has been established prior to commencement of works.	The CEMP will be subject to appropriate review. Issues identified in respect of marine non-native species will be subject to immediate corrective action.
(iv) Full adherence to Piling Protocol & Marine Mammal Observation Protocol	These protocols reflect JNCC advice on minimising noise risk to marine mammals.	This approach will be embedded in the CEMP which has been established prior to commencement of works.	The CEMP will be subject to appropriate review. Issues identified in respect of marine mammals and will be subject to immediate corrective action.

5.0 CONCLUSIONS

Following a Stage 1 Test of Likely Significance (Section 3.0) this found that the proposed essential remedial works at Belfast Harbour Sinclair Wharf would result in:

> *'Potential impact from construction activities in respect of marine mammal disturbance, pollution risk and spread of invasive species due to proximity to open water taking cognisance of hydrological linkage to North Channal SAC and Maidens SAC.'*

Consequently, a Stage 2 Appropriate Assessment (AA) was conducted (Section 4.0). This AA concentrated on the North Channel SAC and Maidens SAC.

Conservation objectives relevant to the designated site selection features were considered, current site information assessed, and the precautionary principle applied. In addition, potential impacts were considered alone and in combination with other relevant projects.

In respect of risk of disturbance to marine mammals, the appointed Contractor will work to the CEMP and adhere to the Piling Protocol and Marine Mammal Observation Protocol.

In respect of potential water pollution risk, the appointed Contractor will work to the requirements of the CEMP that takes into account the following DAERA 'Standing Advice' and Guidance: *Development that may have an Effect on the Water Environment (Discharge to the Water Environment; Pollution Prevention Guidance; Marine Litter); Development that may effect Natural Heritage Interests (Invasive Alien Species; Priority Habitats; Priority Species); Marine Non-Native Species; Marine Wildlife Disturbance.* In addition, the appointed Contractor will work to strict protocols in respect of chemicals, hazardous materials and fuelling arrangements; concrete wash water; and vehicle washing.

Recognising that there are currently approximately 100 invasive non-native freshwater and marine species established in Northern Ireland, strict protocols will be in place in respect of plant and equipment used on-site. In accordance with DAERA 'Standing Advice' on Marine Non-Native Species, these protocols will be based on the 'Inspect, Remove, Clean, Dispose & Report' approach promoted by DAERA and Invasive Species NI. Plant and equipment will be subject to the following prior to leaving its previous location:

- **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
- **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
- **Report** and take photos of species you think may be an INNS on the Invasive Species NI website

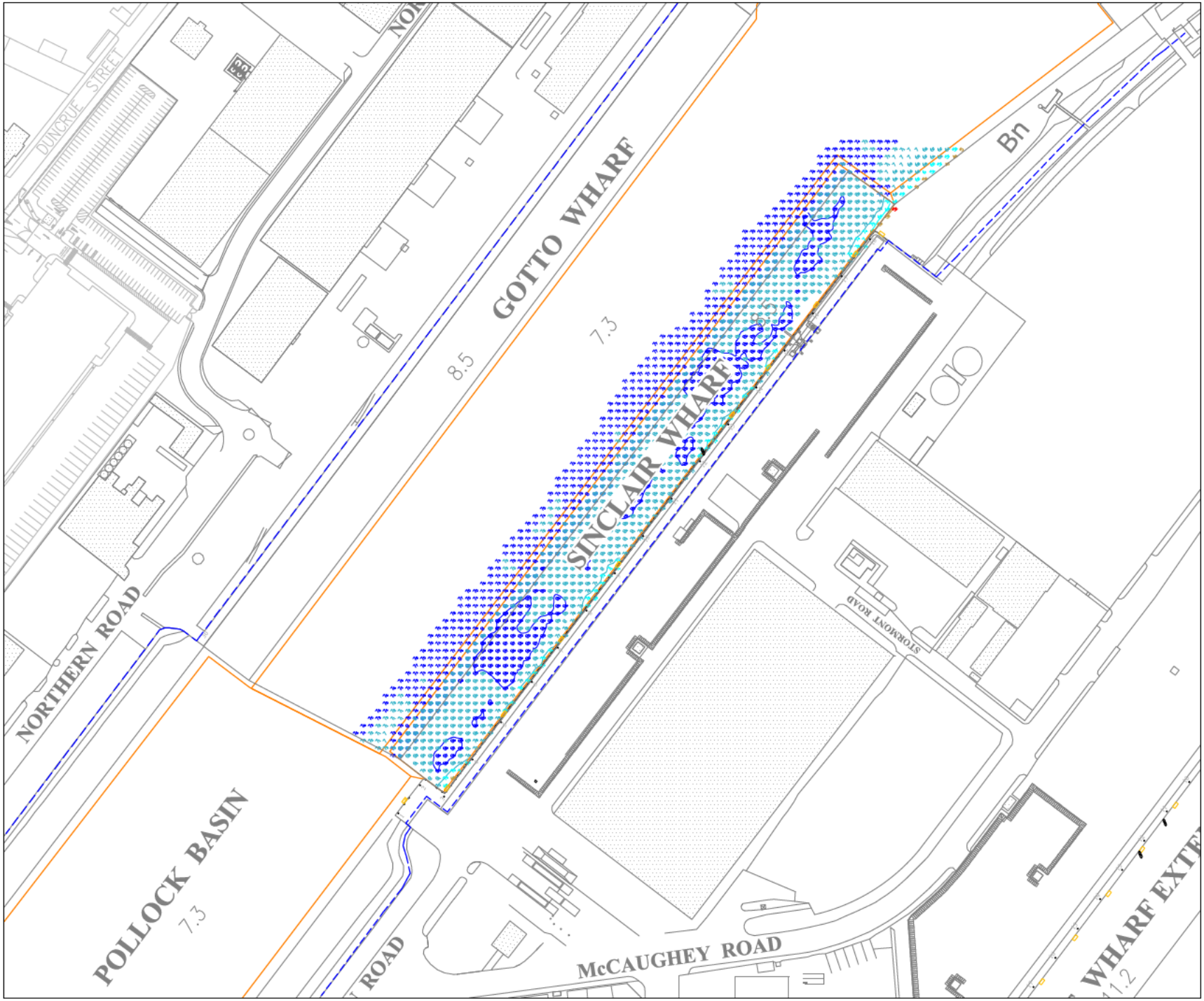
The above will also be applied to plant and equipment prior to removal from site on completion of works.

The AA concludes that in consideration of the appropriate mitigation measures proposed, there will be no adverse impact on the integrity of North Channel SAC and Maidens SAC or any other designated site.

6.0 SUPPORTING DOCUMENTATION

DRAWINGS

Outline CEMP



Site Location
Scale 1:1000



Site Location
Scale 1:50,000

Legend

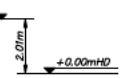
MHWS –3.5mHD

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).
4. Bathymetric Survey shown on drawing undertaken by Clydeside Surveys Ltd in December 2024. Drawing No. CSL–A0–1250–02_2024

Tide Levels CD:

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



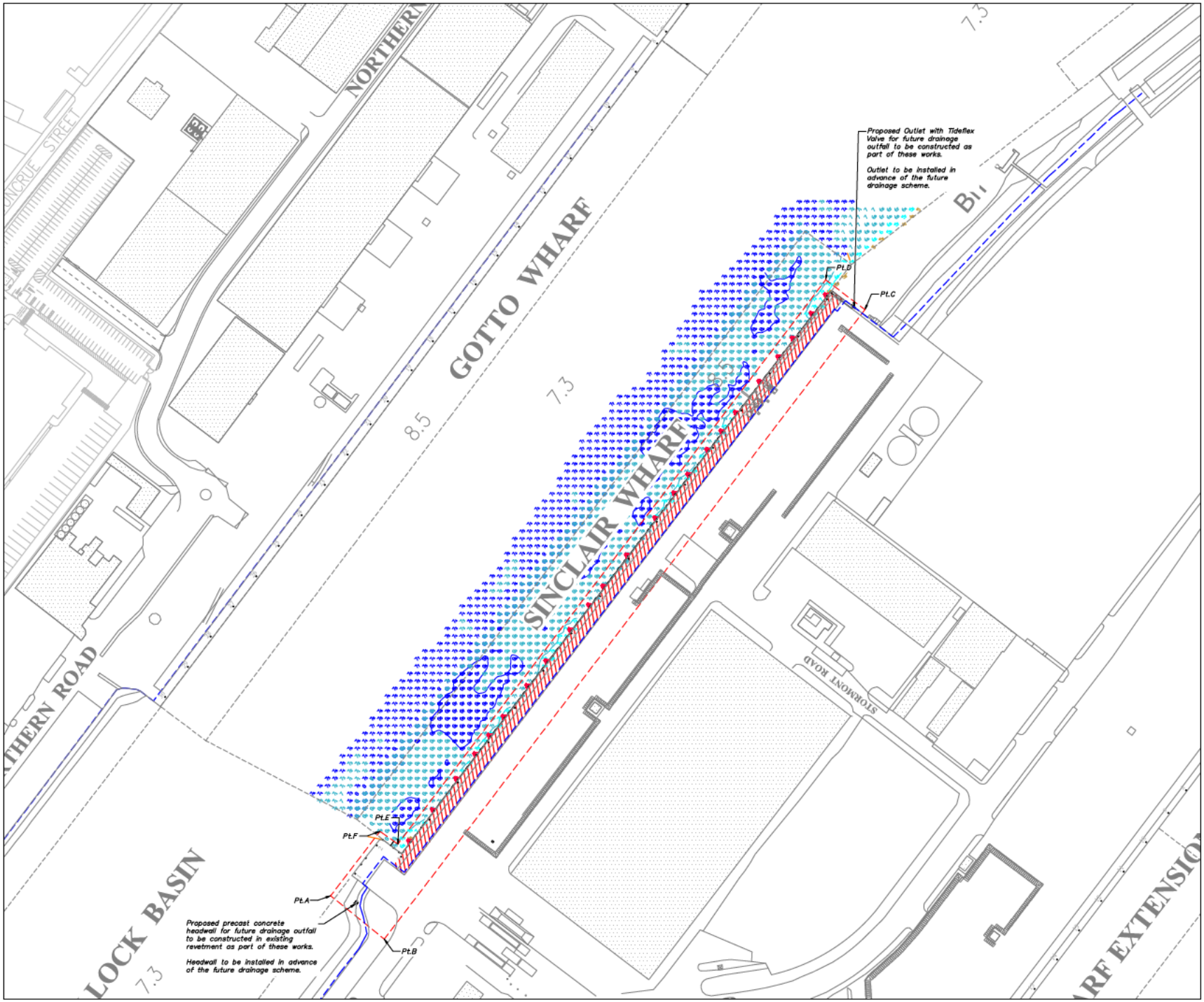
PRELIMINARY DRAWING

Project Title:
SINCLAIR WHARF
STRENGTHENING WORKS

Drawing Title:
EXISTING SITE LOCATION PLAN

Client: BELFAST HARBOUR COMMISSIONERS	[redacted]	Date:	AUGUST 2026
Project Number:		Scales:	AS SHOWN
Doran Project Number: 251103		Sheet Size: A1	Unit/pass: PM_JR_AD
Drawing Number: (Project-Orig-Fb-BE-Type-No-Rev)		Revision:	STATUS:
251103-DCL-MCL-XX-D-C-0001		P01	S2

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Site Location
Scale 1:1000



Site Location
Scale 1:50,000

Extent of Works Below M.H.W.S.			
Point	Easting	Northing	Latitude Longitude
Pt.A	334897.6997	376181.0310	54° 36' 57.4"N –5° 54' 44.4"W
Pt.B	334926.3333	376157.8768	54° 36' 56.6"N –5° 54' 42.9"W
Pt.C	335162.9851	376494.1116	54° 37' 07.3"N –5° 54' 28.0"W
Pt.D	335162.0695	376510.0224	54° 37' 07.8"N –5° 54' 29.1"W
Pt.E	334933.5969	376208.6644	54° 36' 58.3"N –5° 54' 42.4"W
Pt.F	334923.9981	376215.4114	54° 36' 58.5"N –5° 54' 42.9"W

Legend

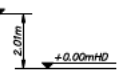
- MHWS –3.5mHD
- Proposed works boundary
- Area of Repair Works to Wharf
- Proposed Fender

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).
4. Bathymetric Survey shown on drawing undertaken by Clydeside Surveys Ltd in December 2024. Drawing No. CSL–A0–1250–02_2024

Tide Levels CD:

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



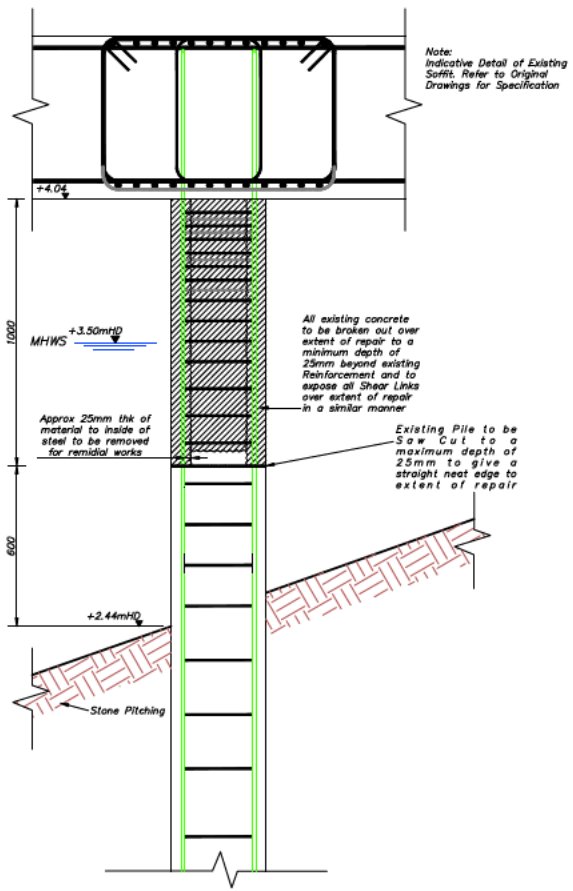
PRELIMINARY DRAWING

Project Title:
SINCLAIR WHARF
STRENGTHENING WORKS

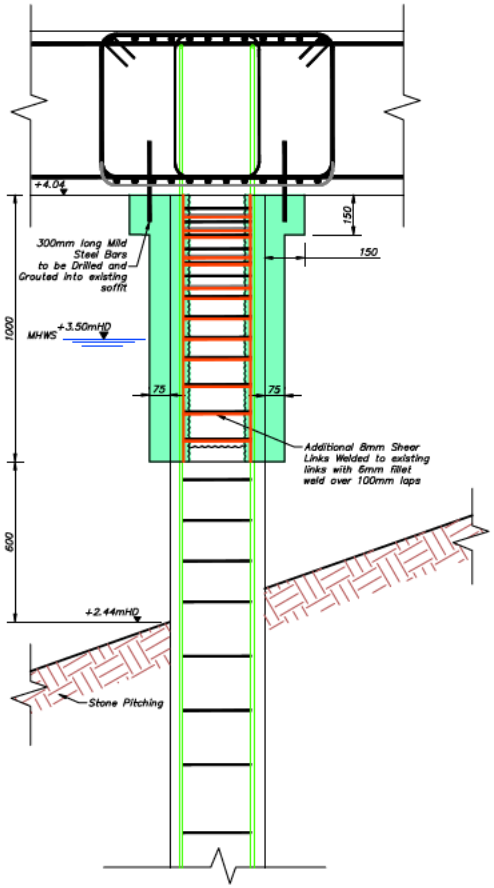
Drawing Title:
PROPOSED SITE LOCATION PLAN

Client: BELFAST HARBOUR COMMISSIONERS	[redacted]	Date:	AUGUST 2026
Project Number:		Scales:	1:1000
Doran Project Number: 251103		Sheet Size: A1	Unit/pen: PM_A1_40
Drawing Number: (Project-Orig-Fi...) 251103-DCL-MCL-XX-D-C-0002		Revision: P01	STATUS: S2

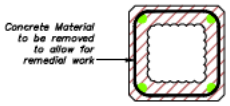
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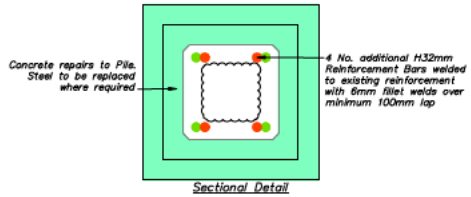
Front Piles
Stage 1 of Works to be carried out to Existing 14"x14" Reinforced Concrete Pile
Scale 1:10



Front Piles
Stage 1 of Works to be carried out to Existing 14"x14" Reinforced Concrete Pile
Scale 1:10



Sectional Detail
Scale 1:10



Sectional Detail
Scale 1:10

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: +0.00m OD

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

2.01m

+0.00mHD

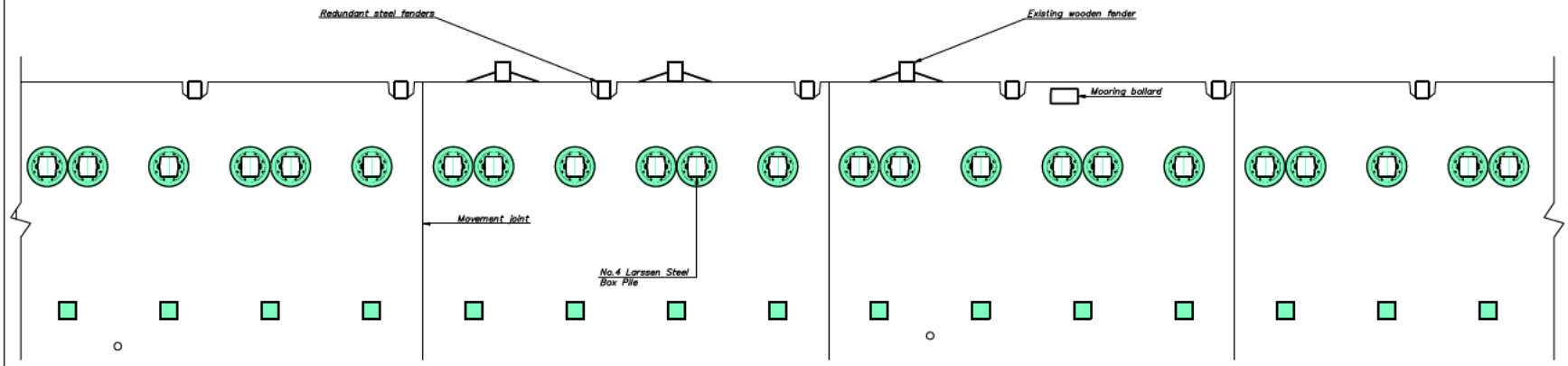
PRELIMINARY DRAWING

Project Title:
SINCLAIR WHARF
STRENGTHENING WORKS

Drawing Title:
Pile Head Strengthening

Client: Belfast Harbour Commissioners		Date: AUGUST 2026	
Project Number: -		Scales: 1:10	
Doran Project Number: 251103		Sheet Size: A1	Units: mm_kg_s0
Drawing Number: [redacted]		Revision: P01	STATUS: S2
251103-DCL-MCL-XX-D-C-0201			

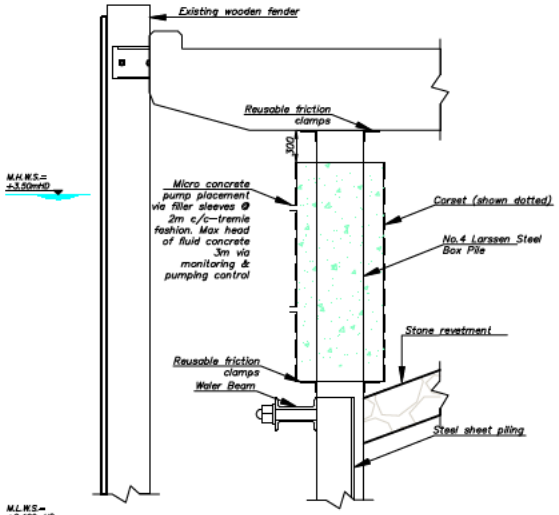
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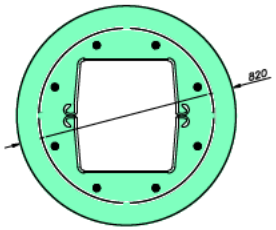
Existing Plan
1:50



Proposed Elevation
1:50



Proposed Typical Section
1:25



Proposed Box Pile
1:10

Concrete Encasement – Repair Notes

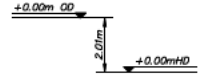
1. Micro Concrete for Pile Encasement shall be Grade C40/50,.
2. Micro Concrete for pile design shall be in accordance with the specification.
3. Maximum size of aggregate to be 10mm
4. Reinforcement to be Grade B500B in accordance with BS 4449: 2005.
5. Cover to Reinforcement shall be 75mm.

General Notes

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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



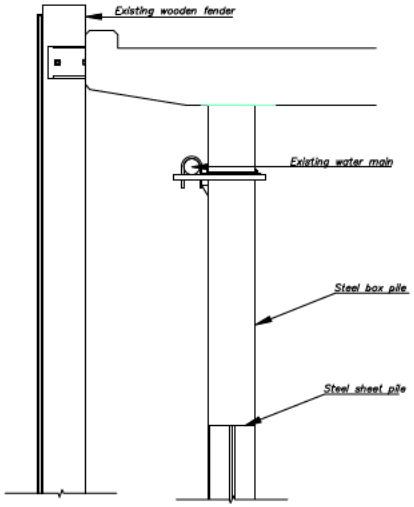
PRELIMINARY DRAWING

Project Title:
SINCLAIR WHARF
STRENGTHENING WORKS

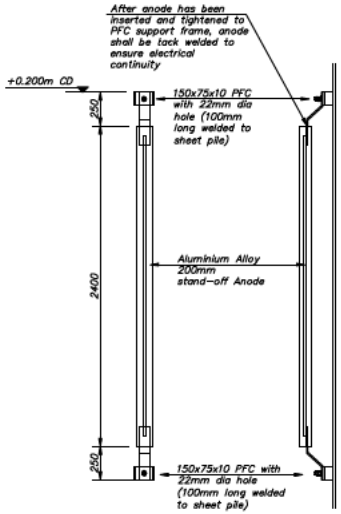
Drawing Title:
BOX PILE REPAIRS
PROPOSED LAYOUT

Client: Belfast Harbour Commissioners	[redacted]	Date: AUGUST 2026	
Project Number: -		Scales: AS SHOWN	
Doran Project Number: 251103		Sheet Size: A1	Units: mm_dp_dp
Drawing Number: (Project-Originator-Zone-Level-Type-Role-Number) 251103-DCL-MCL-XX-D-C-0302		Revision: P01	STATUS: S2

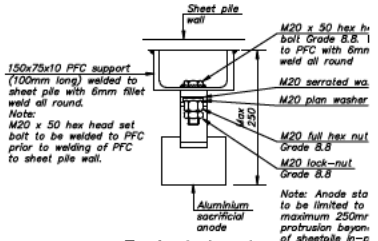
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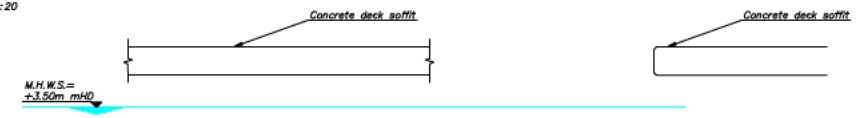
Existing Typical Section
1:25

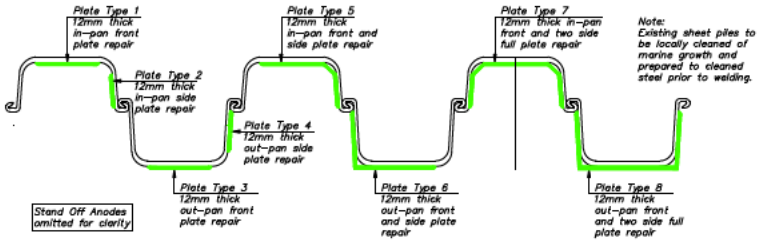


Typical Anode Detail
1:20

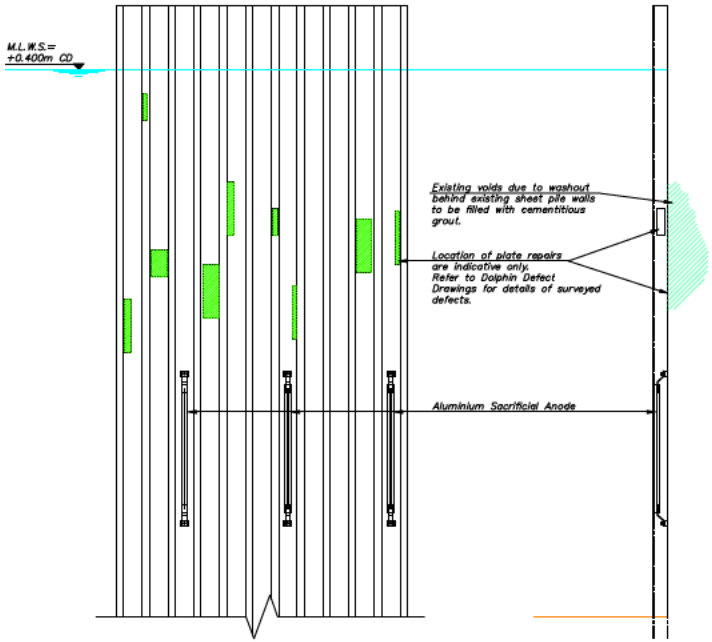


Typical Anode Connection Detail
1:5





Typical Sheet Pile Plate Repairs
1:10



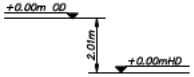
Typical Part Elevation
1:50

Typical Section
1:50

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

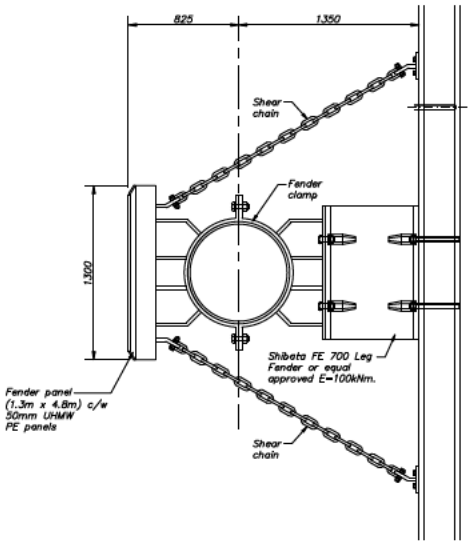
PRELIMINARY DRAWING

Project Title:
SINCLAIR WHARF STRENGTHENING WORKS

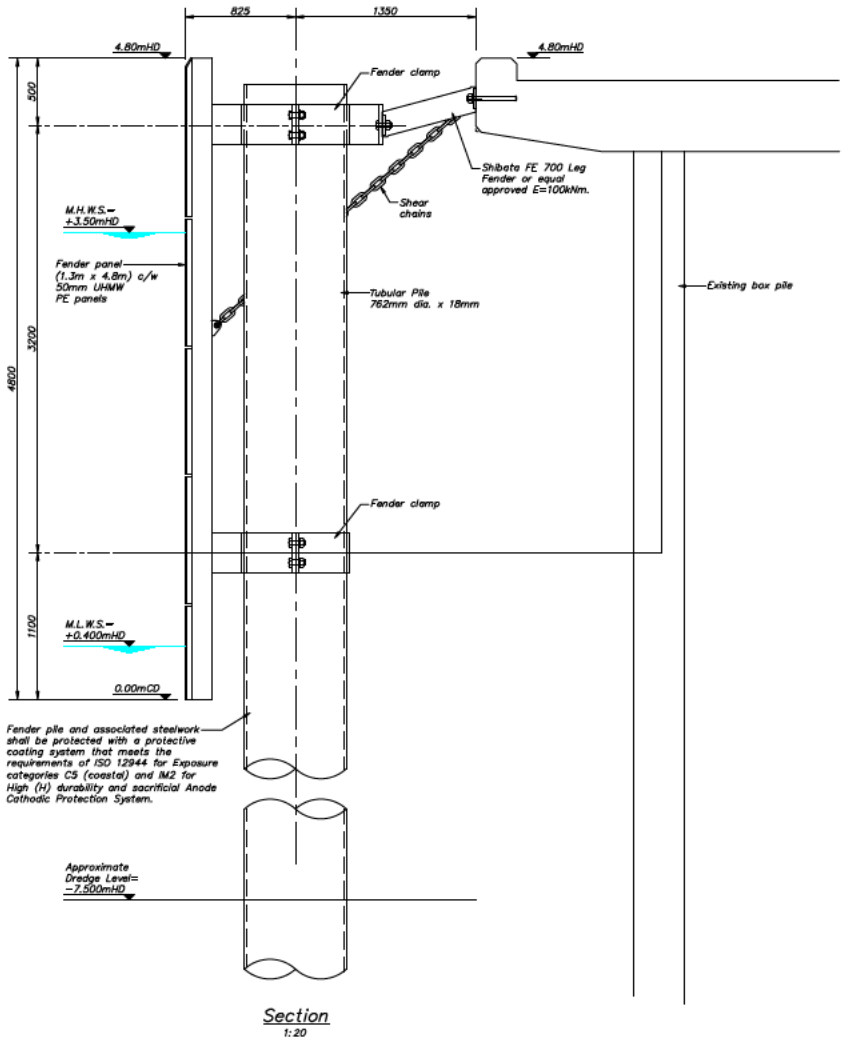
Drawing Title:
SHEET PILE REPAIRS DETAILS

Client: Belfast Harbour Commissioners	D	Date: AUGUST 2026	
Project Number: -	C	Scales: AS SHOWN	
Doran Project Number: 251103	A	Sheet Size: A1	Units/Base: PM_40_40
Drawing Number: (Project-Originator-Zone-Level-Type-Role-Number) 251103-DCL-MCL-XX-D-C-0304		Revision: P01	STATUS: S2

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Plan
1:20



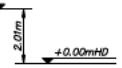
Section
1:20

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:

REPLACEMENT FENDER PILES

Client: BELFAST HARBOUR COMMISSIONERS	[redacted]	Date: AUGUST 2026	
Project Number:		Scales: 1:20	
Doran Project Number: 251103		Sheet Size: A1	Units: mm_kg_s
Drawing Number: (Project-Orig-Fld-Type) 251103-DCL-MCL-XX-D-C-0902		Revision: P01	STATUS: S2

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SINCLAIR WHARF

OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Belfast Harbour Commissioners

19 August 2026

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CONSULTING ENGINEERS

Civil Engineering
Structural Engineering
Traffic & Transportation
Project Management
CDM Services

SINCLAIR WHARF STRENGHTENING WORKS

OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Belfast Harbour Commissioners

19 August 2026

Job no	[redacted]epared	[redacted]ked	[redacted]proved	Status	Rev	Date
251103				DRAFT	P01	10/08/2026
251103				FINAL	P02	19/08/2026

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Registered Office
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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.

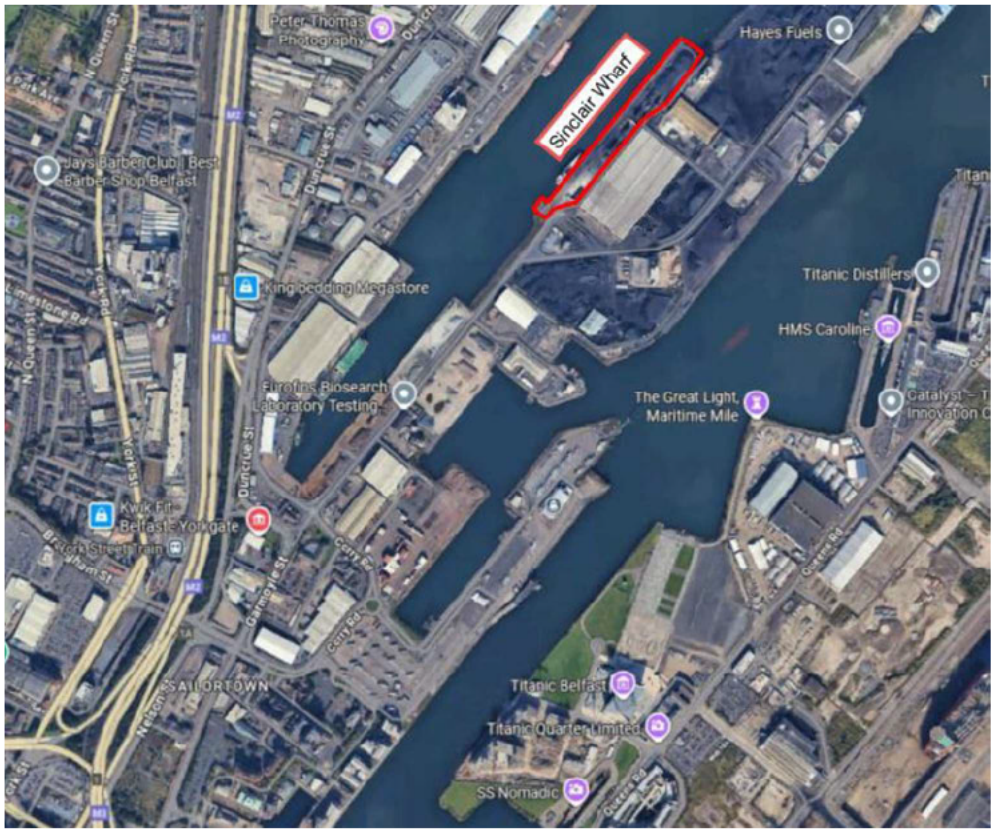


Figure 1: Site Location (from Google Maps)

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.

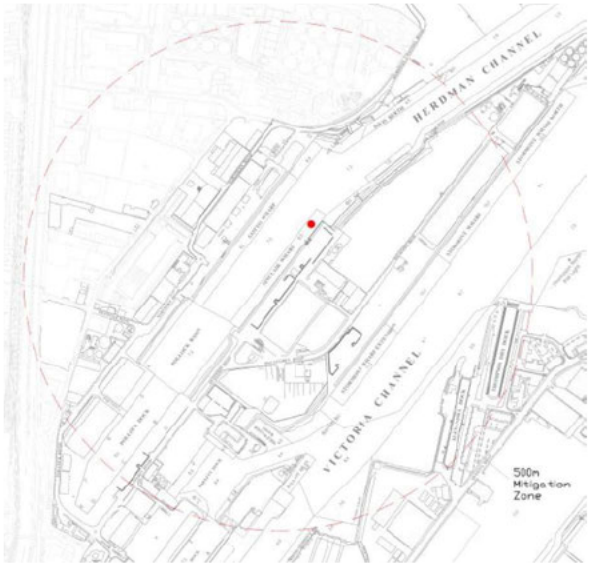


Figure 2: MMO Observation Point

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

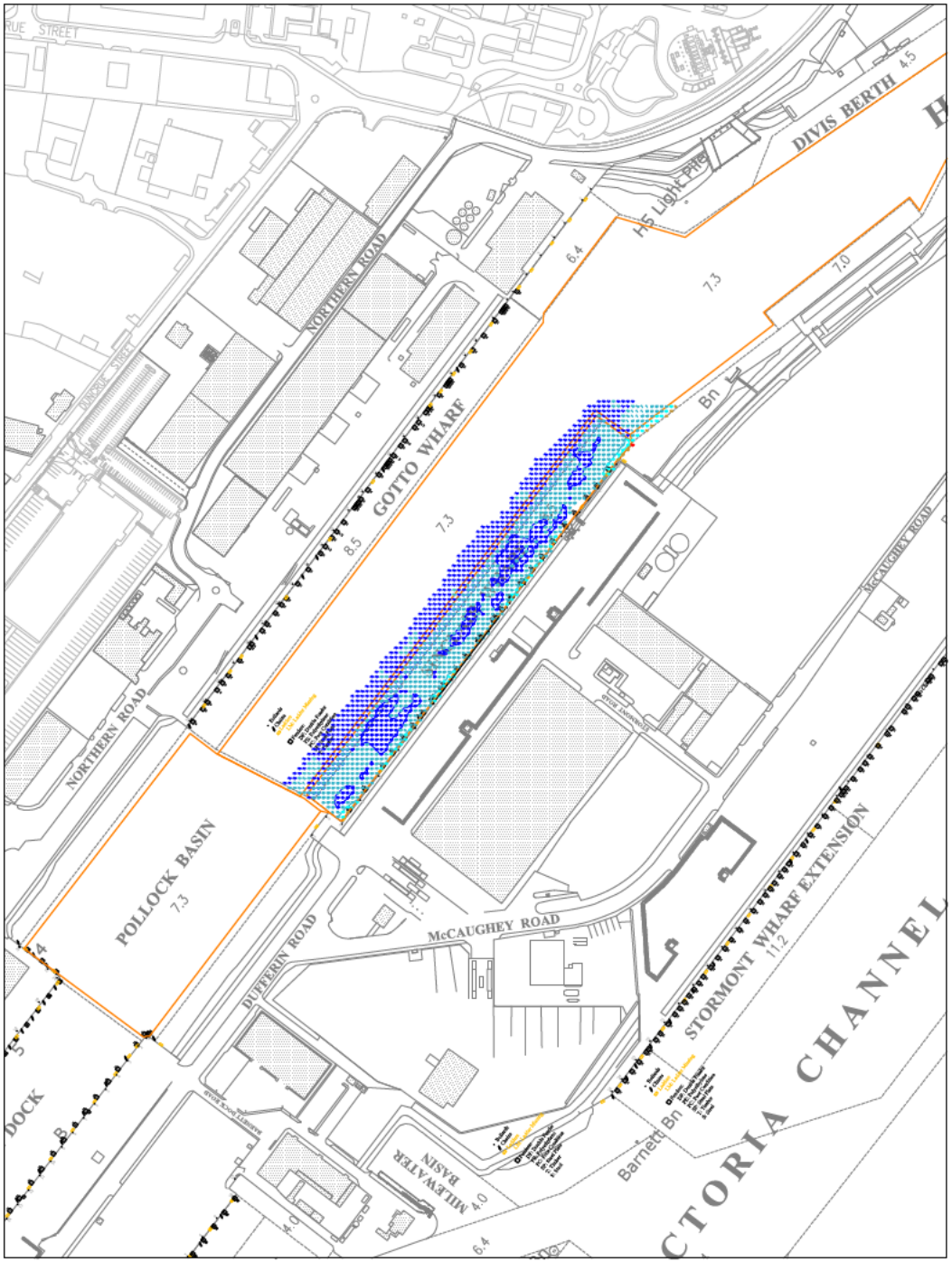
6.5 Waste Management Plan

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

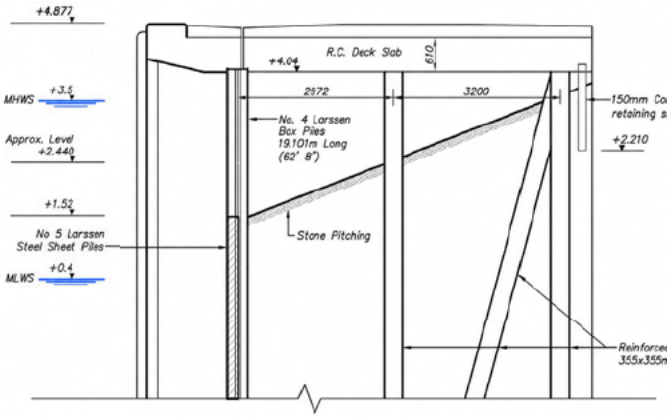
APPENDIX A: SITE PLAN



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: +0.00m OD

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

2.01m
+0.00mHD

PRELIMINARY DRAWING

Project Title:
SINCLAIR WHARF
STRENGTHENING WORKS

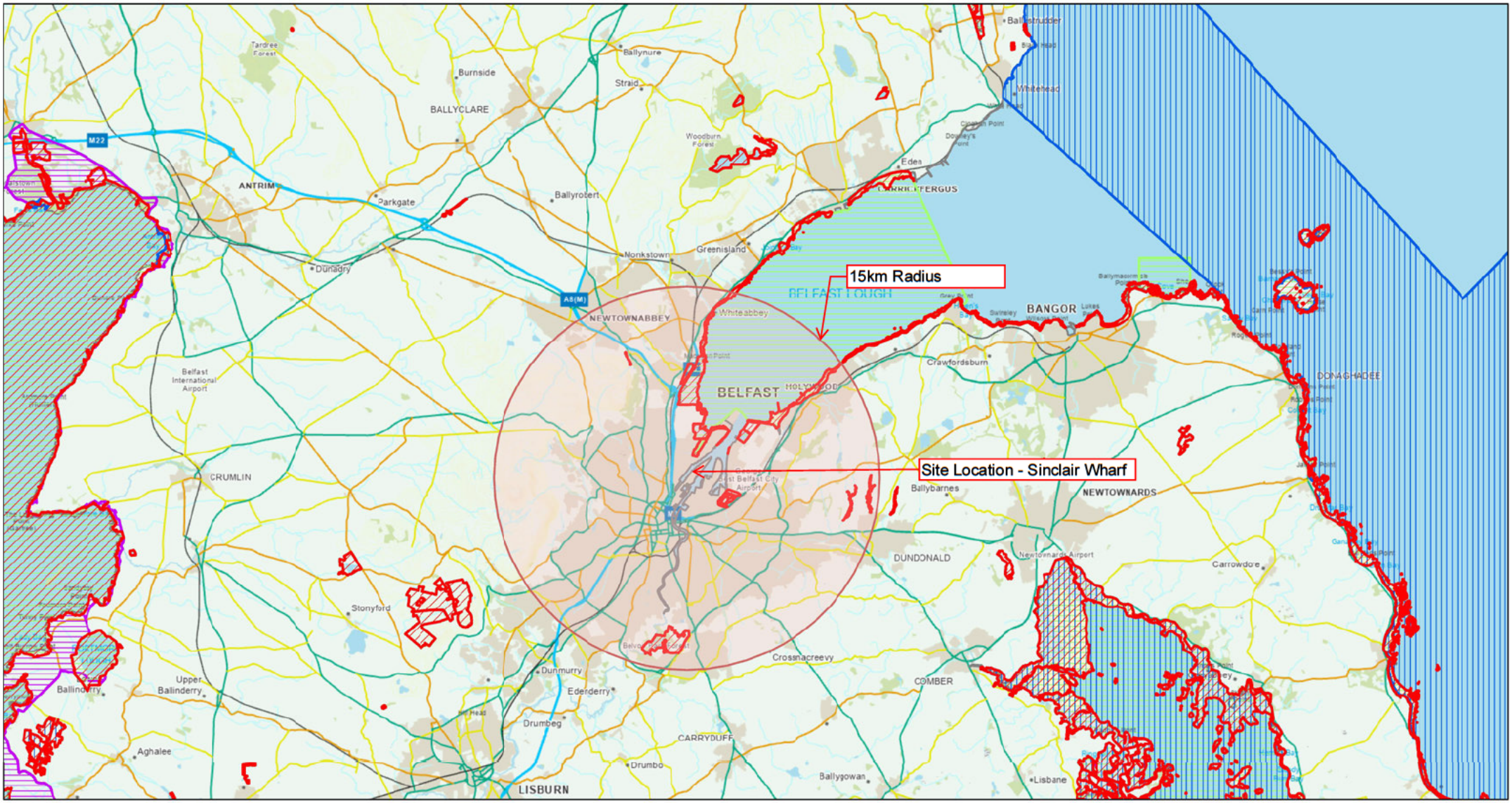
Drawing Title:
SITE LOCATION PLAN

Client: BELFAST HARBOUR COMMISSIONERS	[redacted]	Date: DECEMBER 2025	
Project Number:		Scales: 1:20	
Doran Project Number: 251103		Sheet Size: A1	Units: PM_40_40
Drawing Number: (Project-Orig-Zone-Level-Type-Role-Number) 251103-DCL-ZZ-ZZ-D-C-0001		Revision: P01	STATUS: S1

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APPENDIX B: PROTECTED AREAS

Sinclair Wharf



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1:150,000

- 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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