Queens Parade Development Bangor
Outfall Installation

Shadow Habitats Regulations Assessment

June 2024

Ref: JN 355.19 2024 R1

[redacted] *CEnv MIEMA*
Environmental Consultant

Contents

1.0 INTRODUCTION

Bangor Marine Ltd is currently undertaking the civil and structural engineering design work for the proposed development of an existing site, involving the construction of proposed buildings for commercial, office and residential use, carparking, seafront promenade and open space to include children's play area and grass lawns located in Bangor (Figure 1).

Phase 1 of the works shall initially see the construction of Queens Parade Gardens and public realm facility with the remaining development expected over the coming years. Planning permission has been approved (LA06/2020/0097/F).

Surface water from the development is proposed to be discharged directly to Bangor Marina via a new dedicated outfall. The outfall shall be constructed as part of Phase 1 of the works and sized and positioned to accommodate the future phases of development. The existing development site is understood to largely drain to existing NI Water combined sewer infrastructure, whilst some areas are also understood to drain to existing DFI Rivers culvert infrastructure (namely Ward Park and Clandeboye Stream culverts) in the area. The culverts are understood to be nearing capacity and are also believed to accommodate combined sewer overall facilities from the NI Water network.

The new dedicated outfall is proposed as betterment to the local sewer infrastructure, offering a more sustainable solution, removing clean water from the combined sewer system and relieving pressure from the proposed DFI Rivers culvert network.

The proposed outfall shall be positioned approximately mid-way between the existing culvert outfalls to the Marina (existing culverts are twin 1800 mm diameter pipes) and is proposed at a mid-tide level.

Figure 2 details the Drainage Strategy and identifies the outfall location at Irish Grid Reference (IGR) J 50360 81948.

Figure 3 details the Drainage Layout and Figure 4 details the Outfall Arrangement.

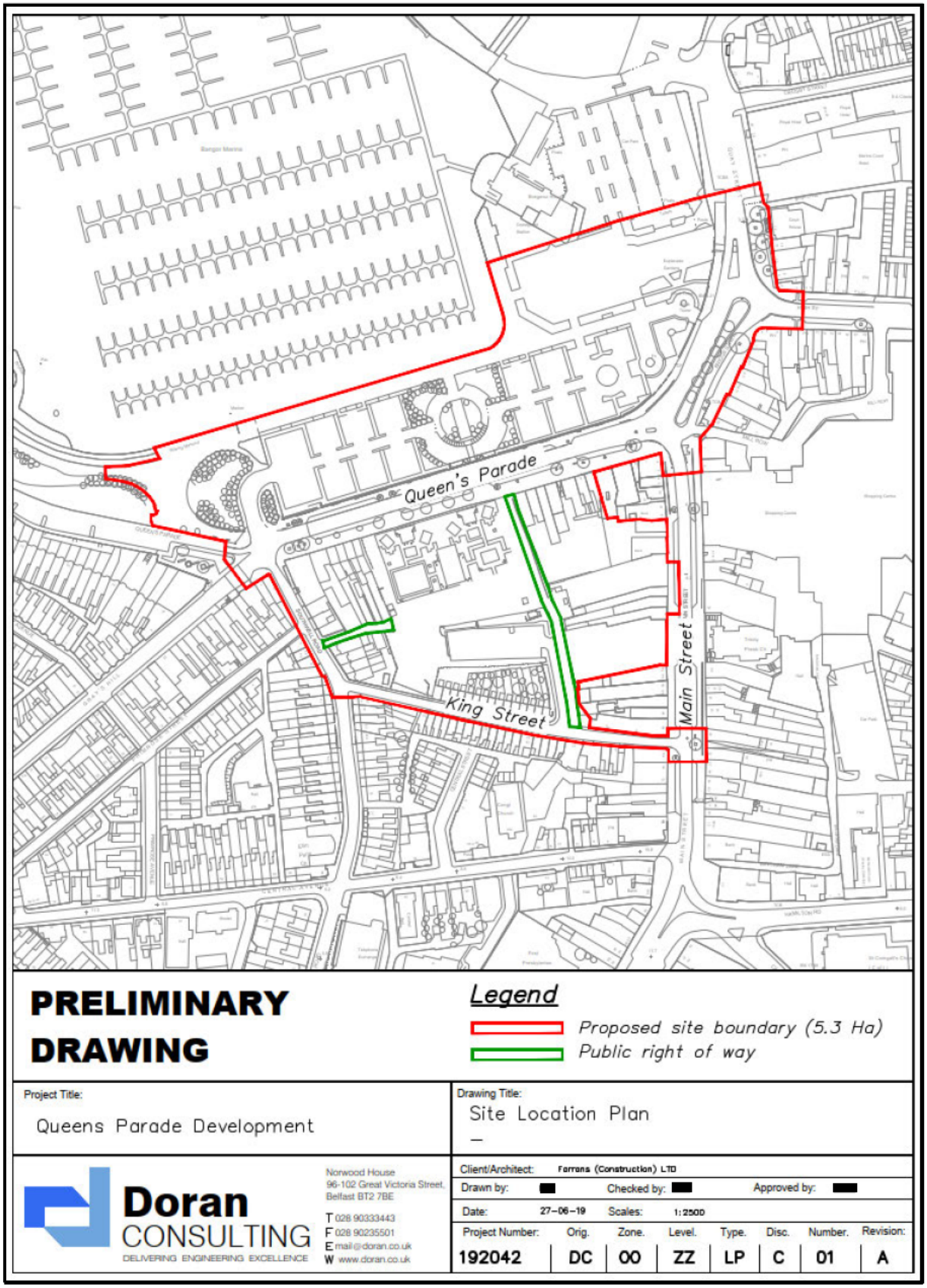


Figure 1: Site Location, Queens Parade Bangor Marina

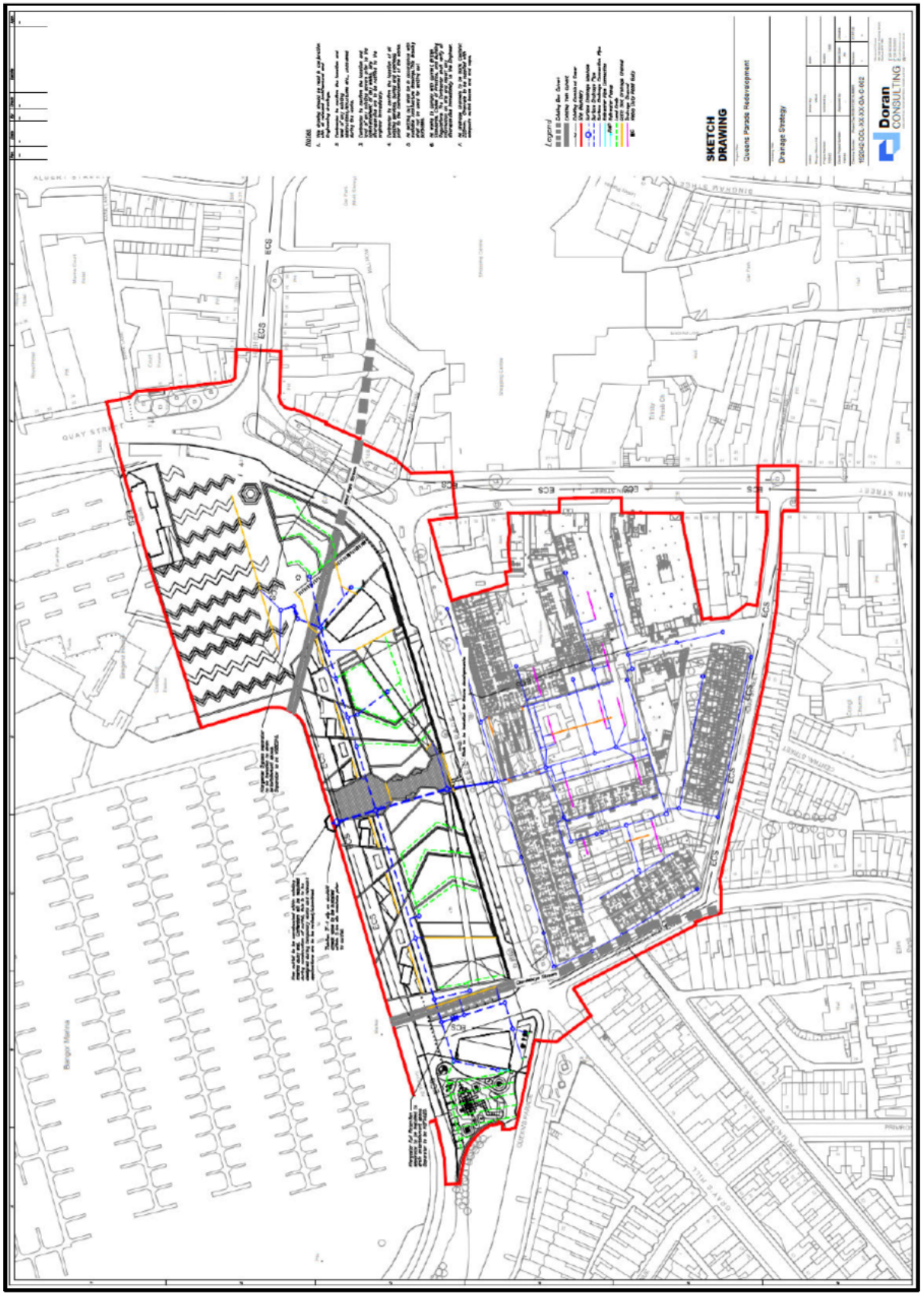


Figure 2: Drainage Strategy (*Detailed Version with Clear Notes in Section 6.0*)

Figure 3: Drainage Layout (*Detailed Version with Clear Notes in Section 6.0*)

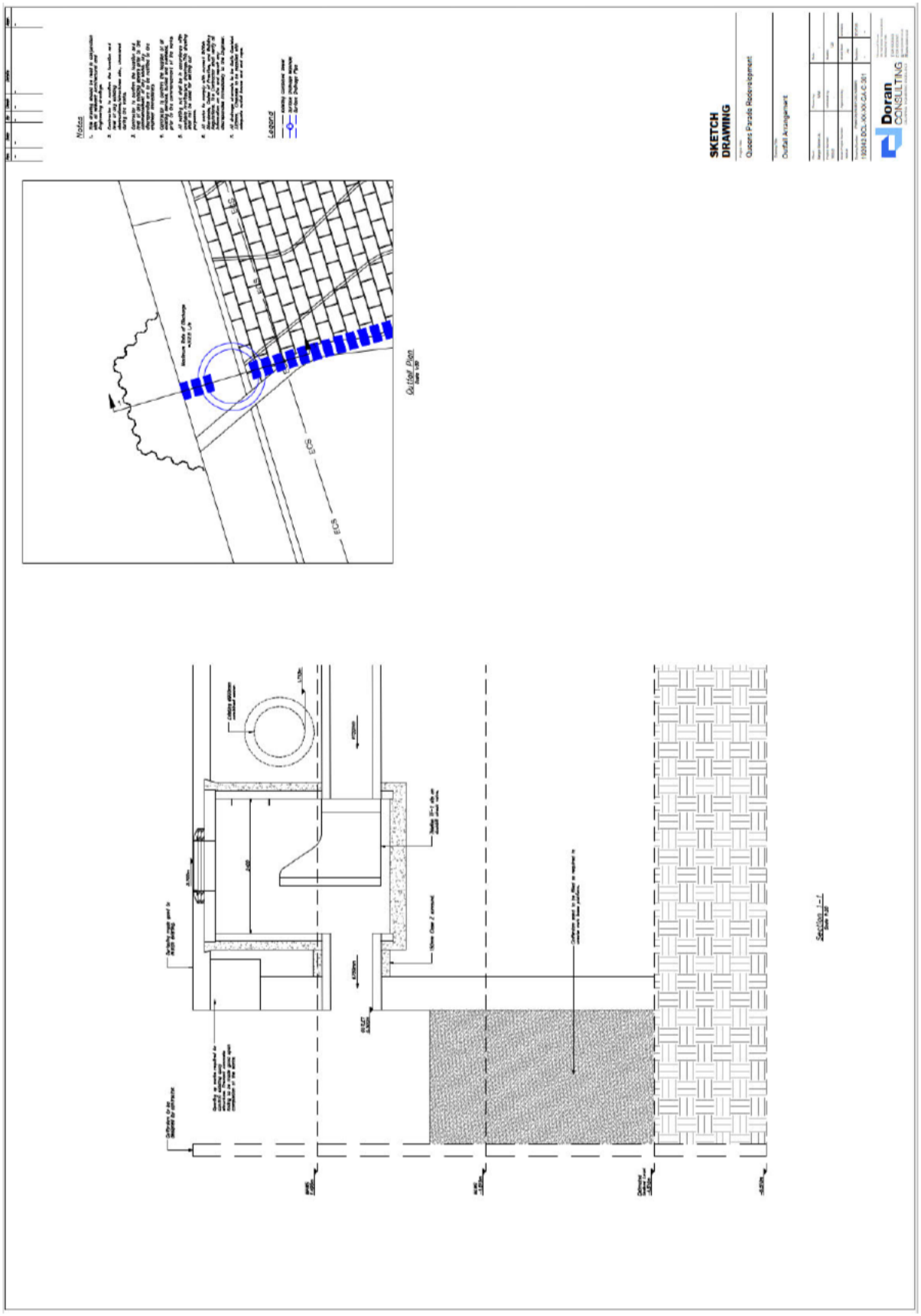


Figure 4: Outfall Arrangement (*Detailed Version with Clear Notes in Section 6.0*)

This report includes the Shadow HRA and acknowledges that the appointed Contractor will implement a robust Construction Environmental Management Plan (CEMP), Issue 01 (included with Marine Licence Application) which will consider 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 Shadow HRA will be submitted in support of a Marine Licence Application for the proposed Outfall Installation. The Shadow HRA is supported by the following summary methodology for the Outfall Installation at Queens Parade Bangor Marina, which will be finalised on appointment of approved contractor.

OUTFALL INSTALLATION, BANGOR MARINA: SUMMARY METHODOLOGY

1. Excavation of ground land side of marine wall.
2. Temporary cofferdam (designed by contractor) to be constructed and backfilled with sand.
3. Opening made in wall to accommodate 750 mm concrete pipe.
4. Pipe placed in new opening, on appropriated bedding material and area around pipe sealed.
5. Trench backfilled once it is confirmed that around the pipe is watertight.
6. Make good of quay wall structure.
7. Surfacing made good to match existing.

In-water construction works are to be timed with the out-running tide. The site management team will refer to the tide tables and instruct the appointed subcontractor when works must start and finish at the morning daily briefing. The temporary works design is currently being progressed. Further detail will be provided on the sequence of works, including the cofferdam construction and deconstruction methodologies once made available and included as an update in the CEMP. However, the design will incorporate a containment system to prevent escape of contaminated water that could cause a pollution incident.

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 not a designated competent authority and therefore this submission is categorised as a Shadow HRA. A Shadow HRA provides the competent authority with all the information required to make the final HRA deliberation. Consequently, this submission is structured as a Shadow 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 Shadow 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).

It should be noted that this Shadow HRA is only applicable to the installation of the new outfall to Bangor Marina and not the construction of the overall Queens Parade development.

3.0 STAGE 1: TEST OF LIKELY SIGNIFICANCE (SCREENING)

Screening Matrix

Name of Project or Plan:

Queens Parade Development Bangor: Outfall Installation

Bangor Marine Ltd is currently undertaking the civil and structural engineering design work for the proposed development of an existing site, involving the construction of proposed buildings for commercial, office and residential use, carparking, seafront promenade and open space to include children's play area and grass lawns located in Bangor (Figure 1, Section 1). Phase 1 of the works shall initially see the construction of Queens Parade Gardens and public realm facility with the remaining development expected over the coming years. Planning permission has been approved (LA06/2020/0097/F). Surface water from the development is proposed to be discharged directly to Bangor Marina via a new dedicated outfall. The outfall shall be constructed as part of Phase 1 of the works and sized and positioned to accommodate the future phases of development. The existing development site is understood to largely drain to existing NI Water combined sewer infrastructure, whilst some areas are also understood to drain to existing DFI Rivers culvert infrastructure (namely Ward Park and Clandeboye Stream culverts) in the area. The culverts are understood to be nearing capacity and are also believed to accommodate combined sewer overall facilities from the NI Water network.

The new dedicated outfall is proposed as betterment to the local sewer infrastructure, offering a more sustainable solution, removing clean water from the combined sewer system and relieving pressure from the proposed DFI Rivers culvert network. The proposed outfall shall be positioned approximately mid-way between the existing culvert outfalls to the Marina (existing culverts are twin 1800 mm diameter pipes) and is proposed at a mid-tide level, Irish Grid Reference (IGR) J 50360 81948 (Figure 2, Section 1).

This project will essentially upgrade the infrastructure and will be undertaken by an approved contractor, who will be required to implement a robust CEMP (Issue 01 included with Marine Licence Application). The CEMP will consider the following DAERA 'Standing Advice' and Guidance: *Development that may have an Effect on the Water Environment; Development that may Effect Natural Heritage Interests; Marine Non-Native Species; Marine Wildlife Disturbance.* In respect of potential water pollution risk, the appointed Contractor will work to strict protocols in respect of chemicals, hazardous materials and fuelling arrangements.

Specific mitigation measures include:

- In-water construction works are to be timed with the out-running tide. The site management team will refer to the tide tables and instruct the appointed subcontractor when works must start and finish at the morning daily briefing.
- The temporary works design shall incorporate a containment system to prevent escape of contaminated water that could cause a pollution incident.

- Spill kit materials will be made available at the works location and spill response training delivered to subcontractor operatives undertaking the works.
- No direct discharge will be permitted to the water environment.
- Water quality monitoring will be undertaken to ensure compliance with consented limits.
- Placement of concrete, cement and grout shall be completed when the excavation is dry. Over-pumping of the excavation will be completed as necessary to prevent washout of alkaline water.
- No concrete washout will be permitted at the outfall excavation. A designated concrete washout facility will be provided on site, suitably sited away from controlled water and site drains and gullies.
- No refuelling of plant or equipment will be permitted within the confines of the outfall excavation. A designated refuelling area will be available on site, suitably sited on hardstanding, at least 10 m from controlled water and site drains and gullies.
- A COSHH store will be made available on site for the storage of oils, chemicals and any other liquid that may pose a risk to the water environment. All COSHH materials will be removed from the works area at the end of shift and locked in the COSHH store. The COSHH store will contain a bund which provides 110% capacity for the volume of liquids stored.
- Excavated materials are to be stockpiled at least 10 m from water's edge.
- Waste generated during the excavation works will be removed from site by a licensed waste carrier and disposed of at an appropriately licensed waste facility.
- Excavated materials (e.g. crushed concrete and stone material) suitable for reuse on site, will be segregated and stockpiled at the use location.
- In the event of a pollution incident occurring, the site management team will inform NIEA via the pollution incident hotline on **0800 80 70 60** and follow the procedures outlined in the Environmental Emergency Response Plan (EERP) contained in the CEMP.

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 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 works do not involve piling and a Marine Licence is being applied for. Construction will require working in tidal conditions, but all work will be carried out once the tide has receded.

Name and Location of National Site Network site:

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

National Site Network site features (Figure 2a – 2h):

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

Outer Ards SPA
Artic Tern
Golden Plover
Light-bellied Brent Goose
Ringed Plover
Turnstone

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

Belfast Lough Open Water SPA
Great Crested Grebe

Outer Belfast Lough MCZ
Ocean quahog (Arctica islandica)
Subtidal (sublittoral) sand

Maidens SAC
Grey Seal

North Channel SAC
Harbour Porpoise

Strangford Lough SAC
Harbour Seal

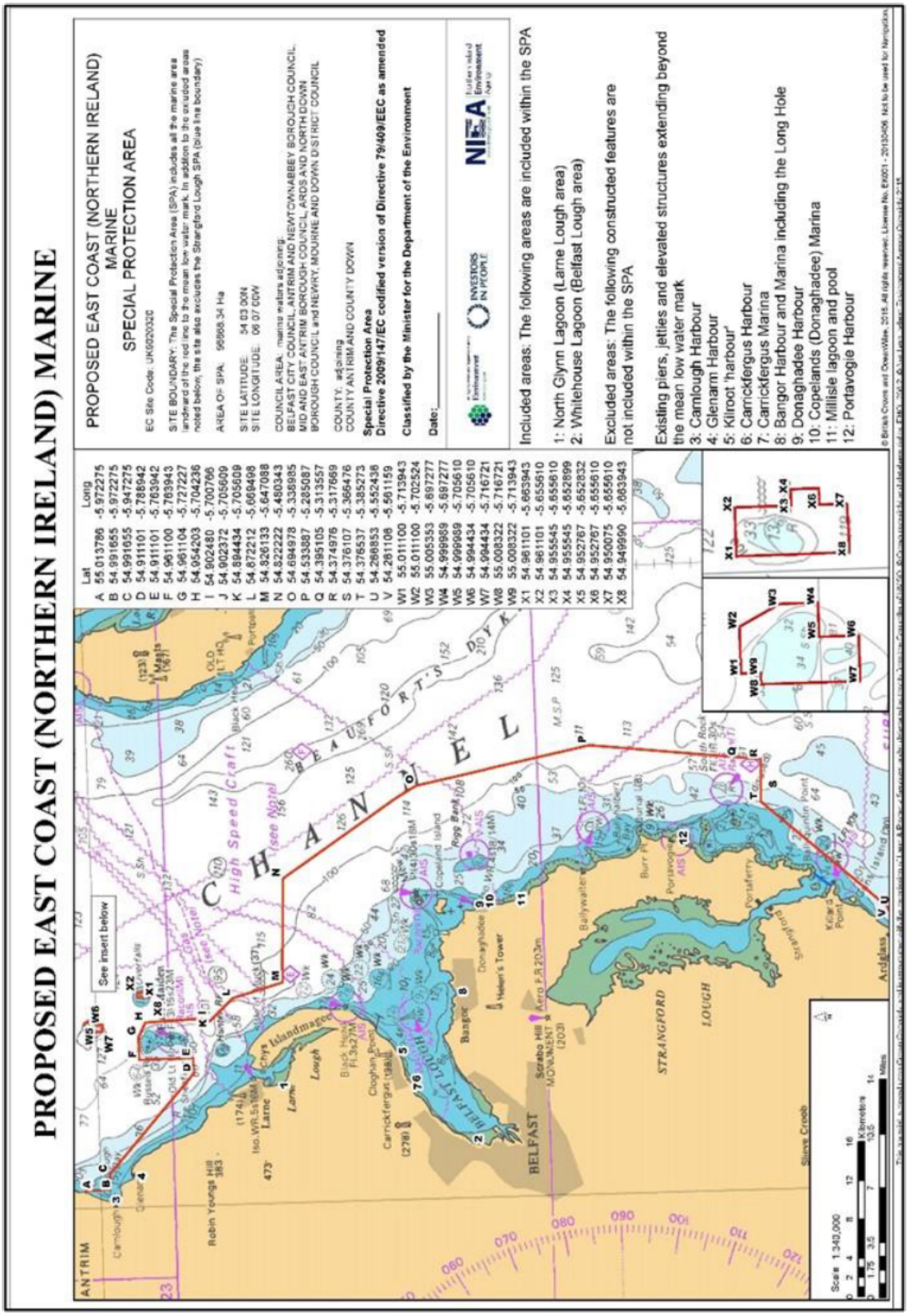


Figure 2a: East Coast (NI) Marine pSPA Boundary (DAERA)

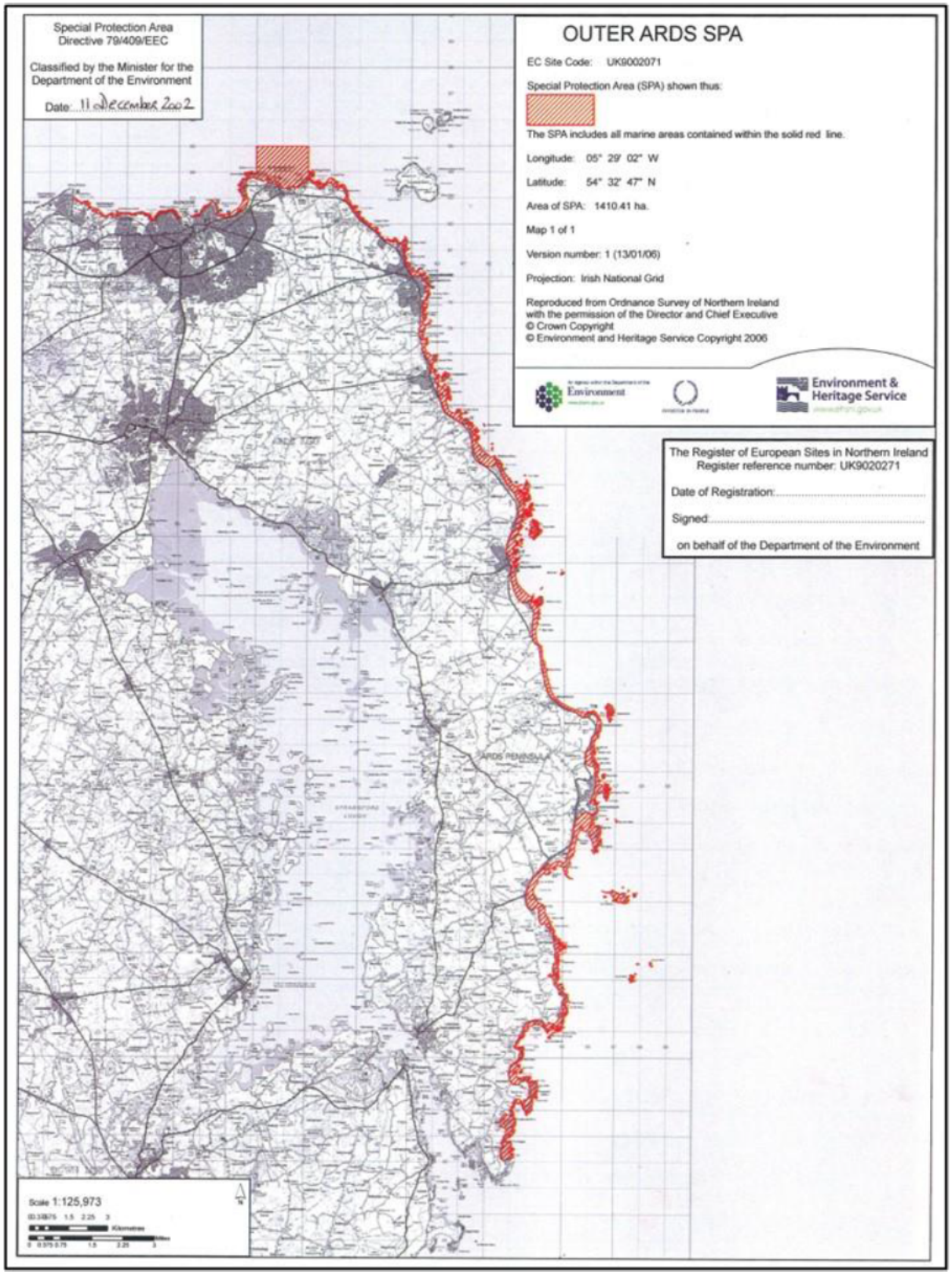


Figure 2b: Outer Ards SPA Boundary (DAERA)

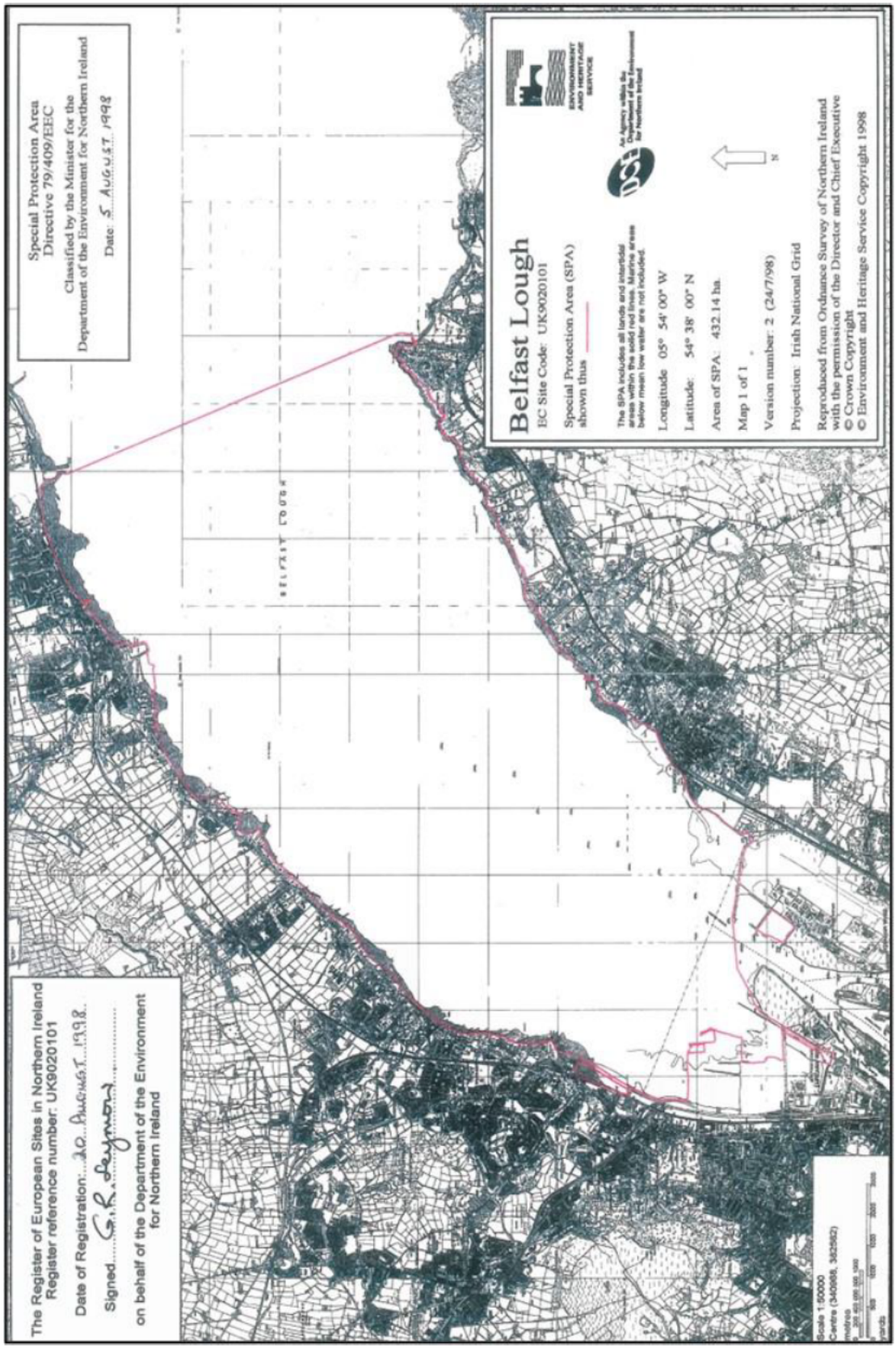


Figure 2c: Belfast Lough SPA Boundary (DAERA)

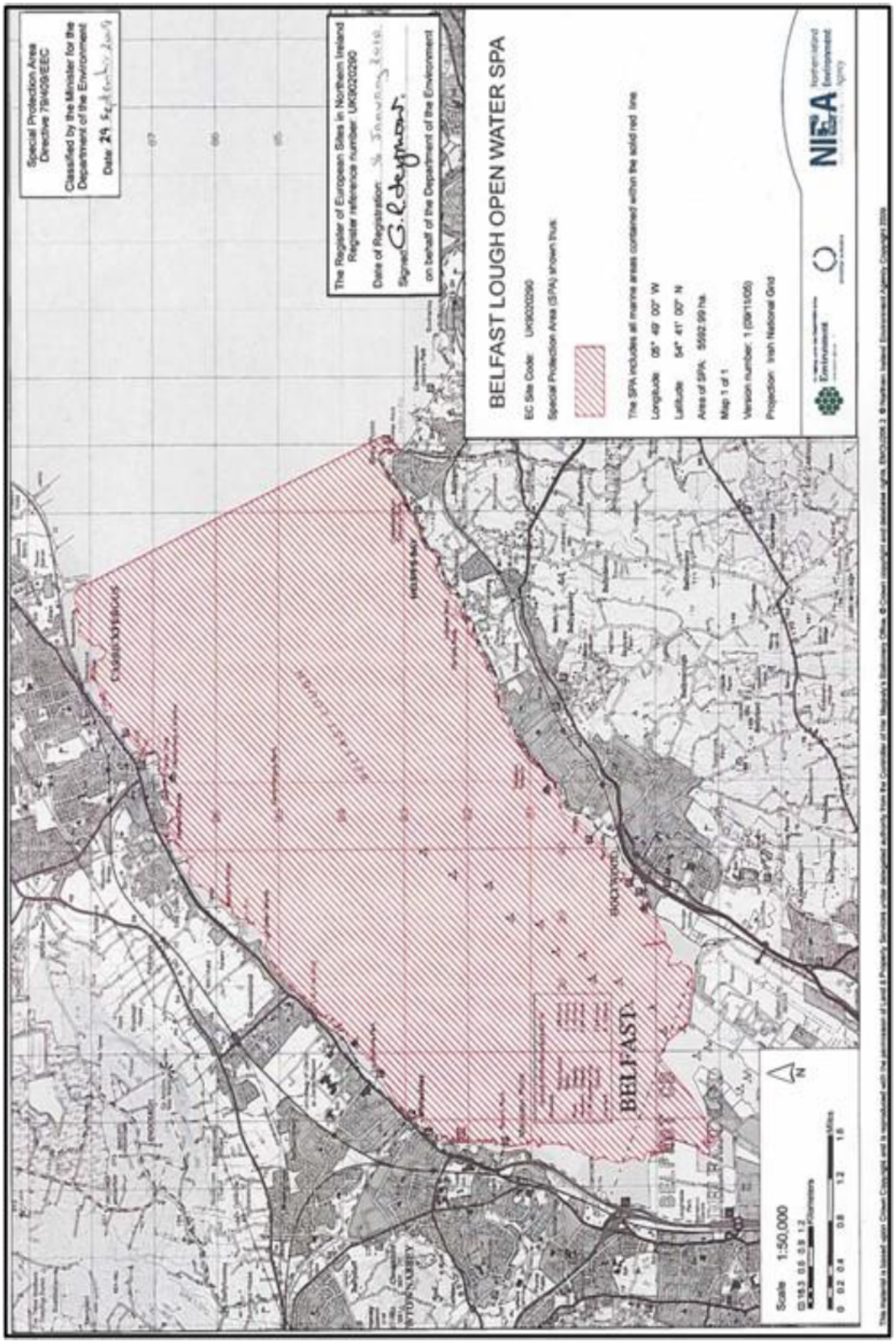


Figure 2d: Belfast Lough Open Water SPA Boundary (DAERA)

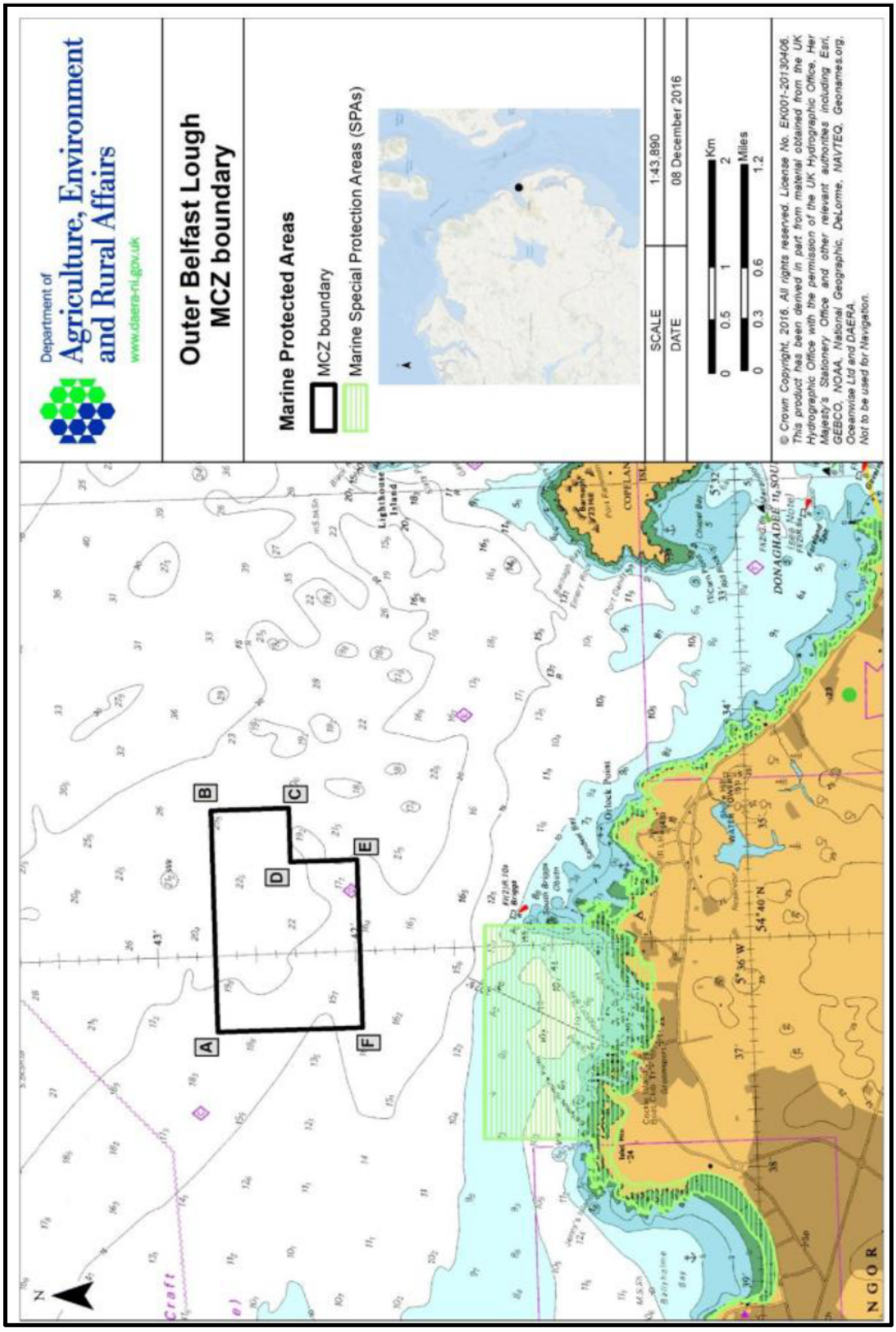


Figure 2e: Outer Belfast Lough MCZ Boundary (DAERA)

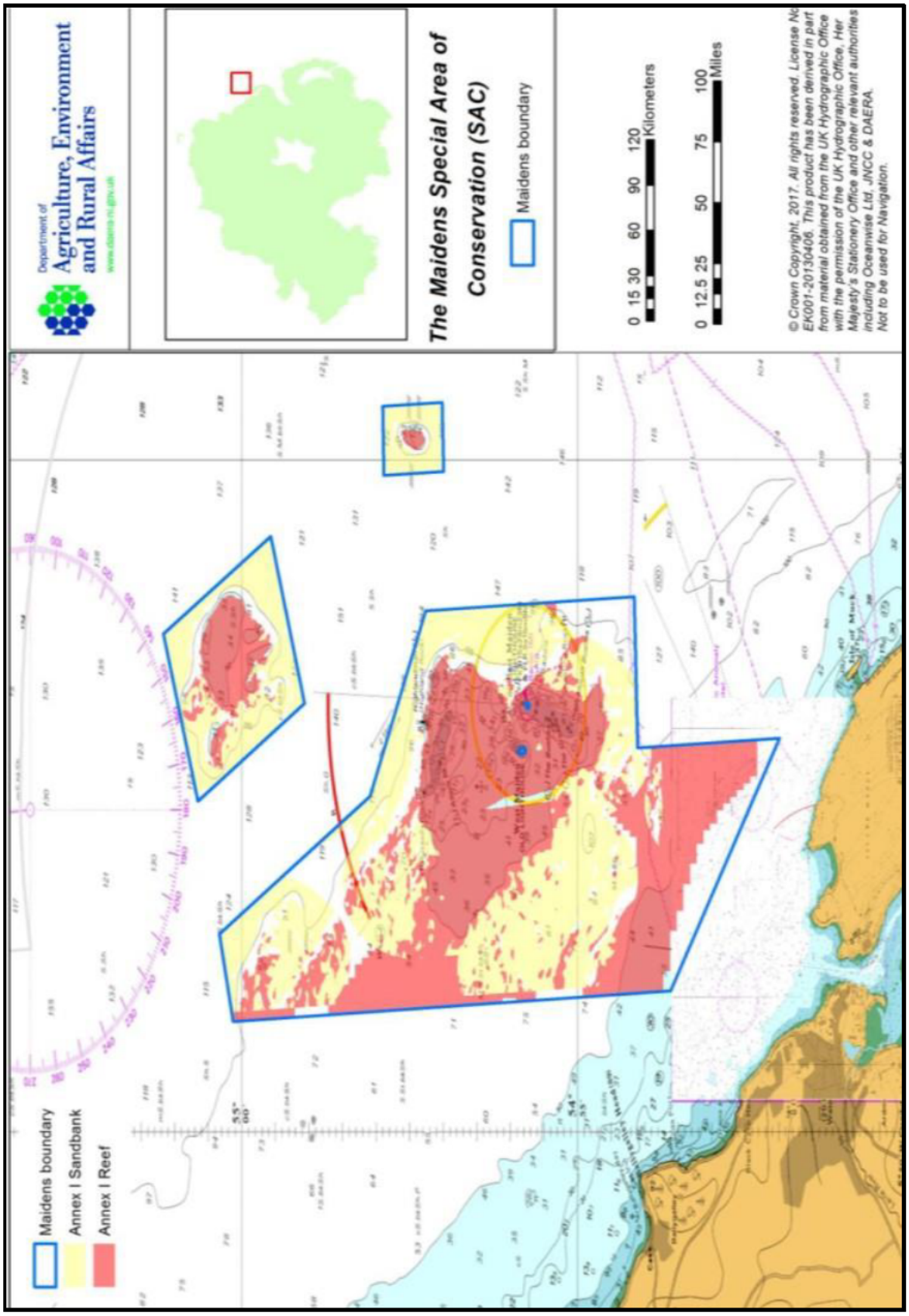


Figure 2f: The Maidens SAC Boundary (DAERA)

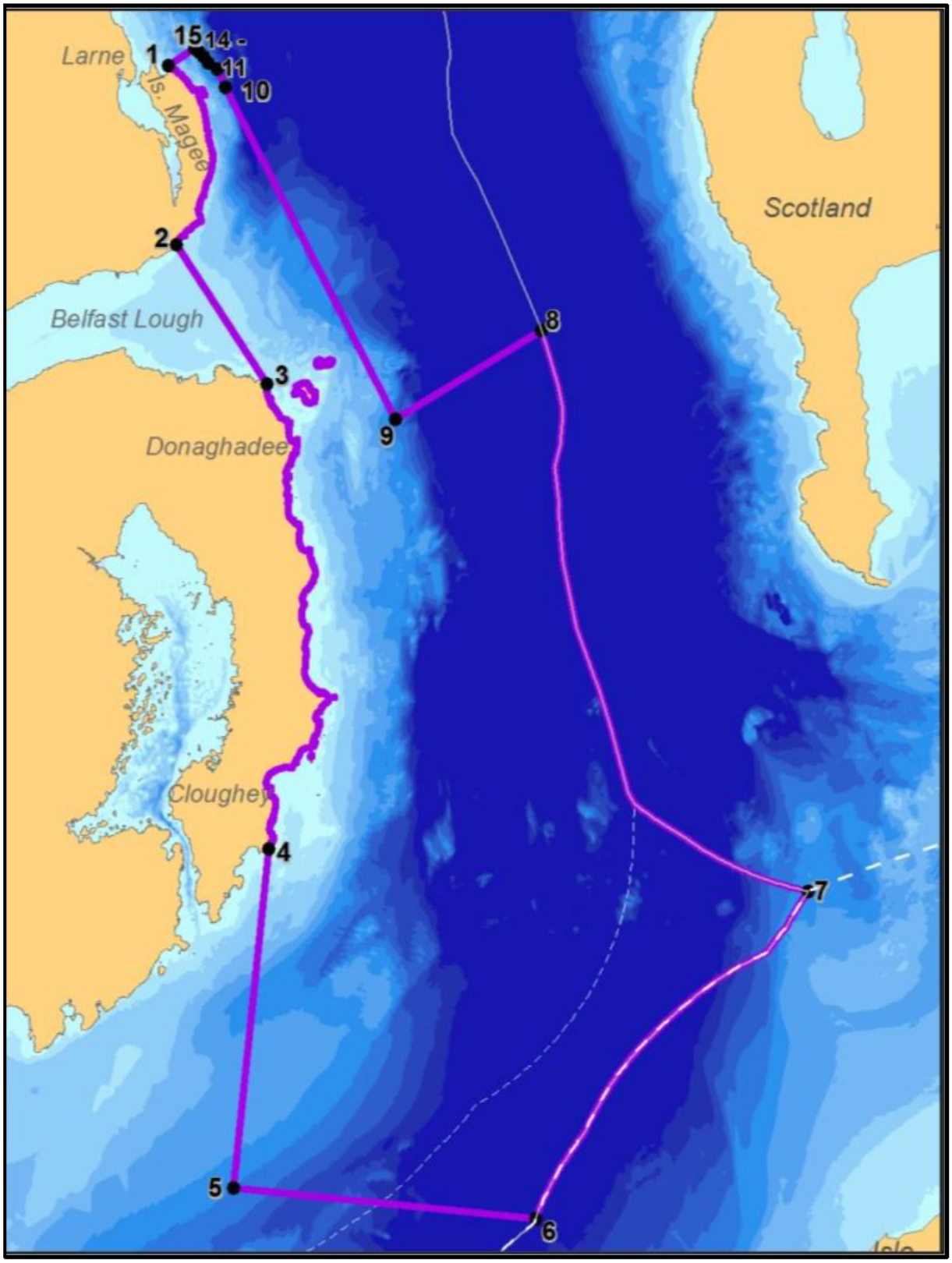


Figure 2g: North Channel SAC Boundary (DEFRA & JNCC)

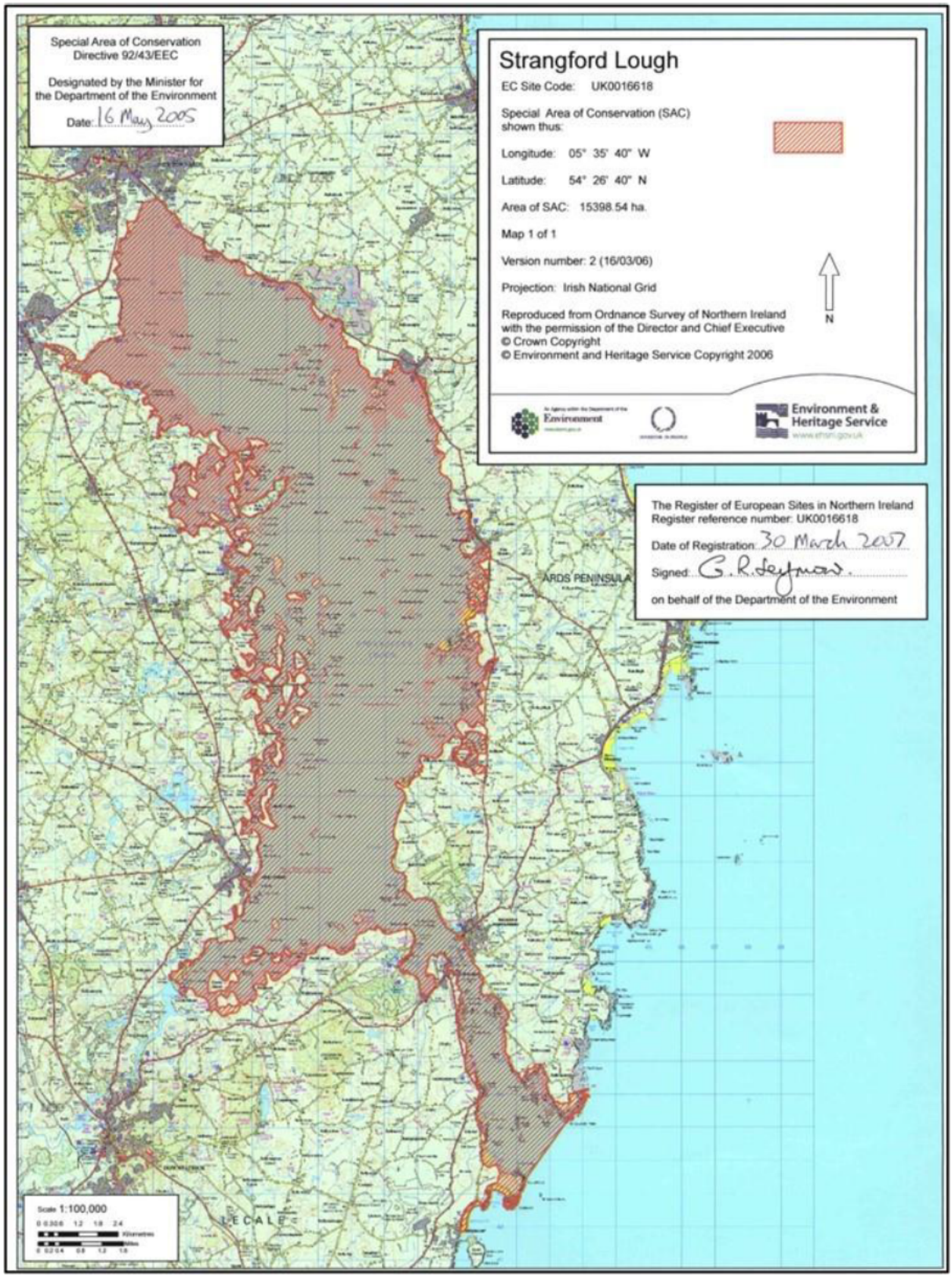


Figure 2h: Strangford Lough SAC Boundary (DAERA)

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.

Outer Ards SPA qualifies because of the important populations of Artic Tern and Golden Plover, Light-bellied Brent Goose, Ringed Plover and Turnstone.

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.

The distances to Belfast Lough Open Water SPA and Belfast Lough SPA of 4.6 km and 4.8 km to the west respectively deems impacts on their SPA features insignificant. However, given the nature and scale of the proposed outfall installation works and the proximity of East Coast (NI) Marine pSPA (0.35 km to N) and Outer Ards SPA (0.4 km to N-W & N-E) there is potential for adverse impact from the project on water quality and spread of invasive species. Therefore, potential risk to the achievement of the conservation objectives.

Bangor Marine Ltd is aware of an ongoing Black Guillemots nesting project in Bangor Marina. The contractor will liaise with Marina personnel in respect of nesting locations (not publicly known) and the works are planned to avoid the sensitive March to July period.

Marine Habitats

Although there are no designated SACs in proximity to the proposed outfall installation works, the site of the works is adjacent to the Annex 1 habitat 'large shallow inlets and bays' and 0.7 km from 'Reef'. Given the nature and scale of the proposed outfall installation works and the proximity of Outer Belfast Lough MCZ (5.7 km to N-E), designated for Ocean quahog (*Arctica islandica*) and Subtidal (sublittoral) sand, there is potential for adverse impact from the project on water quality and spread of invasive species. Therefore, potential risk to the achievement of the conservation objectives.

Marine Mammals

Harbour porpoise is a selection feature of North Channel SAC (5.2 km to N-E), grey seal is a selection feature of Maidens SAC (23.5 km to N) and harbour seal is a selection feature for Strangford Lough SAC (48 km to S). There will be no piling operations associated with the outfall installation. Therefore, there is no requirement to apply the JNCC, NRW, DAERA and Natural England '*Guidance for assessing the significance of noise disturbance against Conservation Objectives of Harbour Porpoise SACs.*

Given the location, nature and scale of the proposed outfall installation works, including the absence of piling and works occurring within an operational marina, the impact on marine mammals is insignificant.

Coastal Processes & Climate Change

These outfall installation works are required to improve the integrity of the drainage system within the Queens Parade development area. The marina area is designated as 'moderate' 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

The boundary of the nearby Outer Ards Ramsar reflects that of Outer Ards SPA and encompasses Outer Ards ASSI and Ballymacormick Point ASSI. Consequently, given the proximity, there is potential for adverse impact from the project on water quality and spread of invasive species. Therefore, potential risk to the achievement of the conservation objectives.

Description of the Project or Plan:

Size and scale

A draft methodology has been prepared for the proposed outfall installation works at the Queens Parade development:

OUTFALL INSTALLATION, BANGOR MARINA: SUMMARY METHODOLOGY

1. Excavation of ground land side of marine wall.
2. Temporary cofferdam (designed by contractor) to be constructed and backfilled with sand.
3. Opening made in wall to accommodate 750 mm concrete pipe.
4. Pipe placed in new opening, on appropriated bedding material and area around pipe sealed.
5. Trench backfilled once it is confirmed that around the pipe is watertight.
6. Make good of quay wall structure.
7. Surfacing made good to match existing.

In-water construction works are to be timed with the out-running tide. The site management team will refer to the tide tables and instruct the appointed subcontractor when works must start and finish at the morning daily briefing. The temporary works design is currently being progressed. Further detail will be provided on the sequence of works, including the cofferdam construction and deconstruction methodologies once made available and included as an update in the CEMP. However, the design will incorporate a containment system to prevent escape of contaminated water that could cause a pollution incident.

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

The site of the proposed works is 0.35 km south of East Coast (NI) Marine pSPA, 0.4 km south east and south west of Outer Ards SPA, 4.6 km east of Belfast Lough Open Water SPA, 4.8 km east of Belfast Lough SPA, 5.7 km south west of Outer Belfast Lough MCZ, 5.2 km south west of North Channel SAC, 23.5 km south of The Maidens SAC and 48 km north of Strangford Lough 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 primarily on land side of marine wall. A coffer dam will be installed on the marine side prior to making an opening in the wall to accommodate the 750 mm concrete pipe. The works will not involve any piling and any waste material will be disposed of in accordance with Duty of Care Regulations. In-water construction works are to be timed with the out-running tide. The site management team will refer to the tide tables and instruct the appointed subcontractor when works must start and finish at the morning daily briefing. The temporary works design is currently being progressed. Further detail will be provided on the sequence of works, including the cofferdam construction and deconstruction methodologies once made available and included as an update in the CEMP. However, the design will incorporate a containment system to prevent escape of contaminated water that could cause a pollution incident.

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.

Duration of construction, operation, decommissioning etc.

The outfall installation works will take place in the period October 2024 to February 2025. Work is expected to be completed over 8-12 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 beneficial drainage infrastructure upgrade works as part of the Queens Parade development.

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	**Potentially Significant: Contractor required to adhere to 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	**Potentially Significant: Contractor required to adhere to 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	**Potentially Significant: Contractor required to adhere to 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	**Potentially Significant: Contractor required to adhere to 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	**Potentially Significant: Contractor required to adhere to 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	**Potentially Significant: Contractor required to adhere to 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	**Potentially Significant: Contractor required to adhere to CEMP**
Golden Plover	**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	**Potentially Significant: Contractor required to adhere to CEMP**
Light-bellied Brent Goose	**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	**Potentially Significant: Contractor required to adhere to CEMP**
Ringed Plover	**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	**Potentially Significant: Contractor required to adhere to CEMP**
Turnstone	**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	**Potentially Significant: Contractor required to adhere to 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)

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):**
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)
Ocean quahog (Arctica islandica)	**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	**Potentially Significant: Contractor required to adhere to CEMP**
Subtidal (sublittoral) sand	**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	**Potentially Significant: Contractor required to adhere to CEMP**
Grey Seal	**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)
Harbour Porpoise	**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):**
Harbour Seal	**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 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 pollution risk and spread of invasive species due to proximity to open water taking cognisance of hydrological linkage to National Network Sites (East Coast (NI) Marine pSPA, Outer Ards SPA and Outer Belfast Lough MCZ).	Potentially significant - due to risk of 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 -**
None	None
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.	DAERA Marine Conservation & Reporting Team
Summary of response to consultation received	Potentially significant - due to risk of pollution and spread of invasive species.
Conclusion: Is the proposal likely to have a significant effect on an NSN site?	**No** ☐ **Yes** ☒

Who carried out the assessment?	[redacted] Environmental Consultant
Sources of data	DAERA (Consultation & data provision) Doran Consulting (Project design)
Level of assessment completed	Test of Likely Significance & Appropriate Assessment Report
Where can the full results of the assessment be accessed and viewed?	Doran Consulting Norwood House 96-102 Great Victoria Street Belfast BT2 7BE
Summary of response.	Potential impact from construction activities in respect of pollution risk and spread of invasive species due to proximity to open water taking cognisance of hydrological linkage to National Network Sites (East Coast (NI) Marine pSPA, Outer Ards SPA and Outer Belfast Lough MCZ).

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)	Potential impact from construction activities in respect of pollution risk and spread of invasive species.
Set out the Conservation Objectives of the site	From *EAST COAST (NI) MARINE pSPA, UK9020320, CONSERVATION OBJECTIVES, DoENI April 2015:* 1. *To maintain each feature in favourable condition* 2. *To maintain or enhance the population of the qualifying species* 3. *To maintain or enhance the range of habitats utilised by the qualifying species* 4. *To ensure that the integrity of the site is maintained* 5. *To ensure there is no significant disturbance of the species* 6. *To ensure that the following are maintained in the long term:* • *Population of the species as a viable component of the site* • *Distribution of the species within site* • *Distribution and extent of habitats supporting the species* • *Structure, function & supporting processes of habitats supporting the species.* From *OUTER ARDS SPA, UK9020271, CONSERVATION OBJECTIVES, DoENI April 2015:* 1. *To maintain or enhance the population of the qualifying species* 2. *Fledging success sufficient to maintain or enhance population* 3. *To maintain or enhance the range of habitats utilised by the qualifying species* 4. *To ensure that the integrity of the site is maintained* 5. *To ensure there is no significant disturbance of the species* 6. *To ensure that the following are maintained in the long term:* • *Population of the species as a viable component of the site* • *Distribution of the species within site* • *Distribution and extent of habitats supporting the species* • *Structure, function & supporting processes of habitats supporting the species.*

Set out the Conservation Objectives of the site	From *OUTER BELFAST LOUGH MCZ CONSERVATION OBJECTIVES AND POTENTIAL MANAGEMENT OPTIONS, DoENI December 2016:* 1. *To recover the Subtidal (sublittoral) sand in favourable condition, taking account of natural change such that:* • *The natural environmental quality is maintained* • *The natural environmental processes are maintained* • *The extent, diversity, community structure and typical species representative of the habitat are maintained.* 2. *To recover the populations of Ocean quahog to favourable condition, taking account of natural change such that:* • *The distribution of the species within the site are maintained* • *The distribution, extent, structure, function and supporting processes of the habitats supporting the species are maintained.*

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 pollution risk and spread of invasive species due to proximity to open water taking cognisance of hydrological linkage to National Network Sites (East Coast (NI) Marine pSPA, Outer Ards SPA and Outer Belfast Lough MCZ).
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 Planning Consent Conditions (LA06/2020/0097/F) 3. Full adherence to CEMP, ensuring the following DAERA 'Standing Advice' and Guidance are fully considered: a. Development that may have an Effect on the Water Environment b. Development that may Effect Natural Heritage Interests c. Marine Non-Native Species d. Marine Wildlife Disturbance 4. Full adherence to Marine Non-Native Species 'Inspect, Remove, Clean, Dispose & Report' approach

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 National Network Sites designation features during outfall installation.	Conditions will minimise potential for adverse pollution impacts.	Contractor will be required to adhere to all Marine Licence conditions.
(ii) Full adherence to Planning Consent Conditions (LA06/2020/0097/F)	LA06/2020/0097/F imposes appropriate conditions to protect key environmental aspects during outfall installation.	Conditions will minimise potential for adverse pollution impacts.	Contractor will be required to adhere to all planning conditions.
(iii) 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.
(iv) 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).

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	Marine Licence compliance will be a key requirement for Project Contractor.	Clear instruction on all Marine Licence issues will be delivered prior to commencement of works and will be audited during outfall installation 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 Planning Consent Conditions (LA06/2020/0097/F)	Statutory compliance will be a key requirement for Project Contractor.	Clear instruction on planning compliance issues will be delivered prior to commencement of works and will be audited during outfall installation 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.
(iii) 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.
(iv) 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 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.

5.0 CONCLUSIONS

A Stage 1 Test of Likely Significance (Section 3.0) found that the proposed outfall installation works at the Queens Parade development, Bangor would result in:

> *'Potential impact from construction activities in respect of pollution risk and spread of invasive species due to proximity to open water taking cognisance of hydrological linkage to National Network Sites.'*

Consequently, a Stage 2 Appropriate Assessment (AA) was conducted (Section 4.0). This AA concentrated on:

- East Coast (NI) Marine pSPA
- Outer Ards SPA
- Outer Belfast Lough MCZ

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 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.

Specific mitigation measures include:

- In-water construction works are to be timed with the out-running tide. The site management team will refer to the tide tables and instruct the appointed subcontractor when works must start and finish at the morning daily briefing.
- The temporary works design shall incorporate a containment system to prevent escape of contaminated water that could cause a pollution incident.
- Spill kit materials will be made available at the works location and spill response training delivered to subcontractor operatives undertaking the works.
- No direct discharge will be permitted to the water environment.
- Water quality monitoring will be undertaken to ensure compliance with consented limits.
- Placement of concrete, cement and grout shall be completed when the excavation is dry. Over-pumping of the excavation will be completed as necessary to prevent washout of alkaline water.

- No concrete washout will be permitted at the outfall excavation. A designated concrete washout facility will be provided on site, suitably sited away from controlled water and site drains and gullies.
- No refuelling of plant or equipment will be permitted within the confines of the outfall excavation. A designated refuelling area will be available on site, suitably sited on hardstanding, at least 10 m from controlled water and site drains and gullies.
- A COSHH store will be made available on site for the storage of oils, chemicals and any other liquid that may pose a risk to the water environment. All COSHH materials will be removed from the works area at the end of shift and locked in the COSHH store. The COSHH store will contain a bund which provides 110% capacity for the volume of liquids stored.
- Excavated materials are to be stockpiled at least 10 m from water's edge.
- Waste generated during the excavation works will be removed from site by a licensed waste carrier and disposed of at an appropriately licensed waste facility.
- Excavated materials (e.g. crushed concrete and stone material) suitable for reuse on site, will be segregated and stockpiled at the use location.
- In the event of a pollution incident occurring, the site management team will inform NIEA via the pollution incident hotline on **0800 80 70 60** and follow the procedures outlined in the Environmental Emergency Response Plan (EERP) contained in the CEMP.

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

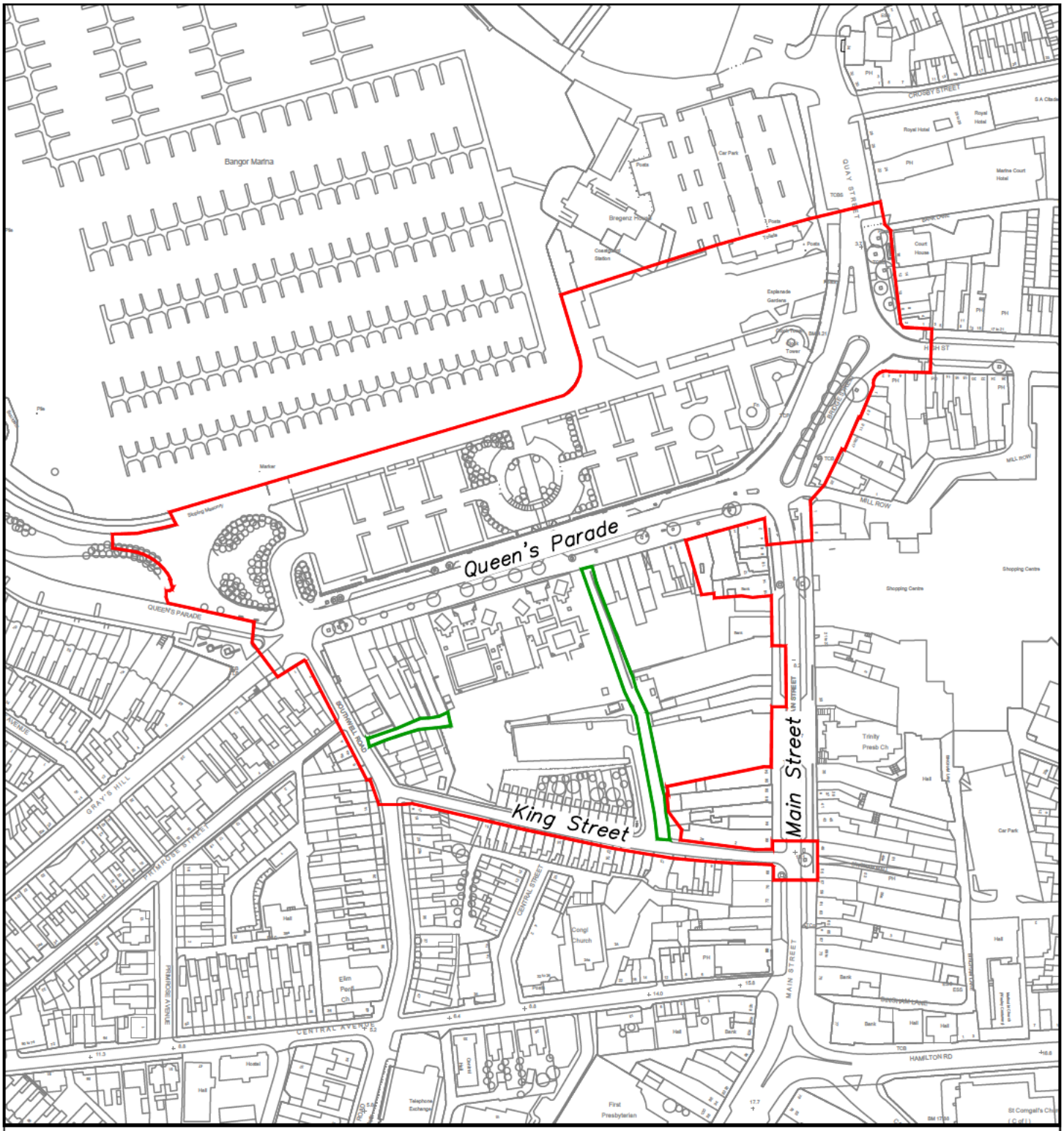
- **Report** and take photos of species you think may be an INNS on the Invasive Species NI website

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 East Coast (NI) Marine pSPA, Outer Ards SPA , Outer Belfast Lough MCZ or any other designated site.

6.0 SUPPORTING DOCUMENTATION

DRAWINGS



PRELIMINARY DRAWING

Legend

Proposed site boundary (5.3 Ha)

Public right of way

Project Title:

Queens Parade Development

Drawing Title:

Site Location Plan

–

Doran CONSULTING

DELIVERING ENGINEERING EXCELLENCE

Norwood House
96-102 Great Victoria Street,
Belfast BT2 7BE

T 028 90333443
F 028 90235501
E mail@doran.co.uk
W www.doran.co.uk

Client/Architect: Farrans (Construction) LTD

[redacted]

Date: 27-06-19 Scales: 1:2500

Project Number:	Orig.	Zone.	Level.	Type.	Disc.	Number.	Revision:
192042	DC	00	ZZ	LP	C	01	A

Rev.	Date	By	Check	Details	Appr.
-	-	-	-		-

Klargester Bypass separator to be installed to drain entertainment space. Separator to be NSBE010.

New outfall to be constructed within existing marina quay wall. Cofferdam will be required during construction of outfall, this is to be designed during temporary works and relevant applications are to be revised/submitted.

Tideflex TF-1 slip on duckbill check valve to be installed within 2.4m dia manhole prior to outfall.

Klargester Full Retention separator to be installed to drain entertainment space. Separator to be NSFA020.

Stub to be installed for future developments.

Notes

1. *This drawing should be read in conjunction with all relevant Architectural and Engineering drawings.*
2. *Contractor to confirm the location and level of any existing obstructions/structures etc., uncovered during the works.*
3. *Contractor to confirm the location and level of any existing sewers prior to the commencement of any works. Any discrepancies are to be notified to the engineer immediately.*
4. *Contractor to confirm the location of all existing services, buried and overhead, prior to the commencement of the works.*
5. *All setting out shall be in accordance with available Architecture drawings.This drawing shall not be used for setting out purposes.*
6. *All works to comply with current British Standards, Codes of Practice, and Building Regulations. The Contractor shall verify all information on site and report any discrepancies immediately to the Engineer.*
7. *All drainage channels to be Gatic Castslot 225mm. Channels to be supplied with adequate outlet boxes and end caps.*

Legend

- Existing Box Culvert
- Existing Twin Culvert
- Existing Combined Sewer
- Site Boundary
- Surface Drainage Manhole
- Surface Drainage Pipe
- Surface Drainage Connection Pipe
- Rainwater Pipe Connection
- RWP Rainwater Popup
- Land Drain
- Gatic Slot Drainage Channel
- Drainage Channel
- G Heavy Duty Road Gully

SKETCH DRAWING

Project Title:

Queens Parade Redevelopment

Drawing Title:

Drainage Strategy

Client: Bangor Marine Ltd,	Drawn by:	Date: -
Project Number: 192042	Checked by: -	Scales: 1:500
Doran Project Number: 192042	Approved by: -	Sheet Size: A0 / Unisizes: -
Drawing Number: (Project-Org-FB-SB-F-DISC-NUMBER) 192042-DCL-XX-XX-GA-C-002	Revision: -	STATUS: -

Doran CONSULTING
DELIVERING ENGINEERING EXCELLENCE
No wood House
96-102 Great Victoria Street,
Belfast BT2 7GE
T 028 90333443
F 028 90335501
E mail@doran.co.uk
W www.doran.co.uk

Rev.	Date	By	Check	Details	Appr.
-	-	-	-	-	-

Klargester Full Retention separator to be installed to drain entertainment space. Separator to be NSFA020.

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New outfall to be constructed within existing marina quay wall. Cofferdam will be required during construction of outfall, this is to be designed during temporary works and relevant applications are to be revised/submitted.

Tideflex TF-1 slip on duckbill check valve to be installed within 2.4m dia manhole prior to outfall.

Stub to be installed for future developments.

Insert 1 Boarder

Insert 1
Scale 1:250

Marker
Sloping Ma
Bregenz House
Coastguard Station
Toilets
Posts
TCB
TCP
Bank
QUEEN'S PARADE
Clanebboye Stream
Ward Park Stream
BRIDGE
ECS
RWP
3.20
4.0
4.21
6.1

Notes

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2. Contractor to confirm the location and level of any existing obstructions/structures etc., uncovered during the works.
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Legend

- Existing Box Culvert
- Existing Twin Culvert
- Existing Combined Sewer
- Surface Drainage Manhole
- Surface Drainage Pipe
- Surface Drainage Connection Pipe
- Rainwater Pipe Connection
- RWP Rainwater Popup
- Land Drain
- Drainage Channel
- Heavy Duty Road Gully

SKETCH DRAWING

Project Title:
Queens Parade Redevelopment

Drawing Title:
Phase 1 Drainage Layout

Client: Bangor Marine Ltd,	Drawn by:	Date: -	
Project Number: 192042	Checked by: -	Scales: 1 250	
Doran Project Number: 192042	Approved by: -	Sheet Size: A0	Unicless: -
Drawing Number: (Project-Orig-Flr-Sb-F-DESC-NUMBER) 192042-DCL-XX-XX-GA-C-201		Revision: -	STATUS: -

Doran CONSULTING
DELIVERING ENGINEERING EXCELLENCE
Norwood House
96-102 Great Victoria Street,
Belfast BT2 7BE
T 028 90333443
F 028 90235501
E mail@doran.co.uk
W www.doran.co.uk

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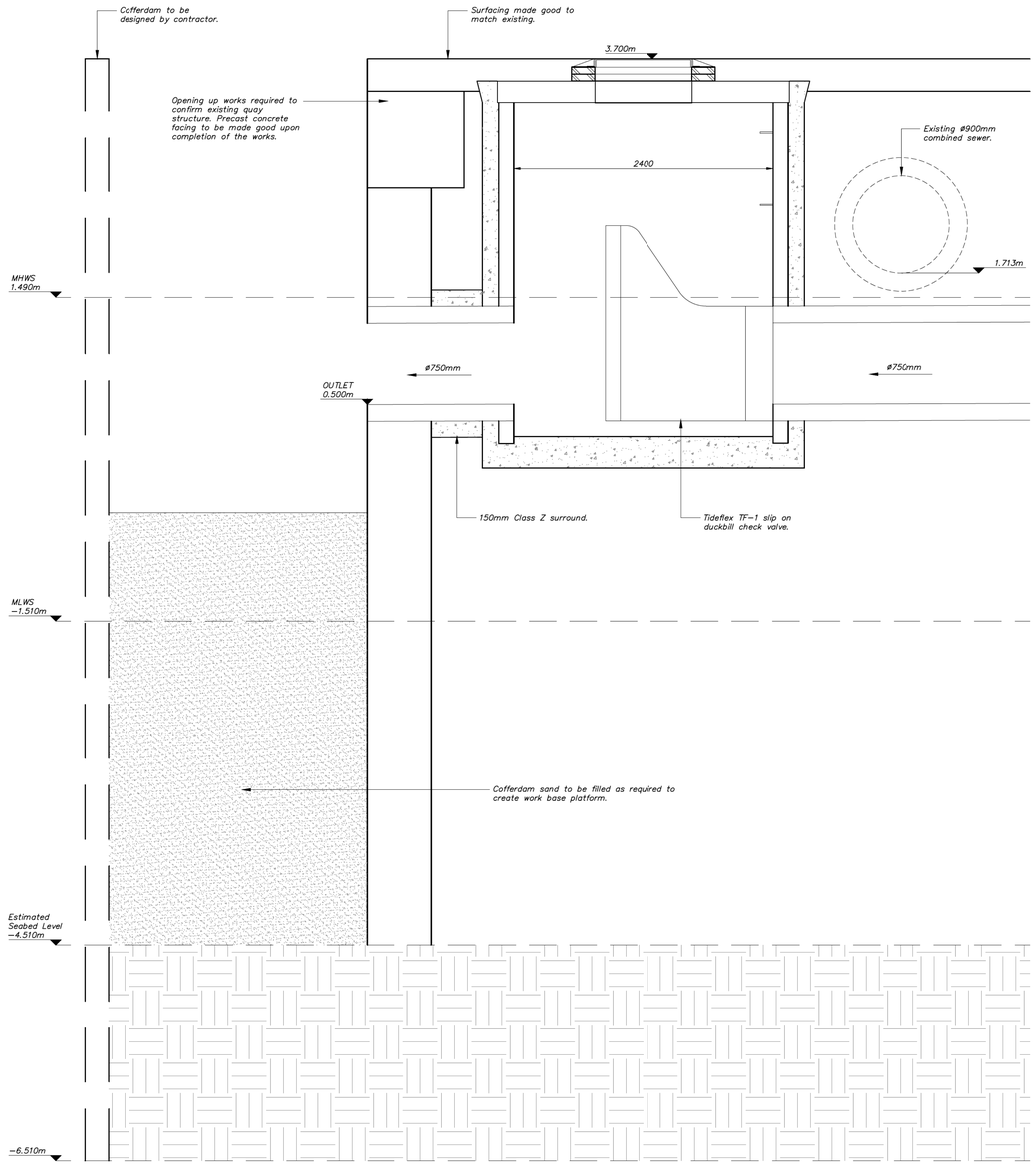

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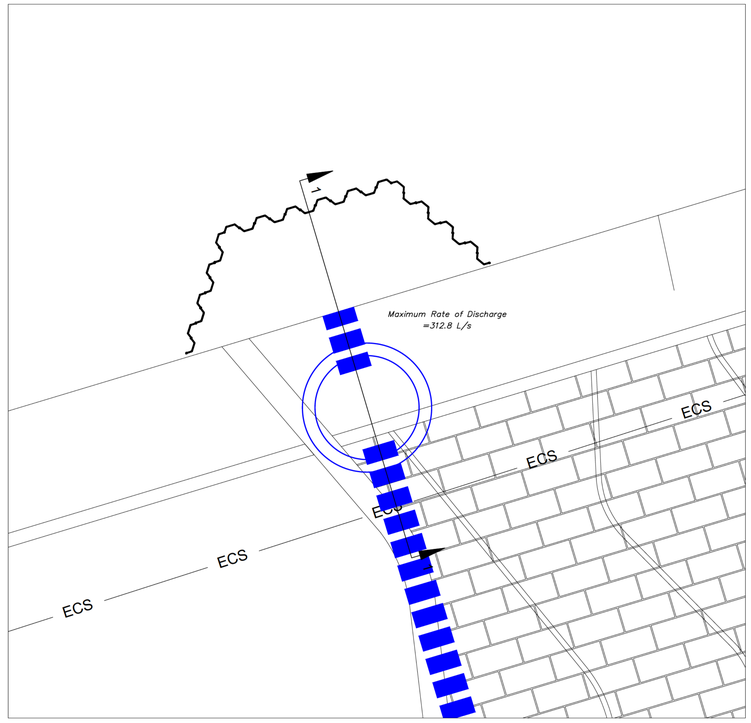

Outfall Plan
Scale 1:50

Notes

1. This drawing should be read in conjunction with all relevant Architectural and Engineering drawings.
2. Contractor to confirm the location and level of any existing obstructions/structures etc., uncovered during the works.
3. Contractor to confirm the location and level of any existing sewers prior to the commencement of any works. Any discrepancies are to be notified to the engineer immediately.
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5. All setting out shall be in accordance with available Architecture drawings.This drawing shall not be used for setting out purposes.
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7. All drainage channels to be Gatic Castslot 225mm. Channels to be supplied with adequate outlet boxes and end caps.

Legend

- Existing Combined Sewer
- Surface Drainage Manhole
- Surface Drainage Pipe

SKETCH DRAWING

Project Title:
Queens Parade Redevelopment

Drawing Title:
Outfall Arrangement

Client: Bangor Marine Ltd,	Drawn by:	Date: -	
Project Number: 192042	Checked by: -	Scales: 1 20	
Doran Project Number: 192042	Approved by: -	Sheet Size: A0	Uniclass: -
Drawing Number: (Project-Org-FB-SB-F-DISC-NUMBER): 192042-DCL-XX-XX-GA-C-301		Revision: -	STATUS: -

Doran CONSULTING
DELIVERING ENGINEERING EXCELLENCE
Norwood House
96-102 Great Victoria Street,
Belfast BT2 7BE
T 028 90333443
F 028 90235501
E mail@doran.co.uk
W www.doran.co.uk