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Rathlin Island Harbour Development



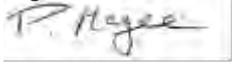
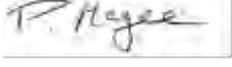
Construction Environmental Management Plan



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1 Introduction

1.1 General

- 1.1.1 The Department for Regional Development (DRD) Transport NI has commissioned Amey to produce an Environmental Statement (ES) with regards to the provision of a new slipway and berthing facility for a new ferry at Rathlin Island Harbour. This Construction Environmental Management Plan (CEMP) is produced in conjunction with the Environmental Statement (ES).
- 1.1.2 An application for planning permission has been submitted for the development under application reference LA01/2015/0342/F. This CEMP has been produced in response to a planning consultation from NIEA received by Causeway Coast and Glens Borough Council.
- 1.1.3 This document has been developed to avoid, minimise or remove any construction effects on the environment and surrounding community. It should be considered a live document with reviews being undertaken at intervals as and when the project dictates. This CEMP should be:
- Viewed as common practice; and
 - Embedded within the **Contractor's policies and site procedures e.g. within an existing Environmental Management System (EMS) framework.**

1.2 Structure

- 1.2.1 This CEMP has been produced to address concerns raised by the statutory authorities with regard to potential impacts the scheme may have on the local environment.
- 1.2.2 Prior to commencement of construction, this CEMP will need to be revised by the Contractor to address any planning conditions placed on the development to ensure that effects are mitigated as far as reasonably practicable.

1.3 Description of Works

- 1.3.1 Rathlin **Island is Northern Ireland's only inhabited island, located approximately 6km north of Ballycastle off the coast of County Antrim.** Site location, site boundary and site layout drawings can be viewed in Appendix A.

- 1.3.2 The harbour improvements will involve the construction of a new slipway for the loading and unloading of vehicles and passengers onto the new ferry as well as a new quay wall which enables the new ferry to berth during the day and overnight. In addition to this, 10 car parking spaces, space for vehicles to manoeuvre onto or off the ferry, and a waiting area for foot passengers will also be constructed.

Site Hours of Work

- 1.3.3 The site will be operational on Mondays to Fridays from 7am to 7pm.

Construction Programme Phasing

- 1.3.4 The construction period will last approximately 6 months commencing in April 2016 and finishing in October 2016.
- 1.3.5 A detailed Construction Programme will be made available for review in the site office. At the time of writing key construction dates were not known.

1.4 Roles and Responsibilities

- 1.4.1 A full list of roles and responsibilities can be viewed in Appendix B.

1.5 Training, Awareness and Competence

- 1.5.1 The CEMP will be distributed to staff, including subcontractors to ensure that the environmental requirements are communicated effectively. Key activities and environmentally sensitive operations will also be briefed to staff and subcontractors. Project, client and company environmental policies shall be displayed on site.
- 1.5.2 A schedule of meetings will be developed to include weekly Safety, Health and Environment meetings, where any issues or incidents will be raised for the attention of the client, along with proposed remedial action if required. An environmental register must be signed and updated to confirm tool box talks, training and weekly meetings by the environmental team.
- 1.5.3 Site staff will be competent to perform tasks that have potential to cause environmental impact. Competence is defined in terms of appropriate education, training and experience. If project specific training is required, training will be appropriate to the role and seniority of staff.
- 1.5.4 Environmental awareness and training shall be achieved by;

- All contractors and operators are to undergo an environmental induction and tool box talks and the CEMP will be signed and updated on the environmental register;
- Site inductions, to include relevant environmental issues, such as waste management, working adjacent the marine environment, noise and dust management and ecological risks and ecological receptors;
- Toolbox talks to cover specific task related matters of environmental risk; and
- Key project specific environmental issues and briefings.

1.6 Monitoring and Reporting

- 1.6.1 During the construction phase, internal communication will include reporting on the following: inspections, audits and non-conformance, environmental performance data including any incidents, near misses and progress on reaching targets.
- 1.6.2 A Marine Mammal Observation Plan and Ornithological Observation Plan will be agreed with the Northern Ireland Environment Agency (NIEA) and implemented by an independent Marine Mammal Observer.
- 1.6.3 The Environmental Advisor will conduct daily visual checks for pollution and leaks from plant and machinery.

2 Legal and Best Practice Requirements

2.1 Legislation

- 2.1.1 The Contractor for the project will comply with all relevant legislation and regulations; and obtain and comply with all necessary consents relating to the construction phase.
- 2.1.2 A list of relevant legislation can be found in Appendix C.

2.2 Consents and Licences

- 2.2.1 A register of permissions and consents that may be required, with responsibilities allocated and a programme for obtaining them is to be developed by the Contractor prior to construction starting.
- 2.2.2 Indicative consents and licences that may be required to enable the construction works are given in Table 2.1. This list will be updated once the planning conditions are known.

Table 2.1: Relevant consents and licences

Issue/Aspect	Legislation	Licence/Permission required
Planning permission	The Planning (development Management) (Amendment) Regulations (Northern Ireland) 2015	Planning permission application has been submitted; planning consultation comments are addressed in this CEMP.
Discharge Licence	The Water (Northern Ireland) Order 1999	A discharge licence is required for site drainage and effluent.
Consent for noise generating activities during construction	The Environmental Noise (Northern Ireland) Regulations 2006	Consent from the Local Planning Authority to carry out construction works under Section 61.

Issue/Aspect	Legislation	Licence/Permission required
Protected species	The Wildlife and Natural Environment Act (Northern Ireland) 2011	Works will be done under a wildlife licence to minimise disturbance.
Marine Licence	Marine & Coastal Access Act 2009	A marine licence is required for construction works in or over the sea and on or under the sea bed.
Waste Management	Controlled Waste (Duty of Care) Regulations (Northern Ireland) 2002	A licensed waste carrier must be used to transfer waste from the site and provide documentation of the disposal of the waste to a registered landfill site.
Archaeological Remains	Historic Monuments and Archaeological Objects (NI) Order 1995	A licence and programme of works required for an archaeological watching brief.

2.3 Pollution Prevention Guidance

DoE Standing Advice Notes

2.3.1 The DoE has recently published a series of Standing Advice notes for planning officers and applicants. The following Advice Notes will be adhered to:

- Standing Advice Note 4: Pollution Prevention Guidance
- Standing Advice Note 11: Discharges to the water environment.

http://www.planningni.gov.uk/index/advice/northern_ireland_environment_agency_guidance/standing_advice.htm

Pollution Prevention Guidelines

- 2.3.2 Pollution Prevention Guidelines (PPGs) are based on relevant legislation and reflect current good practice. Following the guidelines will allow management of environmental responsibilities to prevent pollution and comply with the law.
- 2.3.3 **PPG 1: Understanding your environmental responsibilities – good environmental practices:** Gives information about basic environmental responsibilities and practices. It includes basic advice on risk assessment, site drainage, storing oils and chemicals, waste management and dealing with incidents.
- 2.3.4 **PPG2: Above ground oil storage tanks:** Provides information about storing oil in above-ground storage tanks, for new installations and existing tanks. The guidance is for domestic properties and for businesses with small to medium size commercial oil storage. It gives advice on choosing, installing, using and maintaining oil tanks and how to deal with spills.
- 2.3.5 **PPG5: Works in, or near or over watercourses:** gives information about planning the works, managing silt, concrete and cement, oils and chemicals, maintaining structures over watercourses, waste management and responding to pollution incidents.
- 2.3.6 **PPG 6: Working on construction and demolition sites:** provides information about complying with environmental laws and preventing pollution at construction and demolition sites. It is for site managers, foremen and supervisors. It includes advice on planning activities, site drainage, excavation, storing and using oils and chemicals, cement and concrete, land contamination, waste management and dealing with environmental incidents.
- 2.3.7 **PPG7: Refuelling facilities:** provides information to businesses who operate retail and non-retail liquid refuelling facilities. It includes guidance on planning, designing, operating and maintaining refuelling facilities, plus information on storing other related, non-fuel products and dealing with environmental incidents.
- 2.3.8 **PPG13: Vehicle Washing & Cleaning:** Pollution Prevention Guidance 13 (PPG13) provides information to businesses how to comply with the law and prevent pollution when washing and cleaning vehicles. It does not apply to householders washing their own vehicles at home. It includes advice on dealing with effluent, waste management and storing and using chemicals.
- 2.3.9 **PPG 21 Incident Response Planning:** for producing emergency pollution incident response plans to deal with accidents, spillages and fires.

- 2.3.10 **PPG 22 Dealing with spills:** for incidents response – dealing with spills.
- 2.3.11 **PPG26: Drums and intermediate bulk containers:** gives information to commercial and industrial businesses who store and handle drums and intermediate bulk containers (IBCs). It provides advice on choosing drums and IBCs, designing storage areas, delivery and handling, maintenance, dealing with spills and waste management.
- 2.3.12 The Pollution Prevention Guidelines are available to view on <https://www.gov.uk/government/collections/pollution-prevention-guidance-ppg>.

2.4 Construction Best Practice

- 2.4.1 The contractor will be familiar with and apply the relevant best practice listed in the following guidance documents. It is recommended that copies are available in the site office.
- 2.4.2 **Control of water pollution from linear construction projects. Technical guidance (C648):** This guidance addresses the control of water pollution throughout the whole project cycle, from the design of a scheme, through to construction and commissioning.
- 2.4.3 **CIRIA 'Working with wildlife: guidance for the construction industry'** document. It aims to help those working in the construction industry stay within the law and to understand and adopt good practice in relation to wildlife and development. This is available to view on;
http://www.ciria.org/CIRIA/Resources/Free_CIRIA_publications/Resources/Free_CIRIA_publications.aspx?hkey=622b85b3-7d21-4e59-8093-459571496a0a.
- 2.4.4 Joint Nature Conservation Committee (JNCC), **Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise.**

3 Construction Methodology

3.1 Works Duration

3.1.1 Site works are expected to commence in April 2016 and be completed by October 2016 to coincide with the delivery of the new ferry.

3.2 Access and Egress

3.2.1 Along the alignment of the proposed quay wall, a hardfill causeway will be constructed providing access for dredging and the platform for piling operations

3.3 Equipment and Plant

3.3.1 At the time of writing an indicative list of equipment and plant to be used on site was provided by the design engineers. This will be updated by the Contractor on site. Equipment and plant to be used include;

- Diesel vibratory piling hammer
- Crane
- Tracked excavator
- Vibrating drum roller
- Asphalt paver
- 18t Tipper lorry
- Road planer
- Mechanical vibrating poker.

3.4 Sheet Pile Quay Wall

3.4.1 A diesel piling hammer will drive the piles through a layer of sand and gravel and keyed 1m into the limestone bedrock. The steel sheet pile quay wall will be installed from the hardcore causeway using a crane piling rig assisted by a large tracked excavator. Piles will be aligned using guides and pitched in groups before driving.

3.4.2 The works will commence at the end of the pier and work towards land. A reinforced concrete capping beam will be poured using *in-situ* concrete to "top off" the sheet pile wall.

- 3.4.3 When the piles are installed they will be backfilled with hardcore to form the surface of the quay and compacted in layers using a vibrating drum roller. The deck surface will be reinforced concrete. The formation of the deck will be graded using a large tracked excavator at 1:40 profile and shuttering placed.
- 3.4.4 Reinforcement in the form of steel mesh will be laid between the shutters and concrete to the required depth and gradient. The concrete will be compacted with a mechanical vibrating poker and finished with a tamped surface.

3.5 Hardstanding Area

- 3.5.1 The hard standing area will be formed and finished in asphalt. All the hard standing area will be above Mean High Water Spring level (MHWS).
- 3.5.2 The formation of the ramp will be graded using a large tracked excavator to the required profile and the required road kerbs placed to retain the formation materials. All hardcore sub base will be compacted in layers using a vibrating drum roller to the required level and gradient.
- 3.5.3 A bitmac base course 60mm deep will be laid by road paving machine and the 40mm asphalt wearing course laid by road paving machine with coated chippings placed by hand assisted by a tractor with front shovel.

3.6 Proposed dredging

- 3.6.1 Dredging works will be conducted using a large tracked excavator working from a rock causeway constructed above high water level. The causeway will be constructed from hard-core fill delivered to the site by barge and will be placed along the alignment of the proposed quay wall. Upon completion of the works the causeway material will be used as the backfill to the sheet pile wall.
- 3.6.2 It is envisaged approximately 100m³ will be dredged with a maximum depth of 1m. Arisings from dredging will be reused as backfill to the rear of the new sheet piled wall.
- 3.6.3 If the dredged material is considered unsuitable for use in the works permanently, there will be a facility to dispose at sea under licence.

3.7 Rock Armour

3.7.1 Rock armour units will be placed in two layers using a large tracked excavator at a slope of 1:2. This slope will support the ferry ramp above Mean Low Spring Water level and hardstanding area.

3.8 Ferry Ramp

3.8.1 The ferry ramp will be constructed in reinforced concrete. Temporary works in the form of clay bunds and sheet piles will be used to allow works to be executed in the dry. Approximately 50% of the ferry ramp will be constructed below MHWS.

3.8.2 The formation of the ramp will be graded using a large tracked excavator to the required 1:8 profile and shuttering placed. Reinforcement in the form of steel mesh will be laid between the shutters and concrete placed to the required depth and gradient. The concrete will be compacted with a mechanical vibrating poker and finished with a tamped surface.

3.8.3 The ferry ramp will be retained below MHWS by a combination of reinforced concrete wall and rock armour revetment.

4 Pollution Prevention Plan

4.1 Overview

- 4.1.1 A Pollution Prevention Plan will be agreed with the client and statutory authorities prior to construction works.
- 4.1.2 Although works are planned to reduce the risk of an incident occurring, there may be a residual risk of a pollution incident in the form of a spillage that could cause serious environmental problems. This plan has been prepared to ensure pollution prevention measures are in place to minimise the consequences of an environmental incident.
- 4.1.3 The Pollution Prevention Plan (PPP) outlines control measures that will be implemented to mitigate the risk of pollution from the proposed works.
- 4.1.4 The main aim of the PPP is to ensure that all pollution, mitigation and monitoring measures identified throughout the planning phase of the project will be applied in practice during construction of the proposed development.
- 4.1.5 The potential marine environmental impacts of the project are documented in the Rathlin Island Harbour Development - Environmental Statement. The PPP and CEMP do not aim to reassess those impacts, but to develop and outline controls to manage them during construction and operation.
- 4.1.6 All personnel working on the project will be responsible for the environmental control of their own work and will perform their duties in accordance with the requirements of the PPP and in compliance with the controls referenced therein. No deviations will be permitted without the written authority of the Site Manager.
- 4.1.7 The Site Manager is responsible for ensuring that the contents of the CEMP including the PPP are satisfactorily circulated and explained to site supervisory staff for implementation during construction. Any problems or disputes arising from the implementation of the CEMP will be brought to the attention of the Site Manager and/or Site Environmental Advisor.

4.2 Emergency Spill Response Plan

- 4.2.1 The contractor will be responsible for the preparation and implementation of the spillage response procedure. The key issues to consider for the spillage response procedure include;

- If the contractor already has a standard spill response procedure in operation for marine and coastal sites then this should be amended to reflect the local conditions on site. Where a spill response plan is not in place a project specific plan will be developed;
- The Plan should also detail the procedures to be followed if there is a breach in any licence conditions or a non-compliance. It will be important to ensure that the Site Environmental Advisor is notified of all incidents where there has been a breach in agreed environmental management procedures.

4.2.2 As a general rule the following principles should apply in the event of an environmental emergency;

- If safe, stop the source of the spill and raise the alarm to alert people working in the vicinity of any potential dangers. Inform Site Manager immediately;
- If safe (use PPE), contain the spill using the absorbent spill material provided. Do not spread or flush away the spill. Cover or bund off any vulnerable areas where appropriate;
- If possible, clean up as much as possible using the absorbent spill materials. Do not hose the spillage down or use any detergents;
- Contain any used absorbent material so that future contamination is limited;
- Notify the Construction Manager or the Site Manager and Environmental Adviser so that absorbent material can be disposed of using a specialist contractor.

4.2.3 The Contractor will develop and test, through exercises, the Emergency Spillage Procedure to ensure that appropriate measures to prevent and mitigate damage due to accidents and spillages are in place.

4.2.4 Testing of the Emergency Spillage Procedure shall be recorded on the relevant contractor environmental control form.

4.2.5 Inform all personnel about the spill response procedure through toolbox talks and induction training. Consider the need for refresher training on long-term construction projects.

4.2.6 Use reminder posters, identifying the key essential elements of the spill response procedure, located in appropriate areas such as fuel storage areas, mess cabins, security points or on the back of toilet doors.

4.2.7 Control containment measures for different pollutants are outlined below.

Control/Containment Measure	Pollutants				
	Concrete/ cement	Paints	Oils	Silt	Detergents
Spill on ground					
Sand	✓	✓	✓	✗	✓
Straw bales	✗	✗	✓	✓	✗
Absorbent granules	✗	✗	✓	✗	✗
Geotextile Fence	✓	✗	✗	✓	✗
Drip Trays	✗	✓	✓	✗	✗
Pads/rolls	✗	✗	✓	✗	✗
Drain Seal	✓	✓	✓	✓	✓
Earth Bunds	✓	✓	✓	✓	✓
Spill in water					
Straw bales	✗	✗	✓	✓	✗
Pads/rolls	✗	✗	✓	✗	✗
Booms	✗	✗	✓	✗	✗
Stop further spill contain and inform appropriate personnel immediately	✓	✓	✓	✓	✓

4.2.8 In the event of a significant spill contact the **NIEA Water Pollution hotline (0800 80 70 60)**.

4.2.9 It will be important to incorporate the names and telephone numbers of others that need to be informed (includes alerting people out of hours) and who should contact them within the spillage response plan.

4.2.10 Further issues to be considered when the contractor is preparing an emergency spill response plan include:

- Details of a professional 24 hour call-out clean-up service.

- Ensure sufficient types and quantities of spill response equipment are available on site. Keep spill kits where spills may occur, e.g. at refuelling points or on plant working near a watercourse.
- Material Safety data sheets and COSHH assessments will assist in identifying appropriate spill measures for dealing with hazardous materials.
- Dispose of used spill response material immediately, e.g. oily granules or pads should be bagged up and placed in the designated waste skip.

4.3 Water Quality Monitoring Plan

- 4.3.1 A water quality management plan will be agreed with the client and statutory authorities prior to construction works.
- 4.3.2 During construction works the Environmental Advisor will conduct daily checks on plant and equipment and actively look for any signs of pollution.
- 4.3.3 The mitigation measures will include the requirements for best practice and adherence to relevant guidance as reviewed in Section 2.3 and 2.4 of this document. Other relevant guidance includes:
- Environment Agency Pollution Prevention Guidelines (PPG6);
 - International Marine Organisation guidelines; and
 - Control of Substances Hazardous to Health (COSHH) Handling of Hazardous Materials.

4.4 Notification of Incidences

- 4.4.1 All environmental emergency procedures and contacts will be detailed (environmental emergency procedures will be site specific).
- All environmental emergencies should be reported directly to the Project manager as soon as reasonably practicable.
 - A First Aid Kit should be adequately equipped and be easily accessible. A first aid officer will be appointed by the site manager.
 - If a workplace hazard is spotted it must be raised to prevent any accidents or any activity that could be potentially harmful or even fatal to staff or the public.

- If an incident or event is likely to give rise to public concern and adverse media attention or involves significant spills, leaks of toxic substances, or pollution then procedure should be followed.
- The nearest urgent care facility is located 19 miles from Ballycastle Harbour.

Causeway Hospital

4 Newbridge Road

Coleraine

BT52 1HS

Tel: 028 70327032

- All environmental emergencies should be reported directly to the Site Manager and Environmental Advisor.

Where necessary the contractor will inform the Northern Ireland Environment Agency;

**Northern Ireland Environment Agency
Klondyke Building
Cromac Avenue
Gasworks Business Park
Malone Lower
Belfast
BT7 2JA
Tel: 0845 302 0008
Water Pollution Hotline: 0800 80 70 60**

4.5 Communication Plan

- 4.5.1 The CEMP will be distributed to staff and any subcontractors, to ensure the environmental requirements are communicated effectively. During construction, internal communication will include regular progress meetings. All complaints or information requests will be passed to the Project Manager and recorded in compliance with procedures. Staff details will be agreed and added to the CEMP prior to construction, as set out in Table 4.1.

Table 4.1: Staff Contact Details

Title	Name	Contact No.	Subject
Project Manager	TBC		Over-seeing the project and management of entire team.
HSEQ Representative	TBC		Health, safety, environment and quality issues.
Public Contact Officer	TBC		Complaints, issues and problems relating to the public.
Site Manager/ CDM Supervisor	TBC		Supervising construction and running of projects.
Site HSEQ Advisor	TBC		On-site health, safety, environment and quality issues.
Site Environmental Advisor	TBC		Environmental issues and advice.
Northern Ireland Environment Agency Environment Officer	TBC		Permits and advice on the environment.
Local Authority Environmental Officer	TBC		Local environmental health and planning conditions.

5 Archaeological

5.1 Overview

5.1.1 An Archaeological Impact Assessment (AIA) was produced by Farrimond-MacManus Ltd in March 2015, followed by an Archaeological Programme of Works (APW) in October 2015.

5.1.2 The report states that the proposed development site lies within a particularly archaeologically sensitive area.

5.2 Mitigation

5.2.1 Mitigation for the proposed works include the following.

- Archaeological monitoring of sub-surface works at the proposed site.
- A programme of primary ground reduction works will be undertaken at the site under the supervision of a suitably qualified archaeologist under licence to DoE Historic Environment Division to ensure any archaeological remains may survive within the boundaries of the proposed development site.
- Allowing time within the construction programme for the undertaking of archaeological works when required.
- In the event that archaeological material is uncovered, the surrounding area will be excavated by hand to ascertain the depth and nature of the archaeological deposits and recorded. If however the construction depth has been achieved before the uncovering of archaeological material then construction works may proceed within such areas.
- If straightforward archaeological remains are encountered (e.g. small, isolated features) which can be dealt with by the on-site archaeologist in a period of up to a few hours, works to ensure preservation in situ of those remains will proceed as rapidly as possible.
- The licensed archaeologist has the authority to temporarily stop machine or groundwork activity in an area of the site where potential archaeological material has been identified. Should archaeological remains be present, the licensed archaeologist will be responsible for communicating this to the client or appointed representative as well as the DoE Historic Environment Division).

- NIEA:HED shall be the ultimate arbiter of the definition of appropriate levels of archaeological recording. In the event of any disagreement between the developer and the licensed archaeologist, both parties shall be free to contact NIEA:HED to achieve resolution of the matter.
- NIEA:HED will be kept fully apprised of progress on site and will be afforded access to the site for monitoring purposes at any reasonable time (i.e. during normal working hours), with special access (such as outside working hours) by prior arrangement complying with the site safety plan.
- To ensure the archaeological site is not compromised, the archaeological remains will be covered with a geotextile or plastic sheeting with a buffer of sand, gravel or similar following the completion of archaeological works.
- Upon completion of the required fieldwork, the results will be presented in the form of a post-completion report within four weeks of the completion of fieldwork. This will be accompanied by a fully costed post-evacuation research design if necessary. The report will be prepared to standard outlined in the DOE:EHS Excavation Standards Manual. Copies of any form of publication standard report will be submitted to the Monuments and Buildings Record and the developer.

6 Noise Prevention

6.1 Overview

6.1.1 A construction vibration assessment was carried out in accordance with BS 5228-2:2009+A1:2014. In relation to operation of the new ferry, a noise assessment was undertaken in accordance with BS 4142:2014.

6.1.2 The noise assessment mitigation measures are as follows.

- Establish and maintain good relations with people living and working within the vicinity of site operations.
- Construction works will be limited to daytime works only i.e. weekdays from 7am to 7pm.
- Guidance and recommendations for basic methods of noise and vibration control relating to construction are taken from BS 5228-1.
- To prevent the spread of noise, it should be controlled at its source. This includes using compressors with sound reduced models fitted with properly lined and sealed covers kept closed when machine is in use.
- All ancillary pneumatic tools shall be fitted with mufflers or silencers of the type recommended by manufacturers.
- Shutting down plant and machinery when not in use.
- Where possible, plant with directional noise characteristics shall be positioned to minimise noise at adjacent properties.
- Static machines shall be sited as far away as practicable from inhabited buildings or other noise sensitive premises and/or behind temporary screens or enclosures.
- Plant shall be well maintained and effectively silenced.

6.1.3 It is the responsibility of the contractor to agree with Causeway Coast and Glens Environmental Health Department the measures to undertake with regard to acceptable noise levels.

7 Ecological Management

7.1 Introduction

7.1.1 An Ecological Impact Assessment and Habitats Regulations Screening Report were completed as part of the Environmental Statement.

7.2 Designated Sites & Habitats

7.2.1 The area for the proposed harbour partially falls within the boundary of two designated sites. These sites include Rathlin Island Special Area of Conservation and Rathlin Island Special Protection Area. In addition Rathlin Island Area of Special Scientific Interest encompasses the Rathlin coastline.

7.2.2 These sites have been designated for their range of protected habitats including reefs, vegetated sea cliffs, sea caves and sandbanks.

7.2.3 The Island supports an important seabird breeding colony including;

- razorbill *Alca torda*,
- black-legged kittiwake *Rissa tridactyla*, and
- common guillemot *Uria aalge*.

Rathlin also supports important populations of Peregrine Falcon and the rare Chough.

7.2.4 The site of the proposed works is also within the boundaries of the Rathlin Proposed Marine Conservation Zone (MCZ) which provides protection for nationally important marine wildlife, habitats, geology and geomorphology.

7.3 Wildlife Mitigation

7.3.1 Toolbox talks will be given to all staff at weekly meetings and during induction. Sample toolbox ecology sheets are provided in Appendix D.

Marine Mammals

7.3.2 The following mitigation measures will be undertaken to minimise the risk of direct injury to marine mammals in the area of operations in line with NIEA and the Royal Society for the Protection of Birds (RSPB) guidelines.

7.3.3 The works will be undertaken under a Wildlife Licence to prevent an offence due to disturbance to marine mammals.

- 7.3.4 A trained Marine Mammal Observer (MMO) will be in place during piling, dredging, dumping and demolition operations. The MMO will scan the surrounding area to ensure no marine mammals are in a pre-determined exclusion zone in the 30-minute period prior to operations commencing. It is suggested that this exclusion zone is 500m for demolition and dredging activities, and 1,000m for piling activities.
- 7.3.5 Piling works will be undertaken following **the JNCC guidance 'Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise'**
- 7.3.6 In addition to visual observations by the MMO, the use of acoustic deterrent devices (ADDs) will also be applied by the contractor should piling be used. These devices have the potential to exclude animals from the piling area by using underwater noise to deter them from entering the works area. The ADDs will be positioned across the harbour mouth in advance of piling to prevent marine mammals entering the harbour. The use of these ADDs will be subject to the conditions placed on the Wildlife Licence and will be applied under the direction of the MMO.
- 7.3.7 Noise producing activities shall only commence in daylight hours where effective visual monitoring can be performed by the MMO. Where effective visual monitoring is not possible, the sound producing activities shall be postponed until effective visual monitoring is possible. Visual mitigation for marine mammals (in particular harbour porpoise) will only be effective during daylight hours and if the sea state is 2-3 (Beaufort Scale) or less. In the absence of year-round data on marine mammal use at Rathlin Island, there is no justification for limiting works to any particular season.
- 7.3.8 For piling activities, where the output peak sound pressure level (in water) exceeds 170dB RE1uPa @1m, a ramp-up procedure will be employed following the pre-start monitoring. Underwater acoustic energy output shall commence from a lower energy start-up and thereafter be allowed to gradually build up to the necessary maximum output over a period of 20-40 minutes.
- 7.3.9 As large boulders within the intertidal area are currently utilised by seals for hauling out it is recommended that any large boulder within the development limit be moved to the east of the proposed development and retained within the harbour area to maintain the extent of haul out habitat.

- 7.3.10 Piling or other noisy operations will cease temporarily if a harbour porpoise or seal is observed swimming in the immediate (50m) area of piling and dredging. Work can be resumed once the animal(s) have moved away. This will be under the direction of the MMO.
- 7.3.11 Any approach by marine mammals into the (50m) works area will be reported to NIEA.
- 7.3.12 If there is a break in piling activity for a period greater than 30 minutes then all pre-activity monitoring measures and ramp-up (where this is possible) will recommence as for start-up.
- 7.3.13 Once normal operations commence (including appropriate ramp-up procedures), there is no requirement to halt or discontinue the activity at night-time, nor if weather or visibility conditions deteriorate , nor if marine mammals occur within a radial distance of the sound source that is 500m for dredging and demolition works, and 1000m for piling activities.
- 7.3.14 The MMO will maintain records of the monitoring undertaken throughout the construction period.

Black Guillemots

- 7.3.15 As works are to be undertaken during the breeding season for seabirds, an ornithological observer will be present during the works to ensure there will be no disturbance to birds. It is expected that the Marine Mammal Observer will be qualified to undertake this additional duty.
- 7.3.16 If feasible, nest sites for black guillemots will be provided within the proposed harbour development. This can be in the form of nesting boxes placed in the new quay wall. Suitable locations for nest boxes will be agreed with NIEA and RSPB.

Invasive Species - Biosecurity

- 7.3.17 Invasive species can have a damaging impact on native plants, animals and ecosystems by spreading disease, competing for habitat and food and direct predation.
- 7.3.18 The transportation and use of construction machinery in the harbour has potential to result in the introduction/movement of non-native marine species such as the slipper limpet *Crepidula fornicata* or carpet sea squirt *Didemnum vexillum* into the area. These species have potential to outcompete native species, affect water quality and harm commercial fisheries. The impact of introducing non-natives is assessed to be significant.

-
- 7.3.19 Biosecurity measures will be implemented by the contractor to prevent the spread of non-native marine species. Machinery and plant must be physically checked, cleaned and disinfected before transport to Church Bay and again before leaving Rathlin.

8 Waste Management

8.1 Introduction

- 8.1.1 The Construction Site Waste Management Plan (SWMP) will be completed and maintained on site by the Project/Site Manager. It should be made available to all personnel on site.
- 8.1.2 It is best practice policy that all construction projects will comply with the current and applicable waste regulations. To assist Site Managers in achieving this requirement a number of Best Practice Guidance documents are available for review and reference as set out below.

Site Waste Management – A Code of Practice	https://www.doeni.gov.uk/publications/waste-management-duty-care-code-practice
NIEA Example of a Waste Transfer Note	http://www.netregs.org.uk/pdf/sample_waste_transfer_note_NI.pdf
Management of Hazardous Waste	http://www.netregs.org.uk/library_of_topics/waste/hazardous_special_waste.aspx
DOE Duty of Care	https://www.doeni.gov.uk/articles/duty-care
Site Waste Management Template	http://www.netregs.org.uk/library_of_topics/waste/storage_handling_transport/site_waste_management_plans.aspx
Waste Hierarchy Guidance	https://www.doeni.gov.uk/publications/waste-hierarchy-guidance
DOE Public Waste Registers	https://www.doeni.gov.uk/topics/waste/public-registers

- 8.1.3 The above documents are available to view in the links provided.
- 8.1.4 Other useful guidance such as the CIRIA Waste Minimisation in Construction is also available.

8.2 Site Waste Management

- 8.2.1 A site waste management plan template is included in Appendix E.

Contractor's Roles and Responsibilities

- 8.2.2 Responsibilities include:
- Maintaining records of waste transfers for the operations under their control;
 - Written Information/Waste Transfer Notes (non-hazardous waste) - two years under environmental legislation but up to six years under commercial requirements;
 - Consignment Notes (hazardous/special waste) – three years;
 - Maintaining records required for the Waste Stream Assessment and Environmental Plans;
 - Maintaining compliance with any exemptions/permits for their sites;
 - Ensuring all wastes are stored securely;
 - Communicating requirements to direct staff and subcontractors;
 - Checking this information during reviews and audits;
 - Only using waste suppliers from the preferred supplier list (where this is not possible informing procurement who will provide suitable options);
 - When transferring waste to companies not on the approved supplier list ensuring that duty of care checks have been carried out and recorded; and
 - Ensuring Purchase Orders for waste service procurement require fully completed waste records to be provided.

9 Storage and Security

9.1 Storage

- 9.1.1 Contractor shall implement systematic control and recording procedures for all materials received into, held in and issued from site storage in accordance with established procedures.
- 9.1.2 Incoming materials shall be inspected for damage and correct quantities upon receipt. Deficiencies and non-conformances are to be reported within the related validity period, and any non-conforming materials are to be controlled in accordance with quality procedures. Any protective measures are to be reinstated if a period of storage is envisaged prior to employment of the materials.
- 9.1.3 Any materials accepted into site storage without normal procedures being followed shall have such facts and reasons clearly stated on the delivery sheet e.g. materials received unchecked in order to preserve surface protection.

9.2 Security

- 9.2.1 The Contractor will maintain a level of security as is reasonably practicable in order to prevent loss of associated works assets and to maintain the safety of all persons, including members of the public, through the prevention of vandalism, trespass, theft etc. To ensure:
- Prevent unauthorised access to the construction site including plant, materials and equipment.
 - To set in place a procedure for immobilising construction plant, materials and equipment.
 - Set in place a procedure for securing the site with special attention to areas close to significant areas of population.
 - The construction site signage regime to be adopted.
 - Protection of private and public areas.
 - Maintenance of any public rights of way.

Appendix A **Site Layout**

1:25,000

RATHLIN ISLAND



Legend

 Scheme Location



Scheme Location

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Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT			Preliminary	<input checked="" type="checkbox"/>
Design : HC			For Comment	<input type="checkbox"/>
Chkd : HC			For tender	<input type="checkbox"/>
Appd : AW			For construction	<input type="checkbox"/>
Date : Dec 2015			As constructed	<input type="checkbox"/>
			Other	<input type="checkbox"/>



Client :
 DRD Transport NI
 Development & Traffic Assessment
 Rathkeltair House, Market Street
 Downpatrick, BT30 6AJ (028) 4461 2211




Project Name :
**Rathlin Island
 Harbour Development**

Drawing Title :
**Appendix A -
 Site Location**

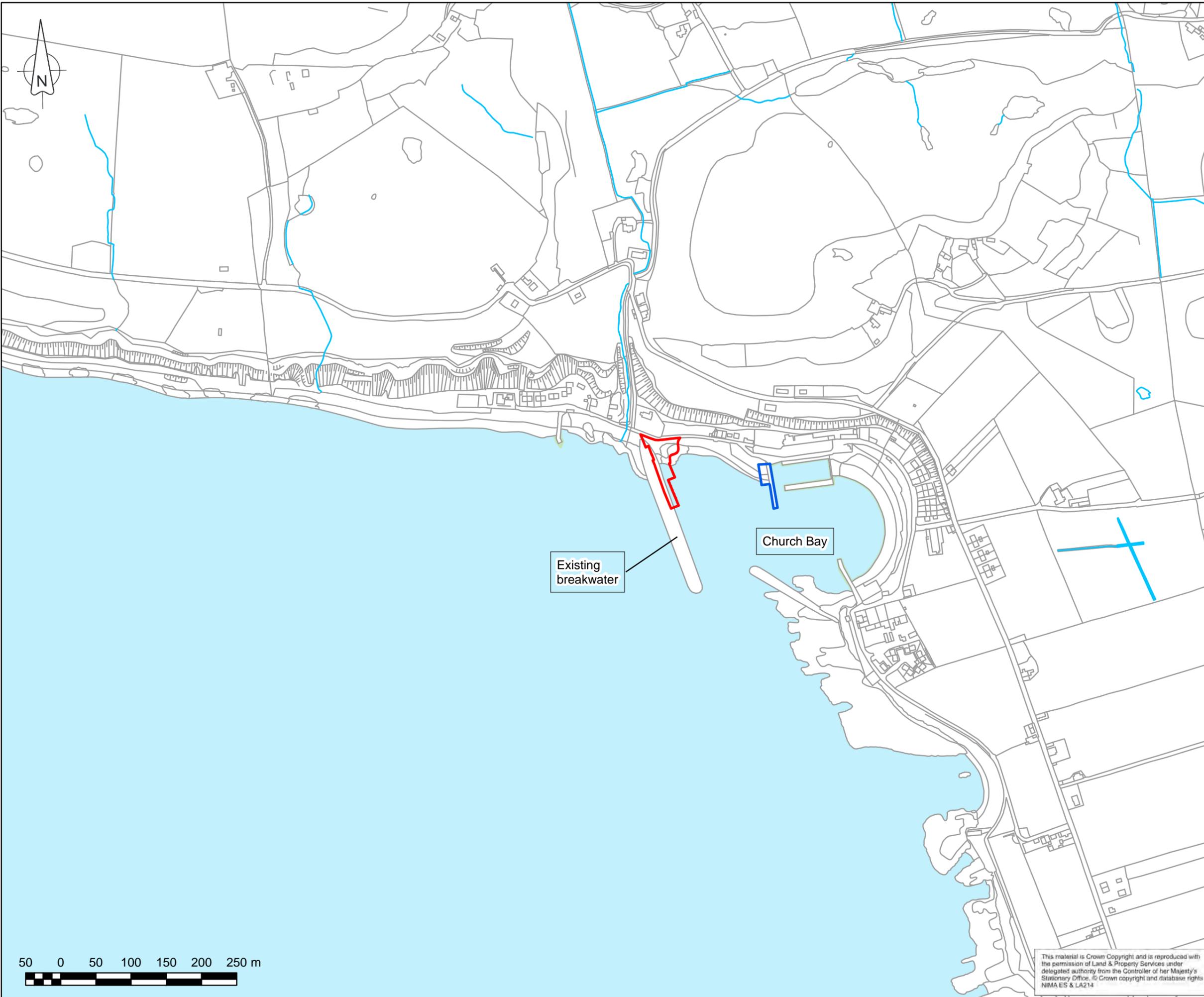
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 Scale : As Shown Dimensions :

Drawing No
 Figure 1.1

Rev
 -

1:750,000





Legend

- Scheme boundary
- Existing slipway and ferry area

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT				Preliminary
Design : HC				For Comment
Chkd : HC				For tender
Appd : AW				For construction
Date : Dec 2015				As constructed
				Other



Client : DRD Transport NI
 Development & Traffic Assessment
 Rathkeltair House, Market Street
 Downpatrick, BT30 6AJ (028) 4461 2211

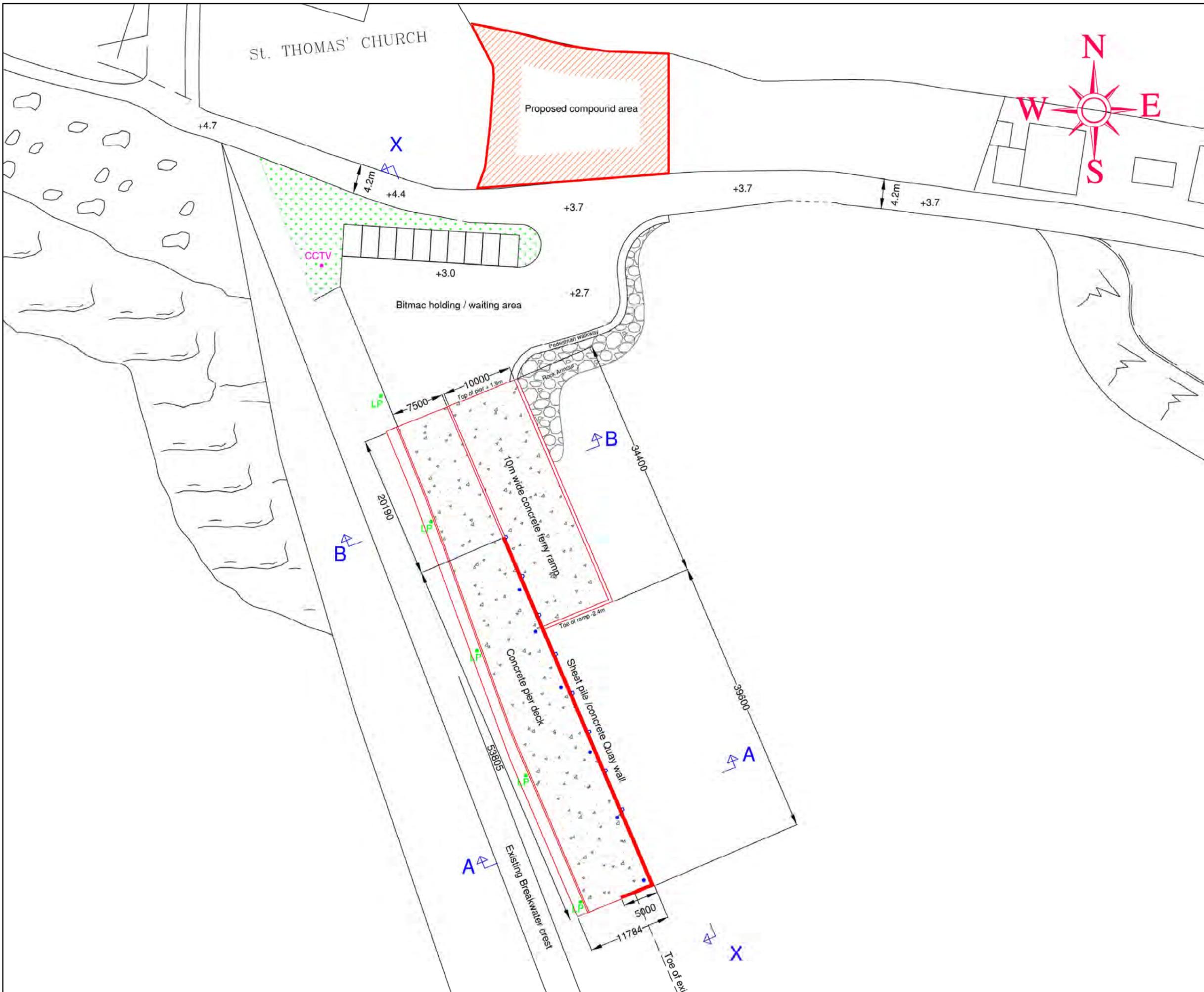
Project Name :
Rathlin Island Harbour Development

Drawing Title :
Appendix A - Site Boundary

Original Drawing Size : A3
 Scale : 1 : 5,000 Dimensions :

Drawing No Figure 1.2	Rev -
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- KEY:
- LAMPPOST
 - ↗ FENDER
 - MOORING BOLLARD
 - +2.7 PROPOSED LEVEL

Rev	Revision Details	Chkd	Appd	Date

Drawn :	Preliminary	<input checked="" type="checkbox"/>
Design :	For Comment	<input type="checkbox"/>
Chkd :	For tender	<input type="checkbox"/>
Appd :	For construction	<input type="checkbox"/>
Date :	Dec 2015	As constructed
		Other



Client : DRD Transport NI
 Development & Traffic Assessment
 Rathkeltair House, Market Street
 Downpatrick, BT30 6AJ (028) 4461 2211

Project Name :
Rathlin Island Harbour Development

Drawing Title :
Appendix A - Site Layout

Original Drawing Size :	A3
Scale :	N.T.S.
Dimensions :	
Drawing No Figure 1.3	Rev -

Appendix B **Roles and Responsibilities**

Project Manager

The Project Manager is responsible for:-

- Ensuring that the CEMP is developed and held on site and implemented throughout all phases of the project. Ensuring the CEMP details are enhanced as and when relevant information is provided by the client, further consent conditions, landowner agreements and pre-construction surveys etc.
- Maintaining the CEMP and ensuring that all contractors comply with it.
- Ensuring that environmental issues identified within the Works Information (WI), the Site Information (SI), Pre-Construction Information, the pre-construction site surveys and relevant information gathered from agencies, local councils etc are addressed.
- Producing environmental controls for all significant hazards identified and implementing control measures to minimise the risk of damage to the environment. Including the formulation of project specific controls.
- Communicating the CEMP and other related document to employees, contractors and client representatives etc.

Health Safety Environmental Quality Representative

The HSEQ representative is responsible for:-

- Undertaking environmental, health and safety and quality audits to measure compliance with the management system.
- Raising action plans to address any non-compliance.
- Advising the project manager on all environmental, health and safety and quality issues.

Contractors and Visitors

Contractors and visitors to the project will be responsible for:-

- Ensuring that the control measures identified from environmental surveys are implemented as they are relevant to their work / visit.
- Ensuring that the project management team are notified of any non-conformance of control measures or incident where the environment has been put at risk.

Additional Team Members

Site Manager

Role and Responsibilities include:

- Ensure the site is secure.
- Ensure F10 notice, Contractor Sign, and signage indicating where and whom visitors should report to are clearly displayed. Compliance will be checked during weekly audit.

- Ensure site is kept in a tidy and in an orderly fashion. Waste will be managed in conjunction with the local or group procedure as applicable.
- Ensure site has controlled access arrangements so that those entering site may avoid hazards.
- Ensure site has an emergency egress arrangement so those leaving site in an emergency may do so safely.
- Ensure there are first aid facilities and appropriately trained first aid staff.
- Ensure spill kits are available and staff have been appropriately trained.

Ensure all those that work on site:

- Have site induction including briefing on environmental issues pertinent to the project and relevant toolbox talks.
- Understand and obey the Site Rules.
- Are made aware of the emergency egress arrangements, muster points, first aid facilities and first aiders, spill and clean up procedures.
- Read and understand the site hazard board.
- Have current certification for activities as required.
- Are aware of all environmental matters which arise on site.

Ensure the activities on site:

- Are carried out under Client Operational Safety Rules where necessary.
- Have task specific Risk Assessments and Method Statements (RAMS) in place identifying any environmental issue which may be applicable.
- Are carried out in accordance with the requirements of any associated RAMS.

Site HSEQ Advisor

Ensure work is carried out:

- In a safe and orderly manner.
- **In accordance with any manufacturers' instructions etc., good standards of workmanship.**
- Ensure site staff are working in accordance with agreed Risk Assessments and Method Statements particularly where activities have the potential to cause environmental harm.
- Health and safety advisor to complete the site waste management plan and ensure it is followed.
- Ensuring that the CEMP is implemented throughout all phases of the project.

Monitor/Report HSE Issues by:

- Carrying out daily checks on site to ensure the site is secure and tidy.
- **Weekly checks and "toolbox talks" carried out and recorded. Weekly site audits.**
- Consulting workers on the effectiveness of measures to reduce risk to the environment, reviewing and improving conditions or methods/procedures where appropriate.
- Keeping records of and reporting any accidents, incidents and close calls (near misses).

Site Environmental Advisor

The project manager shall nominate and appoint an experienced environmental advisor. The environmental advisor shall work closely with the MMO and be the link **between the MMO and the Contractor's operational staff.**

The environmental advisor shall ensure work is carried out:

- In accordance with legislation & consents, objectives, targets and the Construction Environmental Management Plan with regards to any environmental activities on site.
- Ensure site staff operate in accordance with agreed Risk Assessments and Method Statement and in accordance with the induction and tool box talk training with regards to environmental risk.

Monitor/report environmental issues by:

- Ensuring compliance with environmental legislation & consents, objectives, targets and the Construction Environmental Management Plan.
- Carrying out inspections, audits and non – conformance.
- Responsible for delivering environmental training.
- Environmental Advisor to liaise with Health and Safety Advisor to complete the site waste management plan and ensure it is followed.
- Environmental performance data reporting.

Public Contact Officer

Responsible for:

- Acting as the first point of contact for members of the public.
- Arrange and manage public forums and open days for the scheme and address any concerns. Ensure all local residents and stakeholders are kept informed of progress and key issues.
- Establish and maintain relationships with key stakeholders.
- Responsible for the dissemination of the construction programme to all interested parties including any noisy work, large vehicles/traffic disruption etc.
- Coordinating work, questionnaires, providing works information, dealing with queries, responding to complaints and resolving concerns.
- Production of newsletters, bulletins, posters etc. and display of same throughout site offices and the local area on a regular basis to raise awareness of current issues both within the project team and throughout the local community.

Appendix C Relevant Legislation

The following is a non-exhaustive selection of the main legislative requirements or regulations topical to the proposed scheme.

Title of Legislation/Regulation	Relevance to Project
Water (Northern Ireland) Order 1999	Provisions for the prevention of water pollution, including the requirement to apply for consent to discharge for waterways.
The Water Environment (WFD) Regulations (NI) 2003	Sets out requirements for managing, protecting and improving the quality of water resources, particularly river basins.
Fisheries Act (Northern Ireland) 1966	Makes it an offence to pollute a watercourse.
Marine and Coastal Access Act 2009	Provides the legal mechanism to help ensure clean, healthy, safe, productive and biologically diverse oceans and seas by putting in place a new system for improved management and protection of the marine and coastal environment.
Prevention of Oil Pollution Act 1971	This Act was implemented to regulate either accidental or intentional oil discharges.
Merchant Shipping (Dangerous Goods) (Amendment) Rules 1968	The main effect of these Rules is to manage and restrict certain types of explosives on Merchant shipping.
Waste and Contaminated Land (NI) Order 1997	Part 2 deals with waste management including duty of care, licensing and collection.
Controlled Waste Regulations (NI) 2002	Categorises waste to allow for treatment regulation.

Title of Legislation/Regulation	Relevance to Project
<p>Controlled Waste and Duty of Care Regulations (Northern Ireland) SR 2013/255 (as amended)</p> <p>Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations (Northern Ireland) SR 1999/362</p>	<p>Establishes a system for registering waste carriers making it a criminal offence to transport waste without a carrier’s registration.</p>
<p>Pollution Control and Local Government (NI) Order 1978</p>	<p>Provides for control of noise and dust related nuisance.</p>
<p>The Control of Noise at Work Regulations (Northern Ireland) 2006</p>	<p>Contractor on site is required to carry out appropriate noise assessments and provide appropriate noise protection.</p>
<p>Control of Noise (Codes of Practice for Construction and Open Sites) Order (NI) 2002</p>	<p>This Order covers ways in which noisy practices can be minimised on construction sites.</p>
<p>Clean Air (Northern Ireland) Order 1981</p>	<p>Air emissions from construction site activities need to comply with the Clean Air Order. Processes covered under this legislation include demolitions and bonfires on site.</p>
<p>Wildlife Order (Northern Ireland) 1985 as updated by The Wildlife (Amendment) (Northern Ireland) Order 1995 (S.I. 1995 No. 761 (N.I.6)) and The Wildlife and Natural Environment (Northern Ireland) Act 2011</p>	<p>Provides for protection of flora and fauna and lists protected species. Offences relating to projects affecting hedgerows, badgers, bats etc. are established.</p>
<p>Conservation (Natural Habitats etc) Regulations (NI) 1995 (as amended 2004-2012)</p>	<p>Establishes procedures for assessing potential for project to impact on Natura 2000 sites.</p>

Title of Legislation/Regulation	Relevance to Project
Nature Conservation and Amenity Lands (NI) Order 1985 and Nature Conservation and Amenity Lands (Amendment) (NI) Order 1989	The contractor must ensure that their site operations do not affect areas/sites protected under this Order.

Appendix D Ecological Tool Box Sheets

Harbour Porpoise

WHAT?

Harbour porpoises are protected under The Wildlife and Natural Environment Act (Northern Ireland) 2011.

You should always consult with the Marine Mammal Observer (MMO) before undertaking activity on a site where harbour porpoise are known or suspected to be.

In 2015 harbour porpoise were recorded in the waters around Rathlin and Ballycastle.



- IDENTIFICATION**
- Most harbour porpoise are black/brown along their backs, with grey sides and a white underside. Fully grown adults can be up to 1.9m in length and weigh up to 70kg.
 - Their heads are small and rounded without a distinctive beak. Their dorsal fins are small with a slight curve set halfway along the back.
 - Harbour porpoises tend to move slowly at sea surfacing briefly 3-4 times in a row before diving for up to 8 minutes.

- WHY?**
- **Avoid Prosecution:** It is an offence to
 - Kill, injure or disturb a harbour porpoise
 - **Nature Conservation:** Current threats to the UK harbour porpoise population include
 - Incidental fisheries by-catch
 - Chemical pollution
 - Anthropogenic noise
 - Vessel strikes

DO

✓ **IMMEDIATELY**

✓ stop work and inform your line manager/Marine Mammal Observer if you see a harbour porpoise on your site.

DON'T

X **DON'T**

✗ Disturb harbour porpoises.

No.	Harbour Seal
------------	---------------------

WHAT?

Harbour seals are protected under The Wildlife and Natural Environment Act (Northern Ireland) 2011.

You should always consult with the Marine Mammal Observer (MMO) before undertaking activity on a site where harbour seals are known or suspected to be.

Harbour seals are known to use Mill Bay as a haul out site.



- IDENTIFICATION**
- - It has a rotund yet streamlined body with a layer of blubber and a short coat. When fully grown adult males may be only slightly larger than females: males can grow up to 1.9m long and weigh 170kg whereas females can reach up to 1.7m and weigh 130kg.
 - Harbour seals have a wide, pronounced snout, V-shaped nostrils, large eyes and no external ear. The common seal does not have the sloping forehead of the grey seal and is described as more cat-like in appearance. The colour is quite dark grey with a light mottled pattern.
 - Pups are normally born in the inter-tidal zone. Breeding season is usually June to July and pups can be born in spring.

- WHY?**
- - ☐ **Avoid Prosecution:** It is an offence to
 - Intentionally or recklessly disturb harbour seals
 - ☐ **Nature Conservation:** Current threats to the UK harbour seal population include
 - Illegal culling
 - Phocine Distemper Virus (PDV) – found in pesticides
 - Oil Spills
 - Entanglement in fishing nets and marine litter

- DO**
- - ✓ **IMMEDIATELY**
 - ✓ stop work and inform your line manager/MMO if you discover a harbour seal on or in close proximity to the site
 - ✓ Consult the MMO on sightings of harbour seals prior to works.

- DON'T**
- - X **DON'T**
 - ✗ work within 50m of a harbour seal.

No.	Grey Seal
------------	------------------

<p>WHAT?</p> <p>Grey seals are protected under The Wildlife and Natural Environment Act (Northern Ireland) 2011.</p> <p>You should always consult with the Marine Mammal Observer (MMO) before undertaking activity on a site where grey seals are known or suspected to be.</p> <p>Grey seals are known to use Mill Bay as a haul out site.</p>	
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- | |
|--|
| <p style="text-align: center;">IDENTIFICATION</p> <ul style="list-style-type: none"> - It has a rotund yet streamlined body with a layer of blubber and a short coat. When fully grown adult males may be only slightly larger than females: males can grow up to 2m long and weigh 233kg whereas females can reach up to 1.8m and weigh 155kg. - Grey seals have grey and brown fur, sometimes with a pattern of blotches; no ears visible; long muzzle; nostrils parallel; larger and darker than the harbour seal, with a flat or convex profile to its head. - Pups are born with soft white fur usually in late autumn and winter. |
|--|

- | |
|---|
| <p style="text-align: center;">WHY?</p> <p>Avoid Prosecution: It is an offence to</p> <ul style="list-style-type: none"> - Kill intentionally or recklessly disturb grey seals <p>Nature Conservation: Current threats to the UK grey seal population include;</p> <ul style="list-style-type: none"> - Illegal culling - Phocine Distemper Virus (PDV) – found in pesticides - Oil Spills - Entanglement in fishing nets and marine litter |
|---|

- | | |
|--|---|
| <p style="text-align: center;">DO</p> <p>✓ IMMEDIATELY</p> <ul style="list-style-type: none"> ✓ stop work and inform your line manager/MMO if you discover a grey seal on or in close proximity to the site ✓ Consult the MMO on sightings of grey seals prior to works. | <p style="text-align: center;">DON'T</p> <p>X DON'T</p> <ul style="list-style-type: none"> ✗ Work within 50m of a grey seal. |
|--|---|

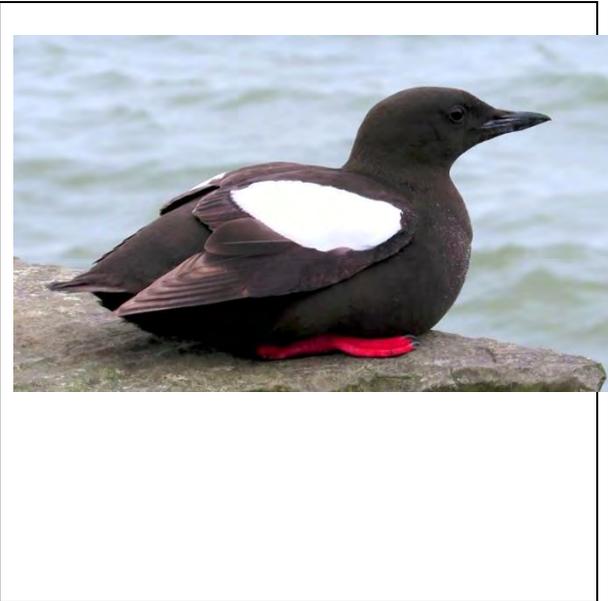
No.	Black Guillemot
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WHAT?

Black guillemots are protected under the Wildlife (Northern Ireland) Order 1985.

You should always consult with the Environmental Advisor before undertaking activity on a site where birds are known or suspected to be.

The cliffs along Church Bay are an important breeding site for this species. The breakwater is not considered suitable for nesting sites for black guillemots as the breakwater is overtopped during severe weather.



- IDENTIFICATION**
- - Black guillemots have striking black and white plumage and bright red feet. They are typically found in ones and twos, scattered around rocky islets.
 - In the summer, black guillemots nest in crevices on rocky shores and feeds in shallow water. Eggs are laid between May and June with both parents taking turns to incubate the eggs. Chicks will fledge after 40 days.

- WHY?**
- - Avoid Prosecution:** It is an offence to
 - Deliberately kill or capture by any method;
 - Deliberate destruction of, or damage to their nests, eggs or removal of their nests;
 - Taking their eggs in the wild and keeping these eggs, even if empty;
 - Deliberate disturbance of these birds particularly during the breeding and rearing period;
 - Keeping birds, the hunting and capture of which is prohibited.
 - Nature Conservation:** Current threats to the UK black guillemot population include;
 - Pollution
 - Degradation of marine and coastal habitats

- DO**
- - ✓ **IMMEDIATELY**
 - ✓ Stop work and inform your line manager/Environmental Advisor if you discover a black guillemot's nest.
 - ✓ Consult with the Environmental Advisor where nests are before starting any works.

- DON'T**
- - X **DON'T**
 - ✗ Disturb or move a black guillemot or its nesting site.

No.	Basking Shark
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<p>WHAT?</p> <p>Basking Sharks are protected under The Wildlife (Northern Ireland) Order 1985.</p> <p>You should always consult with the Marine Mammal Observer (MMO) before undertaking activity on a site where basking sharks may be found.</p> <p>Basking sharks have been spotted swimming in Northern Irish waters, particularly the north coast. In August 2011 a basking shark spent several hours in Portrush Harbour.</p>	
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- | |
|--|
| <p>- IDENTIFICATION</p> |
| <ul style="list-style-type: none"> • Body is streamlined and grey/brown in colour. Fully grown animals may grow up to 10m in length. The first dorsal fin is triangular, very large (up to 1 to 2m tall). • The head is dominated by a large conical snout and five enormous gill slits used to sieve plankton from the water. Mouth can be up to 1m across when open and contains numerous tiny hook-shaped teeth. • Basking sharks are migratory species searching for plankton to feed on. They can be found in coastal waters during the summer months, swimming slowly with their huge mouths open. Their life cycle is poorly understood. |

- | |
|---|
| <p>- WHY?</p> |
| <ul style="list-style-type: none"> □ Avoid Prosecution: It is an offence to <ul style="list-style-type: none"> - Kill, intentionally or recklessly disturb basking sharks. □ Nature Conservation: Current threats to the UK basking shark population include; <ul style="list-style-type: none"> - Shark fin trade - Accidental capture in fishing nets and traps - Collision with boats - Disturbance by public |

<p style="text-align: center;">- DO</p> <p>✓ IMMEDIATELY</p> <ul style="list-style-type: none"> ✓ stop work and inform your line manager and/or Marine Mammal Observer (MMO) if you see a basking shark ✓ Consult with the MMO before starting any works. 	<p style="text-align: center;">- DON'T</p> <p>X DON'T</p> <ul style="list-style-type: none"> ✗ Disturb a basking shark.
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Appendix E **Site Waste Management Plan**



Site waste management plan waste data form

You need to update the waste data form regularly when waste is processed or taken away, to reflect the progress of the project.

Project name:			
Date when this sheet was filled out:			
Stage of project (eg planning stage, during project delivery, end of project):			
Report number (projected waste arising should be report number one etc):			
Project address/location:			
Estimated cost of the project:			
Client:			
Principal contractor:			
Person responsible for waste management on site (name and job title):			
Person and company completing this form, if different from above:			
Sites your waste is going to (including permit, licence or registered exemption reference number and details):			
A	B	C	D
Details of the people removing the waste from your site (including their waste carrier registration number):			
A	B	C	D



		Quantity (specify volume or weight, eg m ³ , kg, T, number of skips)																
Types of waste arising (add more rows if needed)	EWC * code	Reused				Recycled						Disposed of				Relate to boxes above (ie insert A or B etc)		WTN ** complete?
		on site		off site		for use on site		for use off site		sent to recycling or reprocessing facility		land-fill		other than landfill (eg incinerated)		Waste site	Waste carrier	
Target/ achieved (T) / (A)		T	A	T	A	T	A	T	A	T	A	T	A	T	A			
Inert																		
Non-hazardous																		
Hazardous																		
Totals (m³, kg, T)																		
Performance score as % ***																		
SWMP target % ***																		

* European waste catalogue

** Waste transfer note, or consignment note for hazardous waste

*** There is an option to use this form as a measurement tool to work out savings etc against each waste stream



Rathlin Island Harbour Development



Habitats Regulations Screening Assessment

Document Control Sheet

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1 Introduction

1.1 Overview

- 1.1.1 Transport NI Data Division has commissioned its partner Amey to prepare a Habitats Regulations Assessment (HRA) screening report for proposed works to Rathlin Harbour. The proposed works are to construct a new ferry berthing facility in close proximity to the existing harbour at Church Bay, Rathlin Island. The proposed scheme is to facilitate a new passenger and vehicle ferry, due to come into operation in 2016.
- 1.1.2 The ferry service between Ballycastle and Rathlin Island is provided by two ferries – MV Canna and the MV Rathlin Express ferry. The MV Canna ferry is a car and passenger ferry and typically has 12 sailings per day during the summer timetable (1st April – 13th September). The MV Rathlin Express is a passenger ferry and it normally has eight sailings per day during the summer timetable. There are fewer sailings during the weekends and the winter timetable (15th September – 31st March). The new harbour is to facilitate the replacement ferry for the MV Canna.
- 1.1.3 Rathlin Island is designated as a Special Area of Conservation and a Special Protection Area. This HRA screening report will assess whether the conservation objectives for these designations will be compromised by the harbour works.

1.2 The Habitats Directive

- 1.2.1 The European Commission Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive), is transposed in Northern Ireland by The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 and The Conservation (Natural Habitats, etc) (Amendment) Regulations (Northern Ireland) 2012.
- 1.2.2 The Habitats Directive provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of interest to the EU in a favourable condition.
- 1.2.3 Under Article 6(3) of the Habitats Directive *'any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the*

implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public’.

1.2.4 Regulation 43(1) of the Habitats Regulations (NI) requires that:

“(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for a plan or project which –

a) is likely to have a significant effect on a European site in Northern Ireland (either alone or in combination with other plans or projects), and;

b) is not directly connected with or necessary to the management of the site, shall make an appropriate assessment of the implications for the site in view of that site’s conservation objectives.”

1.2.5 This report comprises a Stage 1 screening assessment to determine if the project has the potential to have significant effects on the Natura 2000 sites with respect to the precautionary principle and the ruling of the Waddenzee case by the European Court of Justice C127/02. The Waddenzee case clarified what ‘likely to have a significant effect’ means and ruled that a project should undergo an appropriate assessment *‘if it cannot be excluded, on the basis of the objective information, that it will have a significant effect on the site’.*

1.3 The Habitats Regulations Assessment Process

1.3.1 The European Commission Methodological guidance on the provision of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC recommends a four stage approach in carrying out a Habitats Regulations Assessment as follows:

Stage 1 – Screening

1.3.2 Determines whether a plan or project, either alone or in combination with other plans or projects, is likely to have a significant effect upon a Natura 2000 site.

1.3.3 If the screening process identifies effects to be significant, potentially significant or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2.

Stage 2 – Appropriate Assessment

- 1.3.4 Considers the impact on the integrity of the Natura 2000 sites of the project or plan **either alone or in combination with other plans or projects with respect to the site's** structure and function and its conservation objectives. Additionally, where there are adverse impacts, it assesses the potential mitigation for those impacts.

Stage 3 – Assessment of Alternative Solutions

- 1.3.5 Examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 sites.

Stage 4 – Assessment where no Alternative Solutions Exist and where Adverse Impacts Remain

- 1.3.6 Assess compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the plan or project should proceed.
- 1.3.7 Each stage determines whether the next stage in the process is required, if for example, it is concluded that at the end of Stage 1 there will be no significant impacts on the Natura 2000 sites, there is no requirement to proceed to Stage 2.

1.4 Scope of this Report

- 1.4.1 It is the responsibility of the Competent Authority to undertake this assessment and for the purposes of the Habitats Directive, Causeway Coast and Glens Borough Council, as the planning authority, are the Competent Authority. Amey have been commissioned to provide the information (this report) to allow the Council to make the Habitats Regulations Assessment.
- 1.4.2 This report also incorporates the HRA undertaken by the Department of the Environment (DoE) Marine Division with respect to the dredging and disposal aspects of the project which requires a marine licence.
- 1.4.3 In addition, Amey met with representatives of NIEA and DoE in November 2015 to agree the scope of the HRA. Information on the qualifying features of the designated sites was provided by the Marine Conservation Department and included within this updated HRA.

1.4.4 This Habitats Regulations Assessment Screening Report outlines whether or not the proposed project is likely to have a significant effect upon any Natura 2000 site by **determining if a site's conservation objectives will be compromised.**

1.5 Layout of the Report

1.5.1 This report is structured as follows:

- **Chapter 2: Natura 2000 sites.** This Chapter describes each Natura 2000 site for which an HRA screening matrix is to be completed, including details on qualifying features and conservation objectives.
- **Chapter 3: Proposed Project/Works.** This Chapter describes what the proposed project or works involves, including construction methodology where appropriate.
- **Chapter 4: Test of Likely Significance.** This Chapter discusses the potential likelihood and significance of effects of the proposed project or works on each Natura 2000 site.
- **Chapter 5: Conclusion and Recommendations.** This Chapter summarises the findings of the report, detailing whether there are any likely significant effects on each Natura 2000 site and whether or not the next stage of assessment is required.

1.5.2 Completed screening matrices for each relevant Natura 2000 site are included in **Appendix A**. These include the screening matrices undertaken by DoE for the dredging and disposal aspects of the project.

1.6 Guidance and Methodology

1.6.1 The assessment has been completed using the following guidance:

- The European Commission's '*Managing Natura 2000 Sites (The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC)*' (Ref. 1.1);
- The Northern Ireland Environment Agency's '*Notes on Habitat Regulations Assessment*'. (Ref 1.2)
- Volume 11, Section 4, Part 1 of the Design Manual for Roads and Bridges (DMRB) (Ref.1.3); and
- The Habitats Regulations Assessment Handbook (Ref 1.4).

1.8.2 A site visit was also undertaken by an experienced ecologist in August 2015 to gain an appreciation of the site where the proposed works are to be carried out and to ascertain the habitats affected. An additional site visit was undertaken in December 2015 as part of the habitat survey for the Environmental Statement for this project and the observations made during this survey have also been incorporated into the HRA.

2 Natura 2000 Sites

2.1 General

2.1.1 In May 1992 European Union governments adopted legislation designed to protect the most seriously threatened habitats and species across Europe (Ref. 2.1). This legislation is called the Habitats Directive and complements the Birds Directive adopted in 1979. These directives implemented the creation of a network of sites called Natura 2000. The Birds Directive requires the establishment of Special Protection Areas (SPAs) for birds. The Habitats Directive similarly requires Special Areas of Conservation (SACs) to be designated for other species and for particular habitats. Together, SPAs and SACs make up the Natura 2000 series. All EU Member States contribute to the network of sites in a Europe wide partnership.

2.1.2 DMRB Volume 11, Section 4, Part 1 HD44/09 '*Assessment of Implications (of Highways and/or Road Projects) on European Sites (including Appropriate Assessment)*' advises that any Natura 2000 sites within 2km of the project boundary should be assessed. Furthermore where a project will potentially cross or will lie adjacent to, upstream of, or downstream of, a watercourse which is designated in part or wholly as a SAC or SPA, consideration should be given to potential impacts on European Sites within the same river, lake or reservoir catchment, or at greater distance if an effect pathway exists.

2.1.3 A desk top study using the Northern Ireland Environment Agency Designated Areas Interactive Map (Ref. 2.2) was undertaken to determine the presence of any Natura 2000 sites with a hydrological connection or other effect pathway to the harbour at Rathlin. From this it was determined that the site is partially within or hydrologically connected via ocean currents to the following sites (see **Figure 1**):

- Rathlin Island SAC
- Rathlin Island SPA
- Skerries and Causeway SAC
- Sheep Island SPA
- North Antrim Coast SAC

2.1.4 In addition, due to the highly mobile nature of the species, potential effects on the following Annex II species are also considered:

- Grey seal *Halichoerus grypus* (qualifying feature of the Maidens SCI).
- Harbour seal *Phoca vitulina* (qualifying feature of Strangford Lough and Murlough SACs)

2.1.5 Sheep Island SPA is located approximately 11km south west of Rathlin harbour and is designated for its breeding population of great cormorant *Phalacrocorax carbo*. Due to the mobile nature of this species and the potential for the birds to feed in the waters around Rathlin, this SPA is included in this assessment.

2.1.6 The screening exercise will focus on establishing if the works associated with the new pier and slipway are likely to have a significant effect on any of the sites or species, either during construction, or during operation of the new ferry.

2.1.7 The assessment has been informed by the guidance provided in Volume 11, Section 4 of the Design Manual for Roads and Bridges (DMRB) - Assessment of Implications on European sites and the Habitats Regulations Handbook, with particular reference to guidance on screening for likely significant effects. The template included on the DoE NIEA website has been used as a working template to inform the assessment and these are enclosed in **Appendix A** of this document.

2.2 Description of Natura 2000 Sites

Rathlin Island SAC

2.2.1 Rathlin island is located approximately 6km north of Ballycastle and is a large inhabited marine island. There are basalt and chalk cliffs, as well as several sea stacks to the north and west shores of the island. The south and east shores are more gently sloping with areas of maritime grassland and rocky shore. The length of the coastline is approximately 30km. The island is surrounded by a wide range of coarse sediment and rocky habitats. Strong tidal streams prevail around most of the island. A wide range of species (530 species) have been recorded around the island. As a result of the strong tides, there is very little silt anywhere around the island.

2.2.2 The island has been designated for the following qualifying features. Annex I habitats that are a primary reason for selection of this site:

- Reefs.
- Vegetated sea cliffs of the Atlantic and Baltic Coasts.
- Submerged or partially submerged sea caves.

2.2.3 Annex II habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Sandbanks which are slightly covered by sea water all the time.
- Annual vegetation of drift lines.

2.2.4 Information on the location of the qualifying features was gained from consultation with DoE. The location of the sandbank and reef features in relation to the site boundary is shown on **Figure 2**. At the meeting with DoE and NIEA, it was confirmed that none of the marine qualifying features of this site are present within the development area (J Breen, pers comms).

Rathlin SPA

2.2.5 The boundary of the SPA designation is entirely coincident with the boundary of the SAC. The SPA boundary includes an area of sea around the island which is used by the seabirds which occur around the coast. The qualifying features of the site are as follows.

2.2.6 The site qualifies under Article 4.1 of Birds Directive by supporting nationally important breeding populations of peregrine falcon *Falco peregrinus*.

2.2.7 The island supports chough *Pyrrhocorax pyrrhocorax*.

2.2.8 The site qualifies under Article 4.2 by supporting breeding populations of:

- razorbill *Alca torda*,
- black-legged kittiwake *Rissa tridactyla*, and
- common guillemot *Uria aalge*.

2.2.9 The site also qualifies under Article 4.2 by regularly supporting over 20 000 breeding seabirds.

2.2.10 Rathlin supports the following breeding species which are of importance: fulmar *Fulmarus glacialis*, shag *Phalacrocorax aristotelis*, eider *Somateria mollissima*, common gull *Larus canus*, herring gull *Larus argentatus*, lesser black-backed gull *Larus fuscus*, black guillemot *Cepphus grylle*, puffin *Fratercula artica* and manx shearwater *Puffinus puffinus*.

Skerries and Causeway SAC

- 2.2.11 This site is an entirely marine site and is located along the north Antrim Coast. The SAC contains a wide variety of ground types, depths, tidal strength and exposure to wave action. This produces a complex mosaic of habitats that contain many rare and priority species, most of which are present as a result of the warming influence of the Gulf Stream, the variation in underlying geology of the reef, the complex tidal currents and the interaction between reef and sandbank.
- 2.2.12 Annex I habitats that are a primary reason for selection:
- Sandbanks which are slightly covered by sea water all the time
 - Reefs
 - Submerged or partially submerged sea caves
- 2.2.13 Annex II species present as a qualifying feature, but not a primary reason for selection:
- Harbour porpoise *Phocoena phocoena*.

North Antrim Coast SAC

- 2.2.14 The site is centred **on the Giant's Causeway but extends from near Runkerry Strand in the west to White Park Bay in the east**. The dominant features are the high basalt cliffs and associated habitat that extends from the west of the site to beyond Dunseverick Castle and the high chalk cliffs that back White Park Bay. The grassland and dune communities are located at White Park Bay while a variety of grasslands are found along the active cliff series.
- 2.2.15 Annex I habitats that are a primary reason for selection of this site:
- Vegetated sea cliffs of the Atlantic and Baltic Coasts.
- 2.2.16 Annex I habitats present as a qualifying feature but not a primary reason for selection of this site:
- Annual vegetation of drift lines
 - Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
 - Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)
 - Fixed coastal dunes with herbaceous vegetation (grey dunes)
 - Species rich *Nardus* grassland, on silicious substrates in mountain areas (and submountain areas in Continental Europe)

2.2.17 Annex II species that are a primary reason for selection of this site

- Narrow-mouthed whorl snail *Vertigo angustior*.

Sheep Island SPA

2.2.18 Sheep Island is located off the north coast of County Antrim. It is a small, exposed island with steep cliffs and rocky shores. It is designated under Article 4.2 for its breeding colony of cormorant *Phalacrocorax carbo*.

2.2.19 A summary of the qualifying features and the vulnerability of the sites are given in Table 2.1.

Table 2:1: Summary of Natura 2000 sites

Site Name	Designation and Code	Qualifying Features		Current Conditions and threats
		Habitats	Species	
Rathlin SAC	SAC - UK0030055	<p>Primary reason for site selection:</p> <p>Supports reefs, vegetated sea cliffs and sea caves, all for which this is considered to be one of the best areas in the United Kingdom.</p> <p>Qualifying features but not primary reason for site selection:</p> <p>Supports sandbanks and annual vegetation of drift lines for which the area is considered to support a significant presence.</p>	<p>Primary reason for site selection:</p> <p>None</p> <p>Qualifying features but not primary reason for site selection:</p> <p>None</p>	Some commercial fishing such as pot fishing occurs within the site. The effect of the current fishing activities on the sea cave habitat is probably minimal. Habitat loss/damage caused by man-made structures and recreational use is also thought to be minimal.
Rathlin SPA	SPA – UK9020011	<p>Primary reason for site selection:</p> <p>N/A</p>	<p>Primary reason for site selection:</p> <p>Supports breeding populations of European importance of peregrine falcon, black-legged kittiwake, common guillemot and razorbill.</p> <p>Also supports chough, fulmar, puffin, herring gull, lesser black-backed gull and common gull, as well as an important assemblage of seabirds.</p>	While no significant threats can be identified at present, the seabird colony could be at risk from a potential lack of available food and the risk of oil pollution/oil spills. Similarly, no significant threats can be identified for the peregrine falcons though they could be potentially at risk from persecution.
Skerries and	SAC –	<p>Primary reason for site selection:</p>	<p>Primary reason for site selection:</p>	This area has been fished in the past with the resultant loss of a <i>Modiolus modiolus</i> (horse mussel) biogenic reef and a rare <i>Atrina</i>

Site Name	Designation	Qualifying Features		Current Conditions and threats
Causeway SAC	UK0030383	Supports sandbanks, reefs and sea caves for which this is considered to be one of the best areas in the UK.	Supports population of harbour porpoise for which this area is considered to support a significant presence.	<i>fragilis</i> (fan mussel) bed. Appropriate management will be necessary especially to protect low lying reef areas, the eelgrass bed and stable sediments from threats such as mobile fishing gear, caves from threats such as diffuse pollution through river outflow, and harbour porpoise from threats such as the loss of feeding grounds or seismic and sonar disturbance.
North Antrim Coast SAC	SAC – UK0030224	Primary reason for site selection: Site supports vegetated sea cliffs for which this is considered to be one of the best areas in the UK. It supports a significant presence of annual vegetation of drift lines, Atlantic salt meadows, shifting dunes, fixed dunes and species rich <i>Nardus</i> grassland.	Primary reason for site selection: Supports population of narrow-mouthed whorl snail for which this is considered one of the best areas in the UK.	Historical overgrazing of the dunes and associated grasslands have been addressed by the modification of the grazing regime. Management issues at Giant's Causeway are dealt with in the context of the National Trust's site management plan. Notable issues include maintenance and restoration of heath. Steeper-face grasslands are undergrazed; the impact of increased rankness will be monitored. The long-term management of these mesophile grasslands may require use of specialist 'old breed' livestock. Visitor impact at this very popular natural attraction is well managed, with maintenance of defined paths preventing site damage. Potentially the dune element of the site could be detrimentally affected by changes to the supply of sand to the dunes although this is not a problem at present. However the dynamic nature of the coastline here means that dune erosion and regrowth are a natural component of the site.
Sheep Island SPA	SPA – UK9020021	N/A	Primary reason of site selection: Supports breeding population of cormorant.	While no significant threats can be identified at present, the cormorant colony could be at risk from a potential lack of available food. Although a coastal site, this colony feeds primarily on inland rivers and large lakes.

2.3 Conservation Objectives

Rathlin SAC

- 2.3.1 Habitat descriptions for the qualifying features are available on the Joint Nature Conservation Committee (JNCC) website and summarised below.
- 2.3.2 Reefs – Rathlin Island is surrounded by a wide range of rocky habitats. Along the south-west coast there is a very steep slope of large, stable boulders extending below 50m in places. The boulders support a wide range of species, some of which are rare in Northern Ireland. The north-west of the island consists of a shallow shelf 10-100m wide along the base of the cliffs, followed by a vertical underwater cliff which starts at 20-30m and descends to over 100m. The circalittoral zone of the east coast is mostly dominated by hydroid and sponge dominated biotopes on bedrock, boulders and cobbles among coarse gravel. The qualifying reef habitats are found offshore mostly on the north side of the island, although some reefs are located to the east and south of the island (see **Figure 2**).
- 2.3.3 Submerged sea caves – The island includes well developed examples of both partially submerged and submerged caves and overhangs in limestone and basalt in a strong tidal stream. Submerged caves generally occur at depths ranging from 20 to over 100m.
- 2.3.4 Vegetated sea cliffs – Rathlin Island represents an extensive area of hard cliff along the exposed northern coastline of Northern Ireland. The site consists of very high vertical sea cliffs and sea stacks to the north and east, with more gentle slopes on the eastern coast. As a result of the variations in height and slopes, exposure and rock type, a wide range of maritime cliff vegetation communities is present.
- 2.3.5 Annual vegetation of drift lines – This habitat occurs on deposits of shingle lying at or above mean high water spring tides. The types of deposit involved are generally at the lower end of the size range of shingle (2-200mm diameter) with varying amounts of sand interspersed in the shingle matrix. These shingle deposits occur as fringing beaches that are subject to periodic displacement or overtopping by high tides and storms. The distinctive vegetation, which may form sparse cover is ephemeral and composed of annual or short-lived perennial species. Level or gently-sloping, high level mobile beaches, with limited human disturbance support the best examples of this vegetation.

2.3.6 Sandbanks which are slightly covered by sea water all the time – This habitat consists of sandy sediments that are permanently covered by shallow sea water, typically at depths of less than 20m below chart datum. The habitat comprises distinct banks which may arise from horizontal or sloping plains of sandy sediment. The species diversity is determined by sediment type together with a variety of other physical, chemical and hydrographic factors. This habitat can be categorised into four main sub-types: gravelly and clean sands; muddy sands; eelgrass beds and maerl beds. This habitat is not located within the area of development in Church Bay, although it is located to the south of the development area. Another area of sandbank is located offshore on the eastern side of the island, as shown on Figure 2.

- 2.3.7 The conservation objective for the SAC is to maintain (or restore where appropriate) the
- reefs,
 - submerged or partially submerged sea caves,
 - vegetated sea cliffs of the Atlantic and Baltic Coasts,
 - annual vegetation of drift lines,
 - sandbanks which are slightly covered by sea water all the time, to favourable condition.

2.3.8 Each SAC feature has a number of component objectives as outlined in table 2.2 below.

Table 2:2: Component objectives for Rathlin SAC qualifying features

Feature	Component objective
Reefs	Maintain and enhance as appropriate the extent of the reefs.
	Allow the natural processes which determine the development, structure, function and extent of the reefs to operate appropriately.
	Maintain and enhance, as appropriate the species diversity within this habitat.
Submerged or partially submerged sea caves	Maintain and enhance, as appropriate the extent of the submerged or partially submerged sea caves.
	Allow the natural processes which determine the development, structure, function and extent of the submerged or partially submerged sea caves, to operate appropriately.

Feature	Component objective
	Maintain and enhance, as appropriate, the species diversity within this habitat.
Vegetated sea cliffs of the Atlantic and Baltic coasts	Maintain the extent of vegetated sea cliff subject to natural processes.
	Allow the natural processes which determine the development and extent of vegetated sea cliffs to operate appropriately.
	Maintain and enhance, as appropriate, range of maritime rock crevice and cliff ledge communities.
	Maintain and enhance, as appropriate, range of sea-bird cliff communities.
	Maintain and enhance, as appropriate, range of maritime grassland communities.
	Maintain and enhance, as appropriate, range of maritime heath communities.
	Maintain and enhance, as appropriate, range of transitions and other communities.
	No increase in status of non-native species, undesirable invasive species and species not characteristic of typical communities.
	Maintain and enhance, as appropriate, status of rare and notable species.
	Monitor cliff top or near cliff management activities to ensure they do not lead to loss or enrichment of sea cliff associated communities.
Annual vegetation of drift lines	Maintain and enhance the extent of annual vegetation of drift lines subject to natural processes.
	Allow the natural processes which determine the development and extent of annual vegetation of drift lines to operate appropriately.

Feature	Component objective
	Maintain and enhance, as appropriate, the species diversity within this community including the presence of notable species.
Sandbanks which are slightly covered by sea water	Allow the natural processes which determine the development, structure and extent of sandbanks which are slightly covered by sea water all the time, to operate appropriately.
	Maintain and enhance, as appropriate, the species diversity within this habitat.
	Maintain the extent and volume of sandbanks which are slightly covered by sea water all the time, subject to natural processes.

Rathlin SPA

- 2.3.9 The conservation objectives for the SPA are as follows.
- 2.3.10 There is no significant decrease in the population of breeding birds against national trends, caused by on-site factors.
- 2.3.11 The area of natural and semi-natural habitats used by or potentially usable by feature bird species is maintained or enhanced subject to natural processes.

Skerries and Causeway SAC

- 2.3.12 Conservation objectives are as follows.
- 2.3.13 To avoid deterioration of the qualifying habitats and species thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for the qualifying interest.
- 2.3.14 To ensure for the qualifying habitats that the following are maintained in the long term, subject to natural change:
- Extent of the habitats on site.
 - Distribution of the habitats within the site.
 - Structure and function of the habitats.
 - Processes supporting the habitats.
 - Distribution of typical species of the habitats.

- Viability of typical species as components of the habitat.
- No disturbance of typical species of the habitat.

North Antrim Coast SAC

2.3.15 The conservation objective for this site is as follows.

2.3.16 To maintain (or restore where appropriate) the:

- annual vegetation of drift lines,
- Atlantic salt meadows,
- fixed dunes with herbaceous vegetation,
- shifting dunes along the shoreline with *Ammophila arenaria*,
- species rich *Nardus* grassland, on siliceous substrates in mountain areas (and sub-mountain areas in continental Europe),
- vegetated sea cliffs on the Atlantic and Baltic coasts,
- narrow-mouthed whorl snail *Vertigo angustior*, to favourable condition.

2.3.17 Each qualifying feature has a number of component objectives and these are set out in table 2.3 below.

Table 2:3: component objectives for North Antrim Coast SAC

Feature	Component objective
Annual vegetation of drift lines	Maintain and enhance the extent of annual vegetation of drift lines subject to natural processes
	Allow the natural processes which determine the development and extent of annual vegetation of drift lines to operate appropriately
	Maintain and enhance, as appropriate, the species diversity within this community including the presence of notable species
Atlantic salt meadows	To maintain or extend, as appropriate, the area of saltmarsh, subject to natural processes
	To maintain or enhance, as appropriate, the composition of the saltmarsh communities

Feature	Component objective
	To maintain transitions between saltmarsh communities and to other adjoining habitats
	To permit the continued operation of formative and controlling natural processes acting on the saltmarsh communities
Fixed dunes with herbaceous vegetation (grey dunes)	Maintain and expand the extent of existing species-rich fixed dune
	Maintain and enhance species diversity within the community including the presence of notable species
	Maintain the diversity and quality of habitats associated with the fixed dunes, e.g. neutral grasslands, scrub, especially where these exhibit natural transition to fixed dune vegetation
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	Maintain and enhance the extent of white dunes subject to natural processes
	Allow the natural processes which determine the development and extent of white dunes to operate appropriately
	Maintain and enhance, as appropriate, the species diversity within this community
Species rich <i>Nardus</i> grassland, on siliceous substrates in mountain areas (and sub-mountain areas in continental Europe)	Maintain and expand the extent of existing species-rich dry calcareous grasslands
	Seek nature conservation management over suitable areas immediately outside the cSAC where there is possibility of restoring calcareous grassland
	Maintain the diversity and quality of habitats associated with the calcareous grassland, e.g. acid grasslands, wet heath, scrub, especially where these exhibit natural transition to calcareous grassland

Feature	Component objective
Vegetated sea cliffs on the Atlantic and Baltic coasts	Maintain the extent of vegetated sea cliff subject to natural processes
	Allow the natural processes which determine the development and extent of vegetated sea cliffs to operate appropriately
	Maintain and enhance, as appropriate, range of maritime rock crevice and cliff ledge communities
	Maintain and enhance, as appropriate, range of sea-bird cliff communities
	Maintain and enhance, as appropriate, range of maritime grassland communities
	Maintain and enhance, as appropriate, range of maritime heath communities
	Maintain and enhance, as appropriate, range of transitions and other communities
	No increase in status of non-native species, undesirable invasive species and species not characteristic of typical communities
	Maintain and enhance, as appropriate, status of rare and notable species
	Monitor cliff top or near cliff management activities to ensure they do not lead to loss or enrichment of sea cliff associated communities
<i>Vertigo angustior</i>	To maintain (and if feasible enhance) population numbers and distribution
	To maintain (and if feasible enhance) the extent and quality (composition and structure) of suitable snail habitat, particularly the fenny grassland

Sheep Island SPA

2.3.18 The conservation objective is: to maintain each feature in favourable condition. Component objectives are set out in table 2.4 below.

Table 2:4: Component objectives for Sheep Island SPA

Feature	Component objective
Cormorant breeding population	To maintain or enhance the population of the qualifying species.
	Fledging success sufficient to maintain or enhance population.
	To maintain or enhance the range of habitats utilised by the qualifying species.
	To ensure that the integrity of the site is maintained.
	To ensure there is no significant disturbance of the species.
	To ensure that the following are maintained in the long term – <ul style="list-style-type: none"> • 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 and supporting processes of habitats supporting the species.
Habitat extent	To maintain or enhance the area of natural and semi-natural habitats used or potentially usable by feature bird species, subject to natural processes.

2.4 Other features

2.4.1 The grey seal is a qualifying feature of the Maidens Site of Community Importance (SCI). Although the Maidens is located approximately 44km south east of the harbour at Rathlin, grey seals are known to use the coastline around Rathlin for breeding and hauling out. **The conservation objective for the seals at the Maidens is 'subject to natural change, maintain the population of grey seals' at favourable conservation status.**

- 2.4.2 The main threat of the seal population of the Maidens is from shooting by fishermen, who can request permission to kill seals if they believed them to be seriously interfering with fishing activity and removing catch from nets and pots.
- 2.4.3 There are a number of haul out sites located around the Rathlin coastline that are used by grey seals. On the day of the site visit to the harbour in December, a number of grey seals were observed hauled out on the beach between the breakwater and the harbour as well as within the harbour itself. Information from local residents indicate that seals also use the beaches at Mill Bay to the south of the harbour and at Rue Point, on the southern tip of the island.
- 2.4.4 Harbour seals are a qualifying feature of Strangford Lough SAC and Murlough Lough SAC. Although these sites are some distance from Rathlin, harbour seals will use the waters around the north coast for foraging and are known to use the coastline around Rathlin for hauling out. The conservation objective for the harbour seal populations at these sites is to maintain the feature at favourable conservation status.

3 The Proposed Project

3.1 Description of the Project

- 3.1.1 The project is for the provision of a new ferry berthing facility within the existing harbour area at Church Bay on the island. This is to facilitate a new larger passenger and vehicle ferry. A new pier and slipway will be constructed adjacent to the existing breakwater, located west of the existing mooring points for the current ferries.
- 3.1.2 The construction works will include a new ferry ramp, berthing pier, dredging of the harbour area, construction of a hard standing area for vehicles, mooring bollards, fendering system, lighting and road access.
- 3.1.3 The construction of the pier and slipway and associated new waiting area will result in the loss of approximately 0.2ha of existing shoreline and terrestrial habitat.
- 3.1.4 Indicative drawings showing the site layout have been supplied by TNI and are included as **Figures 3, 4 and 5.**

3.2 Indicative Construction Methodology

- 3.2.1 At time of writing the final construction methodology had not been determined as the project will be contractor design and build. However an indicative detailed construction methodology was provided by the client as set out below. Should the final construction methodology be different to that described, the screening exercise should be revisited.

Dredging and disposal

- 3.2.2 It is most likely that dredging works will be undertaken using a large tracked excavator working from a rock causeway that will be constructed above high water level. The rock causeway will itself be constructed from hardcore fill delivered to the site by a barge and will be located along the alignment of the proposed key wall. This causeway will allow for both access for dredging and as the platform for piling operations. Once dredging and piling have been completed, the causeway material will be used as the backfill for the sheet pile wall.

3.2.3 As a result of the small predicted quantities of dredging (100m³) it is proposed that the resultant material will also be used as backfill to the rear of the new sheet piled wall. If however this material is considered to be unsuited for use there is a facility to dispose at sea and a licence will be in place. The disposal site will be outside of the SAC/SPA boundary.

3.2.4 Maximum dredging is not expected to exceed 3.5m.

Rock armour

3.2.5 Rock armour will be utilised to form the slope supporting the new ferry ramp above the MLWS and hardstanding area. These armour units will be placed in two layers using a large tracked excavator at a slope of 1:2. The excavator will work from the hardstanding areas above MHWS.

Sheet pile quay wall

3.2.6 The steel sheet pile quay wall will be installed from the hardcore causeway by using a crane piling rig with assistance from a large tracked excavator. Piles will be aligned using guides and pitched in groups before driving.

3.2.7 Piles will be driven through a layer of sand and gravel and then keyed 1.0m into the limestone bedrock using a diesel piling hammer. The works will begin at the end of the pier and continue to work back towards land. A reinforced concrete capping beam will be poured using concrete to top off the sheet pile wall.

3.2.8 Once the piles have been installed they will then be backfilled with hardcore material to form the surface of the quay and compacted into layers by a vibrating drum roller. The deck surface will be reinforced concrete. The formation of the deck will be graded using a large tracked excavator to achieve the required 1:40 profile and shuttering. Steel mesh will be laid between the shutters as a reinforcement and concrete placed to the required depth and gradient. The concrete will then be compacted using a mechanical vibrating poker and then finished with a tamped surface.

Ferry ramp

3.2.9 The ferry ramp will be constructed from reinforced concrete. To allow the works to be conducted in dry conditions, temporary works in the form of clay bunds and sheet piles will be used. Approximately 50% of the new ferry ramp will be constructed below the mean high water spring.

- 3.2.10 **The ramp's formation will be graded using a large tracked excavator to achieve the required 1:8 profile and shuttering placed. Steel mesh will be laid between the shutters as a reinforcement and concrete placed to the required depth and gradient. The concrete will then be compacted using a mechanical vibrating poker and then finished with a tamped surface.**
- 3.2.11 The ferry ramp will be retained below the mean high water spring using a combination of concrete wall and rock armour revetment. The concrete wall will be mass concrete and constructed within the cofferdam installed for the construction of the ferry ramp. These armour units will be placed in two using a large tracked excavator at a slope of 1:2

Hardstanding Area

- 3.2.12 The hardstanding area will be formed in hardcore and then finished in asphalt. The area will also be above the mean high water spring.
- 3.2.13 The ramp will be graded using a large tracked excavator to achieve the required profile and the required road kerbs placed to retain the formation material. All hardcore sub bases will be compacted using a vibrating drum roller to achieve the required level and gradient. A bitmac base (60mm deep) will be laid by a road paving machine and an asphalt wearing course (40mm) will also be laid by a road paving machine in addition to coated chippings placed by hand and assisted by a tractor with a front shovel, then compacted by a road roller.

Site works

- 3.2.14 At time of writing it was expected that site works will commence in March 2016 and be completed by October 2016 to coincide with the delivery of the new ferry.
- 3.2.15 During the works the contractor will be required to adhere to pollution prevention guidelines and follow best practice measures to ensure no adverse effects on water quality. The following will be adhered to as a minimum:
- Pollution Prevention Guideline (PPG) 1: Understanding Your Environmental Responsibilities - Good Environmental Practices.
 - PPG2: Above ground oil storage tanks.
 - PPG 5: Works and maintenance in or near water.
 - PPG 6: Working at construction and demolition sites.

- PPG 21: Incident Response Planning.
- PPG 22: Dealing with spillages on highways.
- Construction Industry Research and Information Association (CIRIA) C648: Control of water pollution from linear construction projects.
- Northern Ireland Environment Agency. Road Schemes and the Protection of the Water Environment, A Water Management Unit Guidance Note.

3.2.16 A spillage response plan will be in operation for the duration of the works. Spill kits will be kept close to the working area and staff trained in their operation.

3.3 Project Mitigation

3.3.1 The project requires planning permission from the local authority and a Marine Construction Licence from the DoE. Any conditions applied by these authorities will be incorporated into the construction procurement process and documents to ensure compliance.

3.3.2 Construction impacts on the marine environment and water quality will be managed through a Construction Environmental Management Plan. The contractor will be required to adhere to Pollution Prevention Guidelines and best practice measures to prevent pollution of the water environment. A spillage response plan will be in place for the duration of the works. All site staff will be trained in the use of spill kits, which will be kept within the works area and easily available.

3.3.3 Following consultation with NIEA Marine Conservation, and considering the potential for disturbance to seals during the pupping season, it was determined that the construction works would be undertaken under licence to prevent an offence under the Wildlife Order (NI) 1985. This licence will be applied for by the client/contractor separate to the planning application.

3.3.4 **Piling works will be undertaken following the JNCC guidance 'Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise'.**

- 3.3.5 Where possible, piling works will be timed to avoid the pupping season for harbour seals which is June to July, although the main pupping season for grey seals is September to November. **Piling will adhere to guidelines in the JNCC guidance 'Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise'.**
- 3.3.6 As a condition of the licence a marine mammal observer (MMO) will be required for the duration of the works, particularly during any piling works. A mitigation zone around the site for piling will be agreed with NIEA prior to works commencing, and will be no less than 500m from the pile location. This is the area within which the MMO will visually monitor for marine mammals before piling commences. The visual search by the MMO before piling starts is recommended to be at least 30 minutes. If marine mammals are observed within the specified mitigation zone, the start of activity will be delayed until the animals have moved away. To minimise disturbance from piling, the soft start method will be used for the piling rig. The soft start duration should be a period of not less than 20 minutes. If a marine mammal enters the mitigation zone during the soft start, the piling will cease or power not further increased until the mammal exits the mitigation zone and there is no further detection for 20 minutes.
- 3.3.7 In addition to visual observations by the MMO, the use of acoustic deterrent devices (ADDs) will also be applied by the contractor should piling be used. These devices have the potential to exclude animals from the piling area by using underwater noise to deter them from entering the works area. The ADDs will be positioned across the harbour mouth in advance of piling to prevent marine mammals entering the harbour. The use of these ADDs will be subject to the conditions placed on the Wildlife Licence and will be applied under the direction of the MMO.
- 3.3.8 Piling will only be undertaken during the pupping season for harbour seals (June and July) if a Wildlife Licence for this operation is in place. The conditions of this wildlife licence will include the application of acoustic deterrent under the direction of Marine Mammal Observer as detailed above.
- 3.3.9 As large boulders within the intertidal area are currently utilised by seals for hauling out it is recommended that any large boulder within the development limit be moved to the east of the proposed development at a similar tidal depth and retained within the harbour area to maintain the extent of haul out habitat.

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- 3.3.10 Biosecurity measures will be implemented by the contractor to prevent the spread of non-native marine species. Machinery will be checked, cleaned and disinfected before transport to Church Bay and again before leaving Rathlin.
- 3.3.11 As works are to be undertaken during the breeding season for seabirds, an ornithological observer will be present during the works to ensure there will be no disturbance to birds. It is expected that the Marine Mammal Observer will be qualified to undertake this additional duty.

4 Test of Likely Significance

4.1 Existing Environment

- 4.1.1 A site visit was undertaken on 24 August 2015 to Rathlin harbour to gain an appreciation of the habitats in the vicinity of the harbour area.
- 4.1.2 The existing passenger ferry and the vehicle ferry currently dock at the slipway in Church Bay. The location of the new slipway is approximately 155m due west of the existing slipway, adjacent to the breakwater. The site is composed of an area immediately adjacent to the breakwater with an area of cobbly beach, rock outcrops and grassland, as shown on Photograph 4.1.



Photograph 4:1: Proposed location of new slipway – existing breakwater

- 4.1.3 The existing breakwater is a man made structure composed of large boulders. The habitat immediately adjacent is a rocky shore, with large rock outcrops. On the day of the survey, the tide was out and the beach had common seaweed species such as bladder wrack *Fucus vesiculosus* and sea lettuce *Ulva lactuca*, with occasional limpets *Patella vulgata*, noted on the hard substrate, as shown on Photograph 4.2.



Photograph 4:2: Beach at breakwater

4.1.4 Above the high tide mark, the grassland area was composed of a variety of species with the most common being broad leaved dock *Rumex obtusifolius*, sea mayweed *Tripleurospermum maritimum*, field bindweed *Convolvulus arvensis*, common cleavers *Galium aparine* with perennial ryegrass *Lolium perenne*, ragwort *Senecio jacobaea*, red fescue *Festuca rubra*, ribwort plantain *Plantago lanceolata*, bramble *Rubus fruticosus*, nettle *Urtica dioica*, red goosefoot *Chenopodium rubrum*, sea sandwort *Honckenya peploides* and vetch *Vicia* spp. This is shown on Photograph 4.3.



Photograph 4:3: Grassland adjacent to breakwater at harbour

- 4.1.5 On the day of the survey occasional sea birds were noted foraging in and around the harbour area, such as gulls and cormorants.
- 4.1.6 An additional site visit was undertaken in December 2015 to survey the terrestrial habitats in conjunction with the Environmental Statement for this project. On the day of the survey, a number of grey seals were noted hauled out on the beach on rocks just off shore in the vicinity of the breakwater, as shown on Photograph 4.4.



Photograph 4.4: Seals within the proposed area for new slipway

- 4.1.7 A review of the Rathlin Island 2009-2011 Survey Report from the Nationally Important Marine Features Project (Ref 4.1) was undertaken to ascertain the location of the qualifying feature habitats on the island. According to the report, the reef habitats include the steep limestone and basalt cliffs on the north wall of the island and areas of boulders on the east and south coasts. Caves are found mainly on the north wall at depths of 0-60+ metres. The report also states that an area of sea bed habitat at the white cliffs area of Church Bay has been damaged due to scallop dredging.
- 4.1.8 DoE Marine Conservation Division provided locations of the qualifying features of reefs and sandbanks around Rathlin, these are shown on Figure 2. At a meeting with DoE, it was confirmed that none of the qualifying features of the SAC are present in the development area (Joe Breen, pers comms).
- 4.1.9 Information on tidal streams around Rathlin was gained from MyHarbour.com (Ref 4.2). This indicates that the prevailing tides around the south of the island run in an easterly direction from Bull Point towards Church Bay and then south to Rue Point.

4.2 Potential effects arising from the Project

4.2.1 Habitats Regulations Assessment Screening Matrices have been completed for the Natura 2000 sites and are included in Appendix A. These are based on the indicative drawings and information available at time of writing. The precautionary principle was applied to ascertain potential effects.

Construction Effects

Rathlin SAC

4.2.2 The potential effects of the dredging and disposal aspect of the project have been considered as part of the marine licence application for this project and an HRA carried out by DoE. This HRA has been supplied to Amey for inclusion within the overall HRA for the project and the screening matrices for the dredging and disposal works is included in Appendix A.

4.2.3 None of the qualifying marine habitats are found within the harbour area (Joe Breen, pers comms) and the qualifying habitat *Annual vegetation of drift lines* is not present on the shoreline at the site of the development. Therefore there will be no direct effect on them from habitat loss or damage.

4.2.4 The key potential construction effect pathway for the marine habitats is through changes in water quality. It is proposed to dredge an area of the harbour adjacent to the breakwater to facilitate construction of the slipway and quay. Dredging will result in disturbance of sediment, suspension of sediment in the water column and damage to the sea bed.

4.2.5 On the day of the walkover survey, it was not possible to survey the area to be dredged, however the beach in this area is largely granular and information provided by the client indicates that the dredged material is likely to be sand and gravel. It is expected therefore that the amount of fine material resuspended by the dredging will be small. Any sediment is likely to resettle quickly. The contractor will also be required to adhere to best practice measures to minimise suspended sediments being washed out of the harbour.

4.2.6 There is also potential for the construction works to result in spillages of fuels or oils from machinery, either onto the terrestrial environment or in the harbour. Once in the water column, fuels can result in toxicity to marine organisms, causing mortality and affecting the balance of the ecosystem. Once in the food chain, there can be knock-on

toxicity effects on higher animals. However the contractor will be required to adhere to best practice measures and follow pollution prevention guidelines to minimise effects on water quality. The client has committed to producing a Construction Environmental Management Plan (CEMP) for the works, which will provide details of how impacts on the marine environment will be avoided. This CEMP will be submitted as part of the Environmental Statement for the project.

- 4.2.7 It is anticipated that the harbour area is relatively sheltered and that any spillages should be easily contained before being washed out to open sea. Should any pollutants be washed out to sea, the strong currents around Rathlin will result in rapid dilution and dispersion. In addition, the prevailing currents will carry any pollutants away from the location of the qualifying features of reefs, vegetated sea cliffs and sea caves which are located mainly on the north of the island. The habitats of sandbanks which are slightly covered by sea water all the time and annual vegetation of drift lines are not located within the harbour area and will not be affected by changes in water quality.
- 4.2.8 There will be **no likely significant effect** on any of the habitat qualifying features for the SAC as a result of changes in water quality.
- 4.2.9 The transport and movement of machinery has potential to result in the introduction of non native marine species to the waters around the island, such as the slipper limpet *Crepidula fornicata*. The contractor will be responsible for ensuring biosecurity measures are implemented during the movement of machinery. Plant taken to Rathlin will be checked, cleaned and disinfected before movement to the island. Once works are complete, the machinery will be checked again, thoroughly cleaned and disinfected before transport off the island. Adherence to biosecurity measures will ensure no likely significant effect on the qualifying features of the SAC.

Rathlin SPA

- 4.2.10 At time of writing it was anticipated that the construction works in Church Bay would be undertaken between March and October 2016 as the new ferry is expected to come into operation in October. This means that the works are taking place during the bird breeding season. However, the main breeding area for the qualifying bird species for the SPA (guillemots, razorbills and kittiwakes) are the sea cliffs and sea stacks located along the north coast of the island. It is considered that any noise from piling and construction machinery would not affect nesting or breeding behaviour due to the distance of the harbour from the breeding sites.

- 4.2.11 The other qualifying bird species, the peregrine falcon and chough prefer to nest in upland areas and rocky sea cliffs and are more likely to nest in the heathland areas of Rathlin to the north and west of the harbour. Neither species will be found nesting in the vicinity of the harbour, and it is assessed that construction noise will not affect the breeding behaviour of these birds due to distance from nesting sites.
- 4.2.12 Seabirds do use the harbour area for foraging and there is potential for noise from the construction works to deter birds from entering the harbour. The use of the soft start method for piling will enable birds to move away from the harbour area. Given the biological richness of the seas around Rathlin that provide more suitable foraging habitat than the harbour area, it is assessed that any disturbance to the seabird populations will not adversely affect their conservation status.
- 4.2.13 It is assessed that there will be **no likely significant effect** on the bird species as a result of disturbance from construction.
- 4.2.14 There is potential for indirect effects on the bird populations through changes in water quality affecting prey species. However, the works are confined to the harbour area and are small in scale. With adherence to best practice measures and pollution prevention guidelines, there will be **no likely significant effect** on the birds through reduction in prey availability as a result of a decline in water quality.

Skerries and Causeway SAC

- 4.2.15 The only potential effect pathway for construction effects on the qualifying habitats is impacts due to changes in water quality. However due to distance between Church Bay on Rathlin and the boundary of the Skerries and Causeway SAC (approximately 16km), and the strong tidal currents around Rathlin and the North Antrim Coast, any effects from changes in water quality are **not likely to be significant**.
- 4.2.16 A review of recent cetacean sightings collated by the Irish Whale and Dolphin Group (Ref 4.3) indicates that over the past 2 years, there has been one recorded sighting of harbour porpoise at Rathlin, with more numerous sightings around the North Antrim Coast. There is limited potential for harbour porpoise to enter Church Bay as the waters around the North Antrim Coast provide more suitable feeding habitat. It is not considered likely that porpoise will come close enough into the harbour to be affected by construction noise and/or disturbance from piling. In addition, the works will be undertaken under a Wildlife Licence with a Marine Mammal Observer overseeing the

works and managing the implementation of an acoustic deterrent device. This will ensure disturbance to harbour porpoise is minimised.

- 4.2.17 Any effects on harbour porpoise will be indirect through changes in water quality affecting prey availability. With adherence to pollution prevention guidelines, any effects on water quality in Church Bay will be contained largely within the harbour. Strong tidal currents around Rathlin and the North Coast will result in any pollutants that are washed into open sea being rapidly diluted and dispersed.
- 4.2.18 It is assessed that there will be **no likely significant effect** on harbour porpoise populations.

North Antrim Coast SAC

- 4.2.19 The majority of qualifying features for this SAC are terrestrial habitats/species and will not be affected by works at Rathlin. The only qualifying feature which is marine related is the Atlantic salt meadows habitat. Saltmarsh habitat is vulnerable to silt deposition and changes in water quality affecting species composition. However due to distance from the site at Rathlin and the strong tidal currents between Rathlin and the North Antrim Coast, there will be **no likely significant effect** on the saltmarsh habitat.

Sheep Island SPA

- 4.2.20 Although construction works are anticipated to take place over the bird breeding season, the works at Rathlin harbour are sufficiently far from the cormorant breeding sites on Sheep Island that **no significant effects are likely** on the breeding population from noise disturbance.
- 4.2.21 There is potential for indirect effects on the cormorants through changes in water quality affecting prey availability. The occasional cormorant was noted on the day of the site walkover, feeding in the harbour area at Church Bay. With adherence to pollution prevention guidelines and best practice measures, effects on water quality will be minimised. Therefore it is assessed that there will be **no likely significant effect** on the cormorant population of the SPA.

Other features

- 4.2.22 Grey seals are known to use the sea caves around Rathlin for breeding, and they haul out around Mill Bay and in Church Bay. In Ireland, grey seal pups are generally born between September and November. The construction works are expected to take place between March and October, therefore avoiding the main pupping season for this

species. The works are also some distance from the sea caves used by the seals for breeding. It is therefore assessed that there will be **no likely significant effect** on the conservation objectives for the grey seal population of the Maidens.

- 4.2.23 Works will be undertaken during the pupping season for harbour seals, which are known to use the coastline around Rathlin for foraging and hauling out. Where possible any piling works will be timed to avoid the main pupping season and an MMO will oversee the works under a Wildlife Licence. In addition an acoustic deterrent will be applied under the direction of MMO to ensure seals are not present within the harbour during piling and other noisy works. These mitigation measures will ensure that disturbance to harbour seals are minimised and there will be no likely significant effect on the conservation objectives for the harbour seal population.

Operational Effects

Rathlin SAC

- 4.2.24 The construction of the new slipway and pier, and provision of a pedestrian footway and car parking area will result in the loss of existing sea bed, beach and grassland habitats, with a total habitat loss of approximately 0.2ha. However none of the Annex I habitats for which Rathlin SAC is designated are present in Church Bay and there will be no habitat loss from the qualifying features.
- 4.2.25 The reefs and sea cliffs habitats are generally found on the north side of the island and will not be affected by operation of the new slipway. The sea caves are also located on the north side of the island, and there is no potential for effects. The existing breakwater and built up harbour area means this section of Church Bay is relatively sheltered. The addition of the new pier and slipway alongside the existing breakwater within the harbour will not affect existing tidal currents, coastal wave action or sediment transport pathways. The habitats of vegetation of drift lines and sandbanks are dependent on tidal currents, wave action and patterns of sediment deposition and will therefore not be indirectly affected by operation of the new slipway.
- 4.2.26 There will be no operational impacts as a consequence of the operation of a new ferry. The works are replacing an existing ferry with a new ferry of similar design and although the location of the ferry berth has moved, none of the qualifying features of the SAC or SPA are located where the ferry will dock.

4.2.27 Therefore it is concluded that there will be **no likely significant effect** on:

- Reefs
- Vegetated sea cliffs of the Atlantic and Baltic coasts
- Submerged or partially submerged sea caves
- Sandbanks which are slightly covered by sea water all the time
- Annual vegetation of drift lines.

Rathlin SPA

4.2.28 The development area and harbour is not used for breeding by the qualifying bird species of Rathlin SPA due to lack of suitable habitat. Similarly the operation of the ferry will have no impact on these species, or the habitats and prey species on which they rely. It is therefore concluded that there will **no likely significant effect** on:

- Breeding population of peregrine falcon
- Breeding population of chough
- Breeding population of razorbill
- Breeding population of black-legged kittiwake
- Breeding population of common guillemot
- Seabird assemblage.

Skerries and Causeway SAC

4.2.29 Provision of a new harbour area and the operation of the new replacement ferry will have **no likely significant effects** on the qualifying features for this SAC due to distance and prevailing currents around Rathlin:

- Sandbanks which are slightly covered by sea water all the time
- Reefs
- Submerged or partially submerged sea caves
- Harbour porpoise *Phocoena phocoena*.

North Antrim Coast SAC

4.2.30 The provision of a new harbour at Rathlin and the operation of a replacement ferry will have **no likely significant effects** on any of the qualifying features for this SAC due to distance and lack of effect pathway:

- Vegetated sea cliffs of the Atlantic and Baltic Coasts.
- Annual vegetation of drift lines
- Atlantic salt meadows (*Glauco-Puccinellietalia maritima*)
- Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)
- Fixed coastal dunes with herbaceous vegetation (grey dunes)
- Species rich *Nardus* grassland, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
- Narrow-mouthed whorl snail *Vertigo angustior*.

Sheep Island SPA

- 4.2.31 The loss of sea bird foraging habitat within Church Bay as a result of the new pier and slipway is small and is not considered to be significant to deter cormorants from feeding in the harbour. The slight change in route of the ferry to the new slipway is not considered likely to affect feeding behaviour as the birds are used to the existing ferries and the associated noise and disturbance in the harbour. Therefore there will be **no likely significant effect** on the breeding population of cormorants from this SPA.

Other features

- 4.2.32 Grey seals were observed hauled out on the beach and offshore rocks within the harbour and at the location of the slipway during the site visit in December. The small loss of shoreline habitat as a result of the new pier and slipway is not considered to significantly affect the haul out behaviour of grey seals, given the total amount of suitable habitat along the Rathlin coastline.
- 4.2.33 Where practical the larger intertidal boulders currently utilised for hauling out will be moved to the east of the proposed development at a similar tidal depth and retained within the harbour area to maintain the extent of haul out habitat.
- 4.2.34 Although the location of the docking of the car ferry will change, the level of disturbance from the new ferry is not likely to be significantly different from the existing level of disturbance. During the site visit in December, it was observed that the seals hauled out in the harbour area were not disturbed by the movement and docking of the existing car ferry. It is considered likely that the seals that use the harbour for hauling out have become somewhat habituated to the ferry.

- 4.2.35 The new ferry, although slightly larger than the existing one, is likely to be more efficient and quieter than the current ferry. There may be temporary displacement of some of the seals once the new ferry becomes operational, but given the low numbers of seals observed in the harbour area (less than 10 during site visit), it is considered that there is suitable habitat elsewhere on the island to accommodate them.
- 4.2.36 Therefore there will be **no likely significant effect** on the conservation objectives for the grey seal population of the Maidens.
- 4.2.37 There will be similar effects on the harbour seals and it is assessed that there will be no likely significant effect on the conservation objectives for the Strangford Lough and Murlough populations.

In-Combination Effects

- 4.2.38 A review of planning applications submitted to Causeway Coast and Glens Council identified that planning permission has been requested for a replacement dwelling at **lands near St. Thomas' Church in Church Bay**. **No further information was freely available**. It is assessed that there will be **no likely in-combination effects** from the construction works on a house and the construction of the new slipway and pier on any of the qualifying features for any of the Natura 2000 sites.

5 Summary and Conclusions

5.1 Summary

5.1.1 Amey has undertaken a screening assessment under the Habitats Regulations for the proposed harbour development at Church Bay, Rathlin. The following Natura 2000 sites were assessed:

- Rathlin SAC
- Rathlin SPA
- Skerries and Causeway SAC
- North Antrim Coast SAC
- Sheep Island SPA

5.1.2 In addition, potential effects on grey seals, a qualifying feature of the Maidens SCI and on harbour seals were also assessed.

5.1.3 Construction works have potential to result in changes in water quality, however the client has committed to producing a Construction Environmental Management Plan to minimise effects on the environment. The contractor will be required to adhere to pollution prevention guidelines and best practice measures during construction.

5.1.4 Although the works are anticipated to take place during the bird breeding season, there will be no disturbance effects on the qualifying bird species due to distance of the works from the breeding sites.

5.1.5 Construction works will be carried out under a Wildlife Licence and a trained Marine Mammal Observer will oversee the works to ensure disturbance to marine mammals is minimised. There will be no likely significant effect on the conservation objectives for the local seal and harbour porpoise populations.

5.1.6 There will be no likely significant effects on any of the Natura 2000 sites away from Rathlin due to distance, and the strong tidal currents around Rathlin and the North Antrim coast will result in any pollutants being rapidly diluted and dispersed.

5.1.7 It is assessed that there will be no operational effects on the qualifying features of any of the Natura 2000 sites.

5.2 Conclusions

5.2.1 With the project mitigation implemented during construction there will be no likely significant effects on any of the qualifying features for the following Natura 2000 sites:

- Rathlin SAC
- Rathlin SPA
- Skerries and Causeway SAC
- North Antrim Coast SAC
- Sheep Island SPA

5.2.2 There will be no likely significant effects on grey seals, harbour seals or harbour porpoise.

5.2.3 There will be no operational effects on any of the qualifying features for the above Natura 2000 sites or on marine mammals.

5.2.4 In conclusion, it is assessed that the harbour development can be screened out of the HRA process and no further assessment is required.

6 References

- 1.1 EUROPEAN COMMISSION. '*Managing Natura 2000 Sites*' (2000) (*The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*).
- 1.2 NORTHERN IRELAND ENVIRONMENT AGENCY (NIEA). '*Notes on Habitat Regulations Assessments*'. Website:
http://www.doeni.gov.uk/niea/protected_areas_home/natura_2000/hra_advice/hra_advice-3.htm
- 1.3 DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB). VOLUME 11, SECTION 4, PART 1, **HD 44/09**. '*Assessment of implications (of highways and/or roads projects) on European sites (including Appropriate Assessment)*'.
- 1.4 DTA PUBLICATIONS (2014). *The Habitats Regulations Assessment Handbook*.
www.dtapublications.co.uk
- 2.1 EUROPEAN ECONOMIC COMMUNITY (EEC). Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive)
- 2.2 NORTHERN IRELAND ENVIRONMENT AGENCY (NIEA). Protected Areas Interactive Map Website: <http://maps.ehsni.gov.uk/naturalheritage/>
- 4.1 GOODWIN, C., EDWARDS, H., BREEN, J. AND PICTON, B. (2011). *Rathlin Island – A Survey Report from the Nationally Important Marine Features Project 2009-2011*. Northern Ireland Environment Agency Research and Development Series No. 11/03.
- 4.2 MyHarbour.com. Available to view at
<http://www.visitmyharbour.com/articles/3169/hourly-tidal-streams-around-rathlin-island>
- 4.3 Irish Whale and Dolphin Group sightings, collated and available to view at
http://seawatchfoundation.org.uk/legacy_tools/region.php?output_region=15

Appendix A Screening Matrices

Habitats Regulations Assessment

In accordance with Regulation 43(1) of the Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as amended), Transport NI has considered whether the application either alone or in combination (neither being directly connected with or necessary to the management of the site) is likely to have a significant effect on the Natura 2000 site.

As part of that consideration, Transport NI has:-

(a) taken into account the mitigation measures contained in the application, along with all legally enforceable obligations designed to avoid environmental effects; and

(b) applied 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).

Stage 1: Test of Likely Significance

Name of Project or Plan.	Rathlin Island Harbour Development
Project reference (Planning ref. etc.):	N/A
File number:	N/A
Name and location of Natura 2000 site.	Rathlin Island SAC Grid reference D133518
Natura 2000 site features: (refer to JNCC website)	<p>Annex I habitats that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> • Reefs. • Vegetated sea cliffs of the Atlantic and Baltic Coasts. • Submerged or partially submerged sea caves. <p>Annex II habitats present as a qualifying feature, but not a primary reason for selection of this site:</p> <ul style="list-style-type: none"> • Sandbanks which are slightly covered by sea water all the time. • Annual vegetation of drift lines.
Description of the Project or Plan <ul style="list-style-type: none"> • Size and scale; • Land-take; • Distance from Natura 2000 site or key features of the site; • Resource requirements (water abstraction etc); • Emission (disposal to land, water 	<u>Size and scale</u> A 75m long ferry berth will be constructed adjacent to and inside the existing breakwater, using a combination of steel sheet piles and in situ reinforced concrete retaining walls. The ferry ramp will be 32m long and 10m wide, constructed with a reinforced concrete slab at a gradient of 1:8 with 50% of the ramp constructed below Mean Low

<p>or air);</p> <ul style="list-style-type: none"> • Excavation requirements; • Transportation requirements; • Duration of construction, operation, de-commissioning etc; • Other. 	<p>Water Spring (MLWS). At the head of the pier a 500m² hardstanding area and access onto the public road will be constructed to facilitate the loading and unloading of foot passengers and vehicles. Rock armour revetments will be required to support the ferry ramp above MLWS.</p> <p><u>Land-take</u> The construction of the pier and waiting area will result in the loss of some land from the boundary of the SAC, this will be a total of 0.2ha. However this land-take is not from any of the qualifying habitats.</p> <p><u>Distance from Natura 2000 site or key features of the site</u> The works are located on the boundary of the SAC. However, none of the qualifying habitats are found in the harbour area.</p> <p><u>Resource requirements (water abstraction etc)</u> It is not anticipated that any resources will be required from the Natura 2000 site.</p> <p><u>Emission (disposal to land, water or air)</u> Potential for fuels and sediments to enter water environment during works and piling. A temporary compound area will be located on an area of hard standing.</p> <p><u>Excavation requirements</u> Dredging will be undertaken in a small area of the harbour to facilitate the pier construction and allow berthing of the ferry. The existing beach and grassland area will be excavated for the hardstanding waiting area. A section of the existing breakwater will be broken out to allow construction of the pier.</p> <p><u>Transportation requirements</u> Materials will be transferred to the island and stored in the compound area. Materials will be transferred via the ferry. Works are likely to be carried out from a floating pontoon.</p> <p><u>Duration of construction, operation, de-commissioning etc</u> Construction is expected to take place between March and October 2016 with the new ferry becoming operational in October 2016. The new ferry will be operational for its expected operational life.</p> <p><u>Other</u> The project requires planning permission from the local authority and a Marine Construction Licence.</p>
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	<p>Any conditions applied by these authorities will be incorporated into the construction procurement process and documents to ensure compliance. In addition, a Construction Environmental Management Plan will be provided to the statutory authorities and adhered to by the contractor.</p> <p>During the works the contractor will be required to adhere to pollution prevention guidelines and follow best practice measures to ensure no adverse effects on water quality. The following will be adhered to as a minimum:</p> <ul style="list-style-type: none"> • Pollution Prevention Guideline (PPG) 1: Understanding Your Environmental Responsibilities - Good Environmental Practices. • PPG2: Above ground oil storage tanks. • PPG 5: Works and maintenance in or near water. • PPG 6: Working at construction and demolition sites. • PPG 21: Incident Response Planning. • PPG 22: Dealing with spillages on highways. • Construction Industry Research and Information Association (CIRIA) C648: Control of water pollution from linear construction projects. • Northern Ireland Environment Agency. Road Schemes and the Protection of the Water Environment, A Water Management Unit Guidance Note. <p>A spillage response plan will be in operation for the duration of the works. Spill kits will be kept close to the working area and staff trained in their operation. The contractor will implement biosecurity measures to ensure non native marine species are not introduced to the island through movement of machinery.</p>
<p>Is the proposal directly connected with or necessary to management of the site for conservation of N2K features? If yes proceed no further.</p>	<p>No</p>
<p>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site.</p>	<p>Dredging has potential to result in disturbance of sediment, suspension of sediment in the water column and damage to sea bed.</p> <p>There is potential for construction works to result in spillages of fuels or oils from machinery, either into the marine environment or on the terrestrial environment.</p> <p>The transport and movement of machinery has potential to result in the introduction of non native marine species to the waters around the island, which can have adverse effects on habitats.</p>

N2K Feature: Mention all features	Describe any likely direct or indirect effects to the N2K features arising as a result of: <ul style="list-style-type: none"> • loss; • reduction of habitat area; • disturbance; • habitat or species fragmentation; • reduction in species density; • changes in key indicators of conservation value (e.g. water quality, climate change). 	<u>*Effect Significant/Not Significant? Why?</u>
Reefs	<p>Changes in water quality due to construction works, resulting in changes in species composition.</p> <p>Introduction of non native marine species affecting species composition.</p>	<p>No likely significant effect. Contractor will be required to adhere to PPGs etc, and any pollutants washed out of the harbour will be rapidly diluted and dispersed by the tidal currents around Rathlin. The reef habitats are also located to the north of the island and on the east and south coast, the habitat is not found within Church Bay. Implementation of biosecurity measures will ensure no invasive species are introduced.</p>
Vegetated sea cliffs of the Atlantic and Baltic Coasts	No effects.	<p>No likely significant effect. This habitat is located to the north of the island, and the works will not affect them due to distance and no connection or pathway.</p>
Submerged or partially submerged sea caves	<p>Changes in water quality due to construction works, resulting in changes in species composition.</p>	<p>No likely significant effect. Contractor will be required to adhere to PPGs etc, and any pollutants washed out of the harbour will be rapidly diluted and dispersed by the tidal currents around Rathlin. The sea caves are also located to the north of the island, the habitat is not found within Church Bay.</p>
Sandbanks which are slightly covered by sea water all the time	<p>Changes in water quality due to construction works, resulting in changes in species composition.</p> <p>Introduction of non native marine species affecting species composition.</p>	<p>No likely significant effect. Contractor will be required to adhere to PPGs etc, and any pollutants washed out of the harbour will be rapidly diluted and dispersed by the tidal currents around Rathlin. The habitat is not found within Church Bay. Implementation of biosecurity measures will ensure no invasive species are introduced.</p>

Annual vegetation of drift lines	No effects.	No likely significant effect. This habitat is not found within Church Bay. Operationally there will be no effect on this habitat as the new development will not affect current patterns of sediment deposition or water currents.
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Describe any potential effects on the Natura 2000 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
<p>The key effect pathway is through changes in water quality. Pollution can affect species composition through toxicity and mortality. Contractor will be required to adhere to PPGs and follow Construction Environmental Management Plan.</p> <p>Introduction of non native marine invasive species through transport of machinery to and from the island. Implementation of biosecurity measures will ensure no invasive species are introduced.</p>	No likely significant effects.

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 -
Planning permission has been submitted for a replacement dwelling at Church Bay, however this will not result in any in-combination effects.	No likely significant effects.

Is the potential scale or magnitude of any effect likely to be significant?	
Alone?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
In-combination with other projects of plans?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

List of Agencies Consulted: Provide contact name and telephone or email address.	
Above consultee response.	

Conclusion: Is the proposal likely to have a significant effect on an N2K site?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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IF IT HAS BEEN DETERMINED THAT THE PROPOSAL WILL NOT HAVE A SIGNIFICANT EFFECT THEN ASSESSMENT IS COMPLETED.
IF ANY PART OF THE PROPOSAL IS LIKELY TO HAVE A SIGNIFICANT EFFECT AN APPROPRIATE ASSESSMENT WILL BE REQUIRED – STAGE 2 AA.

Data collected to carry out the assessment

Who carried out the assessment?	Helen Craig MCIEEM
Sources of data	See references in report
Level of assessment completed	Test of Likely Significance
Where can the full results of the assessment be accessed and viewed?	Transport NI Data Section Clarence Court Adelaide Street Belfast
NIEA CDP Response to consultation.	

Habitats Regulations Assessment

In accordance with Regulation 43(1) of the Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as amended), Transport NI has considered whether the application either alone or in combination (neither being directly connected with or necessary to the management of the site) is likely to have a significant effect on the Natura 2000 site.

As part of that consideration, Transport NI has:-

(a) taken into account the mitigation measures contained in the application, along with all legally enforceable obligations designed to avoid environmental effects; and

(b) applied 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).

Stage 1: Test of Likely Significance

Name of Project or Plan.	Rathlin Harbour
Project reference (Planning ref. etc.):	N/A
File number:	N/A
Name and location of Natura 2000 site.	Rathlin Island SPA Grid reference D133518
Natura 2000 site features: (refer to JNCC website)	Breeding population of peregrine falcon Breeding population of razorbill Breeding population of black-legged kittiwake Breeding population of common guillemot The site also supports chough. The site regularly supports over 20 000 breeding seabirds.
Description of the Project or Plan <ul style="list-style-type: none"> • Size and scale; • Land-take; • Distance from Natura 2000 site or key features of the site; • Resource requirements (water abstraction etc); • Emission (disposal to land, water or air); • Excavation requirements; • Transportation requirements; • Duration of construction, 	<u>Size and scale</u> A 75m long ferry berth will be constructed adjacent to the existing breakwater, using a combination of steel sheet piles and in situ reinforced concrete retaining walls. The ferry ramp will be 32m long and 10m wide, constructed with a reinforced concrete slab at a gradient of 1:8 with 50% of the ramp constructed below Mean Low Water Spring (MLWS). At the head of the pier a 500m ² hardstanding area and access onto the public road will be constructed to facilitate the loading and unloading of foot passengers and vehicles. Rock armour revetments

<p>operation, etc; • Other.</p>	<p>de-commissioning</p> <p>will be required to support the ferry ramp above MLWS.</p> <p><u>Land-take</u> The construction of the pier and the waiting area will result in the loss of beach habitat and part of the existing breakwater. The total amount of landtake from the boundary of the SPA is estimated to be 0.2ha. The habitats lost are not considered to be significantly important to the qualifying bird species.</p> <p><u>Distance from Natura 2000 site or key features of the site</u> The works are located on the boundary of the SPA. The main nesting areas for the qualifying bird species are located on the north of the island and along the cliffs west of the harbour.</p> <p><u>Resource requirements (water abstraction etc)</u> It is not anticipated that any resources will be required from the Natura 2000 site.</p> <p><u>Emission (disposal to land, water or air)</u> Potential for fuels and sediments to enter water environment during works and piling. A temporary compound area will be located on an area of hard standing.</p> <p><u>Excavation requirements</u> Dredging will be undertaken in a small area of the harbour to facilitate the pier construction and allow berthing of the ferry. The existing beach and grassland area will be excavated for the hardstanding waiting area. A section of the existing breakwater will be broken out to allow construction of the pier.</p> <p><u>Transportation requirements</u> Materials will be transferred to the island and stored in the compound area. Materials will be transferred via the ferry. Works are likely to be carried out from a floating pontoon.</p> <p><u>Duration of construction, operation, de-commissioning etc</u> Construction is expected to take place between March and October 2016 with the new ferry becoming operational in October 2016. The new ferry will be operational for its expected operational life.</p> <p><u>Other</u> The project requires planning permission from the local authority and a Marine Construction Licence. Any conditions applied by these authorities will be</p>
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	<p>incorporated into the construction procurement process and documents to ensure compliance. In addition, a Construction Environmental Management Plan will be provided to the statutory authorities and adhered to by the contractor.</p> <p>During the works the contractor will be required to adhere to pollution prevention guidelines and follow best practice measures to ensure no adverse effects on water quality. The following will be adhered to as a minimum:</p> <ul style="list-style-type: none"> • Pollution Prevention Guideline (PPG) 1: Understanding Your Environmental Responsibilities - Good Environmental Practices. • PPG2: Above ground oil storage tanks. • PPG 5: Works and maintenance in or near water. • PPG 6: Working at construction and demolition sites. • PPG 21: Incident Response Planning. • PPG 22: Dealing with spillages on highways. • Construction Industry Research and Information Association (CIRIA) C648: Control of water pollution from linear construction projects. • Northern Ireland Environment Agency. Road Schemes and the Protection of the Water Environment, A Water Management Unit Guidance Note. <p>A spillage response plan will be in operation for the duration of the works. Spill kits will be kept close to the working area and staff trained in their operation. The contractor will also implement biosecurity measures to ensure machinery used on the island during the works will not result in the introduction of non native marine species to the island.</p>
<p>Is the proposal directly connected with or necessary to management of the site for conservation of N2K features? If yes proceed no further.</p>	<p>No</p>
<p>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site.</p>	<p>Disturbance to breeding birds from construction noise such as piling and machinery. Indirect effects on bird populations through changes in water quality affecting prey availability. Disturbance to bird foraging in the harbour area from construction noise.</p>

N2K Feature: Mention all features	Describe any likely direct or indirect effects to the N2K features arising as a result of: <ul style="list-style-type: none"> • loss; • reduction of habitat area; • disturbance; • habitat or species fragmentation; • reduction in species density; • changes in key indicators of conservation value (e.g. water quality, climate change). 	<u>*Effect Significant/Not Significant? Why?</u>
Breeding population of peregrine falcon	No effects likely.	No likely significant effect. Nest sites are sufficiently far from Church Bay that noise from construction works are not likely to affect breeding behaviour.
Breeding population of razorbill	Potential for indirect effects due to changes in water quality affecting prey availability.	No likely significant effect. Nest sites are located on the north side of the island, sufficiently far from the harbour that construction noise will not result in disturbance. Contractor will be required to adhere to PPGs and any impacts on water quality will be confined to harbour area. Any washout of pollutants to open sea will be rapidly diluted and dispersed and there will be no impact on food supply for razorbill.
Breeding population of black-legged kittiwake	Potential for indirect effects due to changes in water quality affecting prey availability.	No likely significant effect. Nest sites are located on the north side of the island, sufficiently far from the harbour that construction noise will not result in disturbance. Contractor will be required to adhere to PPGs and any impacts on water quality will be confined to harbour area. Any washout of pollutants to open sea will be rapidly diluted and dispersed and there will be no impact on food supply for kittiwakes.
Breeding population of common guillemot	Potential for indirect effects due to changes in water quality affecting prey availability.	No likely significant effect. Nest sites are located on the north side of the island, sufficiently far from the harbour that construction noise will not result in disturbance. Contractor will be required to adhere to PPGs and any impacts on water quality will be confined to harbour area. Any washout of pollutants to open sea will be rapidly diluted and

		dispersed and there will be no impact on food supply for guillemots.
Assemblage of breeding seabirds	Disturbance to foraging birds from construction noise	No likely significant effect. There is sufficient foraging habitat available beyond the harbour that can be utilised by the birds, the temporary displacement from the harbour area is not considered to significantly affect breeding success.

Describe any potential effects on the Natura 2000 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
<p>The key effect pathway is through changes in water quality. Pollution can affect bird prey species through toxicity and mortality, having a knock on effect on reproductive success for bird populations. Contractor will be required to adhere to PPGs and follow Construction Environmental Management Plan.</p> <p>The works are sufficiently far from breeding sites that disturbance is not considered to be an issue.</p> <p>Temporary displacement of foraging birds during works is not considered to be significant.</p>	No likely significant effects.

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 -
Planning permission has been submitted for a replacement dwelling at Church Bay, however this will not result in any in-combination effects.	No likely significant effects.

Is the potential scale or magnitude of any effect likely to be significant?	
Alone?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
In-combination with other projects of plans?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

List of Agencies Consulted: Provide contact name and telephone or email address.	
Above consultee response.	

Conclusion: Is the proposal likely to have a significant effect on an N2K site?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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IF IT HAS BEEN DETERMINED THAT THE PROPOSAL WILL NOT HAVE A SIGNIFICANT EFFECT THEN ASSESSMENT IS COMPLETED.

IF ANY PART OF THE PROPOSAL IS LIKELY TO HAVE A SIGNIFICANT EFFECT AN APPROPRIATE ASSESSMENT WILL BE REQUIRED – STAGE 2 AA.

Data collected to carry out the assessment

Who carried out the assessment?	Helen Craig MCIEEM
Sources of data	See references in report
Level of assessment completed	Test of Likely Significance
Where can the full results of the assessment be accessed and viewed?	Transport NI Data Section Clarence Court Adelaide Street Belfast
NIEA CDP Response to consultation.	

Habitats Regulations Assessment

In accordance with Regulation 43(1) of the Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as amended), Transport NI has considered whether the application either alone or in combination (neither being directly connected with or necessary to the management of the site) is likely to have a significant effect on the Natura 2000 site.

As part of that consideration, Transport NI has:-

(a) taken into account the mitigation measures contained in the application, along with all legally enforceable obligations designed to avoid environmental effects; and

(b) applied 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).

Stage 1: Test of Likely Significance

Name of Project or Plan.	Rathlin Island Harbour Development
Project reference (Planning ref. etc.):	N/A
File number:	N/A
Name and location of Natura 2000 site.	North Antrim Coast SAC Grid reference D022440 Site is located approximately 12km south west of Rathlin
Natura 2000 site features: (refer to JNCC website)	Annex I habitats that are a primary reason for selection of this site: <ul style="list-style-type: none"> • Vegetated sea cliffs of the Atlantic and Baltic Coasts. Annex I habitats present as a qualifying feature but not a primary reason for selection of this site: <ul style="list-style-type: none"> • Annual vegetation of drift lines • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) • Fixed coastal dunes with herbaceous vegetation (grey dunes) • Species rich <i>Nardus</i> grassland, on silicious substrates in mountain areas (and submountain areas in Continental Europe) Annex II species that are a primary reason for selection of this site <ul style="list-style-type: none"> • Narrow-mouthed whorl snail <i>Vertigo angustior</i>.
Description of the Project or Plan <ul style="list-style-type: none"> • Size and scale; • Land-take; • Distance from Natura 2000 site 	<u>Size and scale</u> A 75m long ferry berth will be constructed adjacent to the existing breakwater, using a combination of steel sheet piles and in situ reinforced concrete

<p>or key features of the site;</p> <ul style="list-style-type: none"> • Resource requirements (water abstraction etc); • Emission (disposal to land, water or air); • Excavation requirements; • Transportation requirements; • Duration of construction, operation, de-commissioning etc; • Other. 	<p>retaining walls. The ferry ramp will be 32m long and 10m wide, constructed with a reinforced concrete slab at a gradient of 1:8 with 50% of the ramp constructed below Mean Low Water Spring (MLWS). At the head of the pier a 500m² hardstanding area and access onto the public road will be constructed to facilitate the loading and unloading of foot passengers and vehicles. Rock armour revetments will be required to support the ferry ramp above MLWS.</p> <p><u>Land-take</u> None required from Natura 2000 site.</p> <p><u>Distance from Natura 2000 site or key features of the site</u> The site is located approximately 12km south west of Rathlin.</p> <p><u>Resource requirements (water abstraction etc)</u> It is not anticipated that any resources will be required from the Natura 2000 site.</p> <p><u>Emission (disposal to land, water or air)</u> Potential for fuels and sediments to enter water environment during works and piling. A temporary compound area will be located on an area of hard standing.</p> <p><u>Excavation requirements</u> Dredging will be undertaken in a small area of the harbour to facilitate the pier construction and allow berthing of the ferry. The existing beach and grassland area will be excavated for the hardstanding waiting area. A section of the existing breakwater will be broken out to allow construction of the pier.</p> <p><u>Transportation requirements</u> Materials will be transferred to the island and stored in the compound area. Materials will be transferred via the ferry. Works are likely to be carried out from a floating pontoon.</p> <p><u>Duration of construction, operation, de-commissioning etc</u> Construction is expected to take place between March and October 2016 with the new ferry becoming operational in October 2016. The new ferry will be operational for its expected operational life.</p> <p><u>Other</u> The project requires planning permission from the local authority and a Marine Construction Licence.</p>
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	<p>Any conditions applied by these authorities will be incorporated into the construction procurement process and documents to ensure compliance. In addition, a Construction Environmental Management Plan will be provided to the statutory authorities and adhered to by the contractor.</p> <p>During the works the contractor will be required to adhere to pollution prevention guidelines and follow best practice measures to ensure no adverse effects on water quality. The following will be adhered to as a minimum:</p> <ul style="list-style-type: none"> • Pollution Prevention Guideline (PPG) 1: Understanding Your Environmental Responsibilities - Good Environmental Practices. • PPG2: Above ground oil storage tanks. • PPG 5: Works and maintenance in or near water. • PPG 6: Working at construction and demolition sites. • PPG 21: Incident Response Planning. • PPG 22: Dealing with spillages on highways. • Construction Industry Research and Information Association (CIRIA) C648: Control of water pollution from linear construction projects. • Northern Ireland Environment Agency. Road Schemes and the Protection of the Water Environment, A Water Management Unit Guidance Note. <p>A spillage response plan will be in operation for the duration of the works. Spill kits will be kept close to the working area and staff trained in their operation.</p>
<p>Is the proposal directly connected with or necessary to management of the site for conservation of N2K features? If yes proceed no further.</p>	<p>No</p>
<p>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site.</p>	<p>Indirect effects through changes in water quality affecting salt meadow habitat. No effect pathway for effects on terrestrial habitats of this SAC.</p>

N2K Feature: Mention all features	Describe any likely direct or indirect effects to the N2K features arising as a result of: <ul style="list-style-type: none"> • loss; • reduction of habitat area; • disturbance; • habitat or species fragmentation; • reduction in species density; • changes in key indicators of conservation value (e.g. water quality, climate change). 	*Effect Significant/Not Significant? Why?
Vegetated sea cliffs of the Atlantic and Baltic Coasts.	No effect pathway.	No likely significant effect.
Annual vegetation of drift lines	No effects pathway.	No likely significant effect.
Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>)	No effects.	No likely significant effect. Contractor will be required to adhere to PPGs and any impacts on water quality will be confined to harbour area. Any washout of pollutants to open sea will be rapidly diluted and dispersed and there will be no impact this habitat due to distance.
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	No effect pathway.	No likely significant effect.
Fixed coastal dunes with herbaceous vegetation (grey dunes)	No effect pathway.	No likely significant effect.
Species rich <i>Nardus</i> grassland, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	No effect pathway.	No likely significant effect.
Narrow-mouthed whorl snail <i>Vertigo angustior</i> .	No effect pathway.	No likely significant effect.

Describe any potential effects on the Natura 2000 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
The works are sufficiently far from the qualifying terrestrial habitats of this site that no effect pathway exists.	No likely significant effects. Works are sufficiently far from the salt marsh habitat that any pollutants or sediments will be rapidly dispersed and not reach the North Antrim

There is potential to affect the saltmarsh habitat though silt deposition and changes in water quality affecting species composition.	shoreline. Any changes to water quality will be contained within Rathlin harbour and not affect North Antrim Coast.
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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 -
Planning permission has been submitted for a replacement dwelling at Church Bay, however this will not result in any in-combination effects.	No likely significant effects.

Is the potential scale or magnitude of any effect likely to be significant?	
Alone?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
In-combination with other projects or plans?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

List of Agencies Consulted: Provide contact name and telephone or email address.	
Above consultee response.	

Conclusion: Is the proposal likely to have a significant effect on an N2K site?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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IF IT HAS BEEN DETERMINED THAT THE PROPOSAL WILL NOT HAVE A SIGNIFICANT EFFECT THEN ASSESSMENT IS COMPLETED.

IF ANY PART OF THE PROPOSAL IS LIKELY TO HAVE A SIGNIFICANT EFFECT AN APPROPRIATE ASSESSMENT WILL BE REQUIRED – STAGE 2 AA.

Data collected to carry out the assessment

Who carried out the assessment?	Helen Craig MCIEEM
Sources of data	See references in report
Level of assessment completed	Test of Likely Significance
Where can the full results of the assessment be accessed and viewed?	Transport NI Data Section Clarence Court Adelaide Street Belfast
NIEA CDP Response to consultation.	

Habitats Regulations Assessment

In accordance with Regulation 43(1) of the Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as amended), Transport NI has considered whether the application either alone or in combination (neither being directly connected with or necessary to the management of the site) is likely to have a significant effect on the Natura 2000 site.

As part of that consideration, Transport NI has:-

(a) taken into account the mitigation measures contained in the application, along with all legally enforceable obligations designed to avoid environmental effects; and

(b) applied 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).

Stage 1: Test of Likely Significance

Name of Project or Plan.	Rathlin Island Harbour Development
Project reference (Planning ref. etc.):	N/A
File number:	N/A
Name and location of Natura 2000 site.	Sheep Island SPA Location 55 14 56 N, 06 21 00 W Site is located approximately 11km south west of Rathlin
Natura 2000 site features: (refer to JNCC website)	Breeding population of cormorant
Description of the Project or Plan <ul style="list-style-type: none"> • Size and scale; • Land-take; • Distance from Natura 2000 site or key features of the site; • Resource requirements (water abstraction etc); • Emission (disposal to land, water or air); • Excavation requirements; • Transportation requirements; • Duration of construction, operation, de-commissioning etc; • Other. 	<p><u>Size and scale</u> A 75m long ferry berth will be constructed adjacent to the existing breakwater, using a combination of steel sheet piles and in situ reinforced concrete retaining walls. The ferry ramp will be 32m long and 10m wide, constructed with a reinforced concrete slab at a gradient of 1:8 with 50% of the ramp constructed below Mean Low Water Spring (MLWS). At the head of the pier a 500m² hardstanding area and access onto the public road will be constructed to facilitate the loading and unloading of foot passengers and vehicles. Rock armour revetments will be required to support the ferry ramp above MLWS.</p> <p><u>Land-take</u> None required from Natura 2000 site.</p> <p><u>Distance from Natura 2000 site or key features of the site</u> The site is located approximately 11km south west of Rathlin.</p> <p><u>Resource requirements (water abstraction etc)</u> It is not anticipated that any resources will be</p>

required from the Natura 2000 site.

Emission (disposal to land, water or air)

Potential for fuels and sediments to enter water environment during works and piling. A temporary compound area will be located on an area of hard standing.

Excavation requirements

Dredging will be undertaken in a small area of the harbour to facilitate the pier construction and allow berthing of the ferry. The existing beach and grassland area will be excavated for the hardstanding waiting area. A section of the existing breakwater will be broken out to allow construction of the pier.

Transportation requirements

Materials will be transferred to the island and stored in the compound area. Materials will be transferred via the ferry. Works are likely to be carried out from a floating pontoon.

Duration of construction, operation, de-commissioning etc

Construction is expected to take place between March and October 2016 with the new ferry becoming operational in October 2016. The new ferry will be operational for its expected operational life.

Other

The project requires planning permission from the local authority and a Marine Construction Licence. Any conditions applied by these authorities will be incorporated into the construction procurement process and documents to ensure compliance. In addition, a Construction Environmental Management Plan will be provided to the statutory authorities and adhered to by the contractor.

During the works the contractor will be required to adhere to pollution prevention guidelines and follow best practice measures to ensure no adverse effects on water quality. The following will be adhered to as a minimum:

- Pollution Prevention Guideline (PPG) 1: Understanding Your Environmental Responsibilities - Good Environmental Practices.
- PPG2: Above ground oil storage tanks.
- PPG 5: Works and maintenance in or near water.
- PPG 6: Working at construction and demolition sites.

	<ul style="list-style-type: none"> • PPG 21: Incident Response Planning. • PPG 22: Dealing with spillages on highways. • Construction Industry Research and Information Association (CIRIA) C648: Control of water pollution from linear construction projects. • Northern Ireland Environment Agency. Road Schemes and the Protection of the Water Environment, A Water Management Unit Guidance Note. <p>A spillage response plan will be in operation for the duration of the works. Spill kits will be kept close to the working area and staff trained in their operation.</p>
<p>Is the proposal directly connected with or necessary to management of the site for conservation of N2K features? If yes proceed no further.</p>	No
<p>Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site.</p>	Indirect effects through changes in water quality affecting prey species.

<p>N2K Feature: Mention all features</p>	<p>Describe any likely direct or indirect effects to the N2K features arising as a result of:</p> <ul style="list-style-type: none"> • loss; • reduction of habitat area; • disturbance; • habitat or species fragmentation; • reduction in species density; • changes in key indicators of conservation value (e.g. water quality, climate change). 	<p><u>*Effect Significant/Not Significant? Why?</u></p>
<p>Breeding population of cormorant</p>	<p>Indirect effects through changes in water quality affecting prey availability.</p>	<p>Contractor will be required to adhere to PPGs and follow best practice guidelines to minimise impacts on marine environment. Any effects on water environment will be confined to Rathlin harbour. It is considered that abundant prey is available in the open water around Sheep Island and that only a small number of cormorants will feed in and around Rathlin harbour. No likely significant effect.</p>

Describe any potential effects on the Natura 2000 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
Indirect effects through changes in water quality affecting prey availability.	No likely significant effect.

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 -
Planning permission has been submitted for a replacement dwelling at Church Bay, however this will not result in any in-combination effects.	No likely significant effects.

Is the potential scale or magnitude of any effect likely to be significant?	
Alone?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
In-combination with other projects of plans?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

List of Agencies Consulted: Provide contact name and telephone or email address.	
Above consultee response.	

Conclusion: Is the proposal likely to have a significant effect on an N2K site?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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IF IT HAS BEEN DETERMINED THAT THE PROPOSAL WILL NOT HAVE A SIGNIFICANT EFFECT THEN ASSESSMENT IS COMPLETED.

IF ANY PART OF THE PROPOSAL IS LIKELY TO HAVE A SIGNIFICANT EFFECT AN APPROPRIATE ASSESSMENT WILL BE REQUIRED – STAGE 2 AA.

Data collected to carry out the assessment

Who carried out the assessment?	Helen Craig MCIEEM
Sources of data	See references in report
Level of assessment completed	Test of Likely Significance
Where can the full results of the assessment be accessed and viewed?	Transport NI Data Section Clarence Court Adelaide Street Belfast
NIEA CDP Response to consultation.	

Habitats Regulations Assessment

In accordance with Regulation 43(1) of the Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as amended), Transport NI has considered whether the application either alone or in combination (neither being directly connected with or necessary to the management of the site) is likely to have a significant effect on the Natura 2000 site.

As part of that consideration, Transport NI has:-

(a) taken into account the mitigation measures contained in the application, along with all legally enforceable obligations designed to avoid environmental effects; and

(b) applied 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).

Stage 1: Test of Likely Significance

Name of Project or Plan.	Rathlin Island Harbour Development
Project reference (Planning ref. etc.):	N/A
File number:	N/A
Name and location of Natura 2000 site.	Skerries and Causeway SAC Location 55.2425, -6.596666667 Site is located approximately 16km south west of Rathlin
Natura 2000 site features: (refer to JNCC website)	Annex I habitats which are a primary reason for selection: <ul style="list-style-type: none"> Sandbanks which are slightly covered by sea water all the time. Reefs. Submerged or partially submerged sea caves. Annex II species present as a qualifying feature, but not a primary reason for selection: <ul style="list-style-type: none"> Harbour porpoise <i>Phocoena phocoena</i>
Description of the Project or Plan <ul style="list-style-type: none"> Size and scale; Land-take; Distance from Natura 2000 site or key features of the site; Resource requirements (water abstraction etc); Emission (disposal to land, water or air); Excavation requirements; 	Size and scale A 75m long ferry berth will be constructed adjacent to the existing breakwater, using a combination of steel sheet piles and in situ reinforced concrete retaining walls. The ferry ramp will be 32m long and 10m wide, constructed with a reinforced concrete slab at a gradient of 1:8 with 50% of the ramp constructed below Mean Low Water Spring (MLWS). At the head of the pier a 500m ² hardstanding area and access onto the public road will be constructed

- **Transportation requirements;**
- **Duration of construction, operation, de-commissioning etc;**
- **Other.**

to facilitate the loading and unloading of foot passengers and vehicles. Rock armour revetments will be required to support the ferry ramp above MLWS.

Land-take

None required from Natura 2000 site.

Distance from Natura 2000 site or key features of the site

The site is located approximately 16km south west of Rathlin.

Resource requirements (water abstraction etc)

It is not anticipated that any resources will be required from the Natura 2000 site.

Emission (disposal to land, water or air)

Potential for fuels and sediments to enter water environment during works and piling. A temporary compound area will be located on an area of hard standing.

Excavation requirements

Dredging will be undertaken in a small area of the harbour to facilitate the pier construction and allow berthing of the ferry. The existing beach and grassland area will be excavated for the hardstanding waiting area. A section of the existing breakwater will be broken out to allow construction of the pier.

Transportation requirements

Materials will be transferred to the island and stored in the compound area. Materials will be transferred via the ferry. Works are likely to be carried out from a floating pontoon.

Duration of construction, operation, de-commissioning etc

Construction is expected to take place between March and October 2016 with the new ferry becoming operational in October 2016. The new ferry will be operational for its expected operational life.

Other

The project requires planning permission from the local authority and a Marine Construction Licence. Any conditions applied by these authorities will be incorporated into the construction procurement process and documents to ensure compliance. In addition, a Construction Environmental Management Plan will be provided to the statutory authorities and adhered to by the contractor.

	<p>During the works the contractor will be required to adhere to pollution prevention guidelines and follow best practice measures to ensure no adverse effects on water quality. The following will be adhered to as a minimum:</p> <ul style="list-style-type: none"> • Pollution Prevention Guideline (PPG) 1: Understanding Your Environmental Responsibilities - Good Environmental Practices. • PPG2: Above ground oil storage tanks. • PPG 5: Works and maintenance in or near water. • PPG 6: Working at construction and demolition sites. • PPG 21: Incident Response Planning. • PPG 22: Dealing with spillages on highways. • Construction Industry Research and Information Association (CIRIA) C648: Control of water pollution from linear construction projects. • Northern Ireland Environment Agency. Road Schemes and the Protection of the Water Environment, A Water Management Unit Guidance Note. <p>A spillage response plan will be in operation for the duration of the works. Spill kits will be kept close to the working area and staff trained in their operation. The works will also be done under a Wildlife Licence with respect to disturbance on marine mammals. A Marine Mammal Observer will be present for the duration of the works, particularly during any piling works. A mitigation zone around the site for piling will be agreed with NIEA prior to works commencing, and will be no less than 500m from the pile location. This is the area within which the MMO will visually monitor for marine mammals before piling commences. The visual search by the MMO before piling starts is recommended to be at least 30 minutes. If marine mammals are observed within the specified mitigation zone, the start of activity will be delayed until the animals have moved away. To minimise disturbance from piling, the soft start method will be used for the piling rig. The soft start duration should be a period of not less than 20 minutes. If a marine mammal enters the mitigation zone during the soft start, the piling will cease or power not further increased until the mammal exits the mitigation zone and there is no further detection for 20 minutes.</p>
<p>Is the proposal directly connected with or necessary to management of the site for conservation of N2K</p>	<p>No</p>

features? If yes proceed no further.	
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site.	Indirect effects through changes in water quality affecting marine fauna and species composition of qualifying habitats. Indirect effects on harbour porpoise through changes in water quality affecting prey availability. Disturbance to harbour porpoise from construction works and piling.

N2K Feature: Mention all features	Describe any likely direct or indirect effects to the N2K features arising as a result of:	*Effect Significant/Not Significant? Why?
	<ul style="list-style-type: none"> • loss; • reduction of habitat area; • disturbance; • habitat or species fragmentation; • reduction in species density; • changes in key indicators of conservation value (e.g. water quality, climate change). 	
Sandbanks which are slightly covered by sea water all the time	No effects likely.	No likely significant effect. The habitat is sufficiently far from the works that any impacts on water quality in Rathlin harbour will not affect this habitat.
Reefs	No effects likely.	No likely significant effect. The habitat is sufficiently far from the works that any impacts on water quality in Rathlin harbour will not affect this habitat.
Submerged or partially submerged sea caves	No effects likely.	No likely significant effect. The habitat is sufficiently far from the works that any impacts on water quality in Rathlin harbour will not affect this habitat.
Harbour porpoise	Potential for indirect effects due to changes in water quality affecting prey availability. Disturbance from construction noise and piling.	No likely significant effect. Contractor will be required to adhere to PPGs and any impacts on water quality will be confined to harbour area. Any washout of pollutants to open sea will be rapidly diluted and dispersed and there will be no impact on food supply for harbour porpoise. Works will be overseen by an MMO to minimise disturbance.

Describe any potential effects on the Natura 2000 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
<p>The key effect pathway is through changes in water quality. Pollution can affect prey species for harbour porpoise through toxicity and mortality, having a knock on effect on reproductive success. Contractor will be required to adhere to PPGs and follow Construction Environmental Management Plan.</p> <p>The works are sufficiently far from the qualifying habitats of this site that no effects are likely.</p> <p>Disturbance to harbour porpoise from construction affecting foraging behaviour, however works will be overseen by an MMO to minimise disturbance.</p>	No likely significant effects.

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 -
Planning permission has been submitted for a replacement dwelling at Church Bay, however this will not result in any in-combination effects.	No likely significant effects.

Is the potential scale or magnitude of any effect likely to be significant?	
Alone?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
In-combination with other projects of plans?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

List of Agencies Consulted: Provide contact name and telephone or email address.	
Above consultee response.	

Conclusion: Is the proposal likely to have a significant effect on an N2K site?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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<p>IF IT HAS BEEN DETERMINED THAT THE PROPOSAL WILL NOT HAVE A SIGNIFICANT EFFECT THEN ASSESSMENT IS COMPLETED.</p> <p>IF ANY PART OF THE PROPOSAL IS LIKELY TO HAVE A SIGNIFICANT EFFECT AN APPROPRIATE ASSESSMENT WILL BE REQUIRED – STAGE 2 AA.</p>
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Data collected to carry out the assessment

Who carried out the assessment?	Helen Craig MCIEEM
Sources of data	See references in report
Level of assessment completed	Test of Likely Significance
Where can the full results of the assessment be accessed and viewed?	Transport NI Data Section Clarence Court Adelaide Street Belfast
NIEA CDP Response to consultation.	

Habitats Regulations Assessment

In accordance with Regulation 43(1) of the Conservation (Natural Habitats, etc) (Northern Ireland) 1995 (as amended), **DOE Marine Division** has considered whether the project, plan or proposal either alone or in combination (neither being directly connected with or necessary to the management of the site) is likely to have a significant effect on the Natura 2000 site.

As part of that consideration, **DOE Marine Division** has:-

(a) taken into account the mitigation measures contained in the project, plan or proposal, along with all legally enforceable obligations designed to avoid environmental effects; and

(b) applied the precautionary approach set out in European Commission Guidance: "Managing *Natura 2000* Sites"¹ and by the European Court of Justice in C-127/02, Waddenzee, paragraphs 56 and 59.²

"The authorisation of a plan or project may only be granted if the Competent National Authority is certain that it will not have any adverse effect on the integrity of the site concerned. That is where no reasonable scientific doubt remains as to the absence of such effect."

(c) consulted the Department and have regard to any representations made by it within such reasonable time as the competent authority may specify for the purposes of the assessment or determining whether an assessment is required for a plan or project. This is required by Regulation 43(3), The Conservation (Natural Habitats, etc.) (Amendment) Regulations (Northern Ireland) 2007.³

(d) Some notes and hyperlinks to assist completion of this template have been inserted to help the Competent Authority/Public body complete their HRA. These can be removed.

Web link references for the above:

1. European Commission Guidance: "Managing Natura 2000 Sites"
http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en.pdf
 2. European Court of Justice in C-127/02, Waddenzee, paragraphs 56 and 59
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:62002J0127:EN:PDF>
 3. The Conservation (Natural Habitats, etc.) (Amendment) Regulations (Northern Ireland) 2007
<http://www.legislation.gov.uk/nisr/2007/345/regulation/14/made>
-

Stage 1: Test of Likely Significance

Name of Project or Plan.	Dredging and disposal of material dredged from beside the breakwater adjacent to Rathlin Harbour Rathlin Island for the purpose of building a new ferry terminal
Reference (if available)	
Name and location of Natura 2000 site (s)	<ul style="list-style-type: none"> • Skerries and Causeway SAC • Rathlin Island SAC/SPA • Sheep Island SPA
Natura 2000 site features:	<p>Skerries and Causeway SAC:</p> <p>Annex I Habitats that are a primary reason for selection of this site. 1110 Sandbanks which are slightly covered by sea water all the time 1170 Reefs 8330 Submerged or partially submerged sea caves</p> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection 1351 Harbour porpoise <i>Phocoena phocoena</i></p> <p>Rathlin Island SAC/SPA:</p> <p>Annex I Habitats that are a primary reason for selection of this site: 1170 Reefs 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts 8330 Submerged or partially submerged sea caves</p> <p>Annex I Habitats present as a qualifying feature, but not a primary reason for selection of this site: 1110 Sandbanks which are slightly covered by sea water all the time. 1210 Annual vegetation of drift lines</p> <p>Guillemot breeding population; Peregrine breeding population; Razorbill breeding population; Breeding seabird assemblage (component species: Fulmar, Common Gull, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill, Puffin); Cormorant breeding population.</p> <p>Sheep Island SPA</p> <p>Sub species of Breeding Cormorant</p>

Description of the Project or Plan	<p>A proposal has been received for the development of Rathlin Harbour New Ferry Berthing Terminal.</p> <p>Dredging is required in order to achieve the optimal depth required for the construction of the new terminal. The proposal is to dredge to approximately -1 m depth and approximately 100 m³ of material will be removed for disposal.</p> <p>A separate HRA has been prepared by the applicant for the construction element of the proposal.</p>
Is the proposal directly connected with or necessary to management of the site for conservation of N2K features?	<p>No</p>
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site.	<p>There is potential for disturbance of seals and also Black Guillemots from the area</p>

N2K Feature: Mention all features	Describe any likely direct or indirect effects to the N2K features arising as a result of: <ul style="list-style-type: none"> • loss; • reduction of habitat area; • disturbance; • habitat or species fragmentation; • reduction in species density; • changes in key indicators of conservation value (e.g. water quality, climate change). 	Effect significant/not significant? Why? <p><u>Size and scale</u> The proposal is to dredge approximately 100 m³ of material (method not yet decided) from the sea bed to -1.0 m and to either use the material in the construction phase or dispose of the material at the regulated disposal site north of Ballycastle</p> <p><u>Land-take</u> Land take from any Natura 2000 site will not occur.</p> <p><u>Distance from Natura 2000 site or key features of the site</u> The proposed site is within the Rathlin Island SAC/SPA.</p> <p><u>Resource requirements (water abstraction etc)</u> There are no resource requirements</p> <p><u>Emission (disposal to land, water or air)</u></p>
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		<p>None</p> <p><u>Excavation requirements</u> Excavation of the sea bed will occur in that dredging will remove material from the sea bed in order to allow construction.</p> <p><u>Transportation requirements</u> None.</p> <p><u>Duration of construction, operation, decommissioning etc</u> The proposed dredging and disposal activity is planned for two weeks. The construction phase of the project will take place from March 2016 to October 2016.</p> <p><u>Other</u> The proposal is so the applicant can prepare the seabed for the construction of a new ferry terminal for Rathlin Island</p>
Skerries and Causeway SAC		
Sandbanks which are slightly covered by sea water all the time.		Not significant This feature is not present within the area of development
Reefs		Not significant As above
Submerged or partially submerged sea caves		Not significant As above

Harbour Porpoise		Not significant The location of the proposal is within a closed area, which is essentially part of the Rathlin Harbour and no recordings are noted from the 2014 Irish Whale and Dolphin group survey GIS layer.
Rathlin Island SAC		
Reefs	Effects on this feature are unlikely.	Not significant There are no reef features in the area for the proposal (pers. Comm. with Joe Breen)
Vegetated sea cliffs of the Atlantic and Baltic coasts	As above.	As above.
Submerged or partially submerged sea caves	As above.	As above.
Sandbanks which are slightly covered by sea water all the time.	As above.	As above.
Annual vegetation of drift lines	As above.	As above.
Rathlin Island SPA		
Guillemot	No significant ornithological issues associated with this proposal	There conservation science ornithological team have stated that there are no ornithological issues with this proposal, however, as a precaution if the work is to be carried out from March to August (the breeding season) a survey is carried out in the harbour area (within the vicinity of the proposal) to ensure there is no disturbance to Black Guillemot, which are not an SPA feature, but they do utilise the harbour area. They will also be a feature of the proposed MCZ. RSPB would hold further information on Black Guillemot utilising this area.
Peregrine	No significant ornithological issues	
Razorbill	No significant ornithological issues	
Seabird assemblage (component species: Fulmar, Common Gull, Lesser Black-backed Gull, Herring	No significant ornithological issues	

Gull, Kittiwake, Guillemot, Razorbill, Puffin)		
Cormorant breeding population	No significant ornithological issues	
Sheep Island SPA		
Cormorant breeding population	No significant ornithological issues	The dredging is far enough away from Sheep Island SPA and there should be no disturbance from the disposal activity and there is a relatively small volume of material to be disposed of at sea.

***Only mitigation measures designed within the application can be considered at this stage. Any conditions that the Competent Authority would impose must be assessed through the appropriate assessment stage (Stage 2).**

Describe any potential effects on the Natura 2000 site as a whole in terms of: interference with the key relationships that define the structure or function of the site	<p>There should be no interference from the proposed dredging and disposal on the Natura 2000 sites.</p> <p>Any potential impacts on seals from disturbance would be looked at through the Wildlife Order process. A survey of the adjacent harbour will also be required to ensure there is no disturbance to breeding Black Guillemots during March to August.</p>

Provide details of any other projects or plans that together with the project or plan being assessed could (directly or indirectly) affect the site.	This project is in conjunction with a proposal to construct a new ferry terminal, however, this construction has been subject to a separate HRA process due to planning and although the HRA has been completed, this may require some refinement due to the project now being classes as EIA development by Planning. There are no other proposals known at this time for this area of Church Bay on Rathlin Island (the latest planning proposals are for onshore works).

Is the potential scale or magnitude of any effect likely to be significant? :	
Alone?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
In-combination with other projects of plans?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

List of Agencies / Organisations Consulted: Provide contact name and telephone or email address.	<p>Eimear Reeve, CDP NIEA Eimear.reeve@doeni.gov.uk</p> <p>Neil McCulloch Conservation Science NIEA Neil.mcculloch@doeni.gov.uk</p>
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	Joe Breen Marine Monitoring Marine Division Joe.breen@doeni.gov.uk
Habitats Regulations Assessment Summary	There will be no likely significant effect from the proposal on Natura 2000 features

Conclusion: Is the proposal likely to have a significant effect on an N2K site?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Data collected to carry out the assessment

Who carried out the assessment?	Cara Lavery Marine Division
Sources of data	NIEA 2000 Bird Survey data, MCZ data for Black Guillemot, IWDG survey data and personal consultation with Marine Conservation
Level of assessment completed	TOLS
Where can the full results of the assessment be accessed and viewed?	On file and DO1-15-5227& DO1-15-5223
Summary of response.	No significant impact on Natura 2000 features, separate assessments of potential disturbance to seals and breeding birds will be required.

DO NOT PROCEED FURTHER IF YOU HAVE ESTABLISHED THAT THIS PROPOSAL IS UNLIKELY TO IMPACT A N2K SITE AND NO MITIGATION IS REQUIRED

Figures

1 0 1 2 3 4 5 km



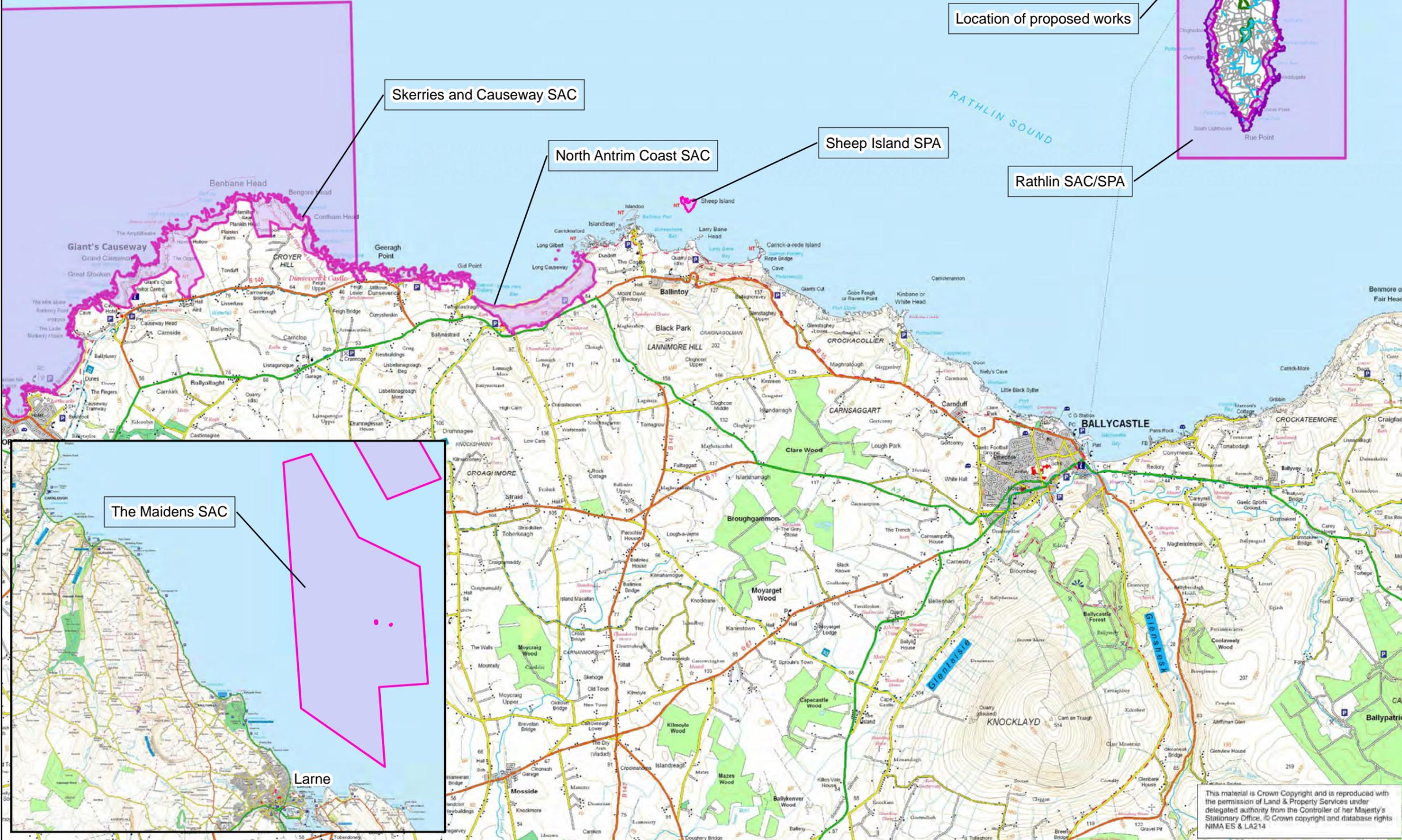
Location of proposed works

Skerries and Causeway SAC

North Antrim Coast SAC

Sheep Island SPA

Rathlin SAC/SPA



The Maidens SAC

Larne

- Legend**
- Scheme Location
 - Sites of Local Nature Conservation Importance (SLNCs)
 - Designated Site (SAC/SPA)
 - Surface watercourse

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT				Preliminary
Design : HC				For Comment
Chkd : HC				For tender
Appd : AW				For construction
Date : Dec 2015				As constructed
				Other



Client :
DRD Transport NI
Development & Traffic Assessment
Rathkeltair House, Market Street
Downpatrick, BT30 6AJ (028) 4461 2211

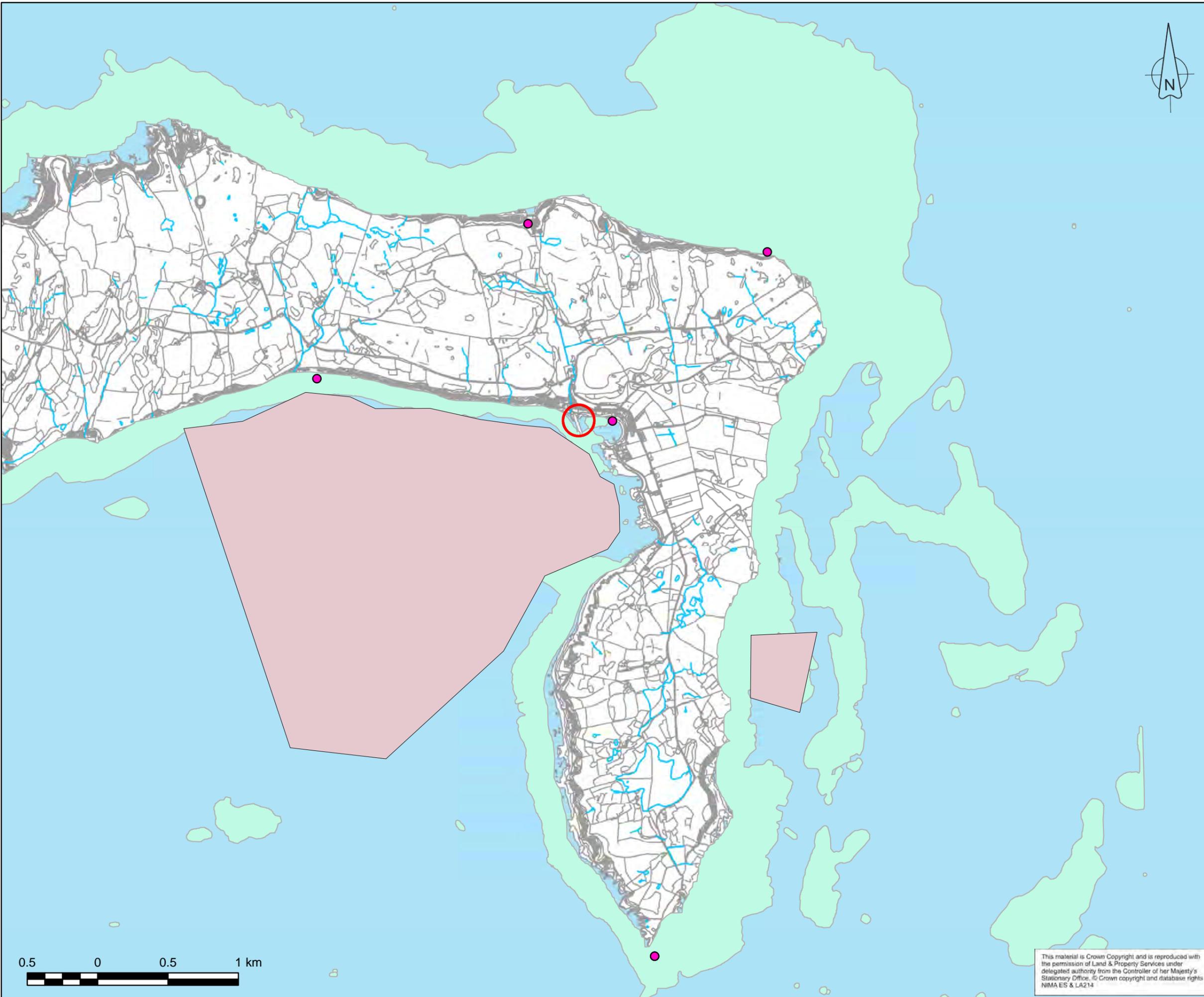
Project Name :
Rathlin Island Harbour Development

Drawing Title :
Designated Sites

Original Drawing Size : A3
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- Legend**
- Scheme location
 - Black guillemot site
 - Sand banks
 - Rock/Reef

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT				Preliminary
Design : HC				For Comment
Chkd : HC				For tender
Appd : AW				For construction
Date : Dec 2015				As constructed
				Other



Client : DRD Transport NI
 Development & Traffic Assessment
 Rathkeltair House, Market Street
 Downpatrick, BT30 6AJ (028) 4461 2211

transportni
 Department for Regional Development

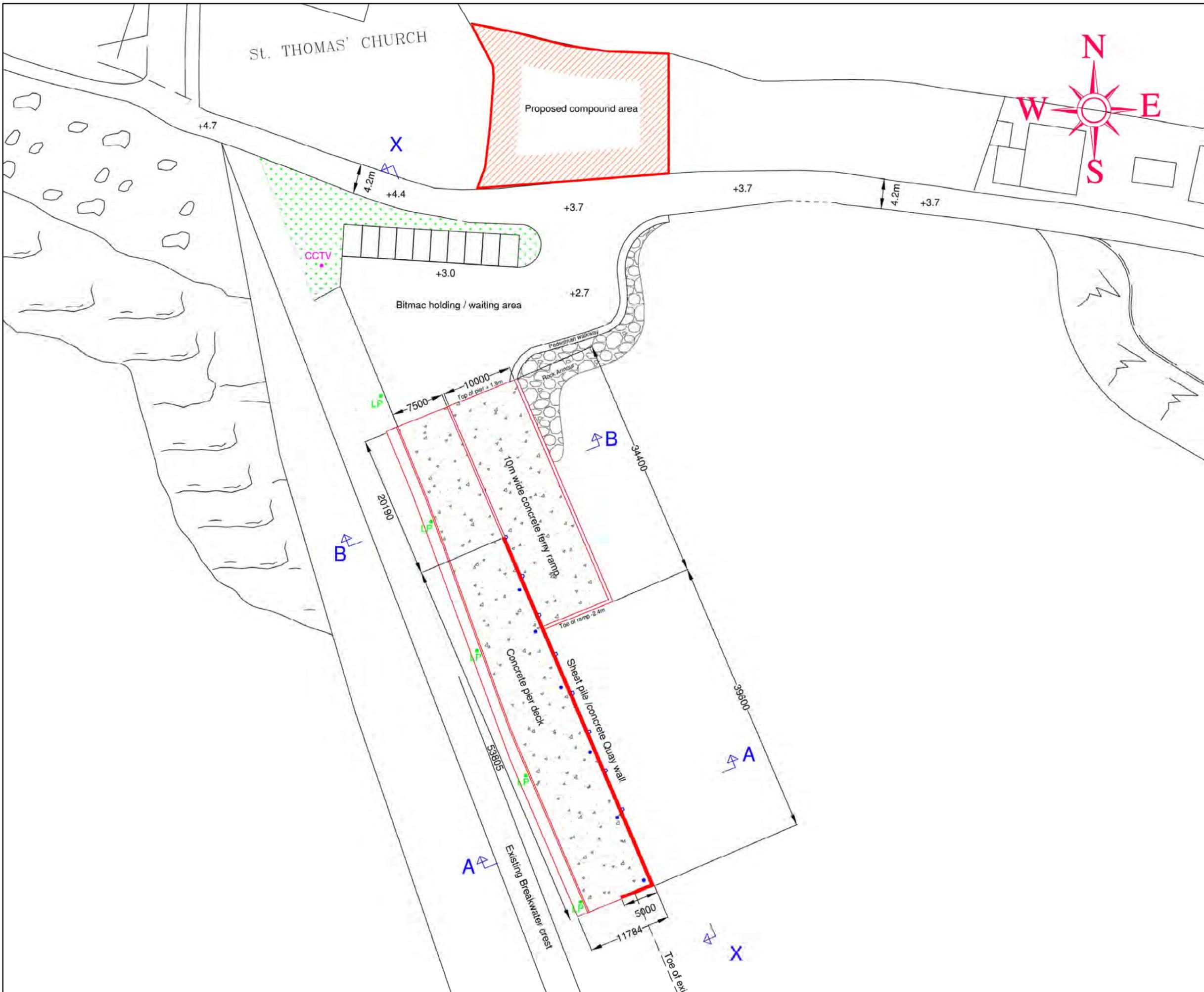
Project Name :
Rathlin Island Harbour Development

Drawing Title :
Marine Habitats

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- KEY:
- LAMPPOST
 - ▵ FENDER
 - MOORING BOLLARD
 - +2.7 PROPOSED LEVEL

Rev	Revision Details	Chkd	Appd	Date

Drawn :	Preliminary	<input checked="" type="checkbox"/>
Design :	For Comment	<input type="checkbox"/>
Chkd :	For tender	<input type="checkbox"/>
Appd :	For construction	<input type="checkbox"/>
Date : Dec 2015	As constructed	<input type="checkbox"/>
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transportni
 Department for Regional Development

Project Name :
Rathlin Island Harbour Development

Drawing Title :
Proposed Design: Plan

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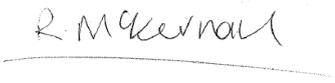
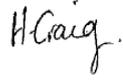
Rathlin Island Harbour Development



Environmental Statement Volume 1: Non-Technical Summary

Document Control Sheet

Project Name:	Rathlin Island Harbour Development
Project Number:	CO401330
Report Title:	Environmental Statement – Non Technical Summary
Report Number:	NTS

Issue	Prepared	Reviewed	Approved
Status/Amendment			
00	Name: Ruaidhri McKernan Signature:  Date: 14/12/15	Name: Helen Craig Signature:  Date: 14/12/15	Name: Andrew Warwick Signature:  Date: 15/12/15
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Appendix A NTS Figures

1 Background

The Department for Regional Development provides a ferry service between Ballycastle and Rathlin Island. The current service is operated by Rathlin Island Ferry Ltd who use two ferries to provide this service:

- a passenger-only vessel provided by the operator; and
- a roll-on roll-off vessel [MV Canna] which is leased by the operator from Caledonian Maritime Assets Ltd.

The MV Canna was built in 1975 and it is approaching the end of its operating life. As a result the Department for Regional Development have commissioned a replacement ferry. The new ferry will be too big to enter into the inner harbour at Rathlin Island. As a consequence it is proposed to construct:

- A new slip-way for the loading and unloading of vehicles and passengers on to the new ferry.
- A new harbour wall which enables the new ferry to berth during the day and overnight.

2 EIA Screening and Scoping

Following the submission of a planning application to Causeway Coast and Glens Borough Council in June an EIA Determination letter was issued on 10th September 2015 requiring the submission of an Environmental Statement. The Council determined that the harbour development falls within a Sensitive Area and category 10 (G) of Schedule 2 of the Planning (EIA) Regulations (Northern Ireland) 2015.

Scoping is the process which determines those environmental topics where significant effect may occur and which therefore require further assessment.

An Environmental Scoping assessment was completed in November. The report concluded that an Ecological Impact Assessment and Habitats Regulations Assessment was required **as a consequence of the significant designations protecting Rathlin Island's** wildlife; that further assessment of the potential landscape impacts should be considered due to the presence of an AONB and Church Bay Local Landscape Policy Area; a full archaeological assessment was needed due to the archaeological significance of the area and a noise assessment was required to assess the change in noise which would be locally experienced.

3 Planning Policy

Rural transport policies within the Regional Development Strategy 2035 (RDS) aim to improve connectivity, social inclusion and access to settlements in order to achieve greater economic prosperity.

The Northern Area Plan 2016 appreciates that in order to sustain rural communities, continuing development needs to occur to promote and support linkages between rural and urban areas and public access to services.

The Northern Area Plan also stipulates that any permitted developments will comply with the requirements set out in the Local Landscape Policy Area (LLPA) and the development limit designated within the Church Bay area of Rathlin Island.

The Rathlin Island Policy outlines a number of objectives to improve the **community's** capacity to participate in sustainable economic and tourism development, while protecting the environmental and natural assets. One of the main policies in the plan is to ensure the islanders have access to a modern affordable ferry service. Furthermore the Rathlin Action Plan places emphasis on improvements to infrastructure and transport systems to facilitate effective island-mainland linkages, to develop linkages between rural and urban areas and to promote equitable access to key public services for all islanders.

The proposed development complies with regional, county and local planning policy as it will improve island accessibility for both residents and tourists enhancing economic, social and cultural opportunities.

4 Consultation

The Department for Regional Development engaged with stakeholders at two stakeholder engagement events, one in summer 2014 for the new ferry and one in April 2015 prior to submitting the planning application.

The local residents were primarily in favour of a new ferry and resultant berthing facilities; the following points were noted:

- More enclosed deck space for passengers in bad weather.
- Ferry size should accommodate for future growth on the island.
- Improved access for disabled people on the ferry.
- Inclusion of luggage space on the ferry.

Extensive consultation was also undertaken with the statutory authorities as part of the screening and scoping exercise and to agree the content of the Environmental Statement and Habitats Regulations Assessment.

5 The Proposed Scheme

The proposed scheme is located within the existing harbour on Rathlin Island. The new slipway is located approximately 150m west of the existing slipway facility within Church Bay, alongside the harbour’s western breakwater (refer **NTS Figures 1 and 2** in **Appendix A**).

The harbour improvements will provide a new ferry ramp, berthing pier, hardstanding area, mooring bollards, fendering system, lighting for the facility and access to the new slipway. The total area of land required for the scheme is 0.2ha.

The new ferry berth will be constructed using a combination of steel sheet piles and reinforced concrete retaining walls which will form a vertical berthing quay. The new berthing pier will be approximately 75m long and will have a reinforced concrete deck and a concrete wave wall along the left hand side of the pier deck.

The new ferry ramp will be approximately 34m long x 10m wide and will be constructed from a reinforced concrete slab.

	
Western Breakwater – site of new pier and slipway	Existing inner harbour

In order to facilitate the loading and unloading of passengers and vehicles from the new ferry a new bitmac hardstanding area will be constructed. This area will incorporate ten parking spaces for users of the ferry as well as providing space for vehicles to comfortably manoeuvre on or off the ferry and adequate space for 140 foot passengers to wait to embark.

Site works are expected to commence in March 2016 and be completed by October 2016 to coincide with the delivery of the new ferry.

6 Alternatives

During the design process, four ferry options and four alternative harbours designs and locations were considered.

A number of issues were raised at stakeholder events that influenced the final design of the ferry. These included more enclosed deck space for passengers in bad weather, provision of a luggage storage area, greater vehicle capacity and ship design to minimise noise levels. The option chosen for the ferry fulfilled the design brief to carry 5-6 cars and 140 passengers.

As the final design for the ferry was a larger vessel that could not be accommodated at the existing slipway, it was necessary to design a new facility for berthing and mooring the ferry. The chosen harbour design was preferred for ease of construction, access for passengers and vehicles and safety of the ferry while berthed overnight.

7 Cultural Heritage

The proposed development site lies within an area of archaeological potential, with numerous archaeological sites and monuments, industrial heritage sites and historic buildings and associated gardens being recorded within its general vicinity. The most significant of these is the modern Parish Church of St. Thomas to the immediate north which is located on the site of an earlier ecclesiastical site (ANT001:023), which is located to the immediate north.

The proposed harbour improvements are not anticipated to have a significantly adverse impact upon any identified archaeological site or feature, with the exception of the potential impact on **remains associated with St. Thomas' Church which may lie outside** the boundaries of the existing church and graveyard.

A programme of controlled primary ground reduction works will be undertaken at the site under the supervision of a suitably qualified archaeologist under licence to DoE to ensure the identification and appropriate treatment of any archaeological remains which may survive in situ within the boundaries of the proposed development site.

8 Ecology and Nature Conservation

Rathlin Island is renowned for its wildlife, both marine and terrestrial. As a result the **islands'** sea, coastline and habitats are protected by significant nature conservation designations – local, national and European.

The island's sea stacks and cliffs support nationally important seabird breeding populations as well as peregrine and chough. The important marine habitats, which include reefs and sea caves, are found offshore to the north and east of the island.

In addition, the DoE is currently proposing to designate Rathlin as a Marine Conservation Zone for its deep seabed habitat, submerged lagoons and its population of black guillemots.

The seabed around Rathlin Island is known for its biodiversity, particularly for sponges. The harbour area in Church Bay is more sheltered than the majority of the coastline around the island and its biodiversity is lower. The terrestrial habitats in the vicinity of the scheme are primarily shingle/gravel beach and coastal grassland.

The beach in the harbour area where the slipway is proposed is used by seals for hauling out. The seas around Rathlin are also used by harbour porpoise, dolphins and minke whale for foraging.

The assessment confirms that the only significant potential impacts relate to the construction phase. Potentially significant construction impacts could include: disturbance to marine mammals during construction (particularly during any piling works), effects on water quality from pollution or sedimentation, potential for introduction of invasive species and disturbance to breeding/foraging birds. Construction impacts will be managed through a Construction Environmental Management Plan to minimise effects on the marine environment.

Works will be undertaken under a Wildlife Licence to minimise disturbance to marine mammals with a Marine Mammal Observer on site during the construction works. Where possible, piling works will also be timed to avoid the main pupping season for harbour seals.

Biosecurity measures will be put in place to prevent the introduction of non-native species to the island from machinery and plant.

The implementation of mitigation measures will ensure there are no significant impacts on seabirds and marine mammals and that the conservation status of the populations is not affected.

The detailed design of the quay wall will incorporate nesting boxes for black guillemots to achieve beneficial effects for this species.

9 Landscape and Visual Assessment

Rathlin Island is located within the Causeway Coast and Glens Area of Outstanding Natural Beauty (AONB). The scheme is also located within the Causeway Coast and Rathlin Island Landscape Character Area and within the Rathlin Seascape Character Area.

On a local scale, the proposed scheme is within Church Bay Local Landscape Policy Area (LLPA). The main landscape features in the area of the proposed harbour improvements are the existing Rathlin Harbour, existing breakwater, residential properties and St Thomas' Parish Church.

There are a total of 8 visual receptors whose views could be impacted as a result of the development. These include residential properties along the coastline at the harbour and **St. Thomas' Parish Church**.

The proposed ferry development will be a standard low lying concrete pier facility constructed adjacent to and forming part of the existing stone breakwater. Being within both the existing harbour area and forming a part of the built up hamlet of Church Bay it is considered that it will not be out of place in this setting and as such the landscape impacts are not considered to be significant.

Construction impacts will be temporary and of short duration. The main impact will be the visual intrusion caused by the construction machinery. This impact is considered to be of slight significance. To reduce this impact, the construction programme will be minimised as far as feasible and good communication will be maintained with local residents with regard to the construction programme.

The lighting on the pier and slipway and in the car parking area will be designed to minimise intrusion to the surrounding properties. An additional proposal to enable the harbour master to switch the harbour lights off at night when the ferry is berthed to reduce lighting pollution is also being considered at present.

Operational effects on the visual receptors will include the introduction of the new slipway, berthing facility and moored ferry features into the view of nearby properties.

Breakwater Studio is the closest property to the development and will have a clear view of the new development. Although the slipway and quay wall will integrate with the existing breakwater, it introduces a new feature into the views from the property. In addition, the views from the property will be routinely and significantly disrupted by the ferry operation and the vehicular and pedestrian traffic this generates. It is assessed that the impact on this property is moderate due to the degree of change experienced.

The impact on the remaining visual receptors is not considered to be significant.

10 Noise and Vibration

Noise and vibration effects were assessed both in terms of the construction of the proposed facility and the operational phase of the proposed facility.

Construction noise levels were predicted at all sensitive receptors in close proximity to the new facility. Construction will be restricted to daytime working hours only (7am to 7pm), Monday to Friday.

The Causeway Coast and Glens Environmental Health Department stipulated that noise should:

- Not exceed 75 dB $L_{Aeq, 1hr}$ between 7am and 7pm on Monday to Fridays, or 75 dB $L_{Aeq, 1hr}$ between 8am and 1pm on Saturdays).

The assessment concluded that construction works are not expected to cause noise levels to exceed 75 dB L_{Aeq} during the day at any of the residential receptors in close proximity to the development. Best practice methods will be employed during construction, such as turning off machinery when not in use and positioning the noisiest plant as far as possible from sensitive receptors.

A noise assessment concentrating on the operational noise of the proposed ferry was undertaken in accordance with the guidance set out in the World Health Organisation (WHO) **Guidelines for Community Noise, 1999 and the BS4142:2014 'Methods for rating and assessing industrial and commercial sound'**.

The results of the assessment show that the noise levels as a result of the ferry operation are below the WHO Guidelines for moderate annoyance. The results of the BS4142:2014 assessment indicates that adverse impacts are not likely at nearby receptors.

11 Cumulative Impacts

There are a number of residential developments proposed in the Church Bay area. Should these proceed to site in the same period as the construction of the Harbour Development there will be a potential for increased temporary nuisance (dust and noise) and disruption for local residents. However given the minor nature of the individual proposals, no significant cumulative environmental impacts are anticipated.

12 Key Mitigation Measures

A schedule of Environmental Commitments has been prepared and the following non exhaustive list provides key mitigation measures identified.

- An archaeological watching brief will be undertaken during excavations.
- Pollution Prevention Guidelines (PPGs) will be adhered to during construction.
- Construction will be undertaken under a Wildlife Licence to ensure marine mammals are not disturbed.
- Biosecurity measures will be implemented to prevent introduction of non-native marine species.
- Black guillemot nest boxes will be incorporated into the pier design.
- Contractor will appoint a responsible person to act as community liaison and keep residents advised on the construction programme.
- Working hours will be restricted to weekday daytime hours (7am to 7pm).

13 Conclusion

With adherence to pollution prevention measures and the application of the mitigation measures as set out in the ES, no significant impacts will arise as a result of construction activities.

Once operational, the slipway and berthing facility will provide access for a new, more efficient ferry. The new ferry will improve access to the island and facilitate future growth on the island.

14 Further Information

The full Environmental Statement will be on display and available for inspection at:

- Department for Regional Development, Clarence Court, 10-18 Adelaide Street, Belfast, BT2 8GB.
- Sheskburn House, 7 Mary Street, Ballycastle, BT54 6QH.

The documents are also available to download on www.drdni.gov.uk.

15 What Happens Next

Construction of the harbour improvements is dependent on approval from Causeway Coast and Glens Borough Council Planning Department. The planning application has been advertised locally and written submissions relating to the environmental effects can be made to Causeway Coast and Glens Planning Department. These written submissions will be considered by the Council in making their decision on whether or not to approve the harbour with or without modifications.

Appendix A NTS Figures

1:25,000

RATHLIN ISLAND



Legend

 Scheme Location



Scheme Location

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Design :	HC		For Comment	<input type="checkbox"/>
Chkd :	HC		For tender	<input type="checkbox"/>
Appd :	AW		For construction	<input type="checkbox"/>
Date :	Dec 2015		As constructed	<input type="checkbox"/>
			Other	<input type="checkbox"/>



Client :
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 Development & Traffic Assessment
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 Downpatrick, BT30 6AJ (028) 4461 2211

transportni
 Department for
 Regional
 Development

Project Name :
**Rathlin Island
 Harbour Development**

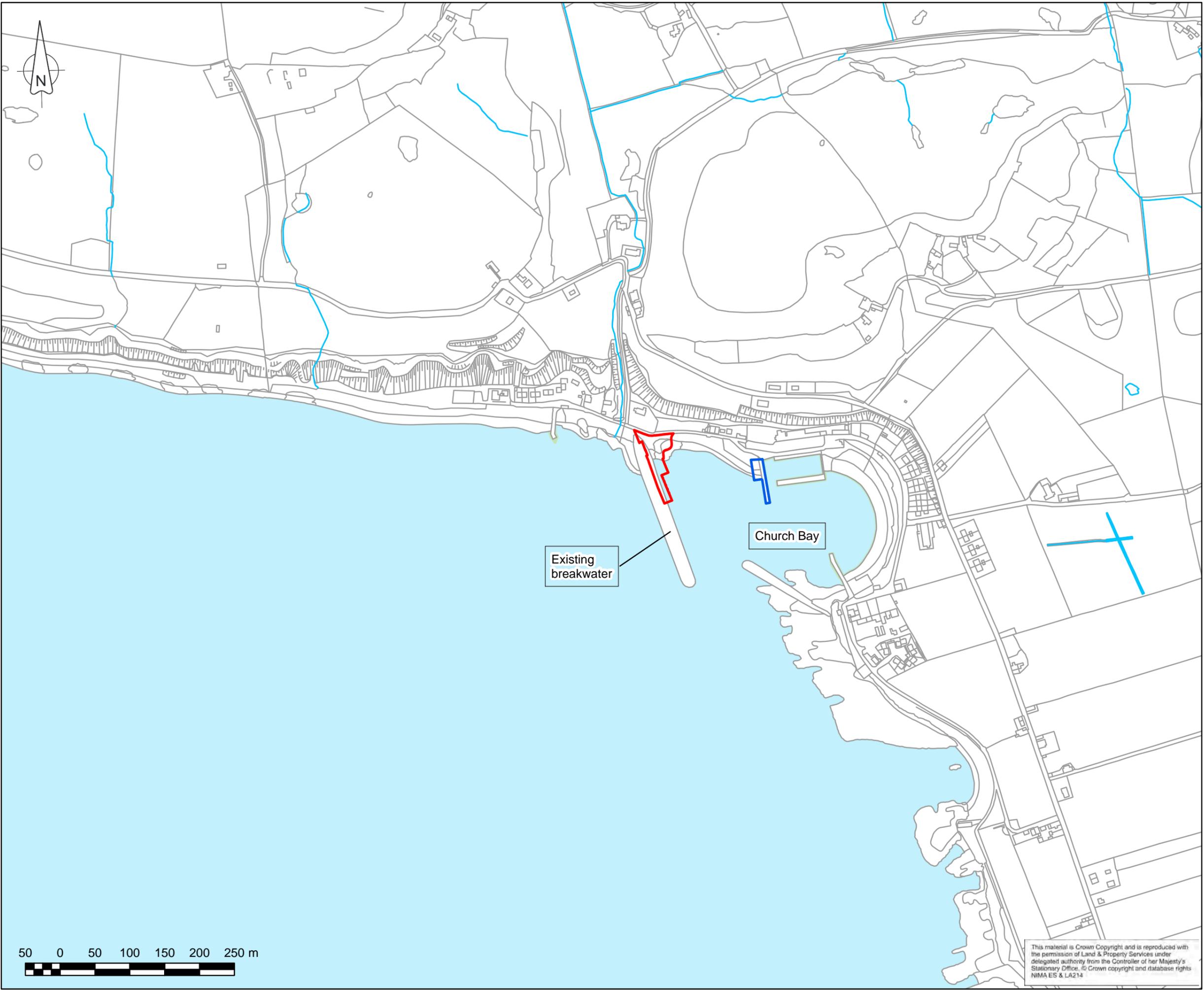
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Drawing No : NTS Figure 1 Rev : -

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Legend

- Scheme boundary
- Existing slipway and ferry area

Rev	Revision Details	Chkd	Appd	Date
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Design : HC				For Comment
Chkd : HC				For tender
Appd : AW				For construction
Date : Dec 2015				As constructed
				Other



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Project Name :
Rathlin Island Harbour Development

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Rathlin Island Harbour Development



Environmental Statement Volume 2: Main Text

Document Control Sheet

Project Name:	Rathlin Island Harbour Development
Project Number:	CO401330
Report Title:	Environmental Statement
Report Number:	ES

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Status/Amendment			
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01	Name: Helen Craig Signature: <i>H. Craig</i> Date: 14/12/15	Name: Andrew Warwick Signature: <i>A. Warwick</i> Date: 15/12/15	Name: Orla Fitzpatrick Signature: <i>O. Fitzpatrick</i> Date: 15/12/15
	Name: Signature: Date:	Name: Signature: Date:	Name: Signature: Date:
	Name: Signature: Date:	Name: Signature: Date:	Name: Signature: Date:

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This Environmental Statement has been prepared and co-ordinated by Amey on behalf of Transport NI. The scheme design and construction methodology was developed by Central Procurement Directorate of DFPNI. The cultural heritage assessment was completed by Farrimond McManus Ltd.

Amey would also like to acknowledge the information supplied by Northern Ireland Environment Agency, Department of Environment Marine Conservation Division and the Royal Society for the Protection of Birds with respect to the wildlife of Rathlin Island.

Preface

The Department for Regional Development is proposing to construct a new slipway and mooring facility to accommodate a new passenger and vehicle ferry for Rathlin Island. This Environmental Statement (ES) reports the findings of the detailed environmental assessments undertaken during the development of the harbour improvements.

Information relating to the Environmental Statement and supporting documentation is available in three volumes:

- Volume 1 – Non Technical Summary
- Volume 2 – Environment Statement
- Volume 3 – Figures.

A Habitats Regulations Screening Report has also been prepared and is available with the ES.

Copies of the Environment Statement, along with the additional volumes outlining the information provided in the ES, will be made available at the following addresses:

DRD NI	Sheskburn House
Clarence Court	7 Mary Street
10 – 18 Adelaide Street	Ballycastle
Belfast	BT54 6QH
BT2 8GB	

The Documents will also be available to download: www.drdni.gov.uk

List of Abbreviations

AADT	Average Annual Daily Traffic
AAWT	Average Annual Weekday Traffic
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
ASSI	Area of Special Scientific Interest
CRTN	Calculation of Road Traffic Noise
DCAL	Department of Culture, Arts and Leisure
DMRB	Design Manual for Roads and Bridges
DoE	Department of Environment
DRD	Department for Regional Development
EAR	Environmental Assessment Report
EIA	Environmental Impact Assessment
ES	Environmental Statement
EU	European Union
ha	hectares
HGV	Heavy Goods Vehicles
IAN	Interim Advice Note
JNCC	Joint Nature Conservation Committee
km	kilometres
LA10, 18hr	A-weighted sound level in dB -exceeded 10% of the time in an 18 hour period
LAeq, T	continuous A-weighted sound pressure
LCA	Landscape Character Area
LLPA	Local Landscape Character Area
m	metres
MHWS	Mean High Water Spring
MMO	Marine Mammal Observer
NIEA	Northern Ireland Environment Agency
NNR	National Nature Reserve
OSNI	Ordnance Survey of Northern Ireland
PPG	Pollution Prevention Guideline
PPS	Planning Policy Statement
SAC	Special Area of Conservation
SLNCI	Site of Local Nature Conservation Importance
SPA	Special Protection Area

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1 Introduction

1.1 Background to the Scheme

1.1.1 The Department for Regional Development provides a ferry service between Ballycastle and Rathlin Island. The current service is operated by the Rathlin Island Ferry Ltd who use two ferries to provide this service:

- a passenger-only vessel provided by the operator; and
- a roll-on roll-off vessel [MV Canna] which is leased by the operator from Caledonian Maritime Assets Ltd.

1.1.2 The majority of people using the ferry are foot passengers, as only residents, commercial vehicles and those with a special permit are allowed to bring their vehicles on to the island.

1.1.3 The MV Canna was built in 1975 and it is approaching the end of its operating life. The Department for Regional Development, with marine consultants Burness Corlett Three Quays, have designed a replacement ferry for the MV Canna. A contract for the construction of the ferry was awarded to Arklow Marine Services in April 2015 and is due to be delivered to Rathlin Island in August 2016. The new roll-on roll-off ferry will cater for vehicles and passengers but they will be accommodated on different areas of the ferry.

1.1.4 It is envisaged that the ferry service will continue to be provided by two vessels – a passenger only ferry and a roll-on roll-off ferry. The new roll-on roll-off ferry will operate between Ballycastle and Rathlin Island in a similar manner as today. The new ferry will be slightly bigger than the MV Canna but have a similar capacity i.e. 6 cars and 140 passengers. Consequently, the new vessel will be too big to enter into the inner harbour at Rathlin Island.

1.1.5 The proposed harbour improvements at Rathlin Island will provide

- A new slip-way for the loading and unloading of vehicles and passengers on to the new ferry
- A new harbour wall which enables the new ferry to berth during the day and overnight.

1.2 Scheme Location

1.2.1 The proposed scheme is located on the southern coastline of Rathlin Island. The island lies approximately 6km north of Ballycastle on **the Co. Antrim coastline and is Ireland's** only inhabited island (refer **Figure 1.1**, Volume 3) The new slipway is located approximately 150m west of the existing inner harbour within Church Bay, alongside the harbours western breakwater (refer **Figure 1.2**, Volume 3). Rathlin Harbour is the main access point for all travellers travelling between Rathlin Island and Ballycastle using the current Rathlin Island Ferry Service.

1.3 Structure of ES

1.3.1 This ES has been prepared in order to support the planning application for the proposed harbour improvements, planning application reference LA01/2015/0382/F. The document provides a detailed description of the present environment and scheme proposals and a comprehensive assessment of the potential effects of the scheme proposals and agreed mitigation measures. It builds on information gained from previous reports and addresses any issues raised.

1.3.2 The ES comprises the following volumes:

- Volume 1 – Non Technical Summary
- Volume 2 – Main Text
- Volume 3 – Figures

In addition a Habitats Regulations Screening Report has been prepared and submitted with the planning application.

1.4 ES Availability and Comments

The ES will be made publically available at the following locations:

DRD NI	Sheskburn House
Clarence Court	7 Mary Street
10 – 18 Adelaide Street	Ballycastle
Belfast BT2 8GB	BT54 6QH

1.5 What happens next?

Construction of the harbour improvements is dependent on approval from Causeway Coast and Glens Borough Council Planning Department. The planning application has been advertised locally and written submissions relating to the environmental effects can be made to Causeway Coast and Glens Planning Department. These written submissions will be considered by the Council in making their decision on whether or not to approve the harbour with or without modifications.

2 Environmental Impact Assessment

2.1 EIA Legislation and Guidance

- 2.1.1 Environmental Impact Assessment is a method of ensuring that the likely effects of new development on the environment are fully understood and considered before planning permission is given for the development to proceed. Its purpose is to improve the quality of decision making by identifying potential environmental issues at an early stage of the development process.
- 2.1.2 The Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment (commonly referred to as the EIA Directive) has been in force since 1985 and applies to a wide range of public and private **projects within the European Union's member states. Under this legislation, the national authorities can decide whether or not an EIA is needed should the scheme fall under Annex I, II or III of this legislation.**
- 2.1.3 The original EIA Directive has been superseded to some extent by three standalone directives. However these amendments were consolidated into a new directive in 2011 (Directive 2011/92/EU). In 2014 a new directive was published (Directive 2014/52/EU) to update guidance regarding screening, reporting, monitoring and decision-making. The requirements of this Directive are incorporated into national legislation through the Planning (EIA) Regulations (Northern Ireland) 2015.
- 2.1.4 The proposed scheme is located in Causeway Coast and Glens Borough Council which holds responsibility for planning and development within the council area. Under Planning (EIA) Regulations (Northern Ireland) 2015, the council is required to make a determination whether an EIA is required for planning applications. This can be undertaken either as part of a formal pre-application request by the developer or on the submission of a planning application the council can make the determination that a development requires Environmental Assessment.

2.2 EIA Screening and Determination

- 2.2.1 A mandatory EIA is required for all projects listed under Annex 1 of the EIA Directive as they are considered to pose significant effects to the environment. Annex 1 projects include motorways, airports, hazardous waste installations and waste water treatment plants.

- 2.2.2 Projects listed under Annex II require a decision made by the planning authority to determine whether an EIA is required. The essential determining factor will be the extent to which a particular Annex II development is likely to have significant effects on the environment. In making the determination, the authority must consider the criteria listed in Annex III of the regulations.
- 2.2.3 Following a pre-application discussion request in October 2014 the (then) Planning Service responded to advise that having undertaken screening and scoping consultations as part of the pre-application process NIEA Natural Heritage had responded to request further information to enable them to carry out a Habitats Regulations Assessment. This requested information included detailed design and construction information and a Construction Environmental Management Plan. The Planning Service concluded that until this information was submitted they could not ascertain if an ES would be required. They did however note that no other environmental concerns had been raised.
- 2.2.4 A planning application for the harbour development was subsequently submitted to Causeway Coast and Glens Borough Council on 17th June 2015 and a Habitats Regulations Assessment report was drafted. Following consultation the Council then issued an EIA Determination letter on 10th September 2015 requiring an Environmental Statement to be submitted. The Council determined that the harbour development falls within a Sensitive Area and category 10 (G) of Schedule 2 of the Planning (EIA) Regulations (Northern Ireland) 2015.
- 2.2.5 Amey were subsequently commissioned by Transport NI to co-ordinate and compile an Environmental Statement for the Rathlin Island Harbour Development.

2.3 EIA Scoping

- 2.3.1 Paragraph 30 of Directive 2014/52/EU states 'in order to improve the quality of an environmental impact assessment, to simplify the procedures and to streamline the decision-making process, the competent authority should ...issue an opinion on the scope and level of detail of the environmental information to be submitted in the form of **an environmental impact assessment report ('scoping')**.
- 2.3.2 Following this guidance, an Environmental Scoping Report was produced in November 2015 as part of the preliminary assessment stage of the scheme. The purpose of this report was to identify the issues of greatest potential significance so that the impacts could be identified and appropriate mitigation measures selected.

2.3.3 The Environmental Scoping Report considered the following topics: Cultural Heritage, Landscape and Visual, Ecology and Nature Conservation, Geology and Soils, Materials, Air Quality, Noise and Vibration, Water Environment, Community and Private Assets, and Effects on All Travellers.

2.3.4 A summary of each individual topic examined in the Environmental Scoping Report is presented below:

Cultural Heritage

2.3.5 The proposed development would impact upon an area of considerable archaeological potential between the road and the high tide mark. Due to the recognised archaeological sensitivity of this area an Archaeological Impact Assessment (AIA) should be included in the ES. Following the submission of the AIA to the council, the planning response from the NIEA Historic Monuments Unit requested amendments to this document that will be included in the ES.

Landscape and Visual

2.3.6 The scheme will impose visual changes in the local landscape and will impact on visual receptors in the surrounding area. Furthermore the proposed development will impact on land that is designated as an Area of Outstanding Natural Beauty (AONB) and as a Local Landscape Planning Area (LLPA). As a result a landscape assessment is recommended as well as an assessment of potential visual impact.

Ecology and Nature Conservation

2.3.7 The proposed works will take place within an Area of Special Scientific Interest (ASSI) and partially within a Special Area of Conservation (SAC). As a result an Ecological Impact Assessment and a Habitats Regulations Assessment are required.

Geology and Soils

2.3.8 There is negligible risk of environmental damage to soils and geology in this area as a result of the proposed scheme. There is potential for soil contamination from the construction process but these impacts will be managed through a Construction Management Plan and will likely result in no significant effects. As a result no further assessment will be required.

Materials

- 2.3.9 The scheme will produce waste and potentially excavated soil. However given the scale of the works, amount of materials required and the implementation of a Site Waste Management Plan, no further assessment is deemed necessary.

Air Quality

- 2.3.10 As the works will not impact on air quality no further assessment is deemed necessary. Additionally the new ferry will be more efficient than the existing ferry and likely produce fewer emissions.

Noise and Vibration

- 2.3.11 Noise effects are expected during construction of the scheme and the existing noise experienced may alter as a result of the operation of the new ferry and slipway. As a result a noise impact assessment should be undertaken.

Water environment

- 2.3.12 The increase in area of hard-standing will have no impact on flooding and any temporary impacts on the water environment will be managed through a Construction Environmental Management Plan (CEMP) and adherence to all relevant Pollution Prevention Guidelines. As a result no further assessment is necessary.

Community and Private Assets

- 2.3.13 The proposed development will not have a significant adverse effect on any community facilities or require any private land take. Therefore no further assessment is required.

Effects on all Travellers

- 2.3.14 Given the potential beneficial effect of the scheme on all travellers as a result of the modernisation of the ferry service no further assessment is deemed necessary.

- 2.3.15 In summary the Scoping report concluded that:

- An assessment of the potential impacts on nature conservation, incorporating a Phase 1 Habitat Survey, be completed to fully ascertain the effects of the scheme on habitats;
- Further Landscape assessment is required including a visual assessment;

- A construction noise impact assessment should be undertaken in accordance with the guidance set out in BS 5228-1:2009+A1:2014. A construction vibration assessment should also be carried out in accordance with BS 5228-2:2009+A1:2014. In relation to operation of the new ferry, a noise assessment should be undertaken in accordance with BS 4142:2014.; and
- Further archaeological assessment is required.

2.3.16 The report also concluded that the following topics; geology and soils, materials, air quality, water environment, communities and private assets and all travellers required no further assessment.

3 Planning Policy

3.1 Introduction

3.1.1 This chapter sets out relevant planning policy at the national and local level. Policies relating to specific technical topics addressed as part of the ES are set out and discussed in the individual chapters.

3.2 Planning History

3.2.1 According to the Northern Area Plan [Ref 3.1 and 3.2], past planning policies had made attempts to address the declining permanent population on Rathlin Island. During the 1990s, planning policies encouraged significant improvements to the island infrastructure and ferry connections to the mainland, and substantial development in Church Bay. However rather than strengthening the island community, the policy actually stimulated the purchase of second homes by seasonal inhabitants.

3.2.2 Local planning policy has since been rectified to ensure that any development seeking planning permission will be subject to a condition restricting their occupation to permanent residents who can demonstrate a strong island connection.

3.3 Planning Legislation and Strategic Planning Policy Statement

Planning Legislation

3.3.1 Primary legislation relevant to the proposed development and the planning application includes:

- The Planning Act (NI) 2011;
- The Planning (NI) Order 1991;
- The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2015;
- The Historic Monuments and Archaeological Objects (Northern Ireland) Order 1995;
- The Conservation (Amendment) Regulations (Northern Ireland) 2012;
- The Wildlife (Northern Ireland) Order 1985;
- The Wildlife and Natural Environment Act (Northern Ireland) 2011;

- The Nature Conservation and Amenity Lands Order (NI) 1985;
- The Environmental Noise (Northern Ireland) Regulations 2006; and
- The Clean Neighbourhood and Environment Act (NI) 2011.

3.3.2 The land-based planning system and the marine planning system are separate but overlap in the intertidal area. In recent years, legislation and policy has been introduced to ensure that marine activities and resources are planned and managed in a coherent manner. Legislation relevant to the proposed scheme includes:

- The UK Marine and Coastal Access Act (MCAA) 2009;
- The UK Marine Strategy Regulations 2010;
- The UK Marine Policy Statement (MPS) 2011; and
- The Marine Act (Northern Ireland) 2013.

3.3.3 The EIA Directive is transposed into legislation by the Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2015. The legislation aims to ensure that a planning authority giving consent for a project makes its decision with the full knowledge of any likely significant effects on the environment by setting out a procedure known as environmental impact assessment to assess such effects.

Strategic Planning Policy Statement

3.3.4 The Strategic Planning Policy Statement (SPPS) has a statutory basis under Part 1 of the **Planning Act (Northern Ireland) 2011**. The SPPS is a statement of the Department's policy on important planning matters that should be addressed across the whole of Northern Ireland. The policy provisions relevant to the scheme include:

- Planning Policy Statement 2 (PPS2): Natural Heritage
- Planning Policy Statement 3 (PPS3): Access, Movement and Parking
- Planning Policy Statement 4 (PPS4): Planning and Economic Development
- Planning Policy Statement 6 (PPS6): Planning, Archaeology and the Built Heritage
- Planning Policy Statement 13 (PPS13): Transportation and Land Use
- Planning Policy Statement 16 (PPS16): Tourism

3.4 Regional Development Strategy

3.4.1 Regional planning strategies are set out in the Regional Development Strategy (RDS) 2035, published 5th March 2012 [Ref 3.3]. The Framework aims to strengthen local decision making and reinforce the importance of up-to-date plans. The aims of the RDS relevant to the Scheme include:

- Supporting strong, sustainable growth for the benefit of all parts of Northern Ireland;
- Supporting our towns, villages and rural communities to maximize their potential;
- Improving connectivity to enhance the movement of people, goods, energy and information between places; and
- Protecting and enhancing the environment for its own sake.

3.4.2 The spatial framework outlined within the RDS, highlights the need for a balanced transport infrastructure that will improve connectivity, social inclusion and access to settlements in order to achieve greater economic prosperity. It encourages rural renaissance, through the development of the centres of small towns and villages so that they meet the immediate needs of the communities they serve.

3.4.3 The RDS recognises that Rathlin Island is unique as it is the only inhabited off-shore island in Northern Ireland and that the challenges faced by such an island community are different from those on the mainland. The framework emphasises the need for a co-ordinated approach to the growth of rural areas. However the approach should also be sensitive to local needs and environmental issues including the ability of settlements and landscapes to absorb development. Decisions regarding rural development should consider the role and function of rural settlements and the accessibility of services to inhabitants of rural areas, whilst still reflecting and complimenting the prevailing regional planning policies.

3.4.4 Rural communities can be disadvantaged by virtue of their remote location from a range of facilities and essential services. However through the promotion of integrated rural transport initiatives, the needs of those living in isolated areas can be met. The RDS **embodies the Government's commitments to** support the provision of a safe and sustainable transport system, the improvement of mobility for those who are socially excluded or those whose mobility is impaired, and the promotion of healthier living.

3.4.5 Rural transport initiatives are not only important in improving the connectivity of rural communities to services and other parts of the region; they are a means to deliver balanced economic growth. The transport linkages can help to provide support and networking opportunities to encourage the formation of local alliances to exploit complementary resources and facilities. The transport linkages are invaluable to the expansion of rural tourism and the promotion of associated developments. By integrating these amenities within rural landscapes, the tourism industry not only provides jobs and opportunities in rural areas, but the additional facilities and services themselves can increase the standard of living of the inhabitants of rural areas.

3.4.6 Furthermore, the RDS encourages the development of transport gateways in order to cope with the volume of users and to provide a high quality experience to the travellers.

3.5 **The Northern Area Plan 2016**

3.5.1 The Northern Area Plan 2016 [Ref 3.1 and 3.2] is the development plan for the four legacy Council Areas of Ballymoney, Coleraine, Limavady and Moyle, prepared under the provisions of Part III of the Planning (Northern Ireland) Order 1991, by the Department of the Environment. The Northern Area Plan 2016 becomes the local development plan for the Council area until the Council adopts its own Local Development Plan.

3.5.2 **The Northern Area Plan's objectives** relevant to the development are as follows:

- To facilitate and promote sustainable development throughout the Northern Plan area in accordance with the Regional Development Strategy.
- To consolidate and sustain small towns and villages as important local rural service centres, in accordance with the Regional Development Strategy.
- To promote development that enhances the character and identity of existing settlements, avoids urban sprawl and protects the countryside.
- To facilitate economic development and the creation and maintenance of employment, consistent with the Anti-Poverty and Social Inclusion Strategy.
- To improve access to, and the range of, employment, commercial, health, education and community services.
- To protect and enhance the coastline, river corridors, mountains and other natural and man-made environments in terms of their character, quality and biodiversity.

- 3.5.3 In accordance with Policy COU 1: Rathlin Island (as outlined in the Northern Area Plan 2016: Plan Strategy and Framework), planning permission for single dwellings for permanent residency will only be granted to applications making a significant contribution to the economic and social vitality of the island. Whilst the policy is only relevant to single dwellings for permanent residency, it is important to acknowledge that its objectives can be met by the proposed scheme.
- 3.5.4 The Northern Area Plan also stipulates that any permitted developments will comply with the requirements set out in the relevant Local Landscape Policy Area (LLPA) in order to protect those areas within or adjoining settlements that are considered to be of greatest amenity value, landscape quality or local significance from undesirable or damaging development.
- 3.5.5 The Church Bay area of Rathlin Island is designated as a LLPA (see Figure 9.2 in Volume 3). The features or combination of features that contribute to the environmental quality, integrity or character of this area include the southern boundary of this LLPA as defined by the Rathlin Island Coastline, the northern boundary is defined by the topographical step which provides the backdrop to the settlement of Church Bay, the western boundary of the LLPA encloses the cliffs that are visually significant to Church Bay when the settlement is viewed on approach from the Ballycastle direction, the eastern boundary incorporates the Listed Buildings of the kelpstore and the boathouse, which played significant roles in the development of Church Bay, and the LLPA contains Sites of Local Nature Conservation importance (SLNCI), including Church Quarter and Mullindress. The LLPA also contains the Manor House and Rathlin Harbour Listed Buildings, and Rathlin Island Coast ASSI.
- 3.5.6 A development limit has also been designated within the Church Bay settlement. However rather than inhibiting growth, the development limit is intended to facilitate the further growth of the existing hub area and to ensure that all development is in accordance with the character of the existing built environment (in terms of density, height and design).
- 3.5.7 Indeed, the Northern Area Plan aims are more relevant to Rathlin Island than other parts of the north coast, as the island continues to suffer decreases in population. The Northern Area Plan appreciates that in order to sustain rural communities, continuing development needs to occur to promote and support linkages between rural and urban areas, public access to services, cultural and social uniqueness and employment opportunities.

3.6 Rathlin Island Policy and Action Plan

3.6.1 The Rathlin Island Policy [Ref 3.4] was published in March 2010, to specifically address the development of Rathlin Island community and to increase the involvement of islanders in the development of policies which improve conditions for all the people of the Island while protecting its environment. The strategic objectives of the policy relevant to the scheme are as follows:

- **To develop Islander's employability;**
- **To increase the community's capacity to participate in sustainable economic and tourism development, while protecting the environmental and natural assets;**
- To ensure a modern affordable Ferry service;
- To provide the Islanders with equitable access to health and social care; and
- To ensure Islanders have equitable access to post primary education.

3.6.2 The Rathlin Island Action Plan [Ref 3.5] was **agreed at the first Minister's Forum meeting** held on Rathlin Island in September 2010. The action plan is the result of a consultation process with key stakeholders which included the Rathlin Development and Community Association (RDCA), the Moyle District Council and government departments. The relevant commitments of the action plan are outlined below:

- To improve infrastructure and transport systems that facilitate effective island-mainland linkages
- To continue the development of linkages between rural and urban areas so that everyone can enjoy the beauty of rural places and the facilities and services of urban places;
- To strengthen community infrastructure which can avail of economic, social and cultural opportunities
- To promote equitable access to key public services for all islanders; and
- To maximise employment opportunities for the islanders.

3.6.3 In conclusion, the strategies set out by the regional policy, the national policy and the Rathlin Island policy all concede the need for further development to improve the existing transport infrastructure as a means of promoting accessibility for both residents and tourists, and the need to create more economic, social and cultural opportunities for the residents in order to promote a more sustainable population on Rathlin Island. The proposed Rathlin Island Harbour Development is therefore in compliance with the relevant planning policies governing development.

4 Consultation

4.1 Consultation Process

4.1.1 Under the EIA Regulations, it is a requirement for consultation to be undertaken with statutory bodies and interested parties with respect to development which requires Environmental Impact Assessment. Throughout the various stages of this scheme, the Department has consulted with a large number of stakeholders.

4.1.2 Consultation is an important part of the assessment process and has the purpose of enabling relevant stakeholders to become involved in and comment on a proposed scheme.

4.2 Public Consultation

4.2.1 The Department for Regional Development engaged with stakeholders at two stakeholder engagement events, one in summer 2014 for the new ferry and one in April 2015 prior to submitting the planning application.

4.2.2 The event for the ferry was held on Rathlin on 17 June 2014 and in Ballycastle on 18 June 2014. This included a presentation by the consultants designing the new ferry Burness Corlett Three Quays to the stakeholders to seek their views on several high level designs.

4.2.3 Although the inhabitants of Rathlin Island were in favour of a new ferry and resultant berthing facilities, issues were raised during the public consultation. These issues included:

- Extensions to the existing timetable to incorporate more sailings.
- More enclosed deck space for passengers in bad weather.
- Ferry size should accommodate for future growth on the island.
- Improved access for disabled people on the ferry.
- Inclusion of luggage space on the ferry.
- Ducted propellers should not be used due to cork screw injuries to marine animals.
- Underwater and airborne noise impacts.

4.3 Statutory Consultation

4.3.1 Upon the receipt of the planning application (17th June 2015) for the proposed harbour improvements, the local planning authority undertook consultation with statutory authorities to establish if there are any environmental concerns, to gather information the consultation bodies may hold on the local environment and to identify potential survey requirements. A number of responses were received from statutory authorities during the consultation period, and whilst the large majority of responses received are supportive of the harbour improvements, a number of concerns were raised. A summary of responses is provided in Table 4.1.

Table 4:1 Summary of Consultation Responses

Consultation Body	Response Received	Summary of Response
DOE	28/09/2015	<p>Historic Monuments Unit has reviewed Programme of Works and there is no requirement for preservation in situ this instance. HMU has requested amendments in the Programme to reflect this.*</p> <p>In terms of the impact on: Coastal Development; Drainage and Water; Land, Soil and Air; and Natural Heritage and Conservation Areas, the DOE is content with the proposal.</p>
Causeway Coast and Glens Borough Council – Planning Office	28/08/2015	<p>A Habitats Regulation Assessment (HRA) will be required.</p> <p>Any construction work during the breeding season for birds has potential impact on Rathlin Island SPA.</p> <p>A Construction Environment Management Plan and Proposed Pollution Prevention Measures to be employed during construction and operational stage of development.</p>
DOE Planning Response Team	21/08/2015	<p>Marine Environment division has considered EIA determination and has no further comments. EIA is not required to determine impacts on Listed Buildings.</p> <p>NIEA landscape architects have no objection to this proposal as it will have negligible impact on the landscape and ANOB.</p>
Causeway Coast and Glens Borough Council – Environmental Health Department	18/08/2015	<p>Requests that a detailed noise impact assessment be conducted.</p>

Consultation Body	Response Received	Summary of Response
Transport NI	03/08/2015	<p>Under Articles 71-83 inclusive of the Roads (NI) Order 1993 to be in possession of Department for Regional Development's consent before any work commences.</p> <p>Precautions should be taken to prevent the deposit of mud and debris on adjacent road. Any mud etc. deposited on the road should be removed immediately.</p> <p>All construction materials should be stored on site.</p> <p>It is responsibility of developer that water does not flow from the site onto the public road.</p>
Causeway Coast and Glens Borough Council – Environmental Health Department	21/07/2015	The Environmental Health Section has no objection to the proposed development subject to BS 5228: 1997 in relation to Construction Activities.
Transport NI	07/07/2015	<p>Advises that amended plan should be provided with:</p> <ul style="list-style-type: none"> • Spot levels provided on the car parking spaces and on holding/waiting area. • Cross sections through the existing public road, verge and proposed car parking in order to determine the extent of grading required. • Provide drainage at proposed access and show the outlet. • Detail 2.0 x 33.0m sight visibility splays at the proposed access.
Northern Ireland Environment Agency (NIEA) Natural Heritage	19/02/2015	<p>Require information to conduct a Habitats Regulation Assessment, detailed drawing plans and a Construction Management Plan.</p> <p>If works commence in March then a specialist ornithologist should check for presence of Black Guillemot.</p>
NIEA Historic Buildings Unit	11/02/2015	HMU would require Archaeological Impact Assessment to be updated.
Royal Society for the Protection of Birds (RSPB)	04/02/2015	Consultation with NIEA regarding a Habitats Regulation Assessment and that Rathlin Island ASSI is considered.

Consultation Body	Response Received	Summary of Response
NIEA Water Management	10/02/2015	The principles of Sustainable Drainage Systems should be incorporated in the design of storm drainage of the site serving both construction and operational phases. If SUDs features cannot adequately manage construction phase drainage, consent to discharge under the terms of the Water (Northern Ireland) Order 1999 will be required.
Department of Environment (DoE) Marine Environment Division	30/01/2015	All construction and deposition works to be below Mean High Water Spring Tide (MHWST) will require a Marine Construction licence, Marine Dredging License and a Marine Disposal licence. Consultation with NIEA Water Management unit to authorise discharge storm water or sewage.
NIEA Waste Management	15/12/2014	There are no records of previous potentially contaminating land uses on the application site, but it is possible that industrial activities at adjacent sites may impact this area. Local authority should be contacted.
NIEA Historic Buildings Unit	10/11/2014	Require detailed drawings relating to build up of land area, rock armour and proposed structures.
Department of Culture, Arts and Leisure (DCAL) Inland Fisheries	21/10/2014	Satisfied that there should be little or no direct impact to salmonid and inland fisheries, including the pot fishery in the bay, provided all conditions are applied and enforced.
Northern Ireland Water	20/10/2014	An existing public combined sewer crosses this site. The applicant will be required to contact NIW at an early design stage to discuss the location of the proposed development.

*the updated Archaeological Programme of Works constitutes the Cultural Heritage chapter within this ES

4.4 Consultation Meetings

4.4.1 A number of meetings have been held with interested parties and statutory bodies throughout the preparation of this ES. The objective of these meetings was to collect and verify known environmental data relevant to the wider study area and the proposed harbour, to seek comment on the assessment process, the scope of the ES and the methods of assessment to be adopted and to discuss mitigation requirements and measures.

4.4.2 A meeting was held on the 30 November 2015 between TNI, Amey and the Department of the Environment to agree the content and scope of the Habitats Regulations Assessment and Environmental Statement. Key points from this meeting are outlined as follows:

- Qualifying features of Rathlin Island SAC are not located within the area proposed for development.
- Dredge material would be disposed at Ballycastle and would not affect the qualifying features of the SAC.
- Construction works would require a licence under the Wildlife Order due to the potential disturbance to seals and porpoises from piling works. The timing of works should avoid the breeding season for seals.
- Construction methodology should be submitted to the Department of the Environment (DOE).
- Mitigation measures should include adherence to Pollution Prevention Guidelines (PPGs), response plan and notifications.
- DoE requested that no significant piling occurs in May/June and that piling should use soft start up methods. A marine mammal observer should be deployed to ensure no seals are disturbed by noisy works and acoustic deterrent measures should be implemented at the mouth of the harbour prior to works to prevent mammals from entering the harbour.
- Biosecurity measures are to be included in the Environmental Statement to prevent the spread of non-native invasive species such as Slipper Limpet.
- NIEA have information regarding the locations of nest sites and haul out areas. This information will be provided to Amey for use in the Environmental Statement.

4.4.3 A meeting was held on 7 December 2015 between Amey and the RSPB to discuss the scope of the ecology assessment and to gain information on background conditions with respect to seabirds on Rathlin. Key concerns raised by RSPB included:

- Impacts on black guillemot population to be considered.
- Works to ensure no disturbance to bird populations, potentially through the use of an ornithological observer during construction.

- Provision of black guillemot nest boxes to be included in the design of the quay wall.
- Biosecurity measures to be included in assessment.
- RSPB would like to provide comment on the Construction Environmental Management Plan when available.

5 The Proposed Scheme

5.1 Existing Environment

- 5.1.1 The existing harbour is located within Church Bay inside the outer rock armour breakwaters (refer Photographs 5.1 – 5.8). The harbour currently has the capacity to accommodate approximately 40 boats and currently both ferries are able to berth overnight within the inner harbour. However the new ferry will be too big to enter the inner harbour.
- 5.1.2 The majority of ferry users are foot passengers. This is due to the fact that only island residents and those with a special permit are allowed to bring vehicles onto the island.
- 5.1.3 The proposed scheme will be located adjacent to the existing western breakwater which is composed of large boulders (refer Photographs 5.4 and 5.8).



Photograph 5.1: Church Bay



Photograph 5.2: Inner Harbour



Photograph 5.3: Ferry disembarking



Photograph 5.4: Western Breakwater



Photograph 5.5: Church Bay



Photograph 5.6: View from ferry on approach



Photograph 5.7: View west over harbour



Photograph 5.8: Western breakwater / site of new slipway

5.2 Location

- 5.2.1 The proposed scheme is located within Causeway Coast and Glens Borough Council. Rathlin Island is situated approximately 6km north of Ballycastle off the north coast of County Antrim and is the only inhabited island in Ireland.
- 5.2.2 The landscape of Rathlin Island is characterised by dramatic basalt and chalk cliffs with the exception of the south and east shores which are gently sloping areas of maritime grassland and rocky shore. Inland there are areas of wetlands, small loughs, maritime heath and rough grazing grassland.
- 5.2.3 The site is located approximately 150m west of the current harbour and is located adjacent to the existing breakwater and Churchquarter Road. The site area is composed of a cobble beach, rock outcrops and marine grassland. The immediate landscape is coastal and rural in nature primarily used for agricultural purposes. Residential properties are sparsely distributed throughout the landscape. Tourism, agriculture and fishing serve as the primary economic activities on the island.

5.2.4 The hamlet of Church Bay has developed around Rathlin Harbour and is comprised of mainly residential properties as well as harbour services and facilities. Rathlin Harbour is the access point for travellers to the island from Ballycastle using the Rathlin Ferry Service.

5.3 Study Area and Sensitive Receptors

5.3.1 The Study Area for the proposed harbour improvements depends on the environmental topic being assessed; however it includes the scheme footprint as a minimum. Baseline surveys for a number of the environmental components include a 'buffer zone' of suitable radius which is stipulated within each technical chapter of this ES.

5.3.2 A summary of the environmentally, socially and culturally sensitive receptors within 200m of the Study Area is provided in Table 5.1.

Table 5.1: Sensitive Receptors

Category	Sensitive Receptor/Land Use
Residential	Properties situated at Ballynagard Cottages
	Properties situated at Churchquarter
	Properties situated at Church Bay
Community	Local residents
Cultural Heritage	St Thomas' Church
	The Manor House
Water Environment	Rathlin Island Coastal Water Body
Biodiversity	Bird Species
	Marine Mammals and Fish Species
	Rathlin ASSI
	Rathlin SAC/SPA

5.4 Scheme Description

- 5.4.1 The proposed harbour improvements will provide a new ferry ramp, berthing pier, hardstanding area, mooring bollards, fendering system, lighting for the facility and road access to the new service (refer **Figure 5.2** and **5.3**, Volume 3). The total area of land required for the scheme is 0.2ha.
- 5.4.2 A small area of sea floor will be dredged to a depth of 3.5m (100m³) below the Mean Low Water Spring (MLWS) tide mark to facilitate the new, larger ferry (refer **Figure 5.4**). If the material generated from the dredging is considered to be unsuitable to reuse in the permanent construction work, there will be a facility to dispose of this material under a marine licence off the coast of Ballycastle.
- 5.4.3 The new ferry berth will be constructed using a combination of steel sheet piles and reinforced concrete retaining walls which will form a vertical berthing quay. The new berthing pier will be approximately 75m long and will have a reinforced concrete deck and a concrete wave wall along the left hand side of the pier deck.
- 5.4.4 The new ferry ramp will be approximately 34m long x 10m wide and will be constructed from a reinforced concrete slab at a gradient of 1:8, 50% of which to be constructed below the MLWS tide. It will also be supported by a retaining wall which will be below MLWS tide.
- 5.4.5 In order to facilitate the loading and unloading of passengers and vehicles from the new ferry a new 500m² bitmac hardstanding area will be constructed. This area will incorporate ten parking spaces for users of the ferry as well as providing space for vehicles to comfortably manoeuvre on or off the ferry and adequate space for 140 foot passengers to wait to embark. A pedestrian footway will also be incorporated into the area. All of this hardstanding area will be above MHWS tide.
- 5.4.6 The scheme will also require the installation of lighting for the new ferry berth and hardstanding area, water supply to the new ferry, mooring bollards, fendering system, access ladders and electrical supply along the length of the pier.
- 5.4.7 Rock armour revetments will be installed to support the ferry ramp above the MLWS tide, the hardstanding area and the pedestrian walkway.
- 5.4.8 The dredging and steel sheet pile quay wall construction works will be facilitated by the construction of a temporary hardcore causeway.

- 5.4.9 During the construction works, a temporary compound will either be set up in an existing area of hardstanding **adjacent to St Thomas's Church** or within the proposed area for the car park.

5.5 Indicative Construction Methodology

- 5.5.1 Site works are expected to commence in March 2016 and be completed by October 2016 to coincide with the delivery of the new ferry.

Dredging and Disposal

- 5.5.2 It is most likely that dredging works will be undertaken using a large tracked excavator working from a rock causeway that will be constructed above high water level. The rock causeway will itself be constructed from hardcore fill delivered to the site by a barge and will be located along the alignment of the proposed key wall. This causeway will act as both access for dredging and the platform for piling operations. Once dredging and piling have been completed, the causeway material will be used as the backfill for the sheet pile wall.
- 5.5.3 As a result of the small predicted quantities of dredging (100m³) it is proposed that the resultant material will also be used as backfill to the rear of the new sheet piled wall. If however this material is considered to be unsuited for use there is a facility to dispose at sea and a licence will be in place.
- 5.5.4 Maximum dredging is not expected to exceed 1.0m.

Rock Armour

- 5.5.5 Rock armour will be utilised to form the slope supporting the new ferry ramp above the MLWS and hard-standing area. These armour units will be placed in two layers using a large tracked excavator at a slope of 1:2. The excavator will work from the hard-standing areas above MHWS.
- 5.5.6 Photograph 5.9 shows a typical methodology for placing rock armour.



Photograph 5.9: placing rock armour

Sheet pile quay wall

- 5.5.7 The steel sheet pile quay wall will be installed from the hardcore causeway by using a crane piling rig with assistance from a large tracked excavator. Piles will be aligned using guides and pitched in groups before driving.
- 5.5.8 Piles will be driven through a layer of sand and gravel and then keyed 1.0m into the limestone bedrock using a diesel piling hammer. The works will begin at the end of the pier and continue to work back towards land. A reinforced concrete capping beam will be poured using concrete to top off the sheet pile wall.
- 5.5.9 Once the piles have been installed they will then be backfilled with hardcore material to form the surface of the quay and compacted into layers by a vibrating drum roller. The deck surface will be reinforced concrete. The formation of the deck will be grading using a large tracked excavator to achieve the required 1:40 profile and shuttering. Steel mesh will be laid between the shutters as a reinforcement and concrete placed to the required depth and gradient. The concrete will then be compacted using a mechanical vibrating poker and then finished with a tamped surface.
- 5.5.10 Photograph 5.10 shows indicative methodology for sheet piling.



Photograph 5.10: sheet piling

Ferry Ramp

- 5.5.11 The ferry ramp will be constructed from reinforced concrete. To allow the works to be conducted in dry conditions, temporary works in the form of clay bunds and sheet piles will be used. Approximately 50% of the new ferry ramp will be constructed below the mean high water spring.
- 5.5.12 **The ramp's formation will be graded** using a large tracked excavator to achieve the required 1:8 profile and shuttering placed. Steel mesh will be laid between the shutters as a reinforcement and concrete placed to the required depth and gradient. The concrete will then be compacted using a mechanical vibrating poker and then finished with a tamped surface.
- 5.5.13 The ferry ramp will be retained below the mean high water spring using a combination of concrete wall and rock armour revetment. The concrete wall will be mass concrete and constructed within the cofferdam installed for the construction of the ferry ramp. These armour units will be placed in two using a large tracked excavator at a slope of 1:2.

Hard-standing Area

- 5.5.14 The hard-standing area will be formed in hardcore and then finished in asphalt. The area will also be above the mean high water spring.

5.5.15 The ramp will be graded using a large tracked excavator to achieve the required profile and the required road kerbs placed to retain the formation material. All hardcore sub bases will be compacted using a vibrating drum roller to achieve the required level and gradient. A bitmac base (60mm deep) will be laid by a road paving machine and an asphalt wearing course (40mm) will also be laid by a road paving machine in addition to coated chippings placed by hand and assisted by a tractor with a front shovel, then compacted by a road roller.

5.5.16 Photograph 5.11 shows typical methodology for laying of bitmac.



Photograph 5.13: Laying bitmac

6 Alternatives

6.1 Introduction

6.1.1 It is a requirement under the EIA Regulations that alternatives for a project should be considered in the environmental assessment process, be it alternative location, design or technology. By looking at alternative options, the aim is for the project to evolve sustainably by taking account of all constraints throughout the lifetime of the project.

6.2 No Development Alternative

6.2.1 This is essentially a do nothing alternative and would involve retaining the existing ferry and not providing a new harbour. The MV Canna is nearing the end of its operational life therefore the no development alternative is not considered feasible.

6.3 Alternatives Considered

Ferry Design

6.3.1 During the design process TNI held public information days in June 2014 on Rathlin and in Ballycastle on the proposed ferry design. There were four ferry options considered as described below and shown on **Figure 6.1** in Volume 3.

Option A

6.3.2 The dimensions of this ferry option were: length 24m, breadth 6.4m, draft 1.37m. The capacity of the ferry was 140 passengers with no vehicles or 27 passengers with vehicles. The limit to the number of foot passengers if vehicles were carried was due to a change in regulations which means foot passengers and vehicles cannot share the same deck space. The vehicle capacity was 5 cars or 1 HGV. It would use the existing harbour arrangements on Rathlin and the cost estimate was £1.8 to £2.1 million.

Option B

6.3.3 The dimensions of this ferry option were: length 25m, breadth 7.4m, draft 1.5m. The capacity was 140 passengers with no vehicles or 90 passengers with vehicles. The vehicle capacity was 5 cars or 1 HGV. It could potentially use the existing harbour arrangements on Rathlin. It was estimated to cost £2.2 to £2.5 million, with increased fuel costs compared to option A.

Option C

6.3.4 The ferry dimensions for this option were: length 26.5m, breadth 8.4m and draft 1.6m. The capacity was 140 passengers with vehicles or 122 passengers with vehicles. Vehicle capacity was 5/6 cars or 1 HGV. It would be unable to use the existing harbour arrangements and new berthing arrangements would be required. The estimated cost was £2.6 to £3.0 million with additional £0.4 million for harbour works. As for option B, this option has increased fuel costs compared to option A.

Option D

6.3.5 The ferry dimensions for this option were: length 25.65m, breadth 8.5m and draft 1.6m. The capacity is the same as option C for 140 passengers with no vehicles or 140 passengers with vehicles. Vehicle capacity is 5 cars or 1 HGV. Like option C, it would be unable to use the existing harbour arrangements at Rathlin with a new berthing and linkspan required. The estimated cost of this options was £2.4 to £2.8 million for the ferry and an additional £1 to £2 million for harbour works. The fuel costs were slightly less than for option C but higher than option B.

Preferred Option

6.3.6 Option C was chosen as the preferred ferry option as it fulfilled the design brief for the ferry to carry 5-6 cars and 140 passengers. Although this design is restricted to 122 passengers when carrying cars, it was considered that it provided more value for money than option D.

Harbour Design

6.3.7 As the final design for the ferry was a larger vessel that could not be accommodated at the existing slipway, it was necessary to design a new facility for berthing and mooring the ferry. A number of alternative harbour designs were considered and these are described below and shown on **Figure 6.2** in Volume 3.

Option A

6.3.8 This option involved the use of a mooring pontoon to allow the ferry to be berthed overnight. The arrangement involved a 1m wide mooring platform located approximately 1.5m east of the breakwater. The breakwater would be re-graded using 3 tonne rock armour units with an access walkway for staff and crew along the top of the breakwater. Access to the ferry was gained via an 18m access gangway. To accommodate the berthing of the ferry, a small area of the seabed would be dredged. This option did not allow passengers or vehicles to disembark at the breakwater, this was for purely mooring overnight. The existing harbour slipway would be used for passengers and vehicles access/egress.

Option B

6.3.9 Option B was the initial design that the current layout is based on. This option involved the construction of a 10m wide concrete quay along the breakwater with a 10m wide ferry ramp adjacent. This allowed the ferry to be moored separately from the berthing facilities. With this option an area of hardstanding is provided on the beach to allow cars to disembark.

Option C

6.3.10 This option was similar to option B but with a shorter quay. This would have resulted in the ferry being moored over the ramp. This option was ruled out on this basis. Both options B and C result in the new ferry moving away from the existing slipway in the harbour.

Existing harbour option

6.3.11 One of the options considered was to modify the existing ramp used by the current ferries and provide a new 70m long wall alongside the slipway. This would result in a gap of only 30m between the new pier and the existing south pier. This option would affect navigation within the harbour for other vessels. In conjunction with the cost of this option it was not considered feasible and ruled out early in the design process.

Preferred Option

6.3.12 In terms of the impact on the environment, all the proposed harbour options were similar.

6.3.13 Option B was the preferred option for ease of construction, access for passengers and vehicles and safety of the ferry while berthed overnight. The preliminary design was refined during the detailed design process to provide car parking spaces and improved pedestrian access.

6.4 Issues during Design process

6.4.1 A number of issues were raised at stakeholder events that influenced the final design of the ferry. These included more enclosed deck space for passengers in bad weather, provision of a luggage storage area, greater vehicle capacity and ship design to minimise noise levels.

6.4.2 Initial designs for the new harbour waiting area included a pedestrian footpath linking the new harbour with the existing harbour area. This was not considered feasible as the required width of footpath could not be accommodated within the existing road width. Consequently extensive works would be required including the provision of a retaining wall, which would not be in keeping with the surrounding environment. In addition, there are no footpaths on the island at all, and the provision of one at the harbour was considered to be not in keeping with the rural nature of the island.

7 Cultural Heritage

7.1 Introduction

- 7.1.1 This archaeological programme of works (POW) was prepared during October 2015 by FarrimondMacManus Ltd, having been commissioned by Whitemountain Quarries Limited on behalf of the Central Procurement Directorate (CPD), and relates to the proposed Rathlin Harbour Improvements Berthing Facility, Rathlin Island. The assessment of archaeological potential and recommendations for the treatment of the site have been undertaken according to best professional practice and in line with statutory Planning Policy Guidelines, with particular reference to Planning Policy 6 (PPS6) and its various Built Heritage sub-policies BH1 – BH6.
- 7.1.2 The report sets out the archaeological background of the proposed development area, assessing its archaeological potential and outlines a proposed methodology for the identification and appropriate recording of any remains which may prove to survive and was prepared in response to the Final Substantive Reply of the Department of the Environment Northern Ireland: Historic Environment Division: Historic Monuments Unit (DOENI:HED:HMU) dated 28th September 2015.
- 7.1.3 The commissioning of FarrimondMacManus Ltd., preparation of this Archaeological Programme of Works and implementation of its recommendations is intended to ensure full compliance with all statutory obligations and current best practice whilst undertaking the proposed construction works.
- 7.1.4 This chapter was drafted by Farrimond-MacManus Ltd in March 2015 and commissioned by CPD following a response from the planning assessment.

7.2 Legal and Statutory Policies Relating to the Protection of Cultural Heritage

- 7.2.1 The legal framework which provides for the protection of the archaeological and cultural heritage resource in Northern Ireland consists of various national and international laws and policies. The Historic Monuments and Archaeological Objects (NI) Order 1995 is central to this framework and provides protection for a number of categories of monuments;
- National monuments in the ownership or guardianship of the State i.e. in State Care.

- Historic monuments or archaeological areas which are scheduled for protection and which are under private ownership.

7.2.2 The provisions of the Historic Monuments and Archaeological Objects Order are further **supplemented by the 1992 "European Convention on the Protection of the Archaeological Heritage" (commonly known as the 'Valletta Convention') which was ratified by the UK in 2000. The aim of the Convention is to 'protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study'** (Article 1). The Convention provides the basic framework for policy on the protection of the archaeological heritage with regards to the specific role of integrated planning policies as laid out in Article 5 of the convention, whereby each member state is compelled to:

- I. seek to reconcile and combine the respective requirements of archaeology and development plans by ensuring that archaeologists participate in:
 - planning policies designed to ensure well-balanced strategies for the protection, conservation and enhancements of sites of archaeological interest,
 - the various states of development schemes,
- II. ensure that archaeologists, town and regional planners systematically consult one another in order to permit:
 - the modification of development plans likely to have adverse effects on the archaeological heritage,
 - the allocation of sufficient time and resources for an appropriate scientific study to be made of the site and for its findings to be published,
- III. ensure that environmental impact assessment and the resulting decisions involve full consideration of archaeological sites and their settings,
- IV. make provision, when elements of archaeological heritage have been found during development work for their conservation *in situ* when feasible.

7.2.3 The Built Heritage section within the Northern Ireland Environment Agency (NIEA) keeps a record of all known monuments and sites (the Northern Ireland Sites and Monuments Record (NISMR)). Any site identified in the NISMR is defined as a site of archaeological interest in the Planning (General Development) Order (NI) 1993. Within the context of the Planning Order of 1993, the protection of archaeological monuments and objects (including those listed as in State Care), Scheduled monuments, SMR sites and those sites not yet identified is managed through Planning Policy Guidelines; particularly Planning Policy 6 (PPS6) and its various Built Heritage sub policies BH1 – BH6.

7.2.4 The protection of the architectural and built heritage resources in Northern Ireland is legislated through Article 42 of the Planning (NI) Order 1991, whereby the Northern Ireland Environment Agency: Built Heritage is obliged to compile a list of buildings of special architectural or historic interest, the protection of which is provided under Article 44 of the Order. Relevant planning policy guidelines relating to the protection of these buildings in terms of demolition, change of use, extension / alteration and their setting are provided for in Planning Policy 6 BH7 – BH11.

7.2.5 Planning Policy Statement 6 also requires that planning and sustainable development plans are prepared to take into account the implications of proposed landuse zonings, locations for development and limits of development on all features of the archaeological and built heritage and their settings within a plan area. Such features will normally be identified as part of the process of Countryside Assessment carried out in association with plan preparation. Development plans may also include local policies for the protection and conservation of specific features of the archaeological and built heritage.

7.2.6 A full list of Policies within Planning Policy Statement 6 is included below:

- Archaeological Sites and Monuments
 - Policy BH 1 The Preservation of Archaeological Remains of Regional Importance and their Settings
 - Policy BH 2 The Protection of Archaeological Remains of Local Importance and their Settings
 - Policy BH 3 Archaeological Assessment and Evaluation
 - Policy BH 4 Archaeological Mitigation (including Discovery of Previously Unknown Archaeological Remains)
- World Heritage Sites
 - Policy BH 5 The Protection of World Heritage Sites
- Historic Parks, Gardens and Demesnes
 - Policy BH 6 The Protection of Parks, Gardens and Demesnes of Special Historic Interest
- Listed Buildings
 - Policy BH 7 Change of Use of a Listed Building
 - Policy BH 8 Extension or Alteration of a Listed Building
 - Policy BH 9 The Control of Advertisements on a Listed Building
 - Policy BH 10 Demolition of a Listed Building
 - Policy BH 11 Development affecting the Setting of a Listed Building

- Conservation Areas
 - Policy BH 12 New Development in a Conservation Area
 - Policy BH 13 The Control of Advertisements in a Conservation Area
 - Policy BH 14 Demolition in a Conservation Area
- Industrial Heritage
- Non-listed Vernacular Buildings
 - Policy BH 15 The Re-use of Non-listed Vernacular Buildings

7.3 Statement of Authority by Author

- 7.3.1 This Archaeological Programme of Works has been compiled by Christopher Farrimond of FarrimondMacManus Limited (Derry). Chris has a BA Honours degree in Archaeology and Palaeoecology from Queen's University Belfast and has been a professional archaeologist since 1998.
- 7.3.2 Prior to and since establishing Farrimond MacManus Limited in 2005, Chris compiled numerous Archaeological Impact Assessments and Desk-Based Assessments for projects including quarries, windfarms, public amenity spaces, urban renewal / public realm schemes, landmark historic building conversions, Greenways, urban and rural housing developments, linear schemes and historic quays.
- 7.3.3 Licensed to conduct archaeological excavations since 2002, Chris has undertaken numerous excavations throughout Ireland and has extensive consultancy experience in all aspects of Cultural Heritage and Archaeological Management (i.e. devising appropriate archaeological management strategies in relation to developmental impact upon archaeological sites and monuments and the successful monitoring and managing of the implementation and completion of related management and mitigation strategies). **Chris also has over 13 years' experience in managing archaeological excavations, staffing and programmes of post-excavation works and reporting.**

7.4 Methodology

- 7.4.1 This archaeological programme of works was conducted in three stages. Firstly a detailed desk-based assessment was undertaken: a search was made of the Northern Ireland Environment Agency: Built Heritage maintained databases including the Sites and Monuments Record, Industrial Heritage Record, Register of Historic / Listed Buildings, Defense Heritage and Historic Parks and Gardens for a study area of c.1km from the proposed development area (PDA). 1km was chosen as an appropriate area of search to put the PDA in its cultural heritage context, and to allow consideration of any effects upon the setting of designated features. Relevant historic maps and the Excavations database were also consulted. No recorded cultural heritage features are listed within the boundary of the proposed development area.
- 7.4.2 Secondly, a fieldwalk survey was undertaken on 6th March 2015 to verify the results of the desk-based assessment and to identify any previously unrecorded archaeological / historic features which may survive at the site. No previously unrecorded archaeological sites or monuments were identified during the fieldwalk survey.
- 7.4.3 Finally, the information obtained through the desk-based assessment and fieldwalk survey was collated and assessed with regards to the potential impact of proposed development works on previously unrecorded archaeological remains within the PDA and upon State Care and Scheduled Monuments within the more general vicinity of the site.

7.5 Site Location and Topography

- 7.5.1 The proposed development area (PDA) is located at the north-western extent of Rathlin Harbour (See Figures 1.1 – 1.2 in Volume 3), approximately 175m to west-south-west of the Manor House. The PDA measures approximately 100m (north-west – south-east) x 80m (See Figure 5.2 in Volume 3) and consists of the existing breakwater, existing access road and a section of the shore-line.

7.6 The Proposed Development

- 7.6.1 The proposed development is to consist of the construction of a 10m wide concrete quay primarily within the foot-print of the existing breakwater, the construction of a 10m wide ferry ramp, upgrading of the existing access road, and the creation of an area of concrete hard-standing.

7.7 The Archaeology of the Wider Area / Historical Background

- 7.7.1 Sites from all periods of the Irish archaeological record are well represented on Rathlin Island and this is reflected, on a smaller scale, in the environs of the PDA.
- 7.7.2 The earliest archaeological activity known from the wider area of Northern Ireland is associated with the Mesolithic industrial site in Larne. Excavations at the site in Larne revealed the largest flint tool industrial site of this period. The importance of Larne as a **site is reflected in that the term “Larnian” is sometimes used to describe the whole Mesolithic culture of Ireland.**
- 7.7.3 Around 4000 BC, new communities of people settled in Ireland and so began the Neolithic (New Stone Age) period which saw the arrival of agriculture. These first farmers brought with them cattle and cereals such as wheat and barley. They also brought with them a new innovation – pottery, the earliest examples of which were well-made hand-thrown round-bottomed vessels. There was also a change in the type of tools used from that of the preceding Mesolithic period. The most notable changes included the introduction of a range of flint scrapers and hunting tools such as leaf-and lozenge-shaped flint and chert arrowheads and polished stone axes for woodworking.
- 7.7.4 Neolithic settlements leave little or no trace on the ground surface and as a result are difficult to spot outside excavation. In recent years, the requirement for archaeological supervision during topsoil stripping on green field sites has uncovered substantial Neolithic settlements. Visual indicators are the burial and ritual monuments such as standing stones, and are generally a good indication of prehistoric activity in an area. Archaeological activity, dating to then Neolithic period (4000 to 2500BC), is demonstrated in the area by the presence of megalithic tombs and other funerary sites.
- 7.7.5 The secular settlements or enclosed farmsteads are commonly known as raths or ringforts and usually occur in small clusters. The total number of raths found across Ireland is estimated to be around 30 – 40,000, though this is probably an underestimate. A typical rath would be delineated by a bank 35m – 40m in diameter with an outer ditch, though variations of this include a platform rath, a raised rath, bivallate and trivallate raths. Excavations have dated raths to 500 - 1100AD and have uncovered houses of wattle, plank, stone, mud or sod, sometimes with a series of outbuildings within their interior.

- 7.7.6 Another feature of Early Christian secular activity is the souterrain, a stone lined tunnel of either a short linear passage or complex maze, which is often found in association with raths, but can occur in isolation. The function of these sites may have been for both storage and refuge and are generally associated with circular houses.
- 7.7.7 There are several hundred ecclesiastical Early Christian sites in Northern Ireland. How they survive today varies widely, some church sites remain in use, some sites are still being used for burial, and some are preserved as monuments while others are only known from ecclesiastical records and memoirs with no above surface remains.
- 7.7.8 While the earliest church organisation was diocesan, monastic organisation developed from the 6th and 7th centuries. These monastic buildings ranged greatly in size and complexity depending on the services offered to the local community - ministering, education, hospital, hospitality and shelter. The earliest buildings were often constructed from timber and can only be recovered during careful excavation. Stone churches, often built over earlier foundations, generally date from the 9th century and can be associated with stone carved crosses, bullaun stones, round towers and water mills.
- 7.7.9 From the 12th century the Irish landscape reflected the political and social changes of the time. The Anglo - Norman invasion saw the introduction of the motte and bailey, a conical flat - topped mound enclosed with a ditch and an attached enclosure to one side. Fortifying their position, stone castles, tower houses and keeps were constructed as important military and administrative centres.
- 7.7.10 In the late 16th and early 17th centuries, Elizabeth I and James I tried to control the rebellious native Irish aristocracy by confiscating their lands and dividing it among new settlers - planters, brought specifically over from Scotland and England. The plantation period saw the introduction of fortified houses and enclosed yards or bawns to house the new settlers in their unfamiliar and potentially hostile surroundings. In addition, planned fortified towns (such as Coleraine and Londonderry) and villages were to be established with associated transportation infrastructure to support agricultural and industrial development. Town defences were usually provided by earthen ramparts, stone walls and enclosing ditches.

- 7.7.11 Although there had been earlier plantations throughout Ireland which had succeeded in confiscating land and grafting on a new aristocracy, the Plantation of Ulster in 1609 was comprehensive. The six Counties of Armagh, Fermanagh, Coleraine, Cavan, Tyrone and Donegal were all systematically planted. Land was allocated to a series of landlords (**commonly referred to as 'Undertakers'**) who brought in Scottish and English colonists, settled them in fortified villages, housed them and armed them. Land was also granted to soldiers who had served the Crown in the wars of the 1590s (commonly referred to as **'Servitors'**) as a reward for their loyalty.
- 7.7.12 **Although the counties of Antrim and Down were not part of the 'official' Plantation,** private land-owners encouraged extensive settlement in these areas. For example, Randal MacDonnell established a substantial Scottish-style mercantile town at Dunluce Castle on the North Antrim coast that attracted large numbers of Scottish merchants and tradesmen.

7.8 Desk Based Assessment

Sites and Monuments Record

- 7.8.1 Consultation of the sites and monuments record (SMR) revealed that there are forty-six archaeological sites and monuments are recorded within c.1km of the PDA. Details of the archaeological sites and monuments are summarised in Table 7.1 and their locations are shown in **Figures 7.1** in Volume 3. Full details of the SMRs are listed in Appendix 1 of Appendix B.
- 7.8.2 The earliest recorded eleven archaeological sites and monuments within the general area of the PDA date to the Prehistoric period. Four of these sites cannot be accurately ascribed to a particular period within Prehistory. Such sites include a possible Prehistoric Settlement site (ANT001:011), a Scheduled site comprising a Standing Stone in a Prehistoric Cemetery (ANT001:014), an Ecclesiastical Site consisting of a Modern Parish Church on an earlier site with stone-lined graves (ANT001:023) and a Prehistoric Cooking Place or Fulacht Fiadh (ANT001:093).
- 7.8.3 Two of the Prehistoric sites comprise findspots of flints dating to the Neolithic period (ANT001:085 & ANT001:086).

- 7.8.4 The Bronze Age is primarily represented by funerary sites; a Scheduled Cist Burial (ANT001:094), an undesignated Cist Burial (ANT001:015), a Scheduled site comprising seven Cist Burials with a ring ditch and stone alignment (ANT001:044) and a Round Cairn (ANT001:081). The findspot of a Late Bronze Age dress fastener is also recorded within the study area (ANT001:066).
- 7.8.5 A single site dating to the Early Christian period is recorded within the study area. The site constitutes the findspot of a reputed Viking long boat (ANT001:080) recovered during the 1920s. It was found in a field at the base of the raised beach to west of a standing stone (ANT 001:014).
- 7.8.6 Archaeological records indicate that there are also sites dating to the 16th century within the study area, including an unlocated findspot of a Coin Hoard dating to 1553-1641 (ANT001:064) and the site of an unlocated Battle Site dating to 1551 (ANT001:083).
- 7.8.7 The Post Medieval period includes the site of a battle in 1642 (ANT001:084), a folklore site (ANT001:051) reputedly the location of a massacre in 1642 and two Mass Sites (ANT001:065 & ANT001:067).
- 7.8.8 A number of modern features in the landscape are recorded within SMR records. These features are representative of modern landscaped features such as tree plantations or tree rings which upon modern survey proved to be modern or non-archaeological in origin (ANT001:028, ANT001:043, ANT001:046 & ANT001:078).
- 7.8.9 The remainder of the recorded terrestrial archaeological sites within the study area all represent sites of uncertain date and include a possible Cairn (ANT001:012), two Hut Sites (ANT001:030 & ANT001:042), a Field Wall (ANT001:045), the Scheduled site of a Fortification (ANT001:052), a Bullaun (ANT001:053), a possible findspot of skeletons (ANT001:063) and a Midden (ANT001:092). Five sites identified through the use of Aerial Photography are also of uncertain date and include a possible Ring Ditch or Barrow (ANT001:117), two possible Enclosures (ANT001:031 & ANT001:036), a Hut Site (ANT001:035) and a possible Monastery or Ecclesiastical Site (ANT001:068A.P. Site).

7.8.10 Twelve further sites are recorded within the Maritime Archaeological Record. Such sites include: a Flint Assemblage which is likely to date to the Neolithic period (MRA003:198), a Corn mill and mill race (MRA003:066), a possible lime kiln (MRA003:193), a Rectangular kelp kiln (MRA003:188), a Kelp store (MRA003:194), the New Quay or Station Pier (MRA003:067), the Old Quay (MRA003:068), a Quay and Slipway (MRA003:069), two Boat Shelters (MRA003:190 & MRA003:191), a modified landing place (MRA003:202) and Graffiti comprising a ship incised in stone (MRA003:216).

Table 7:1: Recorded Archaeological Sites & Monuments within c.1km of the PDA.

SMR No.	Type	Townland	Located	Grid Ref.	Period	Protection
ANT001:011	Possible Prehistoric Settlement Site	Ballynagard	Yes	314080; 452070	Prehistoric	Null
ANT001:012	Possible Cairn	Ballynagard	Yes	314290; 451930	Uncertain	Null
ANT001:014	Standing Stone in Prehistoric Cemetery	Demesne	Yes	314980; 450970	Prehistoric	Scheduled
ANT001:015	Bronze Age Cist Burial	Demesne	Yes	314980; 450730	Bronze Age	Null
ANT001:023	Ecclesiastical Site Reachru; Rechru. Modern Parish Church on earlier site; with stone-lined graves	Church Quarter	Yes	314520; 451100	Prehistoric	Null
ANT001:028	A.P. Site: Non-Antiquity	Ballynoe	Yes	315490; 450580	Modern	Null
ANT001:030	Hut Site	Ballyconagan	Yes	314820; 452020	Uncertain	Null
ANT001:031	A.P. Site: Possible Enclosure	Ballyconagan	Yes	314980; 452080	Uncertain	Null
ANT001:035	A.P. Site: Hut Site	Ballycarry	Yes	315170; 452200	Uncertain	Null
ANT001:036	A.P. Site: Enclosure	Craigmacagan	Yes	315430; 450550	Uncertain	Null
ANT001:042	Hut Site	Ballynagard	Yes	314070; 451690	Modern	Null
ANT001:043	Non-Antiquity	Demesne	Yes	315160; 450260	Uncertain	Null
ANT001:044	Cist Burials (7); 1 with ring ditch; & stone alignment	Demesne	Yes	314960; 450810	Bronze Age	Scheduled
ANT001:045	Field Wall	Ballyconagan	Yes	314710; 452010	Uncertain	Null
ANT001:046	Field Cairn	Ballyconagan	Yes	314760; 452010	Modern	Null
ANT001:051	Folklore Site: reputedly site of a massacre in 1642	Ballycarry	Yes	315600; 451280	Post-Medieval	Null

SMR No.	Type	Townland	Located	Grid Ref.	Period	Protection
ANT001:052	Fortification: The Castle (site of).	Ballycarry	Yes	315320; 451250	Uncertain	Scheduled
ANT001:053	Bullaun: Knocking Stone	Ballynoe	Yes	315450; 451010	Uncertain	Null
ANT001:063	Findspot of Skeletons (possible)	Mullindress	Yes	315160; 451300	Uncertain	Null
ANT001:064	Findspot of Coin Hoard dating 1553-1641 (unlocated)	Ballyconagan	No	314400; 452000	C16th	Null
ANT001:065	Mass Site (unlocated)	Ballynagard	No	314100; 451800	Post-Medieval	Null
ANT001:066	Findspot of L.B.A. Dress Fastener	Ballynagard	Yes	313950; 451800	Late Bronze Age	Null
ANT001:067	Mass Site	Kilpatrick	Yes	313850; 451650	Post-Medieval	Null
ANT001:068	Ecclesiastical Site (Possible): A.P. Site: Possible Monastery	Knockans	Yes	313950; 451560	Uncertain	Null
ANT001:078	Non-antiquity	Ballynoe	Yes	315350; 451060	Modern	Null
ANT001:080	Findspot of reputed Viking Long Boat	Demesne	Yes	314900; 451010	Early Christian	Null
ANT001:081	Round Cairn	Kilpatrick	Yes	313890; 451720	Bronze Age	Null
ANT001:083	Battle Site; 1551 (unlocated)	Church Quarter; Demesne	No	314900; 450900	Late Medieval	Null
ANT001:084	Battle Site; 1642	Ballycarry; Ballynoe; Mullindress	Yes	315200; 451100	Post-Medieval	Null
ANT001:085	Findspot of Flints	Ballycarry	Yes	315240; 451630	Neolithic	Null
ANT001:086	Findspot of Neolithic Flints: Crockascreidlin	Ballycarry	Yes	315460; 451340	Neolithic	Null
ANT001:092	Midden	Demesne	Yes	314940; 450980	Uncertain	Null
ANT001:093	Cooking Place / Fulacht Fiadh	Glebe	Yes	315050; 450930	Prehistoric	Null
ANT001:094	Cist Burial	Demesne	Yes	314970; 450890	Bronze Age	Scheduled
ANT001:117	A.P. Site: Possible Ring Ditch / Barrow	Demesne	Yes	314980; 451062	Uncertain	Null
MRA003:066	Corn mill and mill race	Kinkeel	Yes	315130; 450140	Uncertain	Null
MRA003:067	New Quay; Station Pier. Quay and concrete slipways (3)	Demesne	Yes	314820; 450850	Uncertain	Null
MRA003:068	Quay: Old Quay	Church Quarter	Yes	314730; 451010	Uncertain	Null

SMR No.	Type	Townland	Located	Grid Ref.	Period	Protection
MRA003:069	Quay and slipway	Ballynagard	Yes	314420; 451070	Uncertain	Null
MRA003:188	Rectangular kelp kiln	Kinkeel	Yes	314920; 449970	Uncertain	Null
MRA003:190	Boat naust Boat Shelter	Demesne	Yes	315110; 450270	Uncertain	Null
MRA003:191	Boat naust Boat Shelter	Demesne	Yes	315110; 450270	Uncertain	Null
MRA003:193	Possible lime kiln	Demesne	Yes	315110; 450270	Uncertain	Null
MRA003:194	Kelp store	Demesne	Yes	314990; 450490	Uncertain	Null
MRA003:198	Findspot: Flint assemblage	Kinkeel; Craigmacagan	Yes	315230; 450160	Uncertain	Null
MRA003:202	Modified landing place	Demesne	Yes	314950; 450520	Uncertain	Null
MRA003:216	Ship Graffiti: Ship incised in stone	Mullindress	Yes	314990; 451330	Uncertain	Null

7.8.11 Whilst none of the sites referred to above are recorded as being located within the boundaries of the PDA, three of the sites are recorded as being located within close proximity. Two of these sites constitute historic quays, the first of which comprises a Quay and Slipway (MRA003:069) located c.80m to west of the PDA, and the second of which, constitutes the **“Old Quay” (MRA003:068)** located c.120m to east-southeast of the PDA. More significantly, the modern Parish Church of St. Thomas is located on the site of an earlier ecclesiastical site (ANT001:023) recorded as containing stone-lined graves, and is located to the immediate north of the PDA. Although the boundaries of the modern church are clearly defined, it should be noted that early ecclesiastical enclosures were often much larger than the modern boundaries suggest, and it is possible that previously unrecorded below ground archaeological remains, possibly including human burials, may be encountered in the course of development at this location.

Industrial Heritage Record

7.8.12 Consultation of the Industrial Heritage Record (IHR) indicated six sites recorded within 1km of the PDA (See Figure 7.1 and Table 7.2). These sites attest to the industrial significance of the general area, with various mills and sites associated with the maritime infrastructure being particularly well represented within the Industrial heritage record for the area.

7.8.13 Three of the industrial heritage sites are kiln sites relating to either food production (03706:00:00 & 03710:00:00) or construction (07561:00:00), with the remaining sites relating to the maritime archive; the Harbour at Church Bay (03709:00:00), the Rocket House (03709:03:00) and the Boat House (03709:05:00).

Table 7:2: Recorded Industrial Heritage sites within c.1km of the PDA.

IHR Ref.	Type	Grid Ref.	Location
03706:00:00	Corn Kiln	315360 451560	Ballycarry, Rathlin Island
03709:00:00	Harbour; Church Bay	314820 450930	Church Quarter / Demesne, Rathlin Island
03709:03:00	Rocket House	314940 450910	Demesne, Rathlin Island; Church Bay
03709:05:00	Boat House	314860 450840	Demesne, Rathlin Island; Church Bay
03710:00:00	Corn Mill & Kiln site	315130 450130	Kinkeel, Rathlin Island; Mill Bay
07561:00:00	Limekiln (Crocknascreidlin)	315370 451250	Ballycarry, Rathlin Island

7.8.14 None of the recorded Industrial Heritage sites mentioned above are located within the boundaries of the proposed development site, although the Harbour at Church Bay is located c.100m southeast of the PDA.

7.8.15 The works associated with the proposed development are not currently anticipated to impact upon these or any other Industrial Heritage sites.

Previous archaeological investigations within the PDA

7.8.16 Previous archaeological investigations were undertaken within the boundaries of the PDA in 1995 and comprised an underwater investigation of the area of the breakwater and monitoring of works associated with its construction.

Archaeological investigations in the vicinity of the PDA

- 7.8.17 A number of previous archaeological investigations have been undertaken within the general vicinity of the PDA (See Figure 7.2 in Volume 3). These works have revealed evidence for various site types, including Prehistoric settlement and burial sites, Medieval ecclesiastical sites, and Medieval fortifications. Inconsistencies in the recording of locations and apparent errors in recording Grid References means that the marked location of several of these sites appears to differ from the description of the excavation.
- 7.8.18 Nonetheless, it would appear that two of the previous archaeological excavations were undertaken within the immediate vicinity of the PDA.
- 7.8.19 **The first of these was undertaken to the immediate north of St Thomas' Church during 2006 by Sarah Gormley of the Centre for Archaeological Fieldwork, School of Geography, Archaeology and Palaeoecology, Queen's University, Belfast under licence no. AE/06/191.**
- 7.8.20 The works comprised an archaeological evaluation to investigate the archaeological potential of the site ahead of a proposed graveyard extension project. According to the Sites and Monuments Record, the present church of St Thomas which dates to the 18th century is located on the site of an earlier church, reputedly founded by St Comgall of Bangor in the late 6th or early 7th century. However, four other locations have also been proposed for the site of the early church, including Kilvoruan in Carravindoon townland and Kilbride in Knockans townland. Renovation works at the church in 2003 revealed a number of human skulls and other human bone remains and it has been suggested that they may have originated from the earlier church, being deposited within the present church when it was constructed in the 18th century.

- 7.8.21 The five small trenches excavated during the 2006 phase of works uncovered remains of successive events of slippage and tumble from the cliffs which rise to the north and east side of the site. The slumping and stone tumble deposits in many cases contained what appeared to be midden material of shell and animal bone, coarse pot of Bronze Age and Early Christian date and struck flint and porcellanite. A hearth and a midden pit were the only features encountered and were concentrated in the south-west of the area under investigation. Finds recovered from the hearth included a sherd of lead-glazed pottery, providing a possible date in the medieval period for the feature. Excavation of the midden pit uncovered large quantities of animal bone and shell, Souterrain ware pottery and the articulated skeleton of a dog. No evidence to suggest that the area had been used for human burials was uncovered during the evaluation. The recovery of a midden with a likely date in the Early Christian period suggests that the site was in use, for some time at least, during the period that **St Comgall's Church was active on the island, between the 7th and 10th centuries.**
- 7.8.22 The second of the excavations undertaken within the vicinity of the PDA is recorded as being located to the west of the PDA. However, the description of the excavation suggests that the site was located to the immediate north of the road within the northern portion of the PDA.
- 7.8.23 **Archaeological works were undertaken at the site of six proposed Fisherman's Cottages** during 2007 by Chris Long of Gahan & Long Ltd under licence no. AE/07/224. Archaeological evaluation of the site revealed an archaeological layer concentrated **beside the boundary with St Thomas' Church of Ireland, which contained articulated and disarticulated human remains.** It was subsequently agreed that no construction would be conducted within this area and that the full extent of the archaeological layer be established and subsequently fenced off for future protection.
- 7.8.24 Details of the archaeological excavations undertaken within the general vicinity of the PDA are contained in Appendix 3 of Appendix B.

Historical Parks & Gardens

- 7.8.25 Two areas associated with the Manor House are recorded within the Register of Historic Gardens as being located approximately 70m east and 250m east-northeast of the PDA (See Figure 7.1 in Volume 3).
- 7.8.26 The works associated with the proposed development are not currently anticipated to impact upon these or any other Historic Parks & Gardens.

Registered Battlefields

- 7.8.27 There are two registered historic battle sites within the general area of the PDA; both are recorded within the Sites & Monuments Record.
- 7.8.28 The first of these (ANT001:083) dates to the Late Medieval period and is recorded as the unlocated site of a Battle in 1551 while the second (ANT001:084) dates to the Post-Medieval period and is recorded as the located site of a Battle in 1642.

Listed Buildings

- 7.8.29 There are ten buildings with Listed status located on Rathlin Island (Table 7.3).

Table 7:3: Historic Buildings / Buildings with Listed Status within the general vicinity of the PDA.

HB No.	Type	Address	Second Survey	Grade
HB05/16/001 A	House	Manor House, Outbuildings & Walling, Rathlin Island.		B+
HB05/16/001 B	Walling	Stock Yard A.K.A. Coal Yard, Manor House, Rathlin Island, Co. Antrim.		B2
HB05/16/002	Church	Church of the Immaculate Conception (RC), Rathlin Island.		B+
HB05/16/003	Church	Saint Thomas' (C of I) Church, Rathlin Island.		B+
HB05/16/004	Boat House	Boat House, The Station, Rathlin Island.		B1
HB05/16/005	Kelp Store	Kelp Store, Ouig, Rathlin Island.		B1
HB05/16/006	Mill	Mill, Mill Bay, Rathlin Island.		B1
HB05/16/007	Telephone Kiosk	Telephone Kiosk opposite the Boat House, Rathlin Island, Co. Antrim.		B1
HB05/16/008 A	House	Brockley House, Brockley Clachan, Rathlin Island.		B2
HB05/16/008 B	House	Brockley Cottage, Brockley Ballygill, Middle, Rathlin Island, Co. Antrim, BT54 6RT.	B2	B1

- 7.8.30 Whilst none of these Listed Buildings are located within the boundaries of the PDA, two buildings with Listed status are recorded including **St. Thomas' (C of I) Church** (see **Figure 7.3** in Volume 3 and Photograph 7.1) and the Manor House.



Photograph 7.1: View of St. Thomas' Church overlooking the breakwater

- 7.8.31 The proposed development is to consist of the construction of a 10m wide concrete quay primarily within the foot-print of the existing breakwater, the construction of a 10m wide ferry ramp, the upgrading of the existing access road, and the creation of an area of concrete hard-standing. However given that these works are not elevated within the landscape, the proposed development is not likely to have a significant adverse impact upon these or any other historic building.

Cartographic Sources (Historical Ordnance Survey Maps)

- 7.8.32 Early edition Ordnance Survey 6 Inch and 25 Inch maps were examined to provide information relating to the former land use of the site and the surrounding area (See Plates 7.1-7.3).

- 7.8.33 The 1st Edition OS 6 Inch map (c.1840) (See Plate 7.1) illustrates that the northern portion of the PDA overlying the beach area to the south of the road adjacent to the church boundary, and that the southern portion of the PDA appears to be located within a portion of Church Bay. Whilst the map evidences the presence of significant features within the PDA (such as the Church and the dwellings in the harbour area), the harbour itself has not as yet undergone the extensive development which provide its current form.
- 7.8.34 By the time of the 3rd Edition OS 6 Inch map (c.1870) (See Plate 7.2) a substantial breakwater has been constructed to the immediate west of the PDA; however, much of the surrounding area appears to be similar to the earlier edition OS map. In addition to the construction of the breakwater, a slightly larger portion of the PDA appears to have been reclaimed as part of the development of the harbour.
- 7.8.35 The 4th Edition OS 6 Inch Map (c.1905) (See Plate 7.3) suggests very little change in land use between the later 19th century and the beginning of the 20th century within the general vicinity of the PDA.
- 7.8.36 No archaeological / historical features were identified during examination of the historic maps, in addition to the features mentioned above.



Legend

PDA extent

0 100 200 300 400 500 m

Plate 7.1: 1st Edition OS map (c.1840)



Legend

 PDA extent

0 100 200 300 400 500 m

Plate 7.2: 3rd edition OS map (c. 1870)



Legend

PDA extent

0 100 200 300 400 500 m

Plate 7.3: 4th edition OS map (c. 1905)

Aerial Photography

- 7.8.37 Overhead aerial photographs of the proposed development area were also consulted in order to identify any possible subsurface archaeological features which may not be visible on the ground.
- 7.8.38 Inspection of colour aerial photographs (See Plate 7.4) confirms the current use of the PDA as comprising the existing breakwater, existing access road and a section of the shore-line.



Plate 7.4: Aerial photograph showing recent landuse within the PDA

7.9 Fieldwalk/Site Visit

- 7.9.1 A fieldwalk survey was undertaken on 6th March 2015 to assist with the assessment of the archaeological potential of the site. A photographic record of the fieldwalk survey was also compiled (See Photographs 7.2 – 7.7).
- 7.9.2 The fieldwalk survey confirms that the existing breakwater comprises large rocks and boulders, while the section of the shore-line consists of a small portion of sand and pebble beach / foreshore and an adjacent area of mixed pebbles and soil under grass cover.
- 7.9.3 No previously unrecorded archaeological sites or monuments were identified during the fieldwalk survey.



Photograph 7.2: PDA from road at north looking towards south



Photograph 7.3: PDA from northeast corner looking towards west



Photograph 7.4: PDA from northeast looking towards southwest



Photograph 7.5: PDA from road at northwest looking towards south-southeast



Photograph 7.6: PDA from northwest corner looking towards south



Photograph 7.7: PDA from north looking towards south

7.10 Analysis & Evaluation / Archaeological Impact of the Development

- 7.10.1 The proposed development site lies within an area of archaeological potential, with numerous archaeological sites and monuments, industrial heritage sites and historic buildings and associated gardens being recorded within its general vicinity; however none of which are recorded within the boundaries of the PDA itself.
- 7.10.2 Three of the archaeological sites or monuments referred to above (See Section 7.8) are recorded within the immediate vicinity of the PDA, including two historic quays. The first of which comprises a quay and slipway (MRA003:069) located c.80m to west of the PDA, and the second of which constitutes **the "Old Quay" (MRA003:068)**, which is located c.120m to east-southeast of the PDA. More significantly, the modern Parish Church of St. Thomas is located on the site of an earlier ecclesiastical site (ANT001:023) recorded as containing stone-lined graves, and is located to the immediate north of the PDA. Although the boundaries of the modern church are clearly defined, it should be noted that early ecclesiastical enclosures were often much larger than the modern boundaries suggest, and that previously unrecorded below ground archaeological remains (including human burials) may be encountered during the development of the site.
- 7.10.3 That said, the proposed harbour improvements are not anticipated to have a significantly adverse impact upon any previously identified archaeological site or feature, with the exception of the potential impact on **remains associated with St. Thomas' Church which** may lie outside the boundaries of the existing church and graveyard.

- 7.10.4 Examination of the historic mapping for the site confirms that a substantial breakwater has been constructed partially within and to the immediate west of the PDA and the northern portion of the PDA appears to have been reclaimed as part of the development of the harbour.
- 7.10.5 Moreover, the site visit confirmed that the previous works development of the harbour (located within the boundaries of the PDA) are likely to have had an adverse impact upon any earlier archaeological remains which may previously have been in situ. However at present, it is not possible to accurately ascertain the level of disturbance to the previously surviving archaeological remains, deposits and features.
- 7.10.6 Whilst the proposed development works are not anticipated to have a significantly adverse impact on previously recorded archaeological site or monument, it is possible that unrecorded archaeological deposits surviving within the development area may be impacted.
- 7.10.7 Given the nature of the works associated with the current development proposal and the potential impact of development works associated with primary ground reduction works / construction works upon any previously unrecorded archaeological remains which may survive in situ within the PDA, it is proposed that archaeological works should be undertaken in advance of construction at the site.

7.11 Project Aims and Objectives

- 7.11.1 The aims of the proposed archaeological fieldwork are to establish the presence or absence of archaeological remains in those areas which may be disturbed by the proposed development, to establish the character, date and extent of those that survive and to preserve the remains either in situ or by record.
- 7.11.2 Preservation in situ of any archaeological remains is to be the preferred mitigation measure, in accordance with the Historic Monuments and Archaeological Objects (NI) Order 1995. However, given that the degree of disturbance within the PDA cannot be determined at present, it is difficult to define the exact preservation methods that will be implemented.
- 7.11.3 A methodology to mitigate impacts on archaeological features within the area and to ensure preservation by record is detailed below.

7.12 Methodology and Recommendations

- 7.12.1 The desk based assessment and site visit confirmed that the proposed development site is located within an archaeologically sensitive area.
- 7.12.2 It is recommended that the developer allocates sufficient time within the construction programme to facilitate the necessary archaeological works.
- 7.12.3 Given the nature of the development, archaeological monitoring of sub-surface works is considered to be the most appropriate mitigation measure. It is also recommended that a programme of controlled primary ground reduction works is undertaken at the site, under the supervision of a suitably qualified archaeologist under licence to DOENI:HED:HMU to ensure the identification and appropriate treatment of any archaeological remains which may survive in situ within the boundaries of the proposed development site.
- 7.12.4 It should be noted that works within the sub-tidal zone (i.e. areas below Low Water Mark (LWM)) should be undertaken under strict archaeological supervision (as part of ground / seabed disturbance monitoring) to ensure that all archaeological material found during sub-tidal works are accurately recorded and that all potential impacts are mitigated. To facilitate the archaeological supervision, all works within inter-tidal areas should be undertaken during low tide where possible.
- 7.12.5 If any archaeological material is uncovered, it should be recorded and a small area should be excavated by hand to ascertain the depth and nature of the archaeological deposits. **All 'below surface' works should be reduced to the level of any unrecorded archaeological deposits prior to construction.** However, if the construction depth is achieved and no archaeological material has been uncovered, then works may continue without any further archaeological intervention. This methodology should be applied for all below ground invasive works as they arise.

- 7.12.6 The licensed archaeologist on site is responsible, on behalf of the developer, for the identification and appropriate treatment (i.e. recording & reporting) of any archaeological remains encountered. In order to fulfil the responsibilities of the developer, the licensed archaeologist should have the authority to temporarily stop works where potential archaeological material has been identified, in order to evaluate the character of said remains. Should any archaeological remains be found, the licensed archaeologist will be responsible for communicating this to the client or appointed representative (e.g. the site manager of the main contractor or site agent), as well as to the Department of the Environment Northern Ireland: Historic Environment Division: Historic Monuments Unit (DOENI:HED:HMU).
- 7.12.7 In the event of the discovery of any archaeological remains, time should be allowed for the archaeologist to record features. The level of recording appropriate will depend on the nature, extent and complexity of the remains encountered and in all cases sufficient time will be allowed by the developer for this purpose. The archaeologist(s) will clearly mark off any archaeological feature or area for the duration of the recording process, to allow the main construction programme to continue around it without delay while excavation and recording take place. Should further ground reduction be necessary, archaeological monitoring of those works will be required.
- 7.12.8 DOENI:HED:HMU should be the ultimate arbiter of the definition of appropriate levels of archaeological recording. In the event of any disagreement between the developer and the licensed archaeologist, both parties should be free to contact DOENI:HED:HMU to achieve resolution of the matter.
- 7.12.9 In circumstances where straightforward archaeological remains are encountered (e.g. small, isolated features) which can be dealt with by the on-site archaeologist(s) in a period of up to a few hours, should it be determined preservation *in situ* of those remains is not a viable option, excavation and recording work will proceed as rapidly as possible. In the event of the identification of significant remains work in the affected area will be stopped, the area will be marked off, all parties will be notified immediately and no further action by either the archaeologist(s) or the main contractor will take place within the area, until the level of further work necessary has been determined in consultation with the developer, the licensed archaeologist and DOENI:HED:HMU.

- 7.12.10 All archaeological remains identified during the watching brief which are not capable of preservation in situ, should be fully excavated and recorded. Sampling strategies adopted will depend upon the dimensions, make up and complexity of any archaeological remains encountered and will be determined in consultation with DOENI:HED:HMU.
- 7.12.11 Recording should be carried out using the standard methods employed during archaeological fieldwork, including the maintenance of a day book, the recording of all archaeological features in writing, the utilisation of pro-forma context sheets, the creation of scaled field illustrations and the capturing of appropriate photographs.
- 7.12.12 Any excavated archaeological features will be sub-sampled where artefactual material and/or palaeoenvironmental remains can be identified as present or may reasonably be considered to be present. The level of sampling and / or sub-sampling should be relevant to the nature of the archaeological feature encountered. An appropriate number of control samples may also be taken.
- 7.12.13 The results of the work should be written as a data structure report (DSR) and should include a project design and a costing for any necessary further post-excavation analysis. The results of any further work recommended in the DSR should be amalgamated with that report to form a final report. Copies of both reports along with the site archive should be forwarded to the client and to the Historic Environment Division (HED) for inclusion in the SMR.
- 7.12.14 DOENI:HED:HMU should be kept fully appraised of progress on site. DOENI:HED:HMU should be afforded access to the archaeological work on site for monitoring purposes at any reasonable time (i.e. during normal working hours), with special access (such as outside working hours) if necessary. All site visitors will be required to comply with the site safety plan.
- 7.12.15 It is important to realise that any works associated with post-excavation analysis and/or the production of a publication standard report represent a continuation of the overall programme of archaeological works and that these operations must also be undertaken in accordance with the archaeological condition(s) imposed on the development.
- 7.12.16 Finally, it is recommended that all areas which have been subject to archaeological supervision are surveyed and georeferenced using a suitable equipment, such as RTK GPS and Total Station observations.

8 Ecology and Nature Conservation

8.1 Introduction

8.1.1 This chapter will assess the potential impacts the proposed harbour development and new ferry will have on the ecology of the study area.

8.2 Methodology and Study Area

8.2.1 This assessment is undertaken in accordance with the Chartered Institute of Ecology and **Environmental Management 'Guidelines for Ecological Impact Assessment in the United Kingdom'** (Ref 8.1) and **'Guidelines for Ecological Impact Assessment in Britain and Ireland, Marine and Coastal'**.

8.2.2 A desk top study was undertaken to gain baseline information on any designated sites for ecology. The study area for this was taken to be 2km. A review of the following sources were used to identify ecological constraints:

- Northern Ireland Environment Agency (NIEA) Protected sites website (Ref 8.2)
- Joint Nature Conservation Committee (JNCC) website (Ref 8.3)
- Causeway Coast and Glens Council website (Ref 8.4)
- The Northern Area Plan 2016 (Ref 8.5).

8.2.3 Terrestrial species information was requested from the Centre for Environmental Data and Recording (CEDaR), however at time of writing these had not been received.

8.2.4 In order to gain an appreciation of the environment in the vicinity of the proposed development, a site visit was undertaken on 3 December 2015. An initial phase 1 habitat survey was carried out. The study area for this was taken to be the footprint of the scheme with a 100m buffer zone for the terrestrial environment. This was considered sufficient to map the relevant terrestrial habitats that may be affected by the scheme given the extent of built development around the harbour. The phase 1 habitat **survey was undertaken in accordance with the methodology in JNCC 'Handbook for Phase 1 habitat survey, A technique for environmental audit'** (Ref 8.6). No survey of the marine environment was undertaken due to timing constraints for the production of this report.

8.2.5 A Screening Report for the scheme under the Habitats Regulations has previously been undertaken (Ref 8.7) and the baseline information contained in that report was also used to inform the ES.

8.2.6 The scope of the ecological assessment was discussed and agreed with NIEA following a meeting on 30 November 2015. It was noted that the main marine species which could be potentially affected are marine mammals such as seals and harbour porpoise; and bird species such as the black guillemot. Information on the location of protected species and their habitats was obtained from NIEA and the RSPB.

Assessment methodology

8.2.7 In accordance with the CIEEM guidelines, only those impacts likely to result in significant impacts on valued ecological receptors should be assessed. Impacts are determined based on a likely zone of influence. For this project the zone of influence was taken to be the scheme footprint, construction working area, and the wider harbour area for effects on the marine environment.

8.2.8 Valued ecological receptors are determined based on a defined geographical context, e.g. a Special Area of Conservation would be valued at an International level, while coastal grassland would have value at a local or less than local level. For receptors that have a value at more than one level, the highest value should be taken as the overriding value. Only those ecological receptors of sufficient value for impacts to be significant should be considered in the impact assessment.

8.2.9 The value of areas of habitat should be measured against published selection criteria where available, e.g. Annex III of the Habitats Directive sets out the criteria for selection of habitats for protection as an SAC, while at a local level, habitats may be defined as **'priority habitats' within local biodiversity action plans.**

8.2.10 Assigning value to species should be based on their biodiversity value. To do this it is necessary to consider their distribution and status. Rarity is also an important consideration because of its relationship with threat and vulnerability. In addition, it is necessary to consider the value of populations where a country holds a significant or large population of a species on a global or European scale.

8.2.11 In order to determine the likelihood of an impact occurring the following scale is used:

- Certain/near certain: probability estimated at 95% chance or higher
- Probable: probability estimated above 50% but below 95%

- Unlikely: probability estimated above 5% but less than 50%
- Extremely unlikely: probability estimated at less than 5%.

8.2.12 When assessing impacts on ecosystems, the following parameters are used:

- Are impacts positive or negative;
- Magnitude – a quantitative impact such as area of habitat loss, numbers of vulnerable species affected etc.;
- Extent of impact;
- Duration – construction effects are generally temporary, while operational effects can be long term;
- Reversibility – a permanent impact is one from which recovery is not possible within a reasonable timescale or for which there is no reasonable change of action being taken to reverse it. A temporary impact is one from which spontaneous recovery is possible or for which effective mitigation is possible.

8.2.13 Ecologically significant impacts are defined in the CIEEM guidelines as an impact (either positive or negative) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area. The **guidelines define the integrity of a site as ‘the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified’**. In terms of identifying impacts on the conservation status of habitats or species, the guidelines define these terms as follows:

- *for habitats, conservation status is determined by the sum of the influences acting on the habitat and its typical species, that may affect its long-term distribution, structure and functions as well as the long-term survival of its typical species within a given geographical area; and*
- *for species, conservation status is determined by the sum of influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within a given geographical area.*

8.2.14 In summary, an ecologically significant impact is an impact that has a negative or positive effect on the integrity of a site or ecosystem and/or the conservation objectives for habitats or species populations within a given geographical area.

8.3 Limitations

- 8.3.1 Due to the timescale involved in the preparation of this ES, the phase 1 habitat survey was undertaken outside of the optimal season for surveying. Although this allows the habitats to be mapped, a full species list was not obtained due to much of the vegetation having died back or being dormant.
- 8.3.2 No protected species surveys were undertaken due to the limitation of time and seasonality for the preparation of this ES. However desk top survey records of protected species was gained from CEDaR, NIEA and RSPB.
- 8.3.3 No marine surveys were undertaken due to the timescale of the project but where possible information on the marine species/environment in the vicinity of Church Bay was gained from a desk top study and from information provided by NIEA.

8.4 Planning and Legislative Overview

- 8.4.1 The Conservation (Natural habitats, etc) Regulations (Northern Ireland) 1995 and Conservation (Natural habitats, etc) (Amendment) Regulations (Northern Ireland) 2012 transpose the requirements of the EU Habitats and Wild Bird Directives into NI legislation. This provides protection for a wide range of habitats and species through the creation of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
- 8.4.2 The Wildlife (Northern Ireland) Order 1985 and amendments makes it an offence to interfere with certain species of wild animals and plants.
- 8.4.3 The Wildlife and Natural Environment Act (Northern Ireland) 2011 amends the Wildlife (NI) Order and adds new provisions to protect species. It is an offence under this legislation to recklessly disturb or injure wild birds, certain wild animals and plants.
- 8.4.4 Planning Policy Statement 2 (PPS2): Natural Heritage (Ref 8.8) **sets out the Executive's** commitment to sustainable development and to conserving and where possible enhancing and restoring natural heritage.
- 8.4.5 The Northern Area Plan 2016 is the extant development plan for the area. The plan includes details of Sites of Local Nature Conservation Importance and policies for the protection of the natural environment.

8.4.6 A Biodiversity Strategy for Northern Ireland to 2020 (Ref 8.9) - this plan was produced in response to the Convention on Biological Diversity in 2010 which developed a strategic plan or Aichi Targets, to halt and reduce biodiversity loss as well as maintaining the functionality of ecosystems.

8.5 Baseline Conditions

Designated Sites

8.5.1 The following International and European Designated Sites are located within 2km of the harbour:

- Rathlin Island SAC
- Rathlin Island SPA.

8.5.2 The location of these sites relative to the scheme is shown on **Figure 8.1**. The area for the proposed harbour falls partially within the SAC / SPA boundary – refer **Figure 8.2**.

Rathlin Island SAC

8.5.3 The island has a range of habitats from sea cliffs to areas of maritime grassland and rocky shore. The coastline is composed of a mixture of coarse sediment and rocky habitats. Strong tidal currents prevail around most of the island, resulting in very little silt around the island. The SAC has been designated for the following features.

8.5.4 Annex I habitats that are a primary reason for selection of this site:

- Reefs.
- Vegetated sea cliffs of the Atlantic and Baltic Coasts.
- Submerged or partially submerged sea caves.

8.5.5 Annex II habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Sandbanks which are slightly covered by sea water all the time.
- Annual vegetation of drift lines.

- 8.5.6 A review of the Rathlin Island 2009-2011 Survey Report from the Nationally Important Marine Features Project (Ref 8.10) was undertaken to ascertain the location of the Annex I qualifying feature habitats on the island. According to the report, the reef habitats include the steep limestone and basalt cliffs on the north wall of the island and areas of boulders on the east and south coasts. Caves are found mainly on the north wall at depths of 0-60+ metres.
- 8.5.7 Information provided by DoE Marine Conservation indicate the reefs features are found around the coastline with the sandbank features located south of Church Bay (refer **Figure 8.4**).

Rathlin Island SPA

- 8.5.8 The boundary of the SPA designation is entirely coincident with the boundary of the SAC. The SPA boundary includes an area of sea around the island which is used by the seabirds which occur around the coast. The qualifying features of the site are as follows.
- 8.5.9 The site qualifies under Article 4.1 of Birds Directive by supporting nationally important breeding populations of peregrine falcon *Falco peregrinus*.
- 8.5.10 The site qualifies under Article 4.2 by supporting breeding populations of:
- razorbill *Alca torda*,
 - black-legged kittiwake *Rissa tridactyla*, and
 - common guillemot *Uria aalge*.
- 8.5.11 The site also qualifies by supporting the Annex I species chough *Pyrrhocorax pyrrhocorax* and by regularly supporting over 20 000 seabirds. Rathlin supports the following breeding species which are of importance: fulmar *Fulmarus glacialis*, shag *Phalacrocorax aristotelis*, eider *Somateria mollissima*, common gull *Larus canus*, herring gull *Larus argentatus*, lesser black-backed gull *Larus fuscus*, black guillemot *Cepphus grylle*, puffin *Fratercula artica* and manx shearwater *Puffinus puffinus*.
- 8.5.12 Information obtained from the RSPB indicates that the main breeding area for seabirds is on the north side of the island on the sea cliffs and stacks. Bird populations are also found in Church Bay on the cliffs to the west of the breakwater.

8.5.13 The population of peregrine falcon are commonly found in the heathland and grassland cliff areas on the west of the island. The preferred habitat of Chough is short cropped grassland or heathland on the tops of exposed coastal cliffs. The qualifying sea bird species are typically found on the sea cliffs and stacks located on the north coast of the island during the breeding season.

Nationally important sites

8.5.14 On a national level, there are a number of Areas of Special Scientific Interest designated on the island, of which the following are within the study area:

- Ballycarry ASSI – this site is important for its heath and wetland vegetation and is located approximately 1.2km north east of the harbour. A series of depressions and troughs form a number of small wetlands, interconnected by low-lying channels and flushes.
- Rathlin Island Coast ASSI – the ASSI designation covers the entire coastline of the island. The coast is of particular importance because of the wide variety of habitats and associated flora and fauna. The habitats include sea cliffs and stacks, maritime grassland, saltmarsh, coastal vegetated shingle and a wide range of intertidal features. The sea cliffs and sea stacks provide nesting sites for seabirds such as guillemots, razorbills, puffin and kittiwakes. The cliffs are also used by raptors such as the peregrine falcon and buzzard. Uncommon plants such as Scots lovage, juniper and oysterplant are found along the coastal strip.
- Church Bay ASSI – this site is designated for its earth science interest rather than for biodiversity. It is located approximately 0.3km south east of the harbour. The landform is a series of ridges on the east side of Church Bay composed of sand and gravel deposits, which were formed at a time when the sea level was higher than present day.

8.5.15 There is also a National Nature Reserve on the island, Kebble NNR. However, this is located beyond the study area at the western extents of the island (approximately 4.5km west).

8.5.16 A review of the Northern Area Plan indicates there a number of locally important ecological sites on Rathlin. These Sites of Local Nature Conservation Importance are listed below.

- Ballycarry SLNCI (D157513) – this site is located approximately 1.2km north east of the harbour. It is comprised of open water areas supporting stands of floating and emergent vegetation with bottle sedge, common spike-rush and common reed. Poor acid fen can be found around the margins, characterised by aquatic bog mosses, which have in some parts completely covered the surface of the water.
- Ballyconagan SLNCI (D146519) – this site is located approximately 0.5km north of the scheme and comprises a mosaic of wet and dry heath, wet grassland, acid grassland and marshy pools.
- Church Quarter and Mullindress SLNCI (D148514) – this site is located approximately 0.15km north of the harbour and comprises a mixture of wet and dry heath and unimproved grassland with frequent marshy pool complexes.
- Kinkeel Lough SLNCI (D150495) – this site is comprised of fen and swamp and located approximately 1.5km south east of the harbour. Most of the open water is now covered by stands of floating and emergent vegetation with bottle sedge, common spike-rush and common reed. Poor acid fen characterised by aquatic bog mosses can be found around the margins.
- Ally Lough SLNCI (D151495) - The lough is located approximately 2km south west of the harbour. The site consists of two small lakes with adjacent swamp and unimproved grassland.
- Church Bay raised beach complex SLNCI (D151506) – this site is located approximately 0.4km east of the harbour and is designated for its geological landform and raised beach series.

8.5.17 These ASSIs and SLNCIs are shown on **Figure 8.2** in Volume 3.

Rathlin Proposed Marine Conservation Zone

8.5.18 The Marine Act (Northern Ireland) 2013 makes provision for the designation of Marine Conservation Zones (MCZ) in Northern Irish territorial waters. These MCZs protect a range of nationally important marine wildlife, habitats, geology and geomorphology. Rathlin is one of the proposed MCZs and the DoE have produced conservation objectives and management options for the site (Ref 8.11). The proposed boundary of the MCZ is located between the north coast of Rathlin Island and the North Channel encompassing an area of 93.33km². The MCZ is proposed as it supports the following features for protection:

- Deep seabed habitat (>200m);
- Population of black guillemots;
- Features indicating past change in relative sea level (submerged lagoons and sea arches).

8.5.19 The report also provides information on the location and sensitivity of the recommended features for protection. The deep seabed habitat is located offshore to the north of Rathlin Island.

8.5.20 NIEA undertake annual surveys on the black guillemot population on the island. The birds are generally found along the southern coastline from Bull Point to Church Bay. They nest in the cliffs and rocky crevices along the coast and feed in the kelp forests offshore. The Northern Ireland Seabird Report 2014 (Ref 8.12) states that the population of black guillemots on Rathlin has steadily declined since 2000. The designation of the MCZ would help protect the population.

8.5.21 The submerged lagoons and sea arches are part of the SAC reefs and caves designation and are located on the north east corner and north shore of Rathlin.

Marine environment

8.5.22 A review of the Rathlin Island 2009-2011 Marine Survey Report was undertaken to provide information on sub-tidal and marine habitats/species in the vicinity of the scheme. The closest dive survey point to the scheme was at Mill Bay, south and east of the harbour at 55°17.161'N, 006°11.679'W. **The dive survey** identified a bed of *Zostera marina* seagrass in Church Bay. The extent of the seagrass bed is not known, however surveys suggest that the seagrass cover is sparse and patchy. The bed lies around 6m on medium coarse sand.

8.5.23 The report also highlights that the area around Church Bay is regularly fished by scallop dredgers, with indications that the seabed in this area has been damaged and has a low species diversity as a result of the scallop fishing.

8.5.24 The marine survey report also indicates that the seas around Rathlin are of national importance for sponges. A review of **NIEA 'Rathlin Island: a sponge biodiversity hotspot'** (previously available on NIEA website) summarises the findings of a survey project in 2005 to identify sponge species in the sea around the island. The survey identified around 134 species of which 9 were new to Northern Ireland.

8.5.25 The Northern Ireland Sublittoral Survey (Ref 8.13) indicates the sublittoral habitat in Church Bay is composed of sand and gravel. This survey focused on identifying macroinvertebrate species of conservation concern. Species recorded during the dive surveys included the starfishes *Anseropoda placenta* and *Astropecten irregularis*, the slender sea pen *Virgularia mirabilis*, the spotted burrowing anemone *Arachnanthus sarsi* and an unidentified *Halcampoides* anemone species. Information from Joe Breen, DoE Marine Conservation indicates that the marine habitat in the area of the proposed slipway is composed of muddy sands with little conservation interest (pers comms).

8.5.26 A review of the tidal conditions on visitmyharbour.com (Ref 8.14) was undertaken to gain an appreciation of the prevailing tides around Rathlin Island. The prevailing tides run eastwards from Bull Point to Church Bay, before running south to Rue Point. However, the tide direction changes around high water to run westwards from Church Bay to Bull Point. The tidal currents through Rathlin Sound are very fast and are likely to affect the propagation of waves to Rathlin Harbour.

8.5.27 A Wave and Overtopping study by HR Wallingford (Ref 8.15) was undertaken on behalf of the client to ascertain how the proposed scheme would affect wave conditions in the **harbour**. **The report states** *'waves in Church Bay and entering Rathlin Harbour are dominated by waves from the North Atlantic. In addition, waves are also generated within Rathlin Sound and the area of sea off the Northern Ireland north coast. While the former produce the largest waves incident on the harbour breakwaters, waves generated by local southerly and south-westerly winds have a direction more favourable to penetration into the harbour'*. The wave modelling undertaken also shows that due to the location of the piers and breakwaters at the harbour, the general wave direction in the harbour is shorewards with waves outside the enclosed harbour travelling in a generally eastwards direction.

Causeway Coast and Glens Council Local Biodiversity Action Plan

8.5.28 The Causeway Coast and Glens LBAP (Ref 8.16) sets out a series of action plans for habitats and species found within the council area. The habitats selected for priority action are:

- Coastal – sand dunes and saltmarsh,
- Grassland and farmland – lowland meadows, coastal and floodplain grazing marsh,
- Marine – intertidal mudflats,

- Peatland and heathland – lowland raised bog, blanket bog, lowland heath,
- Urban - urban greenspace, brownfield and industrial sites, gardens,
- Woodland – oakwoods, mixed ashwoods, parkland, wet woodlands, species-rich hedgerows,
- Wetland – rivers, eutrophic lakes, fens and swamps, lowland fens.

8.5.29 The following species have been selected for priority action:

- Harbour porpoise,
- Swift,
- Barn owl,
- Yellowhammer,
- Otter,
- Fish species (Atlantic salmon and brown trout),
- Scarce crimson and gold moth,
- Red squirrel,
- Bumblebee,
- Bats.

8.5.30 None of the LBAP priority habitats identified above are located in the vicinity of Rathlin Harbour. Of the priority species, there is potential for harbour porpoise, swift, yellowhammer, salmon, brown trout, bumblebee and bats to be found in close proximity to the harbour.

Phase 1 habitat survey

8.5.31 The phase 1 habitat survey was carried out on 3 December 2015. Due to timing of the survey being sub-optimal, the survey information was supplemented with information gained during a previous site visit in August 2015 undertaken to inform the HRA for this project. No marine surveys were undertaken for this project.

8.5.32 The site of the proposed slipway is composed of an area immediately adjacent to the existing breakwater with an area of shingle beach, rock outcrops and grassland as shown on photograph 8.1.



Photograph 8:1: habitats in the proposed slipway area, looking south (August)

8.5.33 The habitats mapped are described below and shown on **Figure 8.3** in Volume 3. Target notes are given in Appendix C.

Shingle/gravel above high tide mark

8.5.34 The beach is mostly small cobbles and shingle with strands of kelp and wracks along driftlines. The granular substrate is primarily composed of limestone gravel. There are outcrops of bare limestone rock. Lichens are common on the exposed rock surfaces, which include *Xanthoria parietina*, *Placynthium nigrum* and *Lecanora albescens*.

8.5.35 The intertidal habitat in the vicinity of the breakwater is composed of a shingle /cobble substrate with common seaweed species such as bladder wrack *Fucus vesiculosus* and sea lettuce *Ulva lactuca*. Occasional limpets *Patella vulgata* were noted on the rocks.

8.5.36 On the day of the survey in December, grey seals *Halichoerus grypus* were observed hauled out on tidally exposed boulders close to where the slipway is proposed - as shown on photograph 8.2.



Photograph 8:2 Grey seals within the proposed harbour area (December)

Coastal grassland

8.5.37 This habitat was found in a thin strip between the shingle beach and the road. During the visit in December, there was little flowering vegetation that could be identified to fully classify this habitat. Based on the survey in August, the grassland area was composed of a variety of species with the most common being broad leaved dock *Rumex obtusifolius*, sea mayweed *Tripleurospermum maritimum*, field bindweed *Convolvulus arvensis*, common cleavers *Galium aparine* with perennial ryegrass *Lolium perenne*, ragwort *Senecio jacobaea*, red fescue *Festuca rubra*, ribwort plantain *Plantago lanceolata*, bramble *Rubus fruticosus*, nettle *Urtica dioica*, red goosefoot *Chenopodium rubrum*, sea sandwort *Honckenya peploides* and vetch *Vicia* spp. Photograph 8.3 below shows this habitat from the survey in December.



Photograph 8:3: Coastal grassland habitat at area for proposed car parking

Boulders/rocks above high tide mark

8.5.38 This habitat is primarily composed of the breakwater which is man made. The species found on the boulders are mostly lichens with *Xanthoria parietina* identified.

Bare ground

8.5.39 There is an area of hard-standing between the grounds of St. Thomas's church and a house, to the north of the proposed slipway area. A large concrete retaining wall separates this area of hard-standing from an area of scrub to the north.

Amenity grassland

8.5.40 The grounds of St. Thomas's Church and graveyard are composed of amenity grassland, primarily composed of perennial ryegrass *Lolium perenne* with occasional daisy *Bellis perennis*.

Unimproved calcareous grassland

8.5.1 This habitat is found north of the beach area behind the houses along the coastal road. It is found within areas of rock outcrops and soil cover is likely to be thin. No access could safely be gained to the area for positive species identification but occasional trees such as alder *Alnus glutinosa* and gorse *Ulex europaeus* were noted. The rock outcrops are limestone.

Running water

8.5.2 A small stream is located in the study area, flowing down the slope from Slieveard north of the study area. This stream discharges into the sea west of the breakwater.

Semi-improved neutral grassland

8.5.3 This habitat is found along the small stream running down to the beach. Typical species included perennial ryegrass, daisy, buttercup *Ranunculus repens* with the fern species hartstongue *Asplenium scolopendrium* and maidenhair spleenwort *Asplenium trichomanes* found along the stream banks and on the wall along the roadside.

Scattered scrub

8.5.4 This habitat is composed of seral or climax vegetation dominated by locally native shrubs, usually less than 5m tall, occasionally with a few scattered trees. The habitat is **found to the north of St. Thomas's Church on the slope and** includes species such as bramble *Rubus fruticosus*, fuchsia *Fuchsia magellanica*, bracken *Pteridium aquilinum*, hawthorn *Crataegus monogyna*, alder and rosebay willowherb *Chamerion angustifolium*.

Marine habitats

8.5.5 No targeted marine survey was undertaken within the harbour area. However information from Marine Conservation Division indicates the subtidal habitat at the breakwater is mud and sand with little conservation interest.

Protected Species

Marine mammals

8.5.6 At time of writing the records from CeDAR had not been received. However it is considered that the information received from NIEA and RSPB is up to date.

8.5.7 A review of Irish Whale and Dolphin Society sightings available on the Sea Watch Foundation website (Ref 8.17) indicates that during 2015 the following marine mammals were recorded in the waters around Rathlin and Ballycastle:

- Common dolphin *Delphinus delphis*
- Minke whale *Balaenoptera acutorostrata*
- Harbour porpoise *Phocoena phocoena*

8.5.8 Of these harbour porpoise, common seal and grey seal are all Annex II species and fully protected under the Habitats Directive.

- 8.5.9 Harbour porpoise feed around the coastal waters at Ballycastle and Rathlin, favouring areas with a high degree of water mixing which typically have a high biological productivity. Their main prey is fish. The breeding season is summer with most births occurring in June and July.
- 8.5.10 Grey seals spend most of the year at sea and may roam widely in search of food. They come ashore in autumn where they form breeding colonies on rocky shores, beaches, caves, sandbanks and small islands. They are a qualifying feature of the Maidens SAC and may occasionally be found ashore on Rathlin at Mill Bay, south of the harbour. They use the sea caves around Rathlin for breeding with pups being born between September and November.
- 8.5.11 On the day of the site visit in December, grey seals were noted hauled out in Church Bay in the area of the proposed slipway and on the beach to the east at the smaller breakwater. A couple of seals were also observed swimming in the harbour area between the pontoons and the shoreline. The seals appeared to be acclimatised to the noise of the existing ferries and from human activity around the harbour.
- 8.5.12 Harbour seals favour sandflats and estuaries as haul out sites which are generally close to areas of deep water. Their primary prey is fish and young seals will feed on shrimp. Mating takes place between mid-August and early October with pups being born in June and July. Like grey seals, the harbour seals are known to use Mill Bay as a haul out site and may give birth to pups on this beach.

Birds

- 8.5.13 Black guillemots *Cephus grylle* commonly nest in coastal areas and feed almost exclusively on butterfish *Pholis gunnellus*, making them vulnerable to changes or fluctuations in food supply. The cliffs along Church Bay are an important breeding site for this species. They commonly nest in hidden crevices and under sheltered boulders on rocky shores and cliffs. The breakwater is not considered suitable for nesting sites for black guillemots as the breakwater is overtopped during severe weather. No suitable nest sites were identified during the Phase 1 survey in the vicinity of the harbour. **The wall around St. Thomas's churchyard doesn't provide suitable nesting opportunities.**
- 8.5.14 Information obtained from DoE and RSPB indicate that the main nesting sites for black guillemots are located to the west of the breakwater at Church Bay, along the north of the island and at the southern cliffs at Rue Point. Nest sites have been recorded to the east of Church Bay, the sites are shown on **Figure 8.4**.

- 8.5.15 A review of the JNCC website counts (Ref 8.18) indicate that black guillemot counts for 2013 on Rathlin were 129 individuals on land.
- 8.5.16 Information obtained from the RSPB indicates that during 2015 puffins and kittiwakes had bred successfully and numbers of the birds breeding on the island had increased.
- 8.5.17 On the day of the site visit in December a number of different waders and seabirds were observed along the coastline around the harbour and at Mill Bay. Eider ducks *Somateria mollissima* were noted offshore around the breakwater, while redshank *Tringa totanus* and oystercatcher *Haematopus ostralegus* were observed around the coastline at Church Bay and Mill Bay.
- 8.5.18 Rathlin is also a notable site for the Irish hare *Lepus timidus hibernicus*, which is likely to be found on the moorland north of the harbour.

8.6 Evaluation or Sensitivity of Receptors

- 8.6.1 The CIEEM guidelines recommend valuing receptors in terms of their biodiversity value. The evaluation of receptors involves professional judgement and should take into account the distribution or status of the species or features being considered. Legal protection should be considered separately from value. For example, badgers are legally protected for welfare reasons, rather than because populations are declining or the species is particularly rare.
- 8.6.2 The value of an ecological resource should be determined in a geographical framework as set out below:
- International
 - UK
 - National (e.g. Northern Ireland)
 - Regional
 - County
 - District (e.g. Causeway Coast and Glens Council Area)
 - Local (e.g. Rathlin)
 - Within zone of influence only (which might be the project site or larger area).

8.6.3 Not all the identified receptors in the baseline conditions section will experience impacts as a result of the scheme. Most of the SLNCIs and ASSIs are too far from the site to be within the zone of influence and will not be taken further in this assessment. The species most likely to be affected are those using the waters/habitats around the harbour area. The zone of influence for effects on terrestrial habitats/species is taken to be the scheme footprint with a 100m buffer as these will experience direct effects from construction /operation of the scheme. For the marine environment, given the strong tidal streams around Rathlin and the relatively stable environment within the harbour, the zone of influence is taken to be the scheme footprint, the immediate harbour area enclosed within the breakwaters and a distance of 50m of open sea. Any effects beyond 50m of the breakwaters are not likely to be significant.

8.6.4 The value of the ecological receptors likely to be affected or within the zone of influence are summarised in the table below.

Table 8:1: Value of ecological receptors

Receptor	Value	Justification
Rathlin SAC	International	European designated site with important habitats around the Rathlin coastline, works located adjacent to the boundary of the SAC
Rathlin SPA	International	European designated site of high importance for populations of breeding bird species, works located adjacent to the boundary of the SAC
Rathlin ASSI	National	Important for coastal habitats, works located within the boundary of the ASSI
Proposed MCZ	National	Important for black guillemot population of Rathlin.
Habitats in proposed works area – shingle/gravel coastline	Zone of influence	This habitat will be directly affected by the works.
Habitats in proposed works area – coastal grassland	Zone of influence	This habitat will be directly affected by the works.

Receptor	Value	Justification
Sandy/muddy marine habitat	Zone of influence	This habitat will be directly affected by the works.
Black guillemot	Zone of influence	Harbour area provides feeding potential for this species.
Seals	Zone of influence	The harbour area is used by seals for hauling out during the pupping season.
Harbour porpoise	Zone of influence	Waters off the coast used by feeding porpoise.
Breeding seabirds	Zone of influence	Harbour area provides feeding habitat for seabirds.
Overwintering seabirds	Zone of influence	Harbour area provides feeding and resting habitat for seabirds.

8.7 Impact Assessment

8.7.1 This section assesses the impact on the identified ecological receptors in the absence of mitigation measures.

Construction Impacts

Designated Sites

Rathlin SAC

8.7.2 Dredging will result in the loss of around 100m³ of seabed habitat at the toe of the existing breakwater. This habitat is mud and sand of little conservation interest and the impact is not likely to affect the ecological integrity of the seabed habitat in the harbour area. Over time the sediment is likely to build up again on the seabed and the impact is reversible and not significant.

8.7.3 None of the qualifying marine habitats features are found within the harbour area (Joe Breen, pers comms) and the qualifying habitat *Annual vegetation of drift lines* is not present on the shoreline at the site of the development. The development will have no impact on the existing wave or tidal currents and therefore it is concluded that there will be no impact on the conservation objectives or integrity of the SAC (refer Habitats Regulations Screening Report for further detail).

- 8.7.4 The construction works are due to take place between March and October 2016. This partly coincides with the breeding season for the qualifying features for the SPA. However the bird species nest on the sea cliffs and stacks on the north side of the island or on the cliffs to the west; there is no suitable habitat for nesting within the area for development. Therefore there will be no loss of nesting habitat, and no impact on the integrity of the conservation status of any of the qualifying bird species (refer Habitats Regulations Screening Report for further detail).
- 8.7.5 The construction of the quay wall will require piling, although it is not anticipated that piles will be driven to rock head, reducing noise levels. Noise from piling operations is likely to be localised to the harbour area and is unlikely to be heard on the north side of the island. Noise from general construction works is also likely to be confined to the harbour area and is not considered to affect breeding behaviour of the qualifying bird species. Effects due to disturbance on the qualifying bird species is assessed to be not significant.

Rathlin Coast ASSI/terrestrial habitats

- 8.7.6 Construction of the berth and slipway will result in the loss of approximately 600m² of shingle beach habitat. This is common along the coastline in this area of Rathlin and although it forms part of the ASSI designation, the beach at Church Bay has no species of conservation interest. The impact is assessed to be not significant.
- 8.7.7 The creation of the concrete hardstanding area and car parking bays will result in the loss of approximately 540m² of coastal grassland. Although maritime grassland is a feature of the ASSI designation, the grassland at the breakwater is of low conservation interest and none of the particular species mentioned in the ASSI designation are found in the zone of influence. The impact on coastal grassland is not significant.
- 8.7.8 The areas of habitat lost within the development boundary are shown on **Figure 8.3**.

Marine habitats

- 8.7.9 Works have potential to result in changes in water quality in the harbour area from sedimentation, pollution from machinery and concrete washout. Changes in water quality can affect marine species through bioaccumulation, toxicity, direct mortality and smothering of habitat for juvenile species. This can have a knock on effect on predator/prey relationships, reducing food availability which can affect breeding success. These factors can have a negative impact on the integrity of an ecosystem and its ability to support species. However construction effects will be temporary and short term in duration. On the basis of the size and construction methods to be utilised it is considered that the impact on marine habitat from changes to water quality is of slight significance.
- 8.7.10 The transportation and use of construction machinery in the harbour has potential to result in the introduction/movement of non-native marine species such as the slipper limpet *Crepidula fornicata* or carpet sea squirt *Didemnum vexillum* into the area. These species have potential to outcompete native species, affect water quality and harm commercial fisheries. The impact of introducing non-natives is assessed to be significant.

Black guillemot

- 8.7.11 Although works will take place over the breeding season, there are no suitable nesting sites within the proposed development area or in close proximity to the development area. The works will not result in the loss of nest sites.
- 8.7.12 The proposed works are taking place in a built up area with existing high levels of human disturbance, particularly in spring and summer when visitor numbers to the island are high. The harbour area provides foraging potential for the guillemots with potential for disturbance from the works resulting in the birds moving away from the harbour area to feed.

Seals

- 8.7.13 The works will take place during the pupping season for harbour seals. The seals are known to use the beach at Church Bay for hauling out. Noise from construction works, particularly from piling, is likely to result in disturbance and may deter them from coming into the harbour area to haul out. This has potential to significantly affect the conservation status of the Rathlin island population.

Harbour porpoise

- 8.7.14 The main impact on harbour porpoise is likely to be from disturbance and noise as a result of the works. However it is considered that the noise and disturbance will be largely confined to the harbour area, and porpoise are likely to remain some distance off shore. There is limited prey species likely to bring porpoise into the harbour on a regular basis, and the impact on this species is assessed to be not significant.
- 8.7.15 There is potential for minor indirect effects on marine mammals as a result of changes to water quality affecting prey species. However, this is likely to be of short duration and of slight significance.

Breeding seabirds

- 8.7.16 The area for the proposed development is located in a built up area with an existing relatively high level of human disturbance. There are no suitable nesting sites for breeding seabirds (or peregrine or chough) within the proposed development area and it is assessed that there will be no loss of habitat as a result of the site clearance works.
- 8.7.17 Seabirds however do use the harbour area for foraging and there is potential that noise from the works during the breeding season may result in disturbance, causing seabirds to abandon the harbour area to forage elsewhere. Given the biological richness of the sea around Rathlin, it is considered that more favourable foraging areas are located beyond the harbour area and that only a small/insignificant **proportion of the island's** breeding birds are likely to be affected by the works. The construction works are also short term, lasting only for one breeding season. It is therefore considered that the potential impact on the conservation status of the breeding bird population is not significant.

Overwintering seabirds

- 8.7.18 The works are timed to occur between March and September and will have no impact on overwintering bird populations.

Operational Impacts

Designated Sites

- 8.7.19 There will be no operational impacts on the qualifying features of either the SAC or the SPA. The works are replacing an existing ferry with a new ferry of similar design and although the location of the ferry berth has moved, none of the qualifying features of the SAC or SPA are located where the ferry will dock.

8.7.20 Furthermore the development will sit alongside and within the existing breakwater and will therefore have no impact on the existing wave action or tidal currents around the island. Hence there will be no impact on any of the marine qualifying habitats (eg sandbanks) which exist as a consequence of the existing marine currents and wave action; nor will there be any impact for the same reasoning on the habitat *annual vegetation of driftlines*.

8.7.21 In terms of disturbance the new ferry will be more efficient and is likely to be slightly quieter than the existing ferry. There will be no significant impacts on the qualifying bird species of the SPA from the new ferry.

Rathlin ASSI

8.7.22 There will be no operational impact on the ASSI features.

Marine habitats

8.7.23 When the ferry docks and leaves the slipway it is likely to result in disturbance to the seabed from the engines. The seabed habitat in the harbour area is likely to be low in species diversity due to the existing level of boat activity in the harbour. In addition, the harbour is relatively sheltered and the seabed is mud and sand. The replacement of the existing ferry with a new ferry is not considered to significantly affect the diversity of the seabed in the vicinity of the new slipway.

8.7.24 Beyond the confines of the existing harbour as there will be no impact on the existing wave action or tidal currents there will be impact on marine habitats.

Black guillemots

8.7.25 The level of disturbance for foraging birds from the new ferry compared to the existing ferry is not considered to be significantly different. Black guillemots primarily feed on butterfish which are found all around the rocky shoreline and as such the loss of a small area of mud and sand inside the breakwater will have no impact on this species – its abundance or distribution. The lack of suitable Black Guillemot nesting habitat in the harbour area suggests that the birds are unlikely to be found in the harbour, hence it is concluded that there will be no impact on Black Guillemot as a result of disturbance from the operation of the new ferry.

Seals

- 8.7.26 The construction of the slipway and berth and car parking area will result in the loss of some exposed boulders utilised for hauling out for harbour and grey seals. It is proposed where possible to retain these boulders simply by moving them to the east of the development site and at the same depth.
- 8.7.27 When compared against the total amount of available habitat around the Rathlin coastline used by seals, the loss of approximately 0.22ha of habitat within the development boundary will not affect the conservation status of the local seal population. **Figure 8.5** shows the areas of the island where seals are known to haul out, based on information obtained from personal observation and information provided by DoE and local residents on Rathlin.
- 8.7.28 Although the location of the docking of the car ferry will change, the level of disturbance from the new ferry is not likely to be significantly different from existing level of disturbance. On the day of the site visit in December, it was observed that the seals hauled out in the harbour area were not disturbed by the movement and docking of the existing car ferry. It is likely that the seals that use the harbour for hauling out have become habituated to the ferry. In addition, the new ferry will be more efficient and likely to be slightly quieter than the existing one, resulting in lower noise levels. There may be temporary displacement during construction and when the new ferry initially becomes operational, with seals moving elsewhere in Church Bay, but given the low numbers of seals observed in the harbour area, it is considered that there is suitable habitat elsewhere on the island to accommodate them. It is assessed that the operation of the new ferry will not significantly affect the conservation status of the seal population.

Harbour porpoise

- 8.7.29 There will be no impact from disturbance on harbour porpoise as a result of the replacement of the existing ferry. Levels of disturbance from operation will be no different from existing.

Breeding seabirds

- 8.7.30 Operational impacts will be the same as those from the existing ferry and are not assessed to have a significant effect on the conservation status or breeding success of the seabird populations. The majority of breeding seabirds use the sea cliffs to the north of the island for breeding, there is a lack of suitable habitat around the harbour area.

Overwintering seabirds

- 8.7.31 The new ferry is likely to be slightly quieter than the existing ferry and the level of disturbance will remain similar to existing. Those birds observed foraging or resting in the harbour area during the site visit in December did not appear to be significantly disturbed by the movement and docking of the existing ferry. Therefore it is assessed that operational impacts on the conservation status of the overwintering seabird population is assessed to be not significant.

8.8 Mitigation

Construction

- 8.8.1 Construction impacts on the marine environment and water quality will be managed through a Construction Environmental Management Plan. The contractor will be required to adhere to Pollution Prevention Guidelines and best practice measures to prevent pollution of the water environment. A spillage response plan will be in place for the duration of the works. All site staff will be trained in the use of spill kits, which will be kept within the works area and easily available.
- 8.8.2 The site compound will be placed on areas of hard standing. Refuelling of machinery will be undertaken on hard standing areas and at least 10m from the shoreline.
- 8.8.3 **Piling works will be undertaken following the JNCC guidance 'Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise' (Ref 8.19).**
- 8.8.4 Following consultation with NIEA Marine Conservation, and considering the potential for disturbance to seals during the pupping season, it was determined that the construction works would be undertaken under licence to prevent an offence under the Wildlife Order (NI) 1985. This licence will be applied for by the client/contractor separate to the planning application.

- 8.8.5 As a condition of the licence it is likely that a marine mammal observer (MMO) will be required for the duration of the works, particularly during any piling works. A mitigation zone around the site for piling will be agreed with NIEA prior to works commencing, and will be no less than 500m from the pile location. This is the area within which the MMO will visually monitor for marine mammals before piling commences. The visual search by the MMO before piling starts is recommended to be at least 30 minutes. If marine mammals are observed within the specified mitigation zone, the start of activity will be delayed until the animals have moved away. To minimise disturbance from piling, the soft start method will be used for the piling rig. The soft start duration should be a period of not less than 20 minutes. If a marine mammal enters the mitigation zone during the soft start, the piling will cease or power not further increased until the mammal exits the mitigation zone and there is no further detection for 20 minutes.
- 8.8.6 In addition to visual observations by the MMO, the use of acoustic deterrent devices (ADDs) will also be applied by the contractor should piling be used. These devices have the potential to exclude animals from the piling area by using underwater noise to deter them from entering the works area. The ADDs will be positioned across the harbour mouth in advance of piling to prevent marine mammals entering the harbour. The use of these ADDs will be subject to the conditions placed on the Wildlife Licence and will be applied under the direction of the MMO.
- 8.8.7 Piling will only be undertaken during the pupping season for harbour seals (June and July) if a Wildlife Licence for this operation is in place. The conditions of his wildlife licence will include the application of acoustic deterrent under the direction of Marine Mammal Observer as detailed above.
- 8.8.8 As large boulders within the intertidal area are currently utilised by seals for hauling out it is recommended that any large boulder within the development limit be moved to the east of the proposed development at a similar tidal depth and retained within the harbour area to maintain the extent of haul out habitat.
- 8.8.9 Biosecurity measures will be implemented by the contractor to prevent the spread of non-native marine species. Machinery will be checked, cleaned and disinfected before transport to Church Bay and again before leaving Rathlin.

- 8.8.10 As works are to be undertaken during the breeding season for seabirds, the works may require an ornithological observer to be present during the works to ensure there will be no disturbance to birds. It is expected that the Marine Mammal Observer will be qualified to undertake this additional duty.

Operational

- 8.8.11 If feasible, nest sites for black guillemots will be provided within the proposed harbour development. This can be in the form of nesting boxes placed in the new quay wall. Suitable locations for nest boxes will be agreed with NIEA and RSPB.
- 8.8.12 No additional mitigation is deemed necessary for the operation of the ferry, as the new ferry is a replacement for an existing ferry and operational effects are not considered significant.

8.9 Significance of Effect

Construction

- 8.9.1 The implementation of a Construction Environmental Management Plan will ensure impacts on the marine environment are minimised. Use of PPGs and best practice measures for controlling pollution will result in a non significant effect on the marine environment as a result of potential temporary impacts to water quality.
- 8.9.2 As works will be undertaken under a wildlife licence and with the mitigation measures implemented with respect to marine mammals, it is assessed that the construction works will not have a significant effect on the conservation status of the seal or harbour porpoise populations around Rathlin.
- 8.9.3 Should an ornithological observer be present on site for the duration of the works/breeding season, this will ensure that disturbance does not have a significant effect on the local seabird population.
- 8.9.4 The use of biosecurity measures to prevent transport of non-native species will ensure effects on the marine environment are not significant.

Operation

- 8.9.5 The inclusion of nest boxes for black guillemots will have a beneficial effect on this species by providing additional breeding habitat.

8.10 Conclusions

- 8.10.1 The main impacts on ecology from the proposed scheme arise during construction. The most significant potential impact relates to the possible disturbance of marine mammals; however with the recommended mitigation measures implemented effects are not considered to be significant.
- 8.10.2 There will be minor habitat loss of terrestrial habitats (shingle beach and coastal grassland); however this is not significant with respect to the overall amount of habitat available.
- 8.10.3 Once operational, levels of disturbance from the new ferry are likely to be similar to those that currently exist with the car ferry. Operational effects on marine mammals and birds are not considered to be significant.

9 Landscape and Visual Assessment

9.1 Introduction

9.1.1 This chapter considers the impacts the proposed development will have on the landscape of the harbour area. It will also consider the visual impacts on local receptors. Landscape and visual effects are independent but related issues; landscape effects are change in the landscape, its character and quality, while visual effects relate to the appearance of those changes and the resulting effect on visual amenity.

9.2 Methodology and Study Area

9.2.1 **This assessment has been undertaken in accordance with 'Guidelines for Landscape and Visual Impact Assessment, Third Edition' published by the Landscape Institute and Institute of Environmental Management and Assessment (Ref 9.1).**

9.2.2 In order to determine impacts on the landscape and to identify baseline conditions, the study area was taken to be the scheme footprint with a 1km buffer. A review of existing information was undertaken from the following sources:

- NIEA landscape website (Ref 9.2)
- Northern Area Plan 2016 (Ref 9.3)

9.2.3 A site visit was undertaken in December 2015 to gain an appreciation of the local landscape in the vicinity of the harbour. In addition, the site visit allowed the identification of visual receptors likely to be affected by the scheme. The study area for visual receptors was taken to be 300m from the proposed harbour development as beyond 300m the change in views is not considered significant with respect to the proposed development.

Assessment methodology

9.2.4 The sensitivity of the landscape to change is reflected in the degree to which a landscape is able to accommodate change without adverse effects on its character. Sensitivity is likely to vary according to the existing landscape, the nature of the proposed development and the type of change being considered.

9.2.5 **Landscape character is described in the guidelines as ‘the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape’.**

9.2.6 Landscape receptors include elements of the physical landscape that may be directly affected by the development such as topographic, geological and drainage features, woodland, tree and hedgerow cover, land use, field boundaries and artefacts.

9.2.7 Visual receptors include the public or community at large, residents, visitors and other groups of viewers as well as the visual amenity of people affected. For this scheme receptors include the residents of Church Bay as well as the large number of visitors to the island.

9.2.8 The sensitivity of visual receptors and views will be dependent on:

- the location and context of the viewpoint;
- the expectations and occupation or activity of the receptors; and
- the importance of the view.

9.2.9 To assess the significance of effect on landscape and visual receptors, the degree of change or magnitude of impact is compared against the value of the receptor. As the provision of a new slipway for a ferry is essentially a transport scheme, guidance within **the Design Manual for Roads and Bridges Interim Advice Note (IAN) 135/10 ‘Landscape and Visual Effects Assessment’** was used.

Landscape

9.2.10 Table 9.1 describes how magnitude of impact is assigned for a project.

Table 9:1: Impact magnitude for landscape

Magnitude of impact	Typical descriptor
Major adverse	Total loss or large scale damage to existing character or distinctive features or elements, and/or the addition of new but uncharacteristic conspicuous features and elements.
Moderate adverse	Partial loss or noticeable damage to existing character or distinctive features or elements, and/or the addition of new but uncharacteristic noticeable features or elements.
Minor adverse	Slight loss or damage to existing character or features or elements, and/or the addition of new but uncharacteristic features and elements.

Magnitude of impact	Typical descriptor
Negligible adverse	Barely noticeable loss or damage to existing character or features and elements, and/or the addition of new but uncharacteristic features and elements.
No change	No noticeable loss, damage or alteration to character or features or elements.
Negligible beneficial	Barely noticeable improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic features and elements, or by the addition of new characteristic elements.
Minor beneficial	Slight improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic features and elements, or by the addition of new characteristic elements.
Moderate beneficial	Partial or noticeable improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic and noticeable features and elements, or by the addition of new characteristic features.
Major beneficial	Large scale improvement of character by the restoration of features and elements, and/or the removal of uncharacteristic and conspicuous features and elements, or by the addition of new distinctive features.

The sensitivity of the landscape is determined based on the criteria in Table 9.2.

Table 9:2: Assigning sensitivity to landscape features

Sensitivity	Typical descriptor
High	<p>Landscapes which by nature of their character would be unable to accommodate change of the type proposed, e.g.</p> <p>Of high quality with distinctive elements and features making a positive contribution to character and sense of place.</p> <p>Likely to be designated but the aspects which underpin such value may also be present outside designated areas, especially at the local scale.</p> <p>Areas of special recognised value through use, perception or historic and cultural associations.</p> <p>Likely to contain features and elements that are rare and could not be replaced.</p>
Moderate	<p>Landscapes which by nature of their character would be able to partly accommodate change of the type proposed, e.g.</p> <p>Comprised of commonplace elements and features creating generally unremarkable character but with some sense of place.</p> <p>Locally designated, or their value may be expressed through non-statutory local publications.</p> <p>Containing some features of value through use, perception or historic and cultural associations.</p> <p>Likely to contain some features and elements that could not be</p>

Sensitivity	Typical descriptor
	replaced.
Low	<p>Landscape which by nature of their character would be able to accommodate change of the type proposed, e.g.</p> <p>Comprised of some features and elements that are discordant, derelict or in decline, resulting in indistinct character with little or no sense of place.</p> <p>Not designated.</p> <p>Containing few, if any, features of value through use, perception or historic and cultural associations.</p> <p>Likely to contain few, if any, features or elements that could not be replaced.</p>

9.2.11 The significance of effect is then determined based on the following matrix.

Table 9:3: Significance of effect for landscape

		Magnitude of impact				
		No change	Negligible	Minor	Moderate	Major
Landscape sensitivity	High	Neutral	Slight	Slight/moderate	Moderate/large	Large/very large
	Moderate	Neutral	Neutral/slight	Slight	Moderate	Moderate/large
	Low	Neutral	Neutral/slight	Neutral/slight	Slight	Slight/moderate

9.2.12 Descriptions of the significance of effect are given in Table 9.4.

Table 9:4: Significance of effect for landscape

Significance category	Description
Very large beneficial	<p>Project would: greatly enhance the character of the landscape.</p> <p>Create an iconic high quality feature and/or series of elements.</p> <p>Enable a sense of place to be created or enhanced.</p>
Large beneficial	<p>Project would: enhance the character of the landscape.</p> <p>Enable the restoration of characteristic features and elements lost as a result of changes from inappropriate management or development.</p> <p>Enable a sense of place to be enhanced.</p>
Moderate beneficial	<p>Project would:</p> <p>Improve the character of the landscape.</p> <p>Enable the restoration of characteristic features and elements partially lost or diminished as a result of changes from inappropriate management or development.</p> <p>Enable a sense of place to be restored.</p>

Significance category	Description
Slight beneficial	Project would: Complement the character of the landscape. Maintain or enhance characteristic features and elements. Enable some sense of place to be restored.
Neutral effect	Project would: Maintain the character of the landscape. Blend in with characteristic features and elements. Enable a sense of place to be retained.
Slight adverse	Project would: Not quite fit the character of the landscape. Be at variance with characteristic features and elements. Detract from a sense of place.
Moderate adverse	Project would: Conflict with the character of the landscape. Have an adverse impact on characteristic features or elements. Diminish a sense of place.
Large adverse	Project would: Be at considerable variance with the character of the landscape. Degrade or diminish the integrity of a range of characteristic features and elements. Damage a sense of place.
Very large adverse	Project would: Be at complete variance with the character of the landscape. Cause the integrity of the characteristic features and elements to be lost. Create a sense of place to be lost.

Visual Assessment

9.2.13 The sensitivity of visual receptors is determined with reference to Table 9.5.

Table 9:5: Sensitivity of visual receptors.

Sensitivity	Criteria
High	Residential properties. Users of public rights of way or recreational trails. Users of recreational facilities where the purpose of that recreation is enjoyment of the countryside.
Moderate	Outdoor workers. Users of scenic roads, railways or waterways or users of designated tourist routes. Schools and other institutional buildings, and their outdoor areas.
Low	Indoor workers. Users of main roads (e.g. trunk roads) or passengers in public transport on main arterial routes. Users of recreational facilities where the purpose of that recreation is not related to the view (e.g. sports facilities).

9.2.14 The magnitude of impact for visual receptors is determined based on Table 9.6 below.

Table 9:6: Determining magnitude of impact

Magnitude of impact	Typical descriptor
Major	The project, or a part of it, would become the dominant feature or focal point of the view.
Moderate	The project, or a part of it, would form a noticeable feature or element of the view which is readily apparent to the receptor.
Minor	The project, or a part of it, would be perceptible but not alter the overall balance of features and elements that comprise the existing view.
Negligible	Only a very small part of the project would be discernable, or it is at such a distance that it would form a barely noticeable feature or element of the view.
No change	No part of the project, or work or activity with it, is discernable.

9.2.15 The significance of effect for visual receptors is then determined as for landscape based on Table 9.3 as previously. Table 9.7 below describes the significance of effect categories.

Table 9:7: Significance of effect for visual receptors

Significance	Typical descriptors of effect
Very large beneficial	The project would create an iconic new feature that would greatly enhance the view.
Large beneficial	The project would lead to a major improvement in a view from a highly sensitive receptor.
Moderate beneficial	The proposals would cause obvious improvement to a view from a moderately sensitive receptor or perceptible improvement to a view from a more sensitive receptor.
Slight beneficial	The project would cause limited improvement to a view from a receptor of medium sensitivity, or would cause greater improvement to a view from a receptor of low sensitivity.
Neutral	No perceptible change in the view.
Slight adverse	The project would cause limited deterioration to a view from a receptor of medium sensitivity, or cause greater deterioration to a view from a receptor of low sensitivity.
Moderate adverse	The project would cause obvious deterioration to a view from a moderately sensitive receptor, or perceptible damage to a view from a more sensitive receptor.
Large adverse	The project would cause major deterioration to a view from a highly sensitive receptor, and would constitute a major discordant element in the view.
Very large adverse	The project would cause the loss of views from a highly sensitive receptor, and would constitute a dominant discordant feature in the view.

9.3 Planning and legislative overview

- 9.3.1 The Nature Conservation and Amenity Lands Order (NI) 1985 provides the legislative basis for the Department of the Environment to designate the finest landscape areas as Areas of Outstanding Natural Beauty (AONBs) or national parks and to manage them for conservation and recreation.
- 9.3.2 Locally important landscapes are highlighted in local development plans and designated as Local Landscape Policy Areas.
- 9.3.3 Planning Policy Statement 2: Natural Heritage (Ref 9.4) sets out policies for the protection of landscapes as well as habitats. Policy NH6 – Areas of Outstanding Natural Beauty requires development proposals in AONBs to be sensitive to the distinctive special character of the area and the quality of their landscape, heritage and wildlife.

9.4 Baseline Conditions

Designated Landscapes

- 9.4.1 Rathlin Island is located within the Antrim Coast and Glens Area of Outstanding Natural Beauty (AONB). The AONB stretches along the coastline from Ballycastle to Larne and inland to the Glens of Antrim. The area is dominated by a high undulating plateau cut by deep glens which open north and eastwards to the sea. Rathlin Island lies offshore to the north and is rich in historical, geological and botanical interest. The extent of the AONB is shown on **Figure 9.1** in Volume 3.

Landscape Character Area

- 9.4.2 The scheme is located within the Causeway Coast and Rathlin Island Landscape Character Area. The key characteristics of the LCA are described by NIEA as follows.
- High plateau landscape with distinctive rugged coast, stepped profile and rocky **knolls. Coast includes unique formation of the Giant's Causeway.**
 - Exposed sheep grazed landscape of windswept trees and broken walls; gorse on rocky knolls separates small fields of rough grazing.
 - Rural landscape with villages associated with coastal bays; large, white hotels on cliff tops; modern bungalows; old derelict cottages on knolls.
 - Ruined castles on cliff top locations along the coast. Long views are available from elevated areas across the coast and inland.

9.4.3 On Rathlin Island the land is surrounded by high basalt cliffs, and covered with small loughs. It has many interesting coastal forms as well as important wildlife and archaeological features.

Seascape Character Areas

9.4.4 As well as landscape features, NIEA has described a number of Seascape Character Areas (Ref 9.5). Seascape includes views from land to sea, views from sea to land, views along the coastline and the effect on landscape between sea and land.

9.4.5 The Rathlin SCA is described as:

This stunning and dramatic seascape is typified by its remote and wild qualities, extreme exposure to the elements and panoramic views of extensive rough sea. A composition of rugged cliffs, a broad sweeping bay, an exposed inland plateau providing distant views towards Scotland and the nearby mainland, underpins an exhilarating coastal experience with an outstanding scenic quality. The island has a long history of settlement, invasion, industry and trade with a large number of notable maritime sites, including harbours, quays, slipways, landing places and lighthouses.

9.4.6 Key characteristics include:

- Crashing waves against a dramatic series of rugged vertical cliffs, sea caves, vegetated steep slopes, and headlands with lighthouses.
- Extensive and constantly changing panoramic views across wild sea backed by views of the Antrim Coast and distant views towards Kintyre Peninsula, Islay, Jura, Ailsa Craig, Arran and the Rhins of Galloway.
- The sight, sound and smell of large seabird colonies along north and west cliffs.
- Several ship wrecks located close to shore of the Island.
- Swaths of semi-natural open grasslands and heaths with patches of gorse on steeper slopes.
- Undulating pastures enclosed by an extensive network of remnant stone walls and fences.
- Small loughs with reeds and patches of wet grasslands.
- Isolated scattered dwellings and farmsteads connected by small roads and tracks.

Locally designated landscapes

9.4.7 The Northern Area Plan 2016 has identified a Local Landscape Policy Area at Church Bay on Rathlin. The LLPA is designated for the following features and shown on **Figure 9.2**:

- The southern boundary is defined by the Rathlin Island Coastline.
- The northern boundary is defined by the topographical step which provides the backdrop to the settlement of Church Bay.
- To the west, the LLPA encloses the cliffs that are visually significant to Church Bay when the settlement is viewed on approach from the Ballycastle direction.
- The eastern boundary incorporates the Listed Buildings of the kelpstore and the boathouse.
- It contains the SLNCI of Church Quarter and Mullindress, the Manor House and Rathlin Harbour listed buildings and Rathlin Island Coast ASSI.

Landscape on a local scale

9.4.8 Rathlin Island lies north of Ballycastle and forms an important feature of seaward views from the north coast.

9.4.9 Rathlin Island is recognised world-wide for its remarkable wildlife and landscape. Its environment is also of immense value to the people who live and work there and who visit the Island for recreation.

Landform and Geology

9.4.10 A composition of rugged cliffs, a broad sweeping bay, an exposed inland plateau providing distant views towards Scotland and the nearby mainland, underpins an exhilarating coastal experience with an outstanding scenic quality.

9.4.11 The underlying geology of the area is mainly comprised of white chalk and the overlying black Palaeogene basalt.

9.4.12 The area around the site is comprised of local basalt, white chalk, shingle beach and rocky outcrops with a mix of concrete manmade structures adjacent to the proposal.

Vegetation

- 9.4.13 Vegetation in the vicinity of the breakwater is confined to a thin strip of coastal grassland between the beach and the road. To the north of the road and **St. Thomas's Church** the steep slopes are covered in a mixture of grassland and scattered scrub, becoming heathland on the islands highest points.

Built environment

- 9.4.14 **St. Thomas's Church is an attractive grey stone building with a slate roof and bell tower.** The graveyard is located to the front of the church and is a mixture of old and new gravestones. The graveyard is enclosed by a grey stone wall, similar to the stone used in the building of the church. This is a listed building and more information is provided in Chapter 7 Cultural Heritage.
- 9.4.15 Houses along the harbour front are a mixture of single storey cottages and modern two storey white rendered houses. There are occasional street lights along the road by the coast.
- 9.4.16 The existing breakwater where the slipway is proposed is a man-made structure composed of large boulders. A low stone wall runs alongside the road edge at the top of the grassland strip. The harbour where the current ferries dock is a mixture of concrete pier walls and floating pontoons.

Visual Receptors

- 9.4.17 The visual receptors that will have a view of the harbour area and facing the new proposal are listed below. A total of 8 visual receptors and the viewpoint from the visual receptors have been identified. These are shown on **Figure 9.3** in Volume 3 and described below. The receptors have been split between commercial facilities, residential homes and tourist facilities.



Photograph 9:1: View from Ballynagard Cottage looking east towards Church Bay and the proposed harbour.

9.4.18 Receptor 1 - Ballynagard Cottage: situated on the coastal front, the direct view from Ballynagard Cottage overlooks the coastal beach and Ballycastle in the distance. Views of the breakwater looking to the west will not be affected by the proposal. There are clear views of the breakwater side that will not be touched in the development of the new harbour and will maintain the views of the Church Bay area and the small beach cove adjacent to the breakwater.



Photograph 9:2: View from St Thomas's Church, looking south over Church Bay, facing the proposed development.

9.4.19 Receptor 2 - **St Thomas's Church: is designated as a grade B listed building in Church Bay.** The view from the west side of the Church encompasses a split view of the development proposal and existing breakwater. The view from this point is shared by locals and tourists alike visiting the Church and following the road of the Ballynagard trail leading to the Church of the Immaculate Conception.



Photograph 9:3: Residential Property (Skye Cottage) overlooking Church Bay from a high point, property looks over the bay and in line of the proposed harbour.

9.4.20 Receptor 3 - Residential Property (Skye Cottage): is situated at the top of the Ballynagard trail route at the 'T' Junction leading to the Church of the Immaculate Conception. Photograph 9.3 is taken from the highest point to the **property's** view of the bay, in direct line of the breakwater. The view from the cottage to the harbour is obscured by undulating topography and unmanaged hedges and vegetation.



Photograph 9:4: View from Breakwater Studio, (Harbour View Cottage) looking south/south west across Church Bay, and Ballycastle in the distance and the proposed harbour.

9.4.21 Receptor 4 - Breakwater Studio (Harbour View Cottage): is situated on the coastal front overlooking the breakwater and the coastal ridges of Ballycastle. The studio is located on the east side of the proposed harbour. On the day of the site visit seals were hauled out in the harbour on the side of the development.



Photograph 9:5: Obscured View from Church Bay Cottage looking south/south west across Church Bay, and Ballycastle in the distance and the proposed harbour.

9.4.22 Receptor 5 - Church Bay Cottage: is directly situated on the front of the busy harbour area and public carpark for the harbour area. The view from this residential property is regularly blocked by parked vehicles.



Photograph 9:6: View from Arkell House B&B looking west across Church Bay's harbour and floating jetties.

9.4.23 Receptor 6 - Arkell House B&B: is located to the east of Church Bay. The view overlooks the existing harbour and floating jetty/moorings for visiting boats from the mainland in the height of the tourist season. The proposed harbour will be seen in the far distance across the busy bay. In the summer at peak times of visitors and moorings it will be difficult to see the development across the boats moored at the jetty.



Photograph 9:7: View from Glebe Cottage looking west across Church Bay's harbour and McCuaig's Bar & Restaurant.

- 9.4.24 Receptor 7 - Glebe Cottages: these are residential properties located east of the proposal for the harbour, located on the higher ground behind the local bar (McCuaig's Bar). The view is a combination of the working harbour and docked fishing boats, boat moorings with the roof of McCuaig's Bar and Restaurant which slightly restricts a full view of the Church Bay area. In the foreground the view is a mix of undulating topography, remnants of historical farming, rough grassland and coastal scenery and cliff faces with the breakwater in the distance.



Photograph 9:8: View from Demese Cottage looking north across Church Bay's harbour and south breakwater.

- 9.4.25 Receptor 8 - Demesne, Residential Cottage: a cluster of cottages located to the south east of Church Bay. The view from this point overlooks both breakwaters situated in the bay. Views for this area are of coastal grassland close to fishing boats and remnants of past industry.

9.5 Evaluation or Sensitivity of Receptors

Landscape Receptors

- 9.5.1 The sensitivity of the landscape features is summarised below.
- 9.5.2 Antrim Coast and Glens AONB – although the proposal is located in the AONB, it will be located in an area of existing development. The sensitivity of this landscape is therefore assigned as moderate.

- 9.5.3 Church Bay LLPA – this receptor is also assigned a moderate sensitivity as it would be partly able to accommodate change given the existing level of built development in the area.
- 9.5.4 The landform and geology is assigned a sensitivity of low as it would be able to accommodate change of the type proposed.
- 9.5.5 The sensitivity of the vegetation is assessed as low, as it is a common feature along the coastline and contains no features of value that could not be replaced.
- 9.5.6 The built environment is assigned a sensitivity of moderate as it is comprised of commonplace elements with an unremarkable character but with some sense of place.

Visual Receptors

- 9.5.7 Receptors 1, 3, 5, 6, 7 and 8 are assigned a low sensitivity. Although residential receptors, the views from these properties to the location of the slipway works are either restricted by other development or distant.
- 9.5.8 Receptors 2 and 4 are assigned a high sensitivity. Receptor 2 includes the tourist **walking trail that runs alongside St. Thomas’s Church, as well as the church itself which** is a listed building. Receptor 4 is a residential property as well as a commercial business and it has a clear view across the proposed location of the slipway.

9.6 Impact Assessment

- 9.6.1 The proposed ferry berthing facility is described in detailed in Chapter 5 and presented on Figures 5.1, 5.2 and 5.3. It will be a standard low lying concrete pier facility constructed adjacent to and forming part of the existing stone breakwater. Being within both the existing harbour area and forming a part of the built up hamlet of Church Bay it is considered that it will not be incongruous in this environment.

Construction

Landscape

- 9.6.2 The potential effects during construction will include:
- Visual intrusion of works, security and construction machinery;
 - Removal of areas of rocks, shingle beach and coastal grassland;
 - Reforming of landscape and addition of material;
 - Stockpiling of aggregates and construction materials;
 - Visual intrusion of site compound and welfare facilities;

The access to the main road of Church Bay may be disrupted at times during construction. There will be some disruption to the peaceful character of the landscape due to the nature of construction required for building the new harbour and slipway. This is assessed to be minor in magnitude.

9.6.3 **Effects on the landscape due to the contractor's operations will be temporary and it is important that as far as possible no effects continue after the duration of the contract.**

9.6.4 The construction effects for landscape are determined overall as minor magnitude of impact. The separate landscape elements are split between minor impact and negligible impact. The magnitude of impact for the local landscape and the built environment is minor while the impact on vegetation and landform is negligible.

Visual

9.6.5 Visual receptors 2 and 4 will experience a moderate magnitude of impact during construction as they will have a clear view of the construction works and machinery.

9.6.6 Receptors 5, 6, 7 and 8 will experience minor magnitude of impact, due to distance and nature of current views.

9.6.7 Receptors 1 and 3 will have a negligible impact during construction as their views are either obscured or too distant.

Operation

Landscape

9.6.8 There will be disturbance to the east side of the breakwater and to the embankment attached to the breakwater to accommodate the access. The proposed ferry ramp and berthing facility will also result in the grading of the existing breakwater with some coastal grass and shingle beach removed during the construction phase.

9.6.9 With respect to the local landscape the new facility will retain the characteristics, features and elements of the existing harbour in the view and will also result in the creation of a new feature which is in keeping with the harbour area.

9.6.10 The creation of the new slipway will result in the removal of skips, local debris and abandoned waste in the area, having a beneficial impact on the local landscape.

9.6.11 The magnitude of impact on the regional and local landscape will be minor as the scheme introduces a new feature into the landscape with the slipway and quay wall. In addition, the new ferry will be berthed overnight at this location. Given the level of built development in the existing harbour the new development will not be out of place in the local landscape.

Visual Receptors

9.6.12 The new slipway and mooring facility is designed to integrate into the existing harbour area and will be of similar scale and scope to the current docking facilities. The proposed lighting for the area will be LED lights set into the quay wall with down lighting columns in the car parking area.

9.6.13 The impact on the majority of the visual receptors will be minor. The new quay wall and slipway will introduce a new feature into the view, but this is in keeping with the existing harbour.

9.6.14 Receptor 1 - once operational the new development will not be visible from this property, having a negligible impact.

9.6.15 Receptor 2 - the magnitude of effect is minor adverse as the development will be a new feature in the views and the ferry will be visible when berthed. Over time, the magnitude will become less, reducing to negligible as people become used to the view and as the harbour blends into the environment.

9.6.16 Receptor 3 - this property will have negligible impact as the new development will not be visible.

9.6.17 Receptor 4 - this property is the closest property to the development and will have a clear view of the new development. Although the slipway and quay wall will integrate with the existing breakwater, it introduces a new feature into the views from the property. In addition there will be clear views of the ferry operation and the routine vehicular and pedestrian traffic this generates. It is assessed that the magnitude of impact is moderate adverse. The magnitude of impact is not considered to reduce over time as there is limited opportunity to screen the view.

9.6.18 The use of LED lighting in the quay wall will minimise adverse impacts on the property and if lighting is switched off at night this will further alleviate any lighting intrusion.

- 9.6.19 Receptor 5 - this property will also have a view of the new development, introducing a new feature into the view. However the existing view from this property is often of parked vehicles although the provision of new car parking at the slipway will result in the displacement of these cars to the new harbour area. This will open up the view but the impact is assessed to be minor adverse. As with property 4 there is limited scope to provide screening and the impact remains minor adverse into year 15.
- 9.6.20 Receptor 6 - This property will have a distant view of the scheme, which will often be obscured by other boats moored in the harbour. Nevertheless the scheme introduces a new feature into the view and this is assessed to be of minor magnitude. Over time, as the harbour begins to blend into the surrounding landscape, the impact will reduce to negligible.
- 9.6.21 Receptor 7 - These properties are the furthest away from the scheme and have only distant views of the proposed harbour. The scheme will be visible and the magnitude of impact is minor adverse. Over time however, this reduces to negligible as the concrete will become weathered and blend in with the existing environment.

9.7 Mitigation

Landscape - During Construction

- 9.7.1 While there are no mitigation measures that will remove the adverse impacts of the construction phase of the contract, the following measures will reduce them and the likelihood that they will give rise to permanent adverse impacts.
- 9.7.2 Not all impacts can be predicted as the contractor will choose his own methods of operating and so it is not appropriate to propose detailed mitigation measures for the impacts of the construction operations.
- 9.7.3 The contractor is likely to use the existing area of land adjacent to the breakwater for site compound, machinery and for storage of materials.
- 9.7.4 **The contractor's compound** will be fenced and kept in a neat and tidy condition. Security lighting will be designed to minimise light spillage into adjacent areas. Construction vehicles will be parked away from housing areas and will not cause obstruction.

- 9.7.5 Any incidents of spillage of materials or fluids in landscape areas within or outside the works area will be noted and the contaminated area will be cleaned. If necessary the area will be excavated to 1m depth and the contaminated material removed to an appropriate tip, the area being filled with clean soil or stone and topped to a minimum of 100mm deep with soil. Guidance supported or issued by the Northern Ireland Environment Agency should be followed in the event of any spillage during construction works.
- 9.7.6 In addition any accidental damage beyond the works area to vegetation will be made good by the contractor.
- 9.7.7 The above mitigation measures will ensure that most of the impacts associated with the construction will be temporary in nature.

Post Construction

- 9.7.8 The Wildlife and Natural Environment Act (Northern Ireland) 2011 makes it a duty of public bodies to further the conservation of biodiversity. To this end the landscaping for the grassed area at the slipway will use native grass and wildflower species and include those found on Rathlin.

Visual - During Construction

- 9.7.9 The impacts of the construction phase on residents with a view of the site will be considerable, with limited mitigation available. For this reason the visual impact which arises during construction is best alleviated by minimising the construction period as far as feasible and practicable.
- 9.7.10 As discussed above, not all impacts can be predicted or controlled within the framework of this report as the contractor will choose his own methods of operating.
- 9.7.11 Mitigation designed to reduce the impacts of the construction phase will also reduce the impacts on visual receptors.
- 9.7.12 Effective contact with residents and advance notification will reduce uncertainty and allow residents to accommodate the disturbance.

Post Construction

- 9.7.13 There is no proposed mitigation for the residents with a view of the proposed harbour. The slipway and berth will be a modern structure creating a new distinctive feature in the Church Bay area.

- 9.7.14 There will be limited landscaping of the harbour with the area at the car park re-sown with native grass and wild flower species.
- 9.7.15 Consideration should be given to switching the harbour lights off at night when the ferry is berthed to reduce lighting pollution; this will have a beneficial impact on adjacent receptors.

9.8 Significance of Effect

Landscape

- 9.8.1 The significance of effect on the regional and local landscape is slight. The creation of the new slipway will provide a positive feature in the area.
- 9.8.2 The significance reduces to neutral over time as the concrete becomes weathered, and blends into the environment.
- 9.8.3 There will be minimal change in the residual effects after one year and 15 years of the proposed harbour being operational as there is minimal planting required for this project. There is also limited space for planting opportunities and enhancement. Planting is not beneficial to the scheme or the view of the bay and the coastline approaching the harbour.
- 9.8.4 A summary of the effects on landscape are provided in Table 9.9.

Visual Receptors

- 9.8.5 Table 9.8 reviews the significance of impact on each of the identified receptors. A more detailed summary of the operational impacts and significance of effect is given in Tables 9.10 and 9.11.

Table 9:8: Significance of effect for visual receptors

Receptor	Significance
Receptor 1	There will be a neutral effect on views, which will remain over time
Receptor 2	There will be a slight effect on views which will remain over time.
Receptor 3	The significance of effect is neutral.
Receptor 4	The significance of effect is moderate adverse. This is not expected to significantly reduce over time.
Receptor 5	The significance of effect is assessed to be slight adverse.

Receptor	Significance
Receptor 6	The significance of effect is slight, reduces to neutral over time.
Receptor 7	The significance is slight adverse, reduces to neutral over time.
Receptor 8	The significance of effect is slight, reducing to neutral over time.

Table 9:9: Landscape Summary of Impacts

Receptor	Sensitivity	During Construction		Post Construction		Residual Effects – Year 1		Residual Effects – Year 15	
		Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact
Regional Landscape	Moderate	Minor	Slight	Minor	Slight	Minor	Slight	Negligible	Neutral
Local Landscape	Low	Minor	Slight	Minor	Slight	Minor	Slight	Minor	Neutral
Landform, Geology and Soils	Low	Negligible	Slight	Negligible	Slight	Negligible	Slight	Negligible	Neutral
Vegetation	Low	Negligible	Slight	Negligible	Slight	Negligible	Slight	Negligible	Neutral
Built Environment	Moderate	Minor	Slight	Minor	Slight	Minor	Slight	Minor	Slight

Table 9:10: Visual Receptor Summary of Impacts

No.	Receptor	Sensitivity	During Construction		Post Construction		Residual Effects – Year 1		Residual Effects – Year 15	
			Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact
1	Ballynagard Cottage	Low	Negligible	Slight	Negligible	Neutral	Negligible	Neutral	Negligible	Neutral
2	St Thomas's Church	High	Moderate	Moderate	Minor	Slight	Minor	Slight	Negligible	Slight
3	Residential Property (Skye Cottage)	Low	Negligible	Slight	Negligible	Neutral	Negligible	Neutral	Negligible	Neutral
4	Breakwater Studio (Harbour View Cottage)	High	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Minor	Slight
5	Church Bay Cottage	Low	Minor	Slight	Minor	Slight	Minor	Slight	Minor	Slight
6	Arkell House B&B	Low	Minor	Slight	Minor	Slight	Minor	Slight	Negligible	Neutral
7	Glebe Cottages	Low	Minor	Slight	Minor	Slight	Minor	Slight	Negligible	Neutral

No.	Receptor	Sensitivity	During Construction		Post Construction		Residual Effects – Year 1		Residual Effects – Year 15	
			Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact	Magnitude of Impact	Significance of Impact
8	Demesne Cottages	Low	Minor	Slight	Minor	Slight	Minor	Slight	Negligible	Neutral

N.B. All impacts are adverse unless stated otherwise

Table 9:11: Visual Impact Schedule

Ref. No.	Receptor	Distance from proposals	Nature of Existing View	Sensitivity	Significance of Impact (During Construction)	Significance of Impact (Post Construction)	Significance of Impact Year 1	Significance of Impact Year 15
Church Bay Harbour								
1.	Ballynagard Cottage	114.1m	There are clear views of the breakwater and existing harbour. The view from this point will be of the west side of the breakwater and bay. The view from this point will not be affected by the new proposal.	Low	Slight	Neutral	Neutral	Neutral
2.	St Thomas's Church	24.5m	The view from this point is shared by locals and tourists alike visiting the Church and following the road of the Ballynagard trail leading to the Church	High	Moderate	Slight	Slight	Slight



Ref. No.	Receptor	Distance from proposals	Nature of Existing View	Sensitivity	Significance of Impact (During Construction)	Significance of Impact (Post Construction)	Significance of Impact Year 1	Significance of Impact Year 15
			of the Immaculate Conception.					
3.	Residential Property (Skye Cottage)	213.7m	The property's view of Church Bay is in direct line of the breakwater. The view from the cottage of the development is obscured by undulating topography and unmanaged hedges and vegetation.	Low	Slight	Neutral	Neutral	Neutral
4.	Breakwater Studio	33m	Views from the Studio will be affected by the view of the development. Seals haul out in the harbour on the side of the development.	High	Moderate	Moderate	Moderate	Slight
5.	Church Bay Cottage	90.6m	The view from this residential property is regularly blocked by parked vehicles and fishing boats in the harbour.	Low	Slight	Slight	Slight	Slight
6.	Arkell House B&B	335.4m	The view is overlooking the existing harbour and floating jetty/ moorings for visiting boats from the mainland in the height of the tourist season. The proposed harbour will be seen in the far distance across the bay in winter. In the summer at peak times of visitors and moorings it will be difficult to see the development with boats in the	Low	Slight	Slight	Slight	Slight

Ref. No.	Receptor	Distance from proposals	Nature of Existing View	Sensitivity	Significance of Impact (During Construction)	Significance of Impact (Post Construction)	Significance of Impact Year 1	Significance of Impact Year 15
			harbour.					
7.	Glebe Cottage	416m	The view is mixed of a working harbour and fishing boats.	Low	Slight	Slight	Slight	Slight
8.	Demesne Cottages	297.5m	Views from this area are of coastal grassland close to fishing boats, and remnants of past industry. The new harbour proposal will be seen in the distance, but will be mixed in the view of the existing harbour and past industry remnants in the bay area.	Low	Slight	Slight	Slight	Slight

9.9 Conclusions

- 9.9.1 Construction of the new slipway and quay will result in adverse impacts on the local landscape and visual receptors, however these will be temporary, of short duration and of only slight significance.
- 9.9.2 The development has been designed to integrate into the existing harbour infrastructure. The creation of the new slipway and car parking area will improve the current level of dereliction around the harbour area by providing a modern and maintained facility.
- 9.9.3 Visual impacts on one receptor is moderate (receptor 4) and minor adverse on one receptor (receptor 5). There is limited scope to reduce this over time. For the remaining visual receptors, the impact of the new slipway will reduce over time as the slipway becomes integrated into the landscape with a neutral effect.

10 Noise and Vibration

10.1 Introduction

10.1.1 This chapter assesses the noise and vibration effects associated with the proposed scheme. Noise and vibration effects will be assessed during construction as well as during operation.

10.2 Methodology and Study Area

10.2.1 A scoping assessment was undertaken in November 2015 which recommended that a noise and vibration impact assessment should be undertaken in relation to construction of the proposed development and a noise assessment should be undertaken in relation to the operation of the proposed ferry.

Noise Effects during Construction

10.2.2 Assessing the noise effects during construction is based on guidance set out in BS 5228-1:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites – Part 1 Noise' (Ref 10.1) as well as the requirements set out by The Causeway Coast and Glens Environmental Health Department which state that noise associated with the proposed development should:

- Not exceed 75 dB $L_{Aeq, 1hr}$ between 7am and 7pm on Monday to Fridays, or 75 dB $L_{Aeq, 1hr}$ between 8am and 1pm on Saturdays (when measured at any point 1m from the façade of any residential accommodation); and
- Not exceed 65 dB $L_{Aeq, 1hr}$ between 7pm and 10pm on Monday to Fridays, or 1pm to 10pm on Saturdays (when measured at any point 1m from the façade of any residential accommodation); and

- Not be audible between 10pm and 7am on Mondays to Fridays, before 8am or after 10pm on Saturdays, or at any time on Sundays (when measured at any point 1m from the façade of any residential accommodation). As a guide the total noise level (ambient plus construction) should not exceed the pre-construction ambient level by more than 1dB(A). This will not allow substantial noise **producing construction activities but other 'quiet' activities may be possible.** Routine construction and demolition work which is likely to produce noise sufficient to cause annoyance will not normally be permitted between 10pm and 7am.

10.2.3 In addition, the Causeway Coast and Glens Environmental Health Department has requested that all plant and equipment (including vehicles used in connection with the development) must be situated, operated and maintained in order to prevent the excessive transmission of noise and vibration to nearby residential properties.

10.2.4 In relation to the control of noise and vibration at construction sites, BS 5228-1 provides guidance for predicting construction noise as well as advice on noise and vibration control techniques. The proprietary software NoiseMap 5 (with the BS 5228-1 calculation package) was used to predict construction noise. Each of the construction activities was modelled in accordance with BS 5228-1 (Annex F) in order to obtain the noise levels from construction, with further advice provided in **Tompsett's article 'Uncertainty and diversity in construction noise assessment'** (Ref 10.2). The article advises using typical plant levels in preference to noisiest levels, as well as to apply appropriate on-times to plant and also to distribute works around the site.

Vibration Effects during Construction

10.2.5 Assessing the vibration effects in relation to construction of the proposed development is based on the guidance set out in BS 5228-2:2009+A1:2014 '**Code of practice for noise and vibration control on construction and open sites – Part 2 Vibration'** (Ref 10.3).

10.2.6 The vibration assessment is focused on the sheet piling element of the works as this has the potential to cause groundborne vibration effects at buildings in close proximity to the development. Other components of the construction works are not expected to produce any vibration effects.

10.2.7 Groundborne vibration is measured in terms of PPV (Peak Particle Velocity) with units given in mm/s.

10.2.8 The response of a building to groundborne vibration is affected by the type of foundation, the underlying ground conditions, the building construction and the state of repair of the building. BS 5228-2 provides PPV guide values and these are reproduced in Table 10:1 below. For example, for unreinforced light framed structures (i.e. residential or light commercial buildings) the PPV ranges from 15 mm/s at 4 Hz to 20 mm/s at 15 Hz. Anything below these values indicates that no cosmetic damage to buildings is likely to occur.

Table 10:1: Vibration guide values for property damage (taken from Table B.2 in BS 5228-1)

Type of Building	Peak particle velocity in frequency range of predominant pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	50 mm/s at 4 Hz and above
Unreinforced or light framed structures Residential or light commercial buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Note 1 Values referred to are at the base of the building.

Note 2 Unreinforced or light framed structures, at frequencies below 4 Hz, a maximum displacement of 0.6mm (zero to peak) is not to be exceeded.

10.2.9 Assessment of the vibration effects is based on analysing case history data on vibration levels measured during steel piling at various construction sites in the UK. The data is located on Table D.8 of BS 5228-2, with information including year and location of the works, soil conditions, pile dimensions, method of piling and the measured PPV at various distances.

10.2.10 In terms of assessing the vibration effects on sensitive receptors in close proximity to the proposed development, the distance is measured from the receptor to the construction works. The distance is then compared to similar distances in Table D.8 of BS 5228-2 and the PPV value is compared to the value in Table 10:1 above. PPV values lower than the guide values given in Table 10:1 indicate that damage to property is unlikely.

Noise and Vibration Effects during Operation

10.2.11 The noise assessment of the ferry during operation is based on guidance set out in the WHO (World Health Organisation) Guidelines for Community Noise, 1999 (Ref 10.4) as well as **BS4142:2014** 'Methods for rating and assessing industrial and commercial sound' (Ref 10.5).

10.2.12 During consultation, Causeway Coast and Glens Environmental Health Department requested that a detailed noise impact assessment be produced, including:

- A background noise level survey in close proximity to Harbour View Cottages for times when the ferry will be operational;
- Predicted noise impacts from ferry movements accessing the proposed development including loading and unloading, positioning of the ferry and the opening of the vehicle ramp; and
- Comparison of predicted noise impacts with existing noise standards, for example BS 4142:2014 and the WHO Guidelines for Community Noise, 1999.

10.2.13 The operational noise assessment of the new ferry involves undertaking both background noise measurements and measurements of the existing ferry in operation.

10.2.14 The WHO Guidelines for Community Noise, 1999 include guideline noise level values for specific environments and effects. The specified values take into consideration human health effects of noise exposure and are based on the lowest levels of noise that affect health.

10.2.15 **The WHO guideline values for 'annoyance' are set at 50 dB $L_{Aeq, 16h}$ and 55 dB $L_{Aeq, 16h}$** representing daytime levels below which a majority of the adult population will not be moderately or seriously annoyed, respectively. The guidelines are stated in full in

10.2.16 Table 10:2 below.

Table 10:2: WHO Guidelines for outside values

Effect	Parameter	Time period	Guideline dB(A)	Source
Serious annoyance	$L_{Aeq,16h}$	Daytime and evening	55	WHO, 1999
Moderate annoyance	$L_{Aeq,16h}$	Daytime and evening	50	WHO, 1999

10.2.17 The assessment in relation to the proposed facility is undertaken for daytime only (i.e. 7am to 7pm) and the representative period is 1 hour. No evening or night time assessment is required as the ferries do not operate during these periods

10.2.18 BS 4142:2014 assesses the effects on noise from a specified activity by subtracting the measured background noise level from a rating level. The greater this difference, the greater the indication that significant adverse effects will arise. Conversely, the lower this difference (including negative values) the less likely it is that the activity will have an adverse effect or a significant adverse effect. The BS4142 assessment methodology is reproduced in Table 10:3 below.

Table 10:3: BS 4142:2014 Rating assessment methodology

Rating level – Background noise	Effect
The greater the difference between the rating level and the background level	The greater the significance of the adverse effect depending on the context
around + 10 dB	Indication of significant adverse effect, depending on the context
around + 5 dB	Indication of adverse effect depending on the context
The lower the difference between the rating level and the background level	The less likely it is of an adverse effect or a significant adverse effect depending on the context. It should be noted that not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact

Study Area

10.2.19 The study area for both construction and operation noise is taken to be 600m from the proposed berthing facility.

10.3 Planning and legislative overview

10.3.1 Land Acquisition and Compensation Order (NI) 1973 Part II of the Land Acquisition and Compensation Order (NI) 1973 makes provision for the payment of compensation for property depreciation caused by certain physical factors. The Order provides a right for homeowners to claim compensation where the value of an interest in land is depreciated by noise caused by the use of public works. The compensation for that depreciation shall, subject to the previous part, be payable by the responsible authority.

Assessment and management of environmental noise

10.3.2 The Environmental Noise (Northern Ireland) Regulations 2006 were introduced into Northern Ireland to implement the Assessment and Management of Environmental Noise Directive 2002/49/EC. This Directive relates to the assessment and management of environmental noise in EU member states and defines the requirements and uses of Strategic Noise Maps and Noise Action Plans.

The Planning System

10.3.3 The statutory role of the planning authority in the development management process, as set out in Article 25 (1) of the Planning (Northern Ireland) Order 1991, is to deal with applications for planning permission having regard to the development plan, so far as material to the application, and to any other material considerations. Noise can be treated as a material consideration in the determination of planning applications for proposals likely to give rise to noise that would impact adversely upon residential/public amenity and/or the character of the locality.

10.3.4 In determining applications, the planning system aims to reach balanced decisions and controls must avoid placing unreasonable restrictions on development or adding unduly to the cost and administrative burdens of businesses. This will often result in conditions being applied to planning consents for new development or change of use proposals in order to mitigate excessive noise impacts.

Statutory Nuisance

10.3.5 Articles 63 and 65 of the Clean Neighbourhood and Environment Act (NI) 2011 give district councils the power to serve a Noise Abatement Notice where they consider that noise is prejudicial to health or is a statutory nuisance. There is no fixed level of noise which constitutes a statutory nuisance. Individual circumstances differ and each case should be judged on its merits. In deciding whether or not a specific noise is sufficient to amount to a statutory nuisance, the environmental health officer of the district council has to consider the reaction of the average, reasonable person to the particular noise. Account should be taken only of the volume, but also factors such as when and how often the noise occurs as well as the duration of the noise occurrence. The Noise Abatement Notice may be served on the owner or occupier of the premises and may require the noise to be stopped altogether or be limited to certain times of the day.

Noise Policy Statement for Northern Ireland 2014

10.3.6 The NPSNI was produced by the Department of the Environment. It seeks to clarify current policies and practices to enable noise management decisions to be made within the wider context, at the most appropriate level and in a cost-effective and timely manner. It also seeks to compliment and build on current legislative and regulatory regimes which apply at the international, European, national and local levels for all sources and types of noise.

10.3.7 The regulatory regime most applicable to noise at the European level is the Environmental Noise Directive. The planning regime considers noise as a material consideration in relevant cases and district councils enforce the statutory nuisance regime.

10.3.8 Through the effective management and control of environmental, neighbour and neighbourhood noise the Noise Policy aims to:

1. Avoid or mitigate significant adverse impacts on health and quality of life;
2. Mitigate and minimise adverse impacts on health and quality of life; and
3. Where possible, contribute to the improvement of health and quality of life.

10.4 Baseline Conditions

10.4.1 The proposed development is located in a rural island environment with a population of approximately 100 permanent residents.

10.4.2 Noise monitoring was undertaken at Harbour View Cottages (NML1) on 8 December 2015 and the results show that background noise levels are 51.6 dB LA90, see Table 10:4 below for details. The main noise sources recorded during the survey were from the movement of the water and the occasional vehicle; however no noise was audible from the ferry. For location of the survey see **Figure 10.1** Noise Monitoring Survey Locations in Volume 3.

Table 10:4: Results of Background Noise Survey at Harbour View Cottages

Location NML1	Date	Duration	Measured Noise Levels dB LA90, 1h
2 Harbour View Cottages	08/12/2015	1 hour	51.6

10.4.3 A noise survey was also undertaken at the existing slipway to measure the noise levels of the existing ferry. For location of the survey see Figure 10.1 Noise Survey Locations. On the day of the survey the Express Ferry was not in operation and so noise from the MV Canna only was measured. Noise sources measured included the ferry engine, the movement of the ferry in the water, cars going on and off the ferry via the ramp, foot passengers going on and off the ferry and car engines idling. See Table 10:5 below for noise levels measured during operation of the existing ferry.

Table 10:5: Measured Noise Levels during Operation of Existing Ferry

Location NML2	Duration	Distance from noise source	Description of noise sources	Measured Noise Levels, dB(A)
Adjacent to slip way	10 seconds	5m	Ramp coming down on slipway	72.8
Adjacent to slip way	1 minute	5m	Cars coming off the ferry	68.6
Adjacent to slip way	15 seconds	5m	People coming off the ferry	69.7

Location NML2	Duration	Distance from noise source	Description of noise sources	Measured Noise Levels, dB(A)
Adjacent to slip way	4 minutes 14 seconds	5m	Car Engines Idling & ferry noise	70.4
Adjacent to slip way	2 minutes 33 seconds	5m	Ferry engine idling	60.5
Adjacent to slip way	5 seconds	5m	Ferry ramp coming up and moving out to sea	64.8
Adjacent to slip way	10 seconds	5m	Sound of waves only	61.5

10.4.4 Representative receptors for operational noise were chosen based on their proximity to the proposed development. **Figure 10.2** Noise Sensitive Receptors shows the location of the representative receptors. The distance from each of the representative receptors to the existing and the proposed slipway were measured and are shown in Table 10:6 below.

Table 10:6: Distance from Receptor to Existing and Proposed Ferry Slipway

Representative Receptor and Façade	Distance to Existing Slipway	Distance to Proposed Slipway
St. Thomas' Church (S)	179m	54m
2 Harbour View Cottages (S)	109m	54m
The Bungalow, Churchquarter (S)	82m	82m
3-1 Ballynagard (S)	230m	92m
2G Churchquarter (S)	92m	160m

10.4.5 The following equipment was used to measure noise levels at the noise receptor locations and of the ferry and associated noise sources:

- Larson Davis Lxt 1 (Type 1) Sound Level Meter; and
- CAL 200 acoustic calibrator

- 10.4.6 The sound level meter was calibrated prior to and on completion of the noise monitoring surveys. There was no drift in calibration noted during the field calibrations. Calibration certificates of the sound level meters can be found in Appendix D.
- 10.4.7 All noise measurements were taken at a height of 1.2m above local ground in free-field conditions.
- 10.4.8 Meteorological conditions during the monitoring periods were acceptable in accordance with BS7445: Description and measurement of environmental noise.

10.5 Evaluation or Sensitivity of Receptors

10.5.1 Figure 10.2 Noise Sensitive Receptors and Table 10:7 below shows details of the noise sensitive receptors within 600m of the proposed development. There are 60 residential receptors, 5 community receptors and 4 ecological receptors within 600m of the proposed development. The community receptor within 50m of the development is St. Thomas’ Church while the ecological receptors within 600m of the development include Rathlin Island SPA, Rathlin Island SAC and Rathlin Island Coast ASSI.

Table 10:7: Noise sensitive receptors within 600m of the scheme

Distance bands	No of receptors			
	Residential	Community	Ecological	Amenity
0-50m	2	1	3	0
50-100m	4	0	0	0
100-150m	7	0	0	0
150-200m	4	1	0	0
200-300m	4	2	0	0
300-600m	39	1	1	0
Total	60	5	4	0

10.6 Impact Assessment

Noise Effects during Construction

- 10.6.1 Construction works in relation to the proposed development are expected to commence March 2016 and be completed by October 2016 in time for the arrival of the new ferry.
- 10.6.2 A construction methodology has been provided by the client (refer Chapter 5). Table 10:8 below shows the proposed plant to be used during each stage of construction, together with the associated noise levels (and references) taken from BS 5228-1.

Table 10:8: Noise Levels of Construction Plant to be used

Construction activity	Plant	BS 5228 Table*	BS 5228 Ref.*	Noise Level L_{Aeq} at 10m*
Dredging	1 Tracked excavator 22t	C.7	2	82dB
Rock armour	1 Tracked excavator 22t	C.7	2	82dB
Sheet Pile quay wall	Vibratory piling rig	C.3	8	88 dB
	Crane	C.4	49	77dB
	1 Tracked excavator 22t	C.2	21	71dB
	Diesel piling hammer	C.3	3	88
	1 Vibratory roller 12t	C.5	21	80dB $L_{A Max}$
	Mechanical vibrating poker	C.4	33	78
Ferry ramp	1 Tracked excavator 22t	C.2	21	71dB
	Mechanical vibrating poker	C.4	33	78
Hardstanding area	1 Tracked excavator 22t	C.2	21	71dB
	1 Vibratory roller 12t	C.5	21	80dB $L_{A Max}$
	Road planer	C.5	7	82dB
	1 Asphalt paver plus tipper lorry 18t	C.5	31	77dB

**Source: BS 5228-1 Annex C.*

- 10.6.3 Construction noise was predicted using noise modelling software (Noisemap 5) with the noise sources taken from Table 10:8 above.

- 10.6.4 Representative receptors for construction works were chosen based on their proximity to the proposed development. Figure 10.2 Noise Sensitive Receptors shows the location of the representative receptors.
- 10.6.5 Table 10:9 below shows predicted noise levels for the worst case construction activity at the representative receptors.

Table 10:9: An Estimate of the Worst-case Construction Noise Levels

Representative receptor and façade	dB LAeq Construction	Worst-case activity
St. Thomas' Church (S)	75.1	Hardstanding area
2 Harbour View Cottages (S)	72.1	Sheet pile quay wall
The Bungalow, Churchquarter (S)	70.3	Sheet pile quay wall
3-1 Ballynagard (S)	67.3	Hardstanding area
2G Churchquarter (S)	66.4	Sheet pile quay wall

- 10.6.6 The predicted construction noise levels do not exceed the 75dB L_{Aeq} daytime threshold stipulated by the Causeway Coast and Glens Environmental Health Department at any residential receptor. Predicted construction noise levels are 75.1dB L_{Aeq} at St. Thomas' Church; however this is not a residential receptor.
- 10.6.7 In relation to the 65 dB L_{Aeq} evening threshold stipulated by the Causeway Coast and Glens Environmental Health Department, predicted noise levels are above this threshold at all the representative receptors.
- 10.6.8 In relation to the requirement by the Causeway Coast and Glens Environmental Health Department that noise should not be audible during the night-time, it is assumed that no construction is required to take place during night-time hours.

Vibration Effects during Construction

10.6.9 Table 10:10 below shows the representative receptors for the vibration effects and the distance to the construction works. St. Thomas Church is 57m from the works while 2 Harbour View Cottages is 60m from the works. The distances were compared to the information in Table D.8 of BS 5228-2 which shows that historic PPV levels at these distances are considerably lower than the threshold value of 15 to 20 mm/s as stated in Table 10:1 of this document. For example, in 1978 in Oldham at a distance of 60m from the source a PPV value of 2.5 mm/s was recorded. Also in Canvey Island in Essex at 35m from the source a PPV level of 3 mm/s was recorded.

Table 10:10: Representative receptor for Vibration Assessment

Representative receptor and façade	Distance from works to receptor
St. Thomas' Church (S)	57m
2 Harbour View Cottages (S)	60m

10.6.10 As a result of the historic vibration data, the receptors in closest proximity to the proposed development are not expected to be impacted by groundborne vibration.

Noise and Vibration Effects during Operation

10.6.11 In terms of operation of the ferry, noise levels were predicted at each of the representative receptors based on the following formula:

$$\text{Predicted Noise Level} = \text{Measured Noise Level} - 20 \log \left(\frac{\text{Distance from source to residential receptor}}{\text{Distance from source to monitoring location}} \right)$$

10.6.12 The above formula assumes that the noise is spread with the same intensity in all directions and is the same as stating that for every doubling of the distance between the source and the receptor a reduction of 6dB should be applied to the sound pressure level. Table 10:11 below shows the predicted noise levels of the ferry during normal operation at the representative receptors.

Table 10:11: Predicted Noise Levels at Representative Receptors

Noise Source	St. Thomas' Church (dB)	2 Harbour View Cottages (dB)	The Bungalow, Churchquarter (dB)	3-1 Ballynagard (dB)	2G Churchquarter (dB)
Ramp coming down on slipway	52.0	52.0	49.5	47.5	42.7
Cars coming off the ferry	47.9	47.9	44.3	43.3	38.5
People coming off the ferry	49.0	49.0	45.4	44.4	39.6
Car Engines Idling & ferry noise	49.7	49.7	46.1	45.1	40.3
Ferry engine idling	39.8	39.8	36.2	35.2	30.4
Ferry ramp coming up and moving out to sea	44.1	44.1	40.5	39.5	34.7
waves only	40.8	40.8	37.2	36.2	31.4

10.6.13 All the predicted noise levels are below the WHO daytime guideline values of 50 dB L_{Aeq} at all the representative receptors except St. Thomas Church and 2 Harbour View Cottages. A noise level of 52 dB L_{Aeq} is predicted at these properties when the ramp is coming down on to the slipway which is above the WHO guideline level of 50 dB L_{Aeq} for moderate annoyance but below the level of 55 dB L_{Aeq} for serious annoyance.

10.6.14 A BS4142 assessment was undertaken at the closest representative receptors, namely **St. Thomas' Church and Harbour View Cottages** and the results are shown in Table 10:12 below.

Table 10:12: BS4142:2014 Assessment

Parameter Description	Parameter	Relevant Clause	St. Thomas Church	2 Harbour View Cottages	Comments
Ambient noise	$L_{Aeq,on}$	7.3.1	n/a	n/a	The specific noise level has been modelled.
Residual noise level	$L_{Aeq,off(60min)}$	7.3.3	56.0 dB	56.0 dB	$L_{Aeq,(60 min)}$
Background noise level	$L_{A90(60min)}$	8	51.6 dB	51.6 dB	$L_{AF,90,(60 min)}$
Reference time interval	1 h (daytime)	7.2			
Specific noise level	$L_{Aeq,on(60min)} =$	7.3	47.2 dB	47.2 dB	
Acoustic feature correction		9.2			
Rating level	$L_{Ar,(60min)} =$	9.2	47.2 dB	47.2 dB	
Background noise level	$L_{A90,(60min)} =$	8	51.6 dB	51.6 dB	
Excess of rating over background level	$L_{Ar} - L_{A90} =$	11	47.2 - 51.6 dB = -4.4 dB	47.2 - 51.6 dB = -4.4 dB	
Assessment indicates likelihood of significant effects		11	Below adverse effect	Below adverse effect	

Parameter Description	Parameter	Relevant Clause	St. Thomas Church	2 Harbour View Cottages	Comments
Uncertainty of the assessment		10			

10.6.15 The results of the BS4142 assessment at both representative receptors that adverse impacts are not likely.

10.6.16 Information from the technical specification in relation to the new ferry state that noise levels measured at a distance of 65m from the ferry should not exceed 45 dBA. If the specific noise levels are exceeded, additional silencing or insulation would be required.

10.6.17 Vibration effects as a result of the operation of the new ferry are not expected to be an issue. There have not been any reported vibration effects in relation to the existing ferry and so it is expected that there will be no vibration effects as a result of the new ferry.

10.6.18 Noise effects on marine life are discussed in Chapter 8 Ecology and they are not within the scope of this noise chapter.

10.7 Mitigation

10.7.1 The following paragraphs recommend some mitigation measures in relation to construction noise that would reduce the significance of impact. The following measures are taken from BS 5228-1.

Community relations

10.7.2 As stated in BS 5228-1 good relations with people living and working in the vicinity of site operations are of paramount importance. Early establishment and maintenance of these relations throughout the carrying out of site operations will go some way towards **allaying people’s fears.**

10.7.3 It is suggested that good relations can be developed by keeping people informed of progress and by treating complaints fairly and expeditiously. The person, company or organisation carrying out work on site should appoint a responsible person to liaise with the public.

Limitation of time of works

10.7.4 Noise during construction works has the potential to be significant at all of the representative receptors if works take place during the night or the evening. For this reason, construction works will be limited to daytime works only i.e. weekdays from 7am to 7pm.

Control of noise at source

10.7.5 Control of noise at source includes measures such as use of best practicable means and best practice methods.

10.7.6 The best practice method for each activity is outlined below and should be adhered to during the construction phase.

- All compressors shall be sound reduced models fitted with properly lined and sealed covers which shall be kept closed whenever the machines are in use and all ancillary pneumatic percussive tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers.
- Plant and machinery in intermittent use shall be shut down in intervening periods of non-use or where this is impracticable they shall be throttled down to a minimum.
- Unattended plant outside normal working hours should, if possible, be powered by electricity otherwise acoustic enclosures will be necessary to minimise noise levels.
- Where possible, plant with directional noise characteristics shall be positioned to minimise noise at adjacent properties.
- Static machines shall be sited as far away as practicable from inhabited buildings or other noise sensitive premises and/or behind temporary screens or enclosures.
- Plant shall be well maintained and effectively silenced.

Operational Mitigation

10.7.7 The following mitigation measures should be considered and discussed with the Causeway Coast and Glens Environmental Health Department:

- Preventing the revving of the ferry engines during start up and movement to the slip;

- The ferry operators being aware of the residential amenity of the surrounding area;
- Signage requesting the vehicles waiting to board the ferry switch off their engines and to not rev their engines.

10.8 Significance of Effect

- 10.8.1 If construction noise is limited to daytime, no significant effects are expected at any of the sensitive receptors. In terms of vibration effects during construction there are not expected to be any significant effects.
- 10.8.2 In terms of operational noise relating to the proposed development, there are not expected to be any significant effects as the predicted noise levels are below the WHO guideline levels and the BS4142 assessment indicates that complaints from the operation of the ferry are unlikely.

10.9 Conclusions

- 10.9.1 Noise during construction is not expected to result in significant effects at properties in close proximity to the proposed development. However, keeping the local community informed as well as employing best practice methods in terms of construction plant is recommended. Vibration as a result of sheet piling during the construction works is not expected to be an issue as the closest receptors are over 50m from the construction site and as a result the expected PPV values are lower than the threshold that causes damage to buildings.
- 10.9.2 The operation of the ferry is not expected to result in significant effects at nearby sensitive receptors as the BS4142:2014 assessment concludes that adverse effects are unlikely. All the predicted noise levels except the noise relating to the closing of the ramp are below the 50 dB L_{Aeq} guideline values as stated in the WHO. The predicted noise levels are 52 dB L_{Aeq} which is below the WHO guideline level of 55 dB L_{Aeq} .

11 Cumulative Impacts

11.1 Introduction

11.1.1 There are two types of cumulative impacts that can arise from a project or development.

- Type 1 – impacts resulting from the combined effects of individual impacts resulting from the development programme, e.g. noise, dust and visual impacts, from the proposed development on a particular receptor.
- Type 2 – impacts from several developments, which individually might be insignificant, but when considered together could amount to a significant cumulative impact.

11.1.2 Cumulative impacts on factors of moderate significance may influence decision making if they lead to an increase in the overall adverse effect on a particular resource or receptor.

11.2 Cumulative Impacts

Type 1 impacts

11.2.1 Type 1 impacts as a result of the proposed development include:

- Noise and visual impacts on local residents.
- Noise and vibration impacts from piling on marine mammals and local residents.

11.2.2 These impacts are not considered to be significant enough for additional mitigation to be employed during the works.

Type 2 impacts

11.2.3 Planning permission has been granted for a new house at 10 Church Bay, located approximately 340m east of the scheme. Construction impacts from this development and construction impacts from the harbour have potential to have cumulative effects on local residents and wildlife from noise and dust. At time of writing, the construction programme for the house was not known.

- 11.2.4 Planning permission has also been granted for a development site located 30m south **east of St. Thomas's Church, Church Bay. The application reference E/2010/0114/F is an** application for 4 cottages, 1 apartment Class A1 shop unit (shop to incorporate ticket sales for ferry), incorporating PSD parking area as per planning approval E/2007/0145/F. However the information on the Planning Portal indicates that the planning permission for this development expired in August 2015. Should this application be resubmitted for development and approval, these houses would be additional receptors for visual and noise impacts from operation of the new ferry.
- 11.2.5 In addition, during the site visit in December 2015 it was observed that the Manor House at the harbour was being renovated. The timescale for completion of the renovation is not known but there is potential for cumulative impacts to arise on local residents should the construction works at the harbour and the renovation works overlap.
- 11.2.6 There is no potential for cumulative impacts to arise on ecology or archaeology, however should the listed construction projects all be onsite between the months of March and October 2016 there is potential for additional nuisance to local residents from construction noise and dust.

12 Assessment Summary Table

12.1 Schedule of Effects

12.1.1 This chapter presents the Environmental Impacts Table (Table 12.1) for the scheme. The purpose of the table is to present the main predicted impacts, taking into account mitigation, in summarised form. The table includes a summary of potential impacts in the absence of mitigation, mitigation methods to be employed and the resulting residual impacts that would be expected from the development.

Table 12:1: Environmental Summary Table

Discipline	Potential Impact Description	Impact	Mitigation where necessary	Residual Impact Significance
Cultural Heritage	Impact on unknown archaeological resources within the development area	Not significant	Archaeological watching brief during construction	Neutral
Landscape	Visual intrusion of construction machinery on visual receptors	Slight to moderate adverse	N/A	Slight
	Visual impact of harbour on landscape.	Slight adverse	N/A	Neutral
	Visual impact of harbour on receptors.	Slight adverse	N/A	slight
Ecology and Nature Conservation	Decline in water quality during piling and construction works	Slight significance	Contractor will adhere to PPGs, a Construction Environmental	Not significant

Discipline	Potential Impact Description	Impact	Mitigation where necessary	Residual Impact Significance
			Management Plan will be adhered to for the course of the works.	
	Disturbance to marine mammals and birds during piling.	Slight significance	Works to be undertaken under a Wildlife Licence and overseen by a Marine Mammal Observer.	Not significant
	Introduction of non native invasive species to the island	Significant	Biosecurity measures implemented during transport and movement of machinery	Not significant
Noise and Vibration	Piling effects on local residents from increase in noise levels.	Slight significance	Works confined to day time.	Not significant

12.2 Conclusions

- 12.2.1 With adherence to pollution prevention measures and the mitigation measures as set out in the Schedule of Environmental Commitments, construction effects from the harbour will be reduced to not significant.
- 12.2.2 Once operational, the slipway and berthing facility will provide access for a new, more efficient and larger foot and car ferry. The new ferry will improve access to the island and facilitate future growth on the island.

13 Schedule of Environmental Commitments

13.1.1 All mitigation measures identified in the technical chapters (chapters 7 to 10) necessary to protect the environment during construction and on completion of the harbour will be incorporated into the Contract Documents as a Schedule of Environmental Commitments. This will provide a mechanism to ensure compliance with environmental commitments during construction and on completion. In addition, the appointed contractor will be obliged to consider and incorporate as far as appropriate the construction techniques and proposals outlined in Chapter 5 of this ES.

13.1.2 Table 13.1 below presents the Schedule of Environmental Commitments.

Table 13:1: Schedule of Environmental Commitments

Reference number	Mitigation measure	Implementation of mitigation	Monitoring requirements
Cultural Heritage			
CH1	Watching brief during excavations	During construction	Watching brief
Ecology			
E1	Adherence to pollution prevention guidelines (PPGs)	During construction	
E2	Site compound to be located on areas of hard standing	During construction	
E3	Refuelling of machinery undertaken on areas of hard standing and at least 10m from the shoreline	During construction	
E4	Construction to be undertaken under a Wildlife Licence	During construction	A marine mammal observer will be present for the

Reference number	Mitigation measure	Implementation of mitigation	Monitoring requirements
			duration of the works. An ornithological observer present during breeding season/duration of works?
E5	Use of acoustic deterrent devices	During piling works	A marine mammal observer present for the duration of the works
E7	Biosecurity measures implemented to prevent introduction of non native species	Prior to transport of machinery to Rathlin and before machinery leaves Rathlin	
E8	Black guillemot nest boxes incorporated into design	Placed during construction	
Landscape			
L1	Contractor compound will be fenced and kept neat and tidy	During construction	
L2	Security lighting will be designed to minimise light spillage into adjacent areas.	During construction	
L3	Grassed area to be sown with grasses and wild flowers native to Rathlin.	Post construction	

Reference number	Mitigation measure	Implementation of mitigation	Monitoring requirements
L4	Harbour lights turned off at night when ferry berthed.	Operation	
Noise and Vibration			
N1	Residents kept informed of works	Prior to and during construction	
N2	Contractor to appoint a responsible person to act as community liaison	Prior to and during construction	
N3	Works restricted to daytime hours (7am to 7pm)	During construction	
N4	When not in use plant will be shut off or throttled down to minimum level	During construction	
N5	Siting of plant to minimise noise at adjacent properties	During construction	
N6	Use of well maintained plant and machinery	During construction	

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10.5 BRITISH STANDARDS INSTITUTION (2014). BS 4142:2014 Methods for rating and assessing industrial and commercial sound.



Appendix A Consultation

Planning Application Consultation Response

Application Ref:	LA01 / 2015 / 0342 / F
Proposal	The proposed development for a new ferry ramp, berthing pier, car park area and associated bollards.
Location	Rathlin Harbour, Church Bay, Rathlin Island.
Date of Consultation	03/07/15
Date of Response	07/07/15

TransportNI would advise that we have had discussions with the agents regarding the detail shown on the submitted site plan drg. no. 02 stamp dated 12th June 2015 and they have agreed to submit an amended plan with the following details:

- 1.....Provide spot levels on the car parking spaces and on the holding / waiting area.
- 2.....Provide cross sections through the existing public road, verge and proposed car parking in order to determine the extent of grading required.
- 3.....Provide drainage at the proposed access and show the outlet.
- 4.....Detail 2.0m x 33.0m sight visibility splays at the proposed access.

Case Officer: Terry McKinney

Signed:

**Adam Quigley, SPTO
Dev. Control Engineer**

Signed:

**Cathal Brown, PPTO
Network Planning Manager**

Issued on behalf of Development Control Section

Causeway Coast and Glens Borough Council

ENVIRONMENTAL HEALTH BALLYCASTLE OFFICE

CONSULTATION RESPONSE IN RESPECT OF PLANNING APPLICATION

Ref No:	LA01/2015/0342/F
Proposal:	New ferry ramp, berthing pier, car park area and associated bollards. Fendering system, lighting and road re-alignment at Rathlin Island Harbour. Proposed temporary compound area for site office and storage of materials and plant.
Location:	Rathlin Harbour, Church Bay, Rathlin Island
Date Consulted:	3 rd July 2015
Date of Response:	21 st July 2015

The Environmental Health Section has no objection in principle to the above proposed development subject to:

Construction Noise Impact

BS 5228: 1997 in relation to construction activities states,

“Noise and vibration can be the cause of serious disturbance and inconvenience to anyone exposed to it and in certain circumstances noise and vibration can be a hazard to health.”

Therefore, Causeway Coast and Glens Borough Council’s Environmental Health Department would request that the following informative be attached to any Planning Permission granted:

“Noise from construction activities should –

- (a) not exceed 75 dB $L_{Aeq, 1hr}$ between 07.00 hours and 19.00 hours on Monday to Fridays, or 75 dB $L_{Aeq, 1hr}$ between 08.00 hours and 13.00 on Saturdays, when measured at any point 1 metre from any façade of any residential accommodation, and
- (b) not exceed 65 dB $L_{Aeq, 1hr}$ between 19.00 hours and 22.00 hours on Monday to Fridays, or 13.00 hours to 22.00 hours on Saturdays when measured at any point 1 metre from any façade of any residential accommodation, and
- (c) not be audible between 22.00 hours and 07.00 hours on Monday to Fridays, before 08.00 hours or after 22:00 hours on Saturdays, or at any time on Sundays, at the boundary of any residential accommodation. (As a guide the total level (ambient plus

construction) shall not exceed the pre-construction ambient level by more than 1 dB(A). This will not allow substantial noise producing construction activities but other "quiet" activities may be possible). Routine construction and demolition work which is likely to produce noise sufficient to cause annoyance will not normally be permitted between 22.00 hours and 07.00 hours."

Plant & Equipment

The applicant is requested to ensure that all plant and equipment including vehicles used in connection with the development is so situated, operated and maintained as to prevent the transmission of noise and vibration to nearby residential properties.

Lighting

The applicant shall ensure that all lighting is optically controlled and directed in such a manner as to minimise light pollution from glare and spill to nearby residential properties. Guidance notes for the reduction of light pollution may be obtained from the Institution of Lighting Professionals, Regent House, Regent Place, Rugby. CV21 2PN.

Issued on behalf of

Environmental Health Department
Causeway Coast and Glens Borough Council
Ballycastle Office

Planning Application Consultation Response

Application Ref:	LA01 / 2015 / 0342 / F
Proposal	The proposed development for a new ferry ramp, berthing pier, car park area and associated bollards.
Location	Rathlin Harbour, Church Bay, Rathlin Island.
Date of Consultation	29/07/15
Date of Response	03/08/15

Recommended Approval Conditions

1...The vehicular access, including visibility splays and any forward sight distance, shall be provided in accordance with Drawing No. 06 bearing the date stamp 20th July 2015, prior to the commencement of any other development hereby permitted. The area within the visibility splays and any forward sight line shall be cleared to provide a level surface no higher than 250mm above the level of the adjoining carriageway and such splays shall be retained and kept clear thereafter.

REASON: To ensure there is a satisfactory means of access in the interests of road safety and the convenience of road users.

2...The access gradient to the development hereby permitted shall not exceed 8% (1 in 12.5) over the first 5 m outside the road boundary. Where the vehicular access crosses a footway, the access gradient shall be between 4% (1 in 25) maximum and 2.5% (1 in 40) minimum and shall be formed so that there is no abrupt change of slope along the footway.

REASON: To ensure there is a satisfactory means of access in the interests of road safety and the convenience of road users.

3.....Subject to the above conditions, the development shall be carried out in accordance with the stamped approved Drawing No. 06 bearing the date stamp 20th July 2015

REASON: To ensure the development is carried out in accordance with the approved plans.

Recommended Informatives:

1.....Notwithstanding the terms and conditions of the Department of Environment's approval set out above, you are required under Articles 71-83 inclusive of the Roads (NI) Order 1993 to be in possession of the Department for Regional Development's consent before any work is commenced which involves making or altering any opening to any boundary adjacent to the public road, verge, or footway or any part of said road, verge, or footway bounding the site. The consent is available on personal application to the TransportNI Section Engineer whose address is Trillick House, 49 Queen Street, Ballymoney, BT53 6JD A monetary deposit will be required to cover works on the public road.

2.... Precautions shall be taken to prevent the deposit of mud and other debris on the adjacent road by vehicles travelling to and from the construction site. Any mud, refuse, etc. deposited on the road as a result of the development, must be removed immediately by the operator/contractor.

3....All construction plant and materials shall be stored within the curtilage of the site.

4....It is the responsibility of the Developer to ensure that water does not flow from the site onto the public road (including verge or footway) and that existing road side drainage is preserved and does not allow water from the road to enter the site

Case Officer: Terry McKinney

Signed:

Adam Quigley, SPTO
Dev. Control Engineer

Signed:

Cathal Brown, PPTO
Network Planning Manager

Issued on behalf of Development Control Section

Causeway Coast and Glens Borough Council

ENVIRONMENTAL HEALTH BALLYCASTLE OFFICE

CONSULTATION RESPONSE IN RESPECT OF PLANNING APPLICATION

Ref No:	LA01/2015/0342/F
Proposal:	New ferry ramp, berthing pier, car park area and associated bollards. Fendering system, lighting and road re-alignment at Rathlin Island Harbour. Proposed temporary compound area for site office and storage of materials and plant.
Location:	Rathlin Harbour, Church Bay, Rathlin Island
Date Consulted:	3 rd July 2015
Date of Response:	18 th August 2015

The proposed development will relocate the existing ferry ramp closer to residential receptors at Harbour View Cottages (permitted under E/2010/0114/F).

The sea end of the existing ferry ramp is approximately 150m from Harbour View Cottages whilst the sea end of the proposed ferry ramp is approximately 50m.

Elevated levels of noise can be associated with ferry movements, most notably the 'thump' associated with the lowering of the vehicle ramp onto the ferry ramp. In addition, noise can be associated with the revving of the ferry engine to maintain its position on the ramp during difficult sea conditions.

Causeway Coast and Glens Borough Council's Environmental Health Department request that the applicant produce a detailed noise impact assessment, including:

- A background noise level survey in proximity to Harbour View Cottages for times when the ferry will be operational.
- Predicted noise impacts from ferry movements accessing the proposed development including loading/unloading, positioning of the ferry and the opening of the vehicle ramp.
- Comparison of predicted noise impacts with existing noise standards e.g. BS4142:2014, WHO Guidelines for Community Noise 1999

Issued on behalf of

Environmental Health Department

Causeway Coast and Glens Borough Council

Ballycastle Office

Planning Response Team
Klondyke Building
Cromac Avenue
Gasworks Business Park
Lower Ormeau Road
Belfast
BT7 2JA
Tel: 028 9056 9604
Email: planningresponse.team@doeni.gov.uk

Date: 21 August 2015

Dear Sir/Madam

Planning Application Ref.: LA01/2015/0342/F
Location: Rathlin Harbour
Church Bay
Rathlin Island.
Proposal: New ferry ramp, berthing pier, car park area and associated bollards. Fendering system, lighting and road re-alignment at Rathlin Island Harbour. Proposed temporary compound area for site office and storage of materials and plant.

Thank you for your consultation on the above which was received by DOE on 03/08/2015

Our statutory duty is to ensure that the natural and historic environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.

We have reviewed the details of the application and would provide summary comments as follows (the full detailed response is attached):

Archaeology and Built Heritage

Historic Buildings Unit is satisfied that an EIA is not required to facilitate our assessment of the impact of the proposal on the setting of the listed buildings.

Historic Monuments Unit advises should the Council determine that an Environmental Impact Assessment (EIA) is required then Historic Monuments Unit (HMU) would require an archaeological section within it.

HMU has reviewed the updated Archaeological Impact Assessment (date stamped 12 June 2015) attached as part of the previous LA01/2015/0342/F consultation and has asked for amendments to this.

Coastal Development

Marine Environment Division has considered the EIA Determination and on the basis of the information provided has no further comments to make to the previous Planning consultation response submitted on 22 July 2015.

Natural Heritage and Conservation Areas

Natural Environment Division has identified the international and national designated sites that the proposal could adversely impact and considers that this proposal is likely to result in adverse environmental effects with regard to the Environmental Impact Assessment (EIA) Regulations. Based on natural heritage issues outside of the designated sites, NED considers that this proposal is unlikely to result in significant environmental effects with regard to the Environmental Impact Assessment (EIA) Regulations.

NIEA Landscape Architects would have no objection to this proposal as it will have negligible impact on the landscape and the AONB.

If you wish to discuss anything raised in our response, please do not hesitate to contact Planning Response Team (details above).

Kind Regards

Planning Response Team

On behalf of DOE

Archaeology & Built Heritage

Section Reference: HB05 16 003

Considerations

The application site (LA01 2015 0342 F) is in proximity to St Thomas' Church. This is a Grade B+ listed building of special architectural and historic interest as set out in Section 80 and is protected under the Planning Act (NI) 2011.

Historic Buildings Unit (HBU) a unit within DOE: HED has considered the impact of the proposal on the building and on the basis of the information provided give the following advice:

- HBU is satisfied that an EIA is not required to facilitate our assessment of the impact of the proposal on the setting of the listed buildings.

Informatives

Additional information/advice:

1. Planning Policy Statement 6 – Planning, Archaeology and the Built Heritage.

Archaeology & Built Heritage

Section Reference SM11/1 ANT 1:23

Considerations

Please see our comments regarding LA01/2015/0342/F dated 03/08/2015 and E/2014/0203/PREAPP dated 05/11/2014 and 11/02/2015.

This application site is located in an archaeologically sensitive area, adjacent to several sites and monuments of archaeological interest. Therefore, should the Council determine that an Environmental Impact Assessment (EIA) is required then Historic Monuments Unit (HMU) would require an archaeological section within it.

HMU has reviewed the updated Archaeological Impact Assessment (date stamped 12 June 2015) attached as part of the previous LA01/2015/0342/F **consultation and has asked for amendments to this.**

Explanatory Note

This application site is located in an archaeologically sensitive area, adjacent to several sites and monuments of archaeological interest. Should the Council determine that an Environmental Impact Assessment (EIA) is required then HMU would require an archaeological section within it.

Section Reference: CB22314-1

NIEA Natural Environment Division (NED) has considered this proposal with regard to Designated Sites and Other Natural Heritage Considerations and has the following comments to make.

Designated Sites

Please note that this is a desk based response.

NED CDP has identified the international and national designated sites that the proposal could adversely impact. NED considers that this proposal is likely to result in adverse environmental effects with regard to the Environmental Impact Assessment (EIA) Regulations.

The application site is within Rathlin Island SAC/SPA and Rathlin Island Coast ASSI which is of international and national importance and are protected by Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as amended), and The Environment (Northern Ireland) Order 2002.

Explanatory note

From the information available to NED CDP it is clear that the proposal is not connected with, or necessary for, the conservation management of the N2K/ASSI site.

NED CDP has considered the proposal and highlights the following as potential impacts on the designated sites:

Potential Impacts

Degradation of the adjacent aquatic environment as a result of contaminated runoff or directly from works within the designation. This could affect the range of species supported by the SAC features.

Disturbance to SPA features during construction and operation. Loss of supporting habitat as a result of proposed works.

Direct loss of ASSI feature.

Should the Planning Authority determine that an EIA is necessary, NED recommends that the following information is submitted to enable the competent authority, Causeway Coast and Glens District Council, to undertake a Habitat Regulations Assessment thereby ensuring compliance with the requirements of the Habitats Directive;

- **A Construction Environmental Management Plan. This should include full details of the method of works including a pollution prevention plan and a water quality monitoring plan.**

Should the Planning Authority determine that an EIA is not necessary, NED should be consulted to in order for us to provide site specific advice.

Other Natural Heritage Interests

Considerations

Based on natural heritage issues outside of the designated sites, NED considers that this proposal is unlikely to result in significant environmental effects with regard to the Environmental Impact Assessment (EIA) Regulations.

Should the Planning Authority determine that an EIA is necessary, NED should be consulted at the scoping stage. Should the Planning Authority determine that an EIA is not necessary, NED should be consulted to in order for us to provide site specific advice.

Natural Heritage and Conservation Areas

Section Ref: NIEA NED Landscape Architects Response

Considerations:-

NIEA Landscape Architects would have no objection to this proposal.

It will have negligible impact on the landscape and the AONB.

Shared Environmental Service
County Hall
182 Galgorm Road
Ballymena
BT42 1QF
0300 1245 000
28/08/2015

Causeway Coast and Glens Borough Council
Planning Office

Your Reference: LA01/2015/0342/F

Consultation – EIA Regulation 10

Proposal: New ferry ramp, berthing pier, car park area and associated bollards. Fendering system, lighting and road re-alignment at Rathlin Island Harbour. Proposed temporary compound area for site office and storage of materials and plant.

Location: Rathlin Harbour, Church Bay, Rathlin Island

SES advises that the proposed development is located partly within a sensitive area within the meaning of Part 1, Regulation 2 of The Planning (Environmental Impact Assessment) Regulations (NI) 2015. Note that SES has not reviewed whether this site is within another sensitive area as defined in Regulation 2 (a), (b), (c), (d), (e).

The proposed development is located partly within Rathlin Island Special Area of Conservation (SAC) and Rathlin Island Special Protection Area (SPA). It is proposed that a concrete ferry ramp, concrete pier deck and sheet pile/concrete quay wall will be constructed within the SAC/SPA. It is also anticipated that an area (100m³) will be dredged within these areas.

A Habitats Regulation Assessment (HRA) will be required in accordance with the requirements of Regulation 43 (1) of the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) (as amended). As DRD is the applicant and competent authority, DRD is required to carry out a HRA.

SES considers that the proposal is likely to have a significant effect on the site selection features and conservation objectives of Rathlin Island SAC/SPA. The proposal has the potential to cause the following adverse impacts during construction and operational phases of the proposed development:

- Disturbance to SPA feature species
- Loss of habitat utilised by SPA feature species
- Degradation of water quality through introduction of pollutants which may adversely impact species diversity within SAC features

SES advises that the following information will be required by DRD to complete the HRA and identify any mitigation required:

- Proposed timing of works – any construction works undertaken within the breeding season (March – August) has the potential to impact the selection features of Rathlin Island SPA.

- A Construction Environment Management Plan to include detailed method of works and pollution prevention measures to be employed during construction
- Proposed pollution prevention measures to be employed during operational phase of the proposed development

NB: This assessment only relates to European Protected sites. It does not replace the need for statutory consultation with other consultees including the Department of the Environment as detailed on Schedule 3 of The Planning (General Development Procedure) Order (Northern Ireland) 2015.

Planning Response Team
Klondyke Building
Cromac Avenue
Gasworks Business Park
Lower Ormeau Road
Belfast
BT7 2JA
Tel: 028 9056 9604
Email: planningresponse.team@doeni.gov.uk

Date: 28 September 2015

Dear Sir/Madam

Planning Application Ref.: LA01/2015/0342/F
Location: Rathlin Harbour
Church Bay
Rathlin Island.
Proposal: New ferry ramp, berthing pier, car park area and associated bollards. Fendering system, lighting and road re-alignment at Rathlin Island Harbour. Proposed temporary compound area for site office and storage of materials and plant.

Thank you for your consultation on the above which was received by DOE on 03/07/2015

Our statutory duty is to ensure that the natural and historic environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.

We have reviewed the details of the application and would provide summary comments as follows (the full detailed response is attached):.

Archaeology and Built Heritage

Historic Buildings Unit has considered the impact of the proposal on the building and on the basis of the information provided is content with the proposal with conditions.

Historic Monuments Unit has reviewed the Programme of Works attached as part of this application. There is no requirement for preservation in situ in this instance. **HMU has asked for amendments to the Programme of Works to reflect this.**

Coastal Development

Marine Environment Division has considered the impacts of the proposal on the designated site and on the basis of the information provided is content with the proposal with informatives.

Drainage and water

Water Management Unit has considered the impacts of the proposal on the surface water environment and on the basis of the information provided is content with the proposal subject to conditions.

Land, Soil and Air

Waste Management (WM) (Land and Groundwater Team) notes that there are no records of previous potentially contaminating land uses on this application site or in the adjacent area (see attached map). The proposed development is therefore considered to be a low risk to the environment. WM would have no objection to any planning application subject to the recommended Conditions and Informatives as detailed further in this letter.

Natural Heritage and Conservation Areas

Natural Environment Division has considered the impacts of the proposal on Rathlin Island SAC/SPA and is of the opinion that a robust Habitats Regulations Assessment cannot be undertaken on the information provided to date. NED recommends that Causeway Coast and Glens District Council request the submission of additional information, as detailed below, to enable these assessments to be undertaken.
NED has considered the impacts of the proposal on other natural heritage ineterests and is content with the proposal.

If you wish to discuss anything raised in our response, please do not hesitate to contact Planning Response Team (details above).

Kind Regards

Planning Response Team

On behalf of DOE

Archaeology & Built Heritage

Section Reference SM11/1 ANT 1:23

Considerations

Please see our comments regarding E/2014/0203/PREAPP dated 05/11/2014 and 11/02/2015.

This application site is located in an archaeologically sensitive area, adjacent to several sites and monuments of archaeological interest. Historic Environment Division: Historic Monuments Unit (HMU) has reviewed the Programme of Works attached as part of this application. There is no requirement for preservation in situ in this instance. HMU has asked for amendments to the Programme of Works to reflect this.

HMU is content with the proposal, conditional on the agreement and implementation of a developer-funded programme of archaeological works. This is to identify and record any archaeological remains in advance of new construction, or to provide for their preservation *in situ*, as per Policy BH 4 of PPS 6. The attached condition would be appropriate in this case (L15 & L05A).

Conditions

- No site works of any nature or development shall take place until a programme of archaeological work has been implemented, in accordance with a written scheme and programme prepared by a qualified archaeologist, submitted by the applicant and approved by the Department. The programme should provide for the identification and evaluation of archaeological remains within the site, for mitigation of the impacts of development, through excavation recording or by preservation of remains, and for preparation of an archaeological report.

Reason: to ensure that archaeological remains within the application site are properly identified, and protected or appropriately recorded.

- Access shall be afforded to the site at all reasonable times to any archaeologist nominated by the Department to observe the operations and to monitor the implementation of archaeological requirements.

Reason: to monitor programmed works in order to ensure that identification, evaluation and appropriate recording of any archaeological remains, or any other specific work required by condition, or agreement is satisfactorily completed.

Explanatory Note

This application site is located in an archaeologically sensitive area, adjacent to several sites and monuments of archaeological interest.

Informative

For guidance on the preparation of the Written Scheme and Programme of Archaeological Work, which should be submitted for approval at least 4 weeks before work is due to begin, contact:

Historic Environment Division – Historic Monuments Unit
Causeway Exchange
1–7 Bedford St
Belfast,
BT2 7EG

Quote reference: SM11/1 ANT 1:23

Application for the excavation licence, required under the *Historic Monuments and Archaeological Objects (NI) Order 1995*, should be submitted at least 4 weeks before work is due to begin, by a qualified archaeologist responsible for the project, to:

Historic Environment Division – Historic Monuments Unit
Causeway Exchange
1–7 Bedford St
Belfast,
BT2 7EG

Archaeology & Built Heritage

Section Reference: HB05 16 003

Considerations

The application site (LA01 2015 0342 F) is in proximity to St Thomas' Church. This is a Grade B+ listed building of special architectural and historic interest as set out in Section 80 and is protected under the Planning Act (NI) 2011.

Historic Buildings Unit (HBU) a unit within DOE: HED has considered the impact of the proposal on the building and on the basis of the information provided give the following advice:

- HBU is content with the proposal with conditions.

Explanatory note

The above comment is made to ensure the detailed design is in keeping with the listed building in terms of compliance with Policy BH11 (Development affecting the Setting of a Listed Building) of the Department's Planning Policy Statement 6: Planning, Archaeology and the Built Heritage.

Conditions

1. The proposed temporary compound area for site office and storage of materials and plant shall be limited to the proposed works contract period and the area of ground returned to its present state thereafter.

Informatives

Additional information/advice:

1. Planning Policy Statement 6 – Planning, Archaeology and the Built Heritage.

Coastal Development

Considerations

The application site is within a European and a national designated site:

- Rathlin SPA and SAC; the SPA is designated under the EC Birds Directive (79/409/EEC on the conservation of wild birds) and the SAC is designated under the EC Habitats Directive (92/43/EEC) on the conservation of natural habitats and of wild flora and fauna; and
- Rathlin ASSI, which was declared under the Environment Order (Northern Ireland) 2002.

This application is also approximately 10 km from Sheep Island SPA and 15 km from Skerries and Causeway cSAC. Harbour Porpoise is a site selection feature of Skerries and Causeway cSAC.

A HRA will need to be completed for this application in order to assess if this proposal will have an impact on the site selection features of the Natura 2000 sites.

In addition to designated sites, marine mammals are afforded protection throughout their range through the following nature conservation legislation:

- The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended); and
- The Wildlife (Northern Ireland) Order 1985 (as amended)

This includes marine mammals such as cetaceans and seals. Seal haul out areas are present within the proposed area of development. Therefore the project must provide appropriate mitigation to ensure there is no disturbance of seals in the area. As impact blasting or piling is required as part of the project methodology, further mitigation may also be required as part of the project methodology, to prevent noise disturbance or injury to marine mammals.

Marine Environment Division has considered the impacts of the proposal on the designated site and on the basis of the information provided is content with the proposal with informatives.

Informatives

Marine Licensing

A marine licence application has been received by Marine Environment Division for the construction of a new ferry ramp and supporting infrastructure, at Rathlin Island Harbour, Church Bay, Rathlin Island. The marine licence application will be subject to a 28 day consultation period before a decision is reached on the marine licence application.

The applicant should therefore be made aware that no works may take place below the Mean High Water Spring Tide Mark until a marine licence has been granted by Marine Environment Division. The applicant should also be made aware it is an offence under the

Coastal Development

Marine and Coastal Access Act 2009 to carry out a licensable marine activity except in accordance with a marine licence granted by Marine Environment Division. Conviction of such an offence may incur a fine of up to £50,000 and/or two years imprisonment.

Schedule 5 Species – Wildlife Order:

- Article 11 of the Wildlife (Northern Ireland) Order 1985 (as amended) provides that a person shall not be guilty of an offence under Article 10 (killing or injuring a species listed in schedule 5 (as amended)) if the act was incidental to a lawful operation (i.e. activity permitted by a Marine Licence or Planning Permission) and could not reasonably be avoided. A separate marine Wildlife Licence is therefore not required for national marine protected species if a Marine Licence/Planning Permission has been granted, since adherence to the conditions of the Marine Licence should reduce the likelihood of harm to national marine protected species.

AND

- Under Article 10 it is an offence to intentionally or recklessly disturb; common seals, grey seals or basking sharks.
- It is also an offence under Article 10 to intentionally or recklessly damage or destroy, or obstruct access to, any structure or place which these animals (Schedule 5) use for shelter or protection; damage or destroy anything which conceals or protects any such structure; or disturb any such animal while it is occupying a structure or place which it uses for shelter or protection.
- Under Article 13 of the Wildlife (Northern Ireland) Order 1985 (as amended) it is an offence to sell or transport any Schedule 7 animal dead or alive at any time.
- Any person who knowingly causes or permits an act which is made unlawful under Article 10 or Article 13 shall also be guilty of an offence.
- If there is evidence of Schedule 5 animals listed above at the site, all works must cease immediately and further advice must be sought from DoE Marine Environment Division [Klondyke Building, Cromac Avenue, Belfast BT7 2JA].
- Under the Wildlife (Northern Ireland) Order 1985 (as amended) a licence may be required for any operations which might impact on protected species.

European Protected Species:

- The applicant's attention is drawn to regulation 34 of The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), which states that it is an offence to deliberately¹ capture, injure or kill a wild animal of a European protected species included in Schedule 2 to these Regulations. This includes all species of dolphins, porpoises and whales and the marine turtle species: *Caretta caretta*, *Chelonia mydas*, *Lepidochelys kempii*, *Eretmochelys imbricata* and *Dermochelys coriacea*.

(1) It is also an offence to;

- (a) deliberately disturb such an animal while it is occupying a structure or place which it uses for shelter or protection;
- (b) deliberately to disturb such an animal in such a way as to be likely to;
 - (i) affect the local distribution or abundance of the species to which it belongs;

Coastal Development

- (ii) impair its ability to survive, breed or reproduce, or rear or care for its young; or
 - (iii) impair its ability to hibernate or migrate;
 - (c) deliberately take or destroy the eggs of such an animal;
 - (d) deliberately obstruct access to a breeding site or resting place of such an animal; or
 - (e) damage or destroy a breeding site or resting place of such an animal.
- (2) It is an offence for any person;
- (a) to have in his possession or control,
 - (b) to transport,
 - (c) to sell or exchange, or
 - (d) to offer for sale or exchange,
- any live or dead animal which is taken from the wild and is of a species listed in Annex IV(a) to the Habitats Directive, or any part of, or anything derived from, such an animal.
- If there is evidence of Schedule 2 animals listed above at the site, all works must cease immediately and further advice must be sought from DoE Marine Environment Division [Klondyke Building, Cromac Avenue, Belfast, BT7 2JA].
 - Under this legislation a licence may be required for any operations which might impact on protected species.

¹ Following two European Court of Justice cases (C-103/00 and C-221/04) "*deliberate actions are to be understood as actions by a person who knows, in the light of the relevant legislation that applies to the species involved, and the general information delivered to the public, that his action will most likely lead to an offence against a species, but intends this offence or, if not, consciously accepts the foreseeable results of his action*" http://jncc.defra.gov.uk/PDF/consultation_epsGuidanceDisturbance_all.pdf

Water & Drainage

Section Reference: WMU/PC/24420-1

Considerations

Water Management Unit has considered the impacts of the proposal on the surface water environment and on the basis of the information provided is content with the proposal subject to conditions.

Conditions

A detailed and comprehensive Construction Environmental Management Plan (CEMP) must be submitted to the Planning Authority, for consultation and agreement with NIEA Water Management Unit, at least eight weeks prior to the commencement of construction.

Reason: To ensure effective avoidance and mitigation measures have been planned for the protection of the water environment.

Explanatory Note

Due to the nature of the proposed works and the close proximity of the site to the water environment, care will need to be taken to ensure that polluting discharges do not occur, particularly during the works phase.

Where appropriate, Water Management Unit would encourage the use of SuDS (Sustainable Drainage System) techniques, particularly during the construction phase, to deal with site drainage.

If it is not possible to adequately manage construction phase site drainage using SuDS features, consent to discharge under the terms of the Water (Northern Ireland) Order 1999 will then be required.

Any proposed discharges not directly related to the construction of the development, such as from septic tanks or wash facilities, will also require separate discharge consent applications. The applicant should refer to in DOE Standing Advice Note No. 11 – Discharges to the Water Environment (April 2015), please see below.

In accordance with the Water Abstraction and Impoundment (Licensing) Regulations (Northern Ireland) 2006 (as amended) it is a mandatory requirement that upon the abstraction and/or diversion and/or impoundment of water from the natural river channel/lake, coastal or groundwater sources, an abstraction/impoundment license should be obtained unless the operations specified are Permitted Controlled Activities.

Informatives

The applicant will be required to adhere to the advice detailed in:

DOE Standing Advice Note No.4 – Pollution Prevention Guidance (April 2015)
http://www.planningni.gov.uk/index/advice/northern_ireland_environment_agency_guidance/standing_advice_4_pollution_prevention_guidance.pdf

DOE Standing Advice Note No.5 – Sustainable Drainage Systems (April 2015)
http://www.planningni.gov.uk/index/advice/northern_ireland_environment_agency_guidance/standing_advice_5_sustainable_drainage_systems.pdf

DOE Standing Advice Note No. 11 – Discharges to the Water Environment (April 2015)
http://www.planningni.gov.uk/index/advice/northern_ireland_environment_agency_guidance/standing_advice_11_discharges_to_the_water_environment.pdf

DOE Standing Advice Note No. 18 – Abstraction and Impoundment (May 2015)
http://www.planningni.gov.uk/index/advice/northern_ireland_environment_agency_guidance/standing_advice_18_abstractions_and_impoundments_issue_01_may_2015-2.pdf

Standing Advice Notes are available on the NI Planning Portal under Advice / NIEA Guidance / Standing Advice. Alternately the web address can be copied and pasted to a web browser.

Effective mitigation measures must be in place to protect the water environment and surrounding water bodies from any discharge into them that may damage ecological status and to ensure that the Water Framework Directive (WFD) objectives for the water body are not compromised nor the WFD objectives in other downstream water bodies in the same and other catchments.

The applicant should be informed that it is an offence under the Water (Northern Ireland) Order 1999 to discharge or deposit, whether knowingly or otherwise, any poisonous, noxious or polluting matter so that it enters a waterway or water in any underground strata. Conviction of such an offence may incur a fine of up to £20,000 and / or three months imprisonment.

The applicant should ensure that measures are in place to prevent pollution of surface or groundwater as a result of the activities on site, both during construction and thereafter.

Land, Soil & Air

Section Reference : LA01/2015/0342/F – Rathlin Harbour, Church Bay, Rathlin Island

Considerations

Waste Management (WM) (Land and Groundwater Team) notes that there are no records of previous potentially contaminating land uses on this application site or in the adjacent area (see attached map). The proposed development is therefore considered to be a low risk to the environment. WM would have no objection to any planning application subject to the recommended Conditions and Informatives as detailed below.

Conditions

Wording for proposed conditions concerning the management of land contamination are provided below and should you wish to discuss or have further clarity then do not hesitate to get in touch with the Waste Management (WM) (Land and Groundwater Team)

1. If during the development works, new contamination or risks are encountered which have not previously been identified, works should cease and the Department shall be notified immediately. This new contamination shall be fully investigated in accordance with the Model Procedures for the Management of Land Contamination (CLR11). In the event of unacceptable risks being identified, a remediation strategy shall be agreed with the Department in writing, and subsequently implemented and verified to its satisfaction.

Reason: Protection of environmental receptors to ensure the site is suitable for use.

2. After completing any remediation works required under condition 1 and prior to occupation of the development, a verification report needs to be submitted in writing and agreed with Department. This report should be completed by competent persons in accordance with the Model Procedures for the Management of Land Contamination (CLR11). The verification report should present all the remediation and monitoring works undertaken and demonstrate the effectiveness of the works in managing all the risks and achieving the remedial objectives.

Reason: Protection of environmental receptors to ensure the site is suitable for use.

Explanatory note

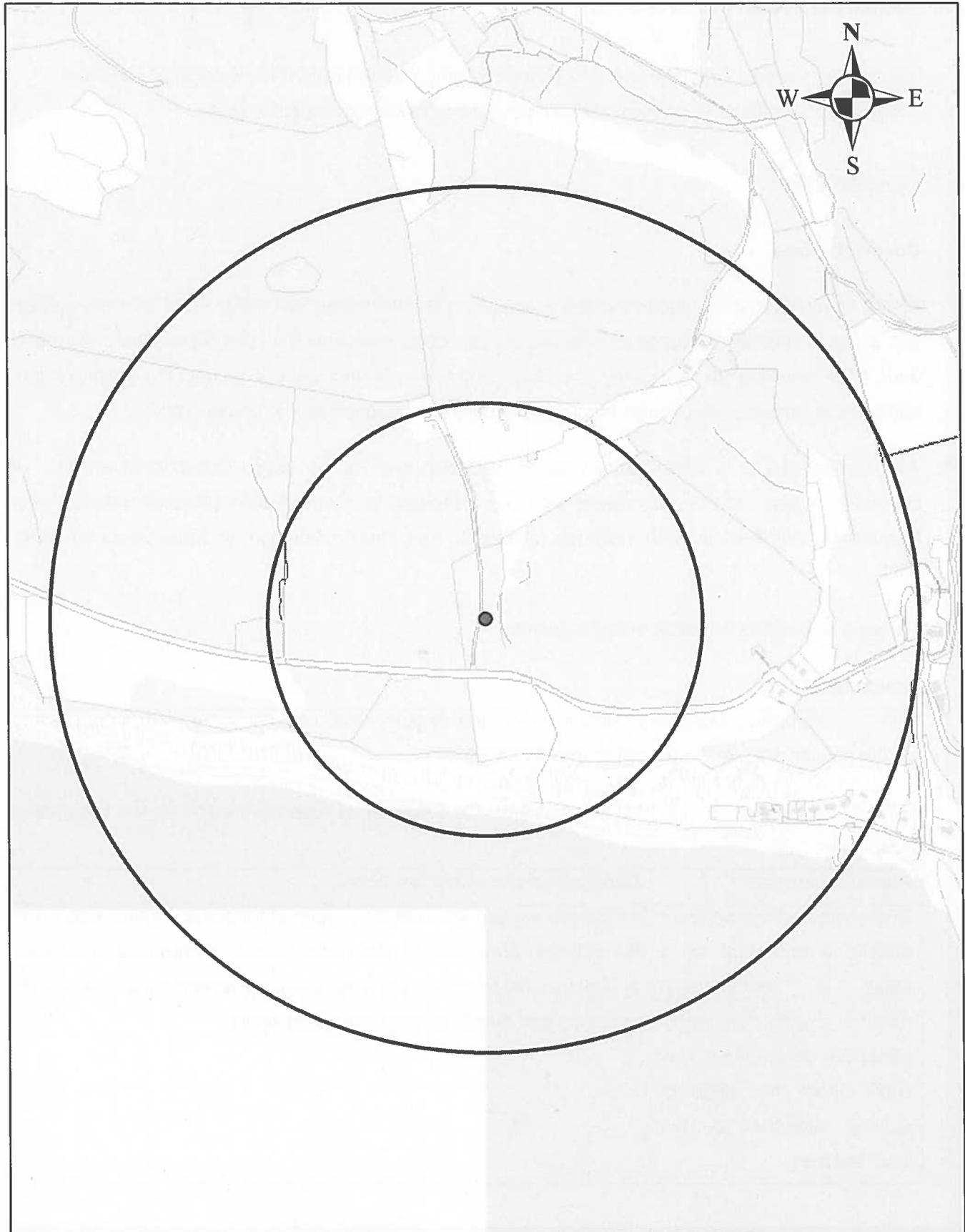
1. The priority of Waste Management (WM) Land and Groundwater Team in assessing this application is to consider the potential for contamination to be present at the site that could impact on environmentally sensitive receptors including groundwater and surface water. However, it should be noted that Causeway Coast and Glens Borough Council is the authoritative body with respect to environmental health matters and we would ask that you ensure they have an opportunity to comment on all relevant information.
2. NIEA's Historic Land Use Database is available to view and search through the SpatialNI website. Access is free of charge and subject to registration and acceptance of licence conditions for map layer NIEA – Land Use – Historic (INSPIRE View Service). It is therefore advised that the applicant further considers previous industrial land uses of the application site by searching the Land Use Database at the SpatialNI website: <https://www.spatialni.gov.uk/geoportal/catalog/main/home.page>.
3. WM notes that there are no records of previous potentially contaminating land uses on this application site or in the adjacent area (see attached map). The proposed

Land, Soil & Air

development is therefore considered to be a low risk to the water environment. WM would have no objection to any planning application subject to the recommended Conditions and Informatives as detailed.

Informatives

1. The purpose of Conditions 1 and 2 are to ensure that the site risk assessment and remediation work is undertaken to a standard that enables safe development and end-use of the site such that it would not be determined as contaminated land under the forthcoming Contaminated Land legislation i.e. Part 3 of the Waste and Contaminated Land Order (NI) 1997. It remains the responsibility of the developer to undertake and demonstrate that the works have been effective in managing all risks.
2. The applicant should ensure that the management of all materials onto and off this site are suitably authorised through the Waste Management Regulations (NI) 2006 and/or the Water Order (NI) 1999. This should be demonstrated through a Site Waste Management Plan (see <http://www.nibusinessinfo.co.uk/content/meet-construction-site-waste-management-plan-swmp-obligations>.)



An Agency within the Department of the
Environment
www.doeri.gov.uk



Northern Ireland
Environment
Agency
www.doeni.gov.uk/niea

Title: Land Use Database

Scale: 1:6,000

Drawn by: 1431485

Date: 09 July 2015

Description:

Land Use Database (250m & 500m buffer)

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Section Reference: CB22314-1

Natural Environment Division have considered this proposal with regard to Designated Sites and Other Natural Heritage Considerations and have the following comments to make.

Designated sites

Considerations

NED has considered the impacts of the proposal on Rathlin Island SAC/SPA. NED is of the opinion that a robust Habitats Regulations Assessment cannot be undertaken on the information provided to date. NED recommends that Causeway Coast and Glens District Council request the submission of additional information, as detailed below, to enable these assessments to be undertaken.

The application site is within Rathlin Island SAC/SPA and Rathlin Island Coast ASSI which is of international and national importance and are protected by Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as amended), and The Environment (Northern Ireland) Order 2002.

Please note that this is a desk based response.

Explanatory note

From the information available to NED it is clear that the proposal is not connected with, or necessary for, the conservation management of the N2K/ASSI site.

NED has considered the proposal and highlights the following as potential impacts on the designated sites;

Potential Impacts	Designated site considerations
Degradation of the adjacent aquatic environment as a result of contaminated runoff or directly from works within the designation. This could affect the range of species supported by the SAC features.	No details are provided on the proposed methods of construction or the pollution prevention or mitigation measures proposed to negate an adverse impact on the adjacent aquatic environment as a result of contaminated runoff generated or piling works.

Disturbance to SPA features during construction and operation. Loss of supporting habitat as a result of proposed works.	Consultation with NED Conservation Science – Ornithology Team - No SPA concerns from the proposal.
Direct loss of ASSI feature.	This is not present within the proposed red line boundary and is unlikely to be adversely impact by the proposal.

It is the view of NED that there is insufficient information to undertake a robust Habitats Regulations Assessment Rathlin Island SAC/SPA. The proposal is contrary to the Department's Planning Policy Statement 2: Natural Heritage, Policy NH 1 in that development would, if permitted, be likely to have a significant effect on the Rathlin Island SAC/SPA.

Therefore NED object to the proposal as required by 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).

NED considers the following information should be submitted;

A Construction Environmental Management Plan. This should include full details of the method of works including a pollution prevention plan, a water quality monitoring plan.

NED is content to be reconsulted following the submission of this information.

Other Natural Heritage Interests

Considerations

NED has considered the impacts of the proposal on other natural heritage considerations and is content with the proposal.



DOE

Department of
the Environment
www.doeni.gov.uk

Planning Response Team
Klondyke Building
Cromac Avenue
Gasworks Business Park
Lower Ormeau Road
Belfast
BT7 2JA
Tel: 028 9056 9604
Email: planningresponse.team@doeni.gov.uk

Date: 28 September 2015

Dear Sir/Madam

Planning Application Ref.: LA01/2015/0342/F
Location: Rathlin Harbour
Church Bay
Rathlin Island.
Proposal: New ferry ramp, berthing pier, car park area and associated bollards. Fendering system, lighting and road re-alignment at Rathlin Island Harbour. Proposed temporary compound area for site office and storage of materials and plant.

Thank you for your consultation on the above which was received by DOE on 28/08/2015

Our statutory duty is to ensure that the natural and historic environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.

We have reviewed the details of the application and would provide summary comments as follows (the full detailed response is attached):.

Archaeology and Built Heritage

Historic Buildings Unit acknowledges the letters of concern and support and remains content with the proposal with conditions.

Coastal Development

In response to the objection letters Marine Division has already highlighted the proximity to protected habitats and species. Marine Division have advised the applicant that given the proximity to seal haul out sites and because seals are protected under The Wildlife (Northern Ireland) Order 1985 (as amended) and The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland 1995 (as amended), appropriate mitigation must be in place during the construction phase to avoid any disturbance / injury or harm.

Natural Heritage and Conservation Areas

Natural Environment Division (NED) has considered the impacts of the proposal on Natural Heritage interests and on the basis of the information provided is content with the proposal.

If you wish to discuss anything raised in our response, please do not hesitate to contact Planning Response Team (details above).

Kind Regards

Planning Response Team

On behalf of DOE

Archaeology & Built Heritage

Section Reference: HB05 16 003

Considerations

The application site (LA01 2015 0342 F) is in proximity to St Thomas' Church. This is a Grade B+ listed building of special architectural and historic interest as set out in Section 80 and is protected under the Planning Act (NI) 2011. Historic Buildings Unit (HBU) a unit within DOE: HED acknowledge the letter of concern and support.

Historic Buildings Unit has considered the impact of the proposal on the building and on the basis of the information provided give the following advice:

- HBU acknowledge the letter of concern and support and is content with the proposal with conditions.

Explanatory note

The above comment is made to ensure the detailed design is in keeping with the listed building in terms of compliance with Policy BH11 (Development affecting the Setting of a Listed Building) of the Department's Planning Policy Statement 6: Planning, Archaeology and the Built Heritage.

Conditions

1. The proposed temporary compound area for site office and storage of materials and plant shall be limited to the proposed works contract period and the area of ground returned to its present state thereafter.

Reason – to ensure the proposal will not have an adverse effect on the setting of the listed building.

Informatives

Additional information/advice:

1. Planning Policy Statement 6 – Planning, Archaeology and the Built Heritage.

Coastal Development

In response to the objection letters Marine Division has already highlighted the proximity to protected habitats and species.

Marine Division have advised the applicant that given the proximity to seal haul out sites and because seals are protected under The Wildlife (Northern Ireland) Order 1985 (as amended) and The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland 1995 (as amended)), appropriate mitigation must be in place during the construction phase to avoid any disturbance / injury or harm.

As seals are protected under the Wildlife (Northern Ireland) Order 1985 (as amended) the applicant has been advised that a Wildlife Licence may also be required.

The Habitats Regulations Assessment which will be completed by the Council for this application will assess seabed disturbance. This HRA will assess impacts on the protected habitats within vicinity of the works.

The site does fall within Rathlin Island ASSI. Natural Environment Division will provide comment on the loss of ASSI features.

The haul-out sites are currently situated on the western side of the breakwater and also at Ruenarone, south of the harbour area.

Natural Heritage & Conservation Areas

Section Reference: CB 22314-3

Considerations

Natural Environment Division (NED) has considered the impacts of the proposal on natural heritage interests and, on the basis of the information provided, is content with the proposal.

Explanatory note

NED acknowledges receipt of the objection letter uploaded to the Planning Portal on 29 July 2015 and 18 August 2015.

NED's response dated 21 August 2015 still stands.

Please note that this is a desk based response.

Pre-Application Discussion – Request Pro-forma

Applicant Details		Agent Details (if any)	
Name: TRANSPORT NI Address: TRANSPORT PROJECTS CLARENCE COURT Postcode: BT2 8GB. Telephone: Email:		Name: CENTRAL PROCUREMENT DIRECTORATE – CONOR Address: CLARE MALLON HOUSE 303 AIRPORT RD, BELFAST Postcode: BT3 9ED Telephone: 90816027 Email: conor.mallon@dfpni.gov.uk	
Location of application site and ownership			
Address: RATHLIN ISLAND HARBOUR .			
Postcode:			
Grid Reference:		Ownership:	
Description of the proposed development (including <i>inter alia</i> the nature and purpose of the development and of its possible effects on the environment...)			
PROVISION OF OVERNIGHT BERTHING FACILITY FOR A NEW VEHICLE FERRY. WORKS INCLUDE PEDESTRIAN WALKWAY ACCESS ON METAL PILED STRUCTURE & MOORING PONTON WITH PILE GUIDES AND ACCESS RAMP & HARDSTANDING AREA			
Attached information			
<ul style="list-style-type: none"> • A site plan (scale 1:1250 or 1:2500) marked with the footprint of the proposed development (in red) and the limit of the land in the applicants ownership/control (in blue); • Photographs of the existing site; • Initial sketch drawings of the proposed development showing the nature and scale of the development; • Drawings/plans showing the potential constraints [trees, other vegetation, overhead wires, listed buildings etc...]; • Results of any preliminary consultation with neighbours, other authorities or statutory undertakers (as appropriate); • Other supporting information such as draft environmental statement; transport assessments or ecological surveys; evidence of community engagement (as appropriate); 			<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Disclosure of Information

Developers and applicants should be aware that information related to pre-application requests may be subject to requests under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004. The Act and Regulations provide for some exemptions from the need to disclose commercially sensitive information and in cases where applicants consider that specific information is exempt from the requirements of the Act or the regulations, the justification for their position should be provided to the local planning Department.

Status of Pre-application Advice

General advice obtained from the Department's website or indeed advice obtained through discussions with duty officers or through the pre-application discussion process does not bind the Department in making a formal decision at the regulatory stage, following public consultation with all interested parties and formal consultation with the local Council.

It is important to note therefore that all pre-application advice is given without prejudice to the formal consideration of a planning application as other information may arise from consultations, third party representations or policy changes during the regulatory determination process. Any variations from the general advice offered at the pre-application stage would be unusual.

Declaration

Signed

Cousin Waller

Dated

9/16/14

Return this form to your Local Area Planning Office: Contact details are available on the Departments website http://www.planningni.gov.uk/index/about/local_area_planning_offices.htm

Date: 19th February 2015
Your Ref:
Our Ref: E/2014/0203/PREAPP
(Please quote at all times)



Central Procurement Directorate
Clare House
303 Airport Road
Belfast
BT3 9ED

Northern Area Planning Office
Local Planning Division
Department of the Environment
County Hall
Castlerock Road
Waterside
Coleraine
BT51 3HS

Please contact: Alana Moyne
Direct Dial: 101

Dear Sir/Madam,

Location: Rathlin Island Harbour

Proposal: Provision of Overnight Berthing Facility for a New Vehicle Ferry. Works include a fixed walkway along the side of the existing breakwater and new mooring pontoon.

I refer to your pre-application discussion request received by this office on 14th October 2014 requesting pre-application advice for the above proposal.

As part of the pre-application process, the Department carried out screening and scoping consultations to assess the likely environmental impacts of the development to determine whether an Environmental Statement will be required to accompany a planning application under Schedule 2, Category 12(B) of The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2012.

NIEA Natural Heritage requires the following information to enable them to carry out a Habitats Regulations Assessment (HRA) before they can comment on the likely environmental impacts of the development.

- Detailed drawing plans clearly showing the scale of the rock armouring units to be laid, the area to be dredged, the location of the site compound and any welfare facilities.
- A Construction Environmental Management Plan detailing the method of works, including the proposed dredging and details of the method of disposal of dredged material, a pollution prevention plan and a water quality monitoring plan.

The Department are therefore unable, at this stage, to advise whether an Environmental Statement (ES) will be required to accompany a planning application. The information detailed above should be submitted with any planning application to enable Natural Heritage to complete a HRA before the Department can advise if an ES is necessary. No significant environmental concerns have been raised by any of the other consultees. A copy of all consultation responses have been attached for your information.

Current planning policy relating to development of this nature is contained within the following planning policy documents which are available to view at www.planningni.gov.uk

- Draft Northern Area Plan 2016 (DNAP 2016)
- Planning Strategy for Rural Northern Ireland (PSRNI)
- Planning Policy Statement 1 (PPS 1) General Principles
- Planning Policy Statement 2 (PPS 2) Natural Heritage
- Planning Policy Statement 6 (PPS 6) Planning, Archaeology & the Built Heritage

The application site is located on the harbour just outside of the settlement development limit of Church Bay on Rathlin Island. It is within the Antrim Coast & Glens Area of Outstanding Natural Beauty (AONB) and Church Bay Local Landscape Policy Area (LLPA). It is also within Rathlin Island Special Area of Conservation (SAC) and Special Protection Area (SPA) and the harbour falls within Rathlin Island Coast Area of Special Scientific Interest (ASSI). The site is adjacent to a known seal haul out site at the harbour. It is opposite the listed Saint Thomas' Church and is also affected by archaeological and monument sites.

A planning application will require an Archaeological Impact Assessment (AIA) which focuses on the sites and monuments record features of the area. Whilst the Department acknowledges the 1995 AIA which was submitted for planning application E/1995/0153/F, this will need to be updated and should contain the information detailed in the attached response from NIEA Historic Monuments Unit.

NIEA: Historic Buildings Unit will require detailed drawings indicating any building up of the land or rock armour and any structures i.e. security huts/fencing to be provided at the 'entrance' to the pontoon walkway.

In addition to the above, Natural Heritage recommend that if works will commence in March 2015, a specialist ornithologist should be employed to check for the possible presence of Black Guillemot as they breed in holes in harbour walls and ledges. The applicant should also consider mitigation to minimise the impact and disturbance to designated sites and protected species during both the construction and operation stage.

The Department would have no objections to the principle of the development, subject to submission of the above information to demonstrate that the proposed works will not have any significant environmental impacts upon protected species, the marine habitat, designated SPA, SAC and ASSI sites or upon archaeological sites or monuments in this sensitive area.

The Department would also make the applicant aware that all construction and/or deposition works below the Mean High Water Spring Tide (MHWST) mark are subject to licensing under the Marine and Coastal Access Act 2009 and the applicant should the Marine Licensing Team, DOE Marine Division, Level 6, Causeway Exchange, 1-7 Bedford Street, Belfast, BT2 7EG, Tel: 028 90823583 to apply for a Marine Construction Licence, a Marine Dredge Licence, and a Marine Disposal Licence.

It should be noted that this represents an informal opinion given in good faith by the Department of the Environment. While reasonable care is taken to ensure its accuracy, it does not constitute a formal determination by the Department. A formal determination on your enquiry can only be given following the submission of a planning application. Any planning application would be subject to public consultation with all interested parties and formal consultation with the local Council. This advice is given without prejudice to the formal consideration of a planning application as other information may arise as a result of consultations, including Council, third party representations, policy changes during the determination process etc. Should you have any queries regarding this letter, please contact this office.

Yours faithfully



for Area Planning Manager

Alana Moyne
Northern Area Planning Office
Local Planning Division
Department of the Environment
County Hall
Castlerock Road
Waterside
COLERAINE
Co. Londonderry
BT51 3HS

Date: 15 January 2015
Telephone: 028 905 69615
Your Ref: E/14/0203
Our Ref: 21660-2

Pre-application Enq

RE: Provision of overnight berthing facility for a new vehicle ferry. Works include pedestrian walkway access on metal piled structure and mooring pontoon with pile guides and access ramp and hard standing area.

Location: Rathlin Island Harbour

Dear Ms Moyne,

I refer to your consultation letter for the above planning application which was received in this office on 10 December 2014.

Position

Please note this is a desk based response.

The site lies within Rathlin Island Special Area of Conservation (SAC) and Special Protection Area (SPA) and Rathlin Island – Coast Area of Special Scientific Interest (ASSI).

NIEA, Natural Environment Division is required under the Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as amended) to undertake a Habitats Regulations Assessment (HRA) on this proposal. We have been unable to carry out a HRA on the basis of the information provided.

We would require the following information in order to assess the proposed development:

1. Detailed drawing plans clearly showing the scale of the rock armouring units to be laid and the area to be dredged. These drawing should also show the location of the site compound and any welfare facilities.
2. If works will commence in March 2015 NIEA Conservation Science - Ornithology Team recommend a specialist ornithologist be employed to check for the possible presence of Black Guillemot as they breed in holes in harbour walls and ledges. Correspondence from the applicant states they would be willing to employ a specialist, please define the role and responsibilities of such a specialist during the construction phase.



3. A Construction Environmental Management Plan will be required. This should include full details of the method of works including the proposed dredging and details on method of disposal of dredged material, a pollution prevention plan and a water quality monitoring plan.

4. NIEA Marine Division should be reconsulted on this proposal.

Yours sincerely

Development Management Team



An Agency within the Department of the
Environment
www.deem.gov.uk



INVESTOR IN PEOPLE

NIEA: Historic Monuments Unit
Waterman House
5-33 Hill Street
Belfast
BT1 2LA

Planning Service Ref: E/2014/0203/PREAPP
NIEA: HMU Ref: SM11/1 ANT 1:23
Site: Berthing facility, Rathlin Island Harbour
Date: 11/02/2015

Please also see our comments regarding this application dated 05/11/2014.

NIEA: Historic Monuments Unit (NIEA: HMU) has reviewed the 1995 Archaeological Impact Assessment (AIA) for E/1995/0153. NIEA: HUM would require the AIA to be updated. The AIA should consist of a detailed overview of the likely impact of development on Rathlin Harbour. This should include a desktop survey of the site, making use of any relevant information held in the Monuments and Buildings Record, historic maps of the area, information of archaeological sites, monuments and artefacts held by the Ulster Museum, consultation of the excavation database, and any other relevant sources.

NIEA: HMU agrees with the broad Mitigation Measures outlined in Section 7.5. The updated AIA should present a mitigation strategy, to include preservation of archaeological remains in situ, for any other, previously unrecorded archaeological remains that may exist at the application site and may only be identified in the course of site preparation works. The mitigation strategy should also make provisions for works that may be necessary after the field work is completed. This should include post-excavation processing and analysis of the archaeological material retrieved, preparation of specialist reports etc. and the preparation of a final report, all this should be in line with PPS 6 Policy guidelines.

Issued on behalf of

NIEA: Historic Monuments Unit



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Environment
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PLANNING RESPONSE

Planning Ref: E 2014 0203 PreApp
NIEA Ref: HB 05/16/003

Address: Rathlin Island Harbour
Subject: Provision of Overnight Berthing Facility for a new ferry vehicle. Works include pedestrian walkway access on a metal piled structure and mooring pontoon with pile guides and access and and hardstanding area.

Date Consulted: 20th Oct 2014
Date of Response: 10th Nov 2014

The access to the pontoon is positioned directly opposite the Saint Thomas' (Church of Ireland) Church, therefore, the **HBU** (unit of NIEA:HED) would require additional information before a clear assessment can be made under the Department's Planning Policy Statement 6: Planning, Archaeology and the Built Heritage.

Please provide further detailed drawings relating to;

1. The creation of the built up land area and its rock armour.
2. Clarity to be provided if any structures (security huts and/or fencing) is to proposed at the 'entrance' to the pontoon walkway.

HBU reserve the right to comment further to the proposed scheme design upon receipt of the above information.

Due to the importance of this Built Heritage site we would also refer to our colleagues in the Historic Monuments Unit for their comment on this application.

Issued on behalf of
NIEA: Historic Environment Division



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Marine Division

Level 6
Causeway Exchange
1-7 Bedford Street
Town Parks
Belfast
BT2 7EG
Telephone: 02890 823549
Email: marinedivision.inforequests@doeni.gov.uk

30 January 2015

CONSULTATION RESPONSE

Application Reference	E/2014/0203/PREAPP
Proposal	Provision of Overnight Berthing Facility for a New Vehicle Ferry. Works include pedestrian access walkway fixed to side of existing breakwater, new access gangway and new mooring pontoon.
Location	Rathlin Island Harbour
Date Consulted	15/01/2015
Reply Due By	05/02/2015

Having considered the further information supplied, the DOE Marine Division has no objections in principle in relation to the proposed development but offer the following comments:

The applicant has submitted revised drawings to those submitted with the original planning application on 17th October 2014. The revised works as per Drawing No. 504293NI/GA1, now involve the construction of an area of new rock armouring adjacent and above existing breakwater and also the relocation of the access gangway to the mooring pontoon. In addition, we note that the applicant also intends to dredge an area to a max level of 1.0m in the vicinity of the mooring pontoon. The intention to dredge was not detailed in the drawing in the original application.

As outlined in the DoE Marine Division response on 28th October 2014, the applicant must be made aware that all construction and/or deposition works below the Mean High Water Spring Tide (MHWST) mark are subject to licensing under the **Marine and Coastal Access Act 2009**. As such the applicants must contact the Marine Licensing Team, DOE Marine Division, Level 6, Causeway Exchange, 1-7 Bedford Street, Belfast, BT2 7EG, Tel: 028 90823583 to apply for;

- A Marine Construction Licence;
- A Marine Dredge Licence; and
- A Marine Disposal Licence.

The applicant should be aware that it is an offence under the **Marine and Coastal Access Act 2009** to carry out a licensable marine activity except in accordance with a marine licence

granted by the DoE Marine Division. Conviction of such an offence may incur a fine of up to £50,000 and/or two years imprisonment.

The applicant has stated that the preferred option will not require any piling; we request that a construction method statement is submitted to the Department prior to works commencing.

It is recommended that the applicant or its agent consults the Northern Ireland Environment Agency, Water Management Unit, in respect of any required authorisation to discharge storm water or foul sewage.

While Rathlin Island SAC should not be negatively impacted from this development, within Northern Ireland marine mammals are protected throughout their range by national legislation and by a number of international regulations. This includes marine mammals such as the grey and common seals and all cetacean species. Given the location of this project and because of the large numbers of seals present on Rathlin Island, it is recommended that the informatives detailed below are attached to any permission granted.

INFORMATIVES

European Protected Species:

The applicant's attention is drawn to regulation 34 of The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), which states that it is an offence to deliberately capture, injure or kill a wild animal of a European protected species included in Schedule 2 to these Regulations. This includes all species of dolphins, porpoises and whales and the marine turtle species: *Caretta caretta*, *Chelonia mydas*, *Lepidochelys kempii*, *Eretmochelys imbricata* and *Dermochelys coriacea*.

(1) It is also an offence to;

- (a) deliberately disturb such an animal while it is occupying a structure or place which it uses for shelter or protection;
- (b) deliberately to disturb such an animal in such a way as to be likely to;
 - (i) affect the local distribution or abundance of the species to which it belongs;
 - (ii) impair its ability to survive, breed or reproduce, or rear or care for its young; or
 - (iii) impair its ability to hibernate or migrate;
- (c) deliberately take or destroy the eggs of such an animal;
- (d) deliberately obstruct access to a breeding site or resting place of such an animal; or
- (e) damage or destroy a breeding site or resting place of such an animal.

(2) It is an offence for any person;

- (a) to have in his possession or control,
 - (b) to transport,
 - (c) to sell or exchange, or
 - (d) to offer for sale or exchange,
- any live or dead animal which is taken from the wild and is of a species listed in Annex IV(a) to the Habitats Directive, or any part of, or anything derived from, such an animal.

Any person who knowingly causes or permits an act which is made unlawful under any of these provisions shall also be guilty of an offence.

If there is evidence of Schedule 2 animals listed above at the site, all works must cease immediately and further advice must be sought from DoE Marine Division, level 6, Causeway exchange, 1-7 Bedford Street, Belfast BT2 7EG. Telephone: 028 90823367.

Under this legislation a licence may be required for any operations which might impact on protected species.

Schedule 5 Species – Wildlife Order:

The applicant's attention is drawn to Article 10 of the Wildlife (Northern Ireland) Order 1985 (as amended), under which it is an offence to intentionally or recklessly kill, injure or take any wild animal included in Schedule 5 to the Order. This includes the common seal (*Phoca vitulina*), grey seal (*Halichoerus grypus*), basking shark (*Cetorhinus maximum*), angel shark (*Squatina squatina*), common skate (*Dipturus batis*) short snouted sea horse (*Hippocampus hippocampus*), spiny seahorse (*Hippocampus guttulatus*), spiny lobster (*Palinurus elaphus*) and fan mussel (*Atrina fragilis*).

Under this regulation it is an offence to intentionally or recklessly disturb; common seals, grey seals or basking sharks.

It is also an offence to intentionally or recklessly damage or destroy, or obstruct access to, any structure or place which these animals (Schedule 5*) use for shelter or protection; damage or destroy anything which conceals or protects any such structure; or disturb any such animal while it is occupying a structure or place which it uses for shelter or protection.

Under Article 13 of the Wildlife (Northern Ireland) Order 1985 (as amended) it is an offence to sell or transport any Schedule 7 animal dead or alive at any time **.

Any person who knowingly causes or permits an act which is made unlawful under any of these provisions shall also be guilty of an offence.

If there is evidence of Schedule 5 animals listed above at the site, all works must cease immediately and further advice must be sought from DoE Marine Division, level 6, Causeway exchange, 1-7 Bedford Street, Belfast BT2 7EG. Telephone: 028 90823367.

Under the Wildlife (Northern Ireland) Order 1985 (as amended) a licence may be required for any operations which might impact on protected species.

*Common skate and angel sharks in respect to article 10 (1) only and within 6 nautical miles of coastal water only.

**Schedule 7 species includes all Schedule 5 species listed above, with the exception of the common skate and angel shark. Sea urchin is protected under Schedule 7 only.

Issued on behalf of
Damian Campbell
Director of Marine Division

Ms Alana Moyne
Northern Area Planning Office
Local Planning Division
Department of the Environment
County Hall
Castlerock road
Coleraine
BT51 3HS

04 February 2015

Dear Ms Moyne

RE: proposed overnight mooring Rathlin Island Harbour (E/2014/0203/preapp)

The RSPB is Europe's largest voluntary nature conservation organisation and is supported by over 1 million members, 13 000 of which reside in Northern Ireland (NI). As such we thank you for sending the above named consultation through to us for comment (E/2014/0203/preapp).

Due to the location of the proposal within the Rathlin Island Special Protection Area (SPA)¹, we recommend continued consultation with the Northern Ireland Environment Agency (NIEA), as a Habitats Regulation Assessment (HRA) will need to be conducted. Therefore as much information as possible regarding the exact footprint of works² and the timing and phasing of works should be provided at this preliminary stage.

Potential pollution pathways should be indicated and how these will be managed during both the constructional and operational phases. We would expect waste issues to also be considered, i.e. how will dredged material be disposed of. Additional drawings and photographs would also be useful to provide site context regarding the proposed location of additional armour protection and walkways.

Although the HRA is focused on the protection of European nature conservation designations, we would also recommend that the Rathlin Island Area of Special Scientific Interest (ASSI)³ is considered within the application, as it appears to be potentially impacted upon by the proposal.

We note from previous communications regarding the case that a Construction Environmental Management Plan (CEMP) has been committed to by the applicant. Without prejudice we would support this as a request by the Department for any approval, to help ensure adequate mitigation for potential impacts on both sites and species during both construction and operation.

We also note that it is unclear whether piling is or isn't required but it is referred to in the title of the planning application. We recommend that if piling is no longer deemed a requirement of the application, that this be corrected.

¹ [Rathlin Island SPA](#)

² [Data Unit](#)

³ [Rathlin Island ASSI](#)

There are of course opportunities within development for biodiversity. For instance, roosting sites have been provided for black guillemots⁴ in Warrenpoint harbour; a project which brought together several organisations to resolve a development versus nature issue. We would encourage such options to be investigated by the applicant/agent.

Please do not hesitate to contact the Assistant Conservation Officer with any related queries.

Yours sincerely

**Assistant Conservation Officer
RSPB Northern Ireland**

⁴ [Newry and Mourne District Council](#)

Alana Moyne
Northern Area Planning Office
County Hall
Castlerock Road
Waterside
COLERAINE
Co. Londonderry
BT51 3HS

10 February 2015

Your Ref: E/2014/0203/PREAPP
Our Ref: WMU/PC/ 23494-1

Dear Alana Moyne

Type: PS - PAD.

RE: Provision of overnight berthing facility for a new vehicle ferry. Works include pedestrian access walkway fixed to side of existing breakwater, new access gangway and new mooring pontoon.

Location: Rathlin Island Harbour

The response from the Water Management Unit (WMU) of Northern Ireland Environment Agency (NIEA) to the above planning application is as follows:-

Where appropriate, the storm drainage of the site serving both the construction and operational phases of the proposal should be designed to the principles of Sustainable Drainage Systems (SuDS) in order to minimise the polluting effects of storm water on waterways.

Construction of SuDS should comply with the design and construction standards as set out in the Construction Industry Research and Information Association (CIRIA) manual C697. A separate site handbook (C698) for the construction of SuDS has also been produced by CIRIA.

If it is not possible to adequately manage construction phase site drainage using SuDS features, consent to discharge under the terms of the Water (Northern Ireland) Order 1999 will then be required.

An application form for consent to discharge site drainage under the Water (NI) Order 1999 can be obtained by contacting NIEA WMU at the above address, or by visiting our web site at:

http://www.ni-environment.gov.uk/water-home/regulation_of_discharges_industrial/industrial_and_private_sewage_2.htm

Please be advised that applications for discharge consent take a minimum of four months to determine.

Should there be a requirement to discharge foul sewage as a result of this proposal, the applicant should provide WMU with full details as to how it is proposed to dispose of this effluent.

The applicant must identify all relevant Pollution Prevention Guidelines (PPG) and must adhere to the precepts contained within these. These can be obtained at:

http://www.netregs.org.uk/library_of_topics/pollution_prevention_guides/all_ppgs.aspx

Relevant PPG documents will include but may not be limited to PPG 1, 2, 5, 6, 21 & 22

WMU would like to highlight the requirements of the Control of Pollution (Oil Storage) Regulations (Northern Ireland) 2010 which are now in effect. These relate to the storage of any oils (as defined by the regulations). A key requirement of the Regulations is that oil storage containers over 200 litres (fixed or mobile) must have a secondary containment system (of 110% capacity) as defined by the regulations (a bund, which is an outer wall or enclosure designed to contain the contents of an inner tank, or a drip tray) to ensure that any leaking oil is contained and does not enter the aquatic environment.

- The Regulations create new standards for above Oil Storage facilities in industrial, commercial and Institutional sectors.
- Make provision for the need for secondary containment of 110% all types of oil stored in containers over 200 litres.
- Compliance immediately for all new all new oil storage facilities installed after 20th March 2011.
- Compliance immediately for oil storage facilities that existed prior to 20th March 2011 of those located within 10m of a waterway OR 50m of a well, spring or borehole.
- Compliance by 31st December 2015 for all remaining oil storage facilities.

NIEA WMU's Pollution Prevention Team must be consulted about any work to be conducted in; near or liable to affect any waterway, including groundwater, in order to agree a method statement with the contractors prior to the commencement of any works. This should be reflected in the Earthworks Assessment. This should reflect all mitigation measures identified to prevent pollution of the water environment during the operational or maintenance phase of a project. Such measures must be in place prior to the commencement of any works and should be incorporated in method statements.

Works method statements should as a minimum:

- Identify the perceived risks to a waterway e.g. from suspended solids, cement, concrete, grout, wash-out areas and hydrocarbons including fuels or oils
- Identify potential pollution pathways
- Mitigation measures will be employed to minimise the risk of pollution to any waterway (as defined by the Water (NI) Order 1999) e.g.
 1. Use of settlement systems for settlement of suspended solids from site drainage
 2. To prevent pollution by fuel/oil from leaking machinery there must be regular inspections (twice daily) of machinery working near any waterway. This also should be reflected in the Earthworks Assessment
 3. Safe refuelling, handling and storage practices for earth stockpiles and secondary containment for chemicals, oil, fuels etc
 4. Emergency spill procedures should be addressed and inclusion of the NIEA hotline 0800 80 70 60

NIEA WMU's Pollution Prevention team strives to reduce the number of water pollution incidents and the impact of human activities on the environment. The team will be happy to offer proactive advice appropriate to the circumstances/works project to ensure appropriate mitigation measures are in place during both construction and operational phase.

NIEA WMU request that notification is given to the DOE Marine Environment Division, Causeway Exchange, 1-7 Bedford Street, Town Parks, Belfast, BT2 7EG, of all proposed works that will occur within 50 metres of the Mean High Water Spring tide mark, including pipe outfalls



that terminate within this zone. This notification is necessary in order to determine if a Marine Licence is required.

Marine issues in Northern Ireland are now undertaken by the Department of Environment's Marine Environment Division which control construction/deposition or removal of materials below the Mean High Water Spring tide mark, under Part 4 (Marine Licensing) of the Marine and Coastal Access Act 2009. DOE Planning should contact the DOE Marine Environment Division regarding this proposal, if not already done so.

Effective mitigation measures must be in place to protect the water environment and surrounding water bodies from any discharge into them that may damage ecological status and to ensure that the Water Framework Directive (WFD) objectives for the water body are not compromised nor the WFD objectives in other downstream water bodies in the same and other catchments.

The applicant should be informed that it is an offence under the Water (Northern Ireland) Order 1999 (as amended) to discharge or deposit, whether knowingly or otherwise, any poisonous, noxious or polluting matter so that it enters a waterway or water in any underground strata. Conviction of such an offence may incur a fine of up to £20,000 and / or three months imprisonment.

**Issued on behalf of NIEA
Water Management Unit**



Waste Management (WM)**Planning application no:** E/2014/0203/PREAPP**WM file Ref:** PLAN 1 4441

Proposal: Provision of Overnight Berthing Facility for a New Vehicle Ferry. Works include pedestrian walkway access on metal piled structure and mooring pontoon with pile guides and access ramp and hardstanding area

Site location: Rathlin Island Harbour**Date of response:** 15/12/2014**Consultee response:** Final Substantive Reply Interim Reply**Summary:**

Given there were no records of previous potentially contaminating land uses on this application site, and the proposed development of an Overnight Berthing Facility, WM recommend that an Environmental Statement and / or risk assessments are not required.

Supporting comments:

The priorities of Waste Management (WM) Land and Groundwater Team in assessing this application is to consider the potential for contamination to be present at the site that could impact on environmentally sensitive receptors including groundwater and surface water. However, it should be noted that Moyle District Council is the authoritative body with respect to environmental health matters and we would ask that you ensure they have an opportunity to comment on all relevant information.

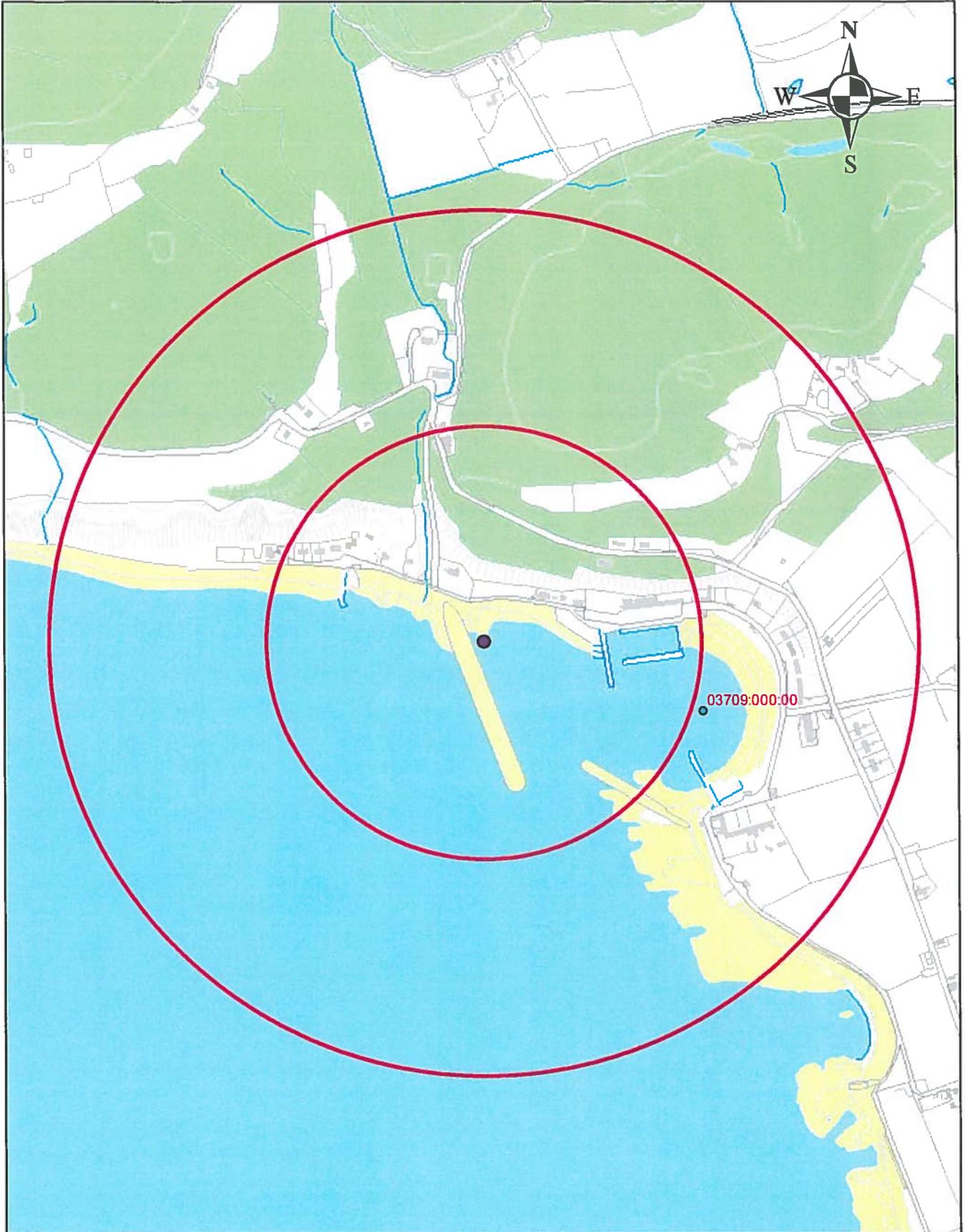
WM's Historic Land Use Database is now available to view and search through the SpatialNI website. Access is free of charge and subject to registration and acceptance of licence conditions for map layer NIEA – Land Use – Historic (INSPIRE View Service). WM Unit Land and Groundwater Team would therefore direct all enquiries regarding historical land use to the Land Use Database at the SpatialNI website: <https://www.spatialni.gov.uk/geoportal/catalog/main/home.page>

The NIEA has no record of the previous land-uses on this application site but it is possible that industrial activities at the adjacent sites may impact this application area – see attached records from the Land Use Database held by NIEA. Records in this database are provided on a “without prejudice” basis as the data has not been verified. **Given there were no records of previous land uses on this application site and the proposed development of an Overnight Berthing Facility, WM recommend that an Environmental Statement and / or risk assessments are not required.**

The applicant should note that the Planning Act (NI) 2011 is introducing reforms to the Northern Ireland planning system and transferring the majority of planning functions to the new district councils in April 2015. **The new system is intended to ensure all necessary information is provided at the outset of the application process to support more efficient and effective development management.**

Reference should be made to the Planning Reform consultation located at:
http://www.planningni.gov.uk/index/news/news_releases/planning_reform_consultation.htm

Issued on behalf of the Waste Management



An Agency within the Department of the
Environment
 www.doeni.gov.uk



Northern Ireland
Environment
 Agency

Title: Land Use Database

Scale: 1:6,000

Drawn by: 1431485

Date: 15 December 2014

Description:

Land Use Database (250 & 500m buffer)

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Infrastructure Planning
Westland House
Old Westland Road
Belfast
BT41 6TE

Tel: 028 90354813 Ext 20646
www.niwater.com



Northern Area Planning Office
Local Planning Division
Department of the Environment
County Hall
Castlerock Road
Waterside
Coleraine
BT51 3HS

Your Ref:
E/2014/0203/PREAPP
Our Ref:

Date: 20 October 2014

Dear Sir / Madam

PLANNING CONSULTATION REFERENCE – E/2014/0203/PREAPP

NI Water would advise as follows –

This proposed development will have no major impact on existing NI Water infrastructure. Please note the following:

- An existing public combined sewer crosses this site. The applicant will be required to contact NIW at an early design stage to discuss the location of the proposed development in order that it does not conflict with existing NIW infrastructure.

Yours faithfully

Alan Moore
Infrastructure Planning



Department of
**Culture, Arts
and Leisure**

www.dcalni.gov.uk

Your reference E/2014/0203/PREAPP
Our reference TC/ENV
Date: 21.10.14.

AN ROINN
Cultúr, Ealaíon
Agus Fóillíochta

MÁNNYSTRIE O
Fowkgates, Airts
An Aisedom

DCAL Inland Fisheries
Group
Causeway Exchange
1-7 Bedford Street
Belfast B15 1AQ

**Planning Application Number - E/2014/0203/PREAPP – Overnight
Berthing Facility - Rathlin Island Harbour**

The nature and location of the proposed development is noted. DCAL is satisfied that there should be little or no direct impact to salmonid and inland fisheries interests provided that all conditions are applied and enforced. The applicant should also be made aware that it is an offence under section 47 of the Fisheries (NI) Act 1966 to cause pollution which is subsequently shown to have a deleterious effect on fish stocks.

**Faithfully,
Fisheries Operations and Technical Support
Inland Fisheries Group
DCAL**

Fisheries & Climate Change
Aquaculture and Fish Health



Department of
**Agriculture and
Rural Development**

www.dardni.gov.uk

www.planningni.gov.uk

Room 426, Dundonald House
Upper Newtownards Road
Belfast
BT4 3SB

Application Reference;
E/2014/0203/PREAPP

30TH OCTOBER 2014

PROPOSED OVERNIGHT BERTHING FACILITY

TO WHOM IT MAY CONCERN,

DARD FISHERIES have no issues or concerns to raise from an aquaculture aspect, but we would like to remind the applicant that;

It is an offence under Article 47 of the Fisheries Act (NI) 1966 to cause pollution which is subsequently shown to have a deleterious effect on fish stocks.

Yours Sincerely,
Fisheries Division
DARD



INVESTOR IN PEOPLE

If you have a hearing difficulty you can contact
the Department via the textphone on 028 9052 4420

An Roinn Talmhaíochta agus Forbartha Tuaithe
Mánnystrie o Fairms an Kintra Fordèrin

transportni

Planning Application Consultation Response

Application Ref:	E / 2014 / 0203 / PREAPP
Proposal	Provision of Overnight Berthing Facility for a New Vehicle Ferry. Works include pedestrian walkway access on metal piled structure and mooring pontoon with pile guides and access ramp and hardstanding area
Location	Rathlin Island Harbour
Date of Consultation	17/10/14
Date of Response	23/10/14

TransportNI has no objections to this proposal.

Case Officer: Terry McKinney

Signed:

Adam Quigley, SPTO
Dev. Control Engineer

Signed:

Cathal Brown, PPTO
Network Planning Manager

Issued on behalf of Development Control Section



ENVIRONMENTAL HEALTH & ENFORCEMENT SECTION

CONSULTATION RESPONSE IN RESPECT OF PLANNING APPLICATION

Ref No:	E/2014/0203/PREAPP
Proposal:	Provision of Overnight Berthing Facility for a New Vehicle Ferry. Works include pedestrian walkway access in metal piled structure and mooring pontoon with pile guides and access ramp and hardstanding area.
Location:	Harbour Church Bay, Rathlin Island, Ballycastle
Date Consulted:	17 th October 2014
Date of Response:	28 th October 2014

The Environmental Health Department has considered this application and has no objection in principle to the above proposed development.

Issued on behalf of

Environmental Health Department
Moyle District Council



**northernireland
tourist board**

PLANNING CONSULTATION RESPONSE

Planning Application Number: E/2014/0203/PREAPP

Proposed Development: Provision of Overnight Berthing Facility for a New Vehicle Ferry. Works include pedestrian walkway access on metal piled structure and mooring pontoon with pile guides and access ramp and hard standing area

Location: Rathlin Island Harbour

Date: 4th December 2014

This response is provided further to EPIC consultation dated 17th October 2014.

NITB is always keen to see the provision of new tourism products and facilities and upgrades to existing facilities – such as a new vehicle ferry and associated facilities – as these can help to enhance the visitor experience within destinations. NITB provided part funding of £51,648 towards capital works at Rathlin Harbour in 2010 for improvements to the public realm around the harbour. This included improved pedestrian and vehicle access, car parking, new fencing, railings, interpretation and landscaping. These works have enhanced Rathlin Harbour improving the visitor experience and visual attractiveness of the area.

Rathlin Island is a key tourist destination within Northern Ireland and forms part of the Causeway Coast and Glens 'key tourism area', as identified in the outcome of a consultation on a Tourism Strategy for Northern Ireland¹. The Strategy states that these 'key tourism areas' should be developed and managed in such a way that they enhance the tourism offer and increase spend from visitors while conserving the area's natural heritage and cultural assets.

If you have any further queries, please feel free to contact me.

Kind regards

Ruth Morgan
r.morgan@nitb.com
028 90 441589

Northern Ireland Tourist Board, St Anne's Court, 59 North Street, Belfast BT1 1NB
Telephone: +44 (0) 28 9023 1221 Textphone: +44 (0) 28 9044 1522 Fax: +44 (0)28 9024 0960

Corporate website: nitb.com

Consumer website: discovernorthernireland.com

The Northern Ireland Tourist Board is an Equal Opportunities Employer.
Chairman: Howard Hastings Chief Executive: Alan Clarke



Marine Division
2nd Floor Klondyke Building
Cromac Building
Belfast
BT7 2JA

Telephone: (028) 90569222
Email: joanne.hanna@doeni.gov.uk

Reference: MC R/105/15

Date: 18th November 2015

Application for dredging at sea (ML 135/15) and disposal at sea (ML 136/15) – Rathlin Harbour

Dear Cara,

I have assessed both the dredging and disposal applications and the associated HRAs for each aspect of the work.

Currently there is a separate HRA for dredging, disposal and then harbour works. The HRA should cover all aspects of the project on land, intertidal area and the marine environment; there should not be multiple HRAs for separate aspects of the project. I therefore recommend that the dredging and disposal HRAs are assessed within the main HRA carried out by AMEY on behalf of the applicant – Transport NI.

Seals are the most notable marine feature which may be impacted, but as set out in the HRA completed by AMEY it is not considered that this disturbance would have a significant impact on the Maidens SCI of which grey seals are a site selection feature. Seals are not a site selection feature of Rathlin Island SAC.

However, in addition to designated sites, marine mammals are afforded protection throughout their range through the following nature conservation legislation:

1. The Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 (as amended); and
2. The Wildlife (Northern Ireland) Order 1985 (as amended)

This includes marine mammals such as cetaceans and seals, both of which are present around Rathlin Island. There are significant seal haul-out sites at the breakwater where works are proposed, there is also another haul-out within Church Bay. Under these Regulations it is an offence to kill, injure, capture or **disturb** these species. Given the location and nature of the proposed work, Marine Conservation and Reporting team advise that the informatives below should be attached to any license granted.

It is advisable that throughout the construction period measures are in place to prevent disturbance or injury to marine mammals, particularly seals. For example, during the proposed dredging work it is recommended that the applicant carries out a visual inspection to ensure no marine mammals are in the western section of the harbour prior to and when dredging activities are taking place. Depending on the mitigation which is put in place, a wildlife licence may or may not be required.

During the construction phase, additional mitigation will be required but this will not be required for these initial works.

Regards,

Joanne Hanna

Marine Conservation & Reporting Team

Yours sincerely,

Joanne Hanna
Marine Conservation & Reporting

Informatives

Schedule 5 Species – Wildlife Order:

- Article 11 of the Wildlife (Northern Ireland) Order 1985 (as amended) provides that a person shall not be guilty of an offence under Article 10 (killing or injuring a species listed in schedule 5(as amended)) if the act was incidental to a lawful operation (i.e. activity permitted by a Marine Licence or Planning Permission) and could not reasonably be avoided. A separate marine Wildlife Licence is therefore not required for national marine protected species if a Marine Licence/Planning Permission has been granted, since adherence to the conditions of the Marine Licence should reduce the likelihood of harm to national marine protected species.

AND

- Under Article 10 it is an offence to intentionally or recklessly disturb; common seals, grey seals or basking sharks.
- It is also an offence under Article 10 to intentionally or recklessly damage or destroy, or obstruct access to, any structure or place which these animals (Schedule 5) use for shelter or protection; damage or destroy anything which conceals or protects any such structure; or disturb any such animal while it is occupying a structure or place which it uses for shelter or protection.
- Under Article 13 of the Wildlife (Northern Ireland) Order 1985 (as amended) it is an offence to sell or transport any Schedule 7 animal dead or alive at any time.
- Any person who knowingly causes or permits an act which is made unlawful under Article 10 or Article 13 shall also be guilty of an offence.
- If there is evidence of Schedule 5 animals listed above at the site, all works must cease immediately and further advice must be sought from DoE Marine Division [Klondyke Building, Cromac Avenue, Belfast BT7 2JA].
- Under the Wildlife (Northern Ireland) Order 1985 (as amended) a licence may be required for any operations which might impact on protected species.

European Protected Species:

- The applicant's attention is drawn to regulation 34 of The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended), which states that it is an offence to deliberatelyⁱ capture, injure or kill a wild animal of a European protected species included in Schedule 2 to these Regulations. This includes all species of dolphins, porpoises and whales and the marine turtle species: *Caretta caretta*, *Chelonia mydas*, *Lepidochelys kempii*, *Eretmochelys imbricata* and *Dermochelys coriacea*.
 - (1) It is also an offence to;
 - (a) deliberately disturb such an animal while it is occupying a structure or place which it uses for shelter or protection;
 - (b) deliberately to disturb such an animal in such a way as to be likely to;
 - (i) affect the local distribution or abundance of the species to which it belongs;
 - (ii) impair its ability to survive, breed or reproduce, or rear or care for its young; or
 - (iii) impair its ability to hibernate or migrate;
 - (c) deliberately take or destroy the eggs of such an animal;
 - (d) deliberately obstruct access to a breeding site or resting place of such an animal; or
 - (e) damage or destroy a breeding site or resting place of such an animal.
 - (2) It is an offence for any person;
 - (a) to have in his possession or control,
 - (b) to transport,
 - (c) to sell or exchange, or
 - (d) to offer for sale or exchange,any live or dead animal which is taken from the wild and is of a species listed in Annex IV(a) to the Habitats Directive, or any part of, or anything derived from, such an animal.
- If there is evidence of Schedule 2 animals listed above at the site, all works must cease immediately and further advice must be sought from DoE Marine Division [Klondyke Building, Cromac Avenue, Belfast, BT7 2JA].
- Under this legislation a licence may be required for any operations which might impact on protected species.

ⁱ Following two European Court of Justice cases (C-103/00 and C-221/04) “deliberate actions are to be understood as actions by a person who knows, in the light of the relevant legislation that applies to the species involved, and the general information delivered to the public, that his action will most likely lead to an offence against a species, but intends this offence or, if not, consciously accepts the foreseeable results of his action” http://jncc.defra.gov.uk/PDF/consultation_epsGuidanceDisturbance_all.pdf

Minutes from Meeting

Meeting Title:

Rathlin ES

Meeting Organiser:

Cara Lavery

Meeting Location:

NIEA, Klondyke building, Ormeau Road

Start Date:

30/11/15

End Date:

30/11/15

Objective:

Agree content and scope of HRA and Environmental Statement for Rathlin harbour

Attendees

Sinead Campbell (SC) – SES

Helen Craig (HC) – Amey

Invited:

Lee Jones (LJ) – CDP

Andrew Warwick (AW) – Amey

Cara Lavery (CL) – DoE Marine Licence Dept

Conor Mallon (CM) – CPD

Joanne Hanna (JH) – DoE marine licence dept

Lisa Bartlett (LB)- TNI

Joe Breen (JB) - NIEA

Attendees

Those Absent Column 1

Those Absent Column 2

Absent:

Minutes

Agenda item:

Introduction

Presenter: Conor Mallon

Discussion:

Scope of works

Conclusions: n/a

Action items

1. N/A

Owner

Enter Name

Due Date

dd/mm/yy

2. Action to be done

Enter Name

dd/mm/yy

Agenda item:

HRA

Presenter: Helen Craig

Discussion:

Screening HRA report and scope of updated HRA to be submitted for planning

- DoE and SES requested detailed construction methodology to be included in the HRA.
- Combined HRA to include dredging and disposal HRAs.
- JB raised the consultation for Rathlin to become a Marine Conservation Zone and that one of the key factors for this designation is the population of black guillemots. Currently the consultation documents for the MCZ are being finalised, the documents show the location of the habitat features and where black guillemots nest, location of butterflyfish populations.
- SC raised the issue of where the qualifying features of the SAC are located, JB confirmed that the qualifying features of sandbanks and reefs are not located in the area proposed for development. Sandbanks located at Mill Bay. In the harbour area the sea bed is mud and sand.
- SC raised the issue of the SPA bird qualifying features **and that HRA didn't mention all the features, needed updated.**
- JB raised the issue of the disposal of the dredge material. CM stated that the material would be disposed at Ballycastle, JB confirmed that this location would not affect the qualifying features of the SAC.

Agenda item:

HRA

Presenter: Helen Craig

- CL and JH raised the issue of disturbance to seals and porpoises from piling works. Stated that construction works would require a licence under the Wildlife Order. HRA to include mitigation measures for piling disturbance, reference JNCC piling guidance. Timing of works to avoid breeding season for seals. DoE requested detailed construction methodology to be submitted to them.
- Mitigation measures to include PPGs, response plan and notifications.

Conclusions: What conclusions were drawn (if any)**Action items****Owner****Due Date**

- | | | |
|---|---------|----------|
| 1. NIEA to supply location of the sandbanks and reefs, black guillemots populations to Amey | JB/NIEA | 04/12/15 |
| 2. HRA updated with dredging/disposal/habitat locations/bird features/mitigation measures
Detailed construction methodology to be submitted to DoE | HC | 11/12/15 |

Agenda item:

Scope of ecology chapter in ES

Presenter: Helen Craig**Discussion:** Scope of ecology chapter and mitigation measures.

- JB raised the issue of seals in the harbour area and at area of proposed site. Timing of works coincides with breeding season, DoE request that no significant piling occurs in May/June, piling to use soft start up measures, marine mammal observer to ensure no seals are near works. Also suggested that acoustic deterrent measures be used at mouth of harbour to prevent mammals entering the harbour.
- SC raised the issue of non native invasive species, to include measures to prevent slipper limpet and Crepidula. Biosecurity measures to be included in ES and HRA.
- HC raised issue of knowing locations of nest sites and haul out areas. NIEA have information on GIS, to be provided to Amey for inclusion in ES chapter. Also RSPB should provide information on bird species.
- DoE requested that nesting boxes for black guillemots be considered in the design and included in the harbour. Black guillemots not likely to be in breakwater. CPD to consider and add to contract documents.
- Night time lighting to be discussed as detailed design progresses, likely to be LED lights in harbour wall and 2 columns in car park.
- Landscape issues to be discussed with John Lennon in NIEA.
-

Conclusions: What conclusions were drawn (if any)**Action items****Owner****Due Date**

- | | | |
|---|-------|----------|
| 1. Include biosecurity measures in HRA/ES | HC | 11/12/15 |
| 2. NIEA to supply habitat and species information to Amey | CL/JH | 11/12/15 |
-

Causeway Coast and Glens
Local Planning Office
County Hall
Castlerock Road
Coleraine
BT51 3HS

4 November 2015

To whom it may concern,

RE: Intent to submit Environmental Statement (ES) for proposed ferry ramp, berthing pier, car park area and associated bollards at Rathlin Island Harbour (LA01/2015/0342/F)

The RSPB is Europe's largest voluntary nature conservation organisation and is supported by over 1 million members, 13 000 of which reside in Northern Ireland (NI). As such we thank you for informing us of the applicant's intent to submit an Environmental Statement (ES) for the above named location. The following response combines our recommendations as to what the ES should contain, with advice on data sources and site surveys.

In the first instance we recommend contacting the RSPB data unit¹, as well as the British Trust for Ornithology (BTO)². An up to date history of breeding birds in the area should help to indicate if bird surveys are necessary and the level required for the proposal. The National Biodiversity Network Gateway (NBN)³ can also be accessed from our website.

We expect the ES to provide sufficient information to allow assessment of the impacts of the proposed development on the environment, in accordance with The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2015 (the EIA Regulations)⁴. Specific matters to be dealt with are listed below.

1. Site Designations

We advise the applicant contacts the Northern Ireland Environment Agency (NIEA) for the most up to date information on both statutory⁵ and non-statutory nature conservation designations, and to view the relevant Area Plans.

¹ [Data](#)

² [BTO](#)

³ [NBN](#)

⁴ [EIA](#)

⁵ [NIEA](#)

2. Analysis

The ES must provide an assessment of the possible impacts of the development on the environment. These possible impacts should include, *inter alia* direct impacts, effects due to disturbance and indirect impacts.

The direct, physical impacts on the development should be addressed, including:

- direct land-take by structures
- disruption of hydrology
- works associated with the construction of the development, including vegetation and soil removal and storage, borrow pits, temporary compounds etcetera
- Disturbance/Habitat Exclusion/Displacement: The development proposal may exclude birds, fish and marine mammals through producing noise, creating a physical or perceptual barrier, resulting in avoidance, and consequent exclusion from food resources
- Sedimentary Processes and Pollution: Degradation of the quality of the surrounding marine environment (contaminated run off waters). Seabirds and other marine wildlife are sensitive to contamination by oil-based compounds.

Disturbance effects could arise in each phase of the development – construction, operation and decommissioning. Possible causes of disturbance are noise, vibration, dust, and the physical presence of construction equipment and the presence of personnel associated with construction and site security. The RSPB's concern centres on whether disturbance factors would result in birds being forced to relocate to sub-optimal habitats.

Indirect impacts may include:

- Introduction of invasive species through development
- Indirect impacts: to birds, fish and marine mammals due to habitat loss for prey, depletion, displacement or aggregation of prey.

The above possible adverse impacts may be applied to a range of birds (including the seabird features of ASSIs, SPAs and pMPZ), both breeding and non-breeding populations. Impacts may occur during installation, operation, decommissioning and routine maintenance operations.

We expect the EIA to consider the impacts to the local populations of Black Guillemots, a feature of the proposed Rathlin Island Marine Protection Zone (pMPZ), as there is potential for nesting sites for Black Guillemots along the breakwater. Under the Wildlife (NI) Order 1985 (as amended)⁶ all birds, their nests and eggs are protected by law. It is an offence to injure, kill or take any wild bird; take, damage or destroy the nest of any wild bird whilst it is in use or being built; to do the same to the eggs of any wild bird; to disturb any wild bird while it is nest building, or in or near to a nest with

⁶ <http://www.legislation.gov.uk/nisi/1985/171/contents>

eggs or young, or to disturb the dependant young of such a bird. The Department of the Environment Marine Division should be consulted for more information relating to the pMPZ.

Measures to protect against the introduction and spread of non- native invasive species should be included in the assessment. Marine invasives such as the slipper limpet (*Crepidula fornicata*) or carpet sea squirt (*Didemnum vexillum*) can be dispersed through vectors within the marine construction process and may be harmful to the marine environment if facilitated. The colonisation of marine invasive species to this area would pose a serious ecological threat to the Rathlin Island SPA/SAC and future proposed MCZ . We suggest that measures to mitigate against anthropogenic spread of marine invasive species should be included within the EIA and be made a specific requirement within the Habitat Management Plan.

Potential pollution pathways should also be indicated and how these will be managed during both the constructional and operational phases. We would expect waste issues to also be considered, i.e. how will dredged material be disposed of.

We note that a Construction Environmental Management Plan (CEMP) has been committed to by the applicant. Without prejudice we would support this as a request by the Department for any approval, to help ensure adequate mitigation for potential impacts on both sites and species during both construction and operation.

3. Mitigation, enhancement and monitoring

Once sufficient information is available to conclude whether the development will have impacts on the site, adverse or otherwise, the ES should outline mitigation measures as appropriate.

The RSPB advocates *no loss of biodiversity* to development, through appropriate mitigation and compensation where necessary. Finally, we would encourage suggestions on enhancing the biodiversity of the development site and its vicinity and would welcome the opportunity to discuss such concepts with the developer. For instance, roosting sites have been provided for black guillemots⁷ in Warrenpoint harbour; a project which brought together several organisations to resolve a development versus nature issue. A similar project was carried out in Bangor Marina in association with the BTO, Action for Biodiversity and the then Ards Borough Council⁸. We would encourage such options to be investigated by the applicant/agent.

A monitoring plan should be put in place to monitor the ornithological interests of the site. The RSPB is of the opinion that any survey and monitoring results should be published.

The RSPB reserves the right to make further representations in relation to this matter.

Please do not hesitate to contact the Assistant Conservation Officer with any related queries.

⁷ [Newry and Mourne District Council](#)

⁸ <http://www.bto.org/national-offices/ireland/what-we-do/black-guillemot>



Yours sincerely

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The Maritime Consultants



Rathlin Ferry Replacement Project

Rathlin Ferry – Replacement Project

Existing Vehicle Ferry

Proposed New Ferry

Design – A (for comparison)

Design – B

Design – C

Design – D

Summary

Existing Vehicle Ferry

M.V. Canna

- Built in 1975 (39 years old) and approaching end of life.
- UK Class VI(A) Passenger Vessel
- Principal Particulars
 - Length - 24.00m
 - Breadth - 6.40m
 - Draught - 1.37m
- Capacity
 - Passengers - 140 (27 winter)
 - Vehicles - 6 cars

Proposed New Ferry

Requirements

- Provide at least the same level of service as M.V. Canna
- Comply with current regulations – EU Passenger Ship Directive

Constraints

- Inner Harbour
- Separation of passengers and vehicles

Other Factors

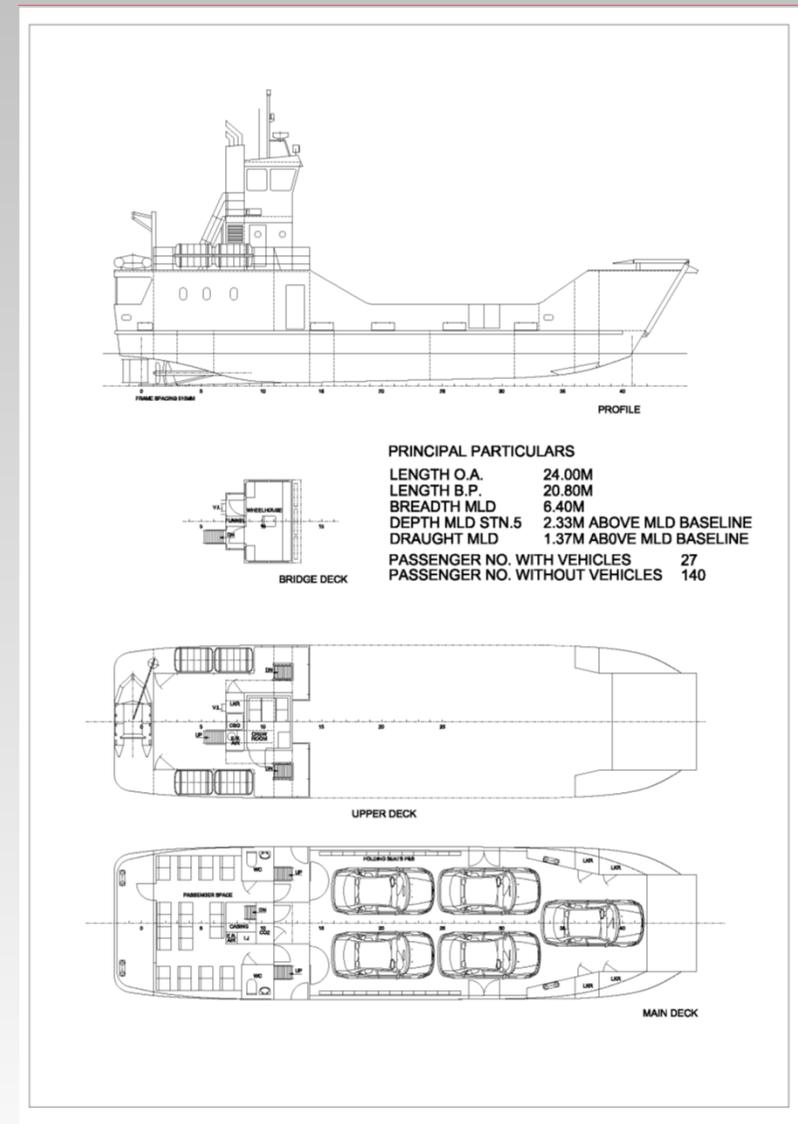
- Rules & Regulations for vessels up to 24m load line length
- Operating costs
- Crew requirements

Design – A (for comparison)

Like for Like Replacement

- Design very similar to M.V. Canna
- EU Class C Passenger Vessel
- Principal Particulars
 - Length - 24.00m
 - Breadth - 6.40m
 - Draught - 1.37m
- Capacity
 - Passengers - 140/27*
 - Vehicles - 5/6 cars

*passenger numbers limited to 27 if any vehicles are being carried.



General Arrangement - A

Design – A (for comparison)

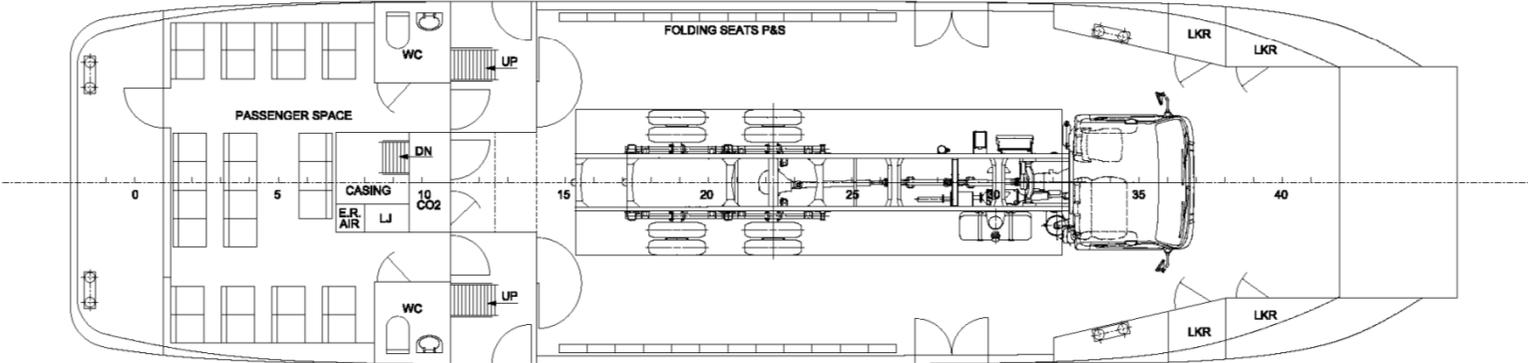
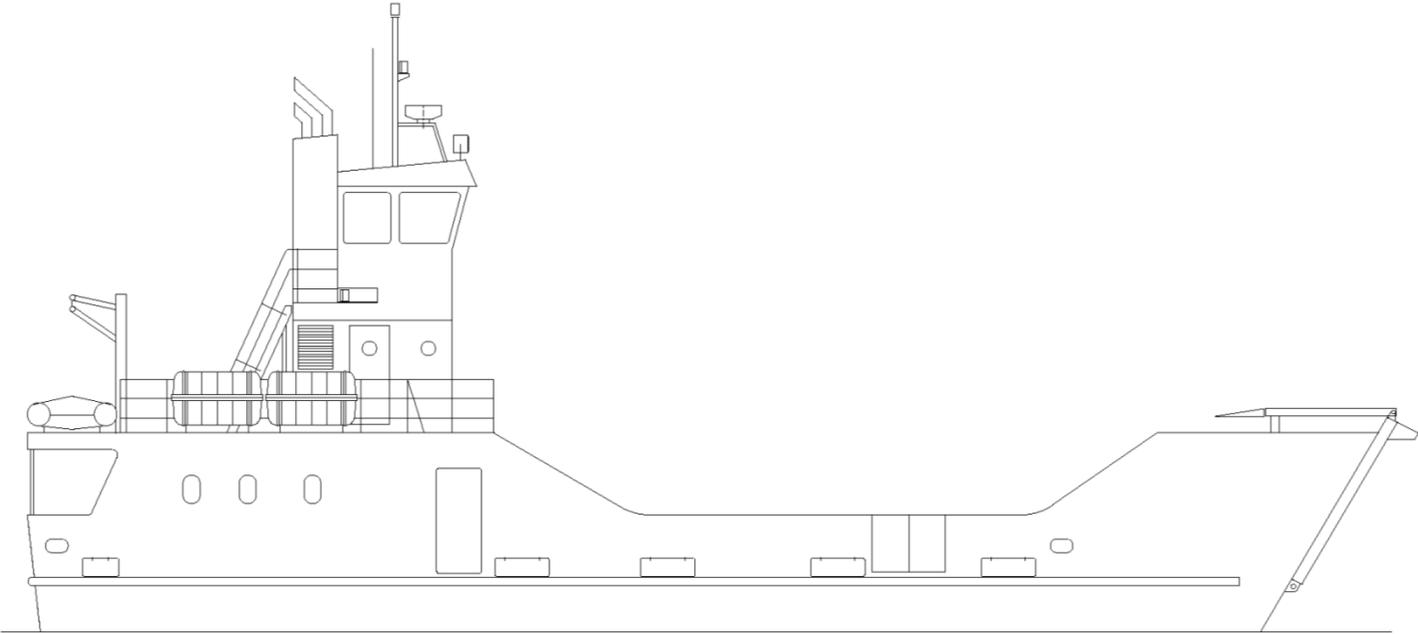
Advantages

- Meet current Rules & Regulations
- Can use the existing slipways at Rathlin & Ballycastle.
- Can moor overnight in the inner harbour.

Disadvantages

- Due to changes in regulations, passenger numbers are limited to 27 when vehicles are carried.
- Would not be able to provide the same level of service as M.V. Canna.

Design – A (for comparison)

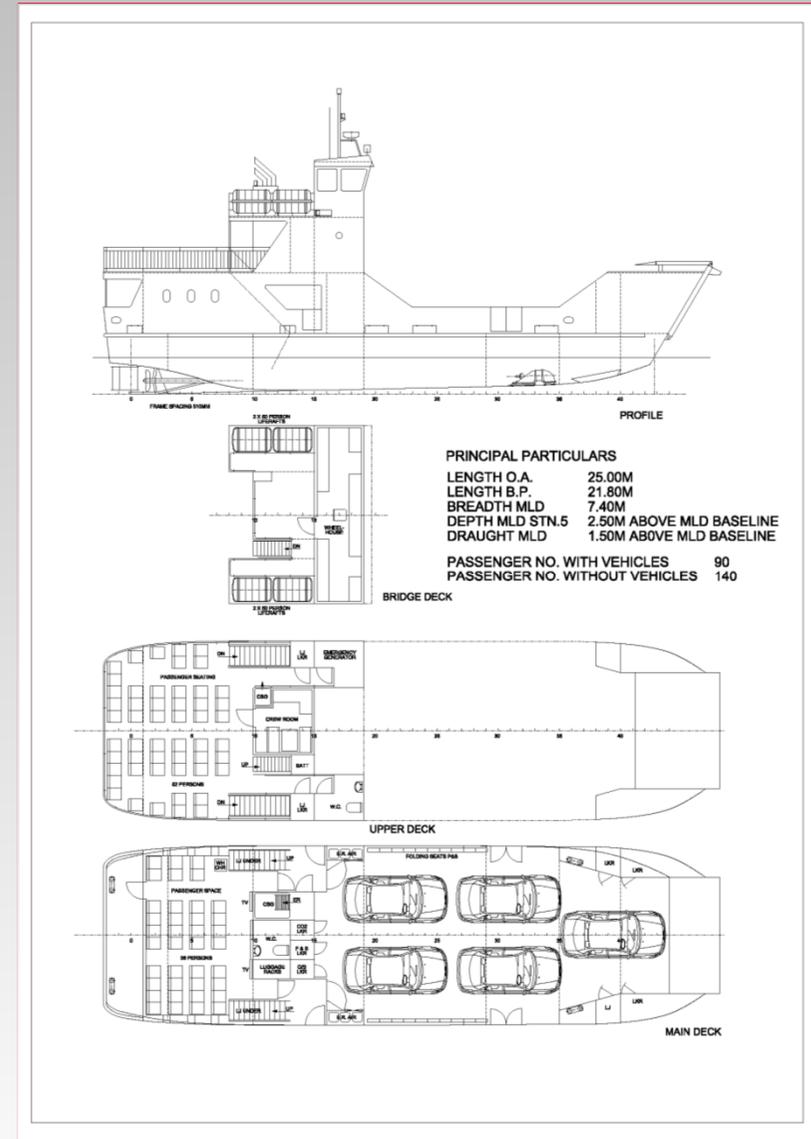


Design - B

Maximum for inner harbour

- Similar to M.V. Canna but with a slight increase in length and breadth
- EU Class C Passenger Vessel
- Principal Particulars
 - Length - 25.00m
 - Breadth - 7.40m
 - Draught - 1.5m
- Capacity
 - Passengers - 140/90*
 - Vehicles - 5/6 cars

*passenger numbers limited to 90 if any vehicles are being carried.



General Arrangement - B

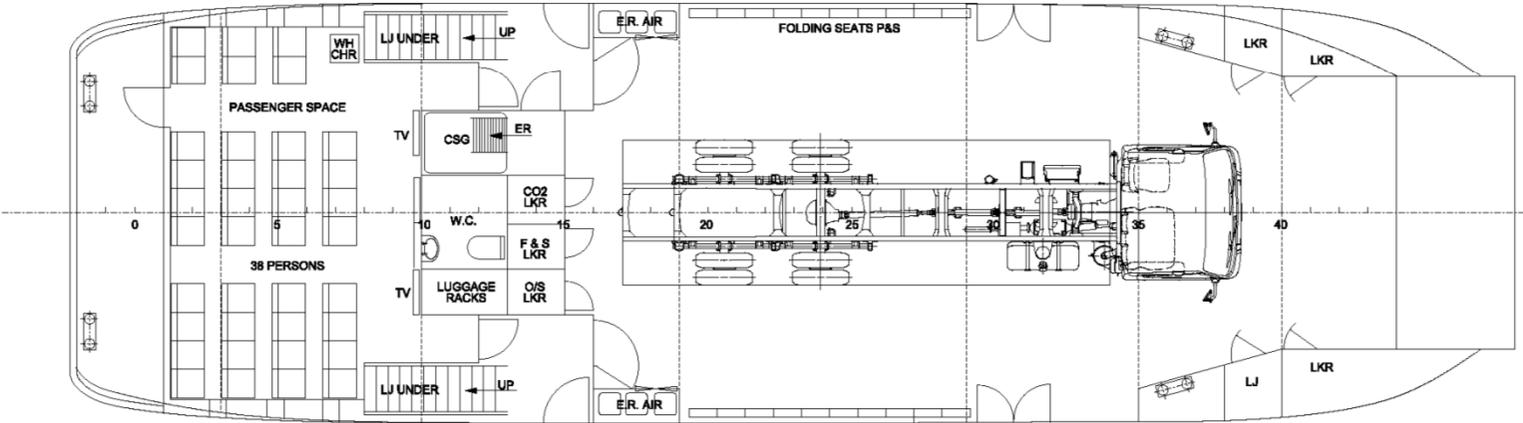
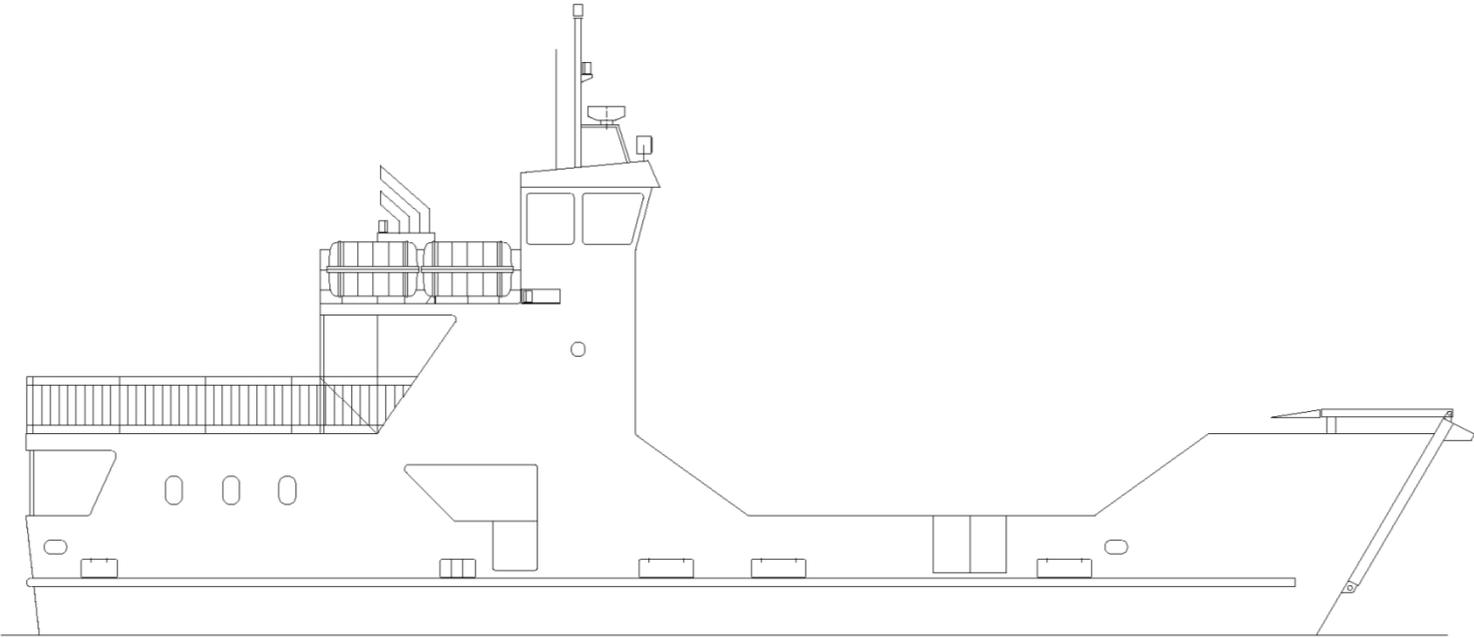
Advantages

- Meet current Rules & Regulations
- Can use the existing slipways at Rathlin & Ballycastle.
- Should be able to moor overnight in the inner harbour.
- Additional 11 seats inside.
- No winter passenger restriction.
- 90 Passengers & 5/6 cars can be carried at the same time.
- Slight increase in vehicle ramp size and deck area compared with M.V. Canna.

Disadvantages

- Due to changes in regulations, passenger numbers are limited to 90 with one or more vehicles.
- Would be able to provide the same level of service as M.V. Canna on 99% of crossings.
- Some crossings during peak visitor times would not be able to take vehicles.

Design - B



Design - C

Larger Bow Loading Design

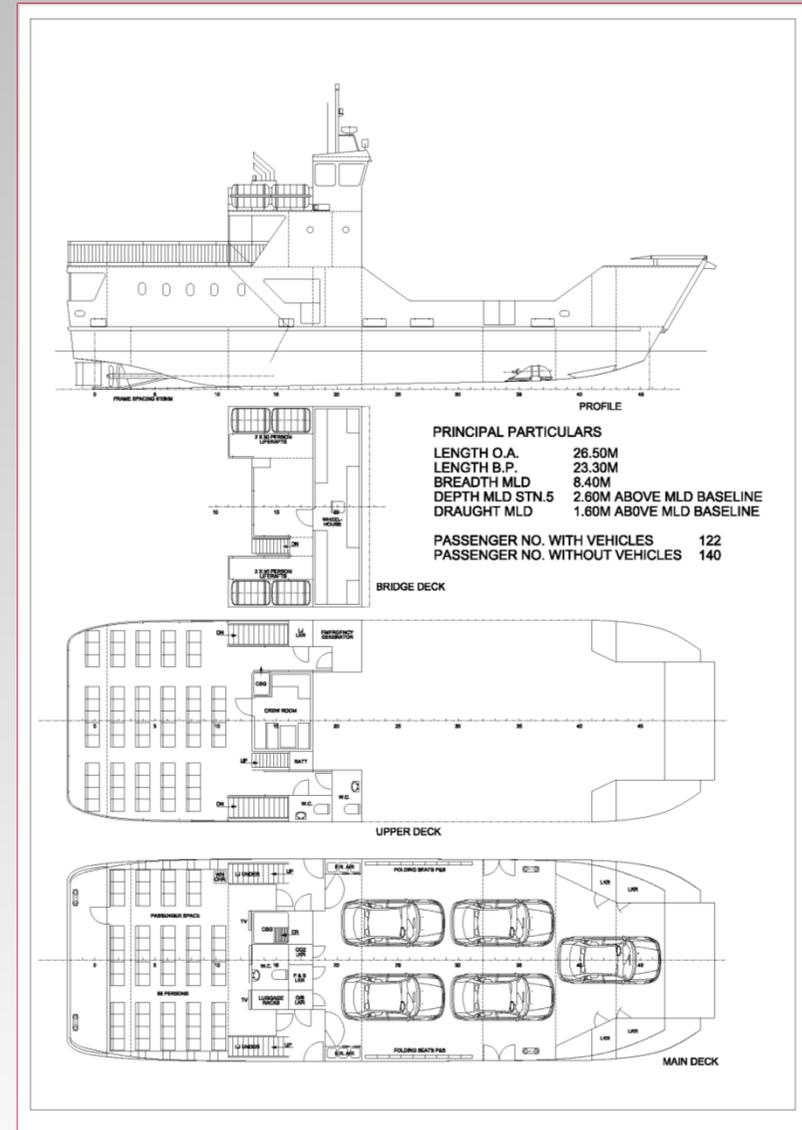
- Bow loading EU Class C Passenger Vessel
- Vessel length increased to 24m load line length
- Breadth and draft also increased to maximise capacity.

- Principal Particulars

Length	-	26.50m
Breadth	-	8.40m
Draught	-	1.6m

- Capacity

Passengers	-	140/122
Vehicles	-	5/6 cars



General Arrangement - C

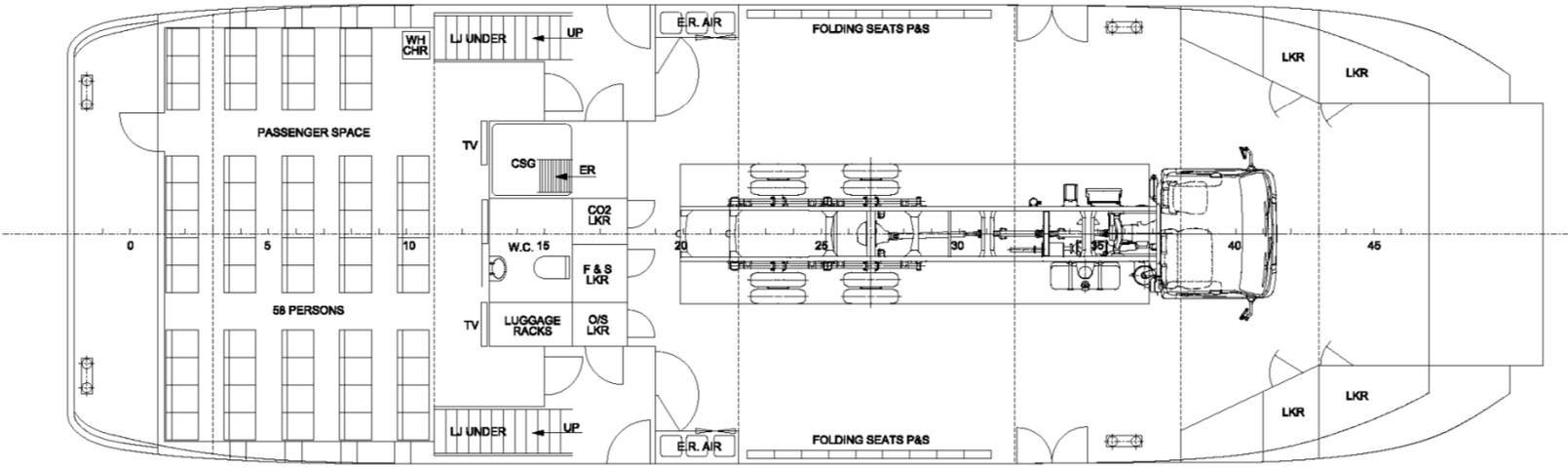
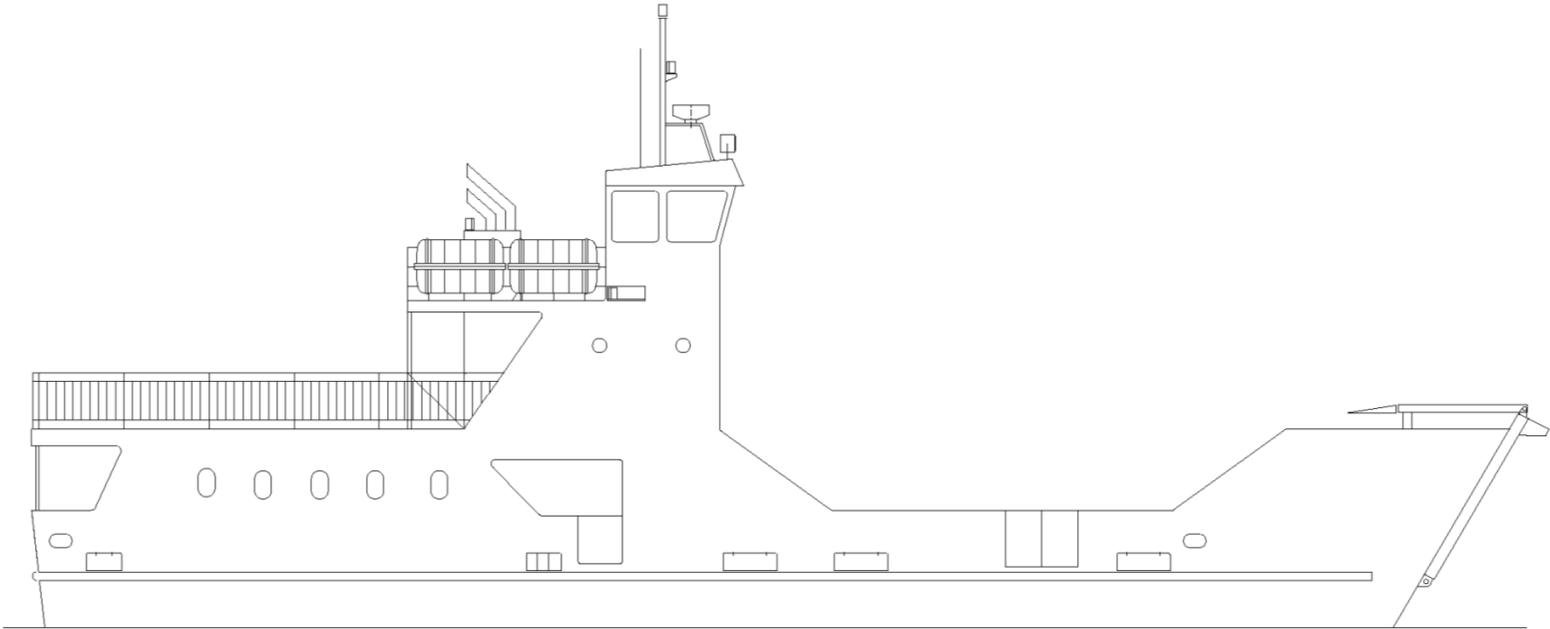
Advantages

- Meet current Rules & Regulations
- Can use the existing slipways at Rathlin & Ballycastle.
- Additional 31 seats inside.
- No winter passenger restriction.
- 122 Passengers & 5/6 cars can be carried at the same time.
- Increased vehicle ramp size and deck area for large cargo.
- Provides the same level of service as M.V. Canna

Disadvantages

- Would require a new mooring in Rathlin due to increased dimensions.
- Increase in operating cost (fuel).

Design - C



Design - D

Larger Stern Loading Design

- Stern loading EU Class C Passenger Vessel
- Vessel length increased to 24m load line length
- Breadth and draft also increased to maximise capacity.

- Principal Particulars

Length - 25.65m

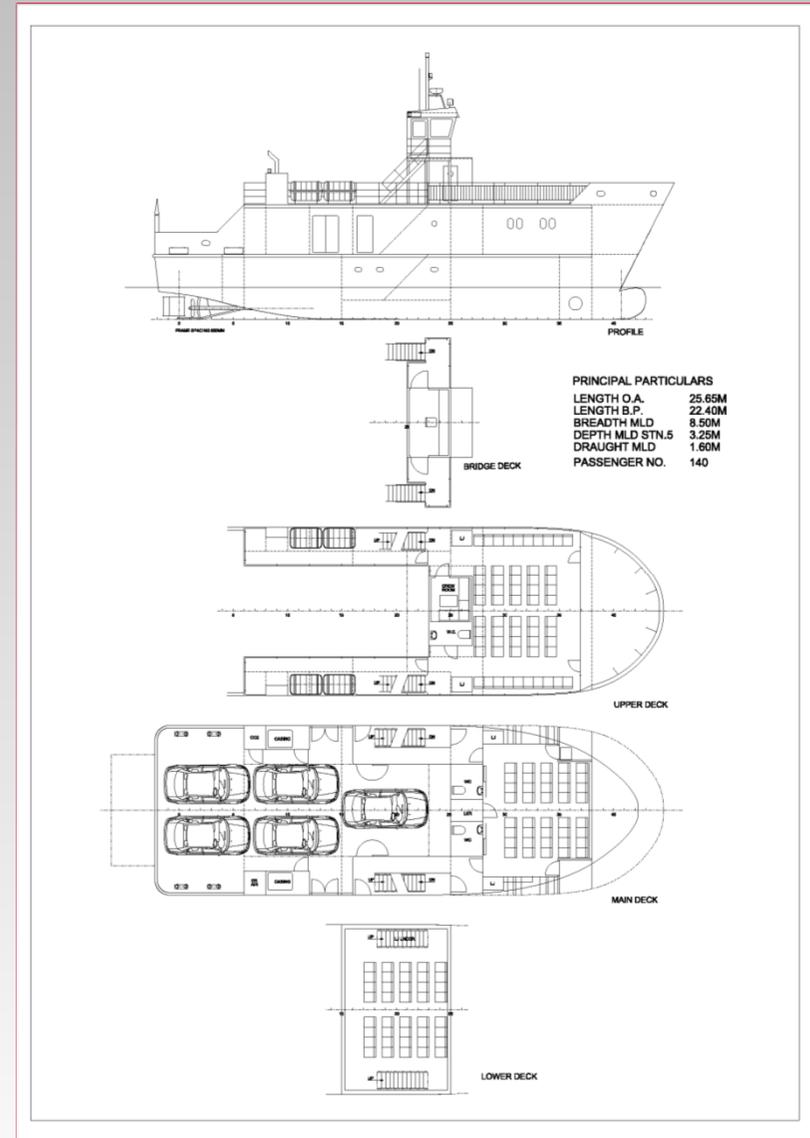
Breadth - 8.50m

Draught - 1.6m

- Capacity

Passengers - 140

Vehicles - 5 cars



General Arrangement - D

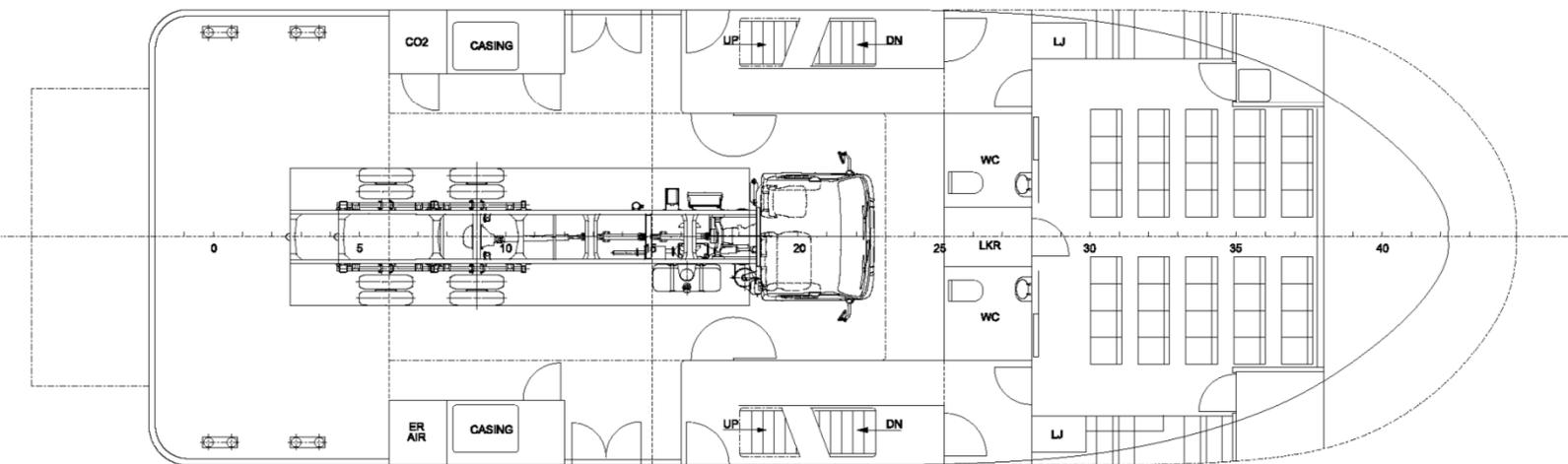
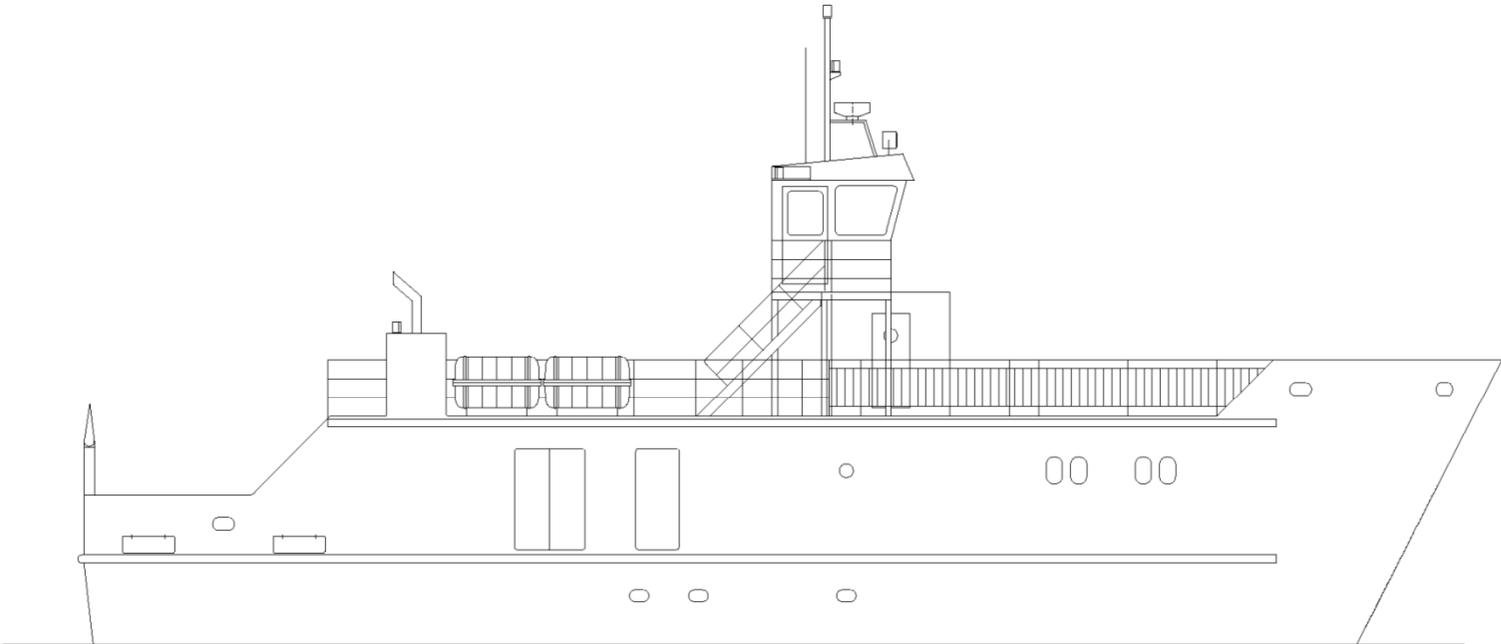
Advantages

- Meet current Rules & Regulations
- Additional 53 seats inside.
- No winter passenger restriction.
- 140 Passengers & 5 cars can be carried at the same time.
- Provides the same level of service as M.V. Canna

Disadvantages

- Would require new link spans at Rathlin and Ballycastle.
- Would require a new mooring in Rathlin due to increased dimensions.
- Increase in operating cost (fuel).
- Width restriction of large cargo similar to M.V. Canna
- Greater vessel motion in passenger areas
- Lower passenger deck is below waterline.

Design - D



Summary

- Design A – Shows what M.V. Canna could do under current rules
- Design B – Meets 99% of requirements and offers best value for money
- Design C – Meets the requirements but requires new mooring location
- Design D – Meets the requirements but requires new mooring location, link spans and offers little over Design C



Thank you



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LONDON SOUTHAMPTON ISLE OF MAN DUBAI

Appendix B Cultural Heritage

Appendix B Cultural Heritage

Appendix 1: Sites and Monuments Record

Recorded archaeological sites & monuments within c.1km of the PDA.

ANT001:011

During excavations at Ballynagard in 1933-34 Blake-Whelan discovered evidence for prehistoric settlement. No clear indication for early settlement was found during field inspection and Blake-Whelan's exact site locations were not established.

Edited Type: POSSIBLE PREHISTORIC SETTLEMENT SITE

Townland: BALLYNAGARD

Grid Ref: D1408052070

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: SETTLEMENT SITE

Condition: SOME REMAINS (Some definable

features)

General Periods: PREHISTORIC / UNCERTAIN

Bibliography: EVANS,E.E. FIELD NOTEBOOK X

J. DOWN & CONNOR HIST. SOC., VOL.6, 1934, 76-9

WHELAN,C.B.: P.B.N.H.P.S. 1933-34, 107-111

WHELAN,C.B.: P.R.I.A. VOL.42, 121-43

ANT001:012

Source? and authority? for this site as a cairn?. No details available at present.

Edited Type: POSSIBLE CAIRN

Townland: BALLYNAGARD

Grid Ref: D1429051930

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: CAIRN

Condition: NO VISIBLE REMAINS (All above ground features

removed)

General Periods: UNCERTAIN

Bibliography: EVANS,E.E. FIELD NOTEBOOK X

J.D. & C..H.S. VOL 6, 1934, 76-9

WHELAN,C.B.:P.B.N.H.P.S., 1933-34, 107-111

ANT001:014

On good quality land above Church Bay, this is a single slab of chalk with pitted surface and embedded small flint nodules. The stone stands 1.13m high and measures 0.9m x 0.4m broad with its long axis NE-SW.

Edited Type: STANDING STONE IN PREHISTORIC CEMETERY

Townland: DEMESNE

Grid Ref: D1498050970

Protection: Scheduled

Parish: RATHLIN ISLAND

Barony:

CARY

General Type: STANDING STONE

Condition: WELL PRESERVED

(Complete/substantially complete)

General Periods: PREHISTORIC / UNCERTAIN

Bibliography: COLLINS,A.E.P. UJA 23, 1960, 38-9

EVANS,E.E. FIELD NOTEBOOK X

EVANS,E.E. UJA 7, 1944, 61-4

HAMILTON, REV.W LETTERS, DUBLIN 1790

LAW,REV.H.I.: "RATHLIN ISLAND AND PARISH." 1962
O.S. FIELD REPORTS ANTRIM NO.5
O'LAVERTY,J.: VOL.IV, 1887, 375
WARNER,R. UJA 36-7, 1973-4, 58-70

ANT001:015

Site of a stone cist discovered during ploughing in 1870. See also ANT 001:044.

Edited Type: BRONZE AGE CIST BURIAL

Townland: DEMESNE

Grid Ref: D1498050730

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: CIST BURIAL

Condition: NO VISIBLE REMAINS (All above ground features removed)

General Periods: BRONZE AGE / PREHISTORIC

SEE BIBLIOGRAPHY FOR ANT 001:014

ANT001:023

Modern parish church on an earlier site. Foundations were uncovered when digging graves close to church towards SE corner. There are stones built into the wall in the Manor House. Large area reported covered with stone lined graves.

Edited Type: MODERN PARISH CHURCH ON EARLIER SITE, WITH STONE-LINED GRAVES

Specific Type STONE LINED GRAVES Specific Period PREHISTORIC

CHURCH

MODERN

CHURCH

UNCERTAIN

Townland: CHURCH QUARTER

Grid Ref: D1452051100

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: ECCLESIASTICAL SITE

Condition: TRACES ONLY (No definable features)

General Periods: PREHISTORIC / MODERN / UNCERTAIN

Bibliography: GLYNN,A. & HADCOCK,R.N.: 1970

HAMILTON,REV.W.: "LETTERS.." DUBLIN 1790, 33

HAMLIN,A.E.: UNPUBLISHED THESIS, 1976, 458-9

LAW, REV.H.I.: "RATHLIN ISLAND AND PARISH." 1962

MARSHALL, J.D.: TRANS. R.I.A. XVII, 1932-7, 37-71

MRS GAGE'S MS. 1851, 32-4, 115-6, 130

O'LAVERTY,J.: VOL.IV, 1887, 373-5

REEVES,W., 1847

USHET : J.DOWN & CONNOR HIST. SOC. 1929, 74-8

ANT001:028

A curving feature noted on APs is probably related to tree planting and is not an antiquity.

Edited Type: A.P. SITE: NON-ANTIQUITY

Townland: BALLYNOE

Grid Ref: D1549050580

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: NON-ANTIQUITY Condition: NO VISIBLE REMAINS (All above ground features removed)

General Periods: MODERN

ANT001:030

On a bog covered terrace overlooking a small lake to E is a circular enclosure noted on AP. An area c 4m diam. is enclosed by an earth and stone bank 0.8m wide x 0.2m high. There are several gaps in the bank, one of which may be the original entrance.

Edited Type: HUT SITE

Townland: BALLYCONAGAN

Grid Ref: D1482052020

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: HUT SITE
features)

Condition: SOME REMAINS (Some definable

General Periods: UNCERTAIN

ANT001:031

No visible remains on the ground. A slight vegetation anomaly may have caused the rings noted on AP.

Edited Type: A.P. SITE: POSSIBLE ENCLOSURE

Specific Type ENCLOSURE (Possible) Specific Period UNCERTAIN

Townland: BALLYCONAGAN

Grid Ref: D1498052080

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: A.P. SITE
removed)

Condition: NO VISIBLE REMAINS (All above ground features

General Periods: UNCERTAIN

ANT001:035

A small well defined bank enclosing an area c 4m diam. showed up on APs. However nothing was visible on the ground. Edited Type: A.P. SITE: HUT SITE

Specific Type HUT SITE

Specific Period UNCERTAIN

Townland: BALLYCARRY

Grid Ref: D1517052200

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: A.P. SITE
removed)

Condition: NO VISIBLE REMAINS (All above ground features

General Periods: UNCERTAIN

ANT001:036

There were no visible remains of this site on the ground.

Edited Type: A.P. SITE: ENCLOSURE

Specific Type ENCLOSURE
CROPMARK

Specific Period UNCERTAIN
UNCERTAIN

Townland: CRAIGMACAGAN

Grid Ref: D1543050550

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: A.P. SITE
removed)

Condition: NO VISIBLE REMAINS (All above ground features

General Periods: UNCERTAIN

ANT001:042

On the summit of Slieveard stands a small oval dry-built stone enclosure for protecting peat.

Edited Type: HUT SITE
Townland: BALLYNAGARD
Protection: -----
Barony: CARY
General Type: HUT SITE
General Periods: MODERN

Grid Ref: D1407051690
Parish: RATHLIN ISLAND
Condition: SUBSTANTIAL REMAINS (Vast majority definable)

ANT001:043

A possible hut site noted on AP proved to be a small local eminence and not an antiquity.
Edited Type: NON-ANTIQUITY
Townland: DEMESNE
Protection: -----
Barony: CARY
General Type: NON-ANTIQUITY
General Periods: UNCERTAIN

Grid Ref: D1516050260
Parish: RATHLIN ISLAND
Condition: NO VISIBLE REMAINS (All above ground features removed)

ANT001:044

During gravel extraction several Bronze Age cists were disturbed. Subsequent excavation revealed 7 burials, one within a ring ditch; a stone alignment; a shallow gully.
Edited Type: CIST BURIALS (7), 1 WITH RING DITCH, & STONE ALIGNMENT
Specific Type STONE ALIGNMENT
RING DITCH
CIST BURIALS(7)
Townland: DEMESNE
Protection: Scheduled
CARY
General Type: CIST BURIAL
General Periods: BRONZE AGE / PREHISTORIC
Bibliography: COLLINS,A.E.P. UJA 23, 1960, 37-8
EVANS,E.E. FIELD NOTEBOOK X
EVANS,E.E. UJA 7, 1940, 61-4
LAW, REV.H.I.: "RATHLIN ISLAND AND PARISH." 1962
O'LAVERTY,J.: VOL.IV, 1887
WARNER,R.: UJA 36-7, 1973-4, 58-70
WIGGENS,K,: YOUNG ARCH'Y SUPPL. 1984

Specific Period BRONZE AGE
BRONZE AGE
BRONZE AGE
Grid Ref: D1496050810
Parish: RATHLIN ISLAND
Barony:
Condition: TRACES ONLY (No definable features)

ANT001:045

This is the remains of an old field wall bisecting a ridge and apparently pre-dating the thin remnants of blanket bog.
Edited Type: FIELD WALL
Townland: BALLYCONAGAN
Protection: -----
Barony: CARY
General Type: FIELD WALL
General Periods: UNCERTAIN

Grid Ref: D1471052010
Parish: RATHLIN ISLAND
Condition: SOME REMAINS (Some definable features)

ANT001:046

A stony knoll c 3.0m dia and 2.5m high. This seems to be a little stone enclosure for storing screws.

Edited Type: MODERN FIELD CAIRN

Townland: BALLYCONAGAN

Grid Ref: D1476052010

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: CAIRN

Condition: SUBSTANTIAL REMAINS (Vast majority

definable)

General Periods: UNCERTAIN

ANT001:051

Reputed site of massacre by Campbells in 1642. There are no archaeological implications.

Edited Type: FOLKLORE SITE: reputedly site of a massacre in 1642

Townland: BALLYCARRY

Grid Ref: D1560051280

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: FOLKLORE SITE

Condition: -----

General Periods: POST-MED / 17TH

Bibliography: HAMILTON, REV.H.I.: "LETTERS..." DUBLIN, 1790, 28

LAW, REV.H.I.: "RATHLIN ISLAND AND PARISH." 1962, 14

MARSHALL, J.D. TRANS. R.I.A. XVII, 37-71

MCCAHAN, R.: "MCCAHAN'S LOCAL HISTORIES." 1923, 12

MORRIS, H.: "SOME ANTIQUITIES OF RATHIN." UJA 17, 1911, 36-46

O'LAVERTY, J.: VOL. IV, 1887, 377

USHET: J. DOWN & CONNOR HIST. SOC. 1929, 7408

ANT001:052

A massive motte-like outcrop with concave top and remains of rectangular stone structure comprised of a low earth and stone bank 1.3m wide and 11.5m N/S x 10.5m E/W. No tradition survives save that it is called 'The Castle'.

Edited Type: CASTLE (SITE OF)

Specific Type CASTLE

Specific Period UNCERTAIN

Townland: BALLYCARRY

Grid Ref: D1532051250

Protection: Scheduled

Parish: RATHLIN ISLAND

Barony: CARY

General Type: FORTIFICATION

Condition: SOME REMAINS (Some definable

features)

General Periods: UNCERTAIN

Bibliography: MCCAHAN, R.: "MCCAHAN'S LOCAL HISTORIES." J.D.C.H.S. 1929 74-8

O'LAVERTY, J. VOL IV, 1887, 361 & 377

ANT001:053

Not precisely located. Reported in JRSAL (1938) 150-1. Called 'Knocking Stone' and described as used for bruising whins, oats, etc. (?) Sandstone; deeply scored on one side; hollow 25cm across and similar depth.

Edited Type: BULLAUN: KNOCKING STONE

Specific Type KNOCKING STONE

Specific Period UNCERTAIN

Townland: BALLYNOE

Grid Ref: D1545051010

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: BULLAUN

Condition: -----

General Periods: UNCERTAIN

Bibliography: HEWSON,L.M.: J.R.S.A.I., 1938, 150-1, PL.XVII

ANT001:063

Information provided to CF in 1983. No further details.

Edited Type: FINDSPOT of SKELETONS

Specific Type SKELETONS

Specific Period UNCERTAIN

Townland: MULLINDRESS

Grid Ref: D1516051300

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: FINDSPOT

Condition: -----

General Periods: UNCERTAIN

ANT001:064

A considerable hoard of coins of Mary, Elizabeth I, James I and Charles I recovered in 1931 from a rabbit hole. Dates range from 1553-1641. Date of c 1641 is suggested for their deposition (Evans,1942).

Edited Type: FINDSPOT of COIN HOARD DATING 1553-1641 (unlocated)

Specific Type COIN HOARD

Specific Period C17TH

Townland: BALLYCONAGAN

Grid Ref: D1440052000

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: FINDSPOT

Condition: -----

General Periods: C16TH / C17TH

Bibliography: BELFAST NEWSLETTER, 25TH APRIL 1934, WITH PHOTO

BROWN AND DOLLEY, 1971, 76, IP 10

EVANS,E.E. UJA 5 1942

SEABY,W.A.; B.N.J., 1959, 511

ANT001:065

Under an overhanging rock, in mountain grazing (O'Laverty,1877). Not precisely located.

Edited Type: MASS SITE (unlocated)

Townland: BALLYNAGARD

Grid Ref: D1410051800

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: MASS SITE
features)

Condition: SOME REMAINS (Some definable

General Periods: POST-MED

Bibliography: O'LAVERTY,J. VOL IV, 1887, 385

ANT001:066

Late Bronze Age dress fastener, surface find while harrowing. On N facing slope at foot of Slieveard overlooking small bog. The field is now, 1989, in rough pasture. Cf ANT 001:079.

Edited Type: FINDSPOT OF L.B.A. DRESS FASTENER

Specific Type DRESS FASTENER

Specific Period L.B.A.

Townland: BALLYNAGARD

Grid Ref: D1395051800

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: FINDSPOT

Condition: -----

General Periods: L.B.A. / PREHISTORIC

Bibliography: EVANS,E.E. UJA 7, 1944, 61-4

ANT001:067

This is said by O'Lavery (1887) to have been the main mass station, but also he comments on no known church or graveyard to explain the name. A substantial basalt boulder set on E side of field may be the mass rock mentioned by O'Lavery. Local informant said (1988) there were remains of monastery here. May be ANT 001:068.

Edited Type: MASS SITE

Townland: KILPATRICK

Grid Ref: D1385051650

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: MASS SITE

Condition: TRACES ONLY (No definable features)

General Periods: POST-MED

Bibliography: O'LAVERTY, J.: VOL IV, 1887, 385

ANT001:068

APs show cropmarks of 4 possible circular hut sites. In adjacent field is a series of square and rectangular ruins within the cropmark of a banked enclosure. No trace of the cropmarks was found during fieldwork, but an arc, c. 11m diam., was discovered 35m along the boundary. Water service works to install a borehole and pipeline on Rathlin Island were carried out under archaeological supervision, SW of the site of the cropmarks. No archaeological deposits were uncovered during topsoil stripping for the borehole, however a small deposit of charcoal flecked soil with heat shattered stone was uncovered c.30m from the W. limit of the pipeline. This has been interpreted as burnt mound material, but was not investigated further as it was outside the limits of development.

Edited Type: A.P. SITE: POSSIBLE MONASTERY

Specific Type: A.P. SITE

Specific Period: UNCERTAIN

MONASTIC SITE (Possible)

UNCERTAIN

Townland: KNOCKANS (Possible)

Grid Ref: D1395051560

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: ECCLESIASTICAL SITE

Condition: TRACES ONLY (No definable features)

General Periods: UNCERTAIN

Bibliography: O.S. FIELD REPORTS ANTRIM NO.4

ANT001:078

This site showed as a circle on AP, but was caused by cattle tramping in a circle around a discarded agricultural machine.

Edited Type: NON-ANTIQUITY

Townland: BALLYNOE

Grid Ref: D1535051060

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: NON-ANTIQUITY

Condition: -----

General Periods: MODERN

SMR Number ANT 001:080

Local informant reports the discovery of a reputed Viking long boat in 1920s. It was found in a field at the base of the raised beach to W of the standing stone ANT 001:014.

Edited Type: FINDSPOT of REPUTED VIKING LONG BOAT

Specific Type: LONG BOAT

Specific Period: E.CHRIST.

Townland: DEMESNE

Grid Ref: D1490051010

Protection: -----

Parish: RATHLIN ISLAND

Barony:

CARY

General Type: FINDSPOT
General Periods: E.CHRIST.

Condition: DESTROYED

ANT001:081

On prominent height with good views except to NW. A round cairn set within an incomplete circular kerb of 37 boulders 10.5 x 9.8m. The cairn is 0.6m high at its centre. The cist at centre of the cairn, recently (1992) disturbed, is 0.6 x 0.8m. It is peat filled, but the burial appears not to have been disturbed.

Edited Type: ROUND CAIRN

Specific Type ROUND CAIRN

Specific Period BRONZE AGE

Townland: KILPATRICK

Grid Ref: D1389051720

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: CAIRN
(definable)

Condition: SUBSTANTIAL REMAINS (Vast majority

General Periods: BRONZE AGE / PREHISTORIC

ANT001:083

O'Lavery records a battle between the Mc Donnell Scots and the English under Sir Ralph Bagnall an Captain Cuffe in Sept. 1551. The exact site of the battle cannot now be located.

Edited Type: BATTLE SITE, 1551 (unlocated)

Townland: CHURCH QUARTER; DEMESNE

Grid Ref: D1490050900

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: BATTLE SITE
(removed)

Condition: NO VISIBLE REMAINS (All above ground features

General Periods: LATE-MED / C16TH

Bibliography: O'LAVERTY,J. VOL. 4, 1887, 357-360

ANT001:084

O'Lavery records a battle fought here in 1642 between the MacDonnells (locals) and Sir Duncan Campbells forces.

Edited Type: BATTLE SITE, 1642

Townland: BALLYCARRY; BALLYNOE; MULLINDRESS

Grid Ref: D1520051100

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: BATTLE SITE
(removed)

Condition: NO VISIBLE REMAINS (All above ground features

General Periods: POST-MED / C17TH

Bibliography: O'LAVERTY,J. VOL.4, 1887, 369-70, 377

ANT001:085

This is a group of 3 fields which all produced Neolithic flints when ploughed.

Edited Type: FINDSPOT OF FLINTS

Specific Type FLINT SCATTER

Specific Period NEOLITHIC

Townland: BALLYCARRY

Grid Ref: D1524051630

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: FINDSPOT
(features)

Condition: SOME REMAINS (Some definable

General Periods: NEOLITHIC / PREHISTORIC

ANT001:086

Two fields at Crockascreidlin produced Neolithic flints when ploughed.

Edited Type: FINDSPOT OF NEOLITHIC FLINTS

Specific Type FLINT SCATTER

Specific Period NEOLITHIC

Townland: BALLYCARRY

Grid Ref: D1546051340

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: FINDSPOT
features)

Condition: SOME REMAINS (Some definable

General Periods: NEOLITHIC / PREHISTORIC

ANT001:092

This midden was discovered in a vertical section at the back of the site for a new dwelling, c. 60m N of the pub. The land rose sharply towards a central ridge, the overlying being 0.3-0.45m thick, thinning to N, composed of chalk and flint nodules. It sealed another layer of chalk & flint nodules, distinguishable by the size of the nodules. A collection of bones were visible in the lower layer. Initial examination revealed that they were butchered animal bones, mainly from pigs & they were found in association with sea shells. They probably constituted food debris. A 2nd site E of the pub consists of 2 U-shaped cuts, but these turned out to be modern cuts.

Edited Type: MIDDEN

Townland: DEMESNE

Grid Ref: D1494050980

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: MIDDEN

Condition: TRACES ONLY (No definable features)

General Periods: UNCERTAIN

ANT001:093

This site, upslope and 100m E of the pub, was discovered during a survey of Rathlin. A pit had been recently dug and subsequently partly backfilled with rubbish, but still visible in section were several large chalk slabs, up to 0.8m long, in an area characterised by small chalk and flint nodules. Limited clearance exposed further chalk slabs & basalt boulders surrounded by clean, very dark loam containing small sherds of coarse pottery & flint flakes, as well as some pieces of bone. The feature appeared to extend n from the disturbed edge exposing the pit. The bones have been sent to QUB for examination and RC dating.

Edited Type: COOKING PLACE / FULACTH FIADH

Specific Type FULACHT FIADH (Possible)

Specific Period PREHISTORIC

COOKING PLACE

UNCERTAIN

Townland: GLEBE

Grid Ref: D1505050930

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: COOKING PLACE

Condition: SUBSTANTIAL REMAINS (Vast majority definable)

General Periods: PREHISTORIC / UNCERTAIN

ANT001:094

This cist burial was discovered eroding out of an exposed section of raised beach material behind McCuig's Bar. Human remains within the cist were visible through gaps between the slabs, along with a food vessel in the SE corner, just in front of the legs. Only a very narrow gap in the upper SW face of the exposed section allowed limited observation and photography to take place. The cist consists

of a box structure placed into a raised beach deposit. 4 upright slabs set on the sides make up the box, which is 1.1m N-S x 0.6-0.7m E-W x 0.9m deep internally. The capstone is a large slab of limestone 1.23m long, supported by 2 underlying slabs. It contains a crouched adult inhumation. The site is within the designated scheduled area for ANT 001:014

Edited Type: CIST BURIAL

Townland: DEMESNE

Grid Ref: D1497050890

Protection: Scheduled

Parish: RATHLIN ISLAND

Barony:

CARY

General Type: CIST BURIAL
(definable)

Condition: SUBSTANTIAL REMAINS (Vast majority)

General Periods: BRONZE AGE / PREHISTORIC

ANT001:117

A possible ring ditch/barrow in an area of Bronze Age activity and adjacent a scheduled bronze age cist cemetery. The ring ditch/barrow is approximately 10m in diameter and was discovered by CAF.

Edited Type: A.P. SITE: POSSIBLE RING DITCH/BARROW

Townland: DEMESNE

Grid Ref: D1498051062

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: A.P. SITE

Condition: -----

General Periods: BRONZE AGE

MRA003:066

This is a mill house and race located at the S side of Mill Bay. The mill is orientated NE-SW into the base of a slope, with the race running past the NE gable. The building is 9.95m x 6.23m externally, the wall being c.0.61m in thickness. Access to the site is via a revetted laneway to the N, which runs between the mill and the shoreline. The building material is predominantly basalt and mortar, however limestone blocks and stones also feature, as do red bricks at the windows and below the eaves / gable top. Roofing slates are still in position, although there are holes on the S side. The roof is supported by collar-beam trusses. There is a single door in the SW gable, measuring 1.23m wide and 1.97m high, with a timber lintel. The NE gable features a rectangular recess (1.13m by 0.67 by 0.41m) on the ground floor, which functioned as the orifice for the mill wheel axle. It is now blocked up but the imprint of the wheel can be seen in the exterior wall. The N wall has one window (0.85m by 0.59m) on the upper floor which is now blocked. The S wall features one window at ground floor, and one at the upper floor, now also blocked up with bricks. Behind the E corner and along the NE gable is a drystone basalt race to divert a stream to the mill wheel. The upper part of the race is c.6m long, and 1.7m wide, but is no longer intact. At the NE gable it is 5.18m long, 1.05m wide and 1m deep (although partially filled with rubble). The wheel axle still lies in the race below the NE gable. The race runs under the laneway and onto the shore through an aperture (1.36m by 0.77m).

Edited Type: Corn mill and mill race

Townland: KINKEEL

Grid Ref: D15135014

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: MILL
(Complete/substantially complete)

Condition: WELL PRESERVED

General Periods: C18TH / C19TH

MRA003:067

This quay, orientated NNW-SSE, is located on the S side of Church Bay, where the shore is sandy and the water quite shallow at low tide. The quay is now covered with concrete, but some of the presumably older stonework, which comprises large sub-rectangular and irregular blocks, generally of limestone, can be seen on the inner, E sidewall. The total length of the quay is 70.1m, and the width c. 8m to the base of the storm wall at the landward end, 5.56m–5.8m in the middle section, and 3.8m at the seaward end. The height of the quay above the seabed is about 2.5m at the seaward end. **The concrete storm wall (sometimes known as a 'parapet wall' or 'seawall'), running the entire length of the quay on its outer, W, side is 1m thick and varies in height. At the landward end it is 86cm high, and near the seaward end it is 1.96m high. At the inner base of the storm wall, towards the landward end of the quay, is a small concrete platform measuring 4.52m long by 70cm wide and 55cm high. A low concrete shelf, c.19cm high (maximum), continues from the northern end of the platform, decreasing in height to the landward end of the quay. About 14m from the seaward end is a kink in the quay where it turns slightly towards the N. Quay furniture consists of mooring posts, rings and loops, of which there are at least 15. A rusted iron anchor, 1.04m in length by 73cm in width (from fluke tip to fluke tip), lies on the quayside near the landward end. Three stretches of concrete slipway are located immediately to the E of the quay, along the top of which several small boats were beached at the time of the survey. The westernmost slip measures 33m long by 12.9m wide, while that to the E of it is wedge-shaped, tapering to seaward and measures 18.5m long, 7.1m wide near the landward end and 1.6m at the seaward. To the E of this, the third slip is 18.5m in length and 3.3m in width. The OS map of 1833 shows an undesignated projection, and a 'Flag Staff' nearby. In the 1858 Revision, it is designated 'New Quay', and on the 1922 edition, it is marked as 'New Quay', 'M.P.s', 'Boat Ho.' and 'F.P.' In 1822, the coastguard was established on Rathlin, and was accommodated in a range of houses above this site. The construction of the quay is very likely to have been associated with this installation. The OS Memoirs for the Parish of Rathlin noted that: 'There is a small pier constructed for the safety of fishing or trading boats', but did not mention the precise location (Day et al. 1994, 128). They also stated that, 'There is a small quay or pier 90 feet long [27.4m] by 24 feet wide [7.3m] in Church Bay'. (ibid. 131). It was not specified whether this was the old quay (MRA 3:68 in Church Quarter) or the new one. The measurements of both this and MRA 3:68 are similar in their original form, although this quay has since been extended.**

Edited Type: Quay and concrete slipways (3)

Townland: DEMESNE

Grid Ref: D14825085

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: QUAY AND SLIPWAYS

Condition: WELL PRESERVED

(Complete/substantially complete)

General Periods: C19TH

MRA003:068

The quay at Church Quarter is now the main landing place of the island, and is situated on the N side of Church Bay, just below the Manor House. A relatively recent harbour complex has been built, enclosing a small, rectangular basin with an entrance at the SW, and incorporating some of the older works. Surviving stonework has now been largely encased in concrete. A high basalt and limestone wall bounds the edge of the Manor House grounds. It stands 2.14m high on the seaward side, but only 90cm high on the Manor House side. Immediately below this wall to seaward is a broad concrete quay, 71.1m long and approximately 5.35m wide, which is accessible to ferry traffic. Towards the W end of this, just above the water level, some stonework is exposed. Most is seaweed-covered, but it may represent older quay works. A metal railing follows the edge of the platform, and there are two iron mooring posts and a metal mooring loop at this level. Seaward of the platform, and at a level 66cm below it, is a quay lying parallel with the shoreline, which is accessible via some steps at the E end. Again this is concrete-covered and slopes up on either side in the middle to form a ramp. This

quay is about 68m in length and up to about 4.55m in width. It is 1.7m above the water level (at mid tide). Quay furniture consists of six mooring posts and at least four rings, and two ladders provide access down to the boats. At the E end of the complex, a modern wooden walkway runs out perpendicularly to the shoreline. Immediately beyond it to the E is a ridge of boulders about 36.4m in total length, also running perpendicular to the shore. This would appear to be approximately on the line of the old quay and, although it is possible that it is modern, it could represent the remains of an older structure. The boulders seem smaller than those typically used in modern breakwaters or rock armouring. Only two of the stones, however, have the appearance of having been deliberately set. Together they form a straight edge and look like basal stones in a structure. The Manor house wall, parallel with the shoreline, is shown on the OS map of 1833, with no formal quay identified. The Ordnance Survey Memoirs for the Parish of Rathlin (1830) note: **'There is a small pier constructed for the safety of fishing or trading boats' but does not mention the precise location (Day et al. 1994, 128). They also state, 'There is a small quay or pier 90 feet long [27.4m] by 24 feet wide [7.3m] in Church Bay. Vessels of 40 tons can come up to it'. (ibid. 131). It is not specified whether this is the old pier or the new one (MRA 3:67). A painting of c.1840 by Mrs Gage shows a wall in front of the manor house with low rocks extending perpendicular to it (Clark 1996, 137). At the eastern edge, part of the formation, whether of natural rock or artificial construction, seems to have functioned as a low landing stage. A structure, perpendicular to the shoreline, is designated 'Old Quay' on the OS map of 1858 and an additional, larger structure, included in the designation 'Old Quay', appears to the W on the 1922 OS Revision.**

Edited Type: Quay

Townland: CHURCH QUARTER

Grid Ref: D14735101

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: QUAY

Condition: TRACES ONLY (No definable features)

General Periods: C18TH / C19TH

MRA003:069

Lying to the W of Lacknakilly in Church Bay, the site comprises a quay and a slipway. These are situated on a boulder/gravel shore and are orientated N-S. The quay is c.40m long, 5m wide and is dog-leg in plan, turning SE toward the terminal. A wall, c.80cm in width and 1.2m in height, has been built along the W side and provides some shelter. The slipway lies on the E side of the quay and is badly dilapidated, being c.15m in length and 9m wide. At the time of the survey, two abandoned boats lay at the top of the landing place, one modern, the other a clinker-built motorboat. Above the quay are the remains of a small stone-built structure, which functioned as a winch house. Landward of the slipway a stone building may have functioned as a small boat house or store. Orientated E-W, it is 10m long by 5.3m wide, with a doorway 2m wide at the E. Both quay and slipway appear to be of relatively modern build using concrete (the complex is first shown on the Irish Grid map).

Edited Type: Quay and slipway

Townland: BALLYNAGARD

Grid Ref: D14425107

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: QUAY AND SLIPWAY

Condition: SUBSTANTIAL REMAINS (Vast majority definable)

General Periods: C20TH

MRA003:188

Situated in a gently sloping field (c.1m inside the shore boundary) above a boulder beach at Beanig is a setting of stones which appears to be the remains of a rectangular kelp kiln. The kiln is orientated NE-SW and measures c.3.2m by c.2.2m externally and 1.08m by 0.8m internally. The bank is 0.6m

wide, 0.48m high internally and 0.3m high externally. The bank is of stone and is subtle, particularly upslope (SSE), and the NE end is very denuded. There is some reddish colouring on the stones but no definite sign of burning. This site represents one of the few kelp kilns situated within a modern field.

Edited Type: Rectangular kelp kiln

Townland: KINKEEL

Grid Ref: D14924997

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: KELP KILN
features)

Condition: SOME REMAINS (Some definable

General Periods: C18TH / C19TH

MRA003:190

One of two boat shelters or nausts (see also MRA 3:191) hollowed into the grass-covered slope above a shingle beach in Mill Bay and open to the sea. This is the southern of the pair, and is orientated ENE/WSW, measuring 5.5m long by 4.1m wide. The interior is revetted by a drystone limestone wall up to 1.5m high, and the interior contains long grass, some large blocks, rubbish and a modern circular limestone hearth. The exterior E side is approximately flush with the ground surface and roadway to the NE. A resident of Ballycarry townland recalled that he had helped his father to build this and the larger N naust (MRA 3:191), and that the N one had been used to store drontheims. Outcropping limestone lies between the nausts and the sea, but this is low and almost flat, and would not present much of an obstacle to launching or landing boats. Natural rock also projects out into the water, but a small break in this, 2.9m wide, lies almost directly opposite the nausts and gives the appearance of an artificially cut slipway where a small rowing boat could be landed. Between the **'slipway' and the nausts are three iron pins. The first has a rectangular head, is slightly bent and projects 21 cm above the surface of the beach. It is loose but still fixed. Some 2.26m to the NE of this, and about 8m from the nausts, are two further pins, both 1.5cm in diameter and 13cm high, fixed between rocks. According to the informant, the purpose of these pins was to increase the purchase on the ropes when hauling boats up the shore. Sullivan described Mill Bay (MacGiolla Easpaig 1990, 75) as 'a small bay where boats land and are drawn up from storms. It is named from a corn mill at its SE end'. See also MRA 3:191.**

Edited Type: Boat naust

Townland: DEMESNE

Grid Ref: D15115027

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: BOAT SHELTER
definable)

Condition: SUBSTANTIAL REMAINS (Vast majority

General Periods: C20TH

MRA003:191

This is the second and N of two boat shelters or nausts (see also MRA 3:190) hollowed into the grass-covered slope above a shingle beach in Mill Bay and open to the sea. Like MRA 3:190, this structure was built by the father of a resident on the island, and was used to store 20ft (6.1m) drontheims with a 6ft (1.8m) beam and a height of about 2ft 6ins (80cm). The opening to the naust does not face the sea directly, but is orientated NW/SE, being at the SE end. The revetted entrance turns W towards the sea at its W side, and the naust is revetted on both the W and SE sides of the entrance. The structure measures 6.8m long internally, by 4.6m wide externally, 3.5m maximum internal width, **and 3.16m at the 'neck' or entrance. The E and NE sides are sloping with many pebbles exposed, and any limestone wall which might have originally revetted this part has now gone.** The maximum height

on the W side is c.1.7m, and on the E side c. 2m. Stones, pebbles, plastic bags and other rubbish were observed lying in its interior.

Edited Type: Boat naust

Townland: DEMESNE

Grid Ref: D15115027

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: BOAT SHELTER
(definable)

Condition: SUBSTANTIAL REMAINS (Vast majority)

General Periods: C20TH

MRA003:193

Situated between the top of a stony beach and the road is an overgrown site in long grass with stone exposed in places. Burnt brick, coke, etc. was noted lying on the beach in front of the site. The structure appears as a sub-circular raised bank with an oval depression in the interior. It is orientated N-S and measures c.8m by c.6m externally and 1.75m by 2.1m internally. The bank varies in width due to possible collapse; it stands 0.55m high internally and 1.5m high externally. The bank has a small 1m gap on the seaward side and the exposed basalt exterior stones on either side of the gap display mortar bonding. Some stone is apparent in the interior E and S sides. The site is probably a kiln, though larger than most kelp examples - possibly a lime kiln.

Edited Type: Possible lime kiln

Townland: DEMESNE

Grid Ref: D15115027

Protection: -----

Parish: RATHLIN ISLAND

Barony:

CARY

General Type: KILN
(features)

Condition: SOME REMAINS (Some definable)

General Periods: UNCERTAIN / C18TH / C19TH

MRA003:194

A large kelp store (orientated E-W) is situated on a bedrock outcrop with stony beaches to the N and S. It is accessed via a built laneway from the road to the E. The walls of this rectangular building feature a slight base, best seen at the W end. The base is 0.09m wide and 0.52m high. The building is composed of limestone, with some basalt blocks and stones, some blocks are dressed and the whole structure is bonded with mortar featuring smaller stones, flint etc. Red brick is used in some of the windows (mainly on the upper floor), fireplace and flue, above the entrance door in the E gable, at the top of the gables and blocking rafter beam holes. Some timber lintels and frames remain in the windows and doors. The building measures 19.97m by 5.49m internally and 21.19m by 6.87m externally; the walls average 0.61m thick. There are two doors in the N side of the building (c.1.5m wide) above the exterior pathway, five windows on the ground floor (av. 1m wide), six on the upper floor. In the E wall there is a large entrance (3.28m wide) – fringed by modern concrete. There are no doors or windows in the S side of the building though an upper floor window has been blocked up. The building was extended landward at some stage – corner quoins can be seen along the N wall exterior and correspond to the remains of a dividing wall (or rather original gable) in the interior. This earlier version of the building would have measured 12.27m by 5.49m internally. The fireplace (1.37m wide) is situated at the W wall – the lower floor flue has completely gone, the upper floor is in red brick. One transverse beam remains here. Some interior plastering can be seen on the ground floor and especially on the upper floor. A path terminating in steps runs from the road along most of the N exterior wall of the building, it is 1.63m wide, 31.4m long and its height varies above the sloping bedrock. The path was originally cobbled in mortar, this has now mainly been removed. The ground rises beyond the E entrance to meet the road; to the S the remains of another wall rising toward the road from the SE corner of the building can be seen for 7.35m.

Edited Type: Kelp store

Townland: DEMESNE

Protection: -----

Barony: CARY

General Type: KELP STORE
(definable)

General Periods: C18TH / C19TH

Grid Ref: D14995049

Parish: RATHLIN ISLAND

Condition: SUBSTANTIAL REMAINS (Vast majority

MRA003:198

A large number of flints were found during fieldwalking over ploughed land. The field is 1.99 square hectares and is situated above Mill Bay at the same height as the raised beach on this shore. It is entered from the road from Church Bay to Rue Point and is divided E-W by a large ditch. Fieldwalking was conducted around the perimeter of the field, continuing in circuits toward the centre. The richest area in terms of flint collection was N of the ditch notably the NE corner (entrance) and E perimeter. The flint assemblage comprised mainly blades with some cores. They would appear to be Late Mesolithic / Neolithic in date.

Edited Type: Flint assemblage

Townland: KINKEEL; CRAIGMACAGAN

Protection: -----

CARY

General Type: FINDSPOT

General Periods: MESO / NEOL

Grid Ref: D15235016

Parish: RATHLIN ISLAND

Barony:

Condition: -----

MRA003:202

A small and narrow opening in the limestone rock, orientated approximately NW/SE, is situated about 18.6m to the NW of the large kelp store (MRA 3:194) in Church Bay, and has been used as a landing place. The mainly natural inlet is about 15m long by 3.2m wide, located in an area of rough, though reasonably flat, limestone rock, and would provide access to small boats at mid-tide. A small, narrow and slightly lower ledge, about 80cm wide, runs along the SW side of the inlet, and appears as though it may have been augmented with stones along its outer edge, adjacent to the channel. Metal eyelets or loops for mooring rings are located in the vicinity. One is situated along the edge of the natural rock, at a slightly higher level than the platform, and another lies further to the N, 15–20m away, again in the natural rock. The general area appears to have been used by boats coming in to land/load kelp at the nearby kelp store, and although there is an artificial landing stage alongside the building, it would have been accessible only at high water. The inlet permits small vessels to approach to within a reasonable distance of the store at least during mid-tide (and possibly at lower tide).

Edited Type: Modified landing place

Townland: DEMESNE

Protection: -----

Barony: CARY

General Type: LANDING PLACE

General Periods: UNCERTAIN / C18TH / C19TH

Grid Ref: D14955052

Parish: RATHLIN ISLAND

Condition: SOME REMAINS (Some definable features)

MRA003:216

This example of ship graffiti appears on the cornerstone of an abandoned building lately used as a cow shed. The building is one of a number sheltering under a scarp in the SW corner of the townland. It is orientated roughly N-S, the graffiti appears on the W-facing side of the structure, at the NW corner. It is situated at the top of the wall, 1.1m above ground level. The graffiti is 31cm by 22cms and features a two or possibly three-masted vessel with a fore-and-aft rig. The hull is long with a

slightly raked stern, there is also a bowsprit and forestays, and a gaff sail on the aft mast. The forward mast appears to have a similar, although incomplete gaff sail. Yards on both masts show topsails could be set and the graffiti is likely to represent a topsail schooner. The building appears on the 1st edition of the OS map (1833) although it has been heavily amended in subsequent years. There is a sloping roof (to the E) rather than a ridge, and there is much concrete and red brick. Nevertheless it is conceivable that the W side and the graffiti stone represent the more intact side of the building.

Edited Type: Ship incised in stone

Townland: MULLINDRESS

Grid Ref: D14995133

Protection: -----

Parish: RATHLIN ISLAND

Barony: CARY

General Type: SHIP GRAFFITI
definable)

Condition: SUBSTANTIAL REMAINS (Vast majority

General Periods: C18TH / C19TH

Appendix 2: Industrial Heritage Record (IHR)

Recorded Industrial Heritage Sites within c.1km of the PDA.

IHR Ref.	Type	Grid Ref.	Location
03706:00:00	Corn Kiln	315360 451560	Ballycarry, Rathlin Island
03709:00:00	Harbour; Church Bay	314820 450930	Church Quarter / Demesne, Rathlin Island
03709:03:00	Rocket House	314940 450910	Demesne, Rathlin Island; Church Bay
03709:05:00	Boat House	314860 450840	Demesne, Rathlin Island; Church Bay
03710:00:00	Corn Mill & Kiln site	315130 450130	Kinkeel, Rathlin Island; Mill Bay
07561:00:00	Limekiln (Crocknascreidlin)	315370 451250	Ballycarry, Rathlin Island

Appendix 3: Excavations Bulletin (www.excavations.ie)

Previous archaeological excavations undertaken on Rathlin Island.

1994:008 - 'Shandragh', Knockans South, Rathlin Island, Antrim

County: Antrim Site name: 'Shandragh', Knockans South, Rathlin Island

Excavations.ie number: 1994:008 License number: —

Author: Malachy G. Conway, c/o Ulster Museum, Botanic Gardens, Belfast, BT9 5AB.

Site type: Late Neolithic settlement and industrial site

ITM: E 712928m, N 951479m

Latitude, Longitude (decimal degrees): 55.297415, -6.221747

The site lies in the south central area of the island with the southern cliffs of Rathlin Island located 300m to the south. Beyond lies the stretch of sea known as Rathlin Sound, with Ballycastle a little over six miles away. The site lies within a complex of largely derelict farm buildings set on a sheltered strip of level ground with a natural basalt rock face lying directly to the north.

Finds of porcellanite axes and flintwork from within the general location of the derelict farm had been reported to HMB Environment Service DoE (NI) and the Ulster Museum Belfast by the landowner on various occasions since 1992 resulting in several field visits to monitor disturbance, largely by field drains and cultivation of a small vegetable garden. During further drain laying in late 1993 substantial

quantities of porcellanite, flint and decorated pottery sherds came to light near the landowner's cottage. The pottery in particular was recovered in large unweathered pieces and comprised Late Neolithic and Early Bronze Age wares. A field visit underlined the necessity for open plan excavation in advance of further planned development in the area.

A small-scale excavation funded by Environment Service DoE (NI) was undertaken by the Ulster Museum over an eleven week period from March 21 to June 10. The aim of the excavation was to recover a contextual sequence for the large volume of material collected by the landowner Mr Paddy Burns (who assisted in the excavation) and to record any subsoil features which may point to the nature and extent of the site.

An area approximately 45 sq m was excavated by hand (two cuttings) in an elongated area directly between the cottage (east) and a derelict farm building (west), being the area where the greatest concentration of finds occurred.

On excavation sod was found to directly overlie the 19th-century farmyard, consisting of a neatly prepared cobbled surface. A mixture of prehistoric and later finds were recovered from and within this surface including several polished porcellanite axes which had been re-used as cobble stones. Below the farmyard surface lay a thin layer of loose dark brown soil containing prehistoric and later finds (including possible souterrain ware sherds). Below this layer a substantial deposit of compact brown soil containing a vast collection of Late Neolithic pottery and lithics was uncovered. The deposit appeared almost midden-like in content and extent. At the southern extremity of the excavation a concentration of cremated human bone and sherds from a food vessel were uncovered, though **no evidence for a cist or pit was found. Below the artefact rich 'midden' deposit lay a prehistoric cobbled** surface through and below which a series of pits and a gully had been cut. In total 10 pits, three small postholes and one curving gully were uncovered. All the features are not contemporary, but they were nearly all found concentrated within a band through the middle of the upper cutting (Tr 1) lying on a relatively level ground surface north of the area containing the major volume of 'midden' material which lies within a hollow to the south (Tr 2). All the cut features contained finds of Late Neolithic pottery and lithic material as well as charcoal. Two pits in particular (112 and 118) were associated with finds of significance. Both pits contained a vitrified material resembling slag in composition and texture, though found to be very light in weight. Both pieces are presently being examined in Oxford and await full identification.

During excavation it was noted that on and below the prehistoric cobble surface areas of lithic artefact concentration occurred and this may reflect possible knapping areas, indeed while most features contained a combination of porcellanite and flint, several were exclusive to one or other category. **The excavation was suspended before the cuttings could be 'bottomed-out', however it is** apparent from the information already collected that there is substantial prehistoric activity within the area. The vast collection of artefacts recovered during excavation both from the midden deposit and other layers and features suggest a continued use of the site from Neolithic through Bronze Age periods and perhaps further.

The Neolithic pottery recovered prior to and during excavation displays a predominance of decorated forms including Goodlands bowls, Sandhills varieties and Carrowkeel Ware all in association. Plain Neolithic pottery also occurs. One aspect of the pottery noted prior to conservation was the presence of porcellanite used as a temper in several decorated Neolithic sherds; this factor appears unique at present to the material from this site. Early Bronze Age pottery occurs in the form of sherds from both bowl and vase food vessel forms. Sherds from coarse wares, possibly Bronze Age in date, are also present. The lithic assemblage is composed of a large number of artefact types as well as a large volume of flakes and cores of both flint and porcellanite; indeed the initial lithic frequency suggests concentrated industrial activity, especially in the production of porcellanite axes (large numbers of rough-outs) though other tools including scrapers and cores have been recognised. This predominance of porcellanite on the site is not surprising as the Brockley outcrop is located less than one mile to the east. Other lithic material recovered includes pitchstone from the Isle of Arran in the

Firth of Clyde (confirmed by non-destructive XRF analysis), while numerous hammerstones and pounders have also been recovered. Other finds include many pieces of fine local sandstone and quartz flakes and pebbles. Some unburned bone survived and one broken piece is perhaps part of a perforated bone pin.

The results from the excavation at this stage are very promising: the site is clearly of an industrial/production nature and has evidence for contacts with Scotland. The resources are all apparently local and this includes the pottery with in some cases local stone used as temper. The **excavation of subsoil features and the probable 'midden' on the site would suggest that the** site was occupied on a permanent or semi-permanent basis, though no definitive structure can as yet be identified. Hopefully further excavation will corroborate this premise.

2003:0023 - Knockans/Ballynagard/Kilpatrick, Rathlin Island, Antrim

County: Antrim Site name: Knockans/Ballynagard/Kilpatrick, Rathlin Island

Excavations.ie number: 2003:0023 License number: AE/02/126; AE/03/09

Author: Cia McConway and Yvonne McQuaid, Archaeological Development Services Ltd, Westlink Enterprise Centre, 30–50 Distillery Street, Belfast BT12 5BJ.

Site type: Burnt mound

ITM: E 713878m, N 951539m

Latitude, Longitude (decimal degrees): 55.297735, -6.206775

Water Service propose to install a borehole and a pipeline through the townlands of Knockans, Ballynagard and Kilpatrick, Rathlin Island. This involved stripping an area 20m north–south by 15m, while the installation of the water pipe involved stripping a 480m-long corridor, 0.5–0.7m wide. This was monitored. No archaeological deposits were uncovered during the borehole strip; however, a small deposit of charcoal-flecked soil with heat-shattered stone was uncovered c. 30m from the western limit of the pipeline, under licence AE/03/09. Although it was not within the brief of the monitoring to follow this deposit beyond the limits of the pipeline, it has been interpreted as being burnt-mound material.

2004:0013 - OWEYBERNE CAVE, BALLYGILL SOUTH, RATHLIN ISLAND, Antrim

County: Antrim Site name: OWEYBERNE CAVE, BALLYGILL SOUTH, RATHLIN ISLAND

Excavations.ie number: 2004:0013 License number: AE/04/96

Author: Peter Moore, Centre for Archaeological Fieldwork, School of Archaeology & Palaeoecology, Queen's University, Belfast and Wes Forsythe, Centre for Mari

Site type: Cave

ITM: E 710998m, N 950870m

Latitude, Longitude (decimal degrees): 55.292377, -6.252357

A series of test excavations were carried out on Rathlin Island from 24 May to 18 June 2004 by the Centre for Archaeological Fieldwork (QUB) in conjunction with the Centre for Maritime Archaeology (UUC). The sites were those which previous coastal survey work had had difficulty addressing.

A series of four natural caves at Oweyberne punctuate the base of a small limestone promontory jutting out between a small river valley to the west and basalt cliffs to the east. The grass-covered ground outside the caves slopes towards the shore before steeply dropping 3-4m. Excavation was focused on the largest cave within the complex, measuring c. 14.98m in length. The main entrance to the cave is 5.7m wide and c. 8m in height. A stone wall 0.65m high (three courses maximum) and 0.46m wide has been built across the entrance with a small gap broken through it. Approximately 10m back from the main entrance is a smaller back chamber.

A single trench measuring 6m by 1m was opened within the main cave chamber. The upper archaeological deposits were recorded as being badly disturbed, containing several clay-pipe stems together with aluminium cans and other modern rubbish. Directly beneath the disturbed strata was a hearth situated towards the mouth of the cave. Deposits of ash and charcoal were associated with

this feature, together with a fragment of lignite bracelet that was roughly D-shaped in section. A yellowish gritty clay layer (C111) was recorded beneath the hearth and produced flint fragments, although there were no tools. A second hearth and a pit were recorded within this layer together with two concentric arcs of stake- and post-holes. These features represent some form of structure within the cave, and could be the remains of additional shelter erected within the cave chamber.

A loose gritty sand that contained three small finds, a flint scraper and two sherds of coarse Bronze Age pottery, was situated beneath C111. One sherd featured decoration in the form of a raised ridge and diamond-shaped criss-cross incisions. These finds were found in conjunction with numerous flint fragments and debitage. The basal layers produced ten small finds. These constituted Early to Middle Bronze Age pottery fragments, one of which also displayed incised criss-cross decoration. A flint point with fine pressure flaking was also recovered. The subsoil layer comprised a sandy deposit with medium rounded stones, probably representing an old beach level within the chamber when it was a sea cave.

2005:009 - **BRUCE'S CASTLE, BALLYCARRY, RATHLIN ISLAND, Antrim**

County: Antrim **Site name: BRUCE'S CASTLE, BALLYCARRY, RATHLIN ISLAND**

Excavations.ie number: 2005:009 License number: AE/05/77

Author: Colm Donnelly, Centre for Archaeological Fieldwork, School of Geography, Archaeology and Palaeoecology, Queen's University Belfast, and John Ó Néill,

Site type: Medieval

ITM: E 716287m, N 951509m

Latitude, Longitude (decimal degrees): 55.296903, -6.168867

An excavation was **undertaken at Bruce's Castle on Rathlin Island, Co. Antrim, from 20 June to 1 July 2005**. The work was conducted by the Centre for Archaeological Fieldwork, School of Geography, **Archaeology and Palaeoecology, Queen's University Belfast, on behalf of the Environment and Heritage Service: Built Heritage**, as a component of the fieldwork programme being undertaken on the island by the Centre for Maritime Archaeology at the University of Ulster at Coleraine.

The castle was discussed in McNeill's overview of the stone castles of north Antrim (1983, 104–6), but, other than some references to its existence in 16th-century texts, its origins and earlier history are poorly understood; it is reputed to be the 'rycht stalwart castell' referred to in John Barbour's 14th-century poem 'The Bruce', where Robert the Bruce sought sanctuary on the island during the winter of 1306–7. The monument is located on the island's eastern coastline and comprises a basalt promontory surrounded on three sides by cliffs, with an outer bank, ditch and inner bank restricting access from the landward side to the north-west. These earthworks enclose a subrectangular area – the outer ward – that measures c. 57m from north-west to south-east by 47m.

From the top of the outer bank, the ditch slopes southwards down to a flat-bottomed base. The width of the ditch varies between 2m and 2.5m for most of its length. From the base of the ditch, the inner bank slopes steeply upwards towards the south, forming a bank that is for much of its length almost 1m higher than the outer bank. The surviving evidence suggests that the inner bank was crowned with a mortared curtain wall, while at the west corner of the outer ward three sections of mortared stonework were identified jutting through the turf layer. In addition, two massive fragments of mortared masonry lie in the ditch opposite this corner, in a position that suggests that – prior to their collapse – they formed part of a perimeter tower that once stood at the south-west end of the inner bank. A subrectangular earthen platform extends for c. 10m from the north-east corner of the inner bank, disturbing the line of the ditch. This projection was described by McNeill (1983, 104) as the site **of a 'nearly circular angle-tower', but no mortared masonry was noted** on the platform during the recent programme of fieldwork.

The inner ward occupies a small rectangular sea-girt rock outcrop to the south-east end of the promontory; this outcrop measures c. 20m from north to south by 40m, and is connected to the main promontory by a narrow basalt land bridge. The remains of a mortared stone wall, 18m in length by

1m in thickness, follows the line of the northern cliff-edge, while at the south-west corner there is a small mortared stone embrasure; these features probably represent the remains of a mortared stone wall that enclosed the circumference of the inner ward.

A scheduled monument, the investigation focused on a study of the outer ward's defences, with a 1m (south-west to north-east) by 9m trench excavated by hand across the inner bank and ditch in an area where cattle poaching had caused damage. The reinstatement of this damaged area following the excavation was part of the programme of work. The outer bank lay beyond the north-western limits of the excavation trench and was not investigated. The first phase of activity at the site involved the cutting of the ditch into the basalt bedrock; the ditch proved to be some 5m wide at its base and flat-bottomed. At the south-eastern side of the trench a sloping stone-lined facing to the inner bank was encountered, with the stones set in mortar, rising up to provide the foundation footings for a badly decayed mortared stone wall, some 0.5m thick, crowning the top of the inner bank. There was no evidence to suggest that the ditch had its origin at a date earlier than the medieval period, and it can be suggested that the stone wall represents the remains of a medieval **curtain wall that defended the outer ward's landward side and which was connected to the now** collapsed perimeter tower at the south-west end of the inner bank.

A second phase of activity was marked by the presence of three distinct basal deposits on the floor of the ditch, including a 0.2m-deep mortar-rich grey silty clay containing rotted mortar present towards the south-east side of the ditch, and a deposit of similar grey silty clay, 0.3m in thickness, at the north-west side of the ditch, containing particles of a mineralised iron-rich orange flecking. A further deposit of grey silty clay, 0.1m thick, was also present across the rest of the base of the ditch. It could be argued that these deposits accumulated in the ditch base during the medieval period, although the deposits associated with the next phase of activity (Phase 3) would suggest that the site had then become abandoned, since the grey silty clay fills in the ditch were overlain by a deposit of grey/brown silty clay which contained frequent flecks of washed-out mortar, and a large quantity of angular basalt pieces. This deposit was some 0.5m deep and was also shown to lie against the mortared stone facing to the inner bank at the south-east end of the trench. A 0.5m-thick deposit of dark-brown clay that also contained large angular basalt stones was found to the inner, south-eastern side of the curtain wall. Both of these deposits were judged to represent the collapse of the curtain wall.

There then appears to have been a second period of fortification (Phase 4), when the medieval defences were remodelled by the introduction of a series of deposits of varied composition and collectively up to 1m in thickness. These deposits included layers rich in laterite and other minerals, layers of brown clay, grey/brown clay and red/brown clay, and deposits of sod-like material. The upper surface of the series of deposits was compacted (e.g. C206, a 0.1m-thick laterite-rich layer deposited to the rear of the old curtain wall) and, taken in conjunction, the introduced layers made up a sloping rampart that was built over and against the old medieval defences and the Phase 3 abandonment layers.

The historical evidence would suggest that the castle was in use during the late 16th century and that it was besieged and captured from the MacDonnells in 1575 by an English force led by Captain John Norris, who, having massacred the defenders and islanders, then withdrew leaving a garrison in the castle to hold the island (Brewer and Bullen 1868, 17). This involved expenditure on repairs to the **castle's fabric, although it was subsequently abandoned by the English by the end of the year**. It can be suggested that Phase 4 either represents the MacDonnells' efforts to refortify the castle, perhaps in 1568 when Sorley Boy MacDonnell was reported as having fortified the island (CSPI 1860, 363–4) or in advance of the English attack in 1575, or that it represents the work undertaken by the English **garrison to repair the castle's defences during their time there**. The subrectangular earthen platform that extends for c. 10m from the north-east corner of the inner bank and which disturbs the line of the ditch should also be considered at this point. It could be that this platform represents the remains

of an earthen bastion added by the English to provide additional flanking strength to the revamped medieval defences.

After this period the site again appears to have fallen into disuse, with a series of post-abandonment layers laid down during Phase 5. The base of the Phase 4 rampart was overlain by a mid-brown silty clay containing angular basalt stones, while the main body of the rampart was covered by a layer of sterile mid-brown silty clay that was present across the entire area investigated. Early modern activity (Phase 6) was represented by a now decayed drystone field wall that was constructed over the line of the old curtain wall, while the entire trench was covered by a turf layer.

References

Brewer, J.S. and Bullen, W. (eds) 1868 Calendar of the Carew Manuscripts, Volume 2, 1575–1588. London.

CSPI 1860 Calendar of State Papers relating to Ireland, Volume 1, 1509–1573. London.

McNeill, T.E. 1983 The stone castles of northern County Antrim. *Ulster Journal of Archaeology* 46, 101–28.

2005:031 - CRAIGMACAGAN, RATHLIN ISLAND, Antrim

County: Antrim Site name: CRAIGMACAGAN, RATHLIN ISLAND

Excavations.ie number: 2005:031 License number: AE/05/71

Author: Ruth Logue and Rosemary McConkey, Centre for Archaeological Fieldwork, School of **Geography, Archaeology and Palaeoecology, Queen's University Belfast,**

Site type: Neolithic

ITM: E 715327m, N 949980m

Latitude, Longitude (decimal degrees): 55.283393, -6.184599

An excavation was carried out at Craigmacagan townland on Rathlin Island in June 2005. The work **was carried out by the Centre for Archaeological Fieldwork, Queen's University Belfast, in partnership** with the Centre for Maritime Archaeology, University of Ulster, Coleraine. The work was part of the CMA maritime survey of the island and was funded by EHS: Built Heritage.

In summer 2004 the CMA carried out an inspection of the site at Craigmacagan, which had been producing archaeological material. The hillside to the rear of an agricultural shed had been excavated back to facilitate the building, and the section face (c. 8m long) was exposing a large amount of archaeological material. Flint, porcellanite chippings and pottery were collected, and the finds seemed to indicate a Neolithic date for the site. Local people also reported finding archaeological material on or near the site.

It was proposed to carry out a limited excavation at the site in order to recover finds from their archaeological context, and so that any structures or features present could be recorded before they were destroyed due to erosion of the section. A single trench 5.5m by 2m, orientated north–south, was opened after the removal of a large amount of material that had been deposited on the hill during clearance for the building of the shed.

The trench yielded a number of archaeological layers, but no actual structures. A large number of finds were recovered – porcellanite rough-outs and chippings, both decorated and undecorated pottery and worked flint. Two fragments of pitchstone were also found. The layers and artefacts may represent material dumped on to the site.

2006:68 - Demesne, Rathlin Island, Antrim

County: Antrim Site name: Demesne, Rathlin Island

Excavations.ie number: 2006:68 License number: AE/06/187

Author: Brian Sloan, Centre for Archaeological Fieldwork, School of **Geography, Archaeology and Palaeoecology, Queen's University, Belfast, BT7 1NN.**

Site type: Bronze Age cist burial

ITM: E 714797m, N 950850m

Latitude, Longitude (decimal degrees): 55.291327, -6.192581

An excavation of a Bronze Age cist burial was carried out to the rear of Mc Cuaig's bar, Church Bay, Rathlin Island. The excavation was a follow-up investigation to work carried out by Declan Hurl (see No. 67 above). A crouched inhumation burial and an intact tripartite bowl were recovered from the cist. Disarticulated human remains were observed in a shallow pit stratigraphically above the cist, and the presence of these remains prompted the need for further investigation. The cist lay c. 3m up an unstable gravel slope, from which the disarticulated remains were actively eroding.

The area of Church Bay is well documented as an area of archaeological significance. Throughout the **18th and 19th centuries there are instances recorded of 'tumuli' being present in the Church Bay area,** and the standing stone visible today (ANT001-014) may represent the remains of a cemetery in this area. The most recent excavations of cists in the Church Bay area were undertaken in 1983-4 under the direction of Ken Wiggins. In all, seven cists were excavated, each containing inhumation burials.

A 3m by 3m trench was opened, centred on the cist, which was constructed of split limestone slabs. Prior to the excavation, mounds of redeposited gravel were observed on the ground surface, resulting from work carried out by the landowner. The mound of gravel in the excavation area was manually removed until the original ground surface was reached. Upon excavation, the disarticulated human remains were recovered and were found to represent at least two individuals. A limestone slab positioned to the north of the pit cut seemed to give the burial a formal arrangement.

The cist was aligned north-east/south-west and measured 1.4m in length. The capstone consisted of a large limestone slab, which had broken in two prior to the excavation. After removal of the contents, the capstone was replaced and the cist left in situ.

The excavation uncovered another cist, below the southern section face. The second cist appeared to be aligned north-south and seemed to be smaller than the cist with the crouched inhumation. It is possible that this cist is a child burial (as Wiggins found in his excavations) or perhaps a cremation burial. However, this cist was left undisturbed in situ.

Analysis of the skeletal remains from the cist and the disarticulated remains from the pit above the **cist is ongoing at Queen's University, Belfast. It is hoped that material from the excavation will be available for dating.**

2006:57 - **St Thomas's Church, Church Quarter, Rathlin Island, Antrim**

County: Antrim **Site name: St Thomas's Church, Church Quarter, Rathlin Island**

Excavations.ie number: 2006:57 License number: AE/06/191

Author: Sarah Gormley, Centre for Archaeological Fieldwork, School of Geography, Archaeology and **Palaeoecology, Queen's University, Belfast.**

Site type: Early medieval/medieval

ITM: E 714447m, N 951090m

Latitude, Longitude (decimal degrees): 55.293563, -6.197989

An archaeological evaluation was carried out at an area of land owned by the National Trust, which **lies immediately north of the boundary of St Thomas's Church, Church Quarter, Rathlin Island.** The work was undertaken to investigate the archaeological potential of the site ahead of a proposed graveyard extension project. The area is included in the Sites and Monuments Record, as tradition **states that the present church, St Thomas's, is located on the site of an earlier church, reputedly founded by St Comgall of Bangor in the late 6th or early 7th century (e.g. O'Laverty 1887, 374; Law 1962, 27; Hamlin 1976, 458).** Four other locations, however, have also been proposed for the site of the early church, including Kilvoruan in Carravindoon townland and Kilbride in Knockans townland (Hamlin 1976, 458). In 2003 a number of human skulls and other human bone remains were uncovered within the present church during renovation work and it has been suggested that they may have originated from the earlier church, being deposited within the present church when it was constructed in the 18th century (Hurl 2003).

Five small trenches were opened (three measuring 2m by 1m and two at 1m by 1m), to test for archaeological remains. The evaluation uncovered remains of successive events of slippage and tumble from the cliffs which rise to the north and east side of the site. The slumping and stone tumble deposits in many cases contained what appeared to be midden material of shell and animal bone, coarse pot of Bronze Age and Early Christian date and struck flint and porcellanite. A hearth and midden pit were the only features encountered and were concentrated in the south-west of the area under investigation (in Trench 2). The hearth deposit, visible as lenses of orange, orange/red and black sandy clay, measured 0.3m by 0.28m and 0.1m thick. Finds recovered from the hearth included a sherd of lead-glazed pottery, providing a possible date in the medieval period for the feature.

The midden pit extended into the trench from the south, 1–1.4m, and extended beyond the limits of the trench at the east, south and west. The dark-brown sticky clay loam fill contained large quantities of animal bone and shell. Souterrain ware pottery was also recovered, as was an articulated skeleton which has been identified as a dog (Dr E. Murray, pers. comm.). The associated souterrain ware gives the midden pit a probable Early Christian date.

No evidence to suggest that the area had been used for human burials was uncovered during the evaluation. The recovery of a midden with a likely date in the Early Christian period suggests that the **site was in use, for some time at least, during the period that St Comgall's Church was active on the island, between the 7th and 10th centuries** (Hamlin 1976, 458).

References

Hamlin, A. 1976 The archaeology of Early Christianity in the north of Ireland. Unpublished PhD thesis, QUB.

Hurl, D. 2003 St Thomas' Church of Ireland church, Rathlin Island. Unpublished file note held in the EHS SMR file.

Law, H.I. 1962 Rathlin Island and Parish, Cookstown.

O'Lavery, J. 1887 An historical account of the Diocese of Down and Connor, Ancient and Modern, Vol. 4. Dublin.

2006:67 - Church Bay, Demesne, Rathlin Island, Antrim

County: Antrim Site name: Church Bay, Demesne, Rathlin Island

Excavations.ie number: 2006:67 License number: AE/06/72

Author: Declan P. Hurl, Historic Monuments Unit, Environment and Heritage Service, Waterman House, 5–33 Hill Street, Belfast, BT1 2LA.

Site type: Bronze Age cist burial

ITM: E 715061m, N 886525m

Latitude, Longitude (decimal degrees): 54.713630, -6.214280

Excavations conducted behind Mc Cuaig's bar, Church Bay, Rathlin Island, revealed two Bronze Age

cist burials and a pit containing a mass of disarticulated human bones. The site lies c. 40m north of the location of an excavation undertaken in 1983–4 by a team led by Ken Wiggins, which uncovered six or seven disturbed cists containing the partial remains of ten individuals, half of whom were within one grave, as well as two Irish bowls, a pygmy cup and a bucket-shaped urn.

The site came to light in 2005, when the erosion of a 3m-high section cut into pebbly raised beach material revealed a number of limestone slabs. Further investigation proved these slabs to be the capstone and side lintels of a cist (Cist A), the top of which was 0.67m below the upper ground surface. An initial excavation, to investigate and rescue the contents of the cist, was undertaken in February 2006 by the writer, assisted by a team from the Centre for Maritime Archaeology, University of Ulster: Coleraine, headed by Colin Breen. The larger part of the cracked capstone, which was 0.7m wide, 0.2m thick and originally 1.3m long, was lifted and the contents revealed.

Within the cist, internally measuring 1.15m long and 0.6m wide and deep, was an adult skeleton, crouched on its left side, and an intact Early Bronze Age tripartite vase. Provisional analysis by Dr

Eileen Murphy (QUB) found that the skeleton is a male of around 45 years of age and 1.85m tall. He was a sturdy individual, with degenerative joint disease in his shoulders, vertebrae, hips and knees. Prior to the opening of the cist, a pit was observed above it, initially thought to represent the cut to accommodate the cist. Upon further examination, however, numerous pieces of fractured bones representing several individuals were found within the pit. A further excavation was carried out by Brian Sloan from the Centre for Archaeological Fieldwork in the autumn of 2006 to investigate this apparent pit burial, and to expose and plan the cist (see No. 68 below.)

2007:38 - Fisherman's Cottages, Church Quarter, Rathlin Island, Antrim

County: Antrim **Site name: Fisherman's Cottages, Church Quarter, Rathlin Island**

Excavations.ie number: 2007:38 License number: AE/07/224

Author: Chris Long, Gahan & Long Ltd, 7–9 Castlereagh Street, Belfast, BT5 4NE.

Site type: Human remains

ITM: E 714497m, N 951050m

Latitude, Longitude (decimal degrees): 55.293193, -6.197219

It is **proposed to construct six fishermen's cottages on Rathlin Island, Co. Antrim. An archaeological** evaluation of the site has been conducted. This revealed an archaeological layer concentrated beside **the boundary with St Thomas' Church of Ireland, which contained** articulated and disarticulated human remains. It has been agreed that no construction will be conducted within this area. It is recommended that the full extent of the archaeological layer be established and subsequently fenced off for future protection.

2009:056 - CHURCH BAY, RATHLIN ISLAND, Antrim

County: Antrim Site name: CHURCH BAY, RATHLIN ISLAND

Excavations.ie number: 2009:056 License number: AE/09/069

Author: Stephen Gilmore, Northern Archaeological Consultancy Ltd, Belfast, BT12 7DY.

Site type: Middens

ITM: E 714837m, N 915857m

Latitude, Longitude (decimal degrees): 54.977093, -6.206104

Topsoil stripping was carried out in June 2009 as part of a planning application for holiday accommodation. Four spreads of charcoal-flecked midden material were uncovered. Two of the middens, C and D, measured c. 12.4m by 5m by 0.48m with an east–west orientation and 12.45m by 3m by 0.32m. The middens were composed of black silty sand with large stones throughout. Frequent fragments of well-preserved animal bone, some showing evidence of butchery, were scattered throughout the middens along with mollusc shells. A shallow hearth was noted at the base of Spread C. It was not possible to assign a time period to these middens.

Appendix 4: Historic Buildings / Buildings with Listed Status

Historic Buildings / Buildings with Listed Status within c. 1km of the PDA.

HB No.	Type	Address	Second Survey	Grade
--------	------	---------	---------------	-------

HB05/16/001	A			
-------------	---	--	--	--

	House	Manor House, Outbuildings & Walling, Rathlin Island.		
--	-------	--	--	--

			B+	
--	--	--	----	--

HB05/16/001	B			
-------------	---	--	--	--

	Walling	Stock Yard A.K.A. Coal Yard, Manor House, Rathlin Island, Co. Antrim.		
--	---------	---	--	--

			B2	
--	--	--	----	--

HB05/16/002				
-------------	--	--	--	--

	Church	Church of the Immaculate Conception (RC), Rathlin Island.		
--	--------	---	--	--

B+
HB05/16/003
Church **Saint Thomas' (C of I) Church, Rathlin Island.**

B+
HB05/16/004
Boat House Boat House, The Station, Rathlin Island.

B1
HB05/16/005
Kelp Store Kelp Store, Ouig, Rathlin Island.

B1
HB05/16/006
Mill Mill, Mill Bay, Rathlin Island .

B1
HB05/16/007
Telephone Kiosk Telephone Kiosk opposite the Boat House, Rathlin Island, Co. Antrim.

B1
HB05/16/008 A
House Brockley House, Brockley Clachan, Rathlin Island.

B2
HB05/16/008 B
House Brockley Cottage, Brockley Ballygill, Middle, Rathlin Island, Co. Antrim, BT54 6RT.

B2 B1

HB Ref No: HB05/16/001 A
Extent of Listing: Includes OUTBUILDINGS AND WALLING
Address: MANOR HOUSE, OUTBUILDINGS AND WALLING RATHLIN ISLAND
Survey 1: B+ Date of Listing: 10/5/1977
Current Use: HOUSE Former Use HOUSE
Conservation Area: No Thatched: No
IG Ref: D1475 5105 Owner CategoryHeritage

HB Ref No: HB05/16/001 B
Address: STOCK YARD AKA COAL YARD MANOR HOUSE, RATHLIN ISLAND CO ANTRIM
Survey 1: B2 Date of Listing: 6/22/1994
Current Use: WALLING Former Use WALLING
Conservation Area: No Thatched: No
IG Ref: D1484 5106 Owner CategoryPRIVATE

HB Ref No: HB05/16/002
Address: CHURCH OF THE IMMACULATE CONCEPTION (RC) RATHLIN ISLAND
Survey 1: B+ Date of Listing: 8/18/1989
Current Use: CHURCH Former Use CHURCH
Conservation Area: No Thatched: No
IG Ref: D1451 5131 Owner CategoryCHURCH

HB Ref No: HB05/16/003
Address: SAINT THOMAS' (C of I) CHURCH RATHLIN ISLAND
Survey 1: B+ Date of Listing: 8/18/1989
Current Use: CHURCH Former Use CHURCH
Conservation Area: No Thatched: No
IG Ref: D1453 5109 Owner CategoryCHURCH

HB Ref No: HB05/16/004
Address: BOAT HOUSE THE STATION RATHLIN ISLAND
Survey 1: B1 Date of Listing: 11/28/1988
Current Use: BOAT HOUSE Former Use Boat House
Conservation Area: No Thatched: No
IG Ref: D1487 5083 Owner CategoryPRIVATE

HB Ref No: HB05/16/005
Address: KELP STORE OUIG RATHLIN ISLAND
Survey 1: B1 Date of Listing: 11/28/1988
Current Use: KELP STORE Former Use KELP STORE
Conservation Area: No Thatched: No
IG Ref: D1499 5049 Owner CategoryHeritage

HB Ref No: HB05/16/006
Address: MILL MILL BAY RATHLIN ISLAND
Survey 1: B1 Date of Listing: 11/28/1988
Current Use: MILL Former Use MILL
Conservation Area: No Thatched: No
IG Ref: D1513 5012 Owner CategoryPRIVATE

HB Ref No: HB05/16/007
Address: TELEPHONE KIOSK OPPOSITE THE BOAT HOUSE RATHLIN ISLAND CO ANTRIM
Survey 1: B1 Date of Listing: 12/20/1989
Current Use: TELEPHONE KIOSK Former Use TELEPHONE KIOSK
Conservation Area: No Thatched: No
IG Ref: D1487 5082 Owner CategoryCOMMERCIAL

HB Ref No: HB05/16/008 A
Address: BROCKLEY HOUSE BROCKLEY CLACHAN RATHLIN ISLAND
Survey 1: B2 Date of Listing: 11/28/1990
Current Use: HOUSE Former Use HOUSE
Conservation Area: No Thatched: No
IG Ref: D1185 5196 Owner CategoryPRIVATE

HB Ref No: HB05/16/008 B
Extent of Listing: House
Date of Construction: 1800 - 1819
Address: Brockley Cottage Brockley Ballygill Middle Rathlin Island Co. Antrim BT54 6RT
Townland: Ballygill Middle
Survey 2: B2 Date of Listing: 11/28/1990 Date of De-
listing: ----
Current Use: House Former Use: House
Conservation Area: No Industrial Archaeology: No
Vernacular: Yes Thatched: No
Monument: No Derelict: Partially
OS Map No: 3/3 IG Ref: D1185 5196
Owner CategoryPrivate
Exterior Description and Setting

A single storey 3 bay cottage, natural slated roof, gabled, 3 chimneys, pebble dashed walls. The cottage forms part of a clachan group of probably 5 former dwellings, 3 of which are ruinous and another vacant. The entrance is on the south side. It has a plain braced and sheeted softwood door, recently made, without fanlight. To the east side of it a sliding sash 4 pane window with low cill and to the west side of door 2 sliding sash 4 pane windows also with low cills. The wall is pebble dashed, probably about 40 or 50 years ago, with a smooth rendered cement plinth approx. 300mm high. There are smooth rendered reveals to door opening and not returned on face and painted red now faded. Windows have smooth rendered and painted reveals returned on wall face 50mm and painted like the door reveals. Window cills are also painted. At gutter line (gutter no longer exists) where a course of brick on edge projected 30mm there is a smooth rendered cement plaster band. A few gutter brackets remain. Formerly the gutter returned along the east gable to a downpipe at rear of house. The east gable has no windows, and the wall surface similar to south wall with the plinth returned along it. There is a smooth rendered cement plaster barge on both slopes but at the chimney becomes horizontal. The west gable is similar without plinth. The north side (NNE) has a single small sliding sash 9 pane window with weight box exposed and lights the rear of the kitchen. The wall surface is as other but without plinth at ground level. The roof is slated with large heavy Bangor Blues (760 mm approx. by 370 mm) on slating laths on modern joists. The ridge tile of the roll variety with hole to insert oak plug on rod to better secure them. These ridge tiles are blue/black in colour (similar to engineering brick colour). There are several holes in the roof particularly in the south side and a large hole over the east room with many slates missing. The 3 chimneys are smooth rendered in cement plaster unpainted with projecting band one course from the top. The middle chimney does not have such a band. It may not have had one. The chimneys are made of brick. The walls are of stone (basalt). The external dimensions of the cottage are 15 metres by 5.5 approx. The cottage group nestles under the shoulder of a rocky hillock which rises steeply to the north west and the landscape in the north side is mostly moorland while to the south there are cultivated small fields. The group is approached by a long winding rough laneway which turns sharp left to run in a straight line between the group of buildings. On the NW side of the lane ruins or otherwise of 5 cottages laid out with their gables to it. On the SE side the modern bungalow of the owner and a large stone barn with its gable to the land and the ruinous of walls of some other buildings. The cottage inspected was the 4th in line from the NE. To the N of it a 1.5 storey cottage of equal length and with 2 back returns. The others are either converted into sheds or are ruinous. The distance between the long walls of the cottages vary from 7 metres to 8.5 metres. The cottage with the back returns considerably reduces the gap between it and the next.

Architects Not Known

Historical Information

The clachan is shown on the 1832 O.S. map very similar as it is today i.e. with 5 no. cottages with their gables to the lane and a series of smaller units, probably outbuildings on the other side. The 1856 revision of the O.S. map shows the clachan with little change, Across the lane from HB05/16/008A is a long barn which contained stable, byre, straw storage and threshing machine. This barn is not shown on either the 1832 or 1856 maps. The owner stated that the previous owner was a J McCartney and in C1960 a Hugh Duncan and C1950's Frank Craig. The Craigs occupied the cottage for several generations. The Griffith V.B of 1858 gives the resident as Neill Criag. The other residents in 1858 were from South, Archibald McCurdy, William Black, Archibald Morrison and William Black. The latter's valuation was £1-5-0 while others varied between 10/2 and 5/2. The lessor was Reverend Robert Gage. The Gagers leased the island from Earl of Antrim in 1746. None of the cottages are occupied, indeed 3 are ruinous though part converted to storage. The layout of the clachan is not like the haphazard arrangements to be found e.g. in Innishowen. One suspects that the layout was dictated by the landlord as the early OS maps show several of like arrangement.

References. Primary Sources 1. UAFP O.S Maps 1832 Antrim No. 1-6" 2. UAFP O.S. Maps 1856 Rev. Antrim No. 1-6 3. O.S Memoirs of Ireland, Parishes of County Antrim IX, North Antrim Coast and

Rathlin 1830-2, 1835, 1838-9. P. 132 - Habits of People. 4. Wife of Owner. Secondary Sources 1. UAHS In the Island of Rathlin P3, 5, 8 2. Lewis Topographical Dictionary of Ireland Vol II P. 501. 3.A Gai? Rural House of the North of Ireland, P90 - Purlin Roots P.100 fig 101

Criteria for Listing

Architectural Interest D. Plan Form J. Setting K. Group value

Historic Interest X. Local Interest

Evaluation A 3 room cottage dating back to at least early 19th century and forming part of a former 5 cottage clachan laid out in a geometric arrangement with the gable end of each cottage fronting onto the access laneway. While the cottage retains its original form it has lost much of its detail character in that the external walls are dry pebble dashed. The south facing windows have been greatly enlarged through still vertical sliding sash type. The single small window on the north side is probably typical of the original windows. The large roofing slates have fallen off in many places leaving two very large holes. Internally the cottage is in poor condition with widespread wet rot and much dampness. The cottage and group are worth recording for clachan layout typical of Rathlin. The group nestles under a hilly outcrop of rock rising precipitously behind it to the north west.

General Comments

Date of Survey Thursday, October 28, 1999

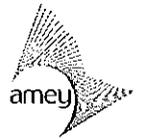
Appendix C Ecology

Appendix C Ecology

Table 0-1: Phase 1 habitat survey target notes

Target note number	Description
1	Grey seals hauled out on the rocks and on beach
2	Seabirds offshore around breakwater, species observed included eider <i>Somateria mollissima</i>
3	Seaweeds on the drift lines along the beach include kelps and wrack species
4	Exposed limestone rock
5	Area of rock armour beside existing pier wall

Appendix D Noise



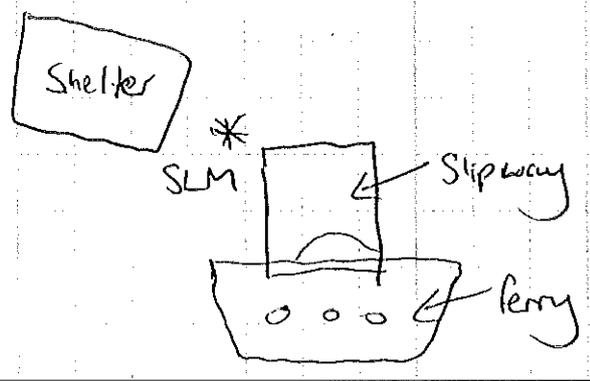
Project Name: Rathlin ES

Location and date:	Rathlin Island 8/12/2015
Sampling method:	
Sound Level Meter:	Lxt1
Sound Calibrator:	CAL200
Other measuring instruments:	
On-site check before measurements:	<input checked="" type="checkbox"/> in the range 93.9±0.3 dB
On-site check after measurements:	<input checked="" type="checkbox"/> in the range 93.9±0.3 dB
Check before and check after Drift:	<input checked="" type="checkbox"/> <0.5 dB
Time and frequency weighting network used:	Fast (F) time weighting / A frequency weighting
Regulation or Standard used:	

Façade location? No, at least 3.5m from any facade Yes, 1m from façade

Time and date	Position/ file ID	Type of noise	Parameter measured	Values (dB)	Weather conditions & Observations
11.15 8/12/2015	Lxt19	Noise from ferry operation MV Canna	LAeq		Dry, light winds. Timings: 1.05 ramp on slip 1.05-2.00 cars unloading 2.30 - people unloading 5.46 engines idling 7.02 quad driving off 8.12 sand of waves 8.33 car + trailer off ferry 9.07 ferry engine idling 10.07 ramp coming up + moving off 12.30 tractor 13.09 ferry reversing 15.37 waves only no noise from ferry.

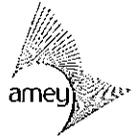
Plan of the site:



Note: Include Noise Meter Location National Grid Reference (E, N - 6 digit reference in metres) for each position

Surveyor's Signature: <u>Clanroy</u>	Name (capital letters): <u>CHRIS CONROY</u>
--------------------------------------	---

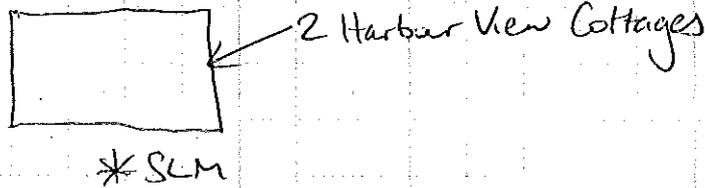
Project Name: Rathlin ES



Location and date:	8/12/2015	2 Harbour View Cottages
Sampling method:		
Sound Level Meter:	Lx+1	
Sound Calibrator:	CAL200	
Other measuring instruments:		
On-site check before measurements:	<input checked="" type="checkbox"/> in the range 93.9±0.3 dB	
On-site check after measurements:	<input checked="" type="checkbox"/> in the range 93.9±0.3 dB	
Check before and check after Drift:	<input type="checkbox"/> <0.5 dB	
Time and frequency weighting network used:	Fast (F) time weighting (A) frequency weighting	
Regulation or Standard used:		
Façade location?	<input type="checkbox"/> No, at least 3.5m from any facade <input type="checkbox"/> Yes, 1m from façade	

Time and date	Position/ File ID	Type of noise	Parameter measured	Values (dB)	Weather conditions & Observations
12:20 8/12/2015	21	Background	LA90 LAeq	52	Dry, sunny, 15mph sound of waves most prevalent

Plan of the site:



Note: Include Noise Meter Location National Grid Reference (E, N – 6 digit reference in metres) for each position

Surveyor's Signature: Conroy

Name (capital letters):

CHRIS CONROY

CERTIFICATE OF CALIBRATION

Issued by:

MTS Calibration Ltd.

Laboratory address:

17 Elvington Close
Billingham TS23 3YS
England

Telephone: +44 (0)1642 876 410

Please note delivery address below



Date of Issue: 18 November 2014

Certificate Number: 23037U

0607

Sound Calibrator

Client: Amey OW Limited
South East Hub, Explorer II
Fleming Way, Crawley
West Sussex, RH10 9GT

Larson Davis

Model CAL200

Serial Number 7903

Two Reference Calibrators, each calibrated by the National Physical Laboratory, were used to establish the sensitivity of the measurement chain. The same measurement chain is then used to determine the output level of the Object Calibrator by the difference between its output and that of the nominated Reference Calibrator. Four independent measurements of the third-octave band sound pressure levels produced by the Reference Calibrators and the Object Calibrator are averaged to minimise uncertainties of the calibration. The measurement chain consists of an NPL-Calibrated Reference Microphone and internally calibrated Reference Preamplifier and Reference Analyser.

As well as providing a traceable measurement of the sound pressure level in the cavity of the Object Calibrator, the Calibrator's frequency and total harmonic distortion are also measured. Frequency is determined from the average of four independent measurements using a multimeter with a current UKAS-accredited calibration. The total harmonic distortion is measured from the average of three independent measurements by third octave analysis, subtracting the level of the fundamental frequency from the sum of the combined harmonics in the frequency band to 20kHz. The complete procedure is detailed in the MTS Calibration Ltd work procedure WP01.

The sound pressure level generated by the calibrator in its WS2 configuration was measured by reference to Brüel & Kjær Model 4133 Microphone and reference Sound Calibrator as shown in the Test Equipment section below. The measured values were:

Output Level 1:	94.02	dB re 20µPa	+/- 0.14 dB (k= 2.00)
Fundamental Frequency 1:	1000.21	Hz	+/- 0.11 Hz (k= 2.00)
Total Harmonic Distortion 1:	0.399	%	+/- 0.011 % (k= 2.00)
Output Level 2:	114.03	dB re 20µPa	+/- 0.14 dB (k= 2.00)
Fundamental Frequency 2:	1000.20	Hz	+/- 0.11 Hz (k= 2.00)
Total Harmonic Distortion 2:	0.452	%	+/- 0.011 % (k= 2.00)

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k (individually calculated as above), to provide a level of confidence of approximately 95%. The uncertainty evaluation has been calculated in accordance with the current version of UKAS publication M3003.

Measurement Conditions: Temperature °C
Atmospheric Pressure mBar
Relative Humidity %

This measurement is valid only for the above device configured for calibration of a WS-2 microphone under the above environmental conditions. For deviation of prevailing conditions, the manufacturer's literature for the calibrator should be referred to.

Test Equipment:

Equipment	Manufacturer	Model	Serial No.	Traceability Ref.	Calibration Due
Reference Microphone	Brüel & Kjær	4133	810486	TE 155	Oct-15
Reference Calibrator	Brüel & Kjær	4231	2326247	TE 129	Oct-16
Real-Time Frequency Analyser	Larson Davis	2900	0271	TE 203	Nov-14

Date of Receipt: 10 November 2014

Date of Measurement: 18 November 2014

Approved Signatory:

Tony Sherris

Page 1 of 1

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards and to units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This Certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

PLEASE SEND ALL DELIVERIES TO:

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Company Registration Number: 06588525 England and Wales

The Grange Business Centre, Belasis Avenue, Billingham TS23 1LG, England

Telephone: 0044 1642 876410 Fax: 0044 1642 876411 E-Mail: dmarsh@slmcal.co.uk or tsherris@slmcal.co.uk <http://www.slmcal.co.uk>

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Issued by:

MTS Calibration Ltd.

Telephone: +44 (0)1642 876 410

Laboratory address:

17 Elvington Close
Billingham TS23 3YS
England



Please note delivery address below

Date of Issue: 13 December 2013

Certificate Number: 21369U

0607

Sound Calibrator

Client: Amey
Rushmere House
46 Cadogan Park
Belfast, BT9 6HH

Larson Davis

Model CAL200

Serial Number 7846

Two Reference Calibrators, each calibrated by the National Physical Laboratory, were used to establish the sensitivity of the measurement chain. The same measurement chain is then used to determine the output level of the Object Calibrator by the difference between its output and that of the nominated Reference Calibrator. Four independent measurements of the third-octave band sound pressure levels produced by the Reference Calibrators and the Object Calibrator are averaged to minimise uncertainties of the calibration. The measurement chain consists of an NPL-Calibrated Reference Microphone and internally calibrated Reference Preamplifier and Reference Analyser.

As well as providing a traceable measurement of the sound pressure level in the cavity of the Object Calibrator, the Calibrator's frequency and total harmonic distortion are also measured. Frequency is determined from the average of four independent measurements using a multimeter with a current UKAS-accredited calibration. The total harmonic distortion is measured from the average of three independent measurements by third octave analysis, subtracting the level of the fundamental frequency from the sum of the combined harmonics in the frequency band to 20kHz. The complete procedure is detailed in the MTS Calibration Ltd work procedure WP01.

The sound pressure level generated by the calibrator in its WS2 configuration was measured by reference to GRAS Model 40AG Microphone and reference Sound Calibrator as shown in the "Test Equipment" section below. The measured values were:

Output Level 1:	93.96	dB re 20µPa	+/- 0.14 dB (k= 2.00)
Fundamental Frequency 1:	999.75	Hz	+/- 0.11 Hz (k= 2.00)
Total Harmonic Distortion 1:	0.313	%	+/- 0.008 % (k= 2.00)
Output Level 2:	114.02	dB re 20µPa	+/- 0.14 dB (k= 2.00)
Fundamental Frequency 2:	999.74	Hz	+/- 0.11 Hz (k= 2.00)
Total Harmonic Distortion 2:	0.439	%	+/- 0.008 % (k= 2.00)

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k (individually calculated as above), to provide a level of confidence of approximately 95%. The uncertainty evaluation has been calculated in accordance with the current version of UKAS publication M3003.

Measurement Conditions: Temperature 24.2 °C
Atmospheric Pressure 1007.2 mBar
Relative Humidity 41.9 %

This measurement is valid only for the above device configured for calibration of a WS-2 microphone under the above environmental conditions. For deviation of prevailing conditions, the manufacturer's literature for the calibrator should be referred to.

Test Equipment:

Equipment	Manufacturer	Model	Serial No.	Traceability Ref.	Calibration Due
Reference Microphone	GRAS	40AG	85705	TE 106	Aug-15
Reference Calibrator	Brüel & Kjær	4231	2326247	TE 129	Aug-15
Real-Time Frequency Analyser	Larson Davis	2900	0492	TE 108	Jul-14

Date of Receipt: 12 December 2013

Date of Measurement: 13 December 2013

Approved Signatory:

Stuart Cowling

Page 1 of 1

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MTS Calibration Ltd

Company Registration Number: 06588525 England and Wales

The Grange Business Centre, Belasis Avenue, Billingham TS23 1LG, England

Telephone: 0044 1642 876410 Fax: 0044 1642 876411 E-Mail: dmarsh@slmcal.co.uk or tsherris@slmcal.co.uk <http://www.slmcal.co.uk>

CERTIFICATE OF CALIBRATION

Issued by: **MTS Calibration Ltd**

Laboratory address: 17 Elvington Close
Billingham TS23 3YS

Telephone: +44 (0)1642 876 410

Please note delivery address below **England**



Date of Issue: 19 December 2013 **Certificate Number:** 21367U 0607

Sound Level Meter Periodic Tests to BS EN 61672-3: 2006 Class 1

Client: Amey
Rushmere House
46 Cadogan Park
Belfast, BT9 6HH

Instrument Make: Larson Davis
Instrument Model: LxT1
Serial Number: 0002589

Microphone Make: PCB
Microphone Model: 377B02
Serial Number: 116742

Preamplifier Make: PCB
Preamplifier Model: PRMLxT1
Serial Number: 015517

Calibrator Make: Larson Davis
Calibrator Model: CAL200
Calibrator Serial Number: 7846
Calibrator Adaptor: n/a
Calibrator Certification Ref: MTS 21369U

Other Accessories supplied:
Windshield

MTS Calibration Ltd has obtained evidence which is generally available to the public that an independent testing organisation responsible for pattern approvals has demonstrated that this model of sound level meter has successfully completed the pattern evaluation tests of IEC 61672-2: 2003. This instrument, which was constructed to the requirements of BS EN 61672-1:2002 Class 1, has been tested using the procedures for periodic testing as specified in BS EN 61672-3: 2006.

The sound level meter submitted for testing has successfully completed the Class 1 periodic tests of IEC 61672-3: 2006 for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2: 2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1: 2002, the sound level meter submitted for testing conforms to the Class 1 requirements of IEC 61672-1: 2002

In conducting these measurements, it was necessary to use manufacturer's data. This was taken from the instruction manual of the instrument.

1770.01 Rev E

The instrument was within the above specification as received - no modifications were made

Ambient Temperature at Calibration (deg C)	24.2	Calibration check frequency (Hz)	999.7
Ambient Pressure at Calibration (mPa)	995.9	Reference Sound Pressure Level (dBA)	114.0
Ambient Relative Humidity at Calibration (%)	33.7	Reference Level Range dB	Single Range

Equipment	Manufacturer	Model	Serial No.	Traceability Ref.	Cal. Due
Condenser Microphone	Larson Davis	2541	7300	TE 157	Nov-14
Acoustic Calibrator 1KHz	Larson Davis	CAL200	9175	TE 208	Aug-15
Acoustic Calibrator	Brüel & Kjær	4226	2141963	TE 206	Aug-14
Signal Generator (set 1)	HP	33120A	US36016577	TE 111	Apr-14
Real-Time Frequency Analyser (set 1)	Larson Davis	2900	0492	TE 108	Jul-14

Authorised signatory:

Date of Receipt: 12 December 2013
Date of Periodic Test: 19 December 2013
Date of Certificate: 19 December 2013

Page: 1
of: 12

Stuart Cowling

MTS Calibration Ltd

The Grange Business Centre, Belasis Avenue, Billingham TS23 1LG

Telephone: 01642 876410 Fax: 01642 876411 E-Mail: dmarsh@slmcal.co.uk or tsherris@slmcal.co.uk



Rathlin Island Harbour Development Environmental Statement

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1:25,000

RATHLIN ISLAND



Legend

 Scheme Location



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Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT			Preliminary	✓
Design : HC			For Comment	
Chkd : HC			For tender	
Appd : AW			For construction	
Date : Dec 2015			As constructed	
			Other	



Client :
DRD Transport NI
Development & Traffic Assessment
Rathkeltair House, Market Street
Downpatrick, BT30 6AJ (028) 4461 2211

transportni
Department for
Regional
Development

Project Name :
**Rathlin Island
Harbour Development**

Drawing Title :
**Site Location
(Scale 1:25,000)**

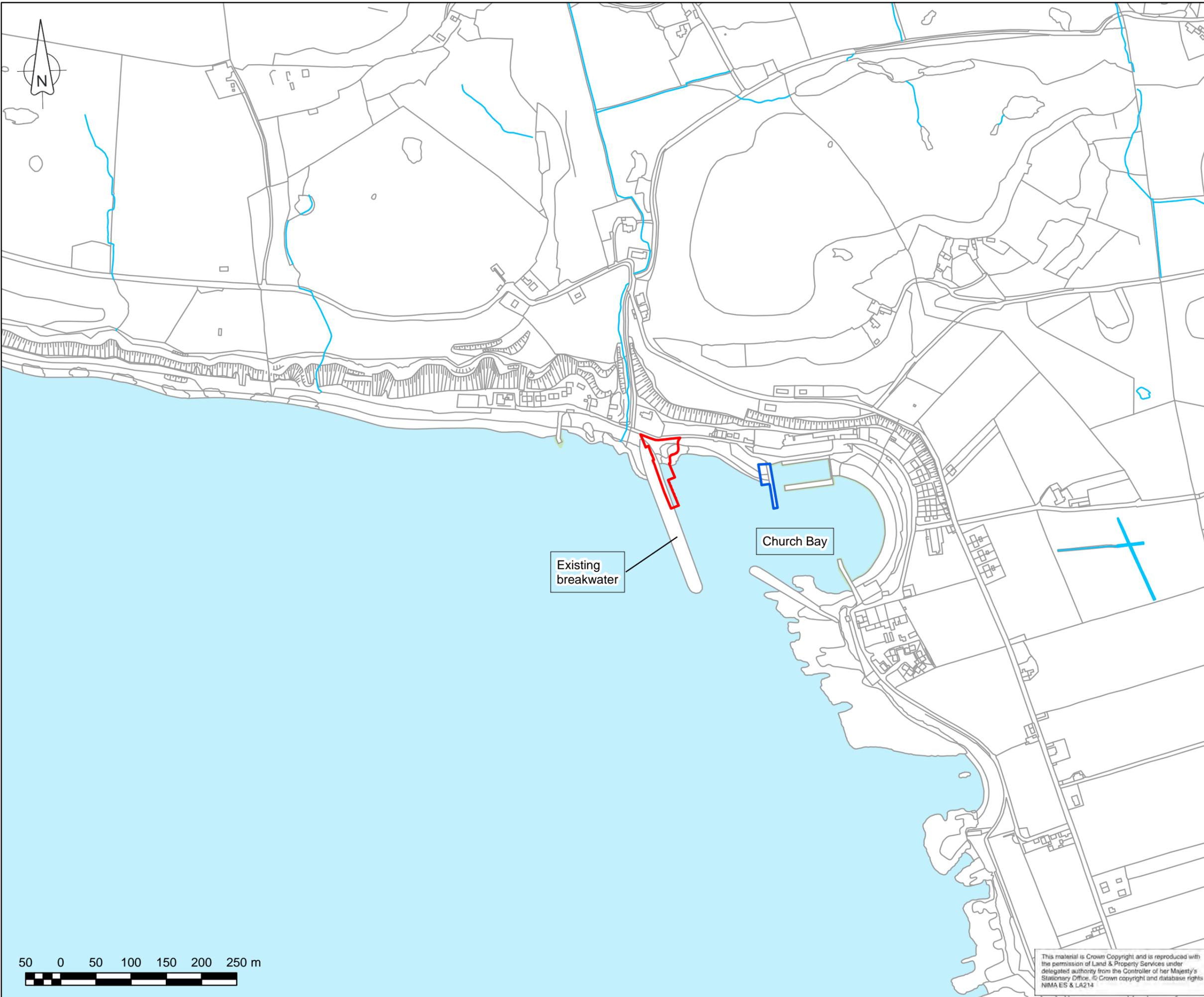
Original Drawing Size : A3
Scale : As Shown Dimensions :

Drawing No
Figure 1.1

Rev
-



1:750,000



Legend

- Scheme boundary
- Existing slipway and ferry area

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT				Preliminary
Design : HC				For Comment
Chkd : HC				For tender
Appd : AW				For construction
Date : Dec 2015				As constructed
				Other



Client : DRD Transport NI
 Development & Traffic Assessment
 Rathkeltair House, Market Street
 Downpatrick, BT30 6AJ (028) 4461 2211

Project Name :
Rathlin Island Harbour Development

Drawing Title :
Site Location (Scale 1:5,000)

Original Drawing Size : A3
 Scale : 1 : 5,000 Dimensions :

Drawing No Figure 1.2	Rev -
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Legend

- Scheme boundary
- Indicative temporary compound location

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT				Preliminary
Design : HC				For Comment
Chkd : HC				For tender
Appd : AW				For construction
Date : Dec 2015				As constructed
				Other



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Project Name :
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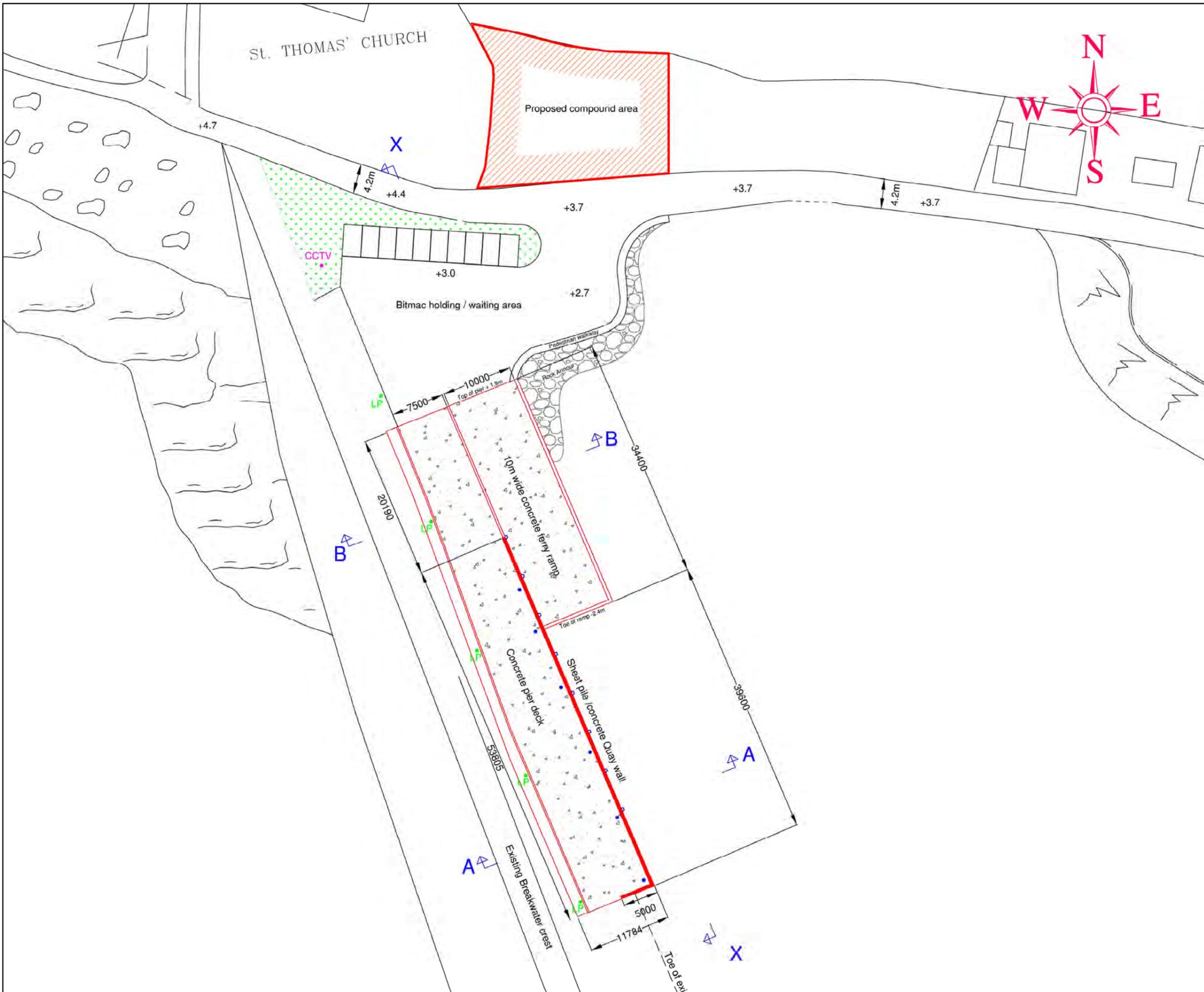
Drawing Title :
Scheme Boundary

Original Drawing Size : A3
 Scale : 1 : 500 Dimensions :

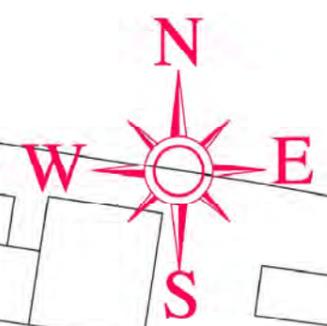
Drawing No : Figure 5.1 Rev : -



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- KEY:
- LAMPPOST
 - FENDER
 - MOORING BOLLARD
 - +2.7 PROPOSED LEVEL



Rev	Revision Details	Chkd	Appd	Date
Drawn :			Preliminary	<input checked="" type="checkbox"/>
Design :			For Comment	<input type="checkbox"/>
Chkd :			For tender	<input type="checkbox"/>
Appd :			For construction	<input type="checkbox"/>
Date :	Dec 2015		As constructed	<input type="checkbox"/>
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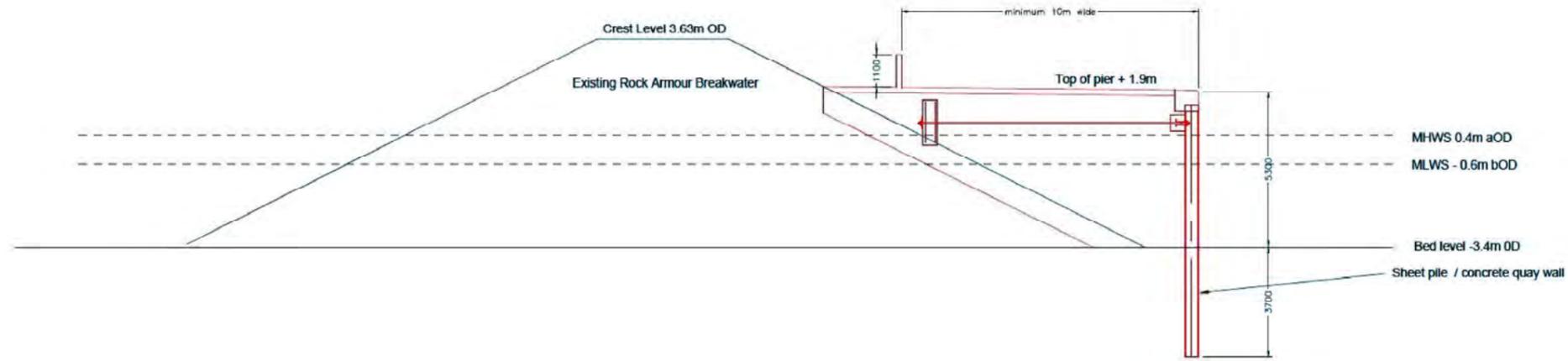
Client : DRD Transport NI
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 Downpatrick, BT30 6AJ (028) 4461 2211

transportni
 Department for Regional Development

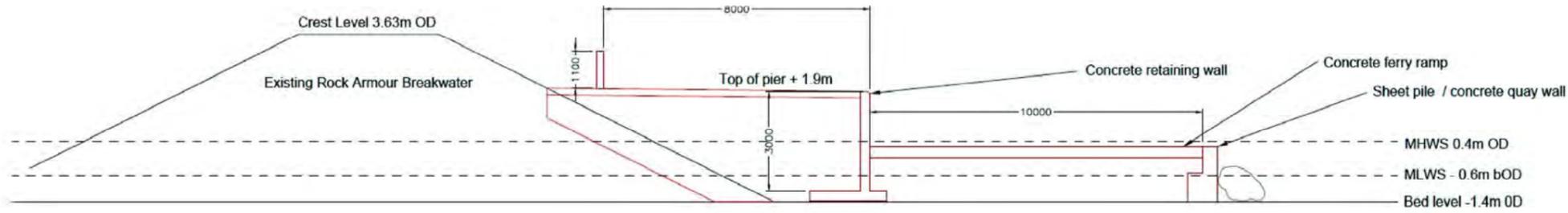
Project Name :
Rathlin Island Harbour Development

Drawing Title :
Proposed Design: Plan

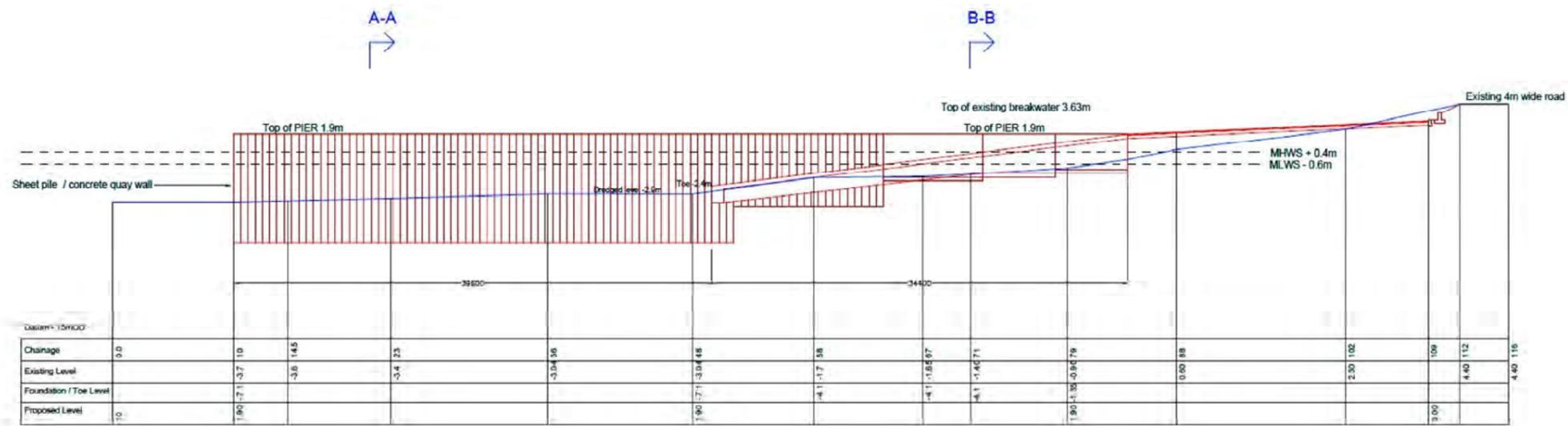
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Scale :	N.T.S.
Dimensions :	
Drawing No Figure 5.2	Rev -



Cross Section A - A
Scale: N.T.S.



Cross Section B - B
Scale: N.T.S.



Long Section X - X
Scale: N.T.S.

Rev	Revision Details	Chkd	Appd	Date
Drawn :				
Design :				
Chkd :				
Appd :				
Date :	Dec 2015			



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Project Name :
Rathlin Island Harbour Development

Drawing Title :
Proposed Design: Cross Sections

Original Drawing Size : A3
Scale : N.T.S. Dimensions :

Drawing No : Figure 5.3
Rev : -



Rev	Revision Details	Chkd	Appd	Date
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	Design :		For Comment	
	Chkd :		For tender	
	Appd :		For construction	
	Date : Dec 2015		As constructed	
			Other	



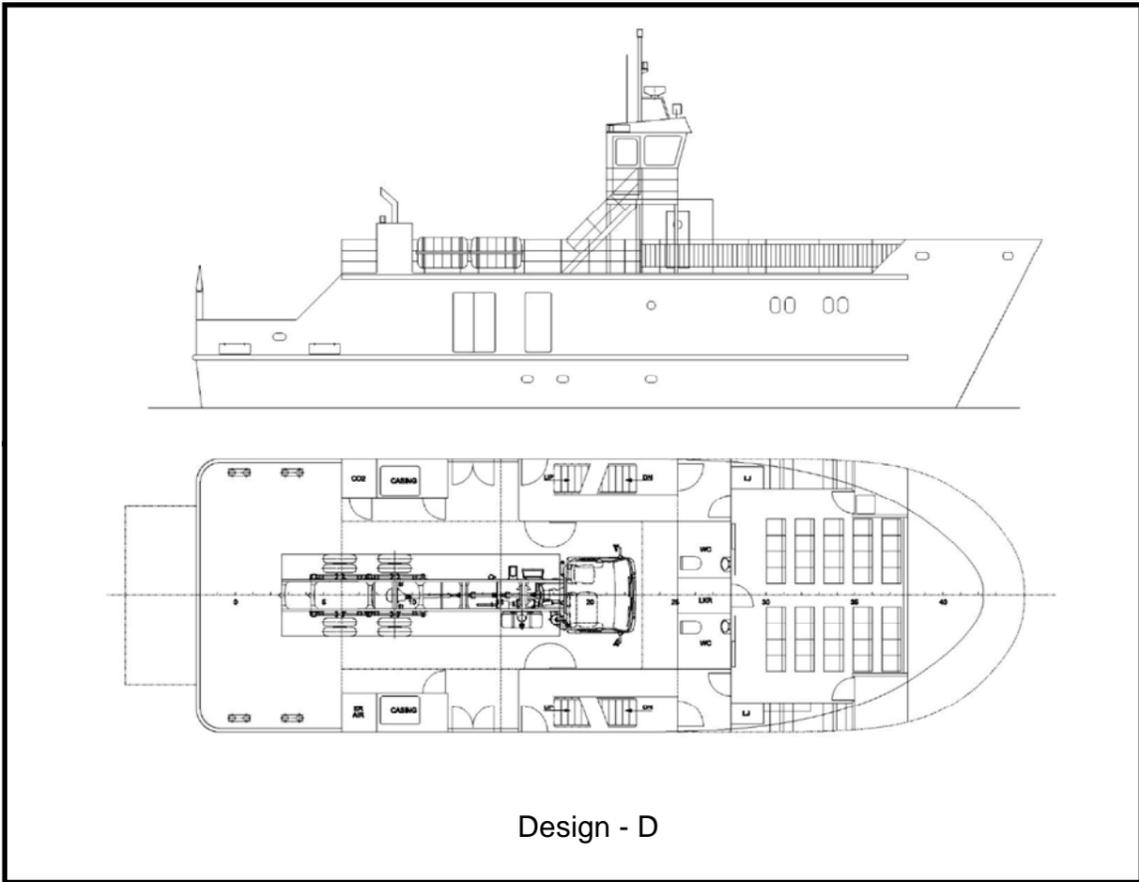
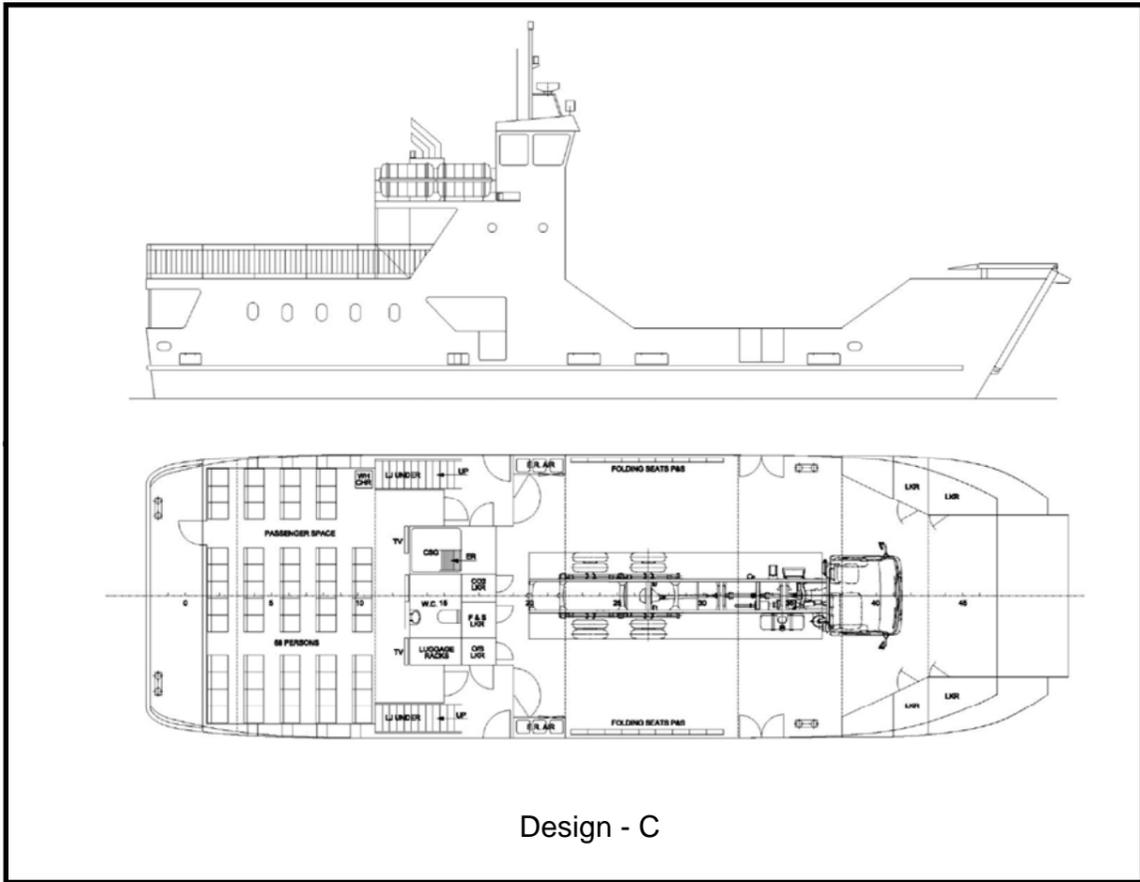
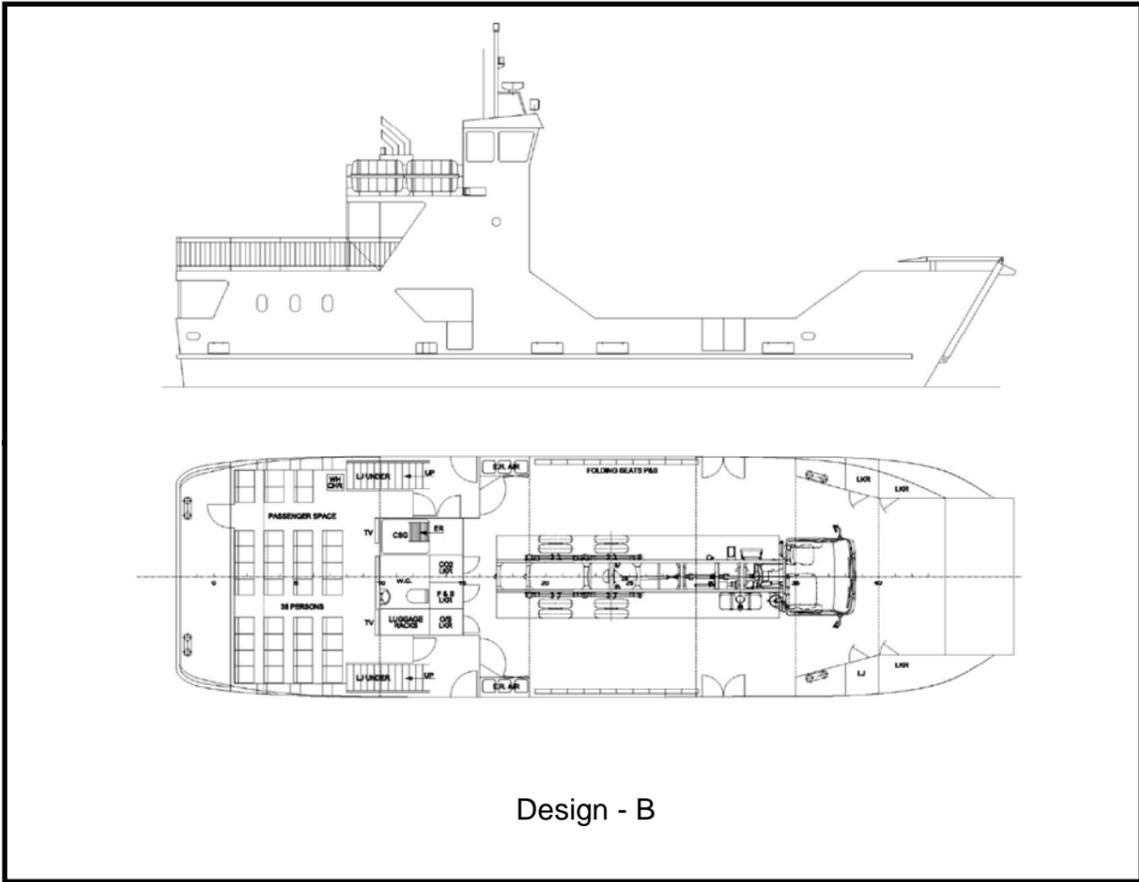
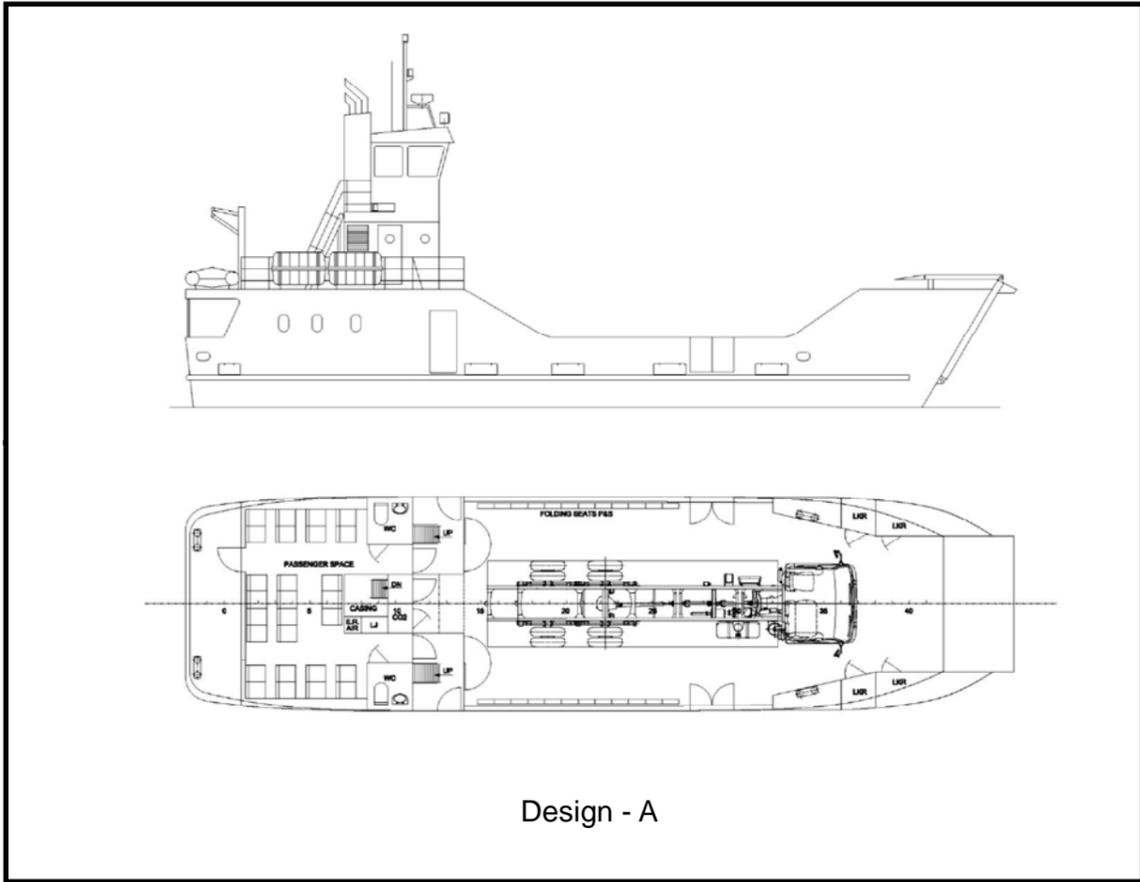
Client : DRD Transport NI
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 Rathkeltair House, Market Street
 Downpatrick, BT30 6AJ (028) 4461 2211

transportni
 Department for Regional Development

Project Name :
Rathlin Island Harbour Development

Drawing Title :
Dredging Plan

Original Drawing Size : A3
Scale : N.T.S. Dimensions :
Drawing No : Figure 5.4
Rev : -



Rev	Revision Details	Chkd	Appd	Date
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Chkd :			For tender	<input type="checkbox"/>
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Date :	Dec 2015		As constructed	<input type="checkbox"/>
			Other	<input type="checkbox"/>



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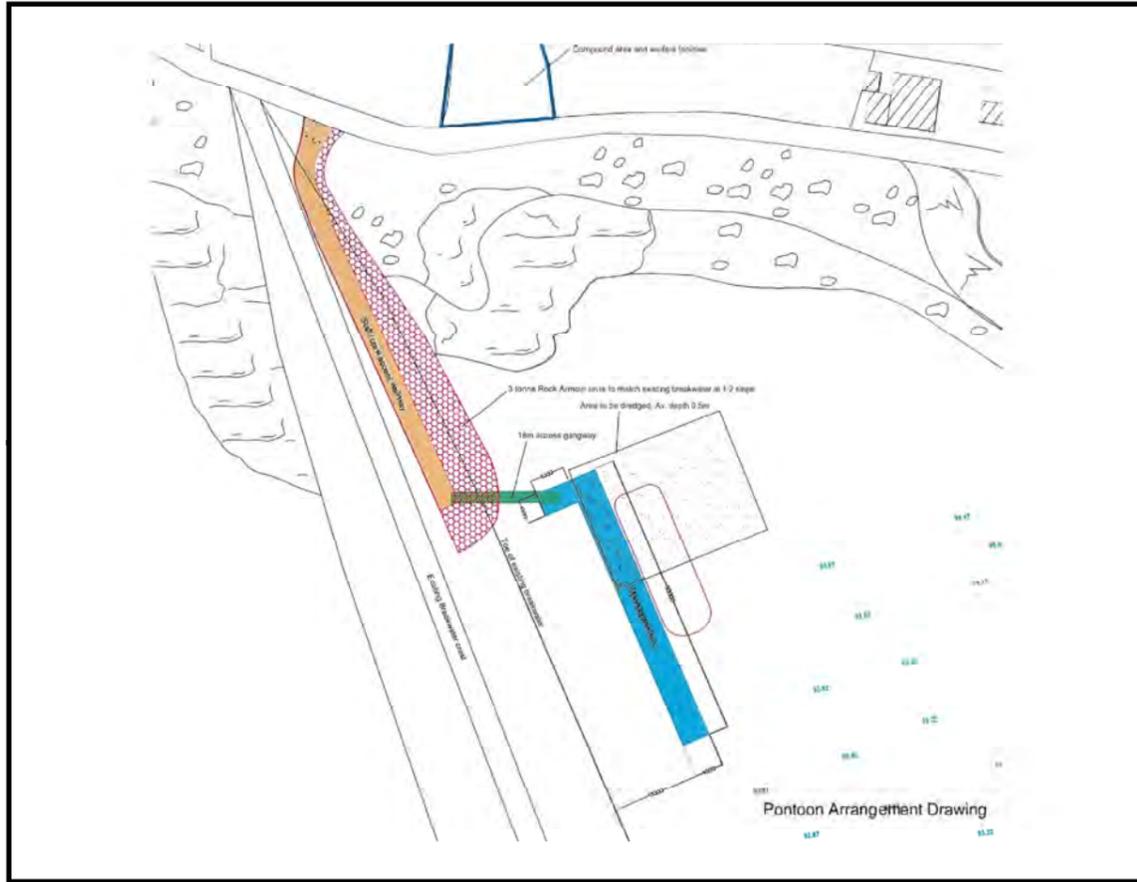



Project Name :
**Rathlin Island
 Harbour Development**

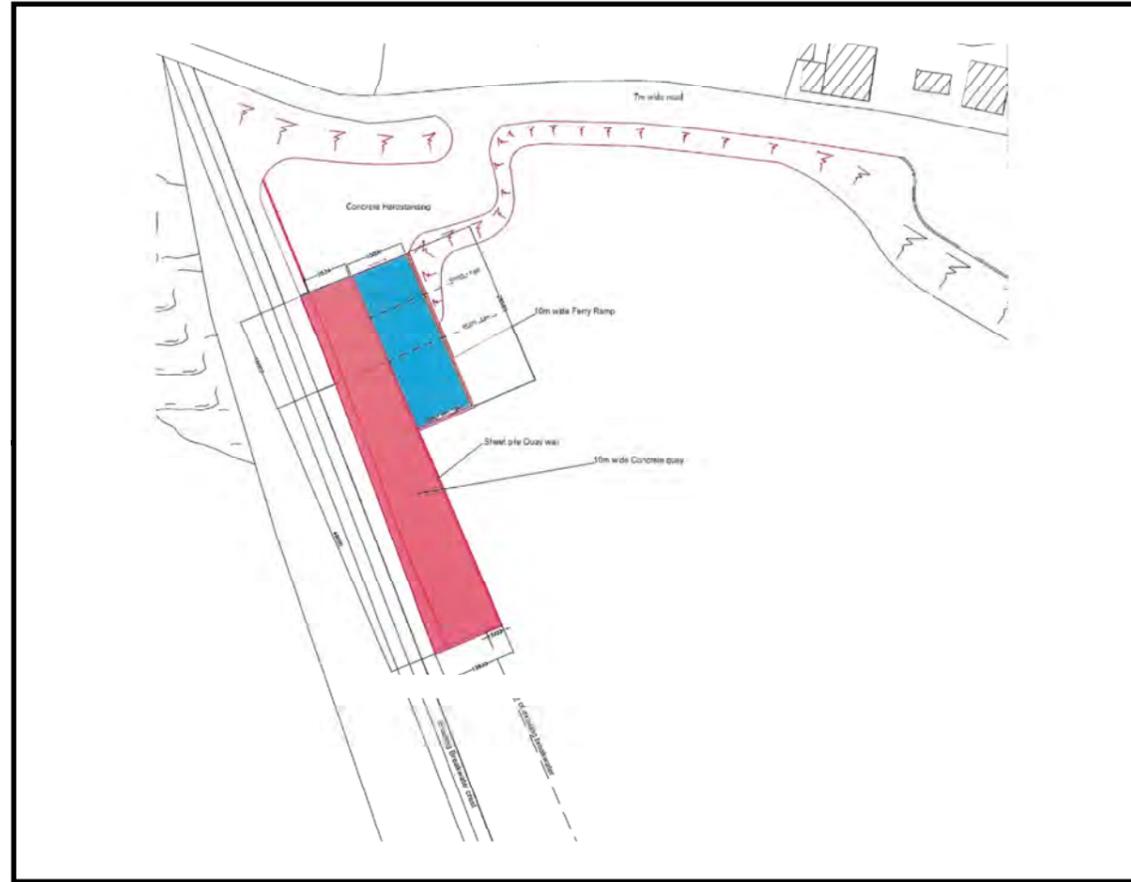
Drawing Title :
*Alternatives Considered:
 Ferry Design*

Original Drawing Size : A3
 Scale : N.T.S. Dimensions :

Drawing No
 Figure 6.1 Rev
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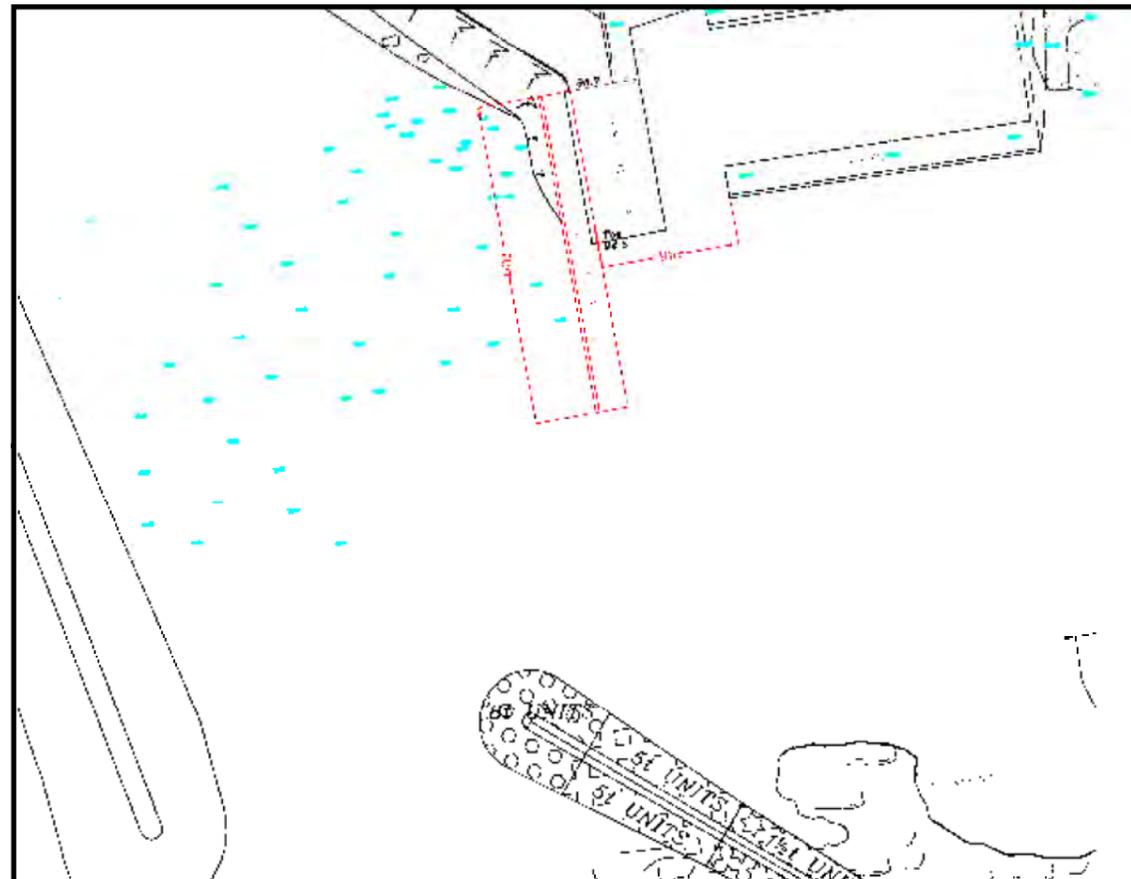
Design - A



Design - B



Design - C



Existing Harbour Option

Rev	Revision Details	Chkd	Appd	Date
Drawn :			Preliminary	✓
Design :			For Comment	
Chkd :			For tender	
Appd :			For construction	
Date :	Dec 2015		As constructed	
			Other	



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transportni
 Department for
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 Development

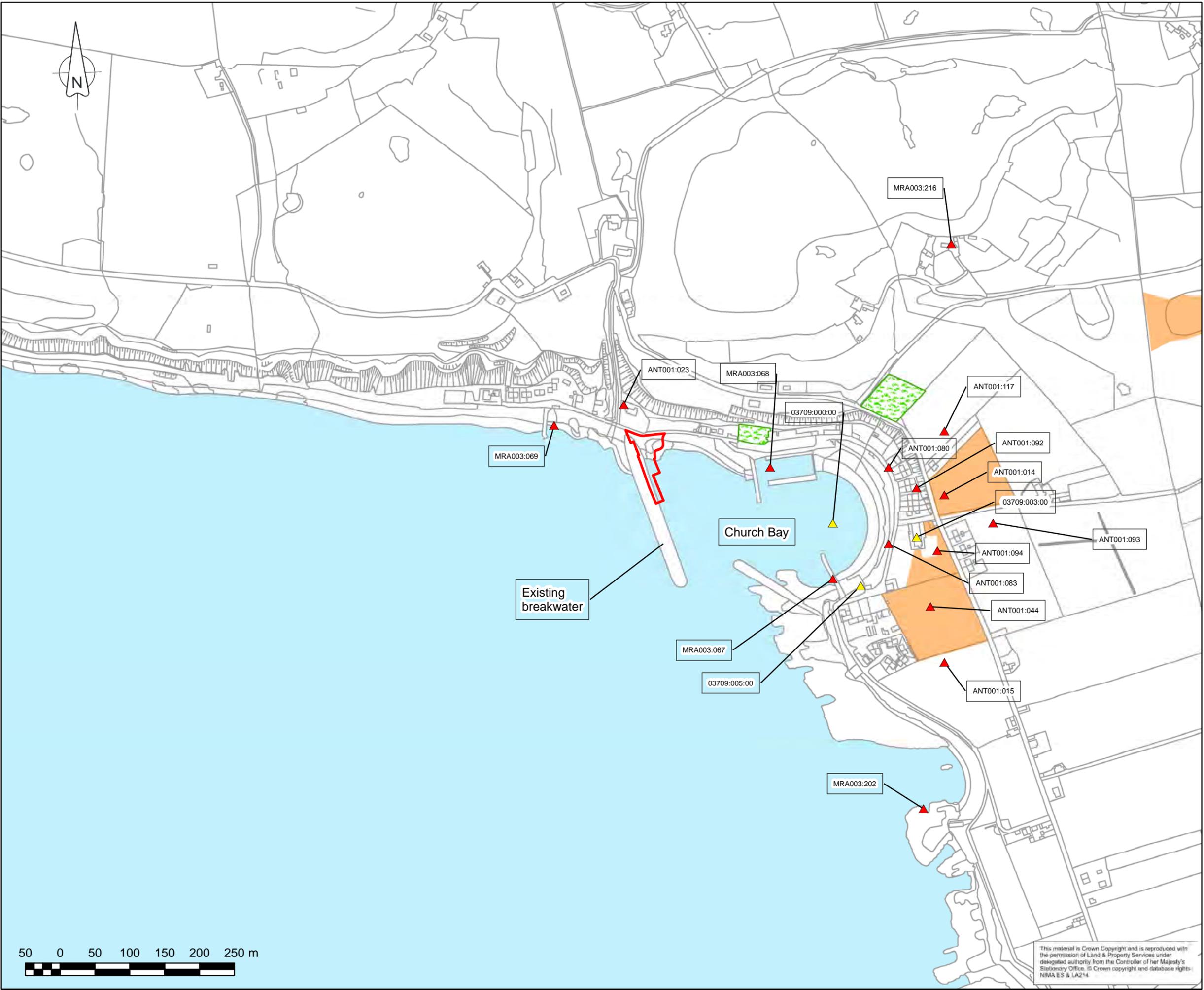
Project Name :
**Rathlin Island
 Harbour Development**

Drawing Title :
**Alternatives Considered:
 Harbour Design**

Original Drawing Size : A3
 Scale : N.T.S. Dimensions :

Drawing No
 Figure 6.2

Rev
 -



Legend

- Scheme boundary
- ▲ Sites and monuments
- ▲ Industrial heritage records
- Scheduled zone
- Historic park or garden

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT				Preliminary
Design : HC				For Comment
Chkd : HC				For tender
Appd : AW				For construction
Date : Dec 2015				As constructed
				Other



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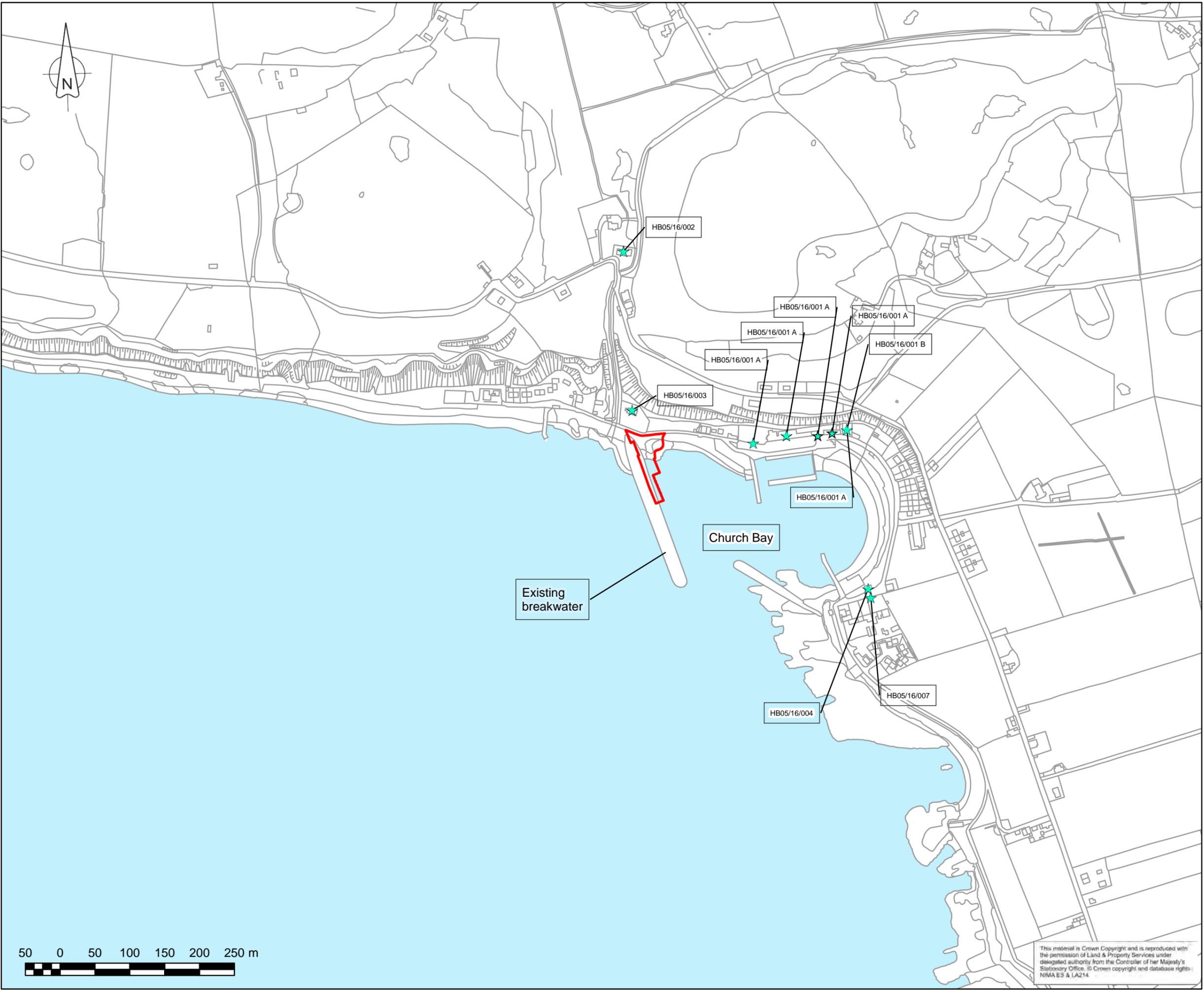
Project Name :
Rathlin Island Harbour Development

Drawing Title :
Recorded Archaeological Sites and Monuments Within 600m

Original Drawing Size : A3
 Scale : 1 : 5,000 Dimensions :

Drawing No : Figure 7.1 Rev : -

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Legend

- Scheme layout
- ★ Listed buildings

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT				Preliminary
Design : HC				For Comment
Chkd : HC				For tender
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Date : Dec 2015				As constructed
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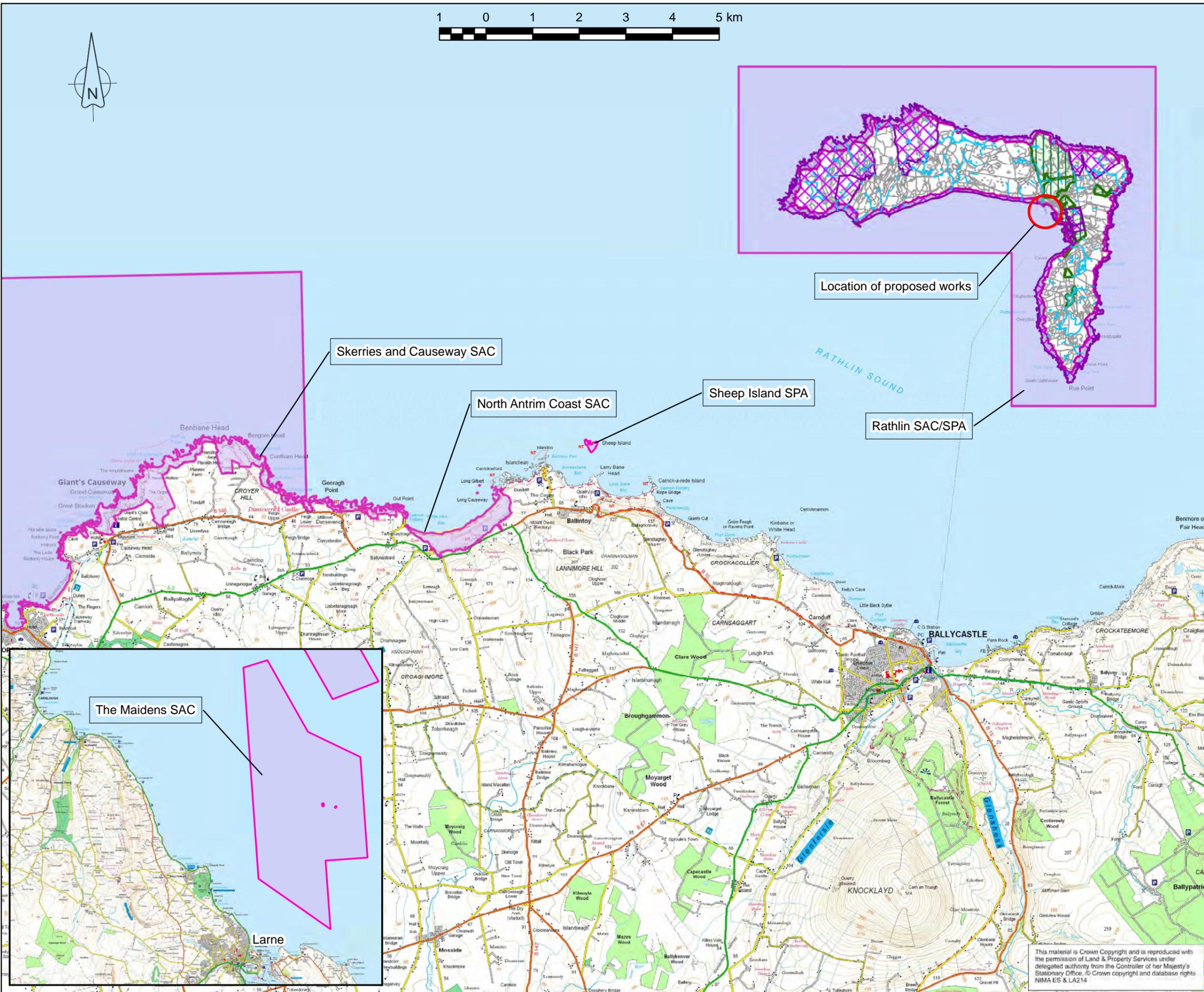
Project Name :
Rathlin Island Harbour Development

Drawing Title :
Listed Buildings within 600m

Original Drawing Size : A3
 Scale : 1 : 5,000 Dimensions :

Drawing No : Figure 7.3 Rev : -

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Location of proposed works

Skerries and Causeway SAC

North Antrim Coast SAC

Sheep Island SPA

Rathlin SAC/SPA

The Maidens SAC

Larne

Legend

-  Scheme Location
-  Sites of Local Nature Conservation Importance (SLNCIs)
-  Designated Site (SAC/SPA)
-  Surface watercourse

Rev	Revision Details	Chkd	Appd	Date
1	Drawn : ACT			Preliminary
2	Design : HC			For Comment
3	Chkd : HC			For tender
4	Appd : AW			For construction
5	Date : Dec 2015			As constructed
				Other



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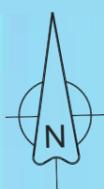
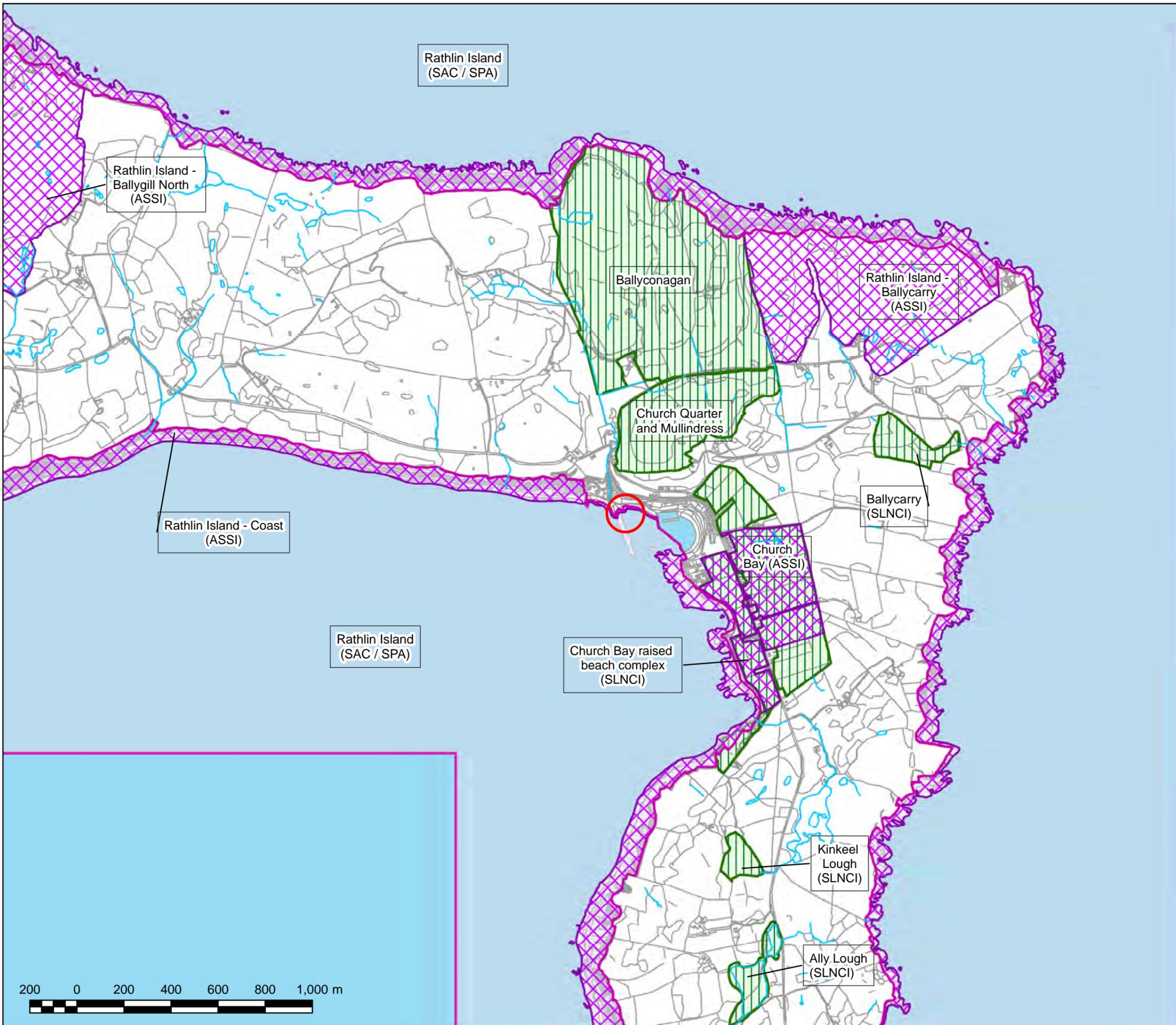
Project Name :
Rathlin Island Harbour Development

Drawing Title :
Designated Sites - National

Original Drawing Size : A3
Scale : 1 : 75,000 Dimensions :

Drawing No : Figure 8.1 Rev : -

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- Legend**
- Scheme Location
 - Area of Special Scientific Interest (ASSI)
 - Sites of Local Nature Conservation Importance (SLNCIs)
 - Designated Site (SAC/SPA)
 - Surface watercourse

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Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT			Preliminary	✓
Design : HC			For Comment	
Chkd : HC			For tender	
Appd : AW			For construction	
Date : Dec 2015			As constructed	
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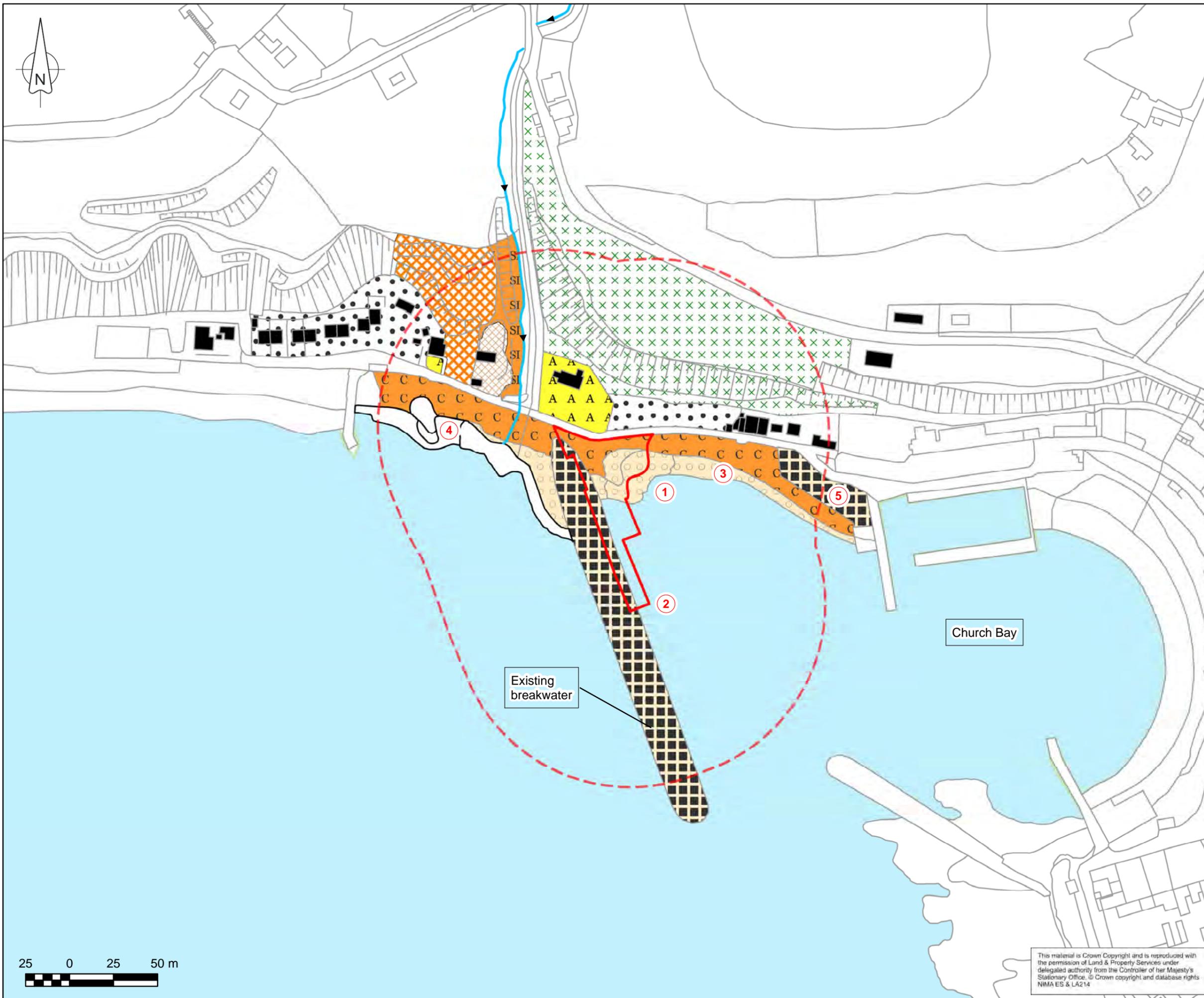
Client : DRD Transport NI
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transportni
 Department for Regional Development

Project Name :
Rathlin Island Harbour Development

Drawing Title :
Designated Sites - Local

Original Drawing Size : A3
Scale : 1 : 15,000
Dimensions :
Drawing No : Figure 8.2
Rev : -



- ### Legend
- 1 Target note
 - 100m buffer
 - Building
 - Semi-improved neutral grassland
 - Boulder/Rocks above high tide mark
 - Scattered Scrub
 - Unimproved calcareous grassland
 - Shingle above high tide mark
 - Coastal grassland
 - Amenity grassland
 - Introduced Shrub
 - Bare ground
 - Other habitats
 - Surface watercourse and flow direction

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT			Preliminary	✓
Design : HC			For Comment	
Chkd : HC			For tender	
Appd : AW			For construction	
Date : Dec 2015			As constructed	
			Other	



Client : DRD Transport NI
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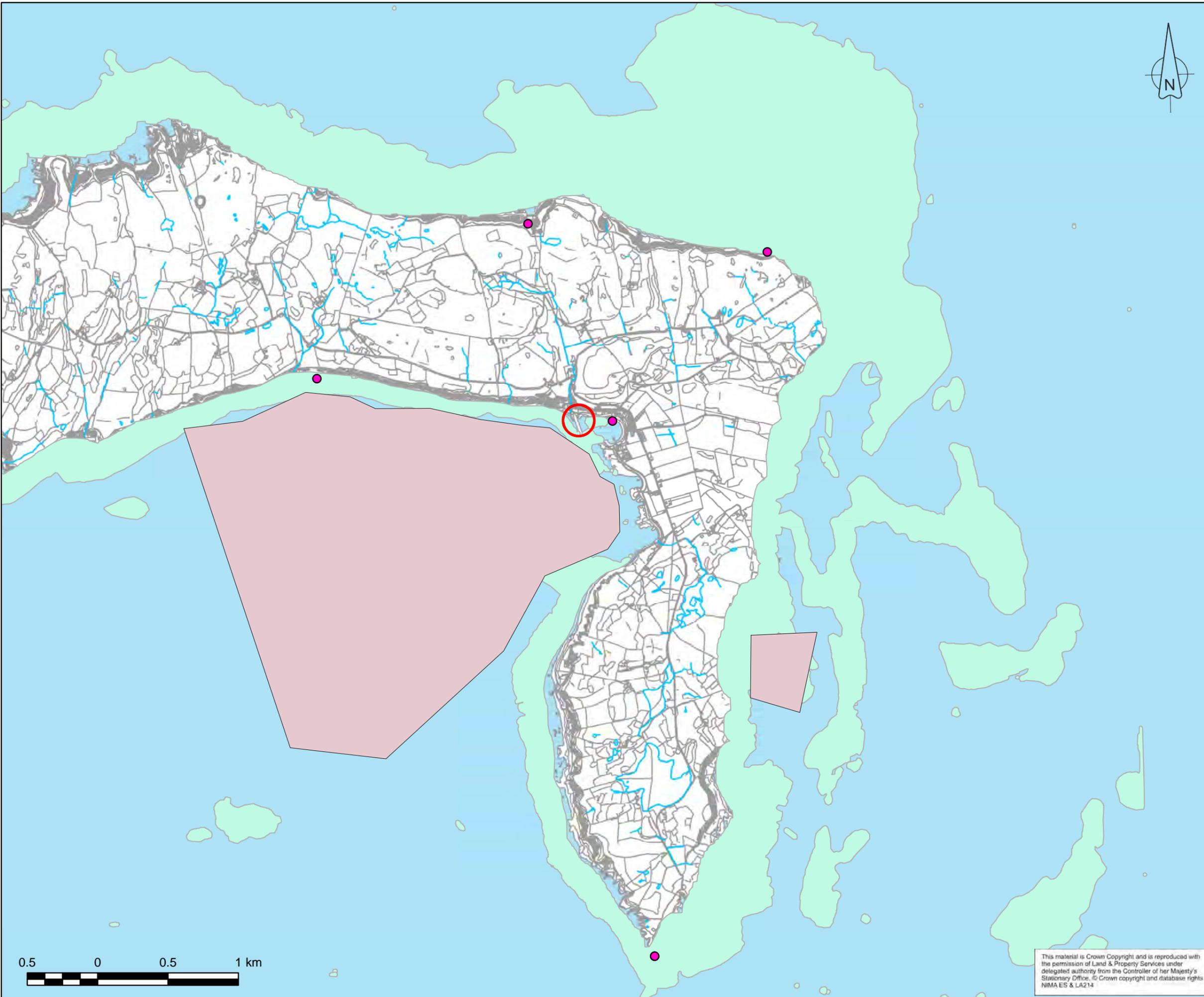
Project Name :
Rathlin Island Harbour Development

Drawing Title :
Phase 1 Survey

Original Drawing Size : A3
Scale : 1 : 2,000
Dimensions :
Drawing No : Figure 8.3
Rev : -



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- Legend**
- Scheme location
 - Black guillemot site
 - Sand banks
 - Rock/Reef

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT			Preliminary	✓
Design : HC			For Comment	
Chkd : HC			For tender	
Appd : AW			For construction	
Date : Dec 2015			As constructed	
			Other	



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transportni
 Department for Regional Development

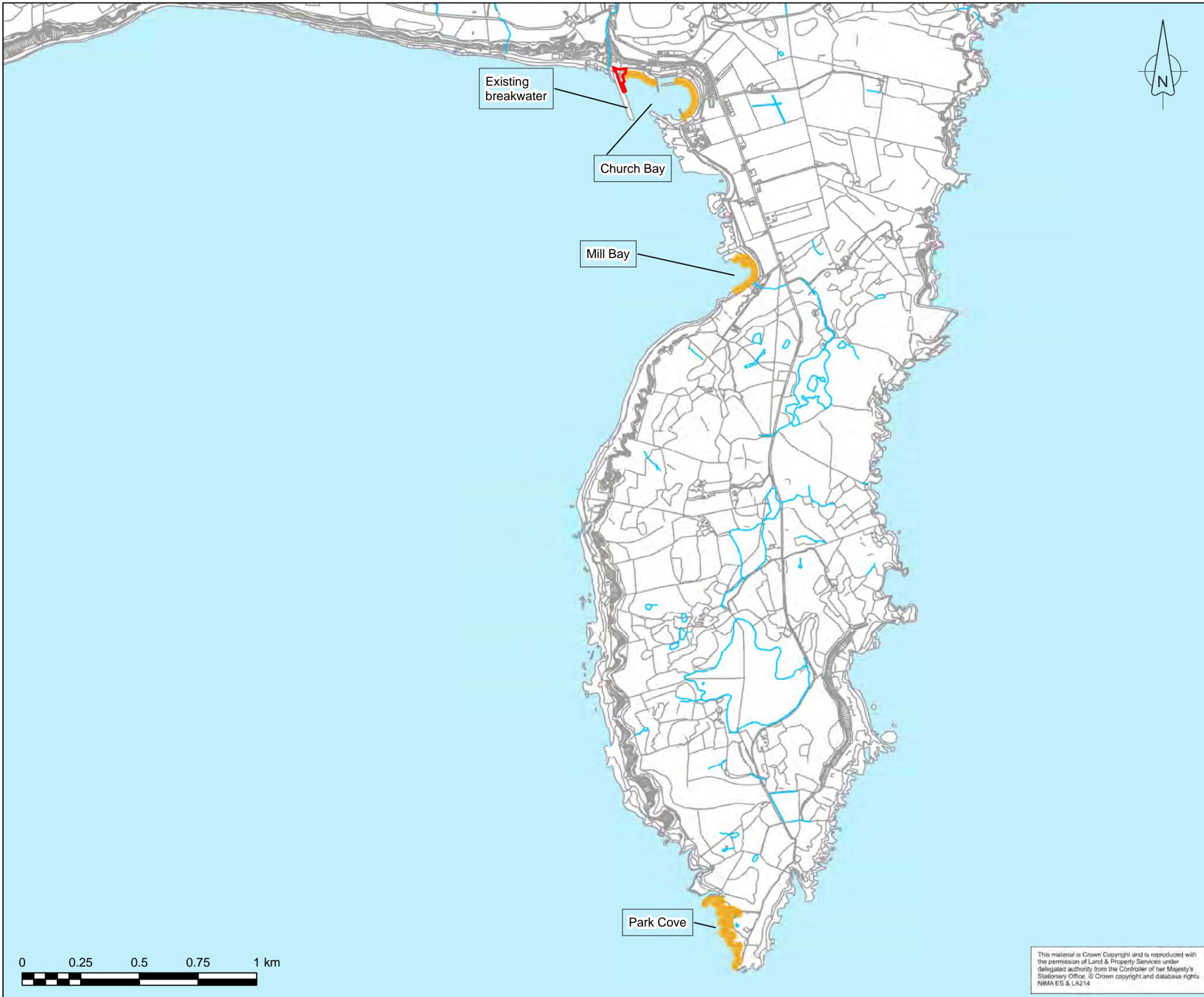
Project Name :
Rathlin Island Harbour Development

Drawing Title :
Marine Habitats

Original Drawing Size : A3
 Scale : 1 : 25,000 Dimensions :

Drawing No : Figure 8.4 Rev : -

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Legend

- Scheme boundary
- Seal haul out areas

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT				Preliminary
Design : HC				For Comment
Chkd : HC				For tender
Appd : AW				For construction
Date : Dec 2015				As constructed
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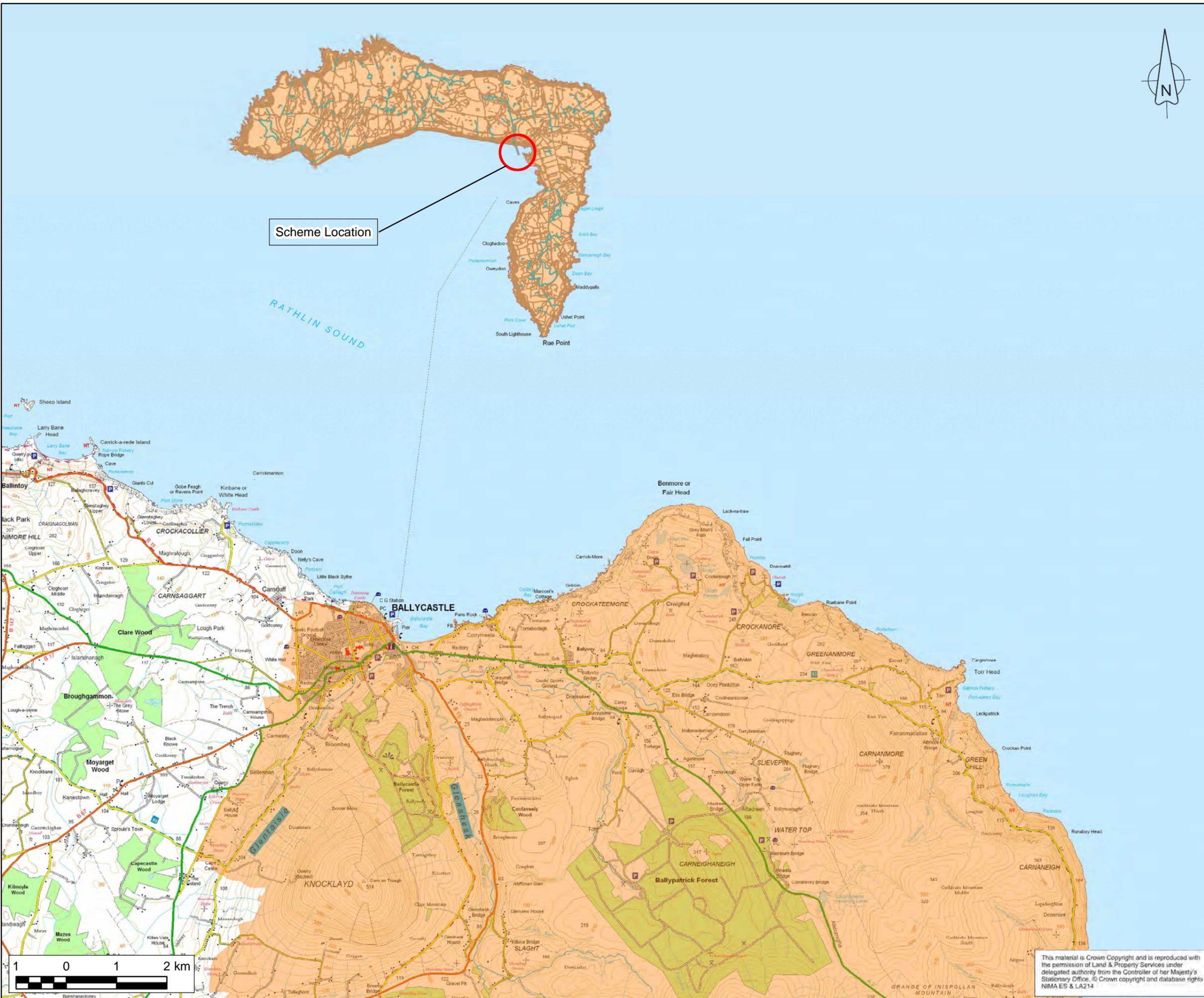
Client : DRD Transport NI
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Project Name :
**Rathlin Island
 Harbour Development**

Drawing Title :
Seal Haul Out Areas

Original Drawing Size : A3	Scale : 1 : 15,000	Dimensions :
Drawing No Figure 8.5	Rev -	

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Legend

- Antrim Coast and Glens Area of Outstanding Natural Beauty (AONB)
- Scheme Location

Rev	Revision Details	Chkd	Appd	Date
Drawn : ACT			Preliminary	<input checked="" type="checkbox"/>
Design : HC			For Comment	<input type="checkbox"/>
Chkd : HC			For tender	<input type="checkbox"/>
Appd : AW			For construction	<input type="checkbox"/>
Date : Dec 2015			As constructed	<input type="checkbox"/>
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Client :
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Project Name :
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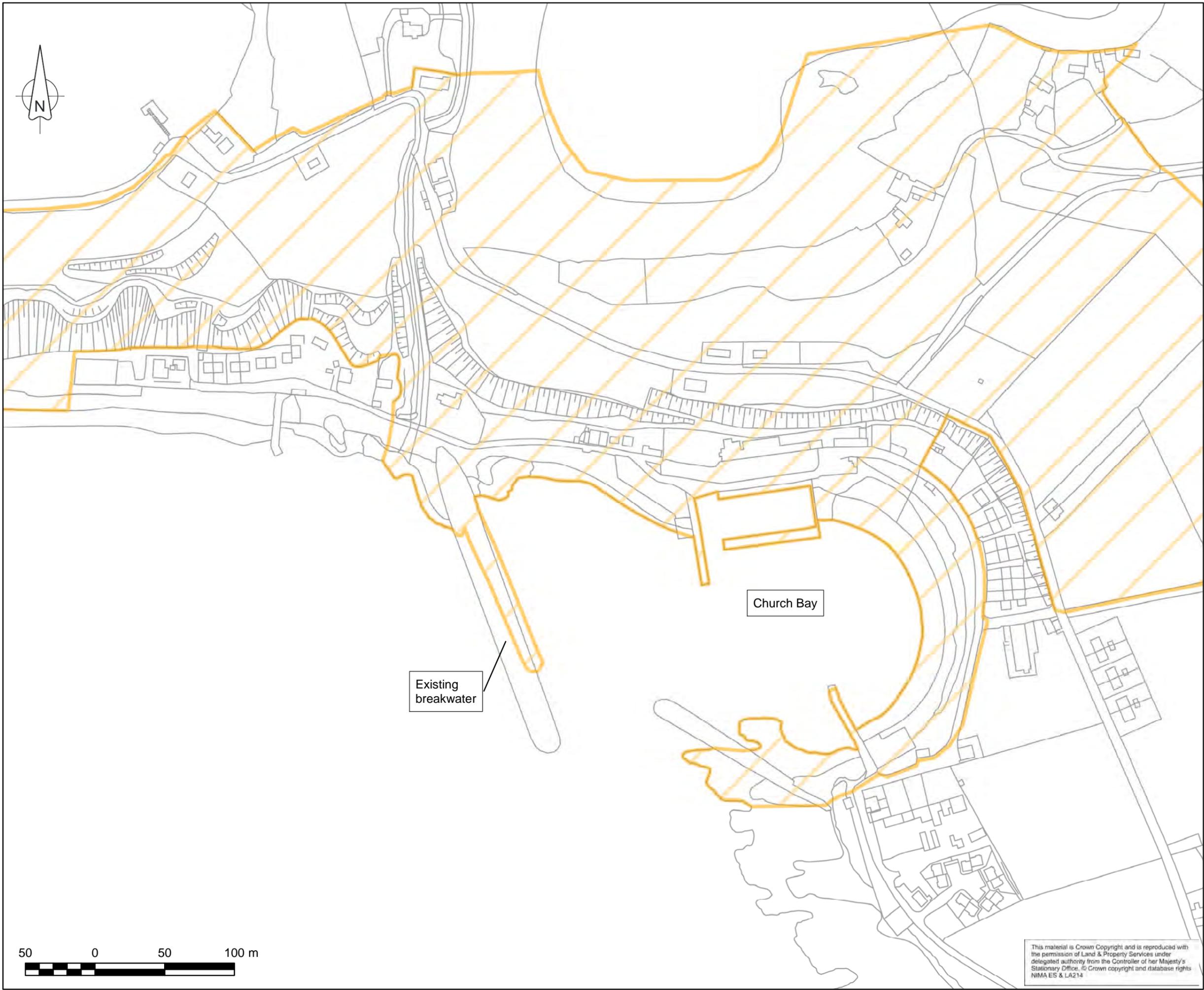
Drawing Title :
Antrim Coast and Glens Area of Outstanding Natural Beauty (AONB)

Original Drawing Size : A3
 Scale : 1 : 70,000 Dimensions :

Drawing No
 Figure 9.1

Rev
 -

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Legend

 Church Bay Local Landscape Policy Area

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Drawn : ACT			Preliminary	✓
Design : HC			For Comment	
Chkd : HC			For tender	
Appd : AW			For construction	
Date : Dec 2015			As constructed	
			Other	



Client : DRD Transport NI
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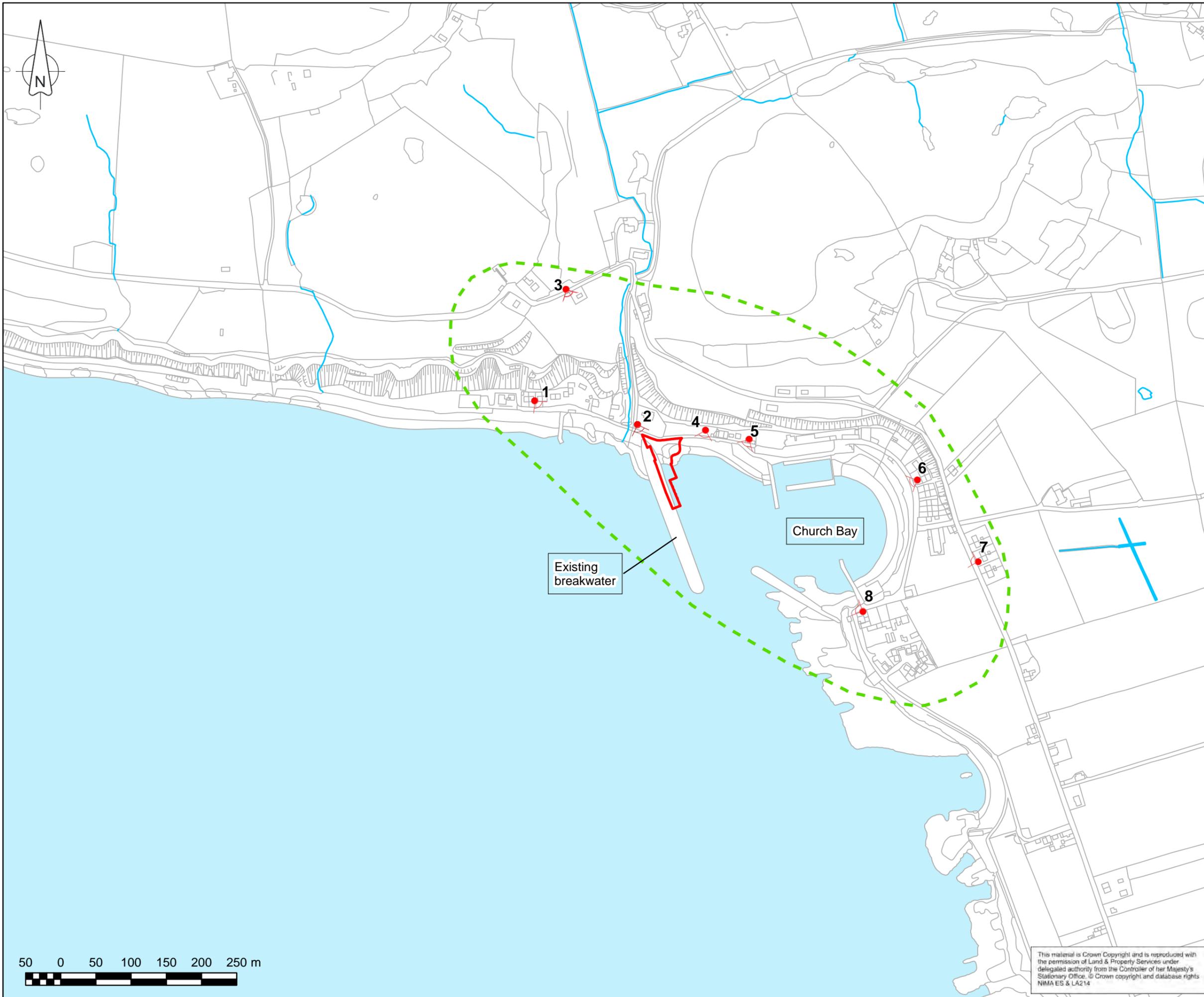

Project Name :
Rathlin Island Harbour Development

Drawing Title :
Church Bay Local Landscape Policy Area

Original Drawing Size : A3
 Scale : 1 : 2,500 Dimensions :

Drawing No : Figure 9.2
 Rev : -

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Legend

- Scheme boundary
- Visual envelope
- Visual receptor view
 - 1.- Ballynagard Cottages
 - 2.- St.Thomas Church
 - 3.- Skye Cottage (Residential property)
 - 4.- Breakwater Studio (Harbour View Cottage)
 - 5.- Church Bay Cottage
 - 6.- Arkell House BB
 - 7.- Glebe Cottages
 - 8.- Demesne (Residential properties)

Rev	Revision Details	Chkd	Appd	Date

Drawn : ACT	Preliminary	✓
Design : HC	For Comment	
Chkd : HC	For tender	
Appd : AW	For construction	
Date : Dec 2015	As constructed	
	Other	



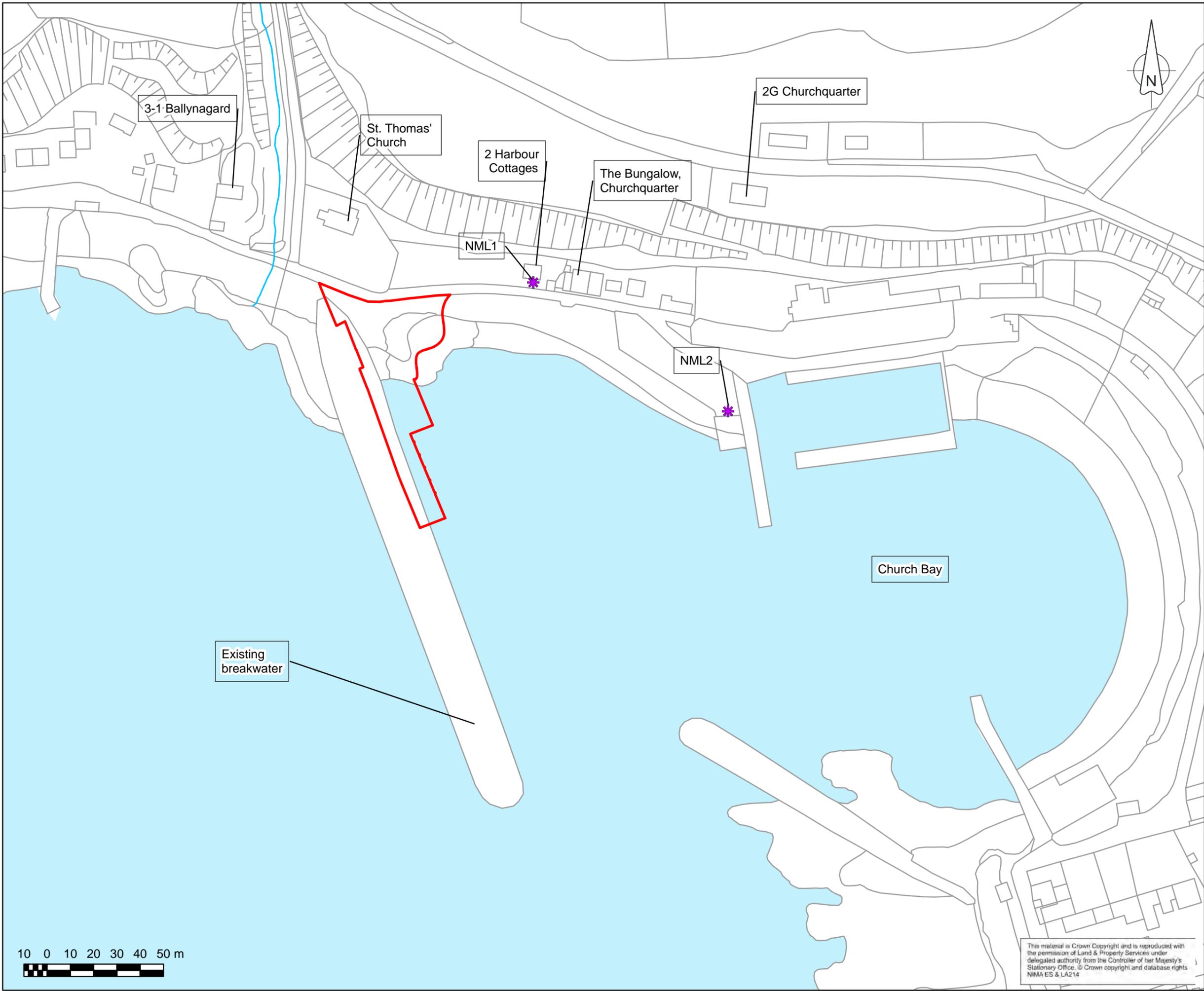
Client : DRD Transport NI
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Project Name :
Rathlin Island Harbour Development

Drawing Title :
Visual Assessment

Original Drawing Size : A3	
Scale : 1 : 5,000	Dimensions :
Drawing No Figure 9.3	Rev -

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Legend

- Scheme boundary
- ✱ Noise monitoring location

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Drawn : ACT			Preliminary	✓
Design : HC			For Comment	
Chkd : HC			For tender	
Appd : AW			For construction	
Date : Dec 2015			As constructed	
			Other	



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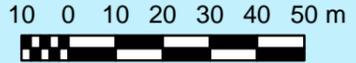
transportni
 Department for Regional Development

Project Name :
Rathlin Island Harbour Development

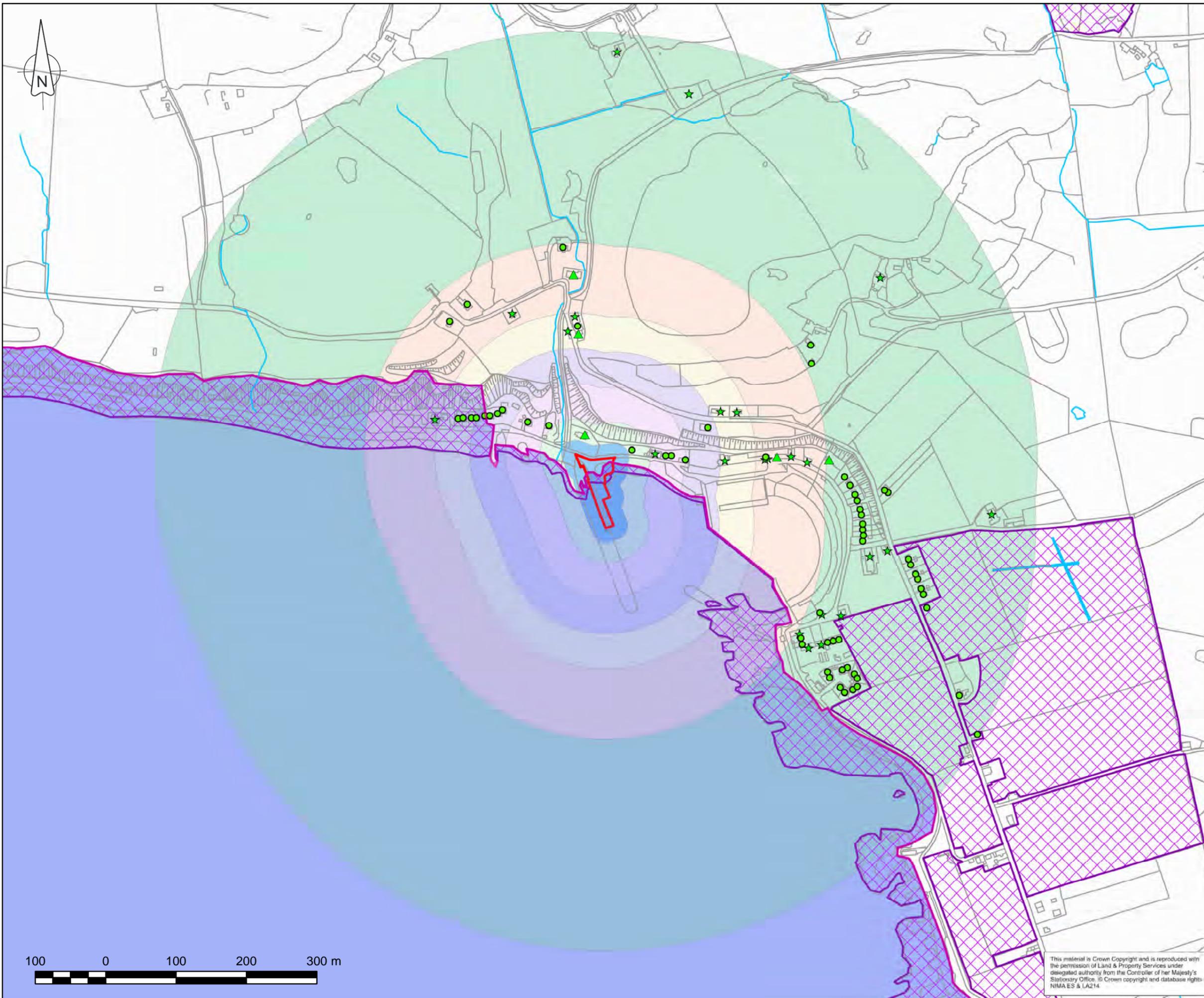
Drawing Title :
Noise Monitoring Locations

Original Drawing Size : A3
 Scale : 1 : 1,500 Dimensions :

Drawing No Figure 10.1	Rev -
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Legend

- Scheme boundary
- Residential receptor
- ★ Commercial receptor
- ▲ Community receptor
- Designated Site (SAC/SPA)
- ASSI
- 0 - 20m Buffer**
0 Residential Receptors
0 Commercial Receptors
0 Community Receptors
3 Environmental Receptors
- 0 - 50m Buffer**
2 Residential Receptors
0 Commercial Receptors
1 Community Receptors
3 Environmental Receptors
- 50 - 100m Buffer**
4 Residential Receptors
1 Commercial Receptors
0 Community Receptors
0 Environmental Receptors
- 100 - 150m Buffer**
7 Residential Receptors
0 Commercial Receptors
0 Community Receptors
0 Environmental Receptors
- 150 - 200m Buffer**
4 Residential Receptors
7 Commercial Receptors
1 Community Receptors
0 Environmental Receptors
- 200 - 300m Buffer**
4 Residential Receptors
7 Commercial Receptors
2 Community Receptors
0 Environmental Receptors
- 300 - 600m Buffer**
39 Residential Receptors
12 Commercial Receptors
1 Community Receptors
1 Environmental Receptors

Rev	Revision Details	Chkd	Appd	Date
	Drawn : ACT			Preliminary
	Design : CC			For Comment
	Chkd : JS			For tender
	Appd : AW			For construction
	Date : Dec 2015			As constructed
				Other



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 Development & Traffic Assessment
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transportni
 Department for Regional Development

Project Name :
Rathlin Island Harbour Development

Drawing Title :
Noise Sensitive Receptors

Original Drawing Size : A3
 Scale : 1 : 5,000 Dimensions :

Drawing No : Figure 10.2 Rev : -

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