



**Report supporting the  
Appropriate Assessment Screening and  
Natura Impact Statement of  
Foreshore License (FC/15/29)  
in Portaleen Pier, Co. Donegal**

*July 2023*

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## Glossary of Acronyms

AA	Appropriate Assessment
CM	Conservation measure
COs	Conservation Objective(s)
DAFM	Department of Food Agriculture and the Marine
DEHLG	Department of Environment, Heritage, and Local Government
EIAR	Environmental Impact Assessment report
European site	Natura 2000 site
FCS	Favourable conservation status
IROPI	Imperative reasoning of overriding public interest
Natura 2000	Network of nature protection areas, including the SACs and SPA designated under the Habitats Directive
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
QIs	Qualifying Interest(s)
SAC	Special Area(s) of Conservation
SCI	Special Conservation Interest(s)
SPA	Special Protected Area(s)

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## Executive Summary

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The Marine Institute has been requested to review an application for foreshore activities (FC/15/29) to refurbish and reconstruct the quay wall at Portaleen pier, Glengad, Co. Donegal. An Appropriate Assessment screening process, and a Natura Impact statement, have been compiled to consider whether the proposed activities are likely to significantly affect the QIs of the Natura 2000 sites in the zone of influence of the project, in view of their Conservation Objectives.

The proposed site overlaps with the North Inishowen Coast SAC and adjacent (within 15km) to 3 other SACs and 10 SPAs (within 50km).

Following a Stage 1 AA Screening process, the following were screened in as QIs that the planned project has potential to overlap with or and have the potential to significantly affect, and so are carried forward for full assessment:

### SAC QIs

- North Inishowen Coast SAC [002012]
  - Mudflats and sandflats not covered by seawater at low tide [1140]
  - Vegetated sea cliffs of the Atlantic and Baltic coasts [2130]
  - Otter (*Lutra lutra*) [1355]

The potential impacts from the proposed project could arise during the construction and operational phase of the project. The designated QI could be impacted in relation to loss of habitat; sediment contamination; noise and disturbance; water quality; and hydrodynamics.

The potential impacts are assessed in the Natura Impact Statement and it has been objectively concluded following best available information, objective criteria, best scientific knowledge and expert judgement, that the proposed project will not pose a risk of adversely affecting (either directly or indirectly) the integrity of Natura sites, either alone or in combination with other plans and projects.

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# 1 Introduction

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## 1.1 Overview of this document

This is a report supporting the Appropriate Assessment of foreshore activities (FC/15/29) at Portaleen, Co. Donegal in Natura 2000 site North Inishowen Coast SAC (site code 002012). It details the screening process and provides the Natura Impact Statement.

This report is to consider if the proposed activities are likely to adversely affect the Qualifying Interests (QIs) of Natura 2000 sites in view of their Conservation Objectives (COs), and any adjacent sites, individually or in combination with existing or planned activities. This is achieved by following the Stage 1 screening process and assessment process outlined in this document. If there is potential for the activities considered to likely, significantly affect QIs and their conservation features, they are carried forward for a Stage 2 Appropriate Assessment, which considers the impacts on the integrity of the Natura site with respect to the sites conservation objectives, and is considered on a cumulative basis with other activities and other potentially disturbing activities.

## 1.2 Legislative Context

Articles 3 - 11 of the European Community (EC) Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the **Habitats Directive**<sup>1</sup>) provide the legislative means to protect habitats and species of Community interest through the conservation of an EU-wide network of protected sites, known as **Natura 2000** sites<sup>2</sup>. The Habitats Directive was originally transposed into Irish law by the *European Communities (Natural Habitats) Regulations, 1997* (S.I. No. 94 of 1997). The 1997 Regulations were subsequently replaced by the *European Communities (Birds and Natural Habitats) Regulations 2011*<sup>3</sup>, as amended (referred to as the *2011 Birds and Natural Habitats Regulations*). Natura 2000 sites are referred to as European sites in these Regulations.

The terms Natura 2000 sites and European sites are synonymous - the term Natura 2000 sites is used in this report. Natura 2000 sites in Ireland form part of the Natura 2000 European network of protected sites. SACs are designated due to their significant ecological importance for habitats and for species protected under Annex I and Annex II respectively of the Habitats Directive. SPAs are designated for the protection of populations and habitats of bird species protected under the **Birds Directive**, EC 79/409/EEC<sup>4</sup>. The National Parks and Wildlife Service (NPWS) are the competent authority for the management of Natura 2000 sites in Ireland.

The specific named habitats and/or (non-bird) species for which an SAC or SPA are selected are called the Qualifying Interests (**QI**), of the site. The specific named bird species for which a SPA is selected is called the 'Special Conservation Interests' (SCI). However, in practice, the common terminology of QI applies also to SCI. The term QI is used throughout this report.

Under Article 6(3) of the Habitats Directive any plan or project likely to significantly affect the integrity of a Natura 2000 site must be subject to an Appropriate assessment (AA). The AA focuses on the likely significant effects of a plan or project on a Natura 2000 site and considers the implications for the site

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<sup>1</sup> [https://ec.europa.eu/environment/nature/legislation/habitatsdirective/index\\_en.htm](https://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm)

<sup>2</sup> [https://ec.europa.eu/environment/nature/natura2000/index\\_en.htm](https://ec.europa.eu/environment/nature/natura2000/index_en.htm)

<sup>3</sup> <https://www.irishstatutebook.ie/eli/2011/si/477/made/en/print>

<sup>4</sup> [https://ec.europa.eu/environment/nature/legislation/birdsdirective/index\\_en.htm](https://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm)

in view of its Conservation Objectives (COs). Every Natura 2000 site has COs which are set out by the NPWS.

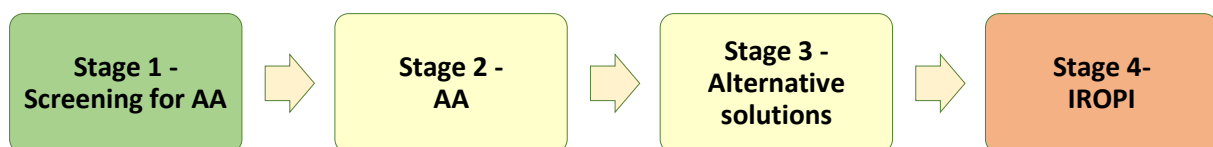
The licensing authority determines applications for foreshore licences and are also the competent authority responsible for undertaking AA of applications. As part of the process, they must determine if the proposed activities, individually or in-combination with other activities, are likely to significantly affect the Conservation Status of QIs and the integrity of the Natura 2000 site. They must base their determination on an AA and they are also responsible for ensuring that an AA is carried out.

### 1.3 Appropriate Assessment (AA) Process

The requirement for an AA derives directly from Article 6(3), which outlines the decision-making tests for considering plans and projects that may have a significant effect on a Natura 2000 site. No definition of the content or scope of AA is given in the Habitats Directive, but the concept and approach are set out in EC guidance <sup>5</sup>.

The *Guidance on Appropriate Assessment of Plans and Projects in Ireland* document<sup>6</sup> published by the Department of Environment, Heritage and Local Government (DEHLG) in 2009, sets out how an AA of plans or proposals in Natura 2000 sites in Ireland should be carried out in alignment with EC guidance. In 2021, the Office of the Planning Regulator (OPR) published a practice note on AA Screening<sup>7</sup>, which provides guidance on how a planning authority should screen an application for planning permission for AA.

The *Guidance on Appropriate Assessment of Plans and Projects in Ireland* document promotes a four-stage process to complete the AA. The four stages are:



The key procedures involved in completing the first two stages of the AA process are described below. Stage 3 and Stage 4 (Imperative reasoning of overriding public interest) are not applicable here.

#### 1.3.1 Stage 1: Appropriate Assessment Screening

*Stage 1 AA Screening* is the process that addresses and records the reasoning and conclusions in relation to whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of the site's COs. If the effects, on the basis of objective information, are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to *Stage 2 Appropriate Assessment*. Screening should be undertaken without the inclusion of mitigation. The greatest level of evidence and justification will be needed in circumstances when the process ends at screening stage on grounds of no effect.

<sup>5</sup> EC 2018. Guidance on Aquaculture and Natura 2000 Sustainable aquaculture activities in the context of the Natura 2000 Network [Link](#)

<sup>6</sup> DEHLG, 2009. Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. [Link](#)

<sup>7</sup> OPR - Office of Planning Regulator (2021). Appropriate Assessment Screening for Development Management. March 2021. 43pp [Link](#)

### 1.3.2 Stage 2: Appropriate Assessment

This stage considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a Natura 2000 site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects. This stage requires a targeted scientific examination of the plan or project and the relevant Natura 2000 sites, to identify and characterise any possible implications for the site in view of the site's QIs and COs, taking account of in combination effects.

The sensitivity of identified QIs in relation to the proposed activities is assessed and the significance of any identified adverse effects is then determined. If adverse effects are determined to be likely, then their scale, magnitude, intensity, and duration are considered in light of the COs and relevant guidance documents. If the assessment is negative, then recommendations on mitigation measures or on licensing decisions will be made.

### 1.4 Structure of Report

This screening report provides:

1. **Introduction** - an outline of the legislative context and the processes.
2. **Proposed Project Background**- provides details of the activity proposed
3. **Stage II Appropriate Assessment (Natura Impact Statement)** – details of the assessment impacts on relevant Natura sites.
4. **Conclusions**- summary of the findings of the screening and assessment process.

### 1.5 Data sources

This process and report rely on data and information from a broad and diverse range of sources. Some of the key sources of information that are generally viewed, consulted and/or utilised to inform the screening and AA processes are listed below. Others are consulted as required, and significant sources are cited in the reports.

Reference documents and Sources of information used to inform this process include:

- The Application
- National Parks & Wildlife (NPWS) protected site information [Link](#)
- NPWS conservation objectives [Link](#) and nature reserves [Link](#)
- NPWS Guidance documents [Link](#)
- Targeted scientific studies
- Primary research literature
- Grey literature, reviews and report documents
- Expert opinion
- Direct queries to applicants through licensing authority
- Foreshore Act, 1933 [Link](#)
- Ireland's Marine Atlas [Link](#)
- DHPLG Foreshore licencing database [Link](#)
- DAFM website [Link](#)
- EPA GeoHive [Link](#)
- EPA maps tool [Link](#)
- Status of EU Protected Habitats and Species in Ireland – Article 17 (Habitats & species) [Link](#)



- Birdwatch Ireland [Link](#)
- Bird status and trends Article 12 web tool - [Link](#)
- Marine Life Information Network [Link](#)
- EPA Catchments.ie dashboard [Link](#)
- Ordnance Survey of Ireland (OSI) [Link](#)
- National Biodiversity Data Centre [Link](#)
- European Environmental agency [Link](#)
- Appropriate Assessment Screening for Development Management. March 2021; Office of Planning Regulator (OPR, 2021). [Link](#)
- Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive [Link](#)
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. NPWS, 2009 – updated in 2010 with reference to Natura Impact Statement. (DEHLG, 2009) [Link](#)
- NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Edited by: Deirdre Lynn and Fionnuala O’Neill [Link](#)
- NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Edited by: Deirdre Lynn and Fionnuala O’Neill [Link](#)
- NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Edited by: Deirdre Lynn and Fionnuala O’Neill [Link](#)
- The European ecological network “Natura 2000” and the appropriate assessment for projects and plans under Article 6 (3) of the Habitats Directive. Nature Conservation, 23. Möckel, S., 2017. [Link](#).
- EC Article 6 - Managing and protecting Natura 2000 sites [Link](#)
- EC Management of Natura 2000 sites: Best Practice [Link](#)
- EC 2000. Managing Natura 2000 sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC. Office for Official Publications of the European Communities, Luxembourg. [Link](#)
- EC 2002. Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Luxembourg. [Link](#)
- EC 2006. Nature and biodiversity cases: Ruling of the European Court of Justice. Office for Official Publications of the European Communities, Luxembourg. [Link](#)
- Federal Agency for Nature Conservation for the FFH impact assessment [Link](#)
- Marlin.ac.uk [Link](#)
- AMBI Sensitivity Scale [Link](#)
- MarESA [Link](#)
- Open Street Maps [Link](#)
- Google Earth and Bing aerial photography

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## 2 Propose Project Background

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The Marine Institute has been requested to review an application for foreshore activities (**Figure 1**) for the refurbishment and reconstruction of the quay wall at Portaleen Pier in Glengad, Co. Donegal.

This section identifies the proposed activities related to the development to be considered as part of the screening exercise in this report, and then considers whether these activities are likely to significantly affect the QIs of the Natura 2000 sites, in view of their Conservation Objectives (COs).

This is achieved by following the Screening Process as outlined in Section 2.3. If there is potential for the activities considered to have likely significant effects on the QI and their conservation features, they will be carried forward for full assessment. These activities are then considered in-combination with other likely disturbing activities.

### 2.1 Details of Proposed Foreshore Activities

The proposed project is for the refurbishment and repair of Portaleen Pier, in Glengad in Co. Donegal (**Figure 2**). The structure of the current pier consists of a concrete loading/berthing quay with an adjacent slipway. The pier is approximately 85m long, the slipway is approximately 40m long and 7m wide. Portaleen Pier is operational year-round, where brown crab, lobster and whelk are primarily landed. Departures for deep-sea angling charters and diving charters also utilise this pier. The pier supports the fishing industry communities of Portaleen and Glengad, employing 30-40 people. There is an existing marine supply store at the pier.



*Figure 1 Ariel view of the current pier (from application documents).*

Extensive undermining and cavities under the quay wall and pier were recorded in a recent dive survey. The AA Screening Report by Byrnelooby, noted that the quay wall of the entire pier requires refurbishment/replacement due to abrasion and erosion and scaling due to poor quality concrete. According to the methodology documents, the elevation of the quay wall showed significant damage.

Areas of spalling concrete, cracked and broken render, and undermining of the base of the wall were recorded, with significant scour, gaps and voids under the concrete wall of the pier between the base of the wall and the bedrock.

The project proposed is for the construction of a new reinforced concrete pier wall, 250mm thick, offset from the existing pier wall, backfilling behind the proposed wall and extension of the pier deck slab to tie into the proposed wall. Part of the works will include underwater construction as the pier still remains 2m underwater at lowest astronomical tide. Where the 250mm new wall stops at the steps, repairs will be carried out by filling voids with microconcrete (larger voids) or polymer modified cementitious repair mortar (smaller voids and above mean low water springs)

For the repair of the Quay Wall, plant and quay wall repair materials will be delivered to the site by road and offloading in the site area. Temporary steel supports will be installed to the quay wall face at approximately the mean low water springs. The concrete deck slab is to be demolished and removed for a distance of 2.5m back from the south face of the quay. All damaged concrete and any loose or spalling material from the face of the quay wall will be removed. A 300mm x 300mm chase will be cut in the rock along the quay wall and between 0.4m and 0.7m from the face of the southern (main) wall and 1.8m from the face of the eastern (end) wall. Sheet piling will be fixed to the chase cut in the rock and supported at the top by temporary steelwork supports. The sheet piling will be concreted in place by filling the rock chase with concrete using a tremie or pump. Temporary vertical formwork will be fixed to the face of the quay wall (where existing wall is poorly undermined) using the sheet piling as support with concrete pumped into the voids. The temporary vertical formwork will be removed. The lower section of the concrete wall will be placed using sheet piling as permanent formwork. A 250mm concrete facing will be applied to the quay wall, using the lower section as a base for the formwork, and this will be tied in to a new 225mm slab at the top. After this, ancillaries will be installed.

For the repair of the slipway, all damaged concrete and loose/spalling material will be removed and the top 6m of existing concrete deck slab will be demolish and removed. A 300mm x 300mm chase will be cut in rock along the quay wall 200mm from the face of the existing edge wall. A short section of sheet piling to required levels to be fixed in the chase cut in the rock. The sheet piling will be concreted in place by filling the rock chase with concrete using a tremie to place the concrete. The new concrete wall will be placed using sheet piling to fix formwork. The existing slipway is to be overlapped with a new 150mm concrete slab.

Working is planned for daylight hours between 8:00- 17:00 (depending on the tide). Equipment listed to be used include: a 13 tonne excavator including compacting plate attachment; a Crane; a 32 tonne tipper lorry; a concrete lorry; and a 6 tonne dumper. The pier will be operational but berthing and usage will be restricted during construction.

Mitigation measures include using precast concrete caisson units will be used underwater to prevent pollution. Some construction materials may be stored on-site. All construction waste will be disposed of in licensed facilities. Any spillage from Engineered granular fill material, steel reinforcement, cast in-situ concrete will be used for the retaining wall and slipway deck. The works should not produce any dredge material or sediment for disposal. All liquids will be stored in a bunding spill tray. Excess light pollution will be avoided with the use of lighting towers. All equipment will be checked daily and have maintenance records to reduce excess noise generation.



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### 3 Stage 1 AA Screening Summary

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The Stage 1 AA Screening has been undertaken by the Marine Institute and is detailed in the *Report supporting the Appropriate Assessment Screening of Foreshore License (FC/15/29) in Portaleen, Co. Donegal*, dated May 2023. This report documented the Stage 1 Screening process of the Appropriate Assessment process of this proposed activity as specified under the Habitat Directive (European Community (EC) Directive 92/43/EEC).

The proposed site is within the North Inishowen Coast SAC and adjacent (within 15km) to 3 other SACs and 10 SPAs (within 50km).

Based on the location, nature and zone of impact of potential effects, and the best scientific information available, this screening assessment has identified QIs or associated conservation features in the Natura sites that the proposed activities will spatially overlap with or has the possibility to significantly affect.

On the basis that likely significant effects of the proposed activity on the European sites cannot be ruled out, the following QIs are brought forward for Stage 2 Appropriate Assessment.

#### *SAC QIs*

- Mudflats and sandflats not covered by seawater at low tide [1140]
- Vegetated sea cliffs of the Atlantic and Baltic coasts [2130]
- Otter (*Lutra lutra*) [1355]

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## 4 Appropriate Assessment (Natura Impact Statement)

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This NIS has been prepared as it was not possible at the Screening for AA stage to rule out, as a matter of scientific certainty, that the proposed project will not have a likely significant effect on Natura sites. It will examine and analyse, in light of the best scientific knowledge, how the proposed operations could impact on the Qualifying Features of Natura sites and whether the predicted impacts would adversely affect the integrity of protected sites.

The potential ecological effects of activities on the CO for the site relate to the physical and biological effects of structures and human activities on designated species, intertidal and sub-tidal habitats and invertebrate communities, and biotopes within those broad habitat types. The overall effect on the conservation status will depend on the spatial and temporal extent of activities during the lifetime of the proposed plan and the nature of each of these activities in conjunction with the sensitivity of the receiving environment.

The screening presented previously identified these QIs to be brought forward for full AA:

### SAC QIs

- Mudflats and sandflats not covered by seawater at low tide [1140]
- Vegetated sea cliffs of the Atlantic and Baltic coasts [2130]
- Otter (*Lutra lutra*) [1355]

### 4.1 The Habitat Impact Assessment Method, Determining Sensitivity and Significance

For the Annex I habitats and their constituent community types, potential effects are identified in relation to, first and foremost, spatial overlap. Subsequent disturbance and the persistence of disturbance are considered.

#### 4.1.1.1 Sensitivity

The sensitivity of a species to a given pressure is the product of the intolerance of the species to a particular pressure, and the time taken for its subsequent recovery. Intolerance is the susceptibility of the species to damage, or death, from an external factor, and recoverability is the ability to return to a state close to that which existed before the activity or event caused change. Life history and biological traits are important determinants of sensitivity of species to pressures.

The following guiding principles broadly underpin the analysis and conclusions of the species and habitat sensitivity assessment:

- Sensitivity of certain taxonomic groups to physical pressures is expected to be generally high or moderate because of their form and structure<sup>8</sup>.
- Sensitivity is expected to be high for species with large bodies and with fragile shells or structures, but low for those with smaller body size. Body size<sup>9</sup> and fragility are regarded as indicative of a high intolerance to physical abrasion. However, even species with a high

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<sup>8</sup> Roberts, C., et al., (2010) Review of existing approaches to evaluate marine habitat vulnerability to commercial fishing activities. Report to the Environment Agency from the Marine Life Information Network and ABP Marine Environmental Research Ltd. Environment Agency Evidence Report: SC080016/R3. Environment Agency, Peterborough. Available from <https://www.marlin.ac.uk/publications>

<sup>9</sup> Bergman, M.J., & Santbrink, J.W. (2000). Mortality in megafaunal benthic populations caused by trawl fisheries on the Dutch continental shelf in the North Sea in 1994. *Journal of Materials Science*, 57, 1321-1331. 10.1006/JMSC.2000.0917

intolerance may not be sensitive to the disturbance if their recovery is rapid once the pressure has ceased.

The sensitivities of the community types (or surrogates) described within a SAC to pressures are identified with ongoing reference to MarLIN ([link](#)) and MarESA programmes ([link](#)).

#### 4.1.1.2 *Structure and Function*

Structure relates to the characterising species of a community, or the collection of animals that make up that community. Function is considered the process whereby the animals living on and in the seafloor, by virtue of their activities, influence benthic dynamics which is reflective of system health<sup>10,11</sup>). Such activities or traits are considered in relation to, among others, the organisms feeding type (e.g., scavenger, filter, deposit feeders), mobility, body size, and ability to bioturbate (i.e. introduce oxygen into the sediment). All such traits can result in the removal or conversion of organic matter to biomass (i.e. secondary production). The structure of a community can be dynamic, while still retaining the function.

There may be persistent disturbance as a result of an activity which may result in a response or change to the structure of the community type, it is expected that (some level of) function will be retained. However, by virtue of the fact that the composite species (i.e. structure) may change, the result is considered a disturbance. The confidence around the measure of spatial overlap is considered high because published literature and monitoring outputs identifies that effects are, for the most part, confined to the footprint of the activity in question.

#### 4.1.1.3 *Disturbance*

Disturbance, in this instance, is meant as that which leads to a change in the characterising species (structure), as listed in the Conservation Objective guidance of the constituent habitat or marine community types. The likelihood of change depends on the sensitivity of the characterising species to the activities in question.

Such disturbance may be temporary or permanent, in the sense that change in characterising species may recover to a pre-disturbed state or may persist. The degree of change is likely a function of the sensitivity of the receiving environment to organic loading, which in turn may be influenced by hydrodynamic conditions in addition to the density of the organisms in culture at the site.

#### 4.1.1.4 *Persistence*

A persistent activity is considered one that occurs with high frequency and/or high intensity, or an activity that occur frequently and throughout the year. If the activities are persistent and the receiving community has a high intolerance to the activity (i.e., the characterising species of the communities are sensitive and consequently impacted) then such communities could be said to be persistently disturbed.

#### 4.1.1.5 *Recoverability*

Recoverability of species depends on biological traits<sup>12</sup> such as reproductive capacity, recruitment rates and generation times. Species with high reproductive capacity, short generation times, and high

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<sup>10</sup> Bolam, S.G., et al., (2002). Diversity, Biomass, and Ecosystem Processed in the Marine Benthos. *Ecological Monographs*, 72: 599-615. [https://doi.org/10.1890/0012-9615\(2002\)072\[0599:DBAEPI\]2.0.CO;2](https://doi.org/10.1890/0012-9615(2002)072[0599:DBAEPI]2.0.CO;2)

<sup>11</sup> Solan, M., et al., (2004). Extinction and Ecosystem Function in the Marine Benthos. *Science*. 306: 1177-1180. <https://doi.org/10.1126/science.1103960>

<sup>12</sup> Tillin, H.M., et al. (2006) Chronic bottom trawling alters the functional composition of benthic invertebrate communities on a sea-basin scale. *Marine Ecology Progress Series*, 318: 31-45. <https://doi.org/10.3354/meps318031>

mobility or dispersal capacity may maintain their populations even when faced with persistent pressures; but such environments may become dominated by these (r-selected) species.

Slow recovery is correlated with slow growth rates, low fecundity, low and/or irregular recruitment, limited dispersal capacity and long generation times. Recoverability, as listed by MarLIN, assumes that the impacting factor has been removed or stopped and the habitat returned to a state capable of supporting the species or community in question. The recovery process is complex and therefore the recovery of one species does not signify that the associated biomass and functioning of the full ecosystem has recovered<sup>13,14</sup>.

For persistent pressures, recovery capacity may be of little relevance except for species or habitats that may have extremely rapid (days or weeks) recovery capacity or whose populations can reproduce and recruit in balance with population damage caused. In all but these cases, and if sensitivity is moderate or high, then the species or habitats may be negatively affected and will exist in a modified state. Such interactions between activities and species, or habitat, or community represent persistent disturbance. They become significantly disturbing if more than 15% of the community is thus exposed.

In the case of episodic pressures (i.e. activities that are seasonal or discrete in time) both the intolerance and recovery components of sensitivity are relevant. If sensitivity is high but recoverability is also high relative to the frequency of application of the pressure, then the species, habitat, or community will be in favourable conservation status (FCS) for at least a proportion of time.

#### 4.1.1.6 Significance

The significance of adverse effects is determined, on the basis of scientific studies, on likely impacts of proposed activities on conservation features allied with CO guidance for constituent community types. The guidance is scaled relative to the anticipated sensitivity of habitats and species to disturbance by activities. Some activities are deemed to be wholly inconsistent with long term maintenance of certain sensitive habitats while other habitats can tolerate a range of activities.

For the practical purpose of management of seabed habitats, other than sensitive habitats such as Maërl-dominated communities, a 15% threshold of overlap between a disturbing activity and the community type is established in the NPWS guidance<sup>15</sup>. Below this threshold, disturbance is deemed to be non-significant. Where disturbance (continuous or ongoing) is greater than 15% of the defined area of Habitat QI or Marine Community Type, it is deemed to be significant.

For the assessment, the 15% threshold:

- applies to the habitats or constituent community types that are overlapped by disturbing activities,
- and is considered in-combination with all other activities,
- and is considered cumulatively with all other likely disturbing activities.

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<sup>13</sup> Anand, G. and Ward, P.T. (2004), Fit, Flexibility and Performance in Manufacturing: Coping with Dynamic Environments. *Production and Operations Management*, 13: 369-385. <https://doi.org/10.1111/j.1937-5956.2004.tb00224.x>

<sup>14</sup> Hall, K., Paramor, O.A.L., Robinson L.A., Winrow-Giffin, A., Frid C.L.J., Eno, N.C., Dernie, K.M., Sharp, R.A.M., Wyn, G.C. & Ramsay, K. 2008. Mapping the sensitivity of benthic habitats to fishing in Welsh waters- development of a protocol. CCW [Policy Research] Report No: [8/12], 85pp.

<sup>15</sup> NPWS (2013) Rutland Island and Sound SAC (site code: 002283) Conservation objectives supporting document- Marine Habitats and Species. Department of Environment, Heritage and Local Government (Link)



To this end, it would be important to identify, as much as practicable, other such activities in the relevant SAC. Figure 3 shows a schematic outlining the determination of significant effects on marine habitats and marine community types.

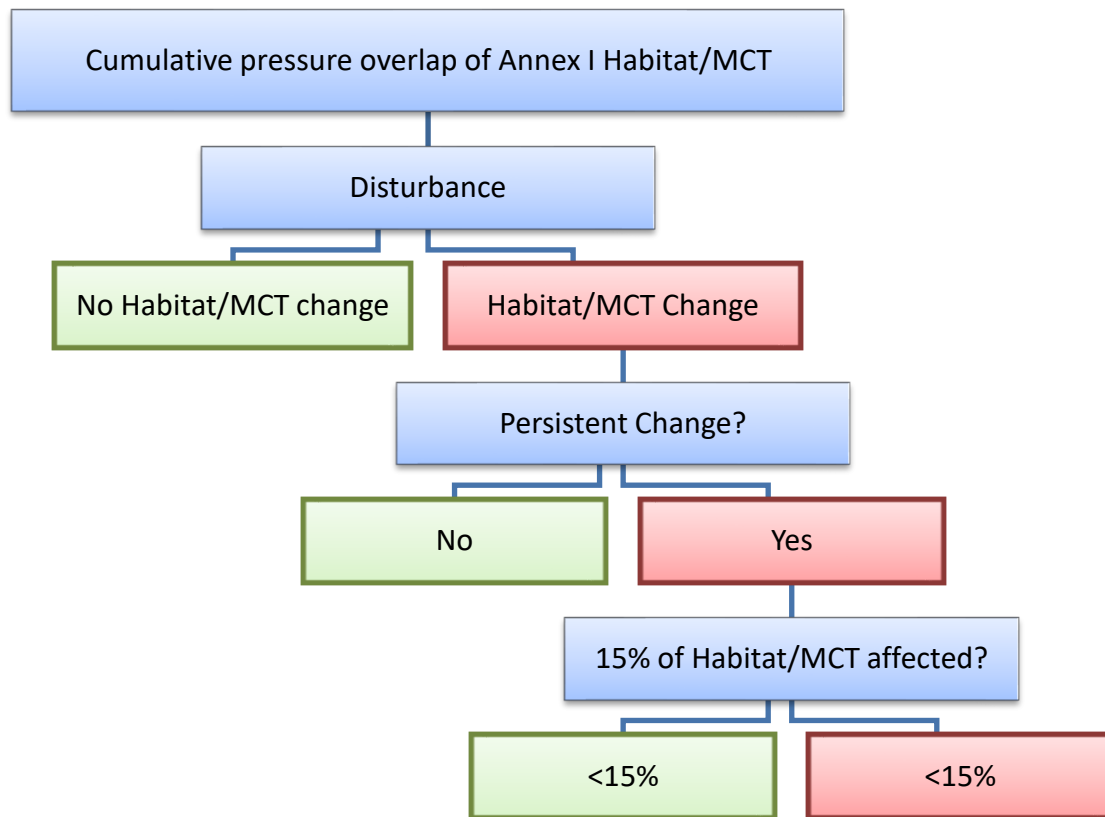


Figure 3 Schematic outlining the determination of likely significant effects on habitats and marine community types (MCT) (following NPWS guidelines).

#### 4.1.1.7 The Process

Where available, the sensitivities to pressures are identified for the:

- community types (or surrogates) - described within a SAC.
- species which are characteristic of benthic communities - as listed in the Conservation Objective supporting document.

For the Annex I habitats and their constituent community types, potential effects are identified in relation to, first and foremost, spatial overlap. Subsequent disturbance and the persistence of disturbance are considered as follows:

- The sensitivity of a community to a given pressure.
- The conservation of functionality of the community.
  - It is expected, in spite of the potential change in characterising species, that certain functions are retained by the benthic communities, such that effects deriving from the activities are alleviated
- The degree to which the activity will disturb the habitat.
  - While there may be persistent disturbance as a result of an activity which may result in a response or change to the structure of the marine community type, it is expected that (some level of) function will be retained.

- The persistence of the disturbance in relation to the intolerance of the community.
  - If the activities are persistent and the receiving community has a high intolerance to the activity, then such communities could be said to be persistently disturbed.
- The ability of a community to recover from disturbance.
- The significance of the disturbance on the community.
  - In the event that disturbance is greater than 15% of the defined area of Habitat QI or Marine Community Type, it is deemed to be significant.

No activity is likely to be allowed or to result in the total exclusion or extirpation of marine community type within the SAC. In addition, overlap on those, mostly biogenic habitats defined as sensitive marine community types (e.g., maërl, seagrasses) is not considered acceptable, given the sensitivity of these communities to bioturbations.

#### 4.1.1.8 *Community Complexes*

It must be noted that the NPWS, in their guidance notes, have acknowledged that given the wide range of community types that can be found in marine environments, the application of conservation targets to these would be difficult. On this basis, they have proposed broad community complexes as management units. These complexes (for the most part) are very broad in their description and do not have clear surrogates which might have been considered in targeted studies and thus reported in the scientific literature. On this basis, the confidence assigned to likely interactions of the community types with anthropogenic activities are by necessity relatively low, with the exception of community types dominated by sensitive taxa, such as Maërl and Zostera.

#### 4.1.1.9 *Sources*

This assessment report refers to a number of sources of information in assessing the sensitivity of the characterising species of the community types recorded within the habitat QIs. A series of reviews commissioned by the Marine Institute which identify habitat and species sensitivity to a range of pressures that are likely to result from aquaculture and fishery activities are utilised<sup>16</sup>. These reviews draw from the broader literature, including the MarLIN Sensitivity Assessment<sup>17</sup>, the AMBI Sensitivity Scale<sup>18</sup>, FEAST<sup>19</sup> and other primary literature. Subsequent literature and reports also provide more recent sources of information on likely interactions<sup>20,21,22</sup>.

#### 4.1.2 *Annex II Species and Birds*

For the Annex II species and birds potential effects are identified in relation to potential impacts for the proposed activity and if there is a potential for an adverse effect on any of the QIs/SCI of the Natura sites in view of their conservation objectives. With the general aim being to maintain or restore the

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<sup>16</sup>ABPMer. Reports 2013. Tools for appropriate assessment of fisheries and aquaculture activities in Marine and Coastal Natura 2000 sites. Reports I to VII. Marine Institute, Ireland [Link](#)

<sup>17</sup> <https://marlin.ac.uk/>

<sup>18</sup> Borja, A., Franco, J. & Pérez, V. 2000. A marine biotic index of establish the ecological quality of soft-bottom benthos within European estuarine and coastal environments. *Marine Pollution Bulletin*. 40: 1100 – 1114.

<sup>19</sup> <http://www.marine.scotland.gov.uk/FEAST/Index.aspx>

<sup>20</sup> Tyler-Walters, H. and Arnold, C., 2008. Sensitivity of Intertidal Benthic Habitats to Impacts Caused by Access to Fishing Grounds. Report to Cyngor Cefn Gwlad Cymru / Countryside Council for Wales from the Marine Life Information Network (MarLIN). Marine Biological Association of the UK, Plymouth.

<sup>21</sup> Tyler-Walters, H., Tillin, H.M., d'Avack, E.A.S., Perry, F., Stamp, T., 2018. Marine Evidence-based Sensitivity Assessment (MarESA) – A Guide. Marine Life Information Network (MarLIN). Marine Biological Association of the UK, Plymouth, pp. 91. [Link](#)

<sup>22</sup> Tyler-Walters, H., Williams, E., Mardle, M.J. & Lloyd, K.A., 2022. Sensitivity Assessment of Contaminant Pressures - Approach Development, Application, and Evidence Reviews. MarLIN, Marine Biological Association of the UK, Plymouth, pp. 192. [Link](#)

favourable conservation status of species of community interest, the following impacts are considered.

- Impact to the habitat extent so that there is sufficiently large habitat to maintain its populations on a long-term basis.
- Impact to the ability for the species to maintain its population dynamics on a long-term basis as a viable component of its natural habitats.
- Impact to the structure and functions which are necessary for long-term maintenance of the species.
- Impact to the natural range of the species.
- Impact to the favourable conservation status of species.

To assess the effects on the integrity of the site, it is considered<sup>23</sup> if the plan or project has the potential to:

- Hamper or cause delays in progress towards achieving the site's conservation objectives.
- Reduce the area, or quality, of protected habitats of protected species present on the site.
- Reduce the population of the protected species significantly present on the site.
- Result in disturbance that could affect the population size or density or the balance between species.
- Cause the displacement of protected species significantly present on the site and thus reduce the distribution area of those species in the site.
- Result in a fragmentation of habitats of species.
- Result in a loss or reduction of key features, natural processes or resources that are essential for the maintenance or restoration of species in the site.
- Disrupt the factors that help maintain the favourable conditions of the site or that are needed to restore these to a favourable condition within the site.
- Interfere with the balance, distribution and density of species that are the indicators of the favourable conditions of the site.

Spatial overlap, and subsequent disturbance and the persistence of disturbance are considered.

#### 4.1.2.1 *The Process*

For the Annex II species and birds the CO, along with their attributes and targets are identified. Information on the populations present within the Natura site, their distribution and activities within the site are identified, where available, or information on their likely interactions with the Natura site are detailed.

Potential effects are considered in relation to the QI and the conservation objectives, considering if the pathway of connectivity between the QI and the sources of potential impacts associated with the activity is significant to cause adverse effects. Multiple factors are considered depending on the species and their behaviours, but elements that are generally considered include: spatial overlap; distance to proposed activities, potential of the project to effect suitable habitat; the likelihood of interactions between the species and the activity; persistence of disturbance; the degree to which the activity will disturb the habitat; the significance of the disturbance on the community.

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<sup>23</sup> European Commission, DGEnv, Guidance document on assessment of plans and projects in relation to Natura 2000 sites : a summary, Publications Office of the EU, 2022 [Link](#)

## 4.2 Potential Impacts of the Proposed Development

As described in Assessment of Activities in this report, this project involves a proposed for the refurbishment and repair of Portaleen Pier, Co. Donegal. The section considers the potential significant impactors from the project.

### 4.2.1 Loss of Habitat

The footprint of the proposed development is located in the North Inishowen Coast SAC (002012). The proposed development site has a physical footprint of approximately 350 m<sup>2</sup>. There will not be a direct loss of significant habitat within the SAC.

### 4.2.2 Sediment Contamination and Impacts on Water Quality

Concrete or sediment may discharge or escape into the rising tide and surface water run-off into the water column during the construction phase of the project. Escape of sediment has the potential to release contaminants, such as silt, hydrocarbons or other chemicals, or spillage from machinery. This can pose a risk to water quality and habitats, through increased turbidity in water reducing light penetration and interfere with feeding of aquatic organisms (particularly suspension or filter feeders), as well as containing potentially harmful pollutants. It can also smother or bury habitats or communities.

In this instance, it is expected that the concrete works will take place during daylight hours, between tides, above the water mark, limiting potential for this contamination. Construction method will involve temporary vertical frameworks and sheet piling. Concrete will be pumped using a tremie or pump. Precast concrete caisson units will be used underwater. All damaged concrete and loose/spalling material will be removed from the site. The works should not produce any dredge material or sediment for disposal. All construction waste will be disposed of in licensed facilities. All liquids are to be stored in a bunding spill tray. All equipment will be checked daily and have maintenance records. The works Contractor will be required to implement all measures necessary for the protection of the site during the works in order to avoid any direct or indirect impacts from the works. A Construction Environmental Management Plan will be developed by the contractor once appointed.

Considering the relatively small footprint of this construction project and the potential for minor amounts of sediment contamination, combined with the potential dilution factor (discharge into the open ocean), sediment contamination and impacts on water quality is not considered to be likely to cause adverse effect to the Natura site.

### 4.2.3 Impacts from Noise and Disturbance

Potentially increased noise and disturbance associated with the site works could cause disturbance or displacement of fauna. Work is planned for daylight hours. All equipment will be checked daily and have maintenance records to reduce excess noise generation. Light pollution will be avoided with the use of lighting towers, where necessary. The proposed repair work is on a pre-existing and functional pier so there is already an on-going element of anthropogenic disturbance, which is likely to be at a similar level following the construction phase, with which the fauna present are already subject to and tolerant of.

The noise and disturbance from the construction will have a relatively small zone of influence and attenuate rapidly. There is the potential of disturbance to sensitive species, but the effect is likely to be sporadic and short term. They are likely to have a negligible effect on any QIs (e.g., Harbour Seal) capacity to forage; thus, disturbance or displacement of fauna will be negligible.

#### 4.2.4 Impacts on Local Hydrodynamic Conditions

As this is repair work to an existing structure, there is unlikely to be any changes in hydrodynamic regime due to the installed structures altering local sediment depositional or erosional processes. No impact from changes in hydrodynamic conditions is predicted to occur

### 4.3 Impact of the proposed activities on Annex I Habitats

#### 4.3.1 Mudflats and sandflats not covered by seawater at low tide [1140]

The Conservation Objective is to maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in North Inishowen Coast SAC. Table 1 describes the attributes and targets associated with this QI in the North Inishowen Coast SAC.

Table 1 Attributes and targets for QI Mudflats and sandflats not covered by seawater at low tide [1140] in North Inishowen Coast SAC.

Attribute	Target
Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.
Community extent	Maintain the extent of the <i>Zostera</i> -dominated community, subject to natural processes.
Community structure: Zostera density	Conserve the high quality of the <i>Zostera</i> -dominated community, subject to natural processes.
Community distribution	Conserve the following community types in a natural condition: Fine to medium sand with <i>Eurydice pulchra</i> community complex; Muddy sand to coarse sediment with <i>Pygospio elegans</i> community complex; Sand with <i>Angulus tenuis</i> and <i>Scoloplos (Scoloplos) armiger</i> community complex.

The community type *Fine to medium sand with Eurydice pulchra community complex*, is situated adjacent to the proposed project ( Figure 4).The distinguishing species of this Fine to medium sand community are the crustaceans *Eurydice pulchra* and *Haustorius arenarius* and the polychaete *Scoloplos (Scolelepis) squamata*. *E. pulchra* occurs in variable abundances throughout the community while *H. arenarius* occurs in low abundances. *S. squamata* occurs in high abundances in Lehan Bay (>30 Km by water from the site) and it is recorded in low abundance or absent elsewhere.

The species inhabiting this biotope are adapted to the high levels of disturbance in mobile sediment, and seasonal change. Species present in this biotope must be able to withstand mobile sediments through physical robustness, mobility and ability to re-position within sediments and/or to recover rapidly to sustain population losses following severe erosion. Characterizing species typically have

opportunistic life history strategies, with short life histories, rapid maturation and extended reproductive periods. Typically, they produce juveniles that are either brooded (amphipods) and, therefore, present to repopulate the disturbed habitat directly or have pelagic larvae capable of dispersal within the water column. Resilience is assessed as 'High' (< 2 years) for impact.

The MarLIN categorises *E. pulchra* as low to moderate sensitivity to sedimentation and water quality change. It is not sensitive to noise, has a low to moderate sensitivity to physical and chemical pressures, and is likely to have a high (or very high) capacity for recovery from many factors of disturbance (turbidity, chemical). The project is a refurbishment to a current concrete structure, so will not permanently remove habitat from the SAC. The size of the project site is 0.035 ha. This repair work will happen over a relatively short period of time so will not be likely to cause a lasting effect on these resilient species. With the work being conducted at low water, and with the currents and dilution in the bay, should there be any inputs to the bay, the activities are unlikely to have any significant adverse impact on the extent, structure, distribution or permanency of the habitat.

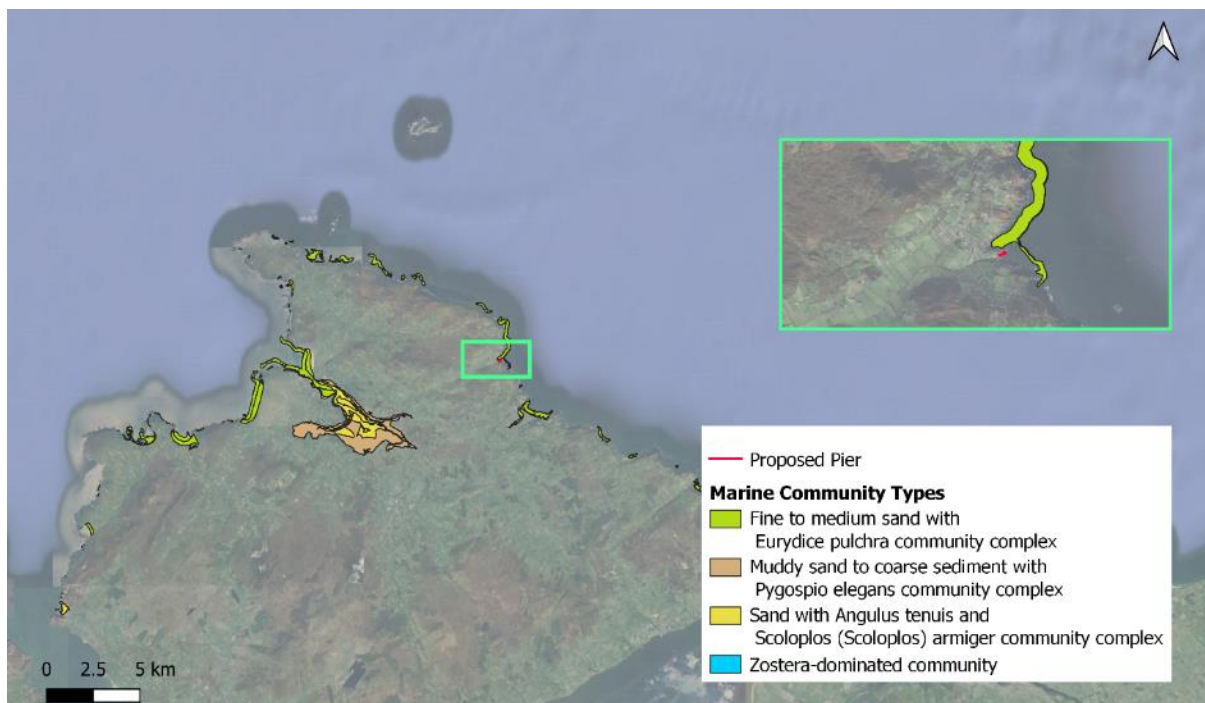


Figure 4 Distribution of community types within the North Inishowen Coast SAC.

The closest instance of the Muddy sand to coarse sediment with *Pygospio elegans* community complex is approximately 3.5 km, in the Culdaff Estuary, from the proposed project site. Due to the lack to spatial overlap or hydrological connectivity, this project will not have adverse effects on this community type.

The closest instance of the Sand with *Angulus tenuis* and *Scoloplos (Scoloplos) armiger* community complex is approximately 28.7 km, in the central inner channel of Trawbreaga Bay, from the proposed project site. Due to the lack to spatial overlap or hydrological connectivity, this project will not have adverse effects on this community type.

The *Zostera*-dominated community is approximately 32.5 km, in the intertidal zone Trawbreaga Bay, from the proposed project site. Due to the lack to spatial overlap or hydrological connectivity, this project will not have adverse effects on this community type.

The project is a refurbishment to a current concrete structure, so will not permanently remove habitat from the SAC. The size of the project site is 0.035 ha. With the work being conducted at low water, and with the currents and dilution in the bay, should there be any inputs to the bay, the activities are unlikely to have any significant adverse impact on the extent, structure, distribution or permanency of the habitat area of Mudflats and sandflats not covered by seawater at low tide [1140].

#### 4.3.1.1 *Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]*

This habitat is associated with sea cliffs. An area to the north-west of Glengad Head has good examples of sea cliffs in the SAC and technically overlaps with the site (Figure 5). Table 2 describes the attributes and targets associated with Vegetated sea cliffs of the Atlantic and Baltic coasts in the North Inishowen Coast SAC.

*Table 2 Attributes and targets associated with Vegetated sea cliffs of the Atlantic and Baltic coasts in the North Inishowen Coast SAC*

Attributes	Targets
Habitat length	The area is stable, subject to natural processes, including erosion. Glengad has 21.5km of sea cliff habitat length.
Habitat distribution	No decline.
Physical structure	No alteration to natural functioning of geomorphological and hydrological processes due to artificial structures.
Vegetation structure	Maintain range of sea cliff habitat zonations including transitional zones, subject to natural processes including erosion and succession. Maintain structural variation within sward.
Vegetation composition	Maintain range of sub-communities with typical species listed in the Irish Sea Cliff Survey <sup>24</sup>
Vegetation composition	Negative indicator species (including non-natives) to represent less than 5% cover. Cover of bracken ( <i>Pteridium aquilinum</i> ) on grassland and/or health less than 10%. Cover of woody species on grassland and/or health less than 20%.

<sup>24</sup> Barron, S., Delaney, A., Perrin, P., Martin, J. and O'Neill, F. (2011). National survey and assessment of the conservation status of Irish sea cliffs. Irish Wildlife Manuals, No. 53. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.



Figure 5 Sea cliffs and proposed site.

The project is a refurbishment to a current concrete structure, so will not permanently remove habitat from the SAC. The size of the project site is 0.035 ha. The refurbishment work will happen to an already existing pier, between the tides. As this project is repair to an existing structure, there will be no impact on the length, distribution, or physical structure of the Vegetated Sea Cliffs. The repair work will not directly influence the vegetation of these cliff habitats.

**It is likely that for all Annex I QIs considered, and the constituent community types, in the North Inishowen Coast SAC will not be adversely affected when all activities are considered.**

#### 4.4 Impact of the proposed activities on Annex II Species

##### 4.4.1 Otter (*Lutra lutra*) [1355]

The North Inishowen Coast SAC is designated for the QI Otter [1355] with a CO to maintain the favourable conservation condition. Table 3 describes the attributes and targets associated with Otter in the North Inishowen Coast SAC.

Table 3 Attributes and targets associated with Otter in the North Inishowen Coast SAC

Attributes	Targets
Distribution	No significant decline.
Extent of terrestrial habitat	No significant decline. Area mapped and calculated as 146.6ha above high water mark (HWM); 61.3ha along riverbanks/around ponds.
Extent of marine habitat	No significant decline. Area mapped and calculated as 1099.2ha



Extent of freshwater habitat	No significant decline. Length mapped and calculated as 30.9km
Couching sites and holts	No significant decline.
Fish biomass available	No significant decline.
Barriers to connectivity	No significant increase



Figure 6 The distribution of otter habitat and commuting areas within the North Inishowen Coast SAC.

Figure 6 shows the distribution of otter habitat and commuting areas near the project site, within this area of the North Inishowen Coast SAC. The risk of negative interactions between the project and aquatic mammal species is a function of:

- The location of the project.
- The infrastructure built.
- The process of construction.
- Noise of disturbance from operations.

Disturbance associated with activity and construction could potentially affect the distribution of otter at the site. However, the level of disturbance is likely to be very low given the likely encounter rates will be small. The construction phase will be time limited, and anthropogenic activity will likely be similar at the site after the construction phase. This is an active pier so otters would already avoid interaction with human activity, so are unlikely to use the areas in the direct vicinity of the pier. The level of disturbance is likely to be low given the likely encounter rates will be small. Otter foraging is primarily crepuscular so less likely to interact with activities at the site.

It is noted that the current conservation status of otter nationally is favourable. It is unlikely that this project poses a risk to otter populations in distribution or extent in the North Inishowen Coast SAC.

Significant adverse effects on the QI Otter can be discounted on the basis that the proposed project will not lead to any modification of the extent of marine habitat and will not affect the number of couching sites and holts. The activity will have no negative impact on the essential food base (fish biomass) available, and the work at the site allows free movement through and within the area.

**Therefore, this project will not pose an adverse risk to the Otter [3155] population, distribution, or extent in the North Inishowen Coast SAC.**

#### 4.5 Assessment of Potential Effects of Non-native Species

There is potential during the construction phase and operational phase of the proposed works for invasive species to be spread outside the site boundary. Disturbance of invasive species within the proposed development site during the construction of the proposed development could lead to the dispersal of scheduled invasive species either via machinery, materials, clothing or wild animals. No invasive species were recorded within the proposed development site and no impact from the spread of invasive species is expected to occur. A Biosecurity Method Statement detailing the proposed approach to ensure that invasive species will be available for the project.

#### 4.6 Consideration of Cumulative Effects

There are no other marine projects that could have the potential to give rise to cumulative impacts with this works.

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## 5 Conclusions & Recommendations

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This is an Appropriate Assessment screening and Natura Impact Statement (NIS) review document supporting the Appropriate Assessment of foreshore activities at Natura 2000 site North Inishowen Coast SAC (site code 002012). The Marine Institute has been requested to review an application for foreshore activities for refurbishment and repair of a pier at Portaleen, Co. Donegal.

The site overlaps with the North Inishowen Coast SAC and is adjacent to 3 other SACs and 10 SPAs within the zone of influence of the project.

Following a Stage 1 AA Screening process, the following were screened in as QIs that the planned project has potential to overlap with or and have the potential to significantly affect, and were carried forward for full assessment:

### *SAC QIs*

- Mudflats and sandflats not covered by seawater at low tide [1140]
- Vegetated sea cliffs of the Atlantic and Baltic coasts [2130]
- Otter (*Lutra lutra*) [1355]

The potential impacts from the proposed project could arise during the construction and operational phase of the project. The designated QIs could be impacted in relation to loss of habitat; sediment contamination; noise and disturbance; water quality; and hydrodynamics.

The potential impacts have been assessed and it has been objectively concluded following best available information, objective criteria, best scientific knowledge and expert judgement, that the proposed project will not pose a risk of adversely affecting (either directly or indirectly) the integrity of Natura sites, either alone or in combination with other plans and projects.