



**Report supporting the
Natura Impact Statement of
Foreshore License (FC/15/31)
in Bunbeg, Co. Donegal**

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Executive Summary

The Marine Institute has been requested to review an application for foreshore activities (FC/15/31) to install a pontoon at the existing quay wall at Bunbeg Harbour, 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 is within the Gweedore Bay and Islands SAC and West Donegal Coast SPA, and adjacent to 7 other SACs (within 15km) and 16 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

- Reefs [1170]
- Otter (*Lutra lutra*) [1355]
- Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029]

SPA QIs

- Chough (*Pyrrhocorax pyrrhocorax*) [A346]
- Cormorant (*Phalacrocorax carbo*) [A017]
- Fulmar (*Fulmarus glacialis*) [A009]
- Herring Gull (*Larus argentatus*) [A184]
- Kittiwake (*Rissa tridactyla*) [A188]
- Razorbill (*Alca torda*) [A200]
- Shag (*Phalacrocorax aristotelis*) [A018]

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.

1 Introduction

1.1 Overview of this document

This is a report supporting the Appropriate Assessment of foreshore activities at Bunbeg Harbour, Co. Donegal, (FC/15/31) in the Natura 2000 site in the Gweedore Bay and Islands SAC (site code 001141) and West Donegal Coast SPA (004150).

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 following the 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 site's 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**¹) 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** sites². 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*³, 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/EEC⁴. 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

¹ https://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

² https://ec.europa.eu/environment/nature/natura2000/index_en.htm

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

⁴ 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.

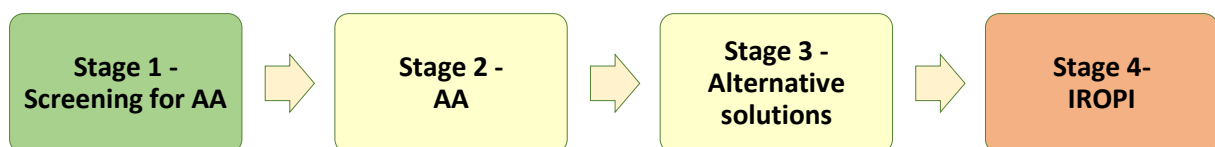
The licensing authority determines applications for foreshore licences and are also the competent authority responsible for undertaking AA of applications. As part of the process, they must determine if the proposed activities are likely to significantly impact the Conservation Status of QIs and the 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 ⁵.

The *Guidance on Appropriate Assessment of Plans and Projects in Ireland* document⁶ 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 Screening⁷, 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 triggers for appropriate assessment screening are based on a 'likelihood' (read as 'possibility') of a potential significant effect occurring and not on certainty. This test is based on the precautionary principle⁸. The

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

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

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

⁸ OPR - Office of Planning Regulator (2021). Appropriate Assessment Screening for Development Management. March 2021. 43pp [Link](#)

greatest level of evidence and justification will be needed in circumstances when the process ends at screening stage on grounds of no effect.

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 adversely affect 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 report provides:

1. **Introduction** - an outline of the legislative context and the processes.
2. **Proposed project Background** - providing details of the activity proposed.
3. **Stage II Appropriate Assessment (Natura Impact Statement)** - details the assessment of 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

2 Proposed Project Background

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

This section identifies the proposed activities related to the development to be considered as part of the assessment exercise in this report, and then considers whether these activities are likely to adversely affect the QIs of the Natura 2000 sites, in view of their Conservation Objectives (COs). These activities are then considered in-combination with other likely disturbing activities.

2.1 Details of Proposed Foreshore Activities

The methodology text in this Section has been synthesised from the applicant's supplied documentation. Bunbeg Pier, in Co. Donegal, is well sheltered and is widely used by leisure users, a seasonal ferry and fishermen (year-round lobster and crab) (Figure 1). The proposed project will consist of the manufacturing and installation of a 230 m x 2.4m pontoon along the existing pier at Bunbeg to provide safer access (Figure 2). The project will take place over a two-week period (October/November) in Q4 of 2023 when there is not significant activity (except for berthed vehicles) and 5-6 people will be working on-site at any time.



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

The contractor will prepare a Traffic Management Plan and Construction Management Plan. A competent person will prepare a lift plan for all lifting operations. It is also up to the contractor to implement methodologies that will eliminate, within reason, any impact on the environment (particularly with regard to pollution). Donegal Co. Council also employ an independent Ecological Clerk of Works (ECOW) to oversee the installation of the pontoons at the Bunbeg site.

The pontoon and supporting steelwork (for attaching the pontoon to the existing wall) will be manufactured off-site. The pier will be fenced off to restrict access and all vessels will be moved from the site to other berths along the pier. A safety boat will remain on the water for the duration of the works. The 60 T mobile crane will set up along the pier edge. The pontoons will be delivered to the project site, offloaded and sorted along the pier using the crane. They will be lowered into the water and fixed together in parallel to the pier for personnel access to the quay wall for attaching steelwork (vertical guide rails).

The supporting steelwork will be mechanically fixed to the existing pier using blind bolts. The vertical steel rails will be lowered by crane and fixed to the steel brackets. When the two vertical rails have been attached, the corresponding pontoon will be lowered into the water and attached to the guide rails. This process will continue moving along the pier until all steel rails and pontoons have been installed. The new pontoons will be temporarily used as a floating work platform to access the side of the pier. The pontoon access gangway is supported by a cantilevered bracket from the existing quay (at the top) and by the pontoon (at the lower end). The crane and work site will be adjacent to the walkway.

After the installation of the support bracket, the access gangway will be lifted and lowered into place and fixed to the support bracket. Hand and guard rails will be fixed around the access point (to access the gangway). The pontoons will be fitted with safety ladders, mooring cleats, fire extinguishers and life rings. A navigation light will be fitted at the seaward end of the gangway.

It is planned for residues and waste from the project to all be recovered and this should not impact the seabed. Access to the pier and boats will be restricted throughout the period of installation. Pedestrian barriers and signage will be in place to safeguard the public.

As all items will be prefabricated off-site, on-site assembly should not cause significant noise. Precast units will be used to reduce the likelihood of cementitious material. Fuelling stations will be located away from the shoreline—at least 50m from the existing quay wall. All oils and chemicals will be stored in appropriate secured containers.

Mitigation measures as outlined by the Donegal Co. Council include managing for sediment contamination, hydrocarbon contamination and noise impacts. For sediment contamination, the contractor should implement a method to capture waste and residues, and to dispose of them properly. Visual observations will take place to monitor for turbid plumes generated by drilling. Where contamination or pollution occurs/ is occurring, work will cease until corrective action can be implemented. For hydrocarbon contamination, all refuelling for the project should be carried out at designated locations away from the water. Spill trays are to be used and spill kits made available during refuelling operations. Biodegradable lubricants will be used, in minimal amounts when necessary. Visual observations will take place for monitoring of breaches. Spill kits will be used when necessary and work will cease in case of an incident. For noise impact, equipment that complies with current standards will be used for these works. ECOW will determine compliance and report on noise level production. Where noise levels are exceeded, actions will be taken to reduce noise to acceptable level.



Figure 2 Proposed project layout (from applicant documents).

3 Stage 1 AA Screening Summary

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/15/31) in Bunbeg, 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 Gweedore Bay and Islands SAC and West Donegal Coast SPA, and adjacent to 7 other SACs (within 15km) and 16 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

- Reefs [1170]
- Otter (*Lutra lutra*) [1355]
- Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029]

SPA QIs

- Chough (*Pyrrhocorax pyrrhocorax*) [A346]
- Cormorant (*Phalacrocorax carbo*) [A017]
- Fulmar (*Fulmarus glacialis*) [A009]
- Herring Gull (*Larus argentatus*) [A184]
- Kittiwake (*Rissa tridactyla*) [A188]
- Razorbill (*Alca torda*) [A200]
- Shag (*Phalacrocorax aristotelis*) [A018]

4 Appropriate Assessment (Natura Impact Statement)

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.

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

- Reefs [1170]
- Otter (*Lutra lutra*) [1355]
- Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029]

SPA QIs

- Chough (*Pyrrhocorax pyrrhocorax*) [A346]
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- Kittiwake (*Rissa tridactyla*) [A188]
- Razorbill (*Alca torda*) [A200]
- Shag (*Phalacrocorax aristotelis*) [A018]

4.1 Assessment methodology

The NPWS has provided in their guidance notes, specifically that relating to marine habitats, detail informing the process and methodology.

4.1.1 Annex 1 Habitats

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 structure⁹.
- 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 size¹⁰ and fragility are regarded as indicative of a high intolerance to physical abrasion. However, even species with a high 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^{11,12}). 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.

⁹ 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>

¹⁰ 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

¹¹ 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)

¹² Solan, M., et al., (2004). Extinction and Ecosystem Function in the Marine Benthos. *Science*. 306: 1177-1180. <https://doi.org/10.1126/science.1103960>

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 traits¹³ such as reproductive capacity, recruitment rates and generation times. Species with high reproductive capacity, short generation times, and high 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^{14,15}.

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

¹³ 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>

¹⁴ 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>

¹⁵ Hall, K., Paramor, O.A.L., Robinson L.A., Winrow-Giffin, A., Frid C.L.J., Eno, N.C., Dornie, 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.

community type is established in the NPWS guidance¹⁶. 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.

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.

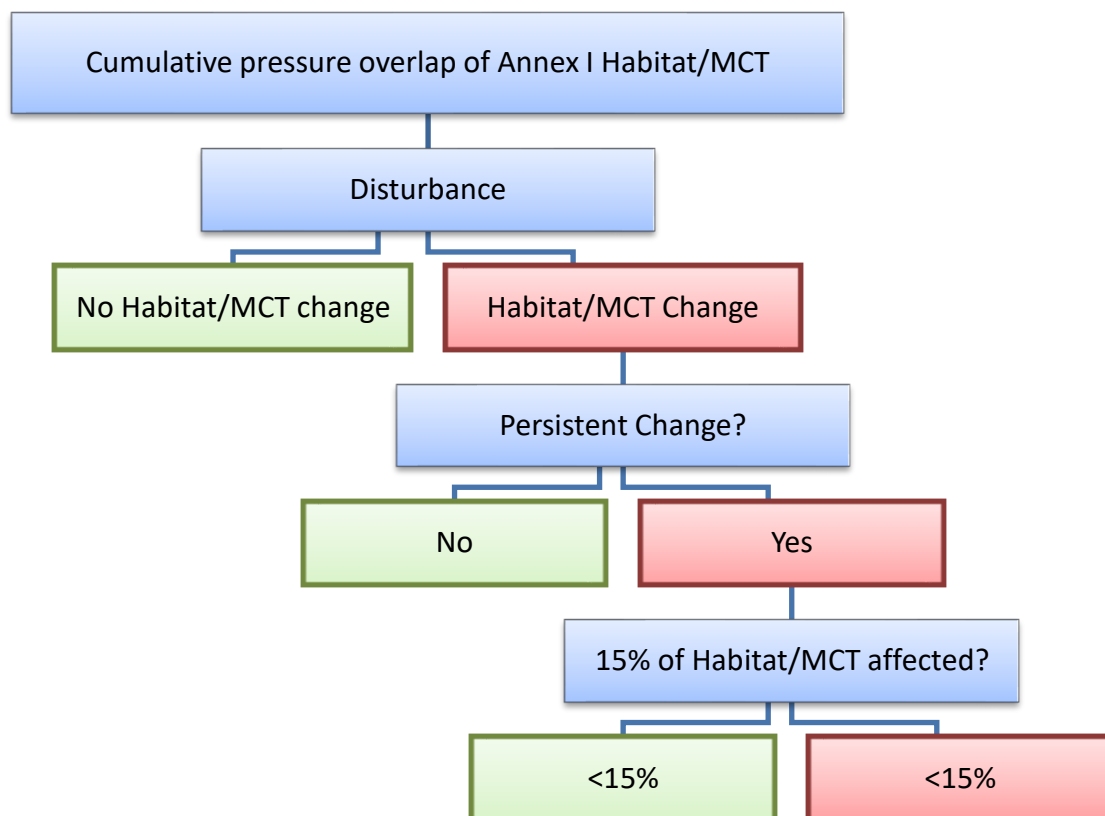


Figure 3 Schematic outlining the determination of likely significant effects on habitats and marine community types (MCT) (following NPWS guidelines).

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.

¹⁶ 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)

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 utilised¹⁷. These reviews draw from the broader literature, including the MarLIN Sensitivity Assessment¹⁸, the AMBI Sensitivity

¹⁷ABPMer. 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](#)

¹⁸ <https://marlin.ac.uk/>

Scale¹⁹, FEAST²⁰ and other primary literature. Subsequent literature and reports also provide more recent sources of information on likely interactions^{21,22,23}.

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 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 considered²⁴ 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.

¹⁹ 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.

²⁰ <http://www.marine.scotland.gov.uk/FEAST/Index.aspx>

²¹ Tyler-Walters, H. and Arnold, C., 2008. Sensitivity of Intertidal Benthic Habitats to Impacts Caused by Access to Fishing Grounds. Report to Cynfor Cefn Gwlad Cymru / Countryside Council for Wales from the Marine Life Information Network (MarLIN). Marine Biological Association of the UK, Plymouth.

²² 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](#)

²³ 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](#)

²⁴ 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](#)

4.1.2.1 *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.

4.2 Potential Impacts of the Proposed Development

As described in Assessment of Activities in this report, this project involves a proposed for the installation of a pontoon to the existing quay wall at the Bunbeg Pier in 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 Gweedore Bay and Islands SAC (001141). The proposed development site has a physical footprint of approximately 756 m², which is floating on the surface of the water. There will not be a direct loss of 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.

The construction primarily involves the positioning of a pontoon and supporting steelwork. These will be manufactured off-site and lifted into place with cranes, therefore the potential for sediment contamination or seepage is very minor. Precast units will be used to reduce the likelihood of cementitious material. Donegal Co. Council will employ an independent Ecological Clerk of Works (ECOW) to oversee the works. It is planned for residues and waste from the project to all be recovered and so as to not impact the seabed. For hydrocarbon contamination, all refuelling for the project should be carried out at designated locations away from the water. Spill trays are to be used and spill kits made available during refuelling operations. Biodegradable lubricants will be used, in minimal amounts when necessary. Visual observations will take place to monitor for turbid plumes generated by drilling. Where contamination or pollution occurs/ is occurring, work will cease until corrective action can be implemented. Spill kits will be used when necessary and work will cease in case of an incident.

This is a relatively small construction project with and considering the dilution factor with discharge into the open ocean, sediment contamination is not considered to be likely to cause adverse 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.

This project is scheduled to take 2 weeks to complete, so persistence of any disturbance is short-lived. Much of the work is conducted off-site. All items will be prefabricated off-site, on-site assembly should not cause significant noise. For noise impact, equipment that complies with current standards will be used for these works. ECOW will determine compliance and report on noise level production. Where noise levels are exceeded, actions will be taken to reduce noise to acceptable level. 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. Any noise and disturbance from the construction will have a relatively small zone of influence and is likely to be sporadic and short term. It is expected to have a negligible effect on the QIs capacity to forage, thus disturbance or displacement of fauna will not likely be significant.

4.2.4 Impacts on Local Hydrodynamic Conditions

This project involves the positioning of a pontoon and supporting steelwork to an already existing active pier. The infrastructure added will be relatively small in size, compared to the overall pier, and will be in-line with the profile of the current pier. There is unlikely to be any changes in hydrodynamic regime due to the installed structures altering local sediment depositional or erosional processes. No significant impact from changes in hydrodynamic conditions is predicted to occur and there will not be any adverse effect on Natura sites in the vicinity.

4.3 Impact of the proposed activities on Annex 1 Habitats

The following Annex I Habitats QIs are in the zone of influence of the project.

- Reefs [1170]

Figure 4 shows the detailed locations of the habitats within the SAC and the vicinity of the project.

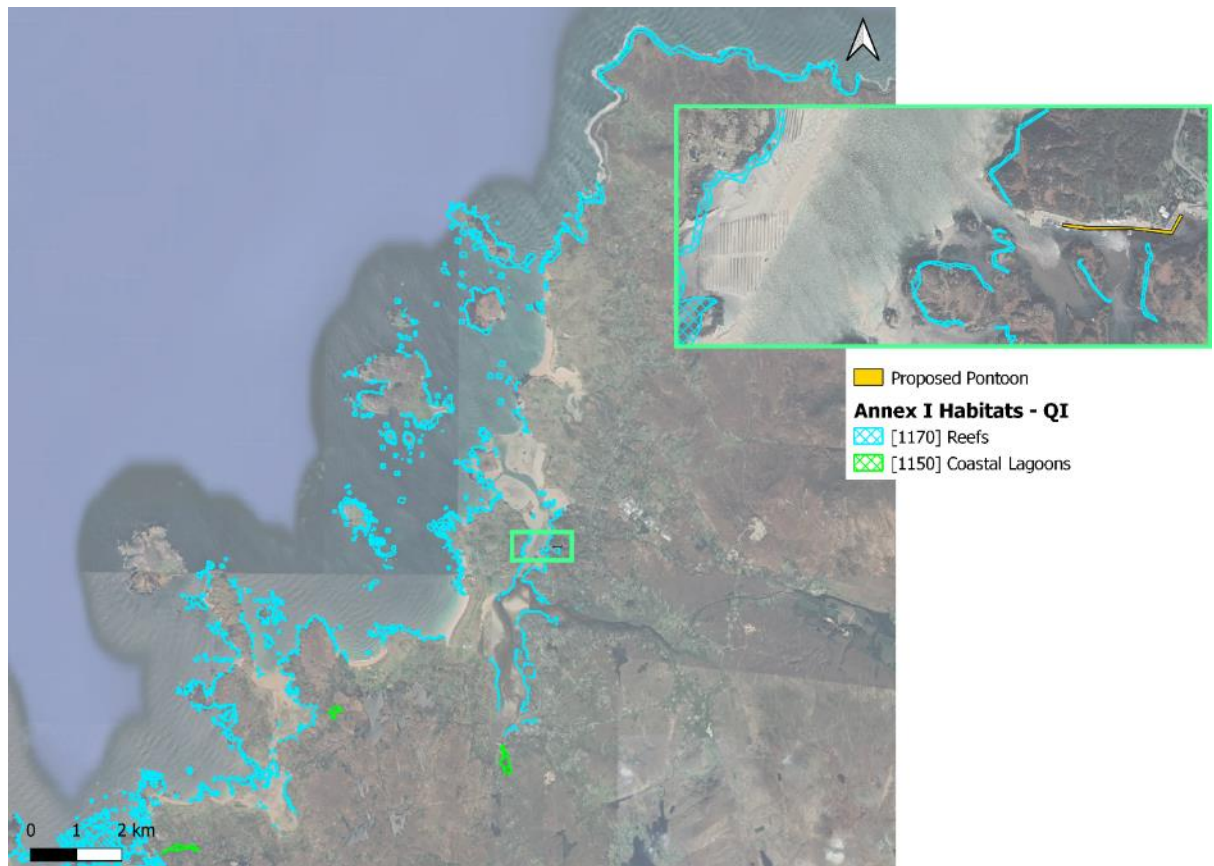


Figure 4 Distribution of community types within the SAC. The closest Coastal Lagoons [1150] habitat is ~4.5 km from the project site and is not included in the Stage 2- Appropriate Assessment.

4.3.1 Reefs [1170]

The Conservation Objective for Reefs [1170] in Gweedore Bay and Islands SAC is to maintain the favourable conservation condition. Table 1 details the attributes and targets for Reefs within the SAC. Figure 5 provides detail of the location of this marine community type within the SAC.

Table 1 List of attributes and targets for the Reefs [1170] at Gweedore Bay and Islands 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: <i>Zostera</i> density	Conserve the high quality of <i>Zostera</i> -dominated community, subject to natural processes
Community distribution	Conserve the following community types in a natural condition: Coarse sediment with crustaceans community complex; Sand with <i>Tellina sp.</i> and <i>Periculodes longimanus</i> community complex; Intertidal reef community; <i>Laminaria</i> -dominated community complex

This Reefs QI is situated adjacent to the proposed project site. The marine community type of interest is distributed across the QI. The project does not propose to permanently remove habitat from the SAC.

The Gweedore Bay and Islands SAC have two main marine community types: Reef community complex and *Laminaria*-dominated community complex. The reef community complex occurs in the intertidal throughout the site with an estimated area of ~309ha. It is recorded on exposed and sheltered shores and in the shallow subtidal. In the northern extreme of the SAC, it is comprised of flat bedrock with small boulder and large cobbles on the lower shore. Where this community complex occurs in sheltered environs it is very narrow and composed primarily of bedrock. On exposed reefs the lichen *Lichina pygmaea*, the gastropods *Nucella lapillus*, *Littorina littorea* and *Patella vulgata*, the barnacles *Chthamalus stellatus* and *Semibalanus balanoides* and the brown algae *Fucus serratus*, *Himantalia elongata* and *Laminaria digitata* are commonly recorded. On sheltered reefs, the brown algae *Fucus vesiculosus* and *Halidrys siliquosa* and unidentified cushion sponges occur. The lichen *Verrucaria maura* and the brown alga *Pelvetia canaliculata* occur throughout this community complex.

The *Laminaria*-dominated community complex is recorded within the SAC in waters between 0 -17m and estimated areas for this complex are approximately 61ha. The species associated with this community are the kelp species *Laminaria hyperborea*, *L. digitata* and *Saccharina latissima*, encrusting calcareous red algae, the echinoderm *Echinus esculentus* and epiphytic bryozoans. The echinoderm *Holothuria (Panningothuria) forskali*, the sponge *Cliona* sp. are recorded from this community complex in areas where *Laminaria* spp. are sparse.

The footprint of the project site is along the length of a currently active pier. There is no direct spatial overlap and no removal of the reef habitat for this project. Considering that the work is the installation of a number of pre-cast structures, is of short duration, and will not have any significant impact on the surrounding waters there is no pressure pathway, and this project will not be an adverse impact on this QI regarding any of its COs.

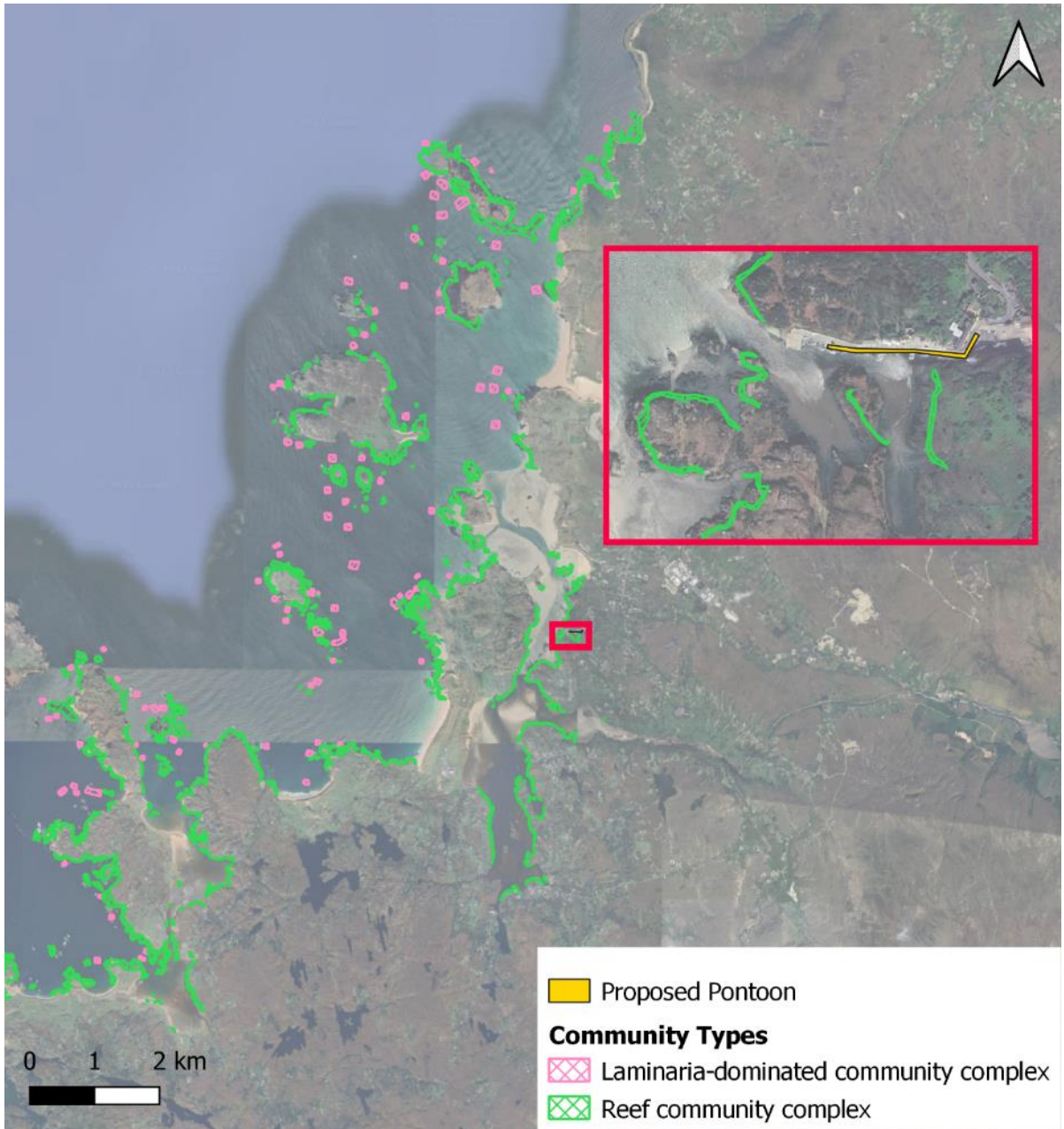


Figure 5 Marine Community Types in Gweedore Bay and Islands SAC.

4.4 Impact of the proposed activities on Annex II Species QIs

4.4.1 Otter (*Lutra Lutra*) [1355]

The Gweedore Bay and Islands SAC is designated for the QI Otter [1355]. The COs are to maintain the favourable conservation. Figure 6 shows the distribution of otter habitat and commuting areas near the project site, within the Gweedore Bay and Islands SAC.

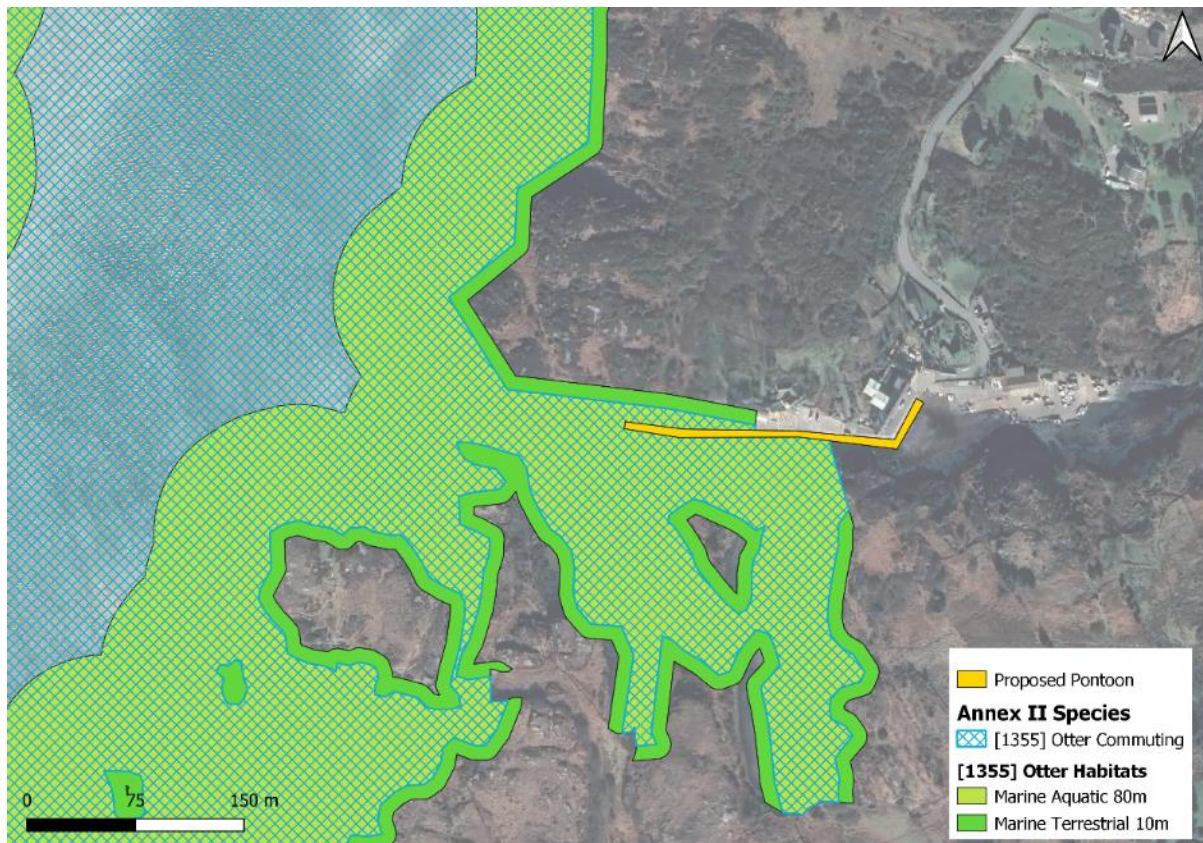


Figure 6 The distribution of otter habitat and commuting areas adjacent to the proposed site within the Gweedore Bay and Islands SAC.

Table 2 details the attributes and targets for Otter [1355] in the Gweedore Bay and Islands SAC.

Table 2 List of attributes and targets for Otter [1355] at Gweedore Bay and Islands SAC.

Attribute	Target
Distribution	No significant decline
Extent of terrestrial habitat	No significant decline. Area mapped and calculated as 154ha above high water mark (HWM); 40ha along riverbanks/ around ponds.
Extent of marine habitat	No significant decline. Area mapped and calculated as 1,192ha.
Extent of freshwater (lake/lagoon) habitat	No significant decline. Area mapped and calculated as 82ha
Extent of freshwater (river) habitat	No significant decline. Length mapped and calculated as 12.1km.
Couching sites and holts	No significant decline.

Fish biomass available	No significant decline.
Barriers to connectivity	No significant increase.

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 of 2 weeks is of a very short period. 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, distribution or extent in the Gweedore Bay and Islands SAC.

Significant adverse effects on the QI Otter can be discounted on the basis of the that the proposed project will not lead to any modification of the following attributes for otter regarding extent of terrestrial, marine, or freshwater habitat. The activity will have no negative impact on the essential food base (fish biomass) available. The project will not affect the number of couching sites and holts.

Therefore, it is likely that Otter [3155] in the Gweedore Bay and Islands SAC will not be adversely affected when all activities are considered.

4.4.2 Freshwater Pearl Mussel [1029]

The Fawnboy Bog/Lough Nacung SAC and Cloghernagore Bog and Glenveagh National Park SAC are designated for the QI Freshwater Pearl Mussel [1029]. The COs are to maintain the favourable conservation. Figure 7 shows the distribution of Freshwater Pearl Mussel suitable habitat, distribution target and catchment near the project site (within the Fawnboy Bog/Lough Nacung SAC and Cloghernagore Bog and Glenveagh National Park SAC).



Figure 7 Freshwater Pearl Mussel Attributes in the Fawnboy Bog/Lough Nacung SAC and Cloghernagore Bog and Glenveagh National Park SAC.

Table 3 details the attributes and targets for Freshwater Pearl Mussel [1029] in the Fawnboy Bog/Lough Nacung SAC.

Table 3 List of attributes and targets for Freshwater Pearl Mussel [1029] in the Fawnboy Boy/Lough Nacung SAC.

Attribute	Target
Distribution	Maintain at 7.81km
Population size	Restore Clady population to at least 250,000 adult mussels
Population structure: recruitment	Restore to at least 20% of population no more than 65mm in length; and at least 5% of population no more than 30mm in length
Population structure: adult mortality	No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution
Suitable habitat: extent	Restore suitable habitat in more than 7.81km in the Clady system and any additional stretches necessary for salmonid spawning
Suitable habitat: condition	Restore condition of suitable habitat
Water quality: macroinvertebrate and phytobenthos (diatoms)	Restore water quality- macroinvertebrates: EQR greater than 0.90 (G4-5 or Q5); phytobenthos: EQR greater than 0.93
Substratum quality: filamentous algae (macroalgae); macrophytes (rooted higher plants)	Restore substratum quality- filamentous algae: absent or trace (less than 5%); macrophytes: absent or trace (less than 5%)
Substratum quality: sediment	Restore substratum quality- stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment
Substratum quality: oxygen availability	Restore to no more than 20% decline from water column to 4cm depth in substrate
Hydrological regime: flow variability	Restore appropriate hydrological regimes
Host fish	Maintain sufficient juvenile salmonids to host glochidial larvae
Fringing habitat	Maintain the area and condition of fringing habitats necessary to support the population

The freshwater pearl mussel (*Margaritifera margaritifera*) is a long-lived, filter-feeding bivalve mollusc found in near-pristine freshwater habitats. They are very sensitive to environmental change. It is a highly threatened animal, categorised as critically endangered in Ireland. Their life-cycle involves the juveniles attaching to the gills of salmonids.

The risk of negative interactions between the project and Freshwater Pearl Mussel is a function of:

- The location of the project.
- The infrastructure built.
- The process of construction.

The project is located at the mouth of the Clady River, without the potential to affect the hydrology of the river or act as a pollution or sedimentation source upstream of the project. The location, construction or infrastructure of the project will not affect the habitat of the freshwater pearl mussel.

There is a salmonid population in the Clady River, which the mussel used in its life-cycle. As the project will not significantly alter the hydrodynamics at the pier, there will be no interference with the migration route of salmonids. This is a project of a short duration, with a small footprint, at a pier with existing anthropogenic disturbance. The localised effects of this project means that likelihood of interaction between this QI and the project is minimal. This project will not be an adverse impact on this QI regarding any of its COs.

4.5 Impact of the proposed activities on SPA QIs

4.5.1 Chough

Resident along rocky coasts, they prefer coastal grassland for feeding, mainly feeding on terrestrial insects, worms, terrestrial invertebrates in soil but will scavenge. The foraging ranges of Chough can be up to 30 km from their roosting sites. They nest in caves or crevices along coasts, or less frequently, in old buildings. This is a project of short duration, with a small footprint, at a pier with existing anthropogenic disturbance. The localised effects of this project means that likelihood of interaction between this QI and the project is minimal. This project will not be an adverse impact on this QI regarding any of its COs.

4.5.2 Cormorant

A Resident species, with some immigration during the winter. They feed solely on fish. They breed in colonies mainly around the coast of Ireland, with some birds breeding inland. Birds on the coast breed on cliffs. They winter at sea and inland. This is a project of short duration, with a small footprint, at a pier with existing anthropogenic disturbance. The localised effects of this project means that likelihood of interaction between this QI and the project is minimal. This project will not be an adverse impact on this QI regarding any of its COs.

4.5.3 Fulmar

A resident species along all Irish coasts, which feeds on variety of food including fish, discards from trawlers, crustaceans and whale flesh. Mainly breeds on sea cliffs, but will nest on level ground, on buildings and in burrows and crevasses. They come to land in the day. They winter at sea but can be seen in Irish waters throughout the year. They attend colonies in the winter sporadically. They have a large foraging range (>2000 Km, mean ~130 Km). This is a project of short duration, with a small footprint, at a pier with existing anthropogenic disturbance. The localised effects of this project means that likelihood of interaction between this QI and the project is minimal. This project will not be an adverse impact on this QI regarding any of its COs.

4.5.4 Herring Gull

A resident species that is both a predator and scavenger, often feeds on the coast and follows fishing boats and uses landfill sites. They feed on fish in open water, caught close to the surface, by shallow plunge-diving (generally <2m), either from low hovering flight or from surface swimming with a short surface jump to launch the dive. Breeds in colonies around the coast of Ireland and also inland in Co. Donegal and Co. Galway. They are widespread on the coast and inland. They have a maximum foraging range of 92 km, mean max of 58.8±26.8 km and mean range of 14.9±7.5 Km. This is a project of short duration, with a small footprint, at a pier with existing anthropogenic disturbance. The localised effects of this project means that likelihood of interaction between this QI and the project is minimal. This project will not be an adverse impact on this QI regarding any of its COs.

4.5.5 Kittiwake

A summer visitor to steep coastal cliffs along all Irish coasts. Disperses to the open ocean in winter and less frequently seen. Feeds on fish, waste from commercial fishing and invertebrates. Forms colonies, often with other seabirds. Breeds on steep sea cliffs where it builds a nesting platform on the most vertical and sometimes improbably steep areas. Will occasionally use man-made structures such as old buildings. They have a maximum foraging range of 770 km, mean max of 156.1±144.5 km and mean range of 54.7±50.4 Km. This is a project of short duration, with a small footprint, at a pier with existing anthropogenic disturbance. The localised effects of this project means that likelihood of interaction between this QI and the project is minimal. This project will not be an adverse impact on this QI regarding any of its COs.

4.5.6 Razorbill

A resident marine species, though occur inshore/ land during the breeding season (summer). Feeds mainly on small fish, and some invertebrates, caught by surface diving. Nests on sea cliffs in mixed colonies. They winter at sea. The project location is not suitable habitat for this species. This is a project of short duration, with a small footprint, at a pier with existing anthropogenic disturbance. The localised effects of this project means that likelihood of interaction between this QI and the project is minimal. This project will not be an adverse impact on this QI regarding any of its COs.

4.5.7 Shag

A resident species along all Irish coasts, that feeds on a wide range of small fish which they dive for. Their average foraging range is 7 km within land. They nest on ledges, in crevasses, in caves or under boulders, on cliffs all around the coast. Whilst young birds will disperse widely, most adults will winter in the vicinity of their breeding colonies. This is a project of short duration, with a small footprint, at a pier with existing anthropogenic disturbance. The localised effects of this project means that likelihood of interaction between this QI and the project is minimal. This project will not be an adverse impact on this QI regarding any of its COs.

4.6 Assessment of Potential Effects of Non-native Species

No invasive species were recorded within the proposed development site and no impact from the spread of invasive species is expected to occur as a result of movement of material and equipment into the site.

4.7 Consideration of Cumulative Effects

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

5 Conclusions & Recommendations

This is a Natura Impact Statement (NIS) review document supporting the Appropriate Assessment of foreshore activities at Natura 2000 site Gweedore Bay and Islands SAC (site code 001141) and West Donegal Coast SPA (004150). The Marine Institute has been requested to review an application for foreshore activities for the installation of a pontoon at Bunbeg Pier, Co. Donegal.

The site is located in an SAC and within the zone of influence of 7 others. It is also within an SPA and within the zone of influence of 16 others.

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

- Reefs [1170]
- Otter (*Lutra lutra*) [1355]
- Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029]

SPA QIs

- Chough (*Pyrhocorax pyrrhocorax*) [A346]
- Cormorant (*Phalacrocorax carbo*) [A017]
- Fulmar (*Fulmarus glacialis*) [A009]
- Herring Gull (*Larus argentatus*) [A184]
- Kittiwake (*Rissa tridactyla*) [A188]
- Razorbill (*Alca torda*) [A200]
- Shag (*Phalacrocorax aristotelis*) [A018]

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.