



Appropriate Assessment Screening Report

Community Centre
Newcastle, Galway



DOCUMENT DETAILS

Client: Galway City Council

Project Title: To construct a community building comprising of meeting rooms, sports/general purpose hall, ancillary accommodation, including AstroTurf playing pitch and play area and all associated site works

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1 Introduction

This Appropriate Assessment Screening Report has been prepared by John Curtin (B.Sc) on behalf of Newcastle Combined Community Association (NCCA). The site for the proposed development lies approximately approximately 270m from the Lough Corrib SAC (000297), 1.81km from the Galway Bay Complex SAC (000268) and 2.09km from the Inner Galway Bay SPA (004031), sites which have been designated under the EU Habitats Directive and the EU Birds Directive, and so it is necessary that the potential impacts of the proposed works be assessed by the competent authority, in accordance with Article 6 of the Habitats Directive. This report provides the information necessary for the competent authority to complete an Appropriate Assessment of the potential impacts of the proposed works on sites of European importance in the area.

1.1 Legislative Background

1.1.1 EU Nature Conservation Legislation and Natura 2000 Sites.

There are three main types of designation for nature conservation in Ireland: Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Natural Heritage Areas (NHAs). NHAs are designated under the Irish Wildlife Act 1976 (amended 2000). SACs and SPAs are designated under European legislation, the EU Habitats Directive 92/43/EEC (transposed into Irish law in the European Union (Natural Habitats) Regulations, 1997 as amended in 1998 and 2005) and the EU Birds Directive 79/409/EEC, respectively. These European designated sites (SACs and SPAs) are also known as Natura 2000 sites. This means that they are part of the Natura 2000 Network, a network of important ecological sites across the European Union.

Sites are designated on the basis of the presence of certain 'Qualifying Features', i.e. the habitats listed under Annex I and the species listed under Annex II of the EU Habitats Directive.

Once a site is designated as a SAC and publicly advertised it is legally protected and becomes a proposed candidate SAC (pcSAC). A three month period follows during which landowners may lodge an objection to the designation. Details of each proposed SAC are then given to the EU Commission, and thereafter the site is called a "candidate SAC". Once the sites are approved by the commission, they are formally designated by the Minister.

1.1.2 Appropriate Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites

Due to the proximity of the proposed development site to a candidate Special Area of Conservation, also known as a Natura 2000 site, an Appropriate Assessment may be required under the Habitats Directive 92/43/EEC, Article 6(3) and (4), Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites. Such assessments are required where it is identified that a proposed plan or project could have significant impact on a Natura 2000 site. Articles 6(3) and (4) of the Directive, state the following;

6.3 'Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives... the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned...'

6.4 'If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest... the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected...'

To determine whether an Appropriate Assessment is required, an initial screening assessment must be conducted and issued to the Department of the Environment, Heritage and Local Government (DoEHLG) Development Applications Unit (DAU).

1.2 Methodology

The screening exercise will be conducted in line with the recommendations and protocol set out in the Guidance from the Commission (EC, 2002) and in accordance with OPR Practice Note PN01 (March 2021). This protocol involves a four-stage process to complete an Appropriate Assessment. At each stage, the findings of certain issues and tests will determine whether the next stage in the process is required.

1.2.1 Appropriate Assessment Stages

The four stages in the Appropriate Assessment process are outlined below:

Stage 1: Screening

This step consists of examining the likely potential impacts of a project or plan, alone or in combination with other projects, upon a Natura 2000 site or sites, and considers whether these impacts may be considered significant. If no significant impacts are foreseen, then a 'finding of no significant effects' (FONSE) statement is issued to the appropriate authority, and the process is complete. If the effects are considered significant or their significance is unknown, then the process moves on to Stage 2.

Stage 2: Appropriate Assessment

Where the screening process has identified potential impacts which are considered significant or unknown, this process examines these potential impacts in detail, in relation to the conservation interests of the Natura 2000 site or sites. Mitigation measures may be suggested to reduce the likelihood or severity of these impacts. If the impacts are still considered to be significant or unknown after this stage is complete, then alternative solutions must be considered (Stage 3).

Stage 3: Assessment of Alternative Solutions

If the potential impacts are still considered to be significant or unknown after the Appropriate Assessment stage, then alternative ways of implementing the project are considered at this stage. If no alternative solutions are possible, then it is considered whether the project or plan may go ahead regardless, if imperative reasons of overriding public interest (IROPI) are found.

Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)

If significant negative impacts on the Natura 2000 site are unavoidable, and no alternative solutions may be found, then this stage involves the consideration of whether the project or plan may go ahead despite these effects, for 'imperative reasons of overriding public interest' (IROPI).

The results of a Stage 1 (Screening) Exercise are detailed in **Section 2** of this report.

2 Stage 1: Screening for Appropriate Assessment

2.1 Description of the Plan or Project

A part 8 application is being sought by Galway City Council. This application is seeking to construct a community building comprising of meeting rooms, sports/general purpose hall, ancillary accommodation, including AstroTurf playing pitch and play area and all associated site works (gross floor 1,000sqm). A Site Layout Plan is included as **Appendix A** to this report.

2.2 Description of the Existing Environment

2.2.1 Site Location in Relation to Natura 2000 Sites

The proposed site lies in Newcastle [53.284682, -9.069243]. The site for the proposed development lies approximately 270m from the Lough Corrib SAC (000297), 1.81km from the Galway Bay Complex SAC (000268) and 2.09km from the Inner Galway Bay SPA (004031) (see **Figure 2.1** below).

Natura 2000 sites within a 15km buffer of the proposed development are listed in **Table 2-1** and **Figure 2-2**.

Newcastle Community Centre Site Location

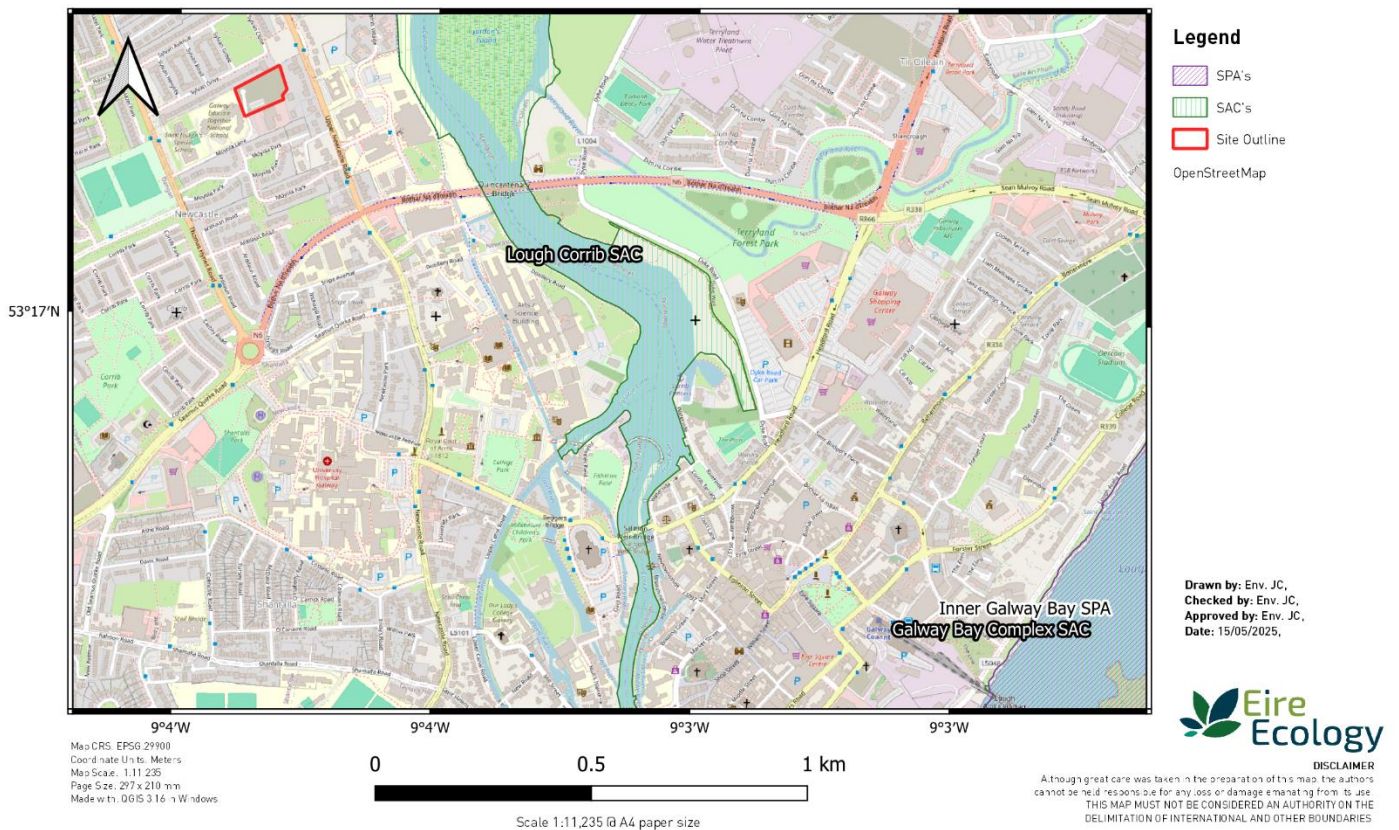


Figure 2-1 Site Location in Relation to the Lough Corrib SAC

Table 2-1 Protected habitats in the vicinity of the proposed development

| Name of Site | Site Code | Distance to proposed development | Number of Conservation Objectives (CO) | List of CO Priority Habitats with codes | Connections (Source-Pathway-Receptor) | Screening Status for further consideration |
|---------------------------|-----------|----------------------------------|--|---|---|--|
| Lough Corrib SAC | 000297 | 270m | 24 | 5. Active raised bogs [7110], Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210], Petrifying springs with tufa formation (Cratoneurion) [7220], Limestone pavements [8240], Bog woodland [91D0] | Proximity | In |
| Galway Bay Complex SAC | 000268 | 1.81km | 17 | 5. Coastal Lagoons [1150], Turloughs [3180], Orchid-rich Calcareous Grassland [6210], Cladium Fens [7210], Limestone Pavement [8240] | Proximity; groundwater flow direction travels towards SAC | In |
| Lough Corrib SPA | 004042 | 1.86km | 14 | 0 | Hydrologically upstream of the site. | Out |
| Inner Galway Bay SPA | 004031 | 2.09km | 21 | 0 | Proximity; groundwater flow direction travels towards SPA | In |
| Cregganna Marsh SPA | 004142 | 9.55km | 1 | N/A | Distance, within different groundwater body | Out |
| Connemara Bog Complex SAC | 002034 | 11.51km | 18 | 2. Coastal lagoons [1150] Blanket bogs (* if active bog) [7130] | Distance | Out |
| Ross Lake and Woods SAC | 001312 | 12.36km | 2 | 0 | Distance | Out |

From the above table it can be seen that three Natura 2000 sites are screened in for further assessment; the Lough Corrib SAC (Site Code: 000297), Galway Bay Complex SAC (Site Code: 000268) and the Inner Galway Bay SPA (Site Code: 004031).

Newcastle Community Centre 15km Buffer

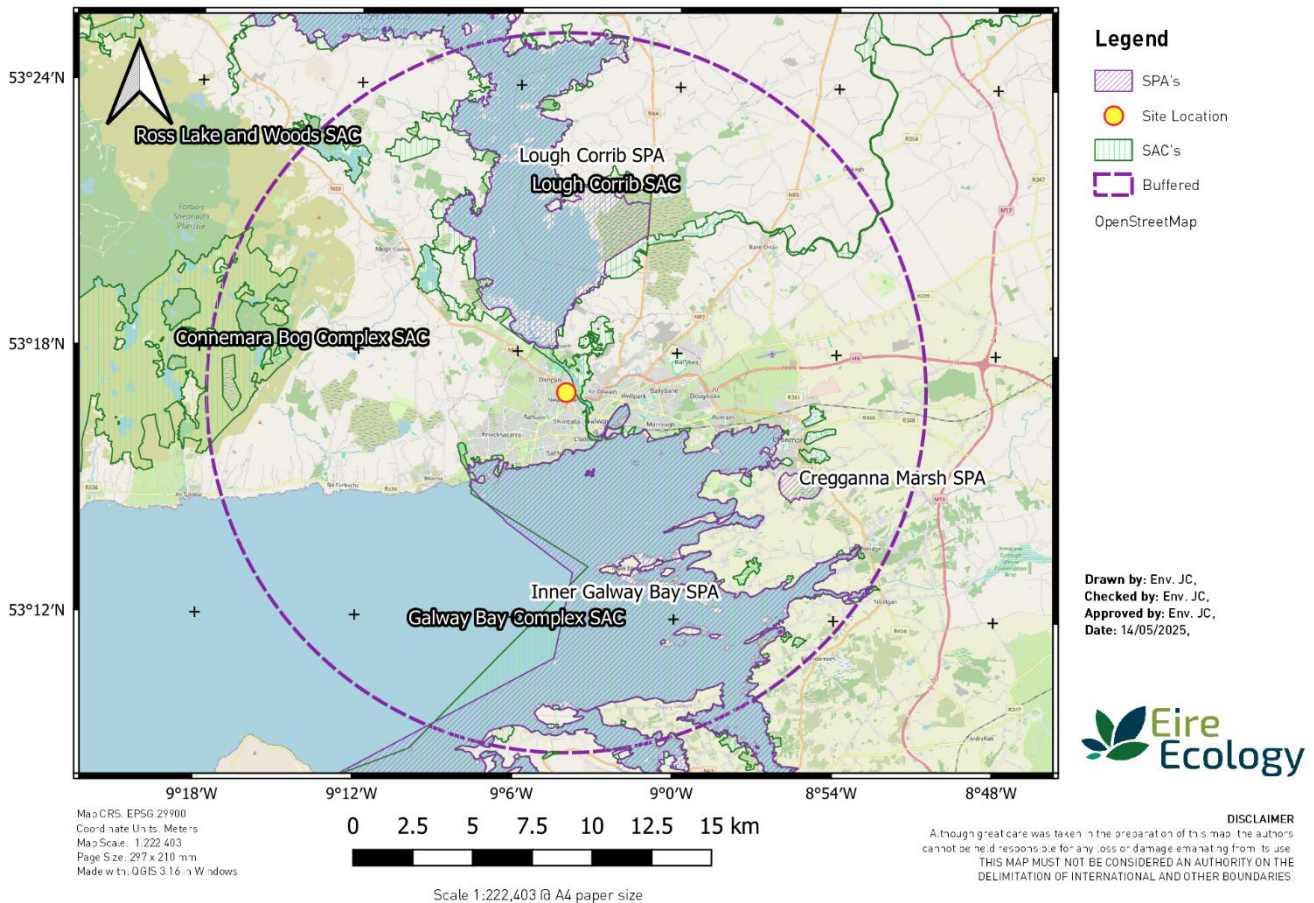


Figure 2-2 15km Buffer Surrounding Proposed Site.

2.2.2 Brief Description of the Natura 2000 Sites which may be affected

Qualifying Features

Natura 2000 sites are designated on the presence of certain habitats and species which are afforded protected under the Birds and Habitats Directives. These habitats and species are regarded as ‘qualifying features’ of the Natura 2000 sites. The following section provides details on the qualifying features of the Natura 2000 site in question - Galway Bay Natura 2000 sites. The NPWS site synopsis for the designated site is given as **Appendix B** to this report.

The qualifying habitats found in the Lough Corrib and Galway Bay Complex SAC’s are outlined in **Tables 2-2 and 2-3** below.

Table 2-2 Lough Corrib SAC Habitat Information

| Habitat code | Habitat name (cSAC Qualifying Feature) | Cover ha (approx.) | Representivity | At Risk from proposed development | Details |
|--------------|---|--------------------|----------------|-----------------------------------|--|
| 3110 | Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) | 757.44 | A | No | Upstream from proposed development |
| 3130 | Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea | 11572.29 | C | No | Upstream of proposed development |
| 3140 | Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. | 21460.69 | A | No | Upstream of proposed development |
| 3260 | Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation | 252.48 | C | No | Upstream of proposed development |
| 6210 | Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) | 252.48 | B | No | Terrestrial habitat with no connectivity to proposed development |
| 6410 | Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) | 252.48 | B | No | Terrestrial habitat with no connectivity to proposed development |
| 7110 | Active raised bogs | 252.48 | B | No | Terrestrial habitat with no connectivity to proposed development |
| 7120 | Degraded raised bogs still capable of natural regeneration | 252.48 | B | No | Terrestrial habitat with no connectivity to proposed development |
| 7150 | Depressions on peat substrates of the Rhynchosporion | 252.48 | A | No | Terrestrial habitat with no connectivity to proposed development |
| 7210 | Calcareous fens with Cladium mariscus and species of the Caricion davallianae | 252.48 | A | No | Terrestrial habitat with no connectivity to proposed development |
| 7220 | Petrifying springs with tufa formation (Cratoneurion) | 252.48 | C | No | Terrestrial habitat with no connectivity to proposed development |
| 7230 | Alkaline fens | 252.48 | A | No | Terrestrial habitat with no connectivity to proposed development |
| 8240 | Limestone pavements | 252.48 | A | No | Terrestrial habitat with no connectivity to proposed development |
| 91A0 | Old sessile oak woods with Ilex and Blechnum in the British Isles | 252.48 | A | No | Terrestrial habitat with no connectivity to proposed development |
| 91D0 | Bog woodland | 252.48 | A | No | Terrestrial habitat with no connectivity to proposed development |

Table 2-3 Galway Bay Complex SAC Habitat Information

| Habit at code | Habitat name (SAC Qualifying Feature) | Cover (ha.) | Representivity | At Risk from proposed development | Details |
|---------------|--|-------------|----------------|-----------------------------------|--|
| 1140 | Mudflats and sandflats not covered by seawater at low tide | 1008.63 | A | Potential secondary risk | Possibly found downstream |
| 1150 | Coastal lagoons | 144.09 | A | Potential secondary risk | Possibly found downstream |
| 1160 | Large shallow inlets and bays | 11671.3 | A | Potential secondary risk | Possibly found downstream |
| 1170 | Reefs | 288.18 | A | Potential secondary risk | Possibly found downstream |
| 1220 | Perennial vegetation of stony banks | 144.09 | B | No | Terrestrial habitat with no connectivity to proposed development |
| 1310 | Salicornia and other annuals colonizing mud and sand | 144.09 | C | Potential secondary risk | Possibly found downstream |
| 1330 | Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) | 144.09 | A | Potential secondary risk | Possibly found downstream |
| 1410 | Mediterranean salt meadows (<i>Juncetalia maritimi</i>) | 144.09 | A | Potential secondary risk | Possibly found downstream |
| 3180 | Turloughs | 144.09 | B | No | No downstream turloughs |
| 5130 | <i>Juniperus communis</i> formations on heaths or calcareous grasslands | 144.09 | B | No | Terrestrial habitat with no connectivity to proposed development |
| 6210 | Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) [* important orchid sites] | 144.09 | B | No | Terrestrial habitat with no connectivity to proposed development |
| 7210 | Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> | 144.09 | B | No | Terrestrial habitat with no connectivity to proposed development |
| 7230 | Alkaline fens | 144.09 | B | No | Terrestrial habitat with no connectivity to proposed development |

For species, a value is given for 'Population Significance'. This value is based on the relative density or size of the population of that species within the Natura 2000 site with that of the national population. Population Significance is ranked on a scale from A to D where A - $100 \geq p > 15\%$, B - $15 \geq p > 2\%$, C - $2 \geq p > 0\%$ and D - Non-significant population. The qualifying species found in the Lough Corrib SAC and Galway Bay Natura 2000 sites are outlined in Table 2-4, 2-5 and 2-6.

Table 2-4 Lough Corrib SAC Species Information

| Species Code | Latin Name | Common Name | Pop Sig | At Risk from proposed development | Details |
|--------------|------------------------------------|-------------------------|---------|-----------------------------------|--|
| 1029 | <i>Margaritifera margaritifera</i> | Freshwater Pearl Mussel | C | No | Found along the Owenriff River |
| 1092 | <i>Austropotamobius pallipes</i> | White-clawed Crayfish | C | No | Co doc states these are found within the lake, upstream of proposed development |
| 1355 | <i>Lutra lutra</i> | European Otter | C | Potential secondary risk | According to the CO document otter habitat stops at the end of the lake although otters do travel along the river. |
| 1303 | <i>Rhinolophus hipposideros</i> | Lesser Horseshoe Bat | C | No | Designated roost located in Cong |
| 1833 | <i>Najas flexilis</i> | Nodding Water-nymph | B | No | Not located downstream of proposed development |
| 1393 | <i>Drepanocladus vernicosus</i> | Shining Sickle-moss | C | No | Found on peatland upstream of development |
| 1096 | <i>Lampetra planeri</i> | Brook lamprey | C | Potential secondary risk | Possibly found downstream |
| 1095 | <i>Petromyzon marinus</i> | Sea lamprey | C | Potential secondary risk | Possibly found downstream |
| 1106 | <i>Salmo salar</i> | Atlantic salmon | C | Potential secondary risk | Possibly found downstream |

Table 2-5 Galway Bay Complex SAC Species Information

| Species Code | Latin Name | Common Name | Pop Sig | At Risk from proposed development | Details |
|--------------|-----------------------|----------------|---------|-----------------------------------|---------------------------|
| 1355 | <i>Lutra lutra</i> | Eurasian otter | C | Potential secondary risk | Possibly found downstream |
| 1365 | <i>Phoca vitulina</i> | Common seal | B | Potential secondary risk | Possibly found downstream |

Table 2-6 Inner Galway Bay SPA Annex I Species Information

| Species Code | Latin Name | Common Name | Pop Sig | At Risk from proposed development | Details |
|--------------|----------------------------|----------------------|---------|-----------------------------------|---------------------------|
| A001 | <i>Gavia stellata</i> | Red-throated diver | C | Potential secondary risk | Possibly found downstream |
| A002 | <i>Gavia arctica</i> | Black-throated Diver | A | Potential secondary risk | Possibly found downstream |
| A003 | <i>Gavia immer</i> | Great Northern Diver | B | Potential secondary risk | Possibly found downstream |
| A140 | <i>Pluvialis apricaria</i> | Golden Plover | C | Potential secondary risk | Possibly found downstream |
| A157 | <i>Limosa</i> | Bar-tailed Godwit | B | Potential | Possibly found downstream |
| A191 | <i>Sterna sandvicensis</i> | Sandwich tern | B | Potential secondary risk | Possibly found downstream |

| Species Code | Latin Name | Common Name | Pop Sig | At Risk from proposed development | Details |
|--------------|-----------------------|-------------|---------|-----------------------------------|---------------------------|
| A193 | <i>Sterna hirundo</i> | Common Tern | B | Potential secondary risk | Possibly found downstream |

Potential Pressures and Threats to the Natura 2000 Sites

The European Nature Information System (EUNIS) website contains data on all Natura 2000 sites, including details of the main threats to and pressures on their qualifying features. Potential threats to and pressures on the qualifying features of the Lough Corrib Natura 2000 Sites are listed in Table 2-7, 2-8 and 2-9 below.

Table 2-7 Potential Pressures and Threats to the Lough Corrib SAC

| Activity | Location | Intensity | Influence |
|---|----------|-----------|-----------|
| Fertilisation | Inside | Low | Negative |
| Grazing | Inside | Low | Neutral |
| Forest planting | Inside | Low | Negative |
| Fish and Shellfish Aquaculture | Inside | Low | Negative |
| Leisure fishing | Inside | High | Negative |
| Hunting | Inside | High | Negative |
| Quarries | Inside | Low | Negative |
| Hand cutting of peat | Inside | Low | Negative |
| Mechanical removal of peat | Inside | Low | Negative |
| Disposal of household waste | Inside | Low | Negative |
| Other leisure and tourism impacts not referred to above | Inside | High | Negative |
| Water pollution | Inside | High | Negative |
| Fertilisation | Outside | High | Negative |
| Grazing | Outside | Medium | Negative |
| Forest planting | Outside | Medium | Negative |
| Quarries | Outside | Low | Negative |
| Dispersed habitation | Outside | High | Negative |
| Disposal of industrial waste | Outside | Low | Negative |
| Paths, tracks, cycling tracks | Outside | Medium | Negative |
| Other leisure and tourism impacts not referred to above | Outside | High | Negative |

Table 2-8 Potential Pressures and Threats to the Galway Bay Complex SAC

| Activity | Location | Intensity | Influence |
|----------------------------|----------|-----------|-----------|
| Grazing | Inside | Low | Negative |
| Nautical sports | Inside | Medium | Negative |
| Sand and gravel extraction | Inside | Low | Negative |
| Fertilisation | Inside | Medium | Negative |
| Grazing | Outside | Medium | Negative |

| Activity | Location | Intensity | Influence |
|---|----------|-----------|-----------|
| Discharges | Inside | High | Negative |
| Walking, horseriding and non-motorised vehicles | Inside | High | Negative |
| Fertilisation | Outside | Medium | Negative |
| Reclamation of land from sea, estuary or marsh | Inside | Medium | Negative |
| Taking and removal of animals (terrestrial) | Inside | Medium | Negative |
| Industrial or commercial areas | Outside | Medium | Negative |
| Discharges | Outside | High | Negative |
| Leisure fishing | Inside | Medium | Negative |
| Urbanised areas, human habitation | Outside | High | Negative |
| Mowing / cutting of grassland | Inside | Low | Negative |
| Marine and Freshwater Aquaculture | Inside | Medium | Negative |
| Leisure fishing | Inside | Medium | Positive |
| Mowing / cutting of grassland | Inside | Low | Positive |

Table 2-9 Potential Pressures and Threats to the Inner Galway Bay SPA

| Activity | Location | Intensity | Influence |
|---|----------|-----------|-----------|
| Discharge | Inside | High | Negative |
| Industrial or commercial areas | Outside | Medium | Negative |
| Dykes, embankments, artificial beaches, general | Inside | Medium | Negative |
| Roads, motorways | Outside | Medium | Negative |
| Fertilisation | Outside | Medium | Negative |
| Marine and Freshwater Aquaculture | Inside | Medium | Negative |
| Hunting | Inside | Low | Negative |
| Urbanised areas, human habitation | Outside | High | Negative |
| Leisure fishing | Inside | Medium | Negative |
| Walking, horseriding and non-motorised vehicles | Inside | Medium | Negative |
| Grazing | Inside | Low | Negative |
| Reclamation of land from sea, estuary or marsh | Inside | High | Negative |
| Nautical sports | Inside | Medium | Negative |
| Roads, motorway | Outside | Medium | Positive |
| Marine and Freshwater Aquaculture | Inside | Medium | Positive |
| Grazing | Inside | Low | Positive |
| Walking, horseriding and non-motorised vehicles | Inside | Medium | Positive |
| Hunting | Inside | Low | Positive |
| Leisure fishing | Inside | Medium | Positive |

Conservation Objectives of the Natura 2000 Sites

Once a site has been designated as an SAC, a management plan should be put together for the site which sets out the Conservation Objectives for the site. Every effort should then be made to ensure that

these objectives are fulfilled, in order to prevent potential impacts to the qualifying features of the site and maintain as far as possible their favourable conservation status.

European and national legislation places a collective obligation on Ireland and its citizens to maintain at favourable conservation status sites designated as Special Areas of Conservation and Special Protection Areas. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, is stable or increasing, and
- the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population data on the species concerned indicate that it is maintaining itself, and
- the natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Management plans have been published for the surrounding Natura 2000 sites. Qualifying interests and objectives (bulleted) are listed below:

Lough Corrib SAC

(3110) Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)

- Permanent habitat area and distribution stable or increasing, subject to natural processes. Habitat area not yet fully defined with main habitat found along western arm proper and may also occur elsewhere along the northern or western shoreline of Lough Corrib, in Ballydoo Lough (N. of Corrib) and in small lakes in the Owenriff catchment.
- Restore: all characteristic zones should be present, correctly distributed and in good condition. Restore maximum depth of vegetation, subject to natural processes.
- Maintain appropriate natural hydrological regime necessary to support the habitat
- Restore: appropriate substratum type, extent and chemistry to support the vegetation, appropriate Secchi transparency, concentration of nutrients in water, water quality to support high levels of chlorophyll a status.
- Nutrient enrichment can favour epiphytic and epipelagic algae that can out-compete the submerged vegetation. The cover abundance of attached algae in lake habitat 3110 should, therefore, be trace/absent (<5% cover).
- Maintain appropriate water and substrate pH. Water colour, DOC, turbidity,
- Maintain condition of fringing habitats necessary to support the natural structure and functioning of habitat 3110

(3130) Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoetanaojuncetea*

- Permanent habitat area and distribution stable or increasing, subject to natural processes The full distribution and characteristics of lake habitat 3130 in Lough Corrib SAC have not been mapped. While the characteristic species slender naiad (*Najas flexilis*) was recorded in the western arm of Lough Corrib, that area appears to be dominated by lake habitat 3110, with lake habitat 3130 found towards the northern basin proper. The division between lake habitats 3130 and 3140 may be difficult to determine, and both habitats may occur throughout the lake. Habitat 3130 is thought likely to dominate Ballycuirke Lake.

- Restore: all characteristic zones should be present, correctly distributed and in good condition. Restore maximum depth of vegetation, subject to natural processes.
 - Maintain appropriate natural hydrological regime necessary to support the habitat
 - Restore: appropriate substratum type, extent and chemistry to support the vegetation, appropriate Secchi transparency, concentration of nutrients in water, water quality to support high levels of chlorophyll a status.
 - Nutrient enrichment can favour epiphytic and epipelagic algae that can out-compete the submerged vegetation. The cover abundance of attached algae in lake habitat 3110 should, therefore, be trace/absent (<5% cover).
 - Maintain appropriate water and substrate pH. Water colour, DOC, turbidity,
 - Maintain condition of fringing habitats necessary to support the natural structure and functioning of habitat 3110
- (3140) Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
- Permanent habitat area and distribution stable or increasing, subject to natural processes. The hard water lake habitat (3140) is found in Lough Corrib, notably the southern basin. Its exact distribution and area has not been mapped however, and it is likely to also extend along the eastern side of the northern basin.
 - Restore: all characteristic zones should be present, correctly distributed and in good condition. Restore maximum depth of vegetation, subject to natural processes.
 - Maintain appropriate natural hydrological regime necessary to support the habitat
 - Restore: appropriate substratum type, extent and chemistry to support the vegetation, appropriate Secchi transparency, concentration of nutrients in water, water quality to support high levels of chlorophyll a status.
 - Nutrient enrichment can favour epiphytic and epipelagic algae that can out-compete the submerged vegetation. The cover abundance of attached algae in lake habitat 3110 should, therefore, be trace/absent (<5% cover).
 - Maintain appropriate water and substrate pH. Water colour, DOC, turbidity,
 - Maintain condition of fringing habitats necessary to support the natural structure and functioning of habitat 3110
- (3260) Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
- Habitat area and distribution stable or increasing, subject to natural processes. Note: rooted macrophytes should be absent or trace (<5% cover) in freshwater pearl mussel (*Margaritifera margaritifera*) habitat. The freshwater pearl mussel (1029) conservation objective takes precedence over this objective for habitat 3260 in the Owenriff River within this SAC, because the mussel requires environmental conditions closer to natural background levels.
 - Maintain appropriate natural hydrological regime necessary to support the habitat (river flow and groundwater discharge).
 - Maintain appropriate substratum particle size range, quantity and quality, subject to natural process.
 - Maintain appropriate water quality to support the natural structure and functioning of the habitat.
 - The area of active floodplain at and upstream of the habitat should be maintained.
 - Maintain the area and condition of fringing Rhiparian habitats necessary to support the habitat and its sub-types
- (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*) [*important orchid sites]
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes
 - Broadleaf herb component of vegetation between 40 and 90%
 - At least 7 positive indicator species present, including 2 "high quality" species
 - Negative indicator species collectively not more than 20% cover, with cover by an individual species not more than 10%. Non- native invasive species, absent or under control
 - 30-70% of sward 5-40cm high
 - Cover of bracken (*Pteridium aquilinum*) and woody species (except juniper (*Juniperus communis*)) not more than 5% cover
 - Not more than 10% bare ground
- (6410) *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes.
 - Broadleaf herb component of vegetation between 40 and 90%.
 - At least 7 positive indicator species present, including 1 "high quality" species.
 - Negative indicator species collectively not more than 20% cover, with cover by an individual species not more than 10%. Non- native species less than 1%.
 - Hair mosses (*Polytrichum* spp.) not more than 5% cover.

- Minimum of 30% of sward 10-80cm high
 - Broadleaf herb component of vegetation between 40% and 90%.
 - Cover of bracken (*Pteridium aquilinum*) and woody species (except juniper (*Juniperus communis*)) not more than 5% cover
 - Not more than 10% bare ground
 - Litter cover not more than 25%
 - Area showing signs of serious grazing or other disturbance less than 20m²
- (7110) Active raised bogs
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes at the two selected bogs; Addergoole Bog and Lough Tee Bog with area of 78.8Ha.
 - No decline in area of high bog.
 - Restore appropriate water levels throughout each site and where possible, appropriate high bog topography, flow directions and slopes.
 - Restore adequate transitional areas to support/protect the raised bog ecosystem and the services it provides.
 - Restore 39.4ha of central ecotope/active flush/soaks/bog woodland as appropriate
 - Restore, where appropriate, typical active raised bog flora, Sphagnum and fauna.
 - Maintain features of local distinctiveness, subject to natural processes; soak system at Addergoole Bog
 - Negative physical features absent or insignificant; bare peat, algae dominated pools and hollows, marginal cracks, tear patterns, subsidence features such as dry mineral mounds/ridges emerging or expanding, and evidence of burning.
 - Native negative indicator species at insignificant levels.
 - Non- native species less than 1%.
- (7120) Degraded raised bogs still capable of natural regeneration
- The long-term aim for Degraded raised bogs still capable of natural regeneration is that its peat-forming capability is re-established; therefore, the conservation objective for this habitat is inherently linked to that of Active raised bogs (7110) and a separate conservation objective has not been set in Lough Corrib SAC
- (7150) Depressions on peat substrates of the Rhynchosporion
- Depressions on peat substrates of the Rhynchosporion is an integral part of good quality Active raised bogs (7110) and thus a separate conservation objective has not been set for the habitat in Lough Corrib SAC
- (7210) Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes
 - Appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat
 - Active peat formation, where appropriate
 - Appropriate water quality to support the natural structure and functioning of the habitat
 - Maintain vegetation cover of typical species including brown mosses and vascular plants
 - Cover of scattered native trees and shrubs not more than 10%
 - Cover of disturbed bare ground not more than 10%. Where tufa is present, disturbed bare ground not more than 1%
 - Areas showing signs of drainage as a result of drainage ditches or heavy trampling not more than 10%
- (7220) Petrifying springs with tufa formation (Cratoneurion)
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes
 - Appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat
 - Appropriate water quality to support the natural structure and functioning of the habitat (No increase from baseline nitrate level and less than 10mg/l, No increase from baseline phosphate level and less than 15µg/l)
 - At least three positive/high quality indicator species as listed in Lyons and Kelly (2016) and no loss from baseline numbers.
 - Potentially negative indicator species should not be Dominant or Abundant; invasive species should be absent.
 - Sward height between 10cm and 50cm (except for bryophyte-dominated ground <10cm)
- (7230) Alkaline fens
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes
 - Appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat

- Maintain soil nutrient status within natural range and maintain active peat formation, where appropriate by controlling water levels.
 - Maintain vegetation cover of typical species including brown mosses and vascular plants. Number of positive vascular plant indicator species present at each monitoring stop is at least two for small-sedge flushes and at least three for black bog-rush (*Schoenus nigricans*) flush and bottle sedge (*Carex rostrata*) fen
 - Cover of scattered native trees and shrubs not more than 10%, total cover of soft rush (*Juncus effusus*) and common reed (*Phragmites australis*) less than 10%, cover of non-native species less than 1% and negative indicators less than 1%.
 - Cover of disturbed bare ground not more than 10%. Where tufa is present, disturbed bare ground not more than 1%
- (8240) Limestone pavements
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes
 - At least seven positive indicator species present
 - Bryophyte cover at least 50% on wooded pavement
 - Collective cover of negative indicator species on exposed pavement not more than 1%
 - Cover of non-native species not more than 1% on exposed pavement; on wooded pavement not more than 10% with no regeneration
 - Scrub cover no more than 25% of exposed pavement
 - Bracken (*Pteridium aquilinum*) cover no more than 10% on exposed pavement
 - Canopy cover on wooded pavement at least 30%
 - Sufficient quantity of dead wood on wooded pavement to provide habitat for saproxylic organisms
 - No evidence of grazing pressure on wooded pavement
 - Indicators of local distinctiveness are maintained
- (91A0) Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes
 - Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semimature trees and shrubs; and well-developed herb layer
 - Maintain diversity and extent of community types
 - Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy
 - At least 30m³/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter
 - No decline in veteran trees and indicators of local distinctiveness
 - Native tree cover not less than 95%
 - A variety of typical native species present, depending on woodland type, including oak (*Quercus petraea*) and birch (*Betula pubescens*)
 - Negative indicator species, particularly non-native invasive species, absent or under control
- (91D0) Bog woodland
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes (At least 1.22ha)
 - Birch (*Betula pubescens*), bog moss (*Sphagnum*) species and at least five other indicator species present
 - Both native and non-native invasive species absent or under control. Total cover should be less than 10%
 - A minimum 30% cover of birch (*Betula pubescens*) with a median canopy height of 4m
 - Dwarf shrub cover not more than 50%, Ling (*Calluna vulgaris*) cover not more than 40%, Bryophyte cover at least 50%, with bog moss (*Sphagnum* spp.) cover at least 25%
 - Each tree size class present with Senescent or dead wood present
- (1029) Freshwater Pearl Mussel *Margaritifera margaritifera*
- Maintain distribution at 9.1km (Owenriff catchment, being found in the lower reaches of the Glengawbeg River, from Lough Agraffard to just upstream of the mouth of Lough Corrib in the Owenriff, and also in the Derrygauna tributary)
 - Restore Owenriff population to at least one million adult mussels
 - 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
 - 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
 - Restore suitable habitat in more than 8.3km in the Owenriff and Glenawbeg rivers (see map 9) and any additional stretches necessary for salmonid spawning
 - Restore condition of suitable habitat

- Restore water quality - macroinvertebrates: EQR greater than 0.90 (Q4-5 or Q5); phytobenthos: EQR greater than 0.93
 - Restore substratum quality - filamentous algae: absent or trace (less than 5%); macrophytes: absent or trace (less than 5%)
 - Restore substratum quality - stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment
 - Restore redox potential to no more than 20% decline from water column to 5cm depth in substrate
 - Restore appropriate hydrological regimes
 - Maintain sufficient juvenile salmonids to host glochidial larvae
 - Maintain the area and condition of fringing habitats necessary to support the population
- (1092) White-clawed Crayfish *Austropotamobius pallipes*
- No reduction from baseline levels in rivers and lake
 - Juveniles and/or females with eggs in all occupied tributaries and occupied parts of Lough Corrib
 - No alien crayfish species
 - No instances of disease
 - At least Q3-4 at all sites sampled by EPA
 - No decline in habitat heterogeneity or habitat quality
- (1095) Sea Lamprey *Petromyzon marinus*
- Greater than 75% of main stem length of rivers accessible from estuary
 - At least three age/size groups present
 - Mean catchment juvenile density at least 1/m²
 - No decline in extent and distribution of spawning beds
 - More than 50% of sample sites positive, with a minimum of four positive sites in a catchment, which are at least 5km apart
- (1096) Brook Lamprey *Lampetra planeri*
- Access to all watercourses down to first order streams
 - At least three age/size groups of brook/river lamprey present
 - Mean catchment ammocoete density of brook/river lamprey at least 5/m²
 - No decline in extent and distribution of spawning beds
 - More than 50% of sample sites positive
- (1106) Salmon *Salmo salar*
- 100% of river channels down to second order accessible from estuary
 - Conservation limit (CL) for each system consistently exceeded
 - Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 minutes sampling
 - No significant decline in out-migrating smolt
 - No decline in number and distribution of spawning redds due to anthropogenic causes
 - At least Q4 at all sites sampled by EPA
- (1303) Lesser Horseshoe Bat *Rhinolophus hipposideros*
- Minimum number of 100 bats for summer roost (roost id. 217 in NPWS database).
 - No decline in condition of summer roosts.
 - No decline in number and condition of auxiliary roosts
 - No decline in extent of potential foraging habitat
 - No significant loss of linear features, within 2.5km of qualifying roosts
 - No significant increase in artificial light intensity adjacent to named roost or along commuting routes within 2.5km of the roost.
- (1355) Otter *Lutra lutra*
- No decline in population
 - No decline in extent of terrestrial habitat calculated as 1054ha;
 - No significant decline of freshwater (river) habitat. Length mapped and calculated as 314.2km
 - No significant decline lake habitat. Area mapped and calculated as 4178ha
 - No significant decline of Coughing sites and holts and fish biomass available
 - No significant increase of barriers to connectivity – stretches of water
- (1393) Slender Green Feather-moss *Drepanocladus vernicosus*
- No decline in distribution or population numbers (NW of Gortachalla Lough)
 - Mean percentage cover of slender green feather-moss (*Hamatocaulis vernicosus*) should be at least 45%
 - No decline of suitable habitat subject to natural processes
 - Maintain suitable hydrological conditions
 - Mean percentage tree cover should be less than 15%
 - Mean percentage shrub cover should be less than 20%

- Mean percentage grass species cover should be less than 25%
- Mean percentage bryophyte cover should be more than 50%
- Mean percentage cover of *Calliergonella cuspidata* should be less than 15%
- Mean vegetation height should not exceed 40cm

[1833] Slender Naiad *Najas flexilis*

- Restore the spatial extent of *Najas flexilis* within the lake, subject to natural processes.
- Restore the depth range of *Najas flexilis* within the lake, subject to natural processes
- Restore the plant fitness and cover abundance subject to natural processes
- Restore species distribution to at least the north-western bay, subject to natural processes
- Restore habitat extent subject to natural processes
- Maintain appropriate natural hydrological regime necessary to support the habitat for the species
- Restore appropriate substratum type, extent and chemistry to support the population of the species
- Restore appropriate water quality, pH, water colour, to support the population of the species
- Restore appropriate associated species and vegetation communities to support the population of *Najas flexilis*
- Maintain the area and condition of fringing habitats necessary to support the population of *Najas flexilis*

Galway Bay complex SAC

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

- Permanent habitat area and distribution stable or increasing, subject to natural processes
- Conserve: Intertidal sandy mud community complex; and Intertidal sand community complex in a natural condition

[1150] Coastal lagoons

- Habitat area and distribution stable, subject to natural variation
- Suitable water quality including salinity
- Maintain number and extent of plant and animal species subject to natural variation
- Keep negative indicator species absent or under control

[1160] Large shallow inlets and bays

- Permanent habitat area and distribution stable or increasing, subject to natural processes
- Maintain the extent and community structure of the *Zostera*-dominated community complex and the maërl-dominated community, subject to natural processes
- Conserve the following community types in a natural condition: Intertidal sandy mud community complex; Intertidal sand community complex; Fine to medium sand with bivalves community complex; Sandy mud to mixed sediment community complex; Mixed sediment dominated by *Mytilidae* community complex; Shingle; Furoid-dominated community complex; *Laminaria*-dominated community complex; and Shallow sponge-dominated community complex

[1170] Reefs

- Permanent habitat area and distribution stable or increasing, subject to natural processes
- Maintain the extent and community structure density of the *Mytilus*-dominated reef community, subject to natural processes
- Conserve the following community types in a natural condition: Furoid- dominated community complex; *Laminaria* - dominated community complex; and Shallow sponge-dominated community complex

[1220] Perennial vegetation of stony banks

- Permanent habitat area and distribution stable or increasing, subject to natural processes
- Maintain the natural circulation of sediment and organic matter, without any physical obstruction
- Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
- Maintain the typical vegetated shingle flora including the range of sub- communities within the different zones. Typical species include sea sandwort (*Honckenya peploides*), sea beet (*Beta vulgaris* ssp *maritima*), rock samphire (*Crithmum maritimum*), sea mayweed (*Tripleurospermum maritimum*), yellow-horned poppy (*Glaucium flavum*) and sea campion (*Silene uniflora*)
- Negative indicator species (including non-natives) to represent less than 5% cover

[1310] *Salicornia* and other annuals colonising mud and sand

- Permanent *habitat area and distribution stable or increasing*, subject to natural processes
Maintain/restore, *natural circulation of sediments and organic matter*, without any physical obstructions

- Maintain, or where necessary restore *creek and pan structure*, subject to natural processes, including erosion and succession
 - Maintain natural tidal regime
 - Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession.
 - Maintain structural variation within sward
 - Maintain more than 90% of area outside creeks vegetated
 - Maintain the range of species-poor communities with typical species listed in SMP (McCorry and Ryle, 2009)
 - Prevent the establishment of cordgrass
- [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Permanent *habitat area increasing*, subject to natural processes
 - No decline or change in habitat distribution subject to natural processes
 - Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions subject to natural processes
 - Maintain natural tidal regime
 - Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
 - Maintain structural variation within sward
 - Maintain more than 90% area outside creeks vegetated
 - Maintain range of sub- communities with typical species for habitat listed in saltmarsh monitoring program (McCorry and Ryle, 2009)
 - Prevent the establishment of cordgrass
- [1410] Mediterranean salt meadows (*Juncetalia maritimi*)
- Permanent *habitat area increasing*, subject to natural processes
 - No decline or change in habitat distribution subject to natural processes
 - Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions subject to natural processes
 - Maintain natural tidal regime
 - Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
 - Maintain structural variation within sward
 - Maintain more than 90% area outside creeks vegetated
 - Maintain range of sub- communities with typical species for habitat listed in saltmarsh monitoring program (McCorry and Ryle, 2009)
 - Prevent the establishment of cordgrass
- [3180] Turloughs
- Habitat area and distribution stable, subject to natural variation
 - Appropriate natural hydrological regimes necessary to support the natural structure and functioning of the habitat
 - Variety, area and extent of *soil types* necessary to support turlough vegetation and other biota
 - *Nutrient status* appropriate to soil types
 - Sufficient *wet bare ground*, as appropriate
 - Appropriate *CaCO₃ deposition* rates and concentration in soil
 - Appropriate *water quality* to support the natural structure and functioning of the habitat
 - Active peat formation, where appropriate
 - Maintain area of sensitive and high conservation value vegetation communities/units at each turlough
 - Maintain vegetation zonation/mosaic characteristic of each turlough
 - Sward heights appropriate to the vegetation unit, and a variety of sward heights across each turlough
 - Maintain typical species within and across all turloughs
 - Maintain marginal fringing habitats that support turlough vegetation, invertebrate, mammal and/or bird populations
- [5130] *Juniperus communis* formations on heaths or calcareous grassland
- Area stable or increasing, subject to natural processes. At least 1.4ha in one location
 - No decline in habitat distribution

- Well-developed structure with an open to closed cover of juniper up to or exceeding 0.5 m in height with associated species. 50 plants recorded
 - At least 10% of plants bearing cones
 - Not more than 10% of plants dead
 - Vegetation structure with variety of typical native species with a minimum of 10 species present [excluding negative indicator species]
 - Negative indicator species, particularly non-native invasive species, absent or under control
- (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) [*important orchid sites]
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes
 - Broadleaf herb component of vegetation between 40 and 90%
 - At least 7 positive indicator species present, including 2 "high quality" species
 - Negative indicator species collectively not more than 20% cover, with cover by an individual species not more than 10%. Non- native invasive species, absent or under control
 - 30-70% of sward 5-40cm high
 - Cover of bracken (*Pteridium aquilinum*) and woody species (except juniper (*Juniperus communis*)) not more than 5% cover
 - Not more than 10% bare ground
- (7210) Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes
 - Appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat
 - Active peat formation, where appropriate
 - Appropriate water quality to support the natural structure and functioning of the habitat
 - Maintain vegetation cover of typical species including brown mosses and vascular plants
 - Cover of scattered native trees and shrubs not more than than 10%
 - Cover of disturbed bare ground not more than 10%. Where tufa is present, disturbed bare ground not more than 1%
 - Areas showing signs of drainage as a result of drainage ditches or heavy trampling not more than 10%
- (7230) Alkaline fens
- Permanent *habitat area and distribution stable or increasing*, subject to natural processes
 - Appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat
 - Active peat formation, where appropriate
 - Appropriate water quality to support the natural structure and functioning of the habitat
 - Maintain vegetation cover of typical species including brown mosses and vascular plants
 - Cover of scattered native trees and shrubs not more than than 10%
 - Cover of disturbed bare ground not more than 10%. Where tufa is present, disturbed bare ground not more than 1%
 - Areas showing signs of drainage as a result of drainage ditches or heavy trampling not more than 10%
- (1355) Otter *Lutra lutra*
- No decline in population
 - No decline in extent of terrestrial habitat calculated as 262ha above high water mark (HWM); 14ha along river banks/around ponds
 - No significant decline of marine habitat. Area mapped and calculated as 2040ha
 - No significant decline of freshwater (river) habitat. Length mapped and calculated as 4km
 - No significant decline lake/lagoon habitat. Area mapped and calculated as 21ha
 - No significant decline of Couching sites and holts and fish biomass available
 - No significant increase of barriers to connectivity – stretches of water
- (1365) Harbour seal *Phoca vitulina*
- Species range within the site should not be restricted by artificial barriers to site use.
 - Conserve breeding sites in a natural condition. See map 12
 - Conserve moult haul-out sites in a natural condition.
 - Conserve resting haul-out sites in a natural condition.

- Human activities should occur at levels that do not adversely affect the harbour seal population at the site

Inner Galway Bay SPA

A003 Great Northern Diver *Gavia immer*

- Long term population trend stable or increasing
- No significant decrease in the range, timing or intensity of use of areas by great northern diver, other than that occurring from natural patterns of variation

A017 Cormorant *Phalacrocorax carbo*

- No significant decline in (applies to breeding cormorant); Breeding population abundance: apparently occupied nests (AONs), Productivity rate, Distribution: breeding colonies, Prey biomass available, Barriers to connectivity, Disturbance at breeding site
- Long term population trend stable or increasing (non-breeding)
- No significant decrease in the numbers or range of areas used by cormorant, other than that occurring from natural patterns of variation (non-breeding)

For the following birds

A028 Grey Heron *Ardea cinerea*

A046 Brent Goose *Branta bernicla hrota*

A050 Wigeon *Anas penelope*

A052 Teal *Anas crecca*

A056 Shoveler *Anas clypeata*

A069 Red-breasted Merganser *Mergus serrator*

A137 Ringed Plover *Charadrius hiaticula*

A140 Golden Plover *Pluvialis apricaria*

A142 Lapwing *Vanellus vanellus*

A149 Dunlin *Calidris alpina alpina*

A157 Bar-tailed Godwit *Limosa lapponica*

A160 Curlew *Numenius arquata*

A162 Redshank *Tringa totanus*

A169 Turnstone *Arenaria interpres*

A179 Black-headed Gull *Chroicocephalus ridibundus*

A182 Common Gull *Larus canus*

- Long term population trend stable or increasing
- No significant decrease in the range, timing or intensity of use of areas by grey heron, other than that occurring from natural patterns of variation

A191 Sandwich Tern *Sterna sandvicensis*

- No significant decline in; Breeding population abundance: apparently occupied nests (AONs), Productivity rate: fledged young per breeding pair, Distribution: breeding colonies, Prey biomass available
- No significant increase to barriers to connectivity
- Human activities should occur at levels that do not adversely affect the breeding sandwich tern population

A193 Common Tern *Sterna hirundo*

- No significant decline in; Breeding population abundance: apparently occupied nests (AONs), Productivity rate: fledged young per breeding pair, Distribution: breeding colonies, Prey biomass available
- No significant increase to barriers to connectivity
- Human activities should occur at levels that do not adversely affect the breeding sandwich tern population

2.3 Soils, Geology & Hydrogeology

The EPA and GSI websites were consulted for available geological/hydrological information (<https://gis.epa.ie/EPAMaps/> & <https://dcentr.maps.arcgis.com/apps/MapSeries/index.html?appid=bc0dba38f3f5477c8fd400f66b5eedcd>).

The site is underlain by Granites & other Igneous Intrusive rocks with topsoil and subsoil both referred to as built lands. The groundwater public viewer run by the GSI classifies the groundwater as having Extreme (E) vulnerability at this location. Vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease at which groundwater may be contaminated by human activities. The site lies within a poor aquifer. The groundwater sub catchment body to which the site resides; Knock [Furbo]_SC_010 has an overall status as not at risk.

2.4 Existing Environment

Table 2-10 and Figure 2-4 show habitats found within the site boundary. The site is situated in an urban environment and has previously been cleared of all vegetation. Google earth imagery from July 2020 shows the site cleared (brownfield) baring the parking lot. Since this time much of the site has revegetated and consists of a mosaic of bare ground, recolonising bare ground, rank grass and scrub. A planted treeline can be found to the north and east.



Figure 2-3: Google earth; July 2020

Newcastle Community Centre Habitat Map



Figure 2-4 Habitat map

Table 2-10 Habitats recorded within site boundary

| Classification (Fossitt) | | | | | |
|--------------------------|---------------------------------|----|------------------|-----|-----------------------------------|
| G | Grassland | GA | Rank Grassland | GA1 | Rank Grassland |
| | | GS | Semi-natural | GS2 | Grassy verges |
| B | Cultivated & Built Land | BL | Built Land | BL3 | Buildings and artificial surfaces |
| E | Exposed Rock & Disturbed Ground | ED | Disturbed ground | ED2 | Spoil and bare ground |
| | | | | ED3 | Recolonising bare ground |

Buildings and artificial surfaces BL3

This habitat refers to a road.

Spoil and bare ground ED2

By its nature this habitat is species poor and mostly lacks plants. Early colonisers of stone heaps and bare ground found within the site included coltsfoot (*Tussilago farfara*) and bramble (*Rubus fruticosus agg.*).

Recolonising bare ground ED3

Much of the site consists of recolonising bare ground. This category is used for any areas where bare or disturbed ground, derelict sites or artificial surfaces of tarmac, concrete or hard core have been invaded by herbaceous plants. Vegetation cover should be greater than 50% for inclusion in this category. Most of the typical colonisers are ruderals, or weed plants however it typically forms a mosaic with grassland and scrub as while it can be diverse in structure it does succeed relatively quickly.

Species found here included Meadow and creeping buttercup (*Ranunculus acris* & *R. repens*), ragwort (*Jacobaea vulgaris*), ribwort plantain (*Plantago lanceolata*), red clover (*Trifolium pretense*), common figwort (*Scrophularia nodosa*), coltsfoot, ox-eye daisy (*Leucanthemum vulgare*), black medic (*Medicago lupulina*), jointed rush (*Juncus articulatus*), sweet vernal grass (*Anthoxanthum odoratum*), Yorkshire fog (*Holcus lanatus*), creeping bent (*Agrostis stolonifera*), tutsan (*Hypericum androsaemum*), cats ear (*Hypochaeris radicata*) and dandelion (*Taraxicum officinale agg.*).

Scrub WS1

Portions of development scrub can be found throughout primarily consisting of gorse (*Ulex europaeus*), occasional bramble and grey willow (*Salix cinerea*).

Rank grassland

Small sections of recolonised ground has succeeded to grassland. In these areas grasses can be found to a greater extent. Yorkshire fog dominates alongside occasional cocksfoot (*Dactylis glomerata*), hoary willowherb (*Epilobium parviflorum*), thistles (*Cirsium arvense* & *C. vulgare*), yarrow (*Achillea millefolium*) common knapweed and non-native but not invasive common comfrey (*Symphytum officinale*).



Plate 2-1 Recolonising bare ground

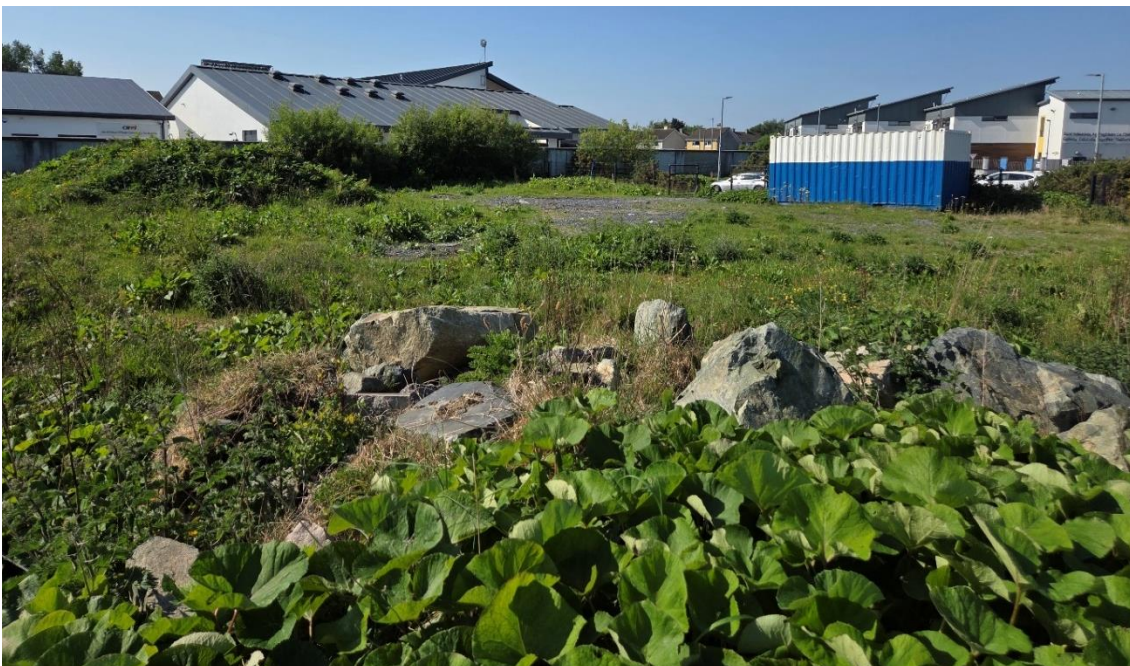


Plate 2-2 Mosaic habitat of recolonising bare ground, spoil and bare ground and grassland

Grassy verge GS2

A narrow band of grass can be found along the road edge partially succeeded to scrub. This habitat corresponds to grassy verge. It contained red fescue (*Festuca rubra*), common bent (*Agrostis capillaris*), sweet vernal grass (*Anthoxanthum odoratum*) tufted vetch (*Vicia cracca*), Germander Speedwell (*Veronica chamaedrys*), Yarrow (*Achillea millefolium*), Field Bindweed (*Convolvulus arvensis*), common knapweed (*Centaurea nigra*), ladies smock (*Cardamine pratensis*), red clover (*Trifolium pratense*) and coltsfoot.



Plate 2-3 Grassy verge with gorse scrub to rear

Treeline WL2

A native treeline has been planted along the northern and eastern boundary. The woodland is approx. 5m thick and has formed a high quality feature dominated by birch (*Betula pubescens*), alder (*Alnus glutinosa*), rowan (*Sorbus aucuparia*) with an understory of hawthorn (*Crataegus monogyna*) and guelder rose (*Viburnum opulus*).



Plate 2-4 Treeline

2.4.1 Fauna

The site was examined for evidence of mammals including a search for badger sets and fox dens. A single fox scat was noted but no evidence of any other species was recorded.

2.4.2 Birds

All species of birds are protected under the Wildlife Act 1976/ Wildlife Amendment Act 2000. A bird survey was conducted on the site primarily to establish if any birds were nesting onsite. The survey conducted a 40-minute vantage point and transect. No birds were found to breed on the site. While the site looks suitable for ground nesting birds such as meadow pipit or skylark, they were not found present. Similarly, no scrub or tree nesting birds were noted. The nearest nest sites appear to be mature trees to the east of the siter located in the back gardens or neighbouring buildings. It is suspected these trees host breeding Robin, great tit and wren while house sparrows , starling and barn swallows are probably nesting within buildings.

Species observed overflying the site are recorded in table 2-11.

Table 2-11: Birds observed.

| Common Name | Scientific Name | BOCCI4 | CO of surrounding SPAs | Associated themselves with site? |
|-----------------|--------------------------------|--------|------------------------|----------------------------------|
| Hooded Crow | <i>Corvus cornix</i> | Green | No | No |
| Wood pigeon | <i>Columba palumbus</i> | Green | No | No |
| Starling | <i>Sturnus vulgaris</i> | Amber | No | No |
| Jackdaw | <i>Coloeus monedula</i> | Green | No | No |
| Cormorant | <i>Phalacrocorax carbo</i> | Amber | Yes; Inner Galway bay | No |
| Herring gull | <i>Larus argentatus</i> | Amber | No | No |
| Robin | <i>Erithacus rubecula</i> | Green | No | No |
| House sparrow | <i>Passer domesticus</i> | Amber | No | No |
| Barn swallow | <i>Hirundo rustica</i> | Amber | No | No |
| Wren (heard) | <i>Troglodytes troglodytes</i> | Green | No | No |
| Dunnock (heard) | <i>Prunella modularis</i> | Green | No | No |

2.4.3 Assessment of site

No species or habitats associated with the surrounding Natura 2000 sites were recorded within the site. A cormorant was noted overflying the site and the neighbouring urban environment heading north, likely to habitats along or within the Corrib river. This species did not associate itself with the site and the site is not suitable for breeding or foraging cormorants who nest in trees in wetlands at the edges of waterbodies.

Overall, the site is of local ecological value with most habitats on site ephemeral in nature. The grassy verge by the road should be retained as its quite diverse however mowing should occur as scrubby gorse is taking over.

2.5 Other Plans and Projects in the Area

It is a requirement of the Appropriate Assessment process to consider the ‘in combination’ effects of the proposed development with other plans and projects in the area. **Table 2-12** below gives details of the other plans and projects in the area which may be affecting Lough Corrib SAC and the Galway Bay Natura 2000 Sites.

Table 2-12 Other Plans and Projects Affecting the surrounding Natura 2000 Sites

| Name of Plan or Project | Key policies/issues/objectives directly related to the relevant Natura 2000 sites | Potential cumulative or in-combination effects on the relevant Natura 2000 sites |
|---|---|--|
| Galway City Development Plan 2023-2029 | Designated Sites, Habitats and Species Policies and Objectives, Natural Heritage and Biodiversity Polices and Objectives, Natural Water Systems Polices | Positive Impact |
| River Basin Management Plan 2022 - 2027 | <p>The Local Authority Waters Programme (LAWPRO) is a national shared service working on behalf of all 31 local authorities in Ireland.</p> <p>Objectives: Ensure that the status of waters supporting protected areas is protected and and achieve ‘good’ ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2027</p> <p>Measures: Implement 11 EU Directives, 9 other basic requirements.</p> | Positive impact |
| NPWS Conservation Management Plans | Conservation Management Plans for the River Corrib SAC, Galway Bay Complex SAC, and the Inner Galway Bay SPA have been published by the NPWS. (See section 2.2.2). | Positive impacts |
| Inland Fisheries Ireland (IFI) Corporate Plan 2021-2025 | <p>Goals:</p> <p>To improve the protection and conservation of the resource.</p> <p>To develop and improve wild fish populations.</p> <p>To increase the number of anglers.</p> <p>To generate a better return for Ireland from the resource</p> | Positive impact |
| Planning Applications in the area | <p>A search was carried out on Galway City Council’s online planning query system. It was ascertained that there has been 13. other local planning application within the past year in the townland of Newcastle:</p> <p>2560083 Extension of dwelling</p> <p>2560048 Retention application</p> <p>2460351 Retention application</p> <p>2460301 Extension of dwelling</p> | Neutral Impact |

| | | | |
|--|---------|--------------------------|--|
| | 2460210 | Retention application | |
| | 2460206 | Extension of dwelling | |
| | 2460101 | Retention application | |
| | 2460057 | Construction of lab | |
| | 2460014 | Extension of dwelling | |
| | 2436 | Extension of dwelling | |
| | 2428 | Extension of dwelling | |
| | 2421 | Construction of dwelling | |
| | 246 | Extension of dwelling | |

2.6 Screening Matrix for Appropriate Assessment in line with EU Commission Guidance

Having established the extent of the proposed project and the details of the Natura 2000 site, a screening assessment for possible impacts can be generated. This section follows the format of the Screening Matrix provided in Annex 2 of the following document;

“Assessment of plans and projects significantly affecting Natura 2000 sites- Methodology guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission, 2001”.

The findings of the screening matrix are summarised in **Table 2-13** below.

Table 2-13 Stage 1 - Screening Matrix for the Proposed Development

| Brief Description of the Project or Plan |
|---|
| <p>Location: The proposed site lies in Newcastle (53.2847106, -9.068997)</p> <p>Distance from Designated Site: The site for the proposed development lies approximately 270m from the Lough Corrib SAC (000297), 1.81km from the Galway Bay Complex SAC (000268) and 2.09km from the Inner Galway Bay SPA (004031)</p> <p>Brief Description of the Project: An extension of time is sought for the previously approved planning permission (Pl ref: 19264). This planning had sought for change of plans for community Centre previously approved under planning permission Ref: 15/153 on revised site boundaries, including revisions to landscaping and external play areas and all associated services (gross floor 1,000sqm). A Site Layout Plan for the proposed development is included as Appendix A to this report.</p> |
| Brief Description of the Natura 2000 Site |
| <p>Site Designation Status: The Lough Corrib candidate Special Area of Conservation (SAC Site Code 000297) and the Galway Bay Complex Special Area of Conservation (Site Code: 000268) are designated under EU Habitats Directive (92/43/EEC) while the Inner Galway Bay Special Protection Area (SPA Site Code: 004031) is designated under the EU Birds Directive (79/409/EEC).</p> <p>Qualifying Features The Galway Bay Complex SAC is of conservation significance due to the presence of 13 habitats listed under Annex I of the EU Habitats Directive and 2 species listed under Annex II of the same directive. The Lough Corrib SAC is of conservation significance due to the presence of 23 habitats listed under Annex I of the EU Habitats Directive and 9 species listed under Annex II of the same directive. The Inner Galway Bay SPA is designated for the presence of several bird species listed on Annex I of the EU Birds Directive (see below). (see below).</p> <p>Qualifying Habitats Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130] Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation [3260]</p> |

Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]
 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]
 Active raised bogs [7110]
 Degraded raised bogs still capable of natural regeneration [7120]
 Depressions on peat substrates of the Rhynchosporion [7150]
 Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae [7210]
 Petrifying springs with tufa formation (Cratoneurion) [7220]
 Alkaline fens [7230]
 Limestone pavements [8240]
 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]
 Bog woodland [91D0]
 Mudflats and sandflats not covered by seawater at low tide [1140]
 Coastal lagoons* [1150]
 Large shallow inlets and bays [1160]
 Reefs [1170]
 Perennial vegetation of stony banks [1220]
 (*Salicornia*) and other annuals colonizing mud and sand [1310]
 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]
 Mediterranean salt meadows (Juncetalia maritimi) [1410]
 Turloughs* [3180]
 (*Juniperus communis*) formations on heaths or calcareous grasslands [5130]
 (EU Habitats Directive 92/43/EEC).

Qualifying Species

Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]
 Austropotamobius pallipes (White-clawed Crayfish) [1092]
 Petromyzon marinus (Sea Lamprey) [1095]
 Lampetra planeri (Brook Lamprey) [1096]
 Salmo salar (Salmon) [1106]
 Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303]
 Lutra lutra (Otter) [1355]
 Drepanocladus vernicosus (Slender Green Feather-moss) [1393]
 Najas flexilis (Slender Naiad) [1833]
 Otter (Lutra lutra) [1355]
 Common seal (Phoca vitulina) [1365]
 [A003] Great Northern Diver (*Gavia immer*)
 [A017] Cormorant (*Phalacrocorax carbo*)
 [A028] Grey Heron (*Ardea cinerea*)
 [A046] Light-bellied Brent Goose (*Branta bernicla hrota*)
 [A050] Wigeon (*Anas penelope*)
 [A052] Teal (*Anas crecca*)
 [A056] Shoveler (*Anas clypeata*)
 [A069] Red-breasted Merganser (*Mergus serrator*)
 [A137] Ringed Plover (*Charadrius hiaticula*)
 [A140] Golden Plover (*Pluvialis apricaria*)
 [A142] Lapwing (*Vanellus vanellus*)
 [A149] Dunlin (*Calidris alpina*)
 [A157] Bar-tailed Godwit (*Limosa lapponica*)
 [A160] Curlew (*Numenius arquata*)
 [A162] Redshank (*Tringa totanus*)
 [A169] Turnstone (*Arenaria interpres*)
 [A179] Black-headed Gull (*Chroicocephalus ridibundus*)

[A182] Common Gull (*Larus canus*)
 [A191] Sandwich Tern (*Sterna sandvicensis*)
 [A193] Common Tern (*Sterna hirundo*)
 [A999] Wetlands & Waterbirds (EU Habitats Directive 92/43/EEC).
 (EU Habitats Directive 92/43/EEC / EU Birds Directive 79/409/EEC).

Several other habitats and species of conservation interest have been recorded from the Lough Corrib Natura 2000 sites. Full details of the sites are found in the Site Synopses included as Appendix B to this report.

Unit Size:

Lough Corrib SAC 25247.2 ha.
 Galway Bay Complex SAC; 14408.98ha.
 Inner Galway Bay SPA; 12456.5ha

ASSESSMENT CRITERIA

Describe the individual elements of the project likely to give rise to impacts on the Natura 2000 site.

No impacts are expected on the Natura 2000 sites in question.

(a) Identify all potential direct and indirect impacts that may have an effect on the conservation objectives of a European site, taking into account the size and scale of the project under the following headings:

| Impacts: | Impacts: Possible Significance of Impacts: |
|---|--|
| <p>Construction phase e.g.</p> <ul style="list-style-type: none"> • Vegetation clearance • Demolition • Surface water runoff from soil excavation/infill/ landscaping (including borrow pits) • Dust, noise, vibration • Lighting disturbance • Impact on groundwater/dewatering • Storage of excavated/construction materials • Access to site • Pests | <p>Construction phase works are relatively minor and are confined to the site which is situated in an urban environment. No streams or conduits were noted providing routes for runoff to enter any designated sites.</p> <p>A site visit conducted on the 13th of May 2025 did not establish any features associated with the surrounding Natura sites.</p> <p>No mitigation measures are required in order to prevent impacts on surrounding designated sites.</p> |
| <p>Operational phase e.g.</p> <ul style="list-style-type: none"> • Direct emission to air and water • Surface water runoff containing contaminant or sediment • Lighting disturbance • Noise/vibration • Changes to water/groundwater due to drainage or abstraction • Presence of people, vehicles and activities • Physical presence of structures (e.g. collision risks) • Potential for accidents or incidents | <p>The site will be connected to the local sewer network. Provided this connection is installed and maintained properly, it is not expected that emissions arising from the development will result in any significant adverse effects on the Natura 2000 sites.</p> |
| In-combination/Other | None expected |

- **Size and Scale**
The development site comprises an overall area of 0.83Ha. At this size, and due to the fact that the works will be located entirely outside the designated area, it is not expected that the development will have any significant impact (direct, indirect or secondary in nature) on the Natura 2000 site in this regard.
- **Land-Take**
The proposed works will be entirely located outside the designated site and so there will be no impacts in this regard.
- **Distance from Natura 2000 site or key features of the site**
The site for the proposed development is located approximately 270m from the Lough Corrib SAC (000297), 1.81km from the Galway Bay Complex SAC (000268) and 2.09km from the Inner Galway Bay SPA (004031). At this distance, no impacts are expected on the Natura 2000 sites in this regard.
- **Resource Requirements**
It is not expected that the proposed development will have any significant impact (direct, indirect or secondary in nature) on the designated sites in this regard.
- **Excavation Requirements**
No impacts are expected on the Natura 2000 site in this regard.
- **Transportation Requirements**
During the construction phase of the proposed development, there will be a slight increase in the volume of traffic in the area for a short time. It is not expected that this slight increase will result in direct, indirect or secondary impacts on the Natura 2000 site.
- **Duration of construction, operation, decommissioning**
The construction phase of the proposed development will last approximately 9 months. It is expected that the building will remain in use for at least 50 years. Neither the construction, operation nor the eventual decommissioning of the proposed development is likely to result in direct, indirect or secondary impacts on the Natura 2000 site.

Describe any likely changes to the site arising as a result of the following;

- **Reduction or fragmentation of habitat area**
There will be no changes in this respect.
- **Disturbance to QI Species**
There will be no changes in this respect.
- **Habitat or Species Fragmentation**
There will be no changes in this respect.
- **Reduction or fragmentation in species density**
There will be no changes in this respect.
- **Changes in key indicators of conservation status value (water or air quality etc.)**
There will be no changes in this respect.
- **Changes to areas of sensitivity or threats to QI**
There will be no changes in this respect.
- **Interference with the key relationships that define the structure or ecological function of the site**
There will be no changes in this respect.

Are 'mitigation' measures necessary to reach a conclusion that likely significant effects can be ruled out at screening?

Yes **No**

Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.

It is not considered that the proposed development will have any significant impacts on Lough Corrib and Galway Bay Natura 2000 sites, alone or in combination with the other plans or projects in the area (outlined in Section 2.3 of this report).

3 Conclusions

This report details the results of a screening exercise carried out for a proposed development in Newcastle, Co Galway. A part 8 application is sought to construct a community building comprising of meeting rooms, sports/general purpose hall, ancillary accommodation, including AstroTurf playing pitch and play area and all associated site works. This planning had sought for change of plans for community Centre previously approved under planning permission Ref: 15/153 on revised site boundaries, including revisions to landscaping and external play areas and all associated services (gross floor 1,000sqm). A Site Layout Plan for the proposed development is included as **Appendix A** to this report. The screening exercise examined impacts on the Lough Corrib and Galway Bay Natura 2000 sites.

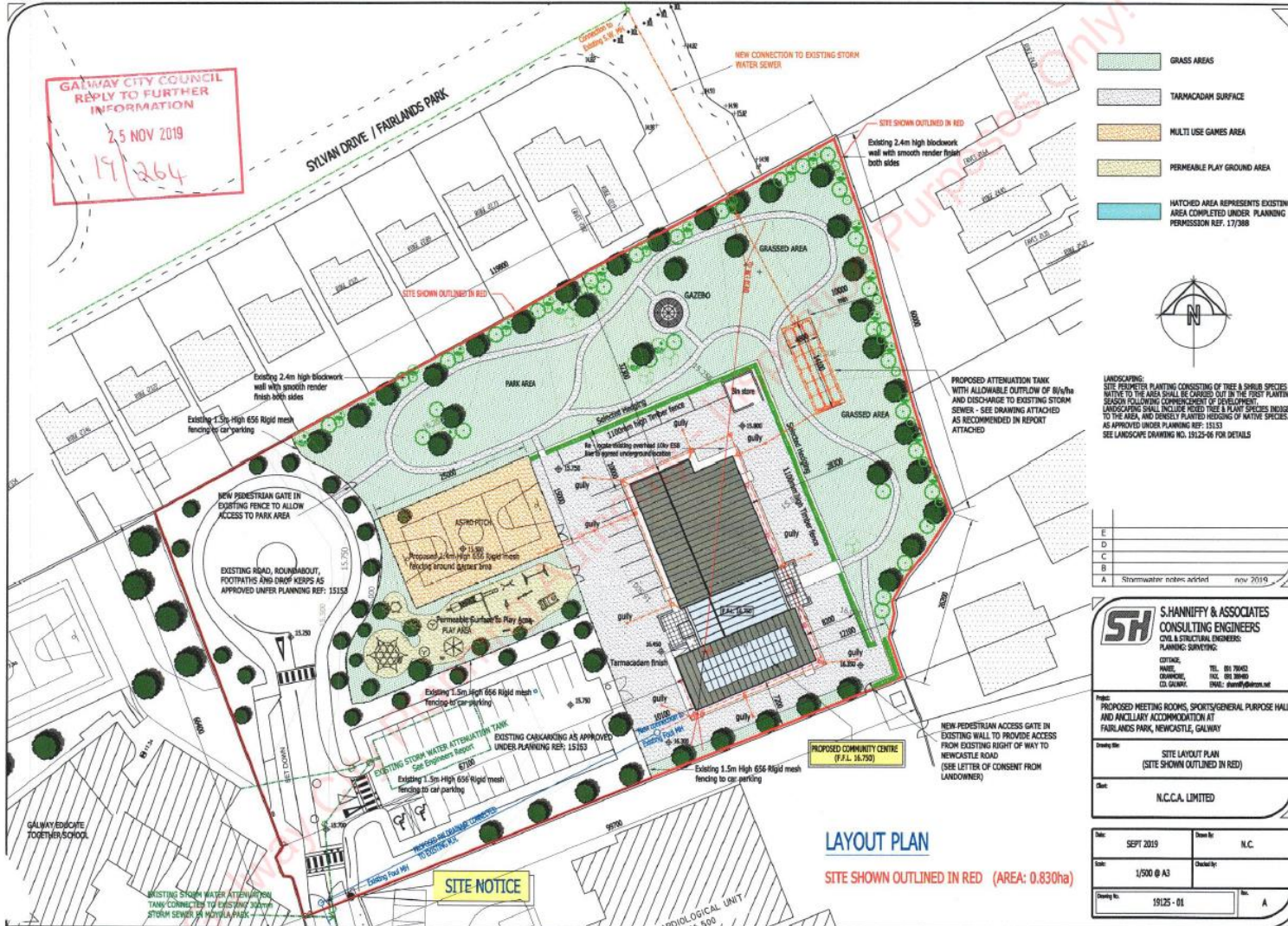
The site for the proposed development is located approximately 270m from the Lough Corrib SAC (000297), 1.81km from the Galway Bay Complex SAC (000268) and 2.09km from the Inner Galway Bay SPA (004031). At this distance, it is not expected that the proposed development will give rise to any direct impacts on the Natura 2000 sites in question.

A site inspection conducted on the 13th of May 2025 showed no habitats or species linked to the surrounding Natura 2000 sites using the site and no potential links were found.

The site will be connected to the local sewer network. Provided this connection is installed and maintained properly, it is not expected that emissions arising from the development will result in any significant adverse effects on the Natura 2000 sites.

Therefore, the conclusion of this screening exercise is that no significant effects are expected on the qualifying interests or conservation objectives of the Lough Corrib and Galway Bay Natura 2000 sites, as a result of the proposed development in question, alone or in combination with the other plans and projects in the area, and therefore that a Natura Impact Statement is not required in this case. This report is therefore issued as a 'Finding of No Significant Effects' (FONSE) statement, in accordance with the EU Commission's methodological guidance (EC, 2001).

APPENDIX A - Site Layout Plan



APPENDIX B NPWS Site Synopses

Site Name: Lough Corrib SAC

Site Code: 000297

Lough Corrib is situated to the north of Galway city and is the second largest lake in Ireland, with an area of approximately 18,240 ha (the entire site is 20,556 ha). The lake can be divided into two parts: a relatively shallow basin, underlain by Carboniferous limestone, in the south, and a larger, deeper basin, underlain by more acidic granite, schists, shales and sandstones to the north. The surrounding lands to the south and east are mostly pastoral farmland, while bog and heath predominate to the west and north. A number of rivers are included within the cSAC as they are important for Atlantic Salmon. These rivers include the Clare, Grange, Abbert, Sinking, Dalgan and Black to the east, as well as the Cong, Bealanabrack, Failmore, Cornamona, Drimneen and Owenriff to the west. In addition to the rivers and lake basin, adjoining areas of conservation interest, including raised bog, woodland, grassland and limestone pavement, have been incorporated into the site.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[3110] Oligotrophic Waters containing very few minerals

[3130] Oligotrophic to Mesotrophic Standing Waters

[3140] Hard Water Lakes

[3260] Floating River Vegetation

[6210] Orchid-rich Calcareous Grassland*

[6410] Molinia Meadows

[7110] Raised Bog (Active)*

[7120] Degraded Raised Bog

[7150] Rhynchosporion Vegetation

[7210] Cladium Fens*

[7220] Petrifying Springs*

[7230] Alkaline Fens

[8240] Limestone Pavement*

[91A0] Old Oak Woodlands

[91D0] Bog Woodland*

[1029] Freshwater Pearl Mussel (*Margaritifera margaritifera*)

[1092] White-clawed Crayfish (*Austropotamobius pallipes*)

[1095] Sea Lamprey (*Petromyzon marinus*)

[1096] Brook Lamprey (*Lampetra planeri*)

[1106] Atlantic Salmon (*Salmo salar*)

[1303] Lesser Horseshoe Bat (*Rhinolophus hipposideros*)

[1355] Otter (*Lutra lutra*)

[1833] Slender Naiad (*Najas flexilis*)

[6216] Slender Green Feather-moss (*Hamatocaulis vernicosus*)

The shallow, lime-rich waters of the southern basin of Lough Corrib support one of the most extensive beds of stoneworts (Charophytes) in Ireland, with species such as *Chara aspera*, *C. hispida*, *C. delicatula*, *C. contraria* and *C. desmacantha* mixed with submerged pondweeds (*Potamogeton perfoliatus*, *P. gramineus* and *P. lucens*), Shoreweed (*Littorella uniflora*) and Water Lobelia (*Lobelia dortmanna*). These *Chara* beds are an important source of food for waterfowl. In contrast, the northern basin contains more oligotrophic and acidic waters, without *Chara* species, but with Shoreweed, Water Lobelia, Pipewort (*Eriocaulon aquaticum*), Quillwort (*Isoetes lacustris*), Alternate Water-milfoil (*Myriophyllum alternifolium*) and Slender Naiad (*Najas flexilis*). The last-named is listed under the Flora (Protection) Order, 2015 and is an Annex II species under the E.U. Habitats Directive.

Large areas of reedswamp vegetation, dominated by varying mixtures of Common Reed (*Phragmites australis*) and Common Club-rush (*Scirpus lacustris*), occur around the margins of the lake. Reedswamp usually grades into species-rich marsh vegetation characterised by Slender Sedge (*Carex*

lasiocarpa), Water Mint (*Mentha aquatica*), Water Horsetail (*Equisetum fluviatile*) and Bogbean (*Menyanthes trifoliata*). Of particular note are the extensive beds of Great Fen-sedge (*Cladium mariscus*) that have developed over the marly peat deposits in sheltered bays, particularly in the southeast corner of the lake. Alkaline fen vegetation is more widespread around the lake margins and includes, amongst the typically diverse range of plants, the Slender Cottongrass (*Eriophorum gracile*), a species protected under the Flora (Protection) Order, 2015. Wet meadows dominated by Purple Moor-grass (*Molinia caerulea*) occur in seasonally flooded areas close to the lake shore. These support species such as Sharp-flowered Rush (*Juncus acutiflorus*), Jointed Rush (*J. articulatus*), Carnation Sedge (*Carex panicea*), Devil's-bit Scabious (*Succisa pratensis*), Creeping Bent (*Agrostis stolonifera*) and Tormentil (*Potentilla erecta*), amongst others.

This large site contains four discrete raised bog areas and is selected for active raised bog, degraded raised bog, Rhynchosporion and bog woodland. Active raised bog comprises areas of high bog that are wet and actively peat-forming, where the percentage cover of bog mosses (*Sphagnum* spp.) is high, and where some or all of the following features occur: hummocks, pools, wet flats, *Sphagnum* lawns, flushes and soaks. Degraded raised bog corresponds to those areas of high bog whose hydrology has been adversely affected by peat cutting, drainage and other land use activities, but which are capable of regeneration. The Rhynchosporion habitat occurs in wet depressions, pool edges and erosion channels where the vegetation includes White Beak-sedge (*Rhynchospora alba*) and/or Brown Beak-sedge (*R. fusca*), and at least some of the following associated species, Bog Asphodel (*Narthecium ossifragum*), sundews (*Drosera* spp.), Deergrass (*Scirpus cespitosus*) and Carnation Sedge.

At Addergoole, on the eastern shores of Lough Corrib, there is an important area of western raised bog. This bog area is one of the most westerly, relatively intact raised bogs in the country. There are also other substantial areas of raised bog along various tributaries of the Corrib in east Co. Galway, namely Slieve Bog, Lough Tee Bog and Killaclogher bog. The active parts of these bogs mostly correspond to the wettest areas, where there are well-developed surface features with hummocks, lawns and pools. It is in such areas that Rhynchosporion vegetation is best represented. The dominant species is the aquatic bog moss *Sphagnum cuspidatum*, which is usually accompanied by Bogbean, White Beak-sedge, Bog Asphodel, Common Cottongrass (*Eriophorum angustifolium*), Bog Sedge (*Carex limosa*) and Great Sundew (*Drosera anglica*). Brown Beak-sedge, a locally rare plant of wet bog pools, has been recorded from a number of the bog areas within the site. At Addergoole a substantial bog lake or soak occurs and this is infilling with large rafts of Rhynchosporion vegetation at present. This area is associated with an important area of wet bog woodland dominated by Downy Birch (*Betula pubescens*). The largest part of the uncut high bog comprises degraded raised bog. Degraded bog is dominated by a raised bog flora which tends to be rather species-poor because of disturbance and/or drying-out. The most conspicuous vascular plant species are usually Carnation Sedge, Heather (*Calluna vulgaris*), Cottongrasses, Cross-leaved Heath (*Erica tetralix*), Bog Asphodel and Deergrass. Bog-rosemary (*Andromeda polifolia*) and Cranberry (*Vaccinium oxycoccos*), two species indicative of raised bog habitat, are frequent on both degraded and active areas of raised bog. *Sphagnum* cover is generally low within degraded areas due to a combination of drying-out and frequent burning. Limestone pavement occurs along much of the shoreline in the lower Corrib basin, and supports a rich and diverse flora, including Herb-Robert (*Geranium robertianum*), Bloody Crane's-bill (*G. sanguineum*), Carline Thistle (*Carlina vulgaris*), Spring Gentian (*Gentiana verna*), Wild Thyme (*Thymus praecox*), Rustyback (*Ceterach officinarum*), Wood Sage (*Teucrium scorodonia*), Slender St. John's-wort (*Hypericum pulchrum*), Quaking-grass (*Briza media*) and Blue Moor-grass (*Sesleria albicans*). Areas of Hazel (*Corylus avellana*) scrub occur in association with exposed limestone pavement and these include species such as Hawthorn (*Crataegus monogyna*), Buckthorn (*Rhamnus catharticus*), Spindle (*Euonymus europaeus*), with occasional Juniper (*Juniperus communis*). Three Red Data Book species are also found in association with limestone scrub - Alder Buckthorn (*Frangula alnus*), Shrubby Cinquefoil (*Potentilla fruticosa*) and Wood Bitter-vetch (*Vicia orobus*), the latter is also protected under the Flora (Protection) Order, 2015. Open areas of orchid-rich calcareous grassland are also found in association with the limestone exposures. These can support a typically rich vegetation, including many orchids such as Pyramidal Orchid (*Anacamptis pyramidalis*), Common Spotted-orchid

(*Dactylorhiza fuchsii*), Early-purple Orchid (*Orchis mascula*), Frog Orchid (*Coeloglossum viride*), Fragrant Orchid (*Gymnadenia conopsea*), Marsh Helleborine (*Epipactis palustris*), Greater Butterfly-orchid (*Platanthera chlorantha*) and Irish Lady's-tresses (*Spiranthes romanzoffiana*). The latter is protected under the Flora (Protection) Order, 2015. The Hill of Doon, located in the north-western corner of the lake, is a fine example of a Sessile Oak (*Quercus petraea*) woodland. The understorey is dominated by Sessile Oak, Holly (*Ilex aquifolium*) and occasional Juniper. There are occasional Yew (*Taxus baccata*) and Ash (*Fraxinus excelsior*), and a well-developed ground layer dominated by Bilberry (*Vaccinium myrtillus*), Hard Fern (*Blechnum spicant*) and Wood Rush (*Luzula sylvatica*). Woodland also occurs on some of the islands in the lake. A number of the rivers in the site support submerged and floating vegetation of the Ranunculion fluitantis and Callitriche-Batrachion, including mosses. For example, in the River Corrib species such as Shining Pondweed (*Potamogeton lucens*), Perfoliate Pondweed (*Potamogeton perfoliatus*), Small Pondweed (*P. berchtoldii*), Yellow Waterlily (*Nuphar lutea*), White Water-lily (*Nymphaea alba*) and stoneworts (*Chara* spp.) occur. The rare and Annex II-listed Slender Green Feather-moss (*Hamatocaulis vernicosus*, formerly known as *Drepanocladus vernicosus*) is found at the fen at Gortachalla, northeast of Moycullen. Here it is widespread around the margins, and this constitutes a large and significant population in the national context. A very large population of another rare moss, *Pseudocalliergon trifarium*, is also found in this area.

The lake is rated as an internationally important site for waterfowl. Counts from 1984 to 1987 revealed a mean annual peak total of 19,994 birds. In the past a maximum peak of 38,281 birds was recorded. The lake supports internationally important numbers of Pochard (average peak 8,600) and nationally important numbers of the following species: Coot (average peak 6,756), Mute Swan (average peak 176), Tufted Duck (average peak 1,317), Cormorant (average peak 110) and Greenland Whitefronted Goose (average peak 83). The latter species is listed on Annex I of the E.U. Birds Directive. The Coot population is the largest in the country and populations of Tufted Duck and Pochard are second only to Lough Neagh. Breeding pairs of Common Scoter on the lake number 30-41 (1995 data), as well as breeding populations of Arctic Tern and Common Tern. Other bird species of note recorded from or close to the lake recently include Hen Harrier, Whooper Swan, Golden Plover and Kingfisher. All of these species are listed on Annex I of the E.U. Birds Directive. Otter and Irish Hare have been recorded regularly within this site. Both of these species are listed in the Red Data Book and are legally protected by the Wildlife Act, 1976. Otter is also listed on Annex II of the E.U. Habitats Directive. Lough Corrib is considered one of the best sites in the country for Otter, due to the sheer size of the lake and associated rivers and streams, and also the generally high quality of the habitats. Atlantic Salmon (*Salmo salar*) use the lake and rivers as spawning grounds. Although this species is still fished commercially in Ireland, it is considered to be endangered or locally threatened elsewhere in Europe and is listed on Annex II of the E.U. Habitats Directive. Lough Corrib is also a well-known fishing lake with a very good Trout (*Salmo trutta*) fishery. The lake has a population of Sea Lamprey (*Petromyzon marinus*), a scarce, though probably under-recorded species listed on Annex II of the E.U. Habitats Directive. Brook Lamprey (*Lampetra planeri*), also listed on Annex II, are also known from a number of areas within the site.

A population of Freshwater Pearl Mussel (*Margaritifera margaritifera*), a species listed on Annex II of the E.U. Habitats Directive, occurs within the site. White-clawed Crayfish (*Austropotamobius pallipes*), also listed on Annex II, is well distributed throughout Lough Corrib and its in-flowing rivers over limestone. A summer roost of Lesser Horseshoe Bat, another Annex II species, occurs within the site - approximately 100 animals were recorded here in 1999. The main threats to the quality of this site are from water polluting activities resulting from intensification of agricultural activities on the eastern side of the lake, uncontrolled discharge of sewage which is causing localised eutrophication of the lake, and housing and boating development, which is causing the loss of native lakeshore vegetation. The raised bog habitats are susceptible to further degradation and drying out due to drainage and peat cutting and, on occasions, burning. Peat cutting threatens Addergoole Bog and already a substantial area of it has been cut away. Fishing and shooting occur in and around the lake. Introduction of exotic crayfish species or the crayfish fungal plague (*Aphanomyces astaci*) could have a serious impact on the native crayfish population. The bat roost is susceptible to disturbance or development.

Despite these ongoing issues, however, Lough Corrib is one of the best examples of a large lacustrine catchment system in Ireland, with a range of habitats and species still well represented. These include 15 habitats which are listed on Annex I of the E.U. Habitats Directive, six of which are priority habitats, and nine species which are listed on Annex II. The lake is also internationally important for birds and is designated as a Special Protection Area.

Site Name: Galway Bay Complex SAC

Site Code: 000268

Situated on the west coast of Ireland, this site comprises the inner, shallow part of a large bay which is partially sheltered by the Aran Islands. The Burren karstic limestone fringes the southern sides and extends into the sublittoral. West of Galway city the bedrock geology is granite. There are numerous shallow and intertidal inlets on the eastern and southern sides, notably Muckinish, Aughinish and Kinvarra Bays. A number of small islands composed of glacial deposits are located along the eastern side. These include Eddy Island, Deer Island and Tawin Island. A diverse range of marine, coastal and terrestrial habitats, including several listed on Annex I of the E.U. Habitats Directive, occur within the site, making the area of high scientific importance.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes): [1140] Tidal Mudflats and Sandflats [1150] Coastal Lagoons* [1160] Large Shallow Inlets and Bays [1170] Reefs [1220] Perennial Vegetation of Stony Banks [1310] Salicornia Mud [1330] Atlantic Salt Meadows [1410] Mediterranean Salt Meadows [3180] Turloughs* [5130] Juniper Scrub [6210] Orchid-rich Calcareous Grassland* [7210] Cladium Fens* [7230] Alkaline Fens [1355] Otter (*Lutra lutra*) [1365] Common (Harbour) Seal (*Phoca vitulina*)

Galway Bay South holds a very high number of littoral communities (12). They range from rocky terraces, to sandy beaches with rock or sand dunes behind. The intertidal sediments of Galway Bay support good examples of communities that are moderately exposed to wave action. A well-defined talitrid amphipod zone in the upper shore gives way to an intertidal, mid shore zone with sparse epifauna or infauna. On the lower, flat part of the shore, the tubes of the deposit-feeding terebellid worm, *Lanice conchilega*, are common on the surface. Nereid and cirratulid polychaete worms (*Hediste diversicolor*, *Arenicola marina*), small crustaceans and bivalves (*Angulus tenuis*, *Cerastoderma edule* and *Macoma balthica*) are present. The area has the country's only recorded example of the littoral community characterized by *Fucus serratus* with sponges, ascidians and red seaweeds on tide-swept lower eulittoral mixed substrata. This community has very high species richness (85 species), as do the sublittoral fringe communities on the Finavarra reef (88 species). The rare Purple Sea Urchin *Paracentrotus lividus* and the foliose red alga *Phyllophora sicula* are present at Finavarra, whereas the red alga *Rhodomenia delicatula* and the rare brown alga, *Ascophyllum nodosum* var. *mackii*, occur in Kinvarra and Muckinish Bays. Sublittorally, the area has a number of distinctive and important communities. Of particular note is that Ireland's only reported piddock (bivalve mollusc) bed thrives in the shallows of Aughinish Bay. The rare sponge, *Mycale contarenii*, is also found here. There is further interest in an extensive maerl bed of *Phymatolithon calcareum* which occurs in the strong tidal currents of Muckinish Bay. There is also maerl off Finavarra Point and in Kinvarra Bay (*Lithothamnion corallioides*, *Lithophyllum dentatum* and *Lithophyllum fasciculatum*). An oyster bed in Kinvarra Bay and seagrass (*Zostera* spp.) beds off Finavarra Point are also important features. Other significant habitats which occur include secondary maerl beds and communities strongly influenced by tidal streams.

Saltmarshes are frequent within this extensive coastal site, with both E.U. Habitats Directive types, 'Atlantic Salt Meadow' and 'Mediterranean Salt Meadow' well represented. Most of the saltmarshes are classified as the bay type, with the substrate being mud or mud/sand. There is one lagoon type and one estuary type. Lagoon saltmarshes are the rarest type found in Ireland. The best examples of saltmarsh are located in inner Galway bay, east of a line running between Galway city and Kinvarra. In this area the coastline is highly indented, thus providing the sheltered conditions necessary for extensive saltmarsh development. Common saltmarsh species include Thrift (*Armeria maritima*), Red Fescue (*Festuca rubra*), Common Scurvygrass (*Cochlearia officinalis*), Lax-flowered Sea-lavender (*Limonium humile*), Common Saltmarsh-grass (*Puccinellia maritima*), Saltmarsh Rush (*Juncus gerardi*) and Sea Rush (*Juncus maritimus*). On the lower levels of the saltmarshes and within pans

there occurs Glasswort (*Salicornia europaea* agg.). A noteworthy feature of the saltmarsh habitat within this site is the presence of dwarfed brown seaweeds in the vegetation. These are also known as "turf furoids" and typical species include *Fucus* spp., *Ascophyllum nodosum* and *Pelvetia canaliculata*. A number of locally rare vascular plant species also grow in saltmarsh areas within the site. These include Reflexed Saltmarsh-grass (*Puccinellia distans*) and Sea-purslane (*Halimione portulacoides*), which are both relatively rare in the western half of the country.

Shingle and stony beaches can be found throughout the site, with the best examples along the more exposed shores to the south and west of Galway city and to the north and east of Finavarra, Co. Clare. In general, these shingle shorelines are sparsely vegetated and frequently occur interspersed with areas of sandy beach and/or bedrock shore. The associated flora is dominated by plant species of frequently disturbed maritime habitats. To the south and west of Galway city, typical plants include Curled Dock (*Rumex crispus*), Common Couch (*Elymus repens*), Sea Sandwort (*Honkenya peploides*), Sea Beet (*Beta vulgaris* subsp. *maritima*), Sea Mayweed (*Matricaria maritima*), Silverweed (*Potentilla anserina*) and Oraches (*Atriplex* spp.). Two rare plant species are associated with the habitat: Henbane (*Hyoscyamus niger*), a threatened species listed in the Irish Red Data Book, grows on shingle beach to the south of Lough Atalia; there are also old records for the threatened plant species Sea-kale (*Crambe maritima*).

An excellent range of lagoons of different types, sizes and salinities occurs within the site. This habitat is given priority status on Annex I of the E.U. Habitats Directive. One unusual type of lagoon, karstic rock lagoon, is particularly well represented. This type of lagoon is common on the Aran Islands, but on mainland Ireland, all but one are confined to this site. Additionally, the best example of all karstic lagoons in the country, Lough Murree, is found at this site. The flora of the habitat is rich and diverse, reflecting the range of salinities in the different lagoons. It is typically brackish, with two species of Tasselweed (*Ruppia* spp.), two Red Data charophytes *Chara canescens* and *Lamprothamnion papulosum*, and *Chaetomorpha linum*, an alga (all lagoonal specialists). The fauna of the lagoon is also rich, diverse and lagoonal. At least 10 lagoonal specialist species were recorded in 1996 and 1998 from the combined habitat of all the lagoons, which is one of the highest number for any lagoonal habitat in the country. Many of the species appear to be rare. The lagoons within this site are excellent examples of the habitat type and of high conservation importance.

Other terrestrial habitats within this site which are of conservation importance include Great Fen-sedge (*Cladium mariscus*)-dominated fen and Black Bog-rush (*Schoenus nigricans*)-dominated alkaline fen at Oranmore, a turlough of moderate size at Ballinacourty, limestone pavement mainly along the southern shore, dry calcareous grassland with orchids (best examples occurring west of Salthill), Juniper (*Juniperus communis*) scrub formations at Oranmore, wet grassland and an area of deciduous woodland at Barna. The orchid-rich grassland occurs on a series of small drumlin hills found to the west of Galway City, and is largely confined to the sides of the hills. Calcicole species such as Kidney Vetch (*Anthyllis vulneraria*), Harebell (*Campanula rotundifolia*), Spring Gentian (*Gentiana verna*), Common Spotted-orchid (*Dactylorhiza fuchsii*), Lesser Twayblade (*Listera ovata*), Pyramidal Orchid (*Anacamptis pyramidalis*), Yellow-wort (*Blackstonia perfoliata*) and Greater Knapweed (*Centaurea scabiosa*) are found here, among others. Juniper is also found in this area.

Areas of alkaline and *Cladium* fen as best represented near Oranmore, and species such as Great Fen-sedge, Common Reed (*Phragmites australis*), Purple Moor-grass (*Molinia caerulea*), Bogbean (*Menyanthes trifoliata*) and Long-stalked Yellow-sedge (*Carex lepidocarpa*) are found along with the usually dominant, Black Bog-rush. The turlough at Ballinacourty floods to about 25 ha in winter, and has vegetation with a typical zonation. Wetland species such as Amphibious Bistort (*Polygonum amphibium*), Common Marsh-bedstraw (*Galium palustre*) and Marsh Cinquefoil (*Potentilla palustris*) are found near the swallow-hole, with species of wet grassland close to the flood limit (e.g. Silverweed, *Potentilla anserina*, Water Mint, *Mentha aquatica* and Creeping Bent, *Agrostis stolonifera*). Sedges (*Carex* spp.) dominate in between.

Inner Galway Bay provides extensive good quality habitat for Common Seal (maximum count of 317 in the all-Ireland survey of 2003). This species is listed on Annex II of the E.U. Habitats Directive. The seals use a range of haul-out sites distributed through the bay - these include inner Oranmore Bay, Rabbit Island, St. Brendan's Island, Tawin Island, Kinvarra Bay, Aughinish Bay and Ballyvaughan. The site provides optimum habitat for Otter, also an Annex II-listed species.

Galway Bay is a very important ornithological site. The shallow waters provide excellent habitat for Great Northern Divers (35), Black-throated Divers (28), Scaup (39), Long-tailed Duck (27) and Red-breasted Merganser (232). (Figures given are peak average maxima over the 3 winters 1994/95 to 1996/97). All of these populations are of national importance. The intertidal areas and shoreline provides feeding and roosting habitat for wintering waterfowl, with Brent Goose (517) having a population of international importance and a further 11 species having populations of national importance. Four of the regular wintering species are listed on Annex I of the E.U. Birds Directive - Golden Plover, Bar-tailed Godwit and the two diver species. Breeding birds are also of importance, with significant populations of Sandwich Terns (81 pairs in 1995) and Common Terns (99 pairs in 1995), both also being listed on Annex I of the E.U. Birds Directive. A large Cormorant colony (approx. 300 pairs in 1989) occurs on Deer Island.

Fishing and aquaculture are the main commercial activities within the site. A concern is that sewage effluent and detritus of the aquaculture industry could be deleterious to benthic communities. Reef and sediment communities are vulnerable to disturbance or compaction from tractors accessing oyster trestles. The *Paracentrotus lividus* populations have been shown to be vulnerable to over-fishing. Extraction of maerl in Galway Bay is a threat. Owing to the proximity of Galway city, shoreline and terrestrial habitats are under pressure from urban expansion and recreational activities. Eutrophication is probably affecting some of the lagoons and is a continued threat. Drainage is a general threat to the turlough and fen habitats. Bird populations may be disturbed by aquaculture activities.

This large coastal site is of immense conservation importance, with many habitats listed on Annex I of the E.U. Habitats Directive, four of which have priority status (lagoon, Cladium fen, turlough and orchid-rich calcareous grassland). The examples of shallow bays, reefs, lagoons and saltmarshes found within this site are amongst the best in the country. The site supports an important Common Seal colony and a breeding Otter population (Annex II species), and six regular Annex I E.U. Birds Directive species. The site also has four Red Data Book plant species, plus a host of rare or scarce marine and lagoonal animal and plant species.

SITE NAME: INNER GALWAY BAY SPA

SITE CODE: 004031

Galway Bay SPA is a very large, marine-dominated, site situated on the west coast of Ireland. The inner bay is protected from exposure to Atlantic swells by the Aran Islands and Black Head. Subsidiary bays and inlets (e.g. Poul-na-clough, Aughinish and Kinvarra Bays) add texture to the patterns of water movement and sediment deposition, which lends variety to the marine habitats and communities. The terraced Carboniferous (Viséan) limestone platform of the Burren sweeps down to the shore and into the sublittoral. The long shoreline is noted for its diversity, with complex mixtures of bedrock shore, shingle beach, sandy beach and fringing salt marshes. Intertidal sand and mud flats occur around much of the shoreline, with the largest areas being found on the sheltered eastern coast between Oranmore Bay and Kinvarra Bay. A number of small islands composed of glacial deposits are included, such as Deer Island, along with some rocky islets.

The southern part of Galway Bay holds a very high number of littoral communities. They range from rocky terraces to sandy beaches with rock or sand dunes behind. The intertidal sediments of Galway Bay support good examples of communities that are moderately exposed to wave action. A well-defined talitrid zone in the upper shore gives way to an intertidal, mid-shore zone with sparse epifauna or infauna. On the lower, flat part of the shore, the tubes of the deposit-feeding terebellid worm, *Lanice conchilega*, are common on the surface. Nereid and cirratulid polychaete worms (*Hediste diversicolor*, *Arenicola marina*), small crustaceans and bivalves (*Angulus tenuis*, *Cerastoderma edule* and *Macoma balthica*) are present. Sublittorally, the area has a number of distinctive and important communities. Of particular note is that Ireland's only reported piddock bed thrives in the shallows of Aughinish Bay. The rare sponge, *Mycale contarenii*, is also found here. Of additional interest is the presence of an extensive maerl bed of *Phymatolithon calcareum* which occurs in the strong tidal currents of Muckinish Bay. There is also maerl off Finavarra Point and in Kinvarra Bay (*Lithothamnion corallioides*, *Lithophyllum dentatum* and *Lithophyllum fasciculatum*). An oyster bed in Kinvarra Bay and seagrass (*Zostera* spp.) beds off Finavarra Point are also important features.

Salt marshes are frequent within this extensive coastal site, with the best examples located east of a line running between Galway City and Kinvarra. In this area the coastline is highly indented, thus providing the sheltered conditions necessary for extensive salt marsh development. Common salt marsh species present include Thrift (*Armeria maritima*), Red Fescue (*Festuca rubra*), Common Scurvygrass (*Cochlearia officinalis*), Lax-flowered Sea-lavender (*Limonium humile*), Common Saltmarsh-grass (*Puccinellia maritima*), Saltmarsh Rush (*Juncus gerardi*) and Sea Rush (*Juncus maritimus*). On the lower levels of the salt marshes and within pans is found Glasswort (*Salicornia europaea* agg.). Shingle and stony beaches occur throughout the site, with the best examples found along the more exposed shores to the south and west of Galway City and to the north and east of Finnavara. In general, these shingle shorelines are sparsely vegetated, with such species as Curled Dock (*Rumex crispus*), Common Couch (*Elymus repens*), Sea Sandwort (*Honkenya peploides*) and Sea Beet (*Beta vulgaris*).

Galway Bay is one of the most important ornithological sites in the western region. It supports an excellent diversity of wintering wetland birds, with divers, grebes, cormorants, dabbling duck, sea duck and waders all well represented. There are internationally important wintering populations of Great Northern Diver (83) and Brent Goose (676), and nationally important populations of an additional sixteen species, i.e. Black-throated Diver (25), Cormorant (266), Mute Swan (150), Wigeon (1,157), Teal (690), Shoveler (88), Red-breasted Merganser (249), Ringed Plover (335), Golden Plover (2,030), Lapwing (3,969), Dunlin (2,149), Bar-tailed Godwit (447), Curlew (697), Redshank (505), Greenshank (20) and Turnstone (182) – all figures are average peaks for the 5 seasons 1995/96-1999/00. Of note is that the populations of Red-breasted Merganser and Ringed Plover represent 6.7% and 3.3% of the respective national totals. Black-throated Diver is a scarce species in Ireland and the Galway Bay population is the most regular in the country. Other species which occur in notable numbers include Little Grebe (35), Grey Heron (102), Long-tailed Duck (19) and Scaup (40). The bay is an important wintering site for gulls, especially Black-headed Gull (1,815), Common Gull (1,011) and Herring Gull (216). In addition, the following species also use the site: Red-throated Diver (13), Great Crested Grebe (16), Mallard (200), Shelduck (139), Common Scoter (79), Oystercatcher (575), Grey Plover (60), Black-tailed Godwit (45) and Great Black-backed Gull (124). The site provides both feeding and roost sites for most of the species, though some birds also commute to areas outside of the site. The wintering birds of Galway Bay have been monitored annually since 1980/81.

The site has several important populations of breeding birds, most notably colonies of Sandwich Tern (81 pairs in 1995) and Common Tern (99 pairs in 1995). A large Cormorant colony occurs on Deer Island – this had 205 pairs in 1985 and 300 pairs in 1989.

Inner Galway Bay provides good quality habitat for Common Seal, a species that is listed on Annex II of the E.U. Habitats Directive. In 1984, this seal colony was one of the top three sites in the country, with over 140 animals recorded. The seals use a range of haul-out sites distributed through the bay. The site provides optimum habitat for Otter.

While there are no imminent threats to the birds, a concern is that sewage effluent and detritus of the aquaculture industry could be deleterious to benthic communities and could affect food stocks of divers, seaduck and other birds. Bird populations may also be disturbed by aquaculture activities. Owing to the proximity of Galway City, shoreline habitats are under pressure from urban expansion and recreational activities.

This large coastal site is of immense ornithological importance, with two wintering species having populations of international importance and a further sixteen species having populations of national importance. The breeding colonies of Sandwich Tern, Common Tern and Cormorant are also of national importance. Also of note is that seven of the regularly occurring species are listed on Annex I of the E.U. Birds Directive, i.e. Red-throated Diver, Black-throated Diver, Great Northern Diver, Golden Plover, Bar-tailed Godwit, Sandwich Tern and Common Tern.