



**ENVIROPLAN CONSULTING  
LIMITED**

## **Title**

**APPROPRIATE ASSESSMENT  
SCREENING REPORT**

## **Development Description**

*"This application sets out proposals for construction of 4 no. housing units comprising of 2 no., 2 bed x 2-storey terrace units. The house design types are adopted from the 'Design Manual for Quality Housing' Standard Internal Layout (Section 5.9). Houses no. 1 and 2 are adopted from house type H13 and houses no. 3 and 4 are adopted from house type H12. This proposal represents an ideal infill opportunity within the confines of the town 50 kph speed limit zones whilst the land benefits from direct access onto the R332 (Dublin Road) and existing water and power services. The area for this proposed site is 1,180m<sup>2</sup>. The proposed density is 34 units/Ha. The Tuam LAP advises a maximum density of 35 units per hectare in this area. The dwellings will be semi-detached in form."*

## **Location**

Parkmore, Tuam, Co. Galway

## **Applicants**

Galway County Council

## **Prepared by:**

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January'24

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## APPENDICES

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### APPENDIX A Site Layout Plan

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# 1 INTRODUCTION

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This Appropriate Assessment Screening Report has been prepared by Emma Fleming (B. Sc., M. Sc) in partnership with James O' Donnell, Planning Consultant (BA, MRUP, Dip APM) on behalf of Galway County Council who are applying for planning permission for *“construction of 4 no. housing units comprising of 2 no., 2 bed x 2-storey terrace units. The house design types are adopted from the ‘Design Manual for Quality Housing’ Standard Internal Layout (Section 5.9). Houses no. 1 and 2 are adopted from house type H13 and houses no. 3 and 4 are adopted from house type H12. This proposal represents an ideal infill opportunity within the confines of the town 50 kph speed limit zones whilst the land benefits from direct access onto the R332 (Dublin Road) and existing water and power services. The area for this proposed site is 1,180m<sup>2</sup>. The proposed density is 34 units/Ha. The Tuam LAP advises a maximum density of 35 units per hectare in this area. The dwellings will be semi-detached in form”* at Parkmore, Tuam, Co. Galway.

Emma Fleming is a qualified ecologist and has obtained a bachelor's degree in applied Freshwater and Marine Biology (BSc Hons) at Atlantic Technological University, Galway, and a master's degree in environmental science at Trinity College Dublin. She has worked in Thailand and Greece gaining extensive experience in marine ecology, biodiversity, and conservation. Emma has completed numerous Appropriate Assessment Screening Reports, Natura Impact Statements, Construction Environmental Management Plans, Ecological Impact Assessments, Environmental Impact Assessment Screening Reports, and Bat Survey Reports. She has conducted extensive field sampling, Marine Mammal Surveys, Bird Surveys and Bat Surveys in the Republic of Ireland and abroad. She has completed a course with CIEEM on Bat Species, Bat Ecology and Bat Surveying.

James O' Donnell is a qualified Town Planner and Project Manager with over 22 years planning experience in both the public and private sector in the west of Ireland, including 6 years' experience as a local authority planning officer. James has particular experience in the project management and delivery of a wide range of complex planning applications requiring environmental and ecological assessment, in accordance with the requirements of the EU Habitats Directive and EIA Directives.

The site for the proposed development lies approximately 3.07km from the Lough Corrib SAC (site code: 000297), which has been designated under the EU Habitats Directive, and so it is necessary that the potential impacts/effects 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/effects of the proposed works on sites of European importance in the area. This report has also had regard to the provisions of the March 2021 publication entitled “*OPR Practice Note PN01- Appropriate Assessment Screening for Development Management.*”

**Table 1.1: Step One: Description of the project/proposal and local site characteristics**

<p><b>Brief description of the project plan</b></p>	<p><i>“This application sets out proposals for construction of 4 no. housing units comprising of 2 no., 2 bed x 2-storey terrace units. The house design types are adopted from the ‘Design Manual for Quality Housing’ Standard Internal Layout (Section 5.9). Houses no. 1 and 2 are adopted from house type H13 and houses no. 3 and 4 are adopted from house type H12. This proposal represents an ideal infill opportunity within the confines of the town 50 kph speed limit zones whilst the land benefits from direct access onto the R332 (Dublin Road) and existing water and power services. The area for this proposed site is 1,180m<sup>2</sup>. The proposed density is 34 units/Ha. The Tuam LAP advises a maximum density of 35 units per hectare in this area. The dwellings will be semi-detached in form.”</i></p>
<p><b>Brief description of site characteristics</b></p>	<p>The application site is located to the southeast of Tuam town, in the Parkmore Housing Estate, just off the R332 road. The predominant land-use in the area is residential with the Dublin Road Housing Estate located to the south of the application site and the River Crest Housing Estate located to the northwest of the application site. Dynamo Blues FC is located c. 242.78 metres to the southeast of the application site and the river Nanny is located approximately 437.61 metres to the northeast of the application site and flows northwest into the Lough Corrib SAC.</p>

## 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 Culture Heritage and the Gaeltacht's 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). 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

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### 2.1 DESCRIPTION OF THE PLAN OR PROJECT

*“This application sets out proposals for construction of 4 no. housing units comprising of 2 no., 2 bed x 2-storey terrace units. The house design types are adopted from the ‘Design Manual for Quality Housing’ Standard Internal Layout (Section 5.9). Houses no. 1 and 2 are adopted from house type H13 and houses no. 3 and 4 are adopted from house type H12. This proposal represents an ideal infill opportunity within the confines of the town 50 kph speed limit zones whilst the land benefits from direct access onto the R332 (Dublin Road) and existing water and power services. The area for this proposed site is 1,180m<sup>2</sup>. The proposed density is 34 units/Ha. The Tuam LAP advises a maximum density of 35 units per hectare in this area. The dwellings will be semi-detached in form.”*

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 is located in Parkmore, Tuam, Co. Galway. (Grid Ref: Easting: 144407.67, Northing: 251457.66). The site for the proposed development lies approximately 3.07km from the Lough Corrib SAC (site code: 000297) (see **Figure 2.1** below).

All Natura 2000 sites within a 15km buffer of the proposed development are listed in **Table 2.1** and **Figure 2.2**.

**Table 2.1: Step Two: Identification of relevant Natura 2000 sites using Source-Pathway-Receptor Model and Compilation of information on QI and Conservation Objectives**

European Site (Code)	List of Qualifying Interest/Special Conservation Interest	Approximate Distance from the proposed development (km)	Receptor/Connection	Screen In – Yes/No
Lough Corrib SAC (Site Code: 000297)	<p>QIs – 15 Habitats and 9 Species</p> <p><a href="https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000297.pdf">https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000297.pdf</a></p>	3.07km	<p>The application site is located entirely outside of the SAC. Therefore, there are no direct impacts/effects predicted on the SAC during the construction or operational phase of development.</p> <p>The river Nanny is located approximately 437.61 metres to the northeast of the application site. The river Nanny flows northwest for approximately 3.02km before entering into the Lough Corrib SAC.</p> <p>There are no indirect impacts/effects predicted on the SAC during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.</p> <p>Therefore, no direct or indirect impacts/effects are predicted on the Lough Corrib SAC during the construction or operational phase of development.</p>	No

Levally Lough SAC (Site Code: 000295)	QIs – 1 Habitat <a href="https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000295.pdf">https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000295.pdf</a>	8.14km	No identifiable connector/receptor pathway to species and habitats associated with this Natura site.	No
Derrinlough (Cloonkeenleananode) Bog SAC (Site Code: 002197)	QIs – 1 Habitat <a href="https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002197.pdf">https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002197.pdf</a>	14.57km	No identifiable connector/receptor pathway to species and habitats associated with this Natura site.	No

The application site lies entirely outside the Lough Corrib SAC and all other Natura 2000 sites, and therefore, no direct impacts/effects are predicted during the construction or operational phase of development.

The river Nanny is located approximately 437.61 metres to the northeast of the application site. The river Nanny flows northwest for approximately 3.02km before entering into the Lough Corrib SAC.

No indirect impacts/effects are predicted on the Lough Corrib SAC or the wider natura 2000 network due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment between the application site and the natura 2000 sites.

As part of the proposed development it is proposed to connect the existing sewer. Provided this system 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. A pre-connection application has been submitted to Uisce Eireann and we await confirmation / agreement but no issues are anticipated due to the minor nature of the proposed connection.

Surface water will discharge to the pre-existing public storm sewer. No impacts/effects are predicted in this regard.

Therefore, no direct or indirect impacts/effects are predicted on the Lough Corrib SAC or the wider Natura 2000 network during the construction or operational phase of development. However, as the Lough Corrib SAC is the closest Natura 2000 site to the proposed application site, it will be considered further below

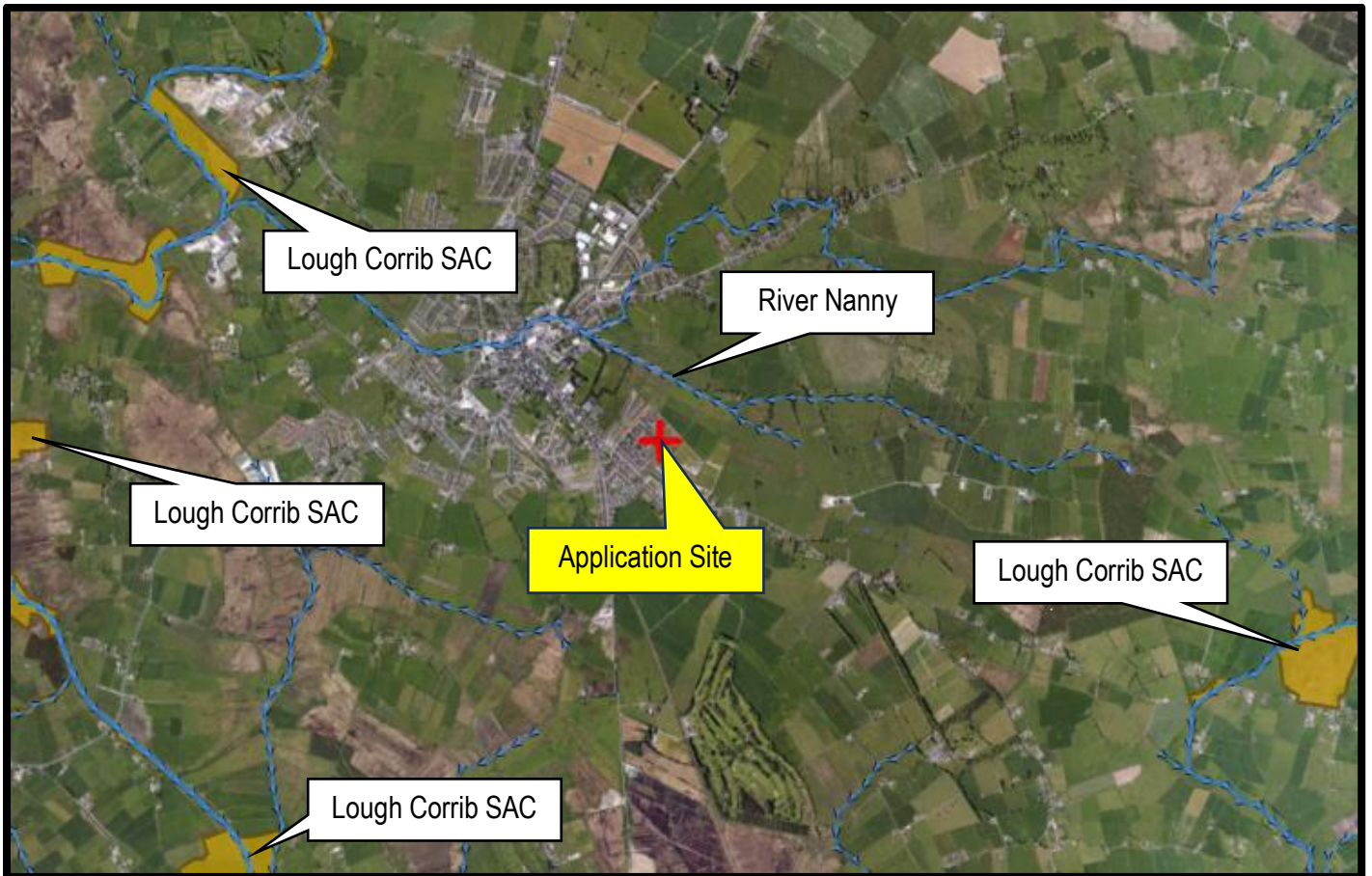


Figure 2.1: Site Location (Red X) in Relation to the Lough Corrib SAC Natura 2000 Site.

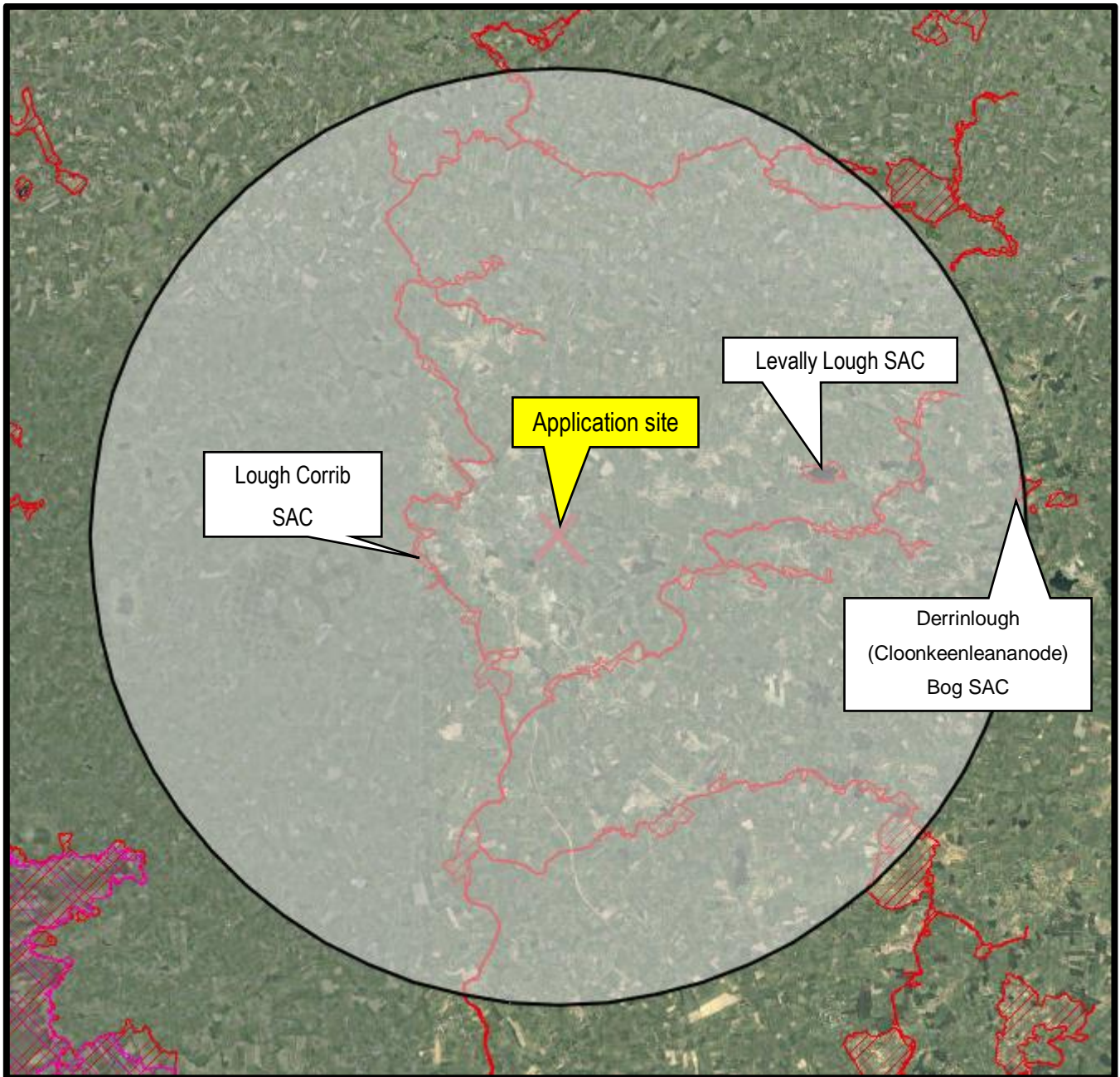


Figure 2.2: 15km Buffer Surrounding Site

## 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 protection 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 - Lough Corrib SAC Natura 2000 site. The NPWS site synopses for the designated sites are given as **Appendix B** to this report.

**Table 2.2 Lough Corrib SAC Habitat Information**

Habitat code	Habitat name	Cover (ha)	Representativity
3110	Oligotrophic waters containing very few minerals of sandy plains ( <i>Littorelletalia uniflorae</i> )	497.497	C
3130	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i>	11572.285	C
3140	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	21460.69	A
3260	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	252.48	C
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates ( <i>Festuco-Brometalia</i> ) (* important orchid sites)	252.48	B
6410	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils ( <i>Molinion caeruleae</i> )	252.48	B
7110	Active raised bogs	39.22	B
7120	Degraded raised bogs still capable of natural regeneration	17.74	B
7150	Depressions on peat substrates of the <i>Rhynchosporion</i>	1.676	A
7210	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	252.48	A
7220	Petrifying springs with tufa formation ( <i>Cratoneurion</i> )	252.48	C
7230	Alkaline fens	252.48	A
8240	Limestone pavements	252.48	A
91A0	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	252.48	A

91D0	Bog Woodland	1.22	A
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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%>=p>15%, B - 15%>=p>2%, C - 2%>=p>0% and D - Non-significant population. The SCI species found in the Lough Corrib SAC Natura 2000 site are outlined in Table 2.3 below.

**Table 2.3 Lough Corrib SAC SCI Species Information**

Species code	Latin name	English name	Population significance
1029	<i>Margaritifera margaritifera</i>	Freshwater Pearl Mussel	C
1092	<i>Austropotamobius pallipes</i>	White-clawed Crayfish	C
1095	<i>Petromyzon marinus</i>	Sea Lamprey	C
1096	<i>Lampetra planeri</i>	Brook Lamprey	C
1106	<i>Salmo salar</i>	Salmon	C
1303	<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	C
1355	<i>Lutra lutra</i>	Otter	C
1833	<i>Najas flexilis</i>	Slender Naiad	B
6216	<i>Hamatocaulis vernicosus</i>	Slender Green Feather-moss	B

#### **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 SAC Natura 2000 site are listed in **Table 2.4** below.

**Table 2.4 Potential Pressures and Threats to the Lough Corrib SAC Natura 2000 Site**

Activity	Location	Intensity	Influence
Fertilisation	Both	Medium	Negative
Diffuse pollution to surface waters due to household sewage and waste waters	Outside	High	Negative
Infilling of ditches, dykes, ponds, pools, marshes or pits	Inside	Medium	Negative
Forest planting on open ground	Both	Medium	Negative
Dispersed habitation	Inside	Medium	Negative
Other human induced changes in hydraulic conditions	Both	Medium	Negative



Removal of hedges and copses or scrub	Inside	High	Negative
Agricultural intensification	Both	Low	Negative
Dispersed habitation	Inside	Low	Negative
Sand and gravel extraction	Outside	Low	Negative
Other human intrusions and disturbances	Inside	High	Negative
Roads, paths and railroads	Inside	Medium	Negative
Piers / tourist harbours or recreational piers	Inside	Medium	Negative
Mechanical removal of peat	Inside	High	Negative
Continuous urbanisation	Outside	Medium	Negative
Invasive non-native species	Inside	High	Negative
Abandonment of pastoral systems, lack of grazing	Inside	Medium	Negative

### *Conservation Objectives of the Natura 2000 Sites*

Once a site has been designated as a Natura site, a management plan should be put together for the site which sets out the Conservation Objectives, these can be Site specific Conservation Objects (SSCO) or Generic 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 Lough Corrib SAC Natura 2000 site. Qualifying interests and objectives (bulleted) are listed below.

### **Lough Corrib SAC (Site Code 000297)**

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

- Area of habitat is stable or increasing, subject to natural processes
- No decline, subject to natural processes of habitat distribution
- Typical species present, in good condition, and demonstrating typical abundances and distribution
- 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
- Restore appropriate Secchi transparency. There should be no decline in Secchi depth/transparency
- Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species
- Restore appropriate water quality to support the habitat, including high chlorophyll a status
- Maintain appropriate water quality to support the habitat, including high phytoplankton composition status
- Restore/maintain trace/absent attached algal biomass
- Maintain high macrophyte status
- Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes
- Restore/maintain appropriate water colour to support the habitat
- Restore/maintain appropriate organic carbon levels to support the habitat
- Restore/maintain appropriate turbidity to support the habitat
- Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of habitat 3110

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

3130-Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea

- Area stable or increasing, subject to natural processes
- No decline, subject to natural processes. See map 3 for indicative lake habitat distribution
- Typical species present, in good condition, and demonstrating typical abundances and distribution
- 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
- Restore appropriate Secchi transparency. There should be no decline in Secchi depth/transparency
- Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species
- Restore appropriate water quality to support the habitat, including high chlorophyll a status
- Maintain appropriate water quality to support the habitat, including high phytoplankton composition status
- Restore/maintain trace/absent attached algal biomass
- Maintain high macrophyte status
- Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes
- Restore/maintain appropriate water colour to support the habitat
- Restore/maintain appropriate organic carbon levels to support the habitat
- Restore/maintain appropriate turbidity to support the habitat
- Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of habitat 3130

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

3140-Hard oligo-mesotrophic waters with benthic vegetation of Chara spp

- Area stable or increasing, subject to natural processes
- No decline, subject to natural processes.
- Typical species present, in good condition, and demonstrating typical abundances and distribution
- 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
- Restore appropriate Secchi transparency. There should be no decline in Secchi depth/transparency
- Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species
- Maintain appropriate water quality to support the habitat, including high chlorophyll a status
- Maintain appropriate water quality to support the habitat, including high phytoplankton composition status
- Restore/maintain trace/absent attached algal biomass (<5% cover) and high phyto-benthos status.
- Restore high macrophyte status
- Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes
- Restore/maintain appropriate water colour to support the habitat
- Restore/maintain appropriate organic carbon levels to support the habitat
- Restore/maintain appropriate turbidity to support the habitat
- Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of habitat 3140

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

3260-Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation

- Area stable or increasing, subject to natural processes
- No decline, subject to natural processes
- Maintain appropriate hydrological regimes
- 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
- Typical species of the relevant habitat sub-type should be present and in good condition
- The area of active floodplain at and upstream of the habitat should be maintained
- Maintain the area and condition of fringing habitats necessary to support the habitat and its sub-types

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

6210-Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (\* important orchid sites)

- Area stable or increasing, subject to natural processes
- No decline, subject to natural processes of occurrence
- At least seven positive indicator species present, including two "high quality" species
- Negative indicator species collectively not more than 20% cover, with cover by an individual species not more than 10%
- Cover of non-native species not more than 1%
- Cover of woody species (except certain listed species) and bracken (*Pteridium aquilinum*) not more than 5% cover
- Broadleaf herb component of vegetation between 40% and 90%
- At least 30% of sward between 5cm and 40cm tall
- Litter cover not more than 25%
- Not more than 10% bare soil
- Area showing signs of serious grazing or other disturbance less than 20m<sup>2</sup>

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

6410-Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)

- Area stable or increasing, subject to natural processes
- No decline, subject to natural processes of occurrence
- At least seven positive indicator species present, including one "high quality" species as listed in O'Neill et al. (2013)
- Negative indicator species collectively not more than 20% cover, with cover by an individual species not more than 10%
- Cover of non-native species not more than 1%
- Hair mosses (*Polytrichum* spp.) not more than 25% cover
- Cover of woody species and bracken (*Pteridium aquilinum*) not more than 5%
- Broadleaf herb component of vegetation between 40% and 90%
- At least 30% of sward between 10cm and 80cm tall
- Litter cover not more than 25%

- Not more than 10% bare soil
- Area showing signs of serious grazing or other disturbance less than 20m<sup>2</sup>

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

#### 7110-Active raised bogs

- Restore the area of active raised bog to 78.8ha, subject to natural processes
- Restore the distribution and variability of active raised bog across the SAC
- No decline in extent of high bog subject to the conservation requirements of the SAC
- Restore appropriate water levels throughout each site
- Restore, 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 adequate cover of high quality microtopographical features
- Restore adequate cover of bog moss (Sphagnum) species to ensure peatforming capacity
- Restore, where appropriate, typical active raised bog flora
- Restore, where appropriate, typical active raised bog fauna
- Maintain features of local distinctiveness, subject to natural processes
- Negative physical features absent or insignificant
- Native negative indicator species at insignificant levels
- Non-native invasive species at insignificant levels and not more than 1% cover
- Air quality surrounding the bogs close to natural reference conditions. The total nitrogen deposition should not exceed 5kg N/ha/y
- Water quality on the high bog and in transitional areas close to natural reference conditions

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

#### 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

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

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

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

7210-Calcareous fens with Cladium mariscus and species of the Caricion davallianae

- Area stable or increasing, subject to natural processes
- No decline, subject to natural processes of occurrence
- Maintain appropriate natural hydrological regimes necessary to support the natural structure and functioning of the habitat
- Maintain active peat formation, where appropriate
- Maintain appropriate water quality, particularly nutrient levels, to support the natural structure and functioning of the habitat
- Maintain vegetation cover of typical species including brown mosses and vascular plants
- Cover of non-native species less than 1%
- Cover of scattered native trees and shrubs less 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%
- No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

7220-Petrifying springs with tufa formation (Cratoneurion)

- Area stable or increasing, subject to natural processes
- No decline, subject to natural processes of occurrence

- Maintain appropriate hydrological regimes
- 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 number
- Potentially negative indicator species should not be Dominant or Abundant; invasive species should be absent
- Field layer height between 10cm and 50cm (except for bryophyte-dominated ground <10cm)
- Cover should not be Dominant or Abundant

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

#### 7230-Alkaline fens

- Area stable or increasing, subject to natural processes
- No decline, subject to natural processes of occurrence
- Maintain soil nutrient status within natural range
- Maintain active peat formation, where appropriate
- Maintain appropriate natural hydrological regimes necessary to support the natural structure and functioning of the habitat
- Maintain appropriate water quality, particularly nutrient levels, to support the natural structure and functioning of the habitat
- Maintain variety of vegetation communities, subject to natural processes
- Number of brown moss species present at each monitoring stop is at least one
- 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
- Total cover of brown moss species and positive vascular plant indicator species at least 20% for small-sedge flushes and at least 75% cover for black bog-rush (*Schoenus nigricans*) flush and bottle sedge (*Carex rostrata*) fen
- Total cover of negative indicator species less than 1%
- Cover of non-native species less than 1%
- Cover of scattered native trees and shrubs less than 10%
- Total cover of soft rush (*Juncus effusus*) and common reed (*Phragmites australis*) less than 10%



- Proportion of live leaves and/or flowering shoots of vascular plants that are more than 5cm above the ground surface should be at least 50%
- Cover of disturbed bare ground less than 10%
- Area showing signs of drainage as a result of drainage ditches or heavy trampling less than 10%
- Disturbed proportion of vegetation cover where tufa is present is less than 1%
- No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

#### 8240-Limestone pavements

- Area stable or increasing, subject to natural processes
- No decline, subject to natural processes of occurrence
- 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

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

#### 91A0-Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles

- Area stable or increasing, subject to natural processes
- No decline in occurrence

- Area stable or increasing. Where topographically possible, "large"; woods at least 25ha in size and "small" woods at least 3ha in size. Area stable or increasing. Where topographically possible, "large"; woods at least 25ha in size and "small" woods at least 3ha in size.
- 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 30m<sup>3</sup>/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter
- No decline in woodland structure for indicators of local distinctiveness and veteran trees.
- No decline. 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

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

#### 91D0-Bog woodland

- Area stable or increasing, subject to natural processes
- No decline, subject to natural processes of occurrence
- 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 size class present
- Senescent or dead wood present

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

1029-Margaritifera margaritifera (Freshwater Pearl Mussel)

- Maintain at 9.1km
- 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 NPWS Map) 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 to no more than 20% decline from water column to 5cm depth in substrate
- Restore appropriate hydrological regimes T
- Maintain sufficient juvenile salmonids to host glochidial larvae
- Maintain the area and condition of fringing habitats necessary to support the population

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

1092-Austropotamobius pallipes (White-clawed Crayfish)

- No reduction from baseline occurrence, in both Lough Corrib and rivers
- 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

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

1095-Petromyzon marinus (Sea Lamprey)

- 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/m<sup>2</sup>
- 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

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

1096-Lampetra planeri (Brook Lamprey)

- 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/m<sup>2</sup>
- No decline in extent and distribution of spawning beds
- More than 50% of sample sites positive for juvenile habitats

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

1106-Salmo salar (Salmon)

- 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
- No decline in number and distribution of spawning redds due to anthropogenic causes
- At least Q4 at all sites sampled by EPA

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

1303-Rhinolophus hipposideros (Lesser Horseshoe Bat)

- Minimum number of 100 bats for summer roost (roost id. 217 in NPWS database)
- No decline in condition and nature of summer and auxillary roosts
- No Significant decline in foraging habitat
- No significant loss, 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.

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

1355-Lutra lutra (Otter)

- No significant decline in distribution
- No significant decline. Area mapped and calculated as 1,054ha along river banks/ lake shoreline/around ponds
- No significant decline. Length mapped and calculated as 314.2km
- No significant decline. Area mapped and calculated as 4,178ha
- No significant decline in couching sites, holts and fish biomass available
- No increase in barriers to connectivity.

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

1833-Najas flexilis (Slender Naiad)

- 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 plant fitness, subject to natural processes
- Restore the cover abundance of *Najas flexilis*, subject to natural processes
- Restore to at least the north-western bay, subject to natural processes
- Restore, 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 to support the population of the species
- Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the population of *Najas flexilis*, subject to natural processes
- Restore/maintain appropriate water colour to support the population of *Najas flexilis*
- 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*

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

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

- No decline, subject to natural processes with regards to distribution of populations and population size
- Mean percentage cover of slender green feather-moss (*Hamatocaulis vernicosus*) should be at least 45%
- No decline, subject to natural processes of suitable habitats
- 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 cuspidate* should be less than 15%
- Mean vegetation height should not exceed 40cm

**Predicted impacts:** There are no direct or indirect impacts/effects predicted on this QI during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.

## 2.3 SOILS, GEOLOGY & HYDROGEOLOGY

The Geological Survey of Ireland (GSI) website was consulted for available geological / hydrological information. The site is underlain by Limestone Till (Carboniferous). Topsoil on site consists of fine loamy drift with limestones. The groundwater vulnerability within the site is rated as low to moderate throughout the site. 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.

**Table 2.7** Details information gleaned from catchments.ie on the water status of the Clare-Corrib groundwater waterbody. This concludes that the overall Groundwater Status is Good.

Clare- Corrib Waterbody Information	
Name	Clare- Corrib
Code	IE_WE_G_0020
Catchments	26D Upper Shannon 29 Galway Bay Southeast 30 Corrib 34 Moy & Killala Bay
Longitude	53.511141
Latitude	-8.8469841
Cycle 1 RBD	Western
Local Authority	Galway County Council
Waterbody Category	Groundwater
WFD Risk	At Risk
Protected Area	N/A
High Status Objective	No
Heavily Modified	N/A
Artificial	N/A
Area (km <sup>2</sup> )	N/A
Length (km)	N/A
Transboundary	No
Canal	No
GW 2016-2021 Overall Groundwater Status	Good

## 2.4 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 2.6** below gives details of the other plans and projects in the area which may be affecting the Lough Corrib SAC Natura 2000 site.

**Table 2.8: Other Plans and Projects Affecting the Natura 2000 Site**

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
<b>Galway County Development Plan 2022-2028</b>	Designated Sites, Habitats and Species Policies and Objectives,  Natural Heritage and Biodiversity Policies and Objectives, Natural Water Systems	Positive Impact
<b>River Basin Management Plan for Ireland 2018 - 2021</b>	The River Basin Management Plan for Ireland, issued in April 2018, sets out a number of objectives and measures for all national water bodies which aim: (1) to prevent the deterioration of water bodies and to protect, enhance and restore them with the aim of achieving at least good status and (2) to achieve compliance with the requirements for designated protected areas.	Positive impact
<b>NPWS Conservation Management Plans</b>	A Conservation Management Plan is in place for the Lough Corrib SAC Natura 2000 site and its aims and objectives are outlined from P6-20 above.	Positive impacts
<b>Inland Fisheries Ireland (IFI) Corporate Plan 2021-2025</b>	Goals: To protect, manage and conserve Ireland’s inland fisheries and sea angling resources and to maximize their sustainability and natural biodiversity. To play a leadership role in achieving our climate action and biodiversity goals	Positive impact
<b>Planning Applications in the area</b>	A search was carried out on Galway County Council’s online planning query system. It was ascertained that there have been 10 other local planning applications granted within a 300m radius of the site in the past 5 years, which are listed below <b>PI. Ref. no. 18284:</b> <i>"for a fully serviced prefabricated classroom adjacent to existing childcare facility. Gross floor space of proposed works 48.16 sqm."</i>  <b>PI. Ref. no. 2261080.</b> <i>"to retain domestic sheds / storage at the side and rear of my dwelling house and all associated works. Gross floor space of work to be retained 36.00sqm."</i>	Neutral Impact



	<p><b>Pl. Ref. no. 18147:</b> “for the construction of 11 dwelling houses comprised as 4 no. two-storey, semi-detached blocks (8 residential units) and 1 no. two-storey, 3-unit terrace (3 residential units) and for all ancillary site works, services, roads, and footpaths. Previous Planning Ref. No. 99/2312 and 07/2947 (ABP Ref. Planning Ref. 07.225317) relate to the site. Gross floor space of proposed works 1066.9 sqm.”</p> <p><b>Pl. Ref. no. 19407:</b> “for minor variations to the property previously approved under pl. ref 18/147 to include a reduction in floor area of the proposed 2-bedroom units and minor alterations to the site layout. Permission is also sought for the construction of 6 additional residential units comprised as 3 no. single-storey, semi-detached blocks (6 residential units) and for all ancillary site works, services, roads, footpaths, and communal parking areas. Gross floor space of proposed works: 1398.2 sqm.”</p> <p><b>Pl. Ref. no. 221230:</b> “for the construction of a two-story extension to the rear of existing private dwelling house along with all ancillary site works. Gross floor space of proposed works: 43.6 sqm.”</p> <p><b>Pl. Ref. no. 211427:</b> “to extend and change the plans and elevations of the first floor units previously granted permission under planning file reference 20-1088, to provide for four number two-bedroom apartments previously permitted. Gross floor space of proposed works: 595.8 sqm.”</p> <p><b>Pl. Ref. no. 201088:</b> “For the change of use of 2 unfinished commercial blocks to residential use which will require the provision of a first-floor level for each block with all associated external stairs to serve same. The blocks were previously approved under Pl. Ref. 06/222. Each block will consist of the provision of 4 apartments per block [hence 8 units will be provided in total]. There will be 2 apartments at ground floor level and 2 apartments at first floor level per block. Private and public open space will be provided. Permission is also sought for alterations to the car parking around the site and the provision of hard and soft landscaping to define the public areas. Gross floor space of proposed works: 570.4 msq.”</p> <p><b>Pl. Ref. no. 201434:</b> “for a two-storey extension to the rear, a single-storey extension to the side their dwelling house, remodel the existing internal layout of the house and all associated works. Gross floor space of proposed works: 92.8 sqm.”</p> <p><b>Pl. Ref. no. 19767:</b> “to construct an extension to the existing dwelling, alterations to the front porch and all ancillary site works. Gross floor space of proposed works: 16 sqm.”</p>	
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	<p><b>PI Ref no: 21140:</b> “for 1) the demolition of the two storey extension to the rear, including extension previously granted under pl. Ref. No. 94/142, 2) construction of two storey extension to the rear, 3) demolition of sunroom construction to the front elevation and replacement with one storey extension, 4) construction of external insulation to original building, 5) changes to existing plans &amp; elevations including to finishes, windows and door styles and 6) all associated services. Gross floor space of proposed works: 135.9 sqm. Gross floor space of any demolition: 58.0 sqm.”</p>	
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## 2.5 SCREENING MATRIX FOR APPROPRIATE ASSESSMENT IN LINE WITH EU COMMISSION GUIDANCE

Having established the extent of the proposed project and the details of the Lough Corrib SAC 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”.

**Table 2.9: Step Three: Assessment of Likely Significant Effects**

(a) Identify all potential direct and indirect impacts that may have an effect on the conservation objective of a European site taking into account the size/scale of the project under the following headings:	
Impacts:	Possible significance of Impacts (Duration/Magnitude)
<p><b>Construction Phase (Examples)</b></p> <ul style="list-style-type: none"> <li>• Vegetation Clearance</li> <li>• Demolition</li> <li>• Surface water runoff from excavation/infill</li> <li>• Dust, noise, vibration</li> <li>• Lighting disturbance</li> <li>• Impact on groundwater</li> <li>• Storage of excavation/construction materials</li> <li>• Access to site</li> <li>• Pests</li> </ul>	<p>The application site is located entirely outside of the Lough Corrib SAC. Therefore, no direct impacts/effects are predicted during the construction phase of development.</p> <p>The river Nanny is located approximately 437.61 metres to the northeast of the application site. The river Nanny flows northwest for approximately 3.02km before entering into the Lough Corrib SAC.</p> <p>There are no indirect impacts/effects predicted during the construction phase of development due to the lack of hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.</p> <p>Therefore, no direct/indirect impacts/effects are predicted on the Lough Corrib SAC during the construction or operational phase of development.</p>
<p><b>Operation Phase (Examples)</b></p> <ul style="list-style-type: none"> <li>• Direct emissions to air and water</li> <li>• Surface water runoff containing contaminant/sediment</li> </ul>	<p>The application site is located entirely outside of the Lough Corrib SAC. Therefore, no direct impacts/effects are predicted during the operational phase of development.</p>

<ul style="list-style-type: none"> <li>• Lighting Disturbance</li> <li>• Noise/vibration</li> <li>• Changes to water/groundwater due to drainage/abstraction</li> <li>• Presence of people, vehicles and activities</li> <li>• Physical presence of structures (collision risks)</li> <li>• Potential for accidents/incidents</li> </ul>	<p>The river Nanny is located approximately 437.61 metres to the northeast of the application site. The river Nanny flows northwest for approximately 3.02km before entering into the Lough Corrib SAC.</p> <p>There are no indirect impacts/effects predicted during the operational phase of development due to the lack of hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment.</p> <p>It is proposed to connect to the pre-existing public sewer. Provided this system 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. A pre-connection application has been submitted to Uisce Eireann and we await confirmation / agreement, but no issues are anticipated due to the minor nature of the proposed connection.</p> <p>Surface water will discharge to the pre-existing storm water drain. No impacts/effects are predicted in this regard.</p> <p>Therefore, no direct or indirect impacts/effects are predicted on the Lough Corrib SAC during the operational phase of development.</p>
<p>In combination/ other:</p>	<p>No likely significant in-combination effects are identified.</p>
<p><b>(b) Describe any likely changes to the European site:</b></p>	
<p>Examples of the type of changes to give consideration to include:</p> <ul style="list-style-type: none"> <li>• Reduction/fragmentation of habitat</li> <li>• Disturbance to QI species</li> <li>• Habitat/species fragmentation</li> <li>• Reduction/fragmentation in species density</li> <li>• Changes in key indicators of conservation status value</li> <li>• Changes to areas of sensitivity/threats to QI</li> <li>• Interference with the key relationships that define the structure or ecological function of the site</li> </ul>	<p>No direct or indirect impacts/effects are predicted on the Lough Corrib SAC or the wider Natura 2000 network due to the proposed development during the construction or operational phase of development.</p> <p>This is due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment between the application site and the Lough Corrib SAC.</p>
<p><b>(c) Are 'mitigation' measures necessary to reach a conclusion that likely significant effects can be ruled out at screening?</b></p>	
<p><input checked="" type="checkbox"/> No    <input type="checkbox"/> Yes</p>	

The findings of the screening matrix are summarised in **Table 2.10** below.

**Table 2.10      Stage 1 - Screening Matrix for the Proposed Development**

<p style="text-align: center;"><b>Brief Description of the Project or Plan</b></p>
<p><b>Location:</b> The proposed site is located at Parkmore, Tuam, Co. Galway (Grid Ref: Easting: 144407.67, Northing: 251457.66).</p>

**Distance from Designated Site:** The site for the proposed development lies approximately 3.07km from the Lough Corrib SAC (site code: 000297).

**Brief Description of the Project:** *“This application sets out proposals for construction of 4 no. housing units comprising of 2 no., 2 bed x 2-storey terrace units. The house design types are adopted from the ‘Design Manual for Quality Housing’ Standard Internal Layout (Section 5.9). Houses no. 1 and 2 are adopted from house type H13 and houses no. 3 and 4 are adopted from house type H12. This proposal represents an ideal infill opportunity within the confines of the town 50 kph speed limit zones whilst the land benefits from direct access onto the R332 (Dublin Road) and existing water and power services. The area for this proposed site is 1,180m<sup>2</sup>. The proposed density is 34 units/Ha. The Tuam LAP advises a maximum density of 35 units per hectare in this area. The dwellings will be semi-detached in form.”*

A Site Layout Plan for the proposed development is included as **Appendix A** to this report.

#### Brief Description of the Natura 2000 Site

**Site Designation Status:** The Lough Corrib SAC is designated under EU Habitats Directive (92/43/EEC).

#### Qualifying Features

The Lough Corrib SAC is of conservation significance due to the presence of 15 habitats listed under Annex I of the EU Habitats Directive and 9 species listed under Annex II of the same directive.

#### Qualifying Habitats -Lough Corrib SAC

- Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)
- Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea
- Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.
- Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation
- Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (\* important orchid sites)
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
- Active raised bogs
- Degraded raised bogs still capable of natural regeneration
- Depressions on peat substrates of the Rhynchosporion
- Calcareous fens with Cladium mariscus and species of the Caricion davallianae
- Petrifying springs with tufa formation (Cratoneurion)
- Alkaline fens
- Limestone pavements
- Old sessile oak woods with Ilex and Blechnum in the British Isles

- Bog woodland

Qualifying Species-Lough Corrib SAC

- *Margaritifera margaritifera* (Freshwater Pearl Mussel)
- *Austropotamobius pallipes* (White-clawed Crayfish)
- *Petromyzon marinus* (Sea Lamprey)
- *Lampetra planeri* (Brook Lamprey)
- *Salmo salar* (Salmon)
- *Rhinolophus hipposideros* (Lesser Horseshoe Bat)
- *Lutra lutra* (Otter)
- *Najas flexilis* (Slender Naiad)
- *Hamatocaulis vernicosus* (Slender Green Feather-moss)

Full details of the site are found in the Lough Corrib SAC Site Synopses included as Appendix B to this report.

Unit Size:

Lough Corrib SAC – 25188.15757 ha

ASSESSMENT CRITERIA

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

There are no direct/indirect impacts/effects predicted on the Lough Corrib SAC due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment between the application site and the Lough Corrib SAC.

**Describe any likely direct, indirect or secondary impacts/effects of the project on the Natura 2000 site by virtue of the following;**

**- Size and Scale**

The development site comprises an overall area of 0.118 hectares and the proposed floor 344 sqm. At this size and scale, 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/effects in this regard.

**- Distance from Natura 2000 site or key features of the site**

The site for the proposed development lies approximately 3.07km from the Lough Corrib SAC (site code: 000297). At this distance, no impacts/effects 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/effects (direct, indirect or secondary in nature) on the designated sites in this regard.

**- Emissions**

It is proposed to connect to the pre-existing public sewer. Provided this system 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. A pre-connection application has been submitted to Uisce Eireann and we await confirmation / agreement, but no issues are anticipated due to the minor nature of the proposed connection.

Surface water will discharge to the pre-existing public storm water sewer. No impacts/effects are predicted 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 1-3 years. It is expected that the dwelling will remain in use for at least 100 years. Neither the operation nor the eventual decommissioning of the proposed development is likely to result in direct, indirect, or secondary impacts on the Natura 2000 sites.

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

**- Reduction of Habitat**

There will be no changes in this respect.

**- Disturbance to Key Species**

There will be no changes in this respect.

**- Habitat or Species Fragmentation**

There will be no changes in this respect.

**- Reduction in species density**

There will be no changes in this respect.

**- Changes in key indicators of conservation value**

There will be no changes in this respect.

**- Climate change**

There will be no changes in this respect.

**Describe any likely impacts on the Natura 2000 site as a whole in terms of the following;**

**- Interference with key relationships that define the structure and function of the site**

No impacts are predicted on the Lough Corrib SAC or the Natura 2000 network due to the proposed development.

**Provide Indicators of significance as a result of the identification of effects set out above in terms of the following;**

**- Loss**

No loss is expected.

- **Fragmentation**  
No fragmentation is expected.
- **Disruption**  
No disruption is expected.
- **Disturbance**  
No disturbance is expected.
- **Change to key elements of the site**  
No change is expected

**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.**

There are no direct/indirect impacts/effects predicted on the Lough Corrib SAC due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment between the application and the Lough Corrib SAC.

## CONCLUSIONS

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Planning is being sought to construct a development which will consist of the “*construction of 4 no. housing units comprising of 2 no., 2 bed x 2-storey terrace units. The house design types are adopted from the ‘Design Manual for Quality Housing’ Standard Internal Layout (Section 5.9). Houses no. 1 and 2 are adopted from house type H13 and houses no. 3 and 4 are adopted from house type H12. This proposal represents an ideal infill opportunity within the confines of the town 50 kph speed limit zones whilst the land benefits from direct access onto the R332 (Dublin Road) and existing water and power services. The area for this proposed site is 1,180m<sup>2</sup>. The proposed density is 34 units/Ha. The Tuam LAP advises a maximum density of 35 units per hectare in this area. The dwellings will be semi-detached in form*” in Parkmore, Tuam, Co. Galway. 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 SAC Natura 2000 site.

The site for the proposed development lies approximately 1.84km from the Lough Corrib SAC. As the proposed site is located entirely outside of the Lough Corrib SAC, no direct impacts/effects are predicted during the construction or operational phase of development.

The river Nanny is located approximately 437.61 metres to the northeast of the application site. The river Nanny flows northwest for approximately 3.02km before entering into the Lough Corrib SAC.

There are no indirect impacts/effects predicted on the Lough Corrib SAC or the wider Natura 2000 network during the construction or operational phase of development due to the lack of identifiable hydrological/ecological connector/receptor pathways, the intervening distance, and the intervening urban environment between the application site and the SAC.

It is proposed to connect to the existing public sewer. Provided this system is installed and maintained properly, it is not expected that emissions arising from the development will result in any significant adverse effects on the Lough Corrib SAC or other Natura 2000 sites. A pre-connection application has been submitted to Uisce Eireann and we await confirmation / agreement but no issues are anticipated due to the minor nature of the proposed connection.

Surface water will discharge to the existing public storm sewer. A Confirmation of feasibility has been obtained from Uisce Eireann. No impacts/effects are predicted in this regard.

Therefore, the conclusion of this screening exercise is that no significant impacts/effects are expected on the qualifying interests or conservation objectives of the surrounding 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. 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). **Therefore, a Natura Impact Statement is not required in this case.**





## APPENDIX B-NPWS Site Synopses for Lough Corrib SAC

**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*) [1393] Slender Green Feather-moss (*Drepanocladus vernicosus*) [1833] Slender Naiad (*Najas flexilis*) 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 (*Drepanocladus [Hamatocaulis] vernicosus*) is found at the fen at Gortachalla, north-east

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 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.