

## Karen Byrne

---

**From:** Joan Sugrue <joan@suca.ie>  
**Sent:** Monday 11 May 2026 13:34  
**To:** Appeals2  
**Subject:** Case No' PL-500131-GY Attn Daniel O'Connor  
**Attachments:** Cover Letter.pdf; NIS - F – 2020.02.09 – 190909.pdf; Oughterard RFC combined 2026 Version 4 8th May.pdf

You don't often get email from joan@suca.ie. [Learn why this is important](#)

**Caution:** This is an **External Email** and may have malicious content. Please take care when clicking links or opening attachments. When in doubt, contact the ICT Helpdesk.

Dear Daniel,

Please find attached our submission in response to the FI of 12<sup>th</sup> February 2026. If you require anything else please contact us,

Yours Sincerely,

Joan Sugrue

**Joan Sugrue** BE, MEngSc, MSc, DIC, CEng, MIEI  
Chartered Engineer

**Phone:** 091-550757  
**Mobile:** 086-8989112  
**Email:** [joan@suca.ie](mailto:joan@suca.ie)

**su•ca**  
civil and structural engineers



An Coimisiun Pleanala,  
By email

**Re: CASE NUMBER PL-500131-GY**

Planning Authority Ref No. 24/61227  
Sports and Amenity Development at Lemonfield, Oughterard for  
Oughterard Sports and Recreational Partnership

Dear Sir,

Attached is the information as requested on the 12<sup>th</sup> February 2026. Attached by email is the original NIS (MKO Planning and Environmental) and the updated NIS (Aster Environmental). If you require any further clarifications please contact us,

Yours faithfully,  
Joan Sugrue,

On behalf of  
Oughterard Sports and Recreational Partnership



# **Natura Impact Statement**

Amenity Development,  
Oughterard, County Galway





## DOCUMENT DETAILS

Client: **Oughterard Sports and Recreational Development**

Project Title: **Amenity Development, Oughterard, County Galway**

Project Number: **190909**

Document Title: **Natura Impact Statement**

Document File Name: **NIS - F - 2021.02.09 - 190909**

Prepared By: **MKO  
Tuam Road  
Galway  
Ireland  
H91 VW84**



Rev	Status	Date	Author(s)	Approved By
01	Final	09/02/2021	JOS	PR

# Table of Contents

1.	<b>INTRODUCTION.....</b>	<b>3</b>
1.1	Background.....	3
1.2	Statement of Authority.....	3
2.	<b>CONCLUSIONS OF ARTICLE 6(3) APPROPRIATE ASSESSMENT SCREENING REPORT.....</b>	<b>4</b>
2.1	Lough Corrib SAC.....	4
2.2	Lough Corrib SPA.....	5
3.	<b>DESCRIPTION OF PROPOSED DEVELOPMENT.....</b>	<b>7</b>
3.1	Site Location.....	7
3.2	Characteristics of the Proposed Development.....	7
3.2.1	Description of the project.....	7
3.2.2	Site Drainage.....	8
3.2.3	Flood risk assessment.....	8
4.	<b>CHARACTERISTICS OF THE RECEIVING ENVIRONMENT.....</b>	<b>10</b>
4.1	Ecological Survey Methodologies.....	10
4.1.1	Desk study.....	10
4.1.2	Ecological Multidisciplinary Walkover Surveys.....	10
4.1.3	Botanical surveys.....	10
4.1.4	Otter Survey.....	11
4.1.5	Hen Harrier Roost Survey.....	11
4.2	Desk Study Results.....	11
4.3	Water Quality.....	11
4.3.1	Inland Fisheries Ireland (IFI).....	11
4.3.2	Lough Corrib SAC.....	12
4.3.3	Lough Corrib SPA.....	17
4.4	Ecological Survey results.....	19
4.4.1	Habitats.....	19
4.4.2	Faunal Surveys - Otter.....	26
4.4.3	Birds.....	26
5.	<b>ASSESSMENT OF POTENTIAL ADVERSE EFFECTS.....</b>	<b>27</b>
5.1	Potential for Direct Effects on the European Sites.....	27
5.2	Potential for Indirect Effects on the European Sites.....	27
5.2.1	Deterioration of surface water quality.....	27
5.2.2	Disturbance to Otter (QI of Lough Corrib SAC).....	29
5.2.3	Bird Disturbance/Displacement and Habitat Loss.....	30
6.	<b>ASSESSMENT OF RESIDUAL EFFECTS.....</b>	<b>32</b>
6.1	Lough Corrib SAC [000297].....	32
6.1.1	Oligotrophic waters containing very few minerals of sandy plains ( <i>Littorelletalia uniflorae</i> ) [3110].....	32
6.1.2	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> [3130].....	34
6.1.3	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp.</i> [3140].....	37
6.1.4	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260].....	40
6.1.5	Petrifying springs with tufa formation (Cratoneurion) [7220].....	41
6.1.6	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> * [7210].....	42
6.1.7	Alkaline fens [7230].....	44
6.1.8	Slender naiad ( <i>Najas flexilis</i> ) [1833].....	46



6.1.9	Freshwater Pearl Mussel ( <i>Margaritifera margaritifera</i> ) [1029]	48
6.1.10	Whiteclawed Crayfish ( <i>Austropotamobius pallipes</i> ) [1092]	49
6.1.11	Sea Lamprey ( <i>Petromyzon marinus</i> ) [1095]	51
6.1.12	Brook Lamprey ( <i>Lampetra planeri</i> ) [1096]	52
6.1.13	Salmon ( <i>Salmo salar</i> ) [1106]	53
6.1.14	Otter ( <i>Lutra lutra</i> ) [1355]	54
6.2	Lough Corrib SPA [004042]	56
6.2.1	Wetlands and Waterbirds [A999]	56
6.2.2	Shoveler ( <i>Anas clypeata</i> ) [A056]	56
6.2.3	Black headed gull ( <i>Chroicocephalus ridibundus</i> ) [A179]	57
6.2.4	Common Gull ( <i>Larus canus</i> ) [A182]	57
6.2.5	Common Tern ( <i>Sterna hirundo</i> ) [A193]	58
6.2.6	Common Scoter ( <i>Melanitta nigra</i> ) [A065]	59
6.2.7	Arctic Tern ( <i>Sterna paradisaea</i> ) [A194]	60
6.2.8	Gadwall ( <i>Anas strepera</i> ) [A051]	60
6.2.9	Pochard ( <i>Aythya ferina</i> ) [A059]	60
6.2.10	Tufted Duck ( <i>Aythya fuligula</i> ) [A061]	61
6.2.11	Hen Harrier ( <i>Circus cyaneus</i> ) [A082]	61
6.3	Conclusion of Residual Impact Assessment	61
7.	<b>CUMULATIVE EFFECTS</b>	<b>63</b>
7.1.1	Plans	63
7.1.2	Other Projects	66
7.1.3	Conclusion of Cumulative Assessment	66
8.	<b>CONCLUDING STATEMENT</b>	<b>67</b>
	<b>BIBLIOGRAPHY</b>	<b>68</b>

**Appendix 1** .....Appropriate Assessment Screening Report (AASR)

**Appendix 2** .....Site Layout Drawings

# 1. INTRODUCTION

## 1.1 Background

McCarthy Keville O'Sullivan Ltd. (MKO) has been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Appropriate Assessment of the proposed development of lands at Lemonfield, Pier Road, Oughterard for mixed amenity use.

An Appropriate Assessment Screening Report has been prepared and is provided in Appendix 1. This Article 6(3) Appropriate Assessment Screening Report has identified the European Sites upon which the proposed development has the potential to result in significant effects and the pathways by which those effects may occur. It has also identified those qualifying interests/special conservation interests that have the potential to be affected by the proposed development.

This report has been prepared in accordance with the European Commission guidance document Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001), European Communities (2018) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission and the Department of the Environment's Guidance on the Appropriate Assessment of Plans and Projects in Ireland (December 2009, amended February 2010).

In addition to the guidelines referenced above, the following relevant guidance was considered in preparation of this report:

1. *European Communities (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission,*
2. *Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission,*
3. *EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC - Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. European Commission.*

## 1.2 Statement of Authority

An ecological baseline survey undertaken on the 17/09/2019 by James Owens (B.Sc., M.Sc.). James is an experienced ecologist with over four years professional experience and is a competent expert in undertaking habitat and ecological assessments to this level.

A follow up walkover survey, including a dusk and dawn hen harrier roost survey was undertaken on the 20<sup>th</sup> and 21<sup>st</sup> of January 2021 by Julie O'Sullivan (B.Sc., M.Sc.). This report has been prepared Julie O'Sullivan. Julie is an experienced ecologist with over five years' experience. This report has been reviewed by Pat Roberts (B.Sc., MCIEEM) who has over 15 years of experience in management and ecological assessment.

2.

## CONCLUSIONS OF ARTICLE 6(3) APPROPRIATE ASSESSMENT SCREENING REPORT

The Article 6(3) Appropriate Assessment Screening report, that is provided as Appendix 1 to this NIS, identified the potential for the proposed development to result in significant effects on the following European Sites:

- > Lough Corrib SAC
- > Lough Corrib SPA

Each of these sites is discussed individually below in terms of the Qualifying Interests/Special Conservation Interests with the potential to be affected and the pathways by which any such effects may occur. The location of the proposed development is provided as Figure 2.1.

2.1

### Lough Corrib SAC

The individual pathways for effect that were identified in Table 3.1 of the AA Screening Report (Appendix 1) and the QIs with the potential to be affected are described below.

Drainage ditches within the site have potential surface water connectivity with Lough Corrib SAC. Taking a precautionary approach, the works have potential, in the absence of mitigation, to impact on surface water quality and downstream aquatic ecological receptors through the release of pollutants including hydrocarbons, fuel, cement and sedimentation.

A potential pathway for indirect effects on the below listed aquatic QIs of the SAC was identified in the form of deterioration in water quality during the construction and operational phases of the development:

- > 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.
- > Slender Naiad (*Najas flexilis*)
- > Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*\*
- > Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation
- > Alkaline fens
- > Petrifying springs with tufa formation (Cratoneurion)
- > *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]
- > White-clawed Crayfish (*Austropotamobius pallipes*)
- > Brook Lamprey (*Lampetra planeri*)
- > Sea Lamprey (*Petromyzon marinus*)
- > Salmon (*Salmo salar*)
- > Otter (*Lutra lutra*)

Potential for indirect disturbance to Otter was also identified with regard to Lough Corrib SAC.

## Lough Corrib SPA

The individual pathways for effect that were identified in Table 3.1 of the AA Screening Report (Appendix 1) and the SCIs with the potential to be affected are described below.





Drainage ditches within the site have potential surface water connectivity with Lough Corrib SPA. Taking a precautionary approach, the works have potential, in the absence of mitigation, to impact on surface water quality and downstream aquatic ecological receptors through the release of pollutants including hydrocarbons, fuel, cement and sedimentation.

A potential pathway for indirect effects on the 'Wetlands' SCI of Lough Corrib SPA was identified in the form of deterioration in water quality during the construction and operational phases of the development. The potential effects require further assessment and will be considered under the conservation objectives for the Wetland and waterbirds [A999] SCI. Potential effects on all SCI species are also considered under Wetland and waterbirds [A999].

Given the proximity of the proposed development site to Lough Corrib SPA (112m), on a precautionary basis, the potential for indirect effects to the following listed SCI species in terms of habitat loss, disturbance/displacement has also been identified:

- > Gadwall (*Anas strepera*) [A051]
- > Shoveler (*Anas clypeata*) [A056]
- > Pochard (*Aythya ferina*) [A059]
- > Tufted Duck (*Aythya fuligula*) [A061]
- > Common Scoter (*Melanitta nigra*) [A065]
- > Hen Harrier (*Circus cyaneus*) [A082]
- > Coot (*Fulica atra*) [A125]
- > Golden Plover (*Pluvialis apricaria*) [A140]
- > Black-headed Gull (*Chroicocephalus ridibundus*) [A179]
- > Common Gull (*Larus canus*) [A182]
- > Common Tern (*Sterna hirundo*) [A193]
- > Arctic Tern (*Sterna paradisaea*) [A194]
- > Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]

**Map Legend**

-  Site boundary - Propose Development
-  Special Protection Area (SPA)
-  Special Area of Conservation (SAC)
-  Permitted development

Microsoft product screen shots reprinted with permission from Microsoft Corporation  
 Ordnance Survey Ireland Licence No. AR 0021821 © Ordnance Survey Ireland/Government of Ireland



**Site Location**

Project Title	Doughterard RFC, Lemenfield Pitches
Client	JOS
Project No.	PR
Scale	1:15000
Figure No.	190909
Date	01.02.2021

**MKO**  
 Planning and Environmental Consultants  
 100 Park Road, Carrigrohane, Co. Cork  
 T: +353 (0)70 719611  
 Email: info@mkokork.ie  
 Website: www.mkokork.ie



### 3. DESCRIPTION OF PROPOSED DEVELOPMENT

#### 3.1 Site Location

The proposed development is located in Lemonfield, Oughterard, Co. Galway (IG Ref: M 13111 43324). The site is located approximately 850m north-east of Oughterard Village and is accessible via Pier Road to the north-west and the old bog road to the south-east.

Lough Corrib SAC (000297) is located 19.6m north-west, and Lough Corrib SPA (004042) is located 112m north-west of the proposed development site.

The site location of the proposed development is shown in Figure 2.1.

#### 3.2 Characteristics of the Proposed Development

##### 3.2.1 Description of the project

Oughterard Sports and Recreational Partnership (OSRP) wish to develop the site at Lemonfield for mixed amenity use, to allow for wider community and social inclusion and offer a broader range of services to all their stakeholders.

The proposed development consists of:

- > Grass / sand pitches for ball sports and for camping and accommodation of scouting jamborees,
- > Building facilities to include meeting rooms, sanitary facilities and showers,
- > Bus and coach set down, parking and turning facilities
- > Storage facilities for sporting and maintenance equipment, canoes, etc.,
- > Kiosk facilities accommodating water sports operators,
- > Security fencing and secure site compounds,
- > Advertising hoarding,
- > Lighting,
- > Access roads,
- > All associated landscaping.

There will be minimal stone brought in from outside (to build roads and parking) as stone will be reused from the site (from the construction of the pitch). Peat will remain in place and geogrids and stone capping layers will be used under roads rather than excavating out to rock.

Construction commenced on a grass playing pitch within the southern section of the site in the latter half of 2020, under a planning exemption certificate. The pitch is currently under construction and will be completed in Spring 2021. This pitch occurs within the red line boundary of the proposed development site but will not form part of this assessment.

The proposed site layout and design drawings are included in Appendix 2 of this report.

### 3.2.2 Site Drainage

#### Wastewater treatment

A Site Suitability Assessment was carried out on site by O'Halloran Engineering, to determine the feasibility of onsite effluent treatment. The assessment was carried out in accordance with the requirements of the 'EPA Code of practice wastewater treatment and disposal systems serving single houses. The relevant conclusions of this report have been summarised below.

The deep well drained mineral soils to the rear of the site offer the only viable solution for onsite treatment of effluent. This places any building with an optimum position towards the rear southern part of the site where the boundaries open out and the soil is better.

The site suitability assessment concluded that the proposed site is suitable for a packaged wastewater treatment system and polishing filter with discharge to ground. A secondary wastewater treatment system (EuroTank BAF43) will be installed, with a population equivalent of 40 with discharge to a pumped sand polishing filter of 60 sqm. The position of this is indicated on Drawing No. ORSP- 001. The proposed foul sewer drainage system will be installed in accordance with Irish Water's Code of Practice for Wastewater Infrastructure. Further details on the wastewater treatment system and soil polishing filter proposed are provided in Appendix 2 to this report.

#### Surface Water

All surface water runoff from the car parks within the site will go through a petrol interceptor then discharge to site a soak-pit, which will comply with BRE Digest 365, or an attenuation tank, before discharging to an open drain.

The grass pitches will comprise perimeter drains, collector drains with secondary drains perpendicular to collector drains. All drains will be gathered to trench soakaways, soakpits and/or attenuation tanks before controlled discharge to open course drainage ditches.

### 3.2.3 Flood risk assessment

A flood risk assessment was carried out for the proposed development and the findings of the flood risk assessment are summarised below.

The primary source of potential flood risk at the proposed subject site is fluvial flooding/lake flooding from Owenriff river/Lough Corrib to the North of the subject site.

The FRM Guidelines use flood zones to determine the likelihood of flooding and for flood risk management within the planning process. The three flood zones levels are:

- Flood Zone A –where the probability of flooding from rivers and the sea is highest (greater than 1% AEP (Annual Exceedance Probability) or 1 in 100 for river flooding);
- Flood Zone B –where the probability of flooding from rivers and the sea is moderate (between 0.1% AEP or 1 in 1000 and 1% AEP or 1 in 100 for river flooding);
- Flood Zone C –where the probability of flooding from rivers and the sea is low (less than 0.1% AEP or 1 in 1000 for both river and coastal flooding). Flood Zone C covers all areas outside zones A and B.

The Catchment Flood Risk Assessment and Management (CFRAM) map for the area indicates that the majority of the proposed development is located in Flood Zone C. A small portion of the land the North part of the subject site is located in flood zone A and flood zone B.

The infrastructure proposed for the area of the site within flood zone A and flood zone B include the coach park and amenity area and are considered water compatible developments as per Planning Systems and Flood Risk Management guidelines (OPW, 2009). Water-compatible development includes amenity open space, outdoor sports and recreation, and associated essential infrastructure, as detailed in Table 3.1 of the Guidelines, thus the development would be considered appropriate in this zone.

Groundwater flood risk from karst features is not a relevant flood mechanism and flood risk from rise of water table is based on the fluvial flood risk levels. Therefore, the flood risk from rise of water table is same as for fluvial flood risk as noted above.

Pluvial flood risk is also a relevant flood mechanism and the existing open drains intercept some of these low-lying areas.

The flood risk assessment concludes that the major portion of the proposed development is water compatible development; this development is feasible as per this preliminary assessment of the flood risks.

4.

## CHARACTERISTICS OF THE RECEIVING ENVIRONMENT

The ecological surveys that were undertaken to inform this NIS are fully described in this section. A general description of the ecology of the site of the proposed development is provided in the AA Screening Report in Appendix 1. The specific surveys that were undertaken to assess the potential effects on the identified European Sites are described below.

4.1

### Ecological Survey Methodologies

4.1.1

#### Desk study

The desk study undertaken for this assessment included a thorough review of the available ecological data associated with the study area of the proposed development. Sources of data included the following:

- Review of NPWS Conservation Objectives supporting documents, site synopsis, standard data forms and supporting documents for EU Designated Sites,
- Review of online web-mappers: National Parks and Wildlife Service (NPWS), Environmental Protection Agency (EPA), IFI fish maps
- Review of the publicly available National Biodiversity Data Centre (NBDC) web-mapper,
- Review of NPWS Article 17 metadata and GIS database.

4.1.2

#### Ecological Multidisciplinary Walkover Surveys

Multi-disciplinary ecological walkover surveys were undertaken in accordance with NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009). This survey provided baseline data on the ecology of the study area and assessed whether further more detailed habitat or species-specific ecological surveys were required. The multi-disciplinary ecological walkover survey comprehensively covered the entire study area.

Habitats were classified in accordance with the Heritage Council's 'Guide to Habitats in Ireland' (Fossitt, 2000). Habitat mapping was undertaken with regard to guidance set out in 'Best Practice Guidance for Habitat Survey and Mapping' (Smith et al., 2011). Plant nomenclature for vascular plants follows 'New Flora of the British Isles' (Stace, 2010), while mosses and liverworts nomenclature follows 'Mosses and Liverworts of Britain and Ireland - a field guide' (British Bryological Society, 2010).

The walkover survey was designed to detect the presence, or suitable habitat for a range of protected faunal species that are may occur in the vicinity of the proposed development. During the multidisciplinary survey, a search for Invasive Alien Species (IAS), with a focus on those listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011), was also conducted.

The walkover survey was undertaken on 17/09/2019 by James Owens (BSc, MSc). The survey timing falls within the recognised optimum period for vegetation surveys/habitat mapping, i.e. April to September (Smith et al., 2011).

4.1.3

#### Botanical surveys

A botanical survey was carried out in the cutover peat habitat. Detailed relevés were recorded in the cutover peat habitat within the northern section of the proposed development site. The peatland vegetation community was identified and classified using the IVC Classification system. Vegetation

relevé data recorded during the field survey (2m x 2m) was formatted and uploaded to the online ERICA database. This programme assesses the data against a reference database of vegetation communities and assigns the relevé data a community classification. This is a robust assessment allowing for accurate vegetation community assignment.

#### 4.1.4 Otter Survey

An Otter survey was conducted as per NRA (2009) guidelines (*Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*) in order to determine the presence or absence of Otter signs within the areas identified as having potential to support the species. This involved a search for all Otter signs e.g. spraints, scat, prints, slides, trails, couches and holts along drainage ditches (including a 10m buffer) within the proposed development site (NPWS 2009, *Threat Response Plan: Otter* (2009-2011)).

#### 4.1.5 Hen Harrier Roost Survey

The site was surveyed for the presence of roosting hen harrier in January 2021. Dusk and dawn surveys were carried out on the evening of the 20<sup>th</sup> and the morning of the 21<sup>st</sup> of January. Details of the survey effort are shown in Table 4-1.

Survey work was undertaken in accordance with methodology devised by Hardey *et al.* (2013) and the 'Irish Hen Harrier Winter Roost Survey guide', (O'Donoghue, 2019). The survey methodology employed required a targeted vantage point (VP) survey using binoculars. Prior to the commencement of the survey, an initial walkover of the site was undertaken to identify a suitable vantage point. The survey area focussed the northern section of the development site that had suitable potential roosting habitat for hen harrier, in the form of gorse scrub.

Table 4-1 Hen Harrier Roost Survey Effort

Date	Start	End	Sunset/sunrise	Weather conditions
20/01/21	16:18	18:30	16:58	Clear; Visibility 2km, Wind: Calm, no rain. Cloud cover 50%
21/01/21	07:39	09:10	08:39	Clear; Visibility 2km, Wind: Calm, light rain showers, Cloud cover 90%

## 4.2 Desk Study Results

### 4.3 Water Quality

The EPA web-mapper (<https://gis.epa.ie/EPAMaps/>) was consulted on the 22/01/2021 regarding the water quality and status of the nearby Lough Corrib (Corrib Upper IE\_WE\_30\_666b). Lough Corrib was assigned 'good' status in the Water Framework Directive monitoring program for the period 2013-2018. Lough Corrib was assessed as 'not at risk' and therefore meets its Water Framework Directive objectives.

#### 4.3.1 Inland Fisheries Ireland (IFI)

Lough Corrib (Lough Corrib Upper WE\_30\_666b) was surveyed as part of the Water Framework Directive fish monitoring surveys in 2011 and 2014.

In 2011 this section of the lake had a draft fish ecological status ‘poor’ and a species richness of eight with species recorded including bream, brown trout, European eel, perch, pike, roach, roach x bream hybrid, roach x rudd hybrid, tench and three-spined stickleback.

In 2014 this section of the lake had a draft fish ecological status ‘good’ and a species richness of eight with recorded species including bream, brown trout, brown trout (*ferox*), European eel, perch, pike, roach, roach x bream hybrid, salmon and three-spined stickleback.

### 4.3.2 Lough Corrib SAC

The following QI habitats and QI Species have the potential to be affected through deterioration of surface water due to pollution during the construction and operational phase of the development:

- 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.
- Slender Naiad (*Najas flexilis*)
- Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*\*
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation
- Alkaline fens
- Petrifying springs with tufa formation (*Cratoneurion*)
- *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]
- White-clawed Crayfish (*Austropotamobius pallipes*)
- Brook Lamprey (*Lampetra planeri*)
- Sea Lamprey (*Petromyzon marinus*)
- Salmon (*Salmo salar*)
- Otter (*Lutra lutra*)

Potential for indirect disturbance to Otter was also identified with regard to Lough Corrib SAC.

#### 4.3.2.1 Review of conservation objectives

The relevant QIs and the associated conservation objectives are presented in Table 4-2.

Table 4-2 Qualifying Interest and Conservation Objectives (Version 01, 2017)

Qualifying Interest	Conservation Objective
Oligotrophic waters containing very few minerals of sandy plains ( <i>Littorelletalia uniflorae</i> )	To restore the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains ( <i>Littorelletalia uniflorae</i> ) in Lough Corrib SAC
Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i>	To restore the favourable conservation condition of Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> in Lough Corrib SAC
Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	To restore the favourable conservation condition of Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. in Lough Corrib SAC
Slender Naiad ( <i>Najas flexilis</i> )	To restore the favourable conservation condition of Slender Naiad in Lough Corrib SAC

Qualifying Interest	Conservation Objective
Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliana</i> *	To maintain the favourable conservation condition of Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliana</i> * in Lough Corrib SAC
Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	To maintain the favourable conservation condition of Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation in Lough Corrib SAC
Alkaline fens	To maintain the favourable conservation condition of alkaline fens in Lough Corrib SAC
Petrifying springs with tufa formation ( <i>Cratoneurion</i> )	To maintain the favourable conservation condition of Petrifying springs with tufa formation ( <i>Cratoneurion</i> )* in Lough Corrib SAC
<i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]	To restore the favourable conservation condition of Freshwater Pearl Mussel in Lough Corrib SAC
White-clawed Crayfish ( <i>Austropotamobius pallipes</i> )	To maintain the favourable conservation condition of White-clawed Crayfish in Lough Corrib SAC
Brook Lamprey ( <i>Lampetra planeri</i> )	To maintain the favourable conservation condition of Brook Lamprey in Lough Corrib SAC
Sea Lamprey ( <i>Petromyzon marinus</i> )	To restore the favourable conservation condition of Sea Lamprey in Lough Corrib SAC
Salmon ( <i>Salmo salar</i> )	To maintain the favourable conservation condition of Atlantic Salmon in Lough Corrib SAC
Otter ( <i>Lutra lutra</i> )	To maintain the favourable conservation condition of Otter in Lough Corrib SAC

#### 4.3.2.2 Review of site-specific pressures and threats

As per the Natura 2000 Data Form, the site-specific threats, pressures and activities with potential to impact on the SAC were reviewed and considered in relation to the proposed development. These are provided in Table 4-3.

Table 4-3 Site-specific threats, pressures and activities

Negative Impacts		
Rank	Threats and Pressures	
(High)	A02.01	Agricultural intensification
(High)	I01	Invasive non-native species
(Medium)	D03.01.02	Piers / tourist harbours or recreational piers
(High)	H01.08	Diffuse pollution to surface waters due to household sewage and waste waters
(Medium)	E01.01	Continuous urbanization
(Medium)	B01	Forest planting on open ground
(Medium)	J02.01.03	Infilling of ditches, dykes, ponds, pools, marshes or pits
(Low)	C01.01	Sand and gravel extraction

Negative Impacts		
Rank	Threats and Pressures	
(Medium)	A04.03	Abandonment of pastoral systems, lack of grazing
(Medium)	J02.15	Other human induced changes in hydraulic conditions
(Medium)	D01	Roads, paths and railroads
(High)	G05	Other human intrusions and disturbances
(Medium)	A10.01	Removal of hedges and copses or scrub
(High)	C01.03.02	Mechanical removal of peat
(Low)	E03.01	Disposal of household / recreational facility waste
(Medium)	A08	Fertilisation
(Medium)	E01.03	Dispersed habitation

Pathways for impact with regard to *Diffuse pollution to surface waters due to household sewage and waste waters (H01.08)*, *Disposal of household / recreational facility waste (E03.01)*, *Other human intrusions and disturbances (G05)* were identified.

### 4.3.2.3 Qualifying Interests

#### 4.3.2.3.1 Freshwater Pearl Mussel (*Margaritifera margaritifera*)

The conservation objective applies to the Owenriff freshwater pearl mussel population in Lough Corrib SAC, which is of international importance and one of eight Irish populations prioritised for conservation action (Moorkens, 2010; NPWS, 2011). Its distribution is well-documented and full baseline monitoring took place in 2004 (Moorkens, 2004). The species is widespread in the Owenriff catchment, being found in the lower reaches of the Glengawbeg River, from Lough Agraftard to just upstream of the mouth of Lough Corrib in the Owenriff, and also in the Derrygauna tributary (Moorkens, 2004; NPWS, 2010).

The Owenriff population was estimated as c.1 million in 2009 (NPWS, 2010). NPWS (2013) estimated that it had reduced to 940,000 in 2012, based on a 1% per year decline owing to insufficient recruitment. Declines were detected in 2011, 2014 and 2015. A large kill followed a drought in 2014 (Moorkens, 2015). The Owenriff population has been surveyed frequently since the 1990s, and monitored regularly since the baseline survey in 2004 (Moorkens, 2004, 2005, 2006, 2009, 2015, 2017; Moorkens and Killeen, 2008, 2014). Mussels are abundant (over 250 per 100m, often 150/m<sup>2</sup>) from the hatchery at Canrawer East to upstream of Oughterard wastewater treatment plant (WWTP) discharge (Moorkens, 2004).

#### 4.3.2.3.2 White-clawed Crayfish (*Austropotamobius pallipes*)

The distribution of white-clawed crayfish within Lough Corrib SAC is illustrated on Map 10 of the site-specific conservation objective document (NPWS, 2017). According to the site-specific conservation objectives white-clawed crayfish (*Austropotamobius pallipes*) the distribution of crayfish in Lough

Corrib is uncertain. It certainly occurs in three 1km squares in the northern section of the lower basin (M2341, M2342, M2941) and is probably more widely distributed.

#### 4.3.2.3.3 Brook Lamprey (*Lampetra planeri*)

According to the site-specific conservation objectives document (NPWS, 2017), 50% of surveyed sites in the catchment were positive in 2013 (IFI, unpublished data) compared with 49% in 2006 (O'Connor, 2007).

#### 4.3.2.3.4 Sea Lamprey (*Petromyzon marinus*)

According to the site-specific conservation objects document "Sea lamprey (*Petromyzon marinus*) congregate and build spawning nests in the River Corrib in Galway city, both up- and downstream of the Salmon Weir Bridge. Their further upstream passage is impeded by the regulating weir immediately upstream. The combination of barriers to passage and low flows can impede further upstream passage in Irish catchments and prevent or reduce penetration and extensive colonisation (Gargan et al., 2011; Rooney et al., 2015). Sea lamprey have been recorded passing through the denil fish passage facility at the regulating weir" (NPWS, 2017).

According to the catchment wide survey of the Corrib for Juvenile Lamprey populations (O'Connor, 2007):

*'Sea lampreys are present in the Corrib catchment but seem to be confined to below the Galway Regulating Weir. Although there are records of sea lampreys in some of the tributaries of Lough Corrib (Kurz & Costello, 1999), these records pre-date the construction of the existing weir. Sea lampreys are known to spawn below the weir and have been recently seen by fisheries board staff in Galway (Seamus Hartigan, pers. comm.). However, the success of sea lamprey spawning activity below the regulating weir is unknown.'*

#### 4.3.2.3.5 Salmon (*Salmo salar*)

According to the site-specific conservation objectives document (NPWS, 2017), there are no barriers to migration of salmon (*Salmo salar*) in Lough Corrib SAC. Salmon spawn in the headwaters of Lough Corrib tributaries.

Lough Corrib (Lough Corrib Upper WE\_30\_666b) was surveyed as part of the Water Framework Directive fish monitoring surveys in 2011 and 2014. Salmon were recorded in Lough Corrib during the 2014 survey. Salmon have been recorded in the Owenriff River upstream of the site at the recording station (1km d/s of Lough Agraiffard\_A) in 2010.

#### 4.3.2.3.6 Otter (*Lutra lutra*)

The extent of terrestrial commuting otter habitat is illustrated on Map 12 of the site-specific conservation objective document (NPWS, 2017). According to the site-specific conservation objectives (NPWS, 2013) the extent of freshwater (river) habitat is 314.2km. The river length calculated on the basis that otters will utilise freshwater habitats from estuary to headwaters. The site-specific conservation objective document states that areas mapped should include 10m terrestrial buffer along shoreline and river banks identified as critical for otters (NPWS, 2007).

#### 4.3.2.3.7 Slender Naiad (*Najas flexilis*)

According to the Conservation objectives supporting document- *Najas flexilis* (version 1, NPWS, 2017), *Najas flexilis* has only been recorded on one occasion from one location in Lough Corrib. The record was made in 1986, in the north-western bay of the lake, at the mouth of the Bealnabrack river near

Maam Bridge. It is possible that the Lough Corrib population of *Najas flexilis* has become extinct since 1986.

#### 4.3.2.3.8 **Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation**

According to the site-specific conservation objectives (NPWS, 2017) little is known, about the characteristics or sub-types of this habitat within the Lough Corrib SAC. Most of the rivers are in arterial drainage schemes that have altered aquatic plant distribution and species composition.

#### 4.3.2.3.9 **Alkaline fen**

Alkaline fens have not been mapped in detail for Lough Corrib SAC and thus total area of the qualifying habitat is unknown. While the full extent of Annex I fen habitats (both this habitat and Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* (7210)) within the SAC is currently unknown, their area is extensive and they often occur in association with and transitional to other habitats including *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (6410), Active raised bogs (7110), Petrifying springs with tufa formation (*Cratoneurion*) (7220) and Limestone pavements (8240) (NPWS internal files).

This habitat was not recorded within the proposed development site however, potential for indirect impacts on this QI exists via potential for deterioration in water quality associated with the construction and operation of the proposed development.

#### 4.3.2.3.10 **Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*\***

Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* have not been mapped in detail for Lough Corrib SAC and thus total area of the qualifying habitat is unknown. While the full extent of Annex I fen habitats (both this habitat and Alkaline fens (7230)) within the SAC is currently unknown, their area is extensive and they often occur in association with and transitional to other habitats including *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (6410), Active raised bogs (7110), Petrifying springs with tufa formation (*Cratoneurion*) (7220) and Limestone pavements (8240) (NPWS internal files).

This habitat was not recorded within the proposed development site however, potential for indirect impacts on this QI exists via potential for deterioration in water quality associated with the construction and operation of the proposed development.

#### 4.3.2.3.11 **Petrifying springs with tufa formation (*Cratoneurion*)\* in Lough Corrib SAC**

Petrifying springs with tufa formation (*Cratoneurion*) have not been mapped within Lough Corrib SAC. The total area of the qualifying habitat in the SAC is unknown. The necessary ecological conditions required for this habitat occur around Lough Corrib. It is often associated with other habitats including Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* (7210), Alkaline fens (7230) and Limestone pavements (8240).

This habitat was not recorded within the proposed development site however, potential for indirect impacts on this QI exists via potential for deterioration in water quality associated with the construction and operation of the proposed development.

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

According to the site-specific conservation objectives document the distribution of lake habitat 3110 in Lough Corrib SAC has not been fully surveyed (NPWS, 2017). Krause and King (1994) recorded it in the "western arm proper". Within Lough Corrib, it is likely to be restricted to this 'western arm' (the north-western bay). It may, however, 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.

This habitat was not recorded within the proposed development site however, potential for indirect impacts on this QI exists via potential for deterioration in water quality associated with the construction and operation of the proposed development.

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

According to the site-specific conservation objectives document the full distribution and characteristics of lake habitat 3130 in Lough Corrib SAC have not been mapped (NPWS, 2017). 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.

This habitat was not recorded within the proposed development site however, potential for indirect impacts on this QI exists via potential for deterioration in water quality associated with the construction and operation of the proposed development.

#### 4.3.2.3.14 **Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.**

According to the site-specific conservation objectives document the hard water lake habitat (3140) is found in Lough Corrib, notably the southern basin (NPWS, 2017). 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.

This habitat was not recorded within the proposed development site however, potential for indirect impacts on this QI exists via potential for deterioration in water quality associated with the construction and operation of the proposed development.

### 4.3.3 **Lough Corrib SPA**

The following downstream aquatic SCI habitats have the potential to be affected through deterioration of surface water due to pollution during the construction phase of the development.

#### ➤ Wetlands and waterbirds

Potential effects on all SCI species are also considered under Wetland and Waterbirds [A999]. Given the proximity of the proposed development site to Lough Corrib SPA (112m), on a precautionary basis the potential for indirect effects to the following listed SCI species in terms of habitat loss, disturbance/displacement has also been identified;

- Gadwall (*Anas strepera*) [A051]
- Shoveler (*Anas clypeata*) [A056]
- Pochard (*Aythya ferina*) [A059]
- Tufted Duck (*Aythya fuligula*) [A061]
- Common Scoter (*Melanitta nigra*) [A065]
- Hen Harrier (*Circus cyaneus*) [A082]
- Coot (*Fulica atra*) [A125]

- Golden Plover (*Pluvialis apricaria*) [A140]
- Black-headed Gull (*Chroicocephalus ridibundus*) [A179]
- Common Gull (*Larus canus*) [A182]
- Common Tern (*Sterna hirundo*) [A193]
- Arctic Tern (*Sterna paradisaea*) [A194]
- Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]

#### 4.3.3.1 Review of Conservation Objectives

The relevant SCI and the associated conservation objective is presented in Table 4-6. The target and attributes for this habitat, as described in the Site-specific Conservation Objectives document, were reviewed and considered in this assessment.

Table 4-4 Qualifying Interest and Conservation Objectives (Version 06, NPWS, 2018)

Special Conservation Interest (SCI)	Conservation Objective
Wetland and Waterbirds	To maintain or restore the favourable conservation condition of the wetland habitat at Lough Corrib SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.
Gadwall ( <i>Anas strepera</i> ) [A051]	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.
Shoveler ( <i>Anas clypeata</i> ) [A056]	
Pochard ( <i>Aythya ferina</i> ) [A059]	
Tufted Duck ( <i>Aythya fuligula</i> ) [A061]	
Common Scoter ( <i>Melanitta nigra</i> ) [A065]	
Hen Harrier ( <i>Circus cyaneus</i> ) [A082]	
Coot ( <i>Fulica atra</i> ) [A125]	
Golden Plover ( <i>Pluvialis apricaria</i> ) [A140]	
Black-headed Gull ( <i>Chroicocephalus ridibundus</i> ) [A179]	
Common Gull ( <i>Larus canus</i> ) [A182]	
Common Tern ( <i>Sterna hirundo</i> ) [A193]	
Arctic Tern ( <i>Sterna paradisaea</i> ) [A194]	
Greenland White-fronted Goose ( <i>Anser albifrons flavirostris</i> ) [A395]	

#### 4.3.3.2 Review of site-specific pressures and threats

As per the Natura 2000 Data Form, the site-specific threats, pressures and activities with potential to effect on the SPA were reviewed and considered in relation to the proposed development. These are provided in Table 4-7.

Table 4-5 Site-specific threats, pressures and activities

Negative Impacts		
Rank	Threats and Pressures	
Medium	A08	Fertilisation
Medium	B	Sylviculture, forestry
High	F03.01	Hunting
Low	G01.01	Nautical sports
High	E01	Urbanised areas, human habitation
High	F02.03	Leisure fishing
Low	A04	Grazing

Pathways for impact with regard to the site-specific threats, pressures 'Urbanised areas, human habitation (E01)' were identified.

#### 4.3.3.3 Wetlands and Waterbirds

The following relevant information has been extracted from the NPWS site synopsis and Natura 2000 Data Form for the SPA:

*'The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Greenland White-fronted Goose, Gadwall, Shoveler, Pochard, Tufted Duck, Common Scoter, Hen Harrier, Coot, Golden Plover, Black-Headed Gull, Common Gull, Common Tern and Arctic Tern. The site is also of special conservation interest for holding an assemblage of over 20,000 wintering waterbirds. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetlands & Waterbirds.*

*Lough Corrib SPA is an internationally important site which supports in excess of 20,000 wintering waterbirds, including a population of Pochard that is, itself, of international importance. A further six species of wintering waterfowl have populations of national importance. The site also contains a nationally important communal roost site for Hen Harrier. Lough Corrib is the most important site in the country for breeding Common Scoter. Its populations of breeding gulls and terns are also notable, with nationally important numbers of Black-headed Gull, Common Gull, Common Tern and Arctic Tern occurring. It is of note that several species which regularly occur are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Greenland White-fronted Goose, Hen Harrier, Golden Plover, Common Tern and Arctic Tern. Lough Corrib is a Ramsar Convention site.'*

### 4.4 Ecological Survey results

#### 4.4.1 Habitats

A dedicated habitat survey of the area within and in the vicinity of the proposed development was undertaken on the 17<sup>th</sup> of September 2019, with a follow up survey on the 20<sup>th</sup> and 21<sup>st</sup> of January 2021.

The habitat classification provided in this report correspond to those described in ‘A Guide to Habitats in Ireland’ (Fossitt, 2000). The habitats recorded during the site visit are listed below in Table 4-10 and a habitat map is provided in Figure 4-1.

Table 4-6 Habitats recorded within the proposed works area and their respective codes.

Habitat	Code
Drainage ditches	FW4
Dry calcareous and neutral grassland	GS1
Wet grassland	GS4
Scrub	WS1
Cutover bog	PB4
Buildings and artificial surfaces	BL3
Treeline	WL2

The northern third of the site contains an area of Cutover bog (PB4) which would have been originally been part of a wider raised bog complex. The area of Cutover bog (PB4) is drained by a number of Drainage ditches (FW4) and gorse (*Ulex europaeus*) Scrub (WS1) has encroached on large areas (Plate 4-1). The Cutover bog (PB4) habitat is dominated by purple moor-grass (*Molinia caerulea*) throughout and by bog myrtle (*Myrica gale*) in parts (Plate 4-2). Other species recorded in lesser abundance include devil’s-bit scabious (*Succisa pratensis*), ling heather (*Calluna vulgaris*), bog asphodel (*Narthecium ossifragum*), tormentil (*Potentilla erecta*), cross-leaved heath (*Erica tetralix*), soft rush (*Juncus effusus*), carnation sedge (*Carex panicea*), *Sphagnum palustre*, *Sphagnum fallax* and *Aulacomnium palustre*. Peat depths were between 1-2m.



*Plate 4-1 Gorse Scrub (WS1) and Drainage ditch (FW4) in the right foreground*



*Plate 4-2 Purple moor-grass and bog myrtle dominated Cutover bog (PB4) with encroaching Scrub (WS1)*

Semi-improved Dry calcareous and neutral grassland (GS1) and Wet grassland (GS4) comprised the majority of the southern two-thirds of the site (Plates 4-3 and 4-4). Dry calcareous and neutral grassland

(GS1) was recorded on slightly raised areas with better drainage and consisted of Yorkshire fog (*Holcus lanatus*), common bent (*Agrostis capillaris*), perennial ryegrass (*Lolium perenne*), white clover (*Trifolium repens*), ribwort plantain (*Plantago lanceolata*) and mouse-ear chickweed (*Cerastium fontanum*). Areas of Wet grassland (GS4) consisted of creeping bent (*Agrostis stolonifera*), Yorkshire fog, soft rush, creeping buttercup (*Ranunculus repens*), marsh thistle (*Cirsium palustre*), floating sweet-grass (*Glyceria fluitans*), broad-leaved dock (*Rumex obtusifolius*) and greater bird's-foot trefoil (*Lotus uliginosus*). Gorse Scrub (WS1) has encroached on part of the Wet grassland (GS4) and forms a mosaic in this area. A number of scattered mature downy birch (*Betula pubescens*) and willow (*Salix* spp.) trees were recorded within the grassland area.

Treelines (WL2) form the site boundary to the north, along the road, part of the eastern boundary, the southern boundary and part of the western boundary (Plate 5-5). Tree species included willow, downy birch, ash (*Fraxinus excelsior*) and whitethorn (*Crataegus monogyna*).

A galvanise and block shed at the southern end of the site was categorised as Buildings and artificial surfaces (BL3) (Plate 4-5).

Since the original field survey carried out in 2019, construction commenced on a grass playing pitch within the southern section of the site in the latter half of 2020, under a planning exemption certificate, and is classified as Spoil and Bare Ground (ED2) (Plate 4-6). This pitch occurs within the red line boundary of the proposed development site, but will not form part of this assessment.



Plate 4-3 Semi-improved Dry calcareous and neutral grassland (GS1)



*Plate 4-4 Species-poor Wet grassland (GS4)*



*Plate 4-5 Treeline (WL2) forming the southern site boundary*



Plate 4-6 Grass playing pitch within the southern section of the site currently under construction, classified as spoil and bare ground (ED2).

Detailed relevés were recorded in the cutover peat habitat within the northern section of the proposed development site. The peatland vegetation community was identified and classified using the IVC Classification system. Vegetation relevé data recorded during the field survey (2m x 2m) was formatted and uploaded to the online ERICA database. This programme assesses the data against a reference database of vegetation communities and assigns the relevé data a community classification. This is a robust assessment allowing for accurate vegetation community assignment.

The vegetation data collected within the cutover bog habitat as part of the dedicated botanical survey corresponds to the Irish Vegetation Classification (IVC) HEAD *Molinia caerulea - Potentilla erecta - Erica tetralix* heath community (Purple Moor-grass – Tormentil – Cross-leaved Heath heath).

This IVC community corresponds to *Molinia caerulea* cutover bog (LS3) as described in the IWM 128 'The habitats of cutover raised bog' (Smith et al., 2020). This is a habitat type of low conservation importance and low species richness. LS3 habitats are generally dry with a low *Sphagnum* cover and of low conservation value.

None of the habitats recorded on the site conform to habitats listed under Annex I of the EU Habitats Directive. The area of Cutover bog (PB4) was part of a larger raised bog area which has been extensively cutover in the past and no intact or uncut high bog was recorded within or adjacent to the proposed development site. The Irish definition of Annex I Degraded raised bog [7120] does not include areas of cutaway or cutover bog (NPWS, 2019 and 2013).

No botanical species listed under the Flora (protection) Order (1999, as amended 2015), listed in the EU Habitats Directive (92/43/EEC), or listed in the Irish Red Data Books were recorded on the site. All species recorded are common in the Irish landscape. No species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 were recorded during the survey.



**Map Legend**

- Site boundary
- Habitat Map**
- Spoil and bare ground (ED2)
- Buildings and artificial surfaces (BL3)
- Cutover bog (PB4)
- Cutover bog (PB4)/ Scrub (WS1)
- Dry calcareous and neutral grassland (GS1)
- Scrub (WS1)
- Wet Grassland (GS4)
- Wet Grassland (GS4)/ Scrub (WS1)
- Linear Habitats**
- Drainage ditch (FW4)
- Treeline (WL2)

Microsoft product screen shots  
 Microsoft Corporation  
 No. AR 0021821 © Ordnance Survey  
 Ireland/Government of Ireland



**Habitat Map**

Project Title	
Oughterard RFC Lemonfield Pitches	
Drawn By	Checked By
JOS	PR
Project No.	Drawing No.
190909	Figure 5.1
Scale	Date
1:3000	01.02.2021

**MKO**  
 Planning and  
 Environmental  
 Consultants  
 Tully Road, Caher  
 Ennis, Co. Kerry  
 +353 (0) 91 735911  
 Website: www.mkoadvisors.ie

#### 4.4.2 Faunal Surveys - Otter

A comprehensive search for otter was undertaken along the small drainage ditches that occur within the site boundary including, and 10m riparian buffer (NRA, 2008 and Reid, et al 2013). No signs of otter, including holts, slides, prints or spraints were recorded. The drainage ditches within the site are suboptimal for otter due to their narrow width, shallow depth and low flow.

#### 4.4.3 Birds

The bird species recorded during the site visit in 2019 are listed in Table 4-11. Five of the bird species observed are green-listed and are common in Ireland. One of the bird species recorded, robin, is amber listed (for its breeding population). The species recorded on site are typical of the agricultural habitats in the wider area.

Table 4-7 Birds species recorded during the survey and their conservation status

Species	Conservation status (BOCCI 2014-2019)
Woodpigeon ( <i>Columba palumbus</i> )	Green
Wren ( <i>Troglodytes troglodytes</i> )	Green
Blue tit ( <i>Cyanistes caeruleus</i> )	Green
Pheasant ( <i>Phasianus colchicus</i> )	Green
Blackbird ( <i>Turdus merula</i> )	Green
Robin ( <i>Erithacus rubecula</i> )	Amber

The site was surveyed for the presence of roosting hen harrier in January 2021. Dusk and dawn surveys were carried out on the evening of the 20<sup>th</sup> and the morning of the 21<sup>st</sup> of January. The survey area focussed the northern section of the development site that had suitable potential roosting habitat for hen harrier, in the form of gorse scrub. No hen harrier were recorded roosting within the site during either survey.

The site is not of ecological significance to roosting hen harrier. Whilst hen harrier could potentially use gorse scrub for roosting, they have a preference for reedbed, heath/bog, rank grassland, fen and bracken (O'Donoghue, 2010). The aforementioned habitats and gorse scrub are common and widespread in the wider area of the site and along the shores of Lough Corrib. The loss of a small area of gorse scrub within the proposed development site would not have an adverse effect on the conservation status of this species.

During the hen harrier survey, incidental records of all bird species were also taken. No species of conservation interest were recorded within the site. The species recorded during the survey were all common species, and included blackbird, robin, hooded crow, rook, wren and chaffinch.

None of the bird species recorded within or adjacent to the development site are protected under Annex I of the EU Birds Directive or Red listed under the Birds of Conservation Concern in Ireland (BoCCI). No Annex I bird species or any SCIs of the nearby Lough Corrib SPA was recorded during the site visit.

There is no supporting habitat for any of the listed wetland or waterfowl SCI bird species of the nearby Lough Corrib SPA within the proposed development site.

## 5. ASSESSMENT OF POTENTIAL ADVERSE EFFECTS

### 5.1 Potential for Direct Effects on the European Sites

The development site lies entirely outside of the boundary of any European Site. There is no potential for direct effects.

### 5.2 Potential for Indirect Effects on the European Sites

#### 5.2.1 Deterioration of surface water quality

A potential pathway for indirect effects on the surface water dependent Qualifying Interests of Lough Corrib SAC and Lough Corrib SPA was identified in the form of deterioration of surface water quality resulting from pollution, associated with the construction and operational phase of the development.

##### 5.2.1.1 Preventative measures to avoid impact on water quality

The pathway that would allow potential impacts to occur was considered in the design of the project. Section 3.2 of this report sets out the environmental management framework to be adhered to during the proposed works and it incorporates the mitigating principles to ensure no adverse impact on the integrity of European Sites. Section 3.2 includes comprehensive detail regarding site set up, pollution prevention, hydrocarbon management, construction monitoring and biosecurity.

The measures described in Section 3.2.3 ensure that the proposed works do not prevent or obstruct any of the qualifying interests from reaching favourable conservation status as per Article 1 of the EU Habitats Directive.

The measures described in Section 3.2.3 ensure that the proposed works do not adversely affect the integrity of European sites.

#### 5.2.1.2 Construction Phase Control Measures and Assessment

The pathway that would allow potentially adverse impacts to occur was considered in the design of the proposed development. The following best practice mitigation and environmental control measures have been incorporated into the proposal:

##### Site Set up

- Prior to the commencement of any excavation or construction activities, the works area will be clearly demarcated using marking tape or temporary fencing and no works will take place outside the fences to prevent damage to areas outside the necessary project footprint.

##### Measures to prevent pollution of watercourses due to sedimentation and erosion during construction

Prior to the commencement of construction activities, the necessary mitigation measures will be put in place to ensure the protection of surface water during the works.

- Existing drains protected by means of a silt fence to ensure the prevention of run off from areas where excavation occurs does not result in silt laden water entering the existing drainage network.
- Stockpiled material will be located a minimum of 50m from drains and will be surrounded by silt fencing to prevent any sediment-laden run-off occurring.

#### **Earthworks**

- Excavation depths will be kept to a minimum.
- Material that is not re-used will be transported off site to a designated waste facility.
- Soil excavation will be completed during dry periods and will be undertaken with excavators and dump trucks. No excavation works will take place during periods of heavy rainfall.
- Suitable stone material will be imported to the site to be used as backfill.

#### **Pollution Prevention & Waste Management**

- All site plant will be inspected at the beginning of each day prior to use. Defective plant shall not be used until the defect is satisfactorily fixed. All major repair and maintenance operations will take place off site.
- Vehicles will never be left unattended during refuelling. Only dedicated trained and competent personnel will carry out refuelling operations and plant refuelling procedures shall be detailed in the contractor's method statements.
- Fuels, lubricants and hydraulic fluids for equipment used on the site will be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment.
- Potential impacts caused by spillages etc. during the construction phase will be reduced by keeping spill kits and other appropriate equipment on-site.
- All works associated with the proposed on-site wastewater treatment systems will be carried out in accordance with the manufacturer's guidelines and the EPA Code of Practice 2009.
- No batching of wet-cement products will occur on site. Ready-mixed supply of wet concrete products will be used. Pouring concrete will occur on dry days only. Ensure pour site is free of standing water and plastic covers will be ready in case of sudden rainfall event.

#### **Environmental Monitoring**

- The contractor will assign a member of the site staff as the environmental officer with the responsibility for ensuring the environmental measures prescribed in this document are adhered to. Any environmental incidents or non-compliance issues will immediately be reported to the project team.

Post implementation of best practice and preventive measures as described above, there is no potential for adverse impact on the listed QIs/SCIs of Lough Corrib SAC or Lough Corrib SPA as a result of deterioration in water quality.

The measures described ensure that the proposed project does not prevent or obstruct any of the QIs or SCIs from reaching Favourable Conservation Status as per Article 1 of the EU Habitats Directive.

### 5.2.1.3 **Operational Phase Control Measures and Assessment**

Indirect effects during the operational stage of the development are not anticipated.

The site suitability assessment concluded that the proposed site is suitable for a packaged wastewater treatment system and polishing filter with discharge to ground. The proposed foul sewer drainage system will be installed in accordance with Irish Water's Code of Practice for Wastewater Infrastructure.

All surface water runoff from the car parks within the site will go through a petrol interceptor then discharge to site a soak-pit, which will comply with BRE Digest 365, or an attenuation tank, before discharging to an open drain.

No indirect effects on water quality during the operational stage of the development are anticipated. There is no potential for adverse impact on the listed QIs/SCIs of the Lough Corrib SAC or Lough Corrib SPA as a result of deterioration in water quality.

The measures described ensure that the proposed project does not prevent or obstruct any of the QIs or SCIs from reaching Favourable Conservation Status as per Article 1 of the EU Habitats Directive.

## 5.2.2 Disturbance to Otter (QI of Lough Corrib SAC)

Taking an extremely precautionary approach, a potential pathway for indirect impact to Otter, was identified in the form of disturbance.

A comprehensive search for otter was undertaken along the small drainage ditches that occur within the site boundary including, and 10m riparian buffer (NRA, 2008 and Reid, et al 2013). No signs of otter, including holts, slides, prints or spraints were recorded.

The drainage ditches within the site are suboptimal for otter due to their narrow width, shallow depth and low flow. No Otter breeding or resting sites were identified during the site visit and no direct impact on the species is anticipated. The site offers sub-optimal habitat for otter. There is no suitable habitat for otter within the proposed development site. The habitats within the footprint of the development are dominated by wet grassland, scrub and cutover bog habitats.

The proposed development site is set back 153m from the shoreline of Lough Corrib and the Owenriff River. The development site is located outside of the mapped otter 250m commuting buffer along the lake shoreline (see Map 12, NPWS 2017).

The following best practice disturbance limitation measures will be adhered to during the construction phase:

- All plant and equipment for use will comply with Statutory Instrument No 359 of 1996 "European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations 1996".
- Plant machinery will be turned off when not in use.
- Operating machinery will be restricted to the proposed works site area.
- Construction works will be limited to daylight hours and artificial lighting to facilitate works will not be permitted.

Otter are predominantly crepuscular in nature and construction activity will be confined to daytime hours, thus minimizing potential disturbance related impacts to the species.

The proposed works are small scale in nature and require minimal excavations or earthworks. The site is separated from any potential otter habitat within the SAC by existing scrub, treeline and peatland habitats in the wider area. Consequently, no potential for significant disturbance related impact exists.

Irish Wildlife Manual No 76 (*National Otter Survey of Ireland 2010/2012*) notes that the occurrence of Otter was unaffected by perceived levels of disturbance at the survey sites. It also notes that there is little published evidence demonstrating any consistent relationship between Otter occurrence and human disturbance (Mason & Macdonald 1986, Delibes et al. 1991; Bailey & Rochford, 2006). Irish

Wildlife Manual No 23 (*National Otter Survey of Ireland 2004/2005*) found no significant relationship between disturbance and otter occurrence. It also states “the lowest percentage occurrence was found at the sites with the lowest recorded disturbance”.

Chanin P (2003) <sup>[1]</sup> provides a literary review with regard to anthropogenic disturbance and refers to several reports which have found that disturbance is not detrimental to Otters (Jefferies, 1987), (Durbin, 1993), (Green & Green, 1997). The report also describes successful breeding in towns, under ferry terminals and under the jetties of one of Europe’s largest oil and gas terminals at Sullom Voe in North Scotland.

Based on the size, scale, location and nature of the proposed works; no complete source-pathway-receptor chain for significant impact during the construction or operational phase of the development has been identified.

The measures ensure that the proposed works do not prevent or obstruct Otter from reaching favourable conservation status as per Article 1 of the EU Habitats Directive.

### 5.2.3

## Bird Disturbance/Displacement and Habitat Loss

### Disturbance/Displacement

Due to the proximity of Lough Corrib SPA to the proposed development, the potential for adverse effects as a result of disturbance and displacement of the SCI species during the construction and operational phases of the development, has been considered.

None of the listed SCI species of Lough Corrib SPA were recorded utilising habitats within the development site during any of the field surveys. The site of the proposed development does not have suitable supporting habitats for significant wintering bird populations.

The proposed works are small scale in nature and require minimal excavations or earthworks during the construction phase. The following best practice disturbance limitation measures will be adhered to during the construction phase:

- All plant and equipment for use will comply with Statutory Instrument No 359 of 1996 “European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations 1996”.
- Plant machinery will be turned off when not in use.
- Operating machinery will be restricted to the proposed works site area.
- Construction works will be limited to daylight hours and artificial lighting to facilitate works will not be permitted.

The proposed development is set back in excess of 100m from the boundary of Lough Corrib SPA. The development site is buffered from Lough Corrib SPA by scrub and treelines which will provide shielding from the lighting. The shoreline of the SPA will not be illuminated as a result of the proposed development. The lighting used will be directional, which will reduce light spill outside of the development footprint, otherwise illuminating areas which were previously dark at night. Lighting will only be used when the pitches are in use.

Based on the size, scale, location and nature of the proposed works; no complete source-pathway-receptor chain for significant impact during the construction or operational phase of the development has been identified.

<sup>[1]</sup> Chanin P (2003). *Ecology of the European Otter. Conserving Natura 2000 Rivers Ecology Series No. 10. English Nature, Peterborough.*

Due to the nature, scale and location of the proposed small-scale development there will be no disturbance of the listed SCI species of Lough Corrib SPA.

### Habitat loss

Lough Corrib SPA is designated for the following species:

- > Gadwall (*Anas strepera*) [A051]
- > Shoveler (*Anas clypeata*) [A056]
- > Pochard (*Aythya ferina*) [A059]
- > Tufted Duck (*Aythya fuligula*) [A061]
- > Common Scoter (*Melanitta nigra*) [A065]
- > Hen Harrier (*Circus cyaneus*) [A082]
- > Coot (*Fulica atra*) [A125]
- > Golden Plover (*Pluvialis apricaria*) [A140]
- > Black-headed Gull (*Chroicocephalus ridibundus*) [A179]
- > Common Gull (*Larus canus*) [A182]
- > Common Tern (*Sterna hirundo*) [A193]
- > Arctic Tern (*Sterna paradisaea*) [A194]
- > Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]

The dominant habitats within the proposed development site are spoil and bare ground, cutover bog, scrub and grassland. There is no suitable habitat within the proposed development site for the gull, tern and waterfowl SCIs for which Lough Corrib SPA is designated including gadwall, shoveler, pochard, tufted duck, common scoter, coot, black-headed gull, common gull, common tern and Arctic Tern. These species are predominantly associated with wetland habitat within the SPA.

Greenland white fronted geese and golden plover may forage on peatland and grassland habitats during the winter. The degraded cutover bog within the proposed development site is not of ecological significance to these species. There will be no net loss of grassland within the proposed development site. The majority of the site will be converted to amenity grassland.

The site was surveyed for the presence of roosting hen harrier in January 2021. No hen harrier were recorded roosting within the site during the surveys.

The site is not of ecological significance to roosting hen harrier. Whilst hen harrier could potentially use gorse scrub for roosting, they have a preference for reedbed, heath/bog, rank grassland, fen and bracken (O'Donoghue, 2010). The aforementioned habitats and gorse scrub are common and widespread in the wider area of the site and along the shores of Lough Corrib. The loss of a small area of gorse scrub within the proposed development site would not have an adverse effect on the conservation status of this species.

The proposed development will not have an adverse effect on the conservation status of any the listed SCI species of this SPA.

## 6. ASSESSMENT OF RESIDUAL EFFECTS

The sections provided below detail the site-specific residual impact assessment in relation to the relevant QIs of the above EU sites in light of their site-specific targets and attributes.

### 6.1 Lough Corrib SAC [000297]

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

The conservation objective for Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] is:

*'To restore the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) in Lough Corrib SAC'*

The attributes and targets for Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6.1.

Table 6-1 Targets and attributes associated with nominated site-specific conservation objectives for Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes	There will be no decline in habitat area, habitat distribution or typical species associated with the proposed development.
Habitat distribution	No decline, subject to natural processes.	
Typical species	Typical species present, in good condition, and demonstrating typical abundances and distribution	
Vegetation composition: characteristic zonation	All characteristic zones should be present, correctly distributed and in good condition	There will be no impacts on the vegetation composition or distribution associated with the habitat.
Vegetation distribution: maximum depth	Restore maximum depth of vegetation, subject to natural processes	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

Attribute	Target	Assessment
Hydrological regime: water level fluctuations	Maintain appropriate natural hydrological regime necessary to support the habitat	<p>The proposed development will not result in the alteration of the hydrology of the habitat.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Lake substratum quality	Restore appropriate substratum type, extent and chemistry to support the vegetation	<p>There will be no impact or alteration to the lake substratum quality as a result of the proposed works.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Water transparency	Restore appropriate Secchi transparency. There should be no decline in Secchi depth/transparency	<p>There will be no impacts on water quality including transparency, nutrients, phytoplankton biomass, phytoplankton biomass, algal biomass or macrophyte status as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Water quality: nutrients	Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species	
Water quality: phytoplankton biomass	Restore appropriate water quality to support the habitat, including high chlorophyll a status	
Water quality: phytoplankton composition	Maintain appropriate water quality to support the habitat, including high phytoplankton composition status	
Water quality: attached algal biomass	Restore/maintain trace/absent attached algal biomass	
Water quality: macrophyte status	Maintain high macrophyte status	

Attribute	Target	Assessment
Acidification status	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes	There will be no impacts on water and sediment pH, alkalinity and cation concentrations quality as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Water colour	Restore/maintain appropriate water colour to support the habitat	There will be no impact on water colour, dissolved organic carbon or turbidity as a result of the proposed development.
Dissolved organic carbon (DOC)	Restore/maintain appropriate organic carbon levels to support the habitat	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Turbidity	Restore/maintain appropriate turbidity to support the habitat	
Fringing habitat : area and condition	Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of habitat 3110	There will be no impact on the condition of the fringe habitat area or condition as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

6.1.2

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

The conservation objective for Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* [3130] is:

*'To restore the favourable conservation condition of Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea in Lough Corrib SAC'*

The attributes and targets for Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1, 2017) and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6.2 below

Table 6-2 Targets and attributes associated with nominated site-specific conservation objectives for Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* [3130]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes	There will be no decline in habitat area, habitat distribution or typical species associated with the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Habitat distribution	No decline, subject to natural processes.	
Typical species	Typical species present, in good condition, and demonstrating typical abundances and distribution	
Vegetation composition: characteristic zonation	All characteristic zones should be present, correctly distributed and in good condition	There will be no impacts on the vegetation composition or distribution associated with the habitat.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Vegetation distribution: maximum depth	Restore maximum depth of vegetation, subject to natural processes	
Hydrological regime: water level fluctuations	Maintain appropriate natural hydrological regime necessary to support the habitat	The proposed development will not result in the alteration of the hydrology of the habitat.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Lake substratum quality	Restore appropriate substratum type, extent and chemistry to support the vegetation	There will be no impact or alteration to the lake substratum quality as a result of the proposed works.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Water quality: transparency	Restore appropriate Secchi transparency. There should be no decline in Secchi depth/transparency	There will be no impacts on water quality including transparency, nutrients, phytoplankton biomass, phytoplankton biomass, algal biomass

Attribute	Target	Assessment
Water quality: nutrients	Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species	or macrophyte status as a result of the proposed development.
Water quality: phytoplankton biomass	Restore appropriate water quality to support the habitat, including high chlorophyll a status	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Water quality: phytoplankton composition	Maintain appropriate water quality to support the habitat, including high phytoplankton composition status	
Water quality: attached algal biomass	Restore/maintain trace/absent attached algal biomass	
Water quality: macrophyte status	Maintain high macrophyte status	
Acidification status	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes	
Water colour	Restore/maintain appropriate water colour to support the habitat	There will be no impact on water colour as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Dissolved organic carbon (DOC)	Restore/maintain appropriate organic carbon levels to support the habitat	There will be no impact on dissolved organic carbon (DOC) as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

Attribute	Target	Assessment
Turbidity	Restore/maintain appropriate turbidity to support the habitat	There will be no impact on turbidity as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Fringing habitat: area and condition	Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of habitat 3130	There will be no impact on the condition of the fringe habitat area or condition as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

6.1.3

### Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.* [3140]

The conservation objective for Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.* [3140] is:

*'To restore the favourable conservation condition of Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. in Lough Corrib SAC'*

The attributes and targets for Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.* [3140] as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6.3.

Table 6-3 Targets and attributes associated with nominated site-specific conservation objectives for Hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.* [3140]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes	There will be no decline in habitat area, habitat distribution or typical species associated with the proposed development.
Habitat distribution	No decline, subject to natural processes.	
Typical species	Typical species present, in good condition, and demonstrating typical abundances and distribution	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

Attribute	Target	Assessment
Vegetation composition: characteristic zonation	All characteristic zones should be present, correctly distributed and in good condition	There will be no impacts on the vegetation composition or distribution associated with the habitat.
Vegetation distribution: maximum depth	Restore maximum depth of vegetation, subject to natural processes	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Hydrological regime: water level fluctuations	Maintain appropriate natural hydrological regime necessary to support the habitat	The proposed development will not result in the alteration of the hydrology of the habitat.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Lake substratum quality	Restore appropriate substratum type, extent and chemistry to support the vegetation	There will be no impact or alteration to the lake substratum quality as a result of the proposed works.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Water quality: transparency	Restore appropriate Secchi transparency. There should be no decline in Secchi depth/transparency	There will be no impacts on water quality including transparency, nutrients, phytoplankton biomass, phytoplankton biomass, algal biomass or macrophyte status as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Water quality: nutrients	Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species	
Water quality: phytoplankton biomass	Restore appropriate water quality to support the habitat, including high chlorophyll a status	
Water quality: phytoplankton composition	Maintain appropriate water quality to support the habitat, including high phytoplankton composition status	

Attribute	Target	Assessment
Water quality: attached algal biomass	Restore/maintain trace/absent attached algal biomass	
Water quality: macrophyte status	Maintain high macrophyte status	
Acidification status	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes	<p>There will be no impacts on acidification status as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works..</p>
Water colour	Restore/maintain appropriate water colour to support the habitat	<p>There will be no impact on water colour as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Dissolved organic carbon (DOC)	Restore/maintain appropriate organic carbon levels to support the habitat	<p>There will be no impact on dissolved organic carbon (DOC) as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Turbidity	Restore/maintain appropriate turbidity to support the habitat	<p>There will be no impact on turbidity as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Fringing habitat: area and condition	Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of habitat 3140	<p>There will be no impact on the condition of the fringe habitat area or condition as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the</p>

Attribute	Target	Assessment
		design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

6.1.4

## Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation [3260]

The conservation objective for Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation [3260] is:

*‘To restore the favourable conservation condition of Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation [3260] in Lough Corrib SAC’*

The attributes and targets for Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation [3260] as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6.4.

Table 6-4 Targets and attributes associated with nominated site-specific conservation objectives for Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation [3260]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes	There will be no decline in habitat area or distribution associated with the proposed works.
Habitat distribution	No decline, subject to natural processes	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Hydrological regime: river flow	Maintain appropriate hydrological regimes	There will be no impacts on the hydrology specifically; river flow or groundwater discharge associated with the proposed development.
Hydrological regime: groundwater discharge	Maintain appropriate hydrological regimes	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Substratum composition: particle size range	Maintain appropriate substratum particle size range, quantity and quality, subject to natural process	The proposed works will not result in the alteration of the substratum particle size range, quantity or quality of the habitat.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

Attribute	Target	Assessment
Water quality	Maintain appropriate water quality to support the natural structure and functioning of the habitat	There will be no impact on water quality associated with the proposed works.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Vegetation composition: typical species	Typical species of the relevant habitat sub-type should be present and in good condition	There will be no impacts on typical species, floodplain connectivity or riparian habitat area associated with the proposed works.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Floodplain connectivity: area	The area of active floodplain at and upstream of the habitat should be maintained	
Riparian habitat: area	Maintain the area and condition of fringing habitats necessary to support the habitat and its sub-types	

### 6.1.5 Petrifying springs with tufa formation (*Cratoneurion*) [7220]

The conservation objective for petrifying springs with tufa formation (*Cratoneurion*) [7220] is:

*'To restore the favourable conservation condition of petrifying springs with tufa formation (*Cratoneurion*) [7220] in Lough Corrib SAC'*

The attributes and targets for petrifying springs with tufa formation (*Cratoneurion*) [7220] as per the Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6.5 below.

Table 6-5 Targets and attributes associated with nominated site-specific conservation objectives for petrifying springs with tufa formation (*Cratoneurion*) [7220]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes	There will be no decline in habitat area or distribution associated with the proposed works  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Habitat distribution	No decline, subject to natural processes	
Hydrological regime: height of water table; water flow	Maintain appropriate hydrological regimes	

Attribute	Target	Assessment
Water quality - nitrate level	No increase from baseline nitrate level and less than 10mg/l	The proposed development will not result in the alteration of the hydrology or water quality of this habitat.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Water quality - phosphate level	No increase from baseline phosphate level and less than 15µg/l	
Vegetation composition: negative indicator species	Potentially negative indicator species should not be Dominant or Abundant; invasive species should be absent	There will be no impacts on the vegetation composition with introduction of negative indicator species associated with the proposed development. There will be no impact on the sward height or physical structure associated with the habitat as a result of the proposed development.
Vegetation structure: sward height	Field layer height between 10cm and 50cm (except for bryophyte-dominated ground <10cm)	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Physical structure: trampling/dung	Cover should not be Dominant or Abundant	

6.1.6

## Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*\* [7210]

The conservation objective for Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*\* [7210] is:

*‘To maintain the favourable conservation condition of Calcareous fens with Cladium mariscus and species of the Caricion davallianae in Lough Corrib SAC.’*

The attributes and targets for Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*\* [7210] as per the Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6.6 below

Table 6-6 Targets and attributes associated with nominated site-specific conservation objectives for Calcareous fen [7210]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes	There will be no decline in habitat area or distribution associated with the proposed works.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Habitat distribution	No decline, subject to natural processes	

Attribute	Target	Assessment
Ecosystem function: water quality	Maintain appropriate water quality, particularly nutrient levels, to support the natural structure and functioning of the habitat	<p>There will be no impact on peat formation, hydrology or water quality of the habitat as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Ecosystem function: peat formation	Maintain active peat formation, where appropriate	
Ecosystem function: hydrology	Maintain appropriate natural hydrological regimes necessary to support the natural structure and functioning of the habitat	
Ecosystem function: water quality	Maintain appropriate water quality, particularly nutrient levels, to support the natural structure and functioning of the habitat	
Vegetation composition: typical species	Maintain vegetation cover of typical species including brown mosses and vascular plants	<p>There will be no impact on vegetation composition specifically, typical species, non-native species or native tree and shrub species of the habitat as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Vegetation composition: non-native species	Cover of non-native species less than 1%	
Vegetation composition: native trees and shrubs	Cover of scattered native trees and shrubs less than 10%	
Physical structure: disturbed bare ground	Cover of disturbed bare ground less than 10%. Where tufa is present, disturbed bare ground not more than 1%	<p>There will be no impact on physical structure specifically disturbed bare ground or drainage of the habitat as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Physical structure: drainage	Area showing signs of drainage as a result of drainage ditches or heavy trampling less than 10%	

Attribute	Target	Assessment
Indicators of local distinctiveness	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	There will be no impact indicators of local distinctiveness specifically of the habitat as a result of the proposed development.

## 6.1.7 Alkaline fens [7230]

The conservation objective for Alkaline fens [7230] is:

'To maintain the favourable conservation condition Alkaline fens [7230] in Lough Corrib SAC'

The attributes and targets for Alkaline fens [7230] as per the Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the nominated attributes and targets for this habitat is provided in Table 6.7.

Table 6-7 Targets and attributes associated with nominated site-specific conservation objectives for Alkaline fens [7230]

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes	There will be no decline in habitat area or distribution associated with the proposed works
Habitat distribution	No decline, subject to natural processes	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Ecosystem function: soil nutrients	Maintain soil nutrient status within natural range	There will be no impact on soil nutrients, peat formations, hydrology or water quality of the habitat as a result of the proposed development.
Ecosystem function: peat formation	Maintain active peat formation, where appropriate	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Ecosystem function: hydrology	Maintain appropriate natural hydrological regimes necessary to support the natural structure and functioning of the habitat	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Ecosystem function: water quality	Maintain appropriate water quality, particularly nutrient levels, to support the natural structure and functioning of the habitat	
Community diversity	Maintain variety of vegetation communities, subject to natural processes	There will be no impact on community diversity of the habitat as a result of the proposed development.

Attribute	Target	Assessment
		<p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
<p>Vegetation composition: number of positive indicator species (brown mosses)</p>	<p>Number of brown moss species present at each monitoring stop is at least one</p>	<p>There will be no impact on vegetation composition specifically, positive indicator species of brown moss, vascular plants, cover of the indicator species, non-native species or native species of the habitat as a result of the proposed development.</p>
<p>Vegetation composition: number of positive indicator species (vascular plants)</p>	<p>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 (<i>Schoenus nigricans</i>) flush and bottle sedge (<i>Carex rostrata</i>) fen</p>	<p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
<p>Vegetation composition: cover of positive indicator species</p>	<p>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 (<i>Schoenus nigricans</i>) flush and bottle sedge (<i>Carex rostrata</i>) fen</p>	
<p>Vegetation composition: negative indicator species</p>	<p>Total cover of negative indicator species less than 1%</p>	
<p>Vegetation composition: non-native species</p>	<p>Cover of non-native species less than 1%</p>	
<p>Vegetation composition: native trees and shrubs</p>	<p>Cover of scattered native trees and shrubs less than 10%</p>	
<p>Vegetation composition: soft rush and common reed cover</p>	<p>Total cover of soft rush (<i>Juncus effusus</i>) and common reed (<i>Phragmites australis</i>) less than 10%</p>	
<p>Vegetation structure: height</p>	<p>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%</p>	<p>There will be no impact on vegetation height as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water</p>

Attribute	Target	Assessment
		pollution during the construction and operational stage of the proposed works.
Physical structure: disturbed bare ground	Cover of disturbed bare ground less than 10%	There will be no impact on physical structure specifically disturbed bare ground, drainage or tufa formations of the habitat as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Physical structure: drainage	Area showing signs of drainage as a result of drainage ditches or heavy trampling less than 10%	
Physical structure: tufa formations	Disturbed proportion of vegetation cover where tufa is present is less than 1%	
Indicators of local distinctiveness	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	There will be no impact indicators of local distinctiveness specifically of the habitat as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

6.1.8

## Slender naiad (*Najas flexilis*) [1833]

The conservation objective for Slender naiad (*Najas flexilis*) [1833] is:

‘To restore the favourable conservation condition of Slender naiad in Lough Corrib SAC’

The attributes and targets for Slender naiad (*Najas flexilis*) [1833] as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for this habitat is provided in Table 6.8.

Table 6-8 Targets and attributes associated with nominated site-specific conservation objectives for Slender naiad (*Najas flexilis*) [1833]

Attribute	Target	Assessment
Population extent	Restore the spatial extent of <i>Najas flexilis</i> within the lake, subject to natural processes.	There will be no decline in population extent, depth, viability or abundance associated with the proposed development  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid
Population depth	Restore the depth range of <i>Najas flexilis</i> within the lake, subject to natural processes	
Population viability	Restore plant fitness, subject to natural processes	

Attribute	Target	Assessment
Population abundance	Restore the cover abundance of <i>Najas flexilis</i> , subject to natural processes.	all water pollution during the construction and operational stage of the proposed works.
Species distribution	Restore to at least the north-western bay, subject to natural processes	The proposed development will not result in the alteration of the species distribution or habitat extent associated with the proposed development.
Habitat extent	Restore, subject to natural processes	
Hydrological regime: water level fluctuations	Maintain appropriate natural hydrological regime necessary to support the habitat for the species	There will be no impact or alteration to the hydrological regime, lake substratum quality, water quality or increased acidification as a result of the proposed works.
Lake substratum quality	Restore appropriate substratum type, extent and chemistry to support the population of the species	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Water quality	Restore appropriate water quality to support the population of the species	
Acidification status	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the population of <i>Najas flexilis</i> , subject to natural processes	
Water colour	Restore/maintain appropriate water colour to support the population of <i>Najas flexilis</i>	There will be no impacts on water colour, associated species or fringing habitats as associated with the habitat as a result of the proposed works.
Associated species	Restore appropriate associated species and vegetation communities to support the population of <i>Najas flexilis</i>	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Fringing habitat: area and condition	Maintain the area and condition of fringing habitats necessary to support the population of <i>Najas flexilis</i>	

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

The conservation objective for Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029] is:

*'To restore the favourable conservation condition of Freshwater Pearl Mussel in Lough Corrib SAC'*

The attributes and targets for Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029] as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for this species is provided in Table 6.9.

Table 6.9 Targets and attributes associated with nominated site-specific conservation objectives for Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029]

Attribute	Target	Assessment
Distribution	Maintain at 9.1km	<p>There will be no impacts on the distribution, population size or population structure as a result of the proposed development. The conservation objectives apply to the Owenriff river population within the SAC.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Population size	Restore Owenriff population to at least one million adult mussels	
Population structure: recruitment	Restore to at least 20% of population no more than 65mm in length; and at least 5% of population no more than 30mm in length	
Population structure: adult mortality	No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution	
Suitable habitat: extent	Restore suitable habitat in more than 8.3km in the Owenriff and Glenawbeg rivers (see map 9) and any additional stretches necessary for salmonid spawning	<p>There will be no impacts on the suitable habitat or on its restoration. The conservation objectives apply to the Owenriff river population within the SAC.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Suitable habitat: condition	Restore condition of suitable habitat	
Water quality: macroinvertebrate and phytobenthos (diatoms)	Restore water quality - macroinvertebrates: EQR greater than 0.90 (Q4-5 or Q5); phytobenthos: EQR greater than 0.93	<p>There will be no alteration to the water quality, substratum quality or hydrological regime necessary to support the natural density and distribution of the species within the SAC.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water</p>
Substratum quality: filamentous algae (macroalgae);	Restore substratum quality - filamentous algae: absent or trace	

Attribute	Target	Assessment
macrophytes (rooted higher plants)	(less than 5%); macrophytes: absent or trace (less than 5%)	pollution during the construction and operational stage of the proposed works.
Substratum quality: sediment	Restore substratum quality - stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment	
Substratum quality: oxygen availability	Restore to no more than 20% decline from water column to 5cm depth in substrate	
Hydrological regime: flow variability	Restore appropriate hydrological regimes	
Host fish	Maintain sufficient juvenile salmonids to host glochidial larvae	Impacts on host fish are not anticipated as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Fringing habitat: area and condition	Maintain the area and condition of fringing habitats necessary to support the population	There will be no alteration of the fringing habitat or condition of the river Owenriff that could affect the favourable condition of this species within the SAC.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

### 6.1.10 Whiteclawed Crayfish (*Austropotamobius pallipes*) [1092]

The conservation objective for White clawed Crayfish (*Austropotamobius pallipes*) is:

‘To maintain the favourable conservation condition of White-clawed Crayfish in Lough Corrib SAC’

The attributes and targets for Whiteclawed Crayfish (*Austropotamobius pallipes*) as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for the species is provided in Table 6.10 below.

Table 6-10 Targets and attributes associated with nominated site-specific conservation objectives for Whiteclawed Crayfish (*Austropotamobius pallipes*) [1092]

Attribute	Target	Assessment
Distribution	No reduction from baseline.	<p>There will be no impact on distribution as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Distribution: Lough Corrib	No reduction from baseline.	<p>There will be no impact on distribution as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Population structure: recruitment	Juveniles and/or females with eggs in all occupied tributaries and occupied parts of Lough Corrib	<p>Recruitment within this species will not be impacted upon due to the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Negative indicator species	No alien crayfish species	<p>There will be no direct or indirect introduction of negative indicator species due to the proposed development.</p> <p>Direct and Indirect pathways that would allow impacts to occur via introduction of negative indicator species were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to prevent the introduction and/or spread of invasive species.</p>
Disease	No instances of disease	<p>There will be no direct or indirect introduction of disease due to the proposed development.</p> <p>The direct and indirect impacts from the introduction of disease was considered as a result of the proposed works and there are a range of measures outlined in</p>

Attribute	Target	Assessment
		Section 5 of this report, which are in place to prevent the introduction and/or spread of invasive species.
Water quality	At least Q3-4 at all sites sampled by EPA	There will be no reduction in water quality as a result of the proposed works.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Habitat quality: heterogeneity	No decline in heterogeneity or habitat quality	There will be no change in habitat heterogeneity or habitat quality as a result of the proposed works..  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

### 6.1.11 Sea Lamprey (*Petromyzon marinus*) [1095]

The conservation objective for Sea Lamprey (*Petromyzon marinus*) is:

*‘To restore the favourable conservation condition of Sea Lamprey in Lough Corrib SAC’*

The attributes and targets for Sea Lamprey (*Petromyzon marinus*) is: as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for the species is provided in Table 6.11.

Table 6-11 Targets and attributes associated with nominated site-specific conservation objectives for Sea Lamprey (*Petromyzon marinus*) [1095]

Attribute	Target	Assessment
Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary	There will be no impact on distribution as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Population structure of juveniles	At least three age/size groups present	There will be no impact on the population structure or juvenile

Attribute	Target	Assessment
Juvenile density in fine sediment	Mean catchment juvenile density at least 1/m <sup>2</sup>	density as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds	There will be no impact on the extent, distribution or availability of habitat as a result of the proposed development
Availability of juvenile habitat	More than 50% of sample sites positive, with a minimum of four positive sites in a catchment, which are at least 5km apart	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

### 6.1.12 Brook Lamprey (*Lampetra planeri*) [1096]

The conservation objective for Brook Lamprey (*Lampetra planeri*) is:

*'To maintain the favourable conservation condition of Brook Lamprey in Lough Corrib SAC'*

The attributes and targets for large shallow inlets and bays as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the nominated attributes and targets for the species is provided in Table 6.12.

Table 6-12 Targets and attributes associated with nominated site-specific conservation objectives for Brook Lamprey (*Lampetra planeri*) [1096]

Attribute	Target	Assessment
Distribution	Access to all watercourses down to first order streams	There will be no direct negative impact on distribution as a result of the proposed works.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Population structure of juveniles	At least three age/size groups of brook/river lamprey present	There will be no impact on the population structure or juvenile

Attribute	Target	Assessment
Juvenile density in fine sediment	Mean catchment juvenile density of brook/river lamprey at least 5/m <sup>2</sup>	density as a result of the proposed works.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds	There will be no impact on the extent, distribution or availability of habitat as a result of the proposed development.
Availability of juvenile habitat	More than 50% of sample sites positive	Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.

### 6.1.13 Salmon (*Salmo salar*) [1106]

The conservation objective for Salmon (*Salmo salar*) [1106] is:

*'To maintain the favourable conservation condition of Salmon in Lough Corrib SAC'*

The attributes and targets for reefs as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for the species is provided in Table 6.13 below.

Table 6-13 Targets and attributes associated with nominated site-specific conservation objectives for Salmon (*Salmo salar*) [1106]

Attribute	Target	Assessment
Distribution: extent of anadromy	100% of river channels down to second order accessible from estuary	There will be no impact on disturbance as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Adult spawning fish	Conservation Limit (CL) for each system consistently exceeded	There will be no reduction in adult spawning fish, salmon fry abundance,

Attribute	Target	Assessment
Salmon fry abundance	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 minutes sampling	<p>out-migrating smolt abundance or the number and distribution of redds as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Out-migrating smolt abundance	No significant decline	
Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes	
Water quality	At least Q4 at all sites sampled by EPA	<p>There will be no reduction in water quality as a result of the proposed development.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works..</p>

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

The conservation objective for Otter (*Lutra lutra*) [1355] is:

*'To maintain the favourable conservation condition of Otter in Lough Corrib SAC.'*

The attributes and targets for Otter (*Lutra lutra*) as per the Site Specific Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 1 2017) and an assessment of the proposed development against the attributes and targets for the species is provided in Table 6.14.

Table 6-14 Targets and attributes associated with nominated site-specific conservation objectives for Otter (*Lutra lutra*) [1355]

Attribute	Target	Assessment
Distribution	No significant decline	<p>There will be no decline on the species distribution as a result of the proposed works. There is no suitable habitat available to otter within the area of the proposed works locations.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of</p>

Attribute	Target	Assessment
		measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Extent of terrestrial habitat	No significant decline. Area mapped and calculated as 1,054ha along river banks/lake shoreline/around ponds	<p>There will be no reduction to the terrestrial habitat extent.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Extent of freshwater (river) habitat	No significant decline. Length mapped and calculated as 314.2km.	<p>There will be no reduction to the freshwater (river) habitat extent</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Extent of freshwater (lake) habitat	No significant decline. Area mapped and calculated as 4,178ha.	<p>There will be no reduction or alteration to the freshwater (lake) habitat extent as a result of the proposed works.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.</p>
Couching sites and holts	No significant decline.	<p>There will be no reduction in holt or couching sites as a result of the proposed works.</p> <p>Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water</p>

Attribute	Target	Assessment
		pollution during the construction and operational stage of the proposed works.
Fish biomass available	No significant decline	There will be no changes to the fish biomass available to otter as a result of the proposed development.  Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction and operational stage of the proposed works.
Barriers to connectivity	No significant increase.	There will be no changes to the connectivity between commuting routes used by Otter as a result of the proposed development.

## 6.2 Lough Corrib SPA [004042]

### 6.2.1 Wetlands and Waterbirds [A999]

The generic conservation objective for Wetland and Waterbirds [A999] is:

To maintain or restore the favourable conservation condition of the wetland habitat at Lough Corrib SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

As per the Generic Conservation Objectives (SSCOs) for Lough Corrib SAC (NPWS Version 7 2020), favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which 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 proposed development is located outside of this European site. The proposed development will not prevent this wetland habitat/supporting habitat for SCI species from reaching favourable condition.

Indirect pathways that would allow impacts to occur via water pollution were considered in the design of the proposed development and a range of measures, outlined in Section 5 of this report, are in place to avoid all water pollution during the construction stage of the proposed works

### 6.2.2 Shoveler (*Anas clypeata*) [A056]

This species has the generic conservation objective 'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The attributes and targets for this species as listed in the Site-Specific Conservation Objectives (SSCOs) for Inner Galway Bay SPA (Version 06, NPWS, 2018) were reviewed and an assessment of the proposed development against the nominated attributes and targets for the species is provided in Table 6.24.

Table 6-15 Targets and attributes associated with nominated site-specific conservation objectives for Shoveler

Attribute	Target	Assessment
Population trend	Long term population trend stable or increasing	The proposed development will not have any effect on the population trend or distribution of this species within the SPA. The habitats on site are not of ecological significant to this species. There will be no effect in terms of loss of supporting habitat or disturbance.
Distribution	No significant decrease in the range, timing or intensity of use of areas by shoveler, other than that occurring from natural patterns of variation	

### 6.2.3 Black headed gull (*Chroicocephalus ridibundus*) [A179]

This species has the generic conservation objective 'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The attributes and targets for this species as listed in the Site-Specific Conservation Objectives (SSCOs) for Inner Galway Bay SPA (Version 06, NPWS, 2018) were reviewed and an assessment of the proposed development against the nominated attributes and targets for the species is provided in Table 6.25.

Table 6-16 Targets and attributes associated with nominated site-specific conservation objectives for Black headed gull

Attribute	Target	Assessment
Population trend	Long term population trend stable or increasing	The proposed development will not have any effect on the population trend or distribution of this species within the SPA. The habitats on site are not of ecological significant to this species. There will be no effect in terms of loss of supporting habitat or disturbance.
Distribution	No significant decrease in the range, timing or intensity of use of areas by Black headed gull, other than that occurring from natural patterns of variation	

### 6.2.4 Common Gull (*Larus canus*) [A182]

This species has the generic conservation objective 'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The attributes and targets for this species as listed in the Site-Specific Conservation Objectives (SSCOs) for Inner Galway Bay SPA (Version 06, NPWS, 2018) were reviewed and an assessment of the proposed development against the nominated attributes and targets for the species is provided in Table 6.26.

Table 6-17 Targets and attributes associated with nominated site-specific conservation objectives for common gull

Attribute	Target	Assessment
Population trend	Long term population trend stable or increasing	The proposed development will not have any effect on the population trend or distribution of this species within the SPA. The habitats on site are not of ecological significant to this species. There will be no effect in terms of loss of supporting habitat or disturbance.
Distribution	No significant decrease in the range, timing or intensity of use of areas by Common gull, other than that occurring from natural patterns of variation	

## 6.2.5 Common Tern (*Sterna hirundo*) [A193]

This species has the generic conservation objective ‘*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA*’.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The attributes and targets for this species as listed in the Site-Specific Conservation Objectives (SSCOs) for Inner Galway Bay SPA (Version 06, NPWS, 2018) were reviewed and an assessment of the proposed development against the nominated attributes and targets for the species is provided in Table 6.27.

Table 6-18 Targets and attributes associated with nominated site-specific conservation objectives for Common Tern

Attribute	Target	Assessment
Breeding population abundance: apparently occupied nests (AONs)	No significant decline	The proposed development will not have any effect on the breeding population, productivity or distribution of this species within the SPA. There will be no alteration in prey biomass, barriers to connectivity, or disturbance at breeding site. The habitats on site are not of ecological significant to this species. There is no suitable breeding or foraging habitat with the proposed development site. There will be no effect in terms of loss of supporting habitat or disturbance.
Productivity rate: fledged young per breeding pair	No significant decline	
Distribution: Breeding colonies	No significant decline	
Prey biomass available	No significant decline	
Barriers to connectivity	No significant increase	
Disturbance at breeding site	Human activities should occur at levels that do not adversely affect the breeding common tern population	

## Golden Plover (*Pluvialis apricaria*) [A140]

This species has the generic conservation objective ‘*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA*’.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The attributes and targets for this species as listed in the Site-Specific Conservation Objectives (SSCOs) for Inner Galway Bay SPA (Version 06, NPWS, 2018) were reviewed and an assessment of the proposed development against the nominated attributes and targets for the species is provided in Table 6.28.

Table 6-19 Targets and attributes associated with nominated site-specific conservation objectives for Golden Plover

Attribute	Target	Assessment
Population trend	Long term population trend stable or increasing	The proposed development will not have any effect on the population trend or distribution of this species within the SPA. There will be no effect in terms of loss of supporting habitat or disturbance.
Distribution	No significant decrease in the range, timing or intensity of use of areas by golden plover, other than that occurring from natural patterns of variation	

## Coot (*Fulica atra*) [A125]

This species has the generic conservation objective ‘*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA*’.

There are no Site-Specific Conservation Objectives (SSCOs) for Wexford Harbour and Slobs SPA. The attributes and targets for this species as listed in the Site-Specific Conservation Objectives (SSCOs) for Wexford Harbour and Slobs SPA were reviewed and an assessment of the proposed development against the nominated attributes and targets for the species is provided in Table 6.29.

Table 6-20 Targets and attributes associated with nominated site-specific conservation objectives for coot

Attribute	Target	Assessment
Population trend	Long term population trend stable or increasing	The proposed development will not have any effect on the population trend or distribution of this species within the SPA. The habitats on site are not of ecological significant to this species. There will be no effect in terms of loss of supporting habitat or disturbance.
Distribution	There should be no significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation.	

### Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]

This species has the generic conservation objective ‘*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA*’.

There are no Site-Specific Conservation Objectives (SSCOs) for Wexford Harbour and Slobs SPA. The attributes and targets for this species as listed in the Site-Specific Conservation Objectives (SSCOs) for Wexford Harbour and Slobs SPA were reviewed and an assessment of the proposed development against the nominated attributes and targets for the species is provided in Table 6.30.

Table 6-21 Targets and attributes associated with nominated site-specific conservation objectives for Greenland White-fronted Goose

Attribute	Target	Assessment
Population trend	Long term population trend stable or increasing	The proposed development will not have any effect on the population trend or distribution of this species within the SPA. There will be no effect in terms of loss of supporting habitat or disturbance.
Distribution	There should be no significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation.	

## 6.2.6 Common Scoter (*Melanitta nigra*) [A065]

This species has the generic conservation objective ‘*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA*’.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The attributes and targets for this species as listed in the Site-Specific Conservation Objectives (SSCOs) for Castlemaine Harbour SPA were reviewed and an assessment of the proposed development against the nominated attributes and targets for the species is provided in Table 6.31.

Table 6-22 Targets and attributes associated with nominated site-specific conservation objectives for Common Scoter

Attribute	Target	Assessment
Population trend	Long term population trend stable or increasing	The proposed development will not have any effect on the population trend or distribution of this species within the SPA. There will be no effect in terms of loss of supporting habitat or disturbance.
Distribution	No significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation.	

### 6.2.7 Arctic Tern (*Sterna paradisaea*) [A194]

This species has the generic conservation objective ‘To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA’.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The attributes and targets for this species as listed in the Site-Specific Conservation Objectives (SSCOs) for South Dublin Bay and River Tolka Estuary SPA were reviewed and an assessment of the proposed development against the nominated attributes and targets for the species is provided in Table 6.32.

Table 6-23 Targets and attributes associated with nominated site-specific conservation objectives for Arctic Tern

Attribute	Target	Assessment
Passage population	No significant decline	The proposed development will not have any effect on the breeding population, productivity or distribution of this species within the SPA. There will be no alteration in prey biomass, barriers to connectivity, or disturbance at breeding site. The habitats on site are not of ecological significant to this species. There is no suitable breeding or foraging habitat with the proposed development site. There will be no effect in terms of loss of supporting habitat or disturbance.
Distribution: roosting areas	No significant decline	
Prey biomass available	No significant decline	
Barriers to connectivity	No significant increase	
Disturbance at roosting site	Human activities should occur at levels that do not adversely affect the numbers of Arctic tern among the post-breeding aggregation of terns	

### 6.2.8 Gadwall (*Anas strepera*) [A051]

This species has the generic conservation objective ‘To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA’.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The proposed development will not have any effect on this species within the SPA. The habitats within the proposed development site are not of ecological significant to this species. There will be no effect in terms of loss of supporting habitat or disturbance.

### 6.2.9 Pochard (*Aythya ferina*) [A059]

This species has the generic conservation objective ‘To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA’.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The proposed development will not have any effect on this species within the SPA. The habitats within the proposed development site are not of ecological significance to this species. There will be no effect in terms of loss of supporting habitat or disturbance.

#### 6.2.10 Tufted Duck (*Aythya fuligula*) [A061]

This species has the generic conservation objective 'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The proposed development will not have any effect on this species within the SPA. The habitats within the proposed development site are not of ecological significance to this species. There will be no effect in terms of loss of supporting habitat or disturbance.

#### 6.2.11 Hen Harrier (*Circus cyaneus*) [A082]

This species has the generic conservation objective 'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'.

There are no Site-Specific Conservation Objectives (SSCOs) for Lough Corrib SPA. The proposed development will not have any effect on this species within the SPA. There will be no effect in terms of loss of supporting habitat or disturbance.

### 6.3 Conclusion of Residual Impact Assessment

Based on the above, in view of best scientific knowledge, on the basis of objective information, the proposed project will not adversely affect any QI/SCI as a result of deterioration in surface water, habitat loss or disturbance during either construction or operation of the proposed project. There is no potential for adverse effect on the identified QIs/SCIs and their associated targets and attributes, or on any European Site. All identified pathways for effect have been robustly blocked through measures to avoid impacts and the incorporation of best practice/mitigation measures into the project design.

Taking cognisance of measures to avoid impacts and best practice/mitigation measures incorporated into the project design which are considered in the preceding section, the Proposed project will not have an adverse effect on the integrity of any European site.

The proposed project will not prevent the QIs/SCIs of European Sites from achieving/maintaining favourable conservation status in the future as defined in Article 1 of the EU Habitats Directive. A definition of Favourable Conservation Status is provided below:

*'conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2;*

The conservation status will be taken as 'favourable' when:

*'Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and*

*'The natural range of the species is neither being reduced nor is 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.'*

Based on the above, it can be concluded in view of best scientific knowledge, on the basis of objective information that the proposed development will not adversely affect the Qualifying Interests/Special Conservation Interests associated with the following EU sites:

- > Lough Corrib SAC [000297]
- > Lough Corrib SPA [004042]

## 7. CUMULATIVE EFFECTS

A search and review in relation to plans and projects that may have the potential to result in cumulative and/or in-combination impacts on European Sites was conducted. This assessment focuses on the potential for cumulative in-combination effects on the European Sites where potential for adverse effects was identified at the screening stage (Appendix 1). This included a review of online Planning Registers, development plans and other available information and served to identify past and future plans and projects, their activities and their predicted environmental effects.

### 7.1.1 Plans

The following development plans been reviewed and taken into consideration as part of this assessment:

- Galway County Development Plan 2015-2021

The review focused on policies and objectives that relate to Natura 2000 sites and natural heritage. Policies and objectives relating to sustainable land use were also reviewed.

Table 6.1: Review of plans

Land Use and Spatial Plans	Key Policies/Issues/Objectives Directly Related to European Sites In The Zone of Influence	Assessment of Potential Impact on European Sites
<p><b>Galway County Development Plan 2015 - 2021</b></p> <p><b>Policy NHB 1 – Natural Heritage and Biodiversity</b>            It is the policy of Galway County Council to support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas, proposed Natural Heritage Areas Ramsar Sites, Nature Reserves, Wild Fowl Sanctuaries and Connemara National Park (and other designated sites including any future designations) and the promotion of the development of a green/ecological network within the plan area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment.</p>	<p><b>Objective NHB 1 – Protected Habitats and Species</b>            Support the protection of habitats and species listed in the Annexes to and/or covered by the EU Habitats Directive (92/43/EEC) (as amended) and the Birds Directive (2009/147/EC), and regularly occurring-migratory birds and their habitats and species protected under the Wildlife Acts 1976-2000 and the Flora Protection Order.</p>	<p>The Development plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the Natura 2000 network and other natural heritage interests. No potential for cumulative impacts when considered in conjunction with the current proposal were identified.</p> <p>There will be no impact on designated sites as a result of deterioration in water quality. Best practice preventative measures will be implemented to avoid effects on ground water quality. There will be no adverse effects on sensitive aquatic receptors listed as QIs/SCIs of European Sites, as a result of deterioration in water quality.</p> <p>There will be no adverse effects on ecological receptors listed as QIs/SCIs of European Sites, as a result of habitat loss, displacement or disturbance.</p>
<p><b>Objective NHB 2 – Biodiversity and Ecological Networks</b>            Support the protection and enhancement of biodiversity and ecological connectivity within the plan area, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stone walls, geological and geo-morphological systems, other landscape features and associated wildlife where these form part of the ecological network and/or may be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive.</p>	<p><b>Variation No.1 to the County Development Plan 2015 - 2021</b></p> <p><b>Objective DS 6 – Natura 2000 Network and Habitats Directive Assessment</b>            Protect European sites that form part of the Natura 2000 network (Including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds</p>	<p>The Development plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the Natura 2000 network and</p>

Land Use and Spatial Plans	Key Policies/Issues/Objectives Directly Related to European Sites In The Zone of Influence	Assessment of Potential Impact on European Sites
<p>Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011(SI No.477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any updated or subsequent guidance). A plan or project (e.g. proposed development) within the plan area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and/or a Habitats Directive Assessment where necessary, that:</p> <ol style="list-style-type: none"> <li>The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European site (either individually or in combination with other plans or projects); or</li> <li>The plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or</li> <li>The plan or project will have a significant adverse effect on the integrity of any European site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.</li> </ol>	<p>other natural heritage interests. No potential for cumulative impacts when considered in conjunction with the current proposal were identified.</p> <p>There will be no impact on designated sites as a result of deterioration in water quality. Best practice preventative measures will be implemented to avoid effects on water quality. There will be no adverse effects on sensitive aquatic receptors listed as QIs/SCIs of European Sites, as a result of deterioration in water quality. There will be no impact on nationally designated sites as a result of the proposed development.</p> <p>There will be no adverse effects on ecological receptors listed as QIs/SCIs of European Sites, as a result of habitat loss, displacement or disturbance.</p>	<p>other natural heritage interests. No potential for cumulative impacts when considered in conjunction with the current proposal were identified.</p> <p>There will be no impact on designated sites as a result of deterioration in water quality. Best practice preventative measures will be implemented to avoid effects on water quality. There will be no adverse effects on sensitive aquatic receptors listed as QIs/SCIs of European Sites, as a result of deterioration in water quality. There will be no impact on nationally designated sites as a result of the proposed development.</p> <p>There will be no adverse effects on ecological receptors listed as QIs/SCIs of European Sites, as a result of habitat loss, displacement or disturbance.</p>
<p><b>Objective DS 10 – Impacts of Developments on Protected Sites</b></p> <p>Have regard to any impacts of development on or near existing and proposed Natural Heritage Areas, Special Protection Areas and Special Areas of Conservation, Nature Reserves, Ramsar Sites, Wildfowl Sanctuaries, Salmonoid Waters, Refuges for Flora and Fauna, Conamara National Park, shellfish waters, freshwater pearl mussel catchments and any other designated sites including future designations.</p>		

## 7.1.2 Other Projects

The proposed development was considered in-combination with other plans and projects in the area that could result in cumulative impacts on designated Sites. The online planning system for Galway County Council as well as the An Bord Pleanála Website (planning searches), was consulted on the 14/01/2020 for the relevant area surrounding the site. Additional projects identified in the Lemonfield area include;

- Permission to construct a private boathouse with all associated work and ancillary services. (Gross floor space of proposed works 44.5sqm) (planning reference: 15332).
- Permission for change of house design and ancillary studio building design from that previously permitted under planning permission ref.no. 15/14 & ref no. 13/351, with all associated works and ancillary services. Gross floor space dwelling 368sqm, studio 48sqm (Planning reference: 15747)
- Permission for a dwellinghouse and garage/shed, to replace existing septic tank with a new private waste water treatment and to demolish existing dwellinghouse (gross floor space 254.4sqm; demolition 132.9sqm) (Planning reference: 13351)
- Permission for a change of house design and garage/sheds from that previously permitted under planning permission reference no. 13/351 and to retain existing works and to complete ancillary studio building with all associated works and ancillary services (Gross floor space dwelling 310sqm;studio 48sqm; shed 48.6sqm) (Planning reference:1514)

## 7.1.3 Conclusion of Cumulative Assessment

Following the detailed assessment provided in the preceding sections, it is concluded that, the proposed development will not result in any residual adverse effects on any of the European Sites, their integrity or their conservation objectives when considered on its own. There is therefore no potential for the proposed development to contribute to any cumulative adverse effects on any European Site when considered in-combination with other plans and projects.

In the review of the projects that was undertaken, no connection, that could potentially result in additional or cumulative impacts was identified. Neither was any potential for different (new) impacts resulting from the combination of the various projects and plans in association with the proposed development.

Taking into consideration the reported residual impacts from other plans and projects in the area and the predicted impacts with the current proposal, no residual cumulative impacts have been identified with regard to any European Site.

## 8. **CONCLUDING STATEMENT**

This NIS has provided an assessment of all potential direct or indirect adverse effects on European Sites

Where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur has been robustly blocked through the use of avoidance, appropriate design and mitigation measures as set out within this report and its appendices. The measures ensure that the construction, operation and decommissioning of the proposed development does not adversely affect the integrity of European sites.

Therefore, it can be objectively concluded that the proposed development, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site.

## BIBLIOGRAPHY

- Bailey, M. and Rochford J. (2006) Otter Survey of Ireland 2004/2005. Irish Wildlife Manuals, No. 23. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.
- Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S. and Fuller, R.J. (2013). Bird Atlas 2007-11: the breeding and wintering birds of Britain and Ireland. BTO Books, Thetford, UK.
- Birds Directive (2009/47/EC) – [http://ec.europa.eu/environment/nature/legislation/birdsdirective/index\\_en.htm](http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm)
- Bowers Marriott, B. (1997) Practical Guide to Environmental Impact Assessment: A Practical Guide. Published by McGraw-Hill Professional, 1997, 320 pp.
- Chandler, J.R. (1970) A Biological Approach to water Quality Management. Water Poll. Cont. 69:415-421.
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and Directive 2009/147/EC (codified version of Directive 79/409/EEC as amended) (Birds Directive) – transposed into Irish law as European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011).
- CIEEM (2016) Institute of Ecology and Environmental Management Draft Guidelines for Ecological Impact Assessment.
- Crowe, O. (2005) Ireland's Wetlands and their Waterbirds: Status and Distribution. BirdWatch Ireland, Rockingham, Co. Wicklow.
- DEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. DEHLG, Dublin.
- DoEHLG (2010). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Revision, February, 2010. Department of the Environment, Heritage and Local Government.
- EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission.
- EC (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC.
- EC (2002) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission.
- EC (2006) Nature and biodiversity cases: Ruling of the European Court of Justice. Office for Official Publications of the European Communities, Luxembourg.
- EC (2007a) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. Office for Official Publications of the European Communities, Luxembourg. European Commission.

- EC (2007b) Interpretation Manual of European Union Habitats. Version EUR 27. European Commission, DG Environment.
- EPA (2002) Guidelines on the information to be contained in Environmental Impact Statements. Environmental Protection Agency.
- EPA (2003) Advice Notes on current practice in the preparation of Environmental Impact Statements. Environmental Protection Agency.
- EPA website: <http://www.epa.ie>.
- European Communities (Conservation of Wild Birds) Regulations, 1985, SI 291/1985 & amendments – <http://www.irishstatutebook.ie>.
- European Communities (Environmental Impact Assessment) Regulations, 1989 to 2001.
- European Communities (Natural Habitats) Regulations, SI 94/1997, SI 233/1998 & SI 378/2005 – <http://www.irishstatutebook.ie>.
- Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Dublin: The Heritage Council.
- Habitats Directive (92/43/EEC).
- NPWS (2008) The Status of EU Protected Habitats and Species in Ireland. Conservation Status in Ireland of Habitats and Species listed in the European Council Directive on the Conservation of Habitats, Flora and Fauna 92/43/EEC.
- NPWS of the DEHLG (2008) The Report on Status of Habitats and Species in Ireland: Technical Reports and Forms.
- NPWS Protected Areas Site Synopses and maps available on <http://www.npws.ie/en/ProtectedSites/>.
- NRA (2004) Environmental Impact Assessment of National Road Schemes – A Practical Guide, National Roads Authority, Dublin.
- NRA (2004) Guidelines for the Treatment of Noise and Vibration in National Road Schemes (1 ed.). Dublin: National Roads Authority.
- NRA (2005) Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes. Dublin: National Roads Authority.
- NRA (2006) A Guide to Landscape Treatments for National Road Schemes in Ireland. Dublin: National Roads Authority.
- NRA (2006) Guidelines for the Protection and Preservation of Trees, Hedgerows and Scrub Prior to, During and Post-Construction of National Road Schemes. Dublin: National Roads Authority.
- NRA (2009). Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes. Dublin: National Roads Authority.
- O'Connor, W. (2007) A Survey of Juvenile Lamprey Populations in the Corrib and Suir Catchments. Irish Wildlife Manuals No. 26. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.



Smith, G.F. & Crowley, W. (2020) The habitats of cutover raised bog. Irish Wildlife Manuals, No. 128. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

Therivel R. (2009) Workshop Material on the Habitats Directive Assessment of Plans Levett-Therivel Sustainability Consultants on behalf of the Heritage Council, Kilkenny.

Water status data available on <http://www.epa.ie> and <http://www.wfdireland.ie>

Wildlife Act 1976 and Wildlife (Amendment) Act 2000.



## **APPENDIX 1**

### **APPROPRIATE ASSESSMENT SCREENING REPORT**



Planning and  
Environmental  
Consultants

## **Appropriate Assessment Screening Report**

Amenity Development,  
Oughterard, Co. Galway





## DOCUMENT DETAILS

Client: **Oughterard Sports and Recreational Partnership**

Project title: **Amenity Development, Oughterard, Co. Galway**

Project Number: **190234**

Document Title: **Appropriate Assessment Screening Report**

Doc. File Name: **AASR - F - 2021.02.09 - 190909**

Prepared By: **MKO  
Tuam Road  
Galway  
Ireland  
H91 VW84**



Rev	Status	Date	Author(s)	Approved By
01	Final	09/02/2021	JOS	PR

# Table of Contents

1.	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	Appropriate Assessment.....	1
1.1.1	Screening for Appropriate Assessment.....	1
1.1.2	Statement of Authority.....	2
2.	<b>DESCRIPTION OF THE PROPOSED DEVELOPMENT.....</b>	<b>3</b>
2.1	Site Location.....	3
2.2	Characteristics of the Proposed Development.....	3
2.2.1	Description of the project.....	3
2.2.2	Description of the Baseline Ecological Environment.....	6
2.2.2.1	Habitats Present on the Site.....	6
2.2.2.2	Fauna.....	9
3.	<b>IDENTIFICATION OF RELEVANT EUROPEAN SITES.....</b>	<b>10</b>
3.1	Identification of the European Sites within the Likely Zone of Impact.....	10
3.2	European Sites with the Potential to be Significantly Affected by the Proposed Development.....	23
3.2.1	Lough Corrib SAC.....	23
3.2.2	Lough Corrib SPA.....	23
4.	<b>ARTICLE 6(3) APPROPRIATE ASSESSMENT SCREENING STATEMENT AND CONCLUSIONS.....</b>	<b>25</b>
4.1	Data Collected to Carry Out Assessment.....	25
4.2	Concluding Statement.....	25
5.	<b>BIBLIOGRAPHY.....</b>	<b>26</b>
	<b>TABLE OF TABLES</b>	
	<i>Table 2-1 Birds species recorded during the survey and their conservation status.....</i>	<i>9</i>
	<i>Table 3-1 Identification of Designated sites within the Likely Zone of Impact.....</i>	<i>11</i>
	<b>APPENDICES</b>	
	Appendix 1.....	Drawings

# 1. INTRODUCTION

MKO has been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Screening for Appropriate Assessment of the proposed development of lands at Lemonfield, Pier Road, Oughterard for mixed amenity use.

Screening for Appropriate Assessment is required under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Where it cannot be excluded that a project or plan, either alone or in combination with other projects or plans, would have a significant effect on a European Site then same shall be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives. The current project is not directly connected with, or necessary for, the management of any European Site consequently the project has been subject to the Appropriate Assessment Screening process.

The assessment in this report is based on a desk study and field surveys undertaken in 2019. It specifically assesses the potential for the proposed development to result in significant effects on European sites in the absence of any best practice, mitigation or preventative measures.

This Appropriate Assessment Screening Report has been prepared in accordance with the European Commission's *Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC* (EC, 2001) and *Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC* (EC, 2018) as well as the Department of the Environment's *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities* (DoEHLG, 2010).

In addition to the guidelines referenced above, the following relevant documents were also considered in the preparation of this report:

1. *Council of the European Commission (1992) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.*
2. *EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.*
3. *EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC - Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence. Opinion of the commission.*
4. *EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.*

## 1.1 Appropriate Assessment

### 1.1.1 Screening for Appropriate Assessment

Screening is the process of determining whether an Appropriate Assessment is required for a plan or project. Under Part XAB of the Planning and Development Act, 2000, as amended, screening must be carried out by the Competent Authority. As per Section 177U of the Planning and Development Act, 2000, as amended 'A screening for appropriate assessment shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site'. The Competent Authority's determination as to whether an Appropriate Assessment is

required must be made on the basis of objective information and should be recorded. The Competent Authority may request information to be supplied to enable it to carry out screening.

Consultants or project proponents may provide for the competent authority, the information necessary for them to determine whether an Appropriate Assessment is required and provide advice to assist them in the Article 6(3) Appropriate Assessment Screening decision.

Where it cannot be excluded beyond reasonable scientific doubt at the Screening stage, that a proposed plan or project, individually or in combination with other plans and projects, would have a significant effect on the conservation objectives of a European site, an Appropriate Assessment is required.

Where an Appropriate Assessment is required, the Competent Authority may require the applicant to prepare a Natura Impact Statement.

The term Natura Impact Statement (NIS) is defined in legislation<sup>1</sup>. An NIS, where required, should present the data, information and analysis necessary to reach a definitive determination as to 1) the implications of the plan or project, alone or in combination with other plans and projects, for a European site in view of its conservation objectives, and 2) whether there will be adverse effects on the integrity of a European site. The NIS should be underpinned by best scientific knowledge, objective information and by the precautionary principle.

This Article 6(3) Appropriate Assessment Screening Report has been prepared in compliance with the provision of section 177U of the Planning & Development Act 2010 as amended.

## 1.1.2 Statement of Authority

An ecological baseline survey undertaken on the 17/09/2019 by James Owens (B.Sc., M.Sc.). James is an experienced ecologist with over four years professional experience and is a competent expert in undertaking habitat and ecological assessments to this level. A follow up walkover survey, including a dusk and dawn hen harrier roost survey was undertaken on the 20<sup>th</sup> and 21<sup>st</sup> of January 2021 by Julie O'Sullivan (B.Sc., M.Sc.). This report has been prepared Julie O'Sullivan. Julie is an experienced ecologist with over five years' experience. This report has been reviewed by Pat Roberts (B.Sc., MCIEEM) who has over 15 years of experience in management and ecological assessment.

---

<sup>1</sup> As defined in Section 177T of the Planning and Development Act, 2000 as amended, an NIS means a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own and in combination with other plans and projects, for a European site in view of its conservation objectives. It is required to include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for the European site in view of its conservation objectives

## 2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

### 2.1 Site Location

The proposed development is located in Lemonfield, Oughterard, Co. Galway (IG Ref: M 13111 43324). The site is located approximately 850m north-east of Oughterard Village and is accessible via Pier Road to the north-west and the old bog road to the south-east.

Lough Corrib SAC (000297) is located 19.6m north-west, and Lough Corrib SPA (004042) is located 112m north-west of the proposed development site.

The site location of the proposed development is shown in Figure 2.1.

### 2.2 Characteristics of the Proposed Development

#### 2.2.1 Description of the project

Oughterard Sports and Recreational Partnership (OSRP) wish to develop the site at Lemonfield for mixed amenity use, to allow for wider community and social inclusion and offer a broader range of services to all their stakeholders.

The proposed development consists of:

- > Grass / sand pitches for ball sports and for camping and accommodation of scouting jamborees,
- > Building facilities to include meeting rooms, sanitary facilities and showers,
- > Bus and coach set down, parking and turning facilities
- > Storage facilities for sporting and maintenance equipment, canoes, etc.,
- > Kiosk facilities accommodating water sports operators,
- > Security fencing and secure site compounds,
- > Advertising hoarding,
- > Lighting,
- > Access roads,
- > All associated landscaping.

Construction commenced on a grass playing pitch within the southern section of the site in the latter half of 2020, under a planning exemption certificate. The pitch is currently under construction and will be completed in Spring 2021. This pitch occurs within the red line boundary of the proposed development site but will not form part of this assessment.

The proposed site layout is shown in Figure 2.2.





## 2.2.2 Description of the Baseline Ecological Environment

### 2.2.2.1 Habitats Present on the Site

A dedicated habitat survey of the area within and in the vicinity of the proposed development was undertaken on the 17<sup>th</sup> of September 2019, with a follow up survey on the 20<sup>th</sup> and 21<sup>st</sup> of January 2021. The habitat classification provided in this report correspond to those described in 'A Guide to Habitats in Ireland' (Fossitt, 2000).

The northern third of the site contains an area of Cutover bog (PB4) which would have been originally been part of a wider raised bog complex (plate 2-1). The area of Cutover bog (PB4) is drained by a number of Drainage ditches (FW4) and gorse (*Ulex europaeus*) Scrub (WS1) has encroached on large areas (Plate 5-1). The Cutover bog (PB4) habitat is dominated by purple moor-grass (*Molinia caerulea*) throughout and by bog myrtle (*Myrica gale*) in parts and is degraded through drainage and scrub encroachment.

Semi-improved Dry calcareous and neutral grassland (GS1) and Wet grassland (GS4) comprised the majority of the southern two-thirds of the site (Plate 2-2). Dry calcareous and neutral grassland (GS1) was recorded on slightly raised areas with better drainage. Gorse Scrub (WS1) has encroached on part of the Wet grassland (GS4) and forms a mosaic in this area. A number of scattered trees were recorded within the grassland area.

Since the original field survey carried out in 2019, construction commenced on a grass playing pitch within the southern section of the site in the latter half of 2020, under a planning exemption certificate, and is classified as spoil and bare ground (ED2) (Plate 2-3). This pitch occurs within the red line boundary of the proposed development site, but will not form part of this assessment. Treelines (WL2) form the site boundary to the north, along the road, part of the eastern boundary, the southern boundary and part of the western boundary. A galvanise and block shed at the southern end of the site was categorised as Buildings and artificial surfaces (BL3).



Figure 2-1 Gorse Scrub (WS1) and Drainage ditch (FW4) in the right foreground



Figure 2-2 Species-poor Wet grassland (GS4)



Plate 2-3 Grass playing pitch within the southern section of the site currently under construction, classified as spoil and bare ground (ED2).

Detailed relevés were recorded in the cutover peat habitat within the northern section of the proposed development site. The peatland vegetation community was identified and classified using the IVC Classification system. Vegetation relevé data recorded during the field survey (2m x 2m) was formatted and uploaded to the online ERICA database. This programme assesses the data against a reference database of vegetation communities and assigns the relevé data a community classification. This is a robust assessment allowing for accurate vegetation community assignment.

The vegetation data collected within the cutover bog habitat as part of the dedicated botanical survey corresponds to the Irish Vegetation Classification (IVC) HE4D *Molinia caerulea* - *Potentilla erecta* - *Erica tetralix* heath community (Purple Moor-grass – Tormentil – Cross-leaved Heath heath).

This IVC community corresponds to *Molinia caerulea* cutover bog (LS3) as described in the IWM 128 'The habitats of cutover raised bog' (Smith et al., 2020). This is a habitat type of low conservation importance and low species richness. LS3 habitats are generally dry with a low *Sphagnum* cover and of low conservation value.

None of the habitats recorded on the site conform to habitats listed under Annex I of the EU Habitats Directive. The area of cutover bog (PB4) was part of a larger raised bog area which has been extensively cutover in the past and no intact or uncut high bog was recorded within or adjacent to the proposed development site. The Irish definition of Annex I Degraded raised bog [7120] does not include areas of cutaway or cutover bog (NPWS, 2019 and 2013).

No botanical species listed under the Flora (protection) Order (1999, as amended 2015), listed in the EU Habitats Directive (92/43/EEC), or listed in the Irish Red Data Books were recorded on the site. All species recorded are common in the Irish landscape. No species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 were recorded during the survey.

## 2.2.2.2 Fauna

### 2.2.2.2.1 Birds

The bird species recorded during the site visit carried out in September 2019 are listed in Table 2-1. Five of the bird species observed are green-listed and are common in Ireland. One of the bird species recorded, robin, is amber listed (for its breeding population). The species recorded on site are typical of the agricultural habitats in the wider area.

Table 2-1 Birds species recorded during the survey and their conservation status

Species	Conservation status (BOCCI 2014-2019)
Woodpigeon ( <i>Columba palumbus</i> )	Green
Wren ( <i>Troglodytes troglodytes</i> )	Green
Blue tit ( <i>Cyanistes caeruleus</i> )	Green
Pheasant ( <i>Phasianus colchicus</i> )	Green
Blackbird ( <i>Turdus merula</i> )	Green
Robin ( <i>Erithacus rubecula</i> )	Amber

None of the bird species recorded within or adjacent to the development site are protected under Annex I of the EU Birds Directive or Red listed under the Birds of Conservation Concern in Ireland (BoCCI). No Annex I bird species or any SCIs of the nearby Lough Corrib SPA was recorded during the site visit.

### 2.2.2.2.2 Otter

An Otter survey was conducted as per NRA (2009) guidelines (*Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*) in order to determine the presence or absence of Otter signs within the areas identified as having potential to support the species. This involved a search for all Otter signs e.g. spraints, scat, prints, slides, trails, couches and holts along drainage ditches (including a 10m buffer) within the proposed development site (NPWS 2009, *Threat Response Plan: Otter (2009-2011)*).

No signs of protected terrestrial mammals were recorded during the walkover survey. Due to the close proximity of the Owenriff River a dedicated otter (*Lutra lutra*) survey was also undertaken. No signs of otter, including holts, slides, prints or spraints were recorded within or adjacent to the site. The drainage ditches within the proposed development site are relatively shallow, have a peaty substrate and in some cases overgrown. The drains did not offer suitable otter habitat.

### 3. IDENTIFICATION OF RELEVANT EUROPEAN SITES

#### 3.1 Identification of the European Sites within the Likely Zone of Impact

The following methodology was used to establish which European Sites are within the Likely Zone of Impact of the proposed development:

- Initially the most up to date GIS spatial datasets for European designated sites and water catchments were downloaded from the NPWS website ([www.npws.ie](http://www.npws.ie)) and the EPA website ([www.epa.ie](http://www.epa.ie)) on the 05/02/2021. The datasets were utilized to identify European Sites which could feasibly be affected by the proposed development.
- All European Sites within a distance of 15km surrounding the development site were identified and are shown on Figure 3.1. In addition, the potential for connectivity with European Sites at distances of greater than 15km from the proposed development was also considered in this initial assessment. In this case, potential connectivity with sites located at a distance of over 15km from the proposed development was identified.
- The catchment mapping was used to establish or discount potential hydrological connectivity between the site of the proposed development and any European Sites. The hydrological catchments are also shown in Figure 3.1.
- Table 3.1 provides details of all relevant European Sites as identified in the preceding steps and assesses which are within the likely Zone of Impact. The assessment considers any likely direct or indirect impacts of the proposed development, both alone and in combination with other plans and projects, on European Sites by virtue of the following criteria: size and scale, land-take, distance from the European Site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements and duration of construction, operation and decommissioning were considered in this screening assessment.
- The site synopses and conservation objectives of these sites, as per the NPWS website ([www.npws.ie](http://www.npws.ie)), were consulted and reviewed at the time of preparing this report. Figure 3.1 shows the location of the proposed development in relation to all European sites within 15km of the proposed development.
- Where potential pathways for Significant Effect are identified, the site is included within the Likely Zone of Impact and further assessment is required.

Table 3-1 Identification of Designated sites within the Likely Zone of Impact

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
<p><b>Special Area of Conservation (SAC)</b></p> <p>Lough Corrib SAC (000297)</p> <p>Distance: 19.6m north-west</p>	<p>&gt; Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [31110]</p> <p>&gt; Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletalia uniflorae</i> and/or <i>Isoetes-Najasjunctea</i> [3130]</p> <p>&gt; Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp.</i> [3140]</p> <p>&gt; Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260]</p> <p>&gt; Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]</p> <p>&gt; <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410]</p> <p>&gt; Active raised bogs [7110]</p> <p>&gt; Degraded raised bogs still capable of natural regeneration [7120]</p> <p>&gt; Depressions on peat substrates of the <i>Rhynchosporion</i> [7150]</p> <p>&gt; Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210]</p> <p>&gt; Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220]</p> <p>&gt; Alkaline fens [7230]</p> <p>&gt; Limestone pavements [8240]</p> <p>&gt; Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</p> <p>&gt; Bog woodland [91D0]</p> <p>&gt; <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</p> <p>&gt; <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092]</p> <p>&gt; <i>Petromyzon marinus</i> (Sea Lamprey) [1095]</p> <p>&gt; <i>Lampetra planeri</i> (Brook Lamprey) [1096]</p> <p>&gt; <i>Salmo salar</i> (Salmon) [1106]</p>	<p>Detailed conservation objectives for this site (Version 1, April 2017) were reviewed as part of the assessment and are available at www.npws.ie</p>	<p>There is no potential for direct impact as the proposed development is outside of the site boundary.</p> <p>Indirect impacts on the following QIs can be ruled out due to the terrestrial nature of the habitats/species, the distance from the proposed works area and the absence of a complete source-pathway-receptor chain for impact:</p> <ul style="list-style-type: none"> <li>&gt; Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)</li> <li>&gt; <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)</li> <li>&gt; Active raised bogs*</li> <li>&gt; Degraded raised bogs still capable of natural regeneration</li> <li>&gt; Depressions on peat substrates of the <i>Rhynchosporion</i></li> <li>&gt; Limestone pavements*</li> <li>&gt; Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</li> <li>&gt; Bog Woodland</li> <li>&gt; Slender Green Feather-moss (<i>Drepanocladus vernicosus</i>)</li> </ul> <p>According to Map 11 of the site-specific conservation objects document, Lough</p>

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
	<ul style="list-style-type: none"> <li>&gt; <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303]</li> <li>&gt; <i>Lutra lutra</i> (Otter) [1355]</li> <li>&gt; <i>Drepanocladus vermicostus</i> (Slender Green Feather-moss) [1393]</li> <li>&gt; <i>Najas flexilis</i> (Slender Naiad) [1833]</li> </ul>		<p>Corrib SAC has been selected for lesser horseshoe bats because of the presence of one important summer roost, located on the northern shores of Lough Corrib, more than 10km north-west of the proposed development site. The development site is outside the foraging range of these Bat population for which the SAC is designated (i.e. 2.5km as per Map 11). There is no pathway for significant effect on the population of lesser horseshoe bat as a result of the development.</p> <p>Drainage ditches within the site have potential surface water connectivity with Lough Corrib SAC. Therefore, the proposed works have the potential to cause deterioration in surface water quality during construction and operation, potentially affecting the following aquatic habitats and supporting habitats for aquatic fauna:</p> <ul style="list-style-type: none"> <li>&gt; Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)</li> <li>&gt; Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoetes Nanojuncetea</i></li> <li>&gt; Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.</li> <li>&gt; Slender Naiad (<i>Najas flexilis</i>)</li> </ul>

European Sites and distance from proposed development	Quality Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
			<ul style="list-style-type: none"> <li>&gt; Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliana</i>*</li> <li>&gt; Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation</li> <li>&gt; Alkaline fens</li> <li>&gt; Petrifying springs with tufa formation (<i>Cratoneurion</i>)*</li> <li>&gt; <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</li> <li>&gt; White-clawed Crayfish (<i>Austropotamobius pallipes</i>)</li> <li>&gt; Brook Lamprey (<i>Lampetra planeri</i>)</li> <li>&gt; Sea Lamprey (<i>Petromyzon marinus</i>)</li> <li>&gt; Salmon (<i>Salmo salar</i>)</li> <li>&gt; Otter (<i>Lutra lutra</i>)</li> </ul> <p>Potential for indirect disturbance to Otter was also identified with regard to Lough Corrib SAC.</p> <p><b>This site is in the zone of likely impact, and further assessment is required.</b></p>
Gortmandarragh Limestone Pavement SAC (001271)  Distance 5.3km south-east	Limestone pavements [8240]	Detailed conservation objectives for this site (Version 1, April 2019) were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a>	This European Site is located 5.3km south-east of the proposed works area and is designated for terrestrial habitats. Based on the lack of connectivity between the site and this SAC, potential for direct and indirect impact on the European Site can be excluded.

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
<p>Connemara Bog Complex SAC (002034)</p> <p>Distance: 6.3km south-west</p>	<ul style="list-style-type: none"> <li>&gt; Coastal lagoons [1150]</li> <li>&gt; Reefs [1170]</li> <li>&gt; Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110]</li> <li>&gt; Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoetes-Najasuncetea</i> [3130]</li> <li>&gt; Natural dystrophic lakes and ponds [3160]</li> <li>&gt; Water courses of plain to montane levels with the <i>Ranunculation fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260]</li> <li>&gt; Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010]</li> <li>&gt; European dry heaths [4030]</li> <li>&gt; <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410]</li> <li>&gt; Blanket bogs (* if active bog) [7130]</li> <li>&gt; Transition mires and quaking bogs [7140]</li> <li>&gt; Depressions on peat substrates of the <i>Rhynchosporion</i> [7150]</li> <li>&gt; Alkaline fens [7230]</li> <li>&gt; Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</li> <li>&gt; <i>Euphydrys aurinia</i> (Marsh Fritillary) [1065]</li> <li>&gt; <i>Salmo salar</i> (Salmon) [1106]</li> <li>&gt; <i>Lutra lutra</i> (Otter) [1355]</li> <li>&gt; <i>Najas flexilis</i> (Slender Naiad) [1833]</li> </ul>	<p>Detailed conservation objectives for this site (Version 1, October 2015) were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>	<p><b>This site is not in the zone of likely impact, and no further assessment is required.</b></p> <p>This SAC is located 6.3km south-west of the proposed development site.</p> <p>There is no hydrological connectivity between the proposed development site and this SAC. No source-pathway-receptor chain for impact was identified between the proposed development and the QJ habitats and species for which this site has been designated. Based on the nature and scale of the development and the distance from this SAC, potential for direct or indirect impact on the European Site can be excluded.</p> <p><b>This site is not within the likely zone of impact and no further assessment is required.</b></p>
<p>Ross Lake and Woods SAC (001312)</p>	<ul style="list-style-type: none"> <li>&gt; Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140]</li> <li>&gt; <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303]</li> </ul>	<p>Detailed conservation objectives for this site (Version 1, October 2018) were</p>	<p>This SAC is located 6.6km south-east of the proposed development site. No source-pathway-receptor chain for impact was</p>

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
<p>Distance: 6.6km south-east</p>		<p>reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>	<p>identified between the site of the proposed works area and the aquatic habitat for which this site has been designated.</p> <p>The development site is situated outside the 2.5km core foraging range of the lesser horseshoe bat (NPWS, 2018). The proposed development will therefore not impact on the QI population for which the SAC has been designated.</p> <p>Potential for direct or indirect impact on the European Site can be excluded. <b>This site is not within the likely zone of impact and no further assessment is required.</b></p>
<p>Cloughmoyne SAC (000479)</p> <p>Distance: 9.8km north-east</p>	<p>&gt; Limestone pavements [8240]</p>	<p>Detailed conservation objectives for this site (Version 1, April 2019) were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>	<p>This European Site is located 9.8km north-east of the proposed works area, on the opposite side of Lough Corrib and is designated for terrestrial habitats. Based on the lack of connectivity between the site and this SAC, potential for direct and indirect impact on the European Site can be excluded.</p> <p><b>This site is not in the zone of likely impact, and no further assessment is required.</b></p>
<p>Ballymaglancy Cave, Cong SAC (000474)</p> <p>Distance: 11.4km north</p>	<p>&gt; Caves not open to the public [8310]</p> <p>&gt; <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303]</p>	<p>Detailed conservation objectives for this site (Version 1, August 2018) were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>	<p>This SAC is located 11.4km north of the proposed development site, on the opposite side of Lough Corrib. No source-pathway-receptor chain for impact was identified</p>

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
<p>Lough Carra/Mask Complex SAC (001774)</p> <p>Distance: 12.2km north</p>	<ul style="list-style-type: none"> <li>&gt; Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110]</li> <li>&gt; Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletalia uniflorae</i> and/or <i>Isoetes-Najasuncetea</i> [3130]</li> <li>&gt; Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140]</li> <li>&gt; European dry heaths [4030]</li> <li>&gt; Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]</li> <li>&gt; Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210]</li> <li>&gt; Alkaline fens [7230]</li> <li>&gt; Limestone pavements [8240]</li> <li>&gt; Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]</li> <li>&gt; <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303]</li> <li>&gt; <i>Lutra lutra</i> (Otter) [1355]</li> </ul>	<p>Generic conservation objectives for this site (Version 7.0, February 2020) were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>	<p>between the site of the proposed works area and the QI species /habitat of this SAC.</p> <p>The development site is situated outside the 2.5km core foraging range of the lesser horseshoe bat (NPWS, 2018). The proposed development will therefore not impact on the QI population for which the SAC has been designated.</p> <p>Potential for direct or indirect impact on the European Site can be excluded. <b>This site is not within the likely zone of impact and no further assessment is required.</b></p>
			<p>This SAC is located 12.2km north of the proposed development site and is located in a separate hydrological catchment.</p> <p>No source-pathway-receptor chain for impact was identified between the proposed development and the QI habitats and species for which this site has been designated.</p> <p>The development site is situated outside the 2.5km core foraging range of the lesser horseshoe bat (NPWS, 2018). The proposed development will therefore not impact on the QI population for which the SAC has been designated.</p>

European Sites and distance from proposed development	Quality Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
<p>Maumturk Mountains SAC (002008)</p> <p>Distance: 12.6km</p>	<p>&gt; <i>Hamatocaulis vernicosus</i> (Slender Green Feather-moss) [6216]</p> <p>&gt; Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110]</p> <p>&gt; Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010]</p> <p>&gt; Alpine and Boreal heaths [4060]</p> <p>&gt; Blanket bogs (* if active bog) [7130]</p> <p>&gt; Depressions on peat substrates of the <i>Rhynchosporion</i> [7150]</p> <p>&gt; Siliceous rocky slopes with chasmophytic vegetation [8220]</p> <p>&gt; <i>Salmo salar</i> (Salmon) [1106]</p> <p>&gt; <i>Najas flexilis</i> (Slender Naiad) [1833]</p>		<p>Based on the nature and scale of the development and the distance from this SAC, potential for direct or indirect impact on the European Site can be excluded.</p> <p><b>This site is not within the likely zone of impact and no further assessment is required.</b></p>
		<p>Detailed conservation objectives for this site (Version 1, July 2017) were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>	<p>This SAC is located 12.6km north-west of the proposed development site and is located in a separate hydrological catchment.</p> <p>No source-pathway-receptor chain for impact was identified between the proposed development and the QI habitats and species for which this site has been designated. Based on the nature and scale of the development and the distance from this SAC, potential for direct or indirect impact on the European Site can be excluded.</p> <p><b>This site is not within the likely zone of impact and no further assessment is required.</b></p>

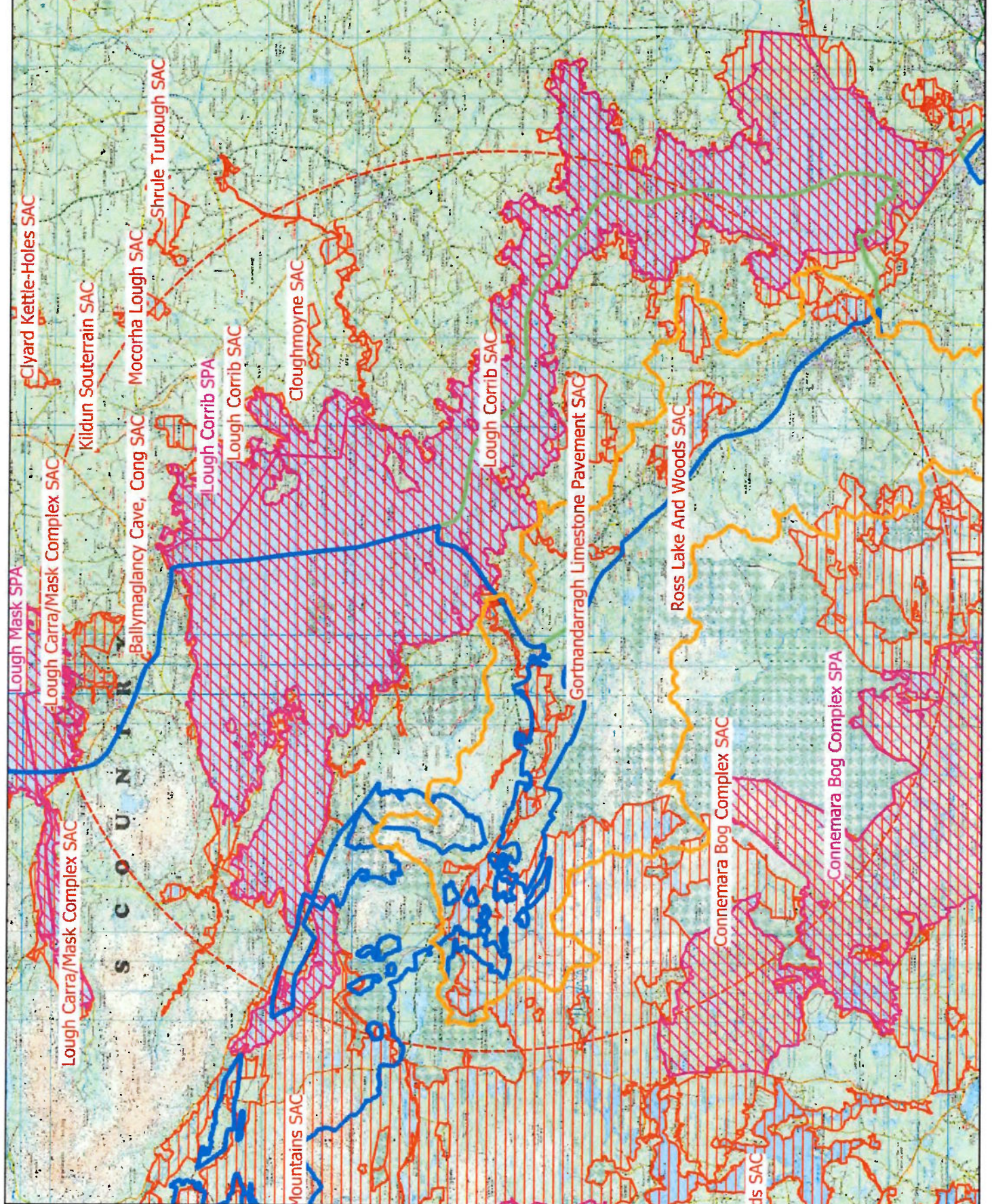
European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
<p>Kildun Souterrain SAC (002320)</p> <p>Distance: 14km north-east</p>	<p>&gt; <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303]</p>	<p>Detailed conservation objectives for this site (Version 1, October 2018) were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>	<p>This SAC is located 14km north-east of the proposed development site, on the opposite side of Lough Corrib. No source-pathway-receptor chain for impact was identified between the site of the proposed works area and the QI species of this SAC.</p> <p>The development site is situated outside the 2.5km core foraging range of the lesser horseshoe bat (NPWS, 2018). The proposed development will therefore not impact on the QI population for which the SAC has been designated.</p> <p>Potential for direct or indirect impact on the European Site can be excluded. <b>This site is not within the likely zone of impact and no further assessment is required.</b></p>
<p>Moorha Lough SAC (001536)</p> <p>Distance: 14.5km north-east</p>	<p>&gt; Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210]</p>	<p>Detailed conservation objectives for this site (Version 1, October 2019) were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>	<p>This SAC is located 14.5km north-east of the proposed development site, on the opposite side of Lough Corrib. This SAC is in a separate hydrological subcatchment. No source-pathway-receptor chain for impact was identified between the site of the proposed works area and the QI habitat for which this SAC has been designated.</p> <p>Potential for direct or indirect impact on the European Site can be excluded. <b>This site is</b></p>

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
<p>Galway Bay Complex SAC (000268)</p> <p>Distance: 24km south-east (in excess of 30km via hydrological connectivity)</p>	<ul style="list-style-type: none"> <li>&gt; Mudflats and sandflats not covered by seawater at low tide [1140]</li> <li>&gt; Coastal lagoons [1150]</li> <li>&gt; Large shallow inlets and bays [1160]</li> <li>&gt; Reefs [1170]</li> <li>&gt; Perennial vegetation of stony banks [1220]</li> <li>&gt; <i>Salicornia</i> and other annuals colonising mud and sand [1310]</li> <li>&gt; Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</li> <li>&gt; Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>&gt; Turloughs [3180]</li> <li>&gt; <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130]</li> <li>&gt; Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]</li> <li>&gt; Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210]</li> <li>&gt; Alkaline fens [7230]</li> <li>&gt; <i>Lutra lutra</i> (Otter) [1355]</li> <li>&gt; <i>Phoca vitulina</i> (Harbour Seal) [1365]</li> </ul>	<p>Detailed conservation objectives for this site, dated April 2013, were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>	<p><b>not within the likely zone of impact and no further assessment is required.</b></p> <p>There is no potential for direct impact as the proposed development is outside of the site boundary.</p> <p>Indirect impacts on this SAC can be ruled out due to the attenuation of Lough Corrib, the distance from the proposed development site and the absence of a complete source-pathway-receptor chain.</p> <p><b>This site is not in the zone of likely impact, and further assessment is required.</b></p>
<b>Special Protection Area (SPA)</b>			
<p>Lough Corrib SPA (004042)</p> <p>Distance: 112m north</p>	<ul style="list-style-type: none"> <li>&gt; Gadwall (<i>Anas strepera</i>)</li> <li>&gt; Shoveler (<i>Anas clypeata</i>)</li> <li>&gt; Pochard (<i>Aythya ferina</i>)</li> <li>&gt; Tufted Duck (<i>Aythya fuligula</i>)</li> <li>&gt; Common Scoter (<i>Melanitta nigra</i>)</li> </ul>	<p>This site has the generic conservation objective:</p> <p><i>'To maintain or restore the favourable conservation condition of the bird species</i></p>	<p>This SPA is located 112m north of the proposed development site. There is no potential for direct impact as the proposed development is outside of the SPA boundary.</p>

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
	<ul style="list-style-type: none"> <li>&gt; Hen Harrier (<i>Circus cyaneus</i>)</li> <li>&gt; Coot (<i>Fulica atra</i>)</li> <li>&gt; Golden Plover (<i>Pluvialis apricaria</i>)</li> <li>&gt; Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</li> <li>&gt; Common Gull (<i>Larus canus</i>)</li> <li>&gt; Common Tern (<i>Sterna hirundo</i>)</li> <li>&gt; Arctic Tern (<i>Sterna paradisaea</i>)</li> <li>&gt; Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>)</li> <li>&gt; Wetland and Waterbirds</li> </ul>	<p>listed as <i>Special Conservation Interests for this SPA</i>'</p> <p>This site has a second conservation objective:</p> <p>'To maintain or restore the favourable conservation condition of the wetland habitat at Lough Corrib SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.' (NPWS Generic version 7.0, 2020)</p>	<p>On a precautionary basis the potential for indirect effects to the listed SCI species in terms of habitat loss, disturbance/displacement has also been identified.</p> <p>A drainage ditch, that has potential surface water connectivity with Lough Corrib SPA, occurs adjacent to the works area, along its northern boundary. Therefore, the proposed works have the potential to cause deterioration in surface water quality during construction and operation, potentially affecting the following downstream SCI 'Wetland and Waterbirds'. Potential effects on all SCI species are considered under Wetland and waterbirds.</p> <p><b>This site is in the zone of likely impact, and further assessment is required.</b></p>
<p>Connemara Bog Complex SPA (004181)</p> <p>Distance: 9.5km south-west</p>	<ul style="list-style-type: none"> <li>&gt; Cormorant (<i>Phalacrocorax carbo</i>) [A017]</li> <li>&gt; Merlin (<i>Falco columbarius</i>) [A098]</li> <li>&gt; Golden Plover (<i>Pluvialis apricaria</i>) [A140]</li> <li>&gt; Common Gull (<i>Larus canus</i>) [A182]</li> </ul>	<p>This site has the generic conservation objective:</p> <p>'To maintain or restore the favourable conservation condition of the bird species listed as <i>Special Conservation Interests for this SPA</i>' (NPWS Generic version 7.0, 2020).</p>	<p>This SPA is located 9.5km south-west of the proposed development site. There is no potential for direct impact as the proposed development is outside of the SPA boundary.</p> <p>Due to the intervening buffer distance from the SPA and the nature of SCI species; no potential pathway for adverse effects in the form of habitat loss, disturbance or</p>

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, <a href="http://www.npws.ie">www.npws.ie</a> on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
Lough Mask SPA (004062)  Distance: 13.7km North	<ul style="list-style-type: none"> <li>&gt; Tufted Duck (<i>Aythya fuligula</i>) [A061]</li> <li>&gt; Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]</li> <li>&gt; Common Gull (<i>Larus canus</i>) [A182]</li> <li>&gt; Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183]</li> <li>&gt; Common Tern (<i>Sterna hirundo</i>) [A193]</li> <li>&gt; Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]</li> <li>&gt; Wetland and Waterbirds [A999]</li> </ul>	<p>This site has the generic conservation objective:</p> <p><i>'To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA'</i></p> <p>This site has a second conservation objective:</p> <p><i>'To maintain or restore the favourable conservation condition of the wetland habitat at Lough Mask SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.'</i> (NPWS Generic version 7.0, 2020)</p>	<p>displacement of SCI populations associated with the SPA was identified. <b>No pathway for effect was identified and the site is not within the Likely Zone of Impact.</b></p> <p>This SPA is located 13.7km north of the proposed development site. There is no potential for direct impact as the proposed development is outside of the SPA boundary.</p> <p>Due to the intervening buffer distance from the SPA and the nature of SCI species; no potential pathway for adverse effects in the form of habitat loss, disturbance or displacement of SCI populations associated with the SPA was identified. This SPA is located on a separate hydrological catchment and there is no potential for pollution of wetland habitat.</p> <p><b>No pathway for effect was identified and the site is not within the Likely Zone of Impact.</b></p>
Inner Galway Bay SPA	<ul style="list-style-type: none"> <li>&gt; Great Northern Diver (<i>Gavia immer</i>) [A003]</li> <li>&gt; Cormorant (<i>Phalacrocorax carbo</i>) [A017]</li> <li>&gt; Grey Heron (<i>Ardea cinerea</i>) [A028]</li> <li>&gt; Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</li> </ul>	<p>Detailed conservation objectives for this site (Version 1, May 2013) were reviewed as part of the assessment and are available at <a href="http://www.npws.ie">www.npws.ie</a></p>	<p>This SPA is located 24km south-east of the proposed development site. There is no potential for direct impact as the proposed</p>

European Sites and distance from proposed development	Quality Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 05/02/2021)	Conservation Objectives	Likely Zone of Impact Determination
Distance: 24km south-east (in excess of 30km via hydrological connectivity)	<ul style="list-style-type: none"> <li>&gt; Wigeon (<i>Anas penelope</i>) [A050]</li> <li>&gt; Teal (<i>Anas crecca</i>) [A052]</li> <li>&gt; Shoveler (<i>Anas clypeata</i>) [A056]</li> <li>&gt; Red-breasted Merganser (<i>Mergus serrator</i>) [A069]</li> <li>&gt; Ringed Plover (<i>Charadrius hiaticula</i>) [A137]</li> <li>&gt; Golden Plover (<i>Pluvialis apricaria</i>) [A140]</li> <li>&gt; Lapwing (<i>Vanellus vanellus</i>) [A142]</li> <li>&gt; Dunlin (<i>Calidris alpina</i>) [A149]</li> <li>&gt; Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</li> <li>&gt; Curlew (<i>Numenius arquata</i>) [A160]</li> <li>&gt; Redshank (<i>Tringa totanus</i>) [A162]</li> <li>&gt; Turnstone (<i>Arenaria interpres</i>) [A169]</li> <li>&gt; Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]</li> <li>&gt; Common Gull (<i>Larus canus</i>) [A182]</li> <li>&gt; Sandwich Tern (<i>Sterna sandvicensis</i>) [A191]</li> <li>&gt; Common Tern (<i>Sterna hirundo</i>) [A193]</li> <li>&gt; Wetland and Waterbirds [A999]</li> </ul>		<p>development is outside of the SPA boundary.</p> <p>Indirect impacts on this SAC can be ruled out due to the attenuation of Lough Corrib, the distance from the proposed development site and the absence of a complete source-pathway-receptor chain.</p> <p><b>This site is in the zone of likely impact, and further assessment is required.</b></p>



**Map Legend**

- Site boundary - Propose Development
- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- Permitted development
- 15km Buffer
- Ballyquike Lough Stream Subcatchment
- Groundwater catchment**
- Maam Clonbur
- Ross Lake

Microsoft Corporation  
 Microsoft product screen shots reprinted with permission from  
 Ordnance Survey Ireland Licence No. AR 0021821 © Ordnance Survey Ireland/Government of Ireland



EU Sites within 15km	
Project File	Oughterard RFC Lenonfield Pitches
Client File	JOS
Drawn By	PR
Project No.	190909
Figure	Figure 3.1
Scale	1:165000
Date	01.02.2021

**MKO**  
 Planning and  
 Environmental  
 Consultants  
 100 West Quay  
 Waterford City  
 +353 (0)91 778411  
 info@mkokonsultants.ie  
 www.mkokonsultants.ie

3.2

## European Sites with the Potential to be Significantly Affected by the Proposed Development

Where potential pathways for effect are identified in Table 3.1 above, further assessment is required and the potential for the proposed works to contribute to a cumulative impact on Lough Corrib SAC, Galway Bay Complex SAC, Lough Corrib SPA and Inner Galway Bay SPA requires further assessment at the Appropriate Assessment stage.

### 3.2.1 Lough Corrib SAC

Drainage ditches within the site have potential surface water connectivity with Lough Corrib SAC. Taking a precautionary approach, the works have potential, in the absence of mitigation, to impact on surface water quality and downstream aquatic ecological receptors through the release of pollutants including hydrocarbons, fuel, cement and sedimentation.

A potential pathway for indirect effects on the below listed aquatic QIs of the SAC was identified in the form of deterioration in water quality during the construction and operational phases of the development:

- 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.
- Slender Naiad (*Najas flexilis*)
- Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*\*
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation
- Alkaline fens
- Petrifying springs with tufa formation (Cratoneurion)\*
- *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]
- White-clawed Crayfish (*Austropotamobius pallipes*)
- Brook Lamprey (*Lampetra planeri*)
- Sea Lamprey (*Petromyzon marinus*)
- Salmon (*Salmo salar*)
- Otter (*Lutra lutra*)

Potential for indirect disturbance to Otter was also identified with regard to Lough Corrib SAC.

### 3.2.2 Lough Corrib SPA

Drainage ditches within the site have potential surface water connectivity with Lough Corrib SPA. Taking a precautionary approach, the works have potential, in the absence of mitigation, to impact on surface water quality and downstream aquatic ecological receptors through the release of pollutants including hydrocarbons, fuel, cement and sedimentation.

A potential pathway for indirect effects on the 'Wetlands' SCI of Lough Corrib SPA was identified in the form of deterioration in water quality during the construction and operational phases of the development. The potential effects require further assessment and will be considered under the conservation objectives for the Wetland and waterbirds [A999] SCI. Potential effects on all SCI species are also considered under Wetland and waterbirds [A999].



Given the proximity of the proposed development site to Lough Corrib SPA (112m), on a precautionary basis the potential for indirect effects to the listed SCI species in terms of habitat loss, disturbance/displacement has also been identified.

## 4. ARTICLE 6(3) APPROPRIATE ASSESSMENT SCREENING STATEMENT AND CONCLUSIONS

The findings of this Screening Assessment are presented following the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010).

### 4.1 Data Collected to Carry Out Assessment

**In preparation of the report, the following sources were used to gather information:**

- Review of NPWS Site Synopses, Conservation Objectives for the European Sites
- Review of 2019, 2013 and 2007 EU Habitats Directive (Article 17) Reports.
- Review of online web-mappers: National Parks and Wildlife Service (NPWS), EPA, Water Framework Directive (WFD),
- Review of specially requested records from the NPWS Rare and Protected Species Database for the hectads which overlap with the study area.
- Inland Fisheries Ireland (IFI) Reports
- Review of OS maps and aerial photographs of the site of the proposed project.
- Review of relevant databases including National Biodiversity Ireland Database and available literature of previous surveys conducted in the area.
- Review of other plans and projects within the area.
- Site visit carried out by James Owens (BSc., MSc.) in September 2019 and by Julie O'Sullivan (BSc., MSc.) in January 2021.

### 4.2 Concluding Statement

It cannot be concluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the proposed development, individually or in combination with other plans and projects, would not be likely to have a significant effect on Lough Corrib SAC and Lough Corrib SPA.

As a result, it is recommended to the competent authority that an Appropriate Assessment is required, and a Natura Impact Statement will be prepared in respect of the proposed development.

5.

## BIBLIOGRAPHY

- Bailey, M. and Rochford J. (2006) Otter Survey of Ireland 2004/2005. Irish Wildlife Manuals, No. 23. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.
- Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S. and Fuller, R.J. (2013). Bird Atlas 2007-11: the breeding and wintering birds of Britain and Ireland. BTO Books, Thetford, UK.
- Barbour, M.T. and J.B. Stribling. (1991) Use of Habitat Assessment in Evaluating the Biological Integrity of Stream Communities. Biological Criteria: Research and Regulation: 25-38. EPA-440/5-91-005. Washington, DC: Office of Water, US EPA.
- Birds Directive (2009/47/EC) – [http://ec.europa.eu/environment/nature/legislation/birdsdirective/index\\_en.htm](http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm)
- CIEEM, 2018, Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine.
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and Directive 2009/147/EC (codified version of Directive 79/409/EEC as amended) (Birds Directive) – transposed into Irish law as European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011).
- DEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. DEHLG, Dublin.
- DoEHLG (2010). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Revision, February, 2010. Department of the Environment, Heritage and Local Government.
- EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission.
- EC (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC.
- EC (2002) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission.
- EC (2006) Nature and biodiversity cases: Ruling of the European Court of Justice. Office for Official Publications of the European Communities, Luxembourg.
- EC (2007a) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. Office for Official Publications of the European Communities, Luxembourg. European Commission.
- EC (2007b) Interpretation Manual of European Union Habitats. Version EUR 27. European Commission, DG Environment.
- European Communities (Conservation of Wild Birds) Regulations, 1985, SI 291/1985 & amendments – <http://www.irishstatutebook.ie>.

European Communities (Natural Habitats) Regulations, SI 94/1997, SI 233/1998 & SI 378/2005 – <http://www.irishstatutebook.ie>.

Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Dublin: The Heritage Council.

Habitats Directive (92/43/EEC).

NPWS (2008) The Status of EU Protected Habitats and Species in Ireland. Conservation Status in Ireland of Habitats and Species listed in the European Council Directive on the Conservation of Habitats, Flora and Fauna 92/43/EEC.

NPWS of the DEHLG (2008) The Report on Status of Habitats and Species in Ireland: Technical Reports and Forms.

NPWS Protected Site Synopses and maps available on <http://www.npws.ie/en/ProtectedSites/>.

NRA (2004) Environmental Impact Assessment of National Road Schemes – A Practical Guide, National Roads Authority, Dublin.

NRA (2005) Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes. Dublin: National Roads Authority.

NRA (2006) Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes. Dublin: National Roads Authority.

NRA (2009). Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes. Dublin: National Roads Authority.

NRA (2008). The Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads. Dublin: National Roads Authority.

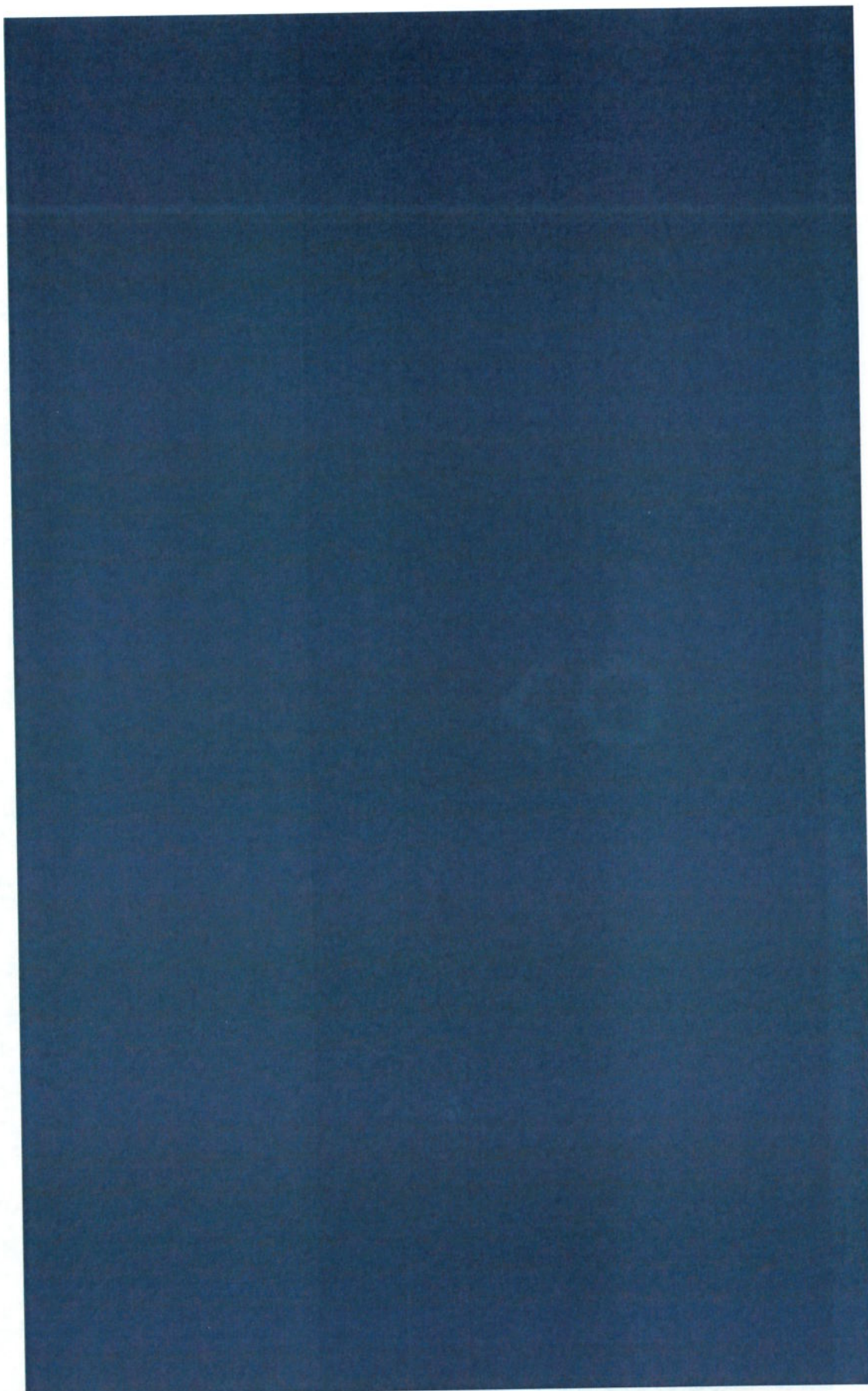
Scottish Natural Heritage (SNH) (July 2013) Assessing Connectivity with Special Protection Areas (SPA)

Stace, C. A. (1997). New Flora of the British Isles. Cambridge: Cambridge University Press.

Therivel R. (2009) Workshop Material on the Habitats Directive Assessment of Plans Levett-Therivel Sustainability Consultants on behalf of the Heritage Council, Kilkenny.

Therivel, R. (2009) 'Appropriate assessment of plans in England', Environmental Impact Assessment Review 29(4), pp. 261-272.







**APPENDIX 2**  
**SITE LAYOUT DRAWINGS**



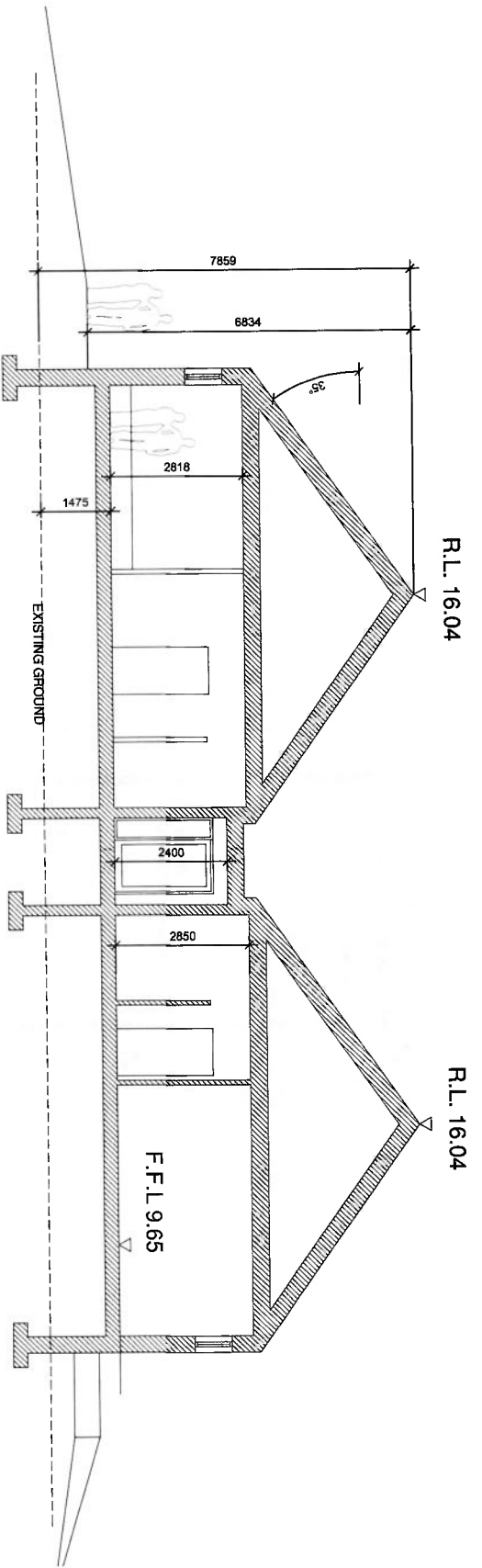




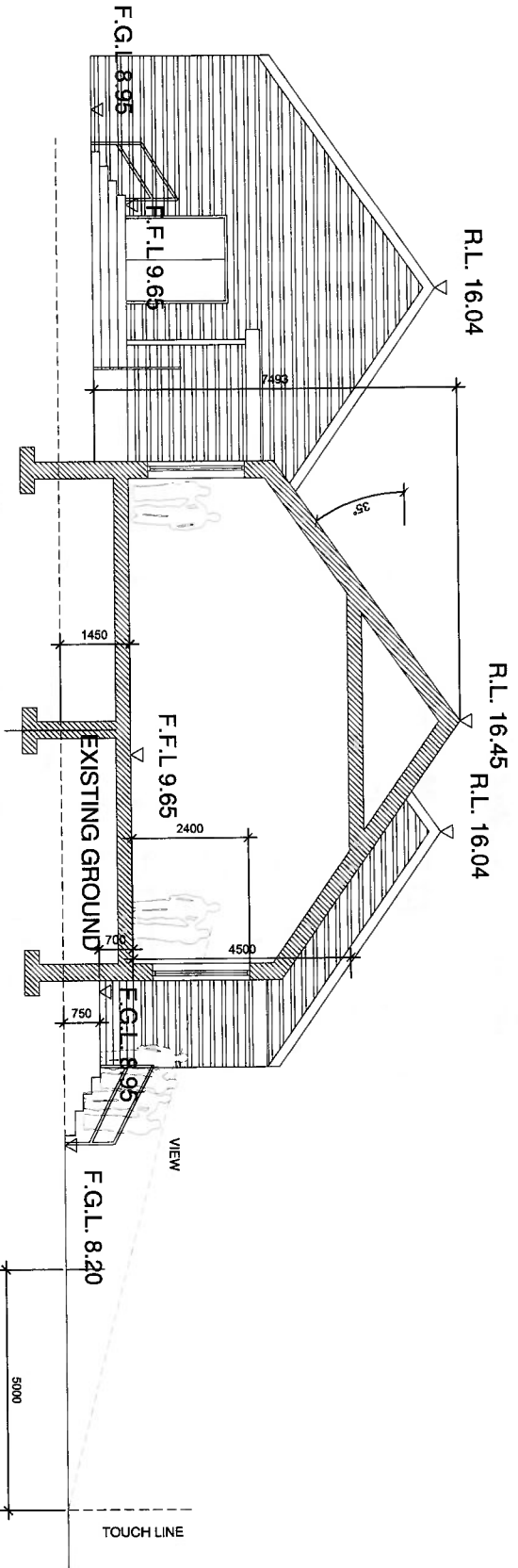








Cross Section A - A  
Scale 1 : 100



Cross Section B - B  
Scale 1 : 100

**NOTES**  
DO NOT SCALE - USE FINISHED DIMENSIONS ONLY.  
ALL DIMENSIONS TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES TO BE REPORTED TO DESIGNER. CONSTRUCTION WITH ALL RELEVANT SPECIFICATIONS AND DIMENSIONS. ALL LEVELS ARE TO FINISHED LEVELS UNLESS OTHERWISE INDICATED.

**LEGEND**


**SKETCH DESIGN**


**GENERAL ARRANGEMENT**


**GENERAL ARRANGEMENT**  
Lester Navigation Architects Ltd.  
Scales 1 - First Floor - Rear House - Merchants Road - Calvery  
1 - 031 868678 m 087 282772  
1 - 031 868678  
\* lesternavigation@gmail.com  
Client: Oupland Leisure and Sports Promoting  
Project: Oupland Park Development, Pier Road, Oupland,  
Barnsley  
Drawing: PROPOSED SECTIONS  
Date: 08.10.20  
Scale: 1:100 (A1) 08/10/20  
Drawn by: J.K.  
Checked by: J.K.  
Date: 08.10.20  
Scale: 1:100 (A1) 08/10/20  
THIS DRAWING IS FOR FEASIBILITY STUDY ONLY











**Natura Impact Statement May 2026**  
Community Sports and Amenity Facility  
Lemonfield, Oughterard



Marie Louise Heffernan, CEnv, MIEEM, MSc.

Rosleague, Letterfrack, Co. Galway,

086 8278031 [www.aster.ie](http://www.aster.ie)

## Qualifications and Experience

This report was prepared by Marie Louise Heffernan, CEnv, MCIEEM, MSc (Environmental Science).

Marie Louise Heffernan is a Senior Ecologist with over 30 years' professional experience in environmental assessment, with a particular focus on Natura 2000 sites. She has undertaken extensive habitat surveys, boundary assessments and ecological fieldwork, including work carried out in collaboration with the National Parks and Wildlife Service (NPWS).

She has been preparing Appropriate Assessments since 2009 and is a recognised trainer in Appropriate Assessment, delivering training since 2010, including with the Chartered Institute of Ecology and Environmental Management (CIEEM). She has extensive experience in assessing the potential impacts of development on European sites, including both terrestrial and aquatic environments.

Marie Louise holds a Master of Science in Environmental Science from Trinity College Dublin (1995). She is a Chartered Environmentalist (CEnv) with the Society for the Environment (UK) and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM).

## **Executive Summary**

This Natura Impact Statement (NIS) has been prepared in support of the proposed Community Sports and Amenity Facility at Lemonfield, Oughterard, Co. Galway, including associated passing bays. The assessment has been undertaken in accordance with Article 6(3) of the Habitats Directive and the European Communities (Birds and Natural Habitats) Regulations 2011–2021.

The proposed development has been designed as a low-impact community facility, with environmental considerations integrated into the project design from the outset. Potential ecological and hydrological risks were identified at an early stage and addressed through the adoption of embedded mitigation measures including floating pitch construction methods to minimise disturbance of peat soils, avoidance of deep excavation works, retention of existing drainage patterns, and the use of permeable surfacing within parking and passing bay areas.

The ecological assessment confirmed that no habitats associated with the qualifying interests of Lough Corrib SAC are present within the development site. The site comprises modified and previously disturbed habitats of generally low to moderate ecological value, including degraded peatland, amenity grassland, scrub and drainage ditches. While evidence of occasional otter activity was recorded, otter is the only qualifying interest species of the SAC identified within the site, and no holts, couches or breeding sites were identified.

Bird surveys undertaken in 2026 confirmed that the site supports a typical assemblage of common rural bird species associated with modified habitats. The habitats present are not suitable for any of the bird species associated with Lough Corrib SPA. No wetland, open water, roosting or feeding habitats of relevance to SPA species occur within the site, and no qualifying interest bird species were recorded during surveys.

The assessment identified that the only potential pathway linking the site to European sites is an indirect and attenuated hydrological connection to Lough Corrib SAC and Lough Corrib SPA via existing drainage ditches and the Owenriff River. Accordingly, there is no potential for direct impacts on qualifying interest habitats or species of either European site. Potential effects are limited to indirect impacts associated with water quality, including temporary risks relating to sediment release or pollution during construction works.

A review of flooding and hydrological conditions confirmed that parts of the site are influenced by localised flooding and high groundwater levels. However, the development has been specifically designed to work with existing site conditions through low-impact construction methods, permeable surfacing and retention of existing drainage pathways.

A range of mitigation measures have been incorporated into the project to protect water quality and ecological receptors during both construction and operation. These include ecological supervision of works, timing restrictions on vegetation clearance and drain maintenance works, protection of drainage features, sediment and pollution controls, and appropriate wastewater and surface water management measures.

Having regard to:

- the scale and nature of the proposed development;
- the modified character of the site;
- the absence of qualifying interest habitats within the site;
- the absence of suitable habitat for SPA bird species;
- the indirect and limited hydrological connectivity to Lough Corrib;
- the low-impact design approach adopted; and
- the implementation of the mitigation measures outlined in this report,

it is concluded that, with the implementation of the mitigation measures described, the proposed development, either alone or in combination with other plans or projects, will not adversely affect the integrity of Lough Corrib SAC or Lough Corrib SPA in view of their conservation objectives.

Accordingly, the proposed development is considered compliant with the requirements of the Habitats Directive and the principles of Appropriate Assessment, subject to the full implementation of the mitigation measures outlined in this report.

## Contents

<i>Contents</i> .....	5
<i>1.0 Introduction</i> .....	6
<i>2.0 Description of Development</i> .....	7
<i>3.0 Methodology</i> .....	13
<i>4.0 Receiving Environment</i> .....	16
<i>5.0 Zone of Influence and Selection of European Sites</i> .....	30
<i>6.0 Natura 2000 sites Lough Corrib SAC and SPA</i> .....	32
<i>7.0 Cumulative Impacts</i> .....	44
<i>8.0 Mitigation Measures</i> .....	45
<i>9.0 Conclusion Statement</i> .....	52
<i>References</i> .....	53
<i>Appendix 1: Natura 2000 - Site Synopses</i> .....	55

## 1.0 Introduction

This Natura Impact Statement (NIS) has been prepared by Aster Environmental Consultants Ltd. to support the Appropriate Assessment of the proposed sports and community amenity development at Lemonfield, Oughterard, County Galway, together with associated roadside works including the construction of passing bays and alterations to roadside drainage along the site frontage.

The report has been prepared following a request for further information from An Coimisiún Pleanála in relation to Appeal Reference PL-500131-GY. The Board requested the submission of an updated Natura Impact Statement having regard to the age of the ecological surveys previously undertaken and the need to fully assess the roadside boundary works including vegetation removal and alterations to drains along the site frontage.

Previous ecological assessments for the project were prepared in two separate documents. A Natura Impact Statement prepared by MKO Planning and Environmental Consultants addressed the proposed amenity development, while a separate Natura Impact Statement prepared by Aster Environmental Consultants assessed the ecological implications of the proposed passing bays and associated roadside works.

In order to provide a clear and comprehensive assessment for the competent authority, the current report consolidates and replaces the previous Natura Impact Statements. The proposed development, including the sports and amenity facilities and the associated roadside works, is therefore assessed as a single project within this document. This document supersedes the MKO and previous Aster integrating findings into a single assessment.

This approach ensures that the full extent of the development and all associated works are considered together within a single Appropriate Assessment. The report therefore allows An Coimisiún Pleanála to evaluate the potential for likely significant effects and any potential adverse effects on the integrity of European sites in a clear and transparent manner.

The report incorporates updated ecological information including updated habitat observations, updated mapping and site photographs, and a review of ecological conditions within the site and its surroundings. Where relevant, previously collected ecological survey information has been reviewed and assessed in the context of current site conditions.

This Natura Impact Statement has been prepared in accordance with the requirements of Article 6(3) of the Habitats Directive (92/43/EEC), the European Communities (Birds and Natural Habitats) Regulations 2011–2021 and relevant European Commission and national guidance on Appropriate Assessment.

The purpose of this report is to provide the information necessary to allow the competent authority to undertake an Appropriate Assessment of the proposed development and to determine whether the project, either alone or in combination with other plans and projects, will have any adverse effect on the integrity of any European site.

## 2.0 Description of Development

### 2.1 Overview

The proposed development comprises the construction of a community sports and amenity facility at Lemonfield, Oughterard, County Galway together with associated access improvements along Pier Road, including the construction of roadside passing bays.

The development is promoted by the Oughterard Sports and Recreational Partnership and is intended to provide recreational facilities for the local community, including sports pitches, amenity areas and associated infrastructure.

The lands are currently characterised by a mixture of managed grassland, modified peat soils and drainage features, with an existing grass playing pitch located within the southern portion of the site.

### 2.2 Main Sports and Amenity Development

The principal elements of the proposed development include the construction of a grass multi-sport playing pitch together with associated community facilities and supporting infrastructure.

The development includes:

- a grass multi-purpose sports pitch
- grassed amenity areas
- three multipurpose hard-surface ball courts
- an astro amenity area enclosed by fencing
- car parking for approximately 58 vehicles
- a bus and coach parking area
- a community facilities building containing meeting rooms, toilets, showers and administrative facilities
- external lighting for both the existing and proposed pitches
- internal access roads and circulation areas
- associated landscaping and boundary treatments

### 2.3 Construction of Main Sports Pitch

The primary sports pitch (approximately 100 m x 66 m) will be constructed using a **floating construction methodology** suitable for peatland conditions.

In order to minimise disturbance of underlying peat soils, the design provides for the peat layer to remain largely in situ.

Construction of the secondary pitch will involve limited groundworks, as approximately two-thirds of the existing pitch area already comprises suitable soil within the upper layers. Accordingly, the existing ground profile will largely be retained, with works confined primarily to localised levelling and the placement of additional soil layers where required.

The proposed works will include:

- removal of surface vegetation (scraw);
- localised levelling and placement of sand and topsoil layers where required to achieve a suitable playing surface; and
- seeding with an appropriate sports grass mix.

No deep excavation works are proposed as part of the development.

## **2.4 Pitch Drainage Design**

No new drainage network is proposed for the secondary pitch. Existing perimeter drains located around the pitch boundaries will be retained and maintained as part of the development.

Where existing drains traverse the pitch area, these will be piped as necessary to ensure the continued operation of the existing drainage system while maintaining suitable ground conditions for sports use.

## **2.5 Pitch (Existing Section 5 Area)**

A grass playing pitch has already been constructed within the southern portion of the site.

The construction of this pitch was previously considered by the planning authority under Section 5 of the Planning and Development Act 2000 (as amended), which determined that the works constituted exempted development.

This pitch therefore forms part of the existing baseline condition of the site.

Works associated with this pitch have included:

- removal of surface vegetation
- levelling of existing soils
- placement of a thin sand layer (approximately 25 mm) to improve surface conditions

No new drainage infrastructure is associated with this pitch and the underlying soil and peat layers remain largely in situ.

The pitch will be maintained through periodic sand top dressing and the application of organic seaweed-based fertiliser twice annually.

For the purposes of this Natura Impact Statement, the existing pitch is treated as part of the established land use of the site.

## 2.6 Access Road Construction (Floating Road)

An internal access road will be constructed using a floating road design suitable for weak or peat soils.

Construction will involve:

- removal of surface vegetation
- placement of a woven geotextile membrane extending beyond road margins
- installation of a geogrid reinforcement layer
- placement of approximately 450 mm of crushed stone (Clause 803 fill) in layers not exceeding 150 mm
- compaction using light vibratory equipment
- placement of a 50 mm surface layer of limestone screenings

This approach minimises excavation and distributes loading across the underlying soils.

## 2.7 Passing Bays and Roadside Works

In order to facilitate safe vehicular access, three roadside passing bays will be constructed along Pier Road.

Two passing bays will be approximately 25 m in length, These already exist and one of these will be extended , while a third located near the site entrance will extend approximately 70 m and function as a merging lane.

Construction of the passing bays will involve:

- removal of vegetation along the roadside verge
- localised excavation and levelling
- installation of drainage pipes within existing roadside drains where required
- placement of clean stone backfill
- placement of gravel surfacing over geotextile

Where roadside drains intersect the passing bays, drainage pipes will be installed to maintain flow continuity. Pipes will be wrapped in permeable geotextile and backfilled with clean stone.

The passing bays will be constructed within the existing roadside corridor and will maintain existing drainage pathways.

## 2.8 Surface Water Management

The site contains an existing network of drainage ditches which convey surface water towards the Owenriff River and Lough Corrib.

The proposed development will integrate with this existing drainage system.

Surface water from pitches and hardstanding areas will be managed through:

- interception via drainage systems
- infiltration via soakaways or attenuation features
- controlled discharge to existing drainage ditches

Surface water runoff from the proposed car parking areas will infiltrate naturally through the permeable surfacing. As no hard surface areas are proposed within the car parks, runoff will percolate directly to ground, thereby reducing surface water generation and supporting natural drainage.

## 2.9 Wastewater Treatment

Wastewater generated by the proposed facilities building will be treated by a packaged secondary wastewater treatment system (Eurotank BAF43) designed for a population equivalent of approximately 40 persons.

Treated effluent will discharge to a pumped sand polishing filter (approximately 60 m<sup>2</sup>) prior to infiltration to ground in accordance with the EPA Code of Practice.

## 2.10 Existing Ground Conditions and Site Modifications

The site has been subject to previous modification including agricultural improvement, drainage and more recent ground disturbance.

Within the southern portion of the site, in addition to the existing playing pitch, areas of ground disturbance are present including:

- placement of stone material
- excavation and storage of peat soils
- modification of a drainage channel

These features form part of the current baseline condition of the site and are considered in this assessment.

## 2.11 Construction Activities

Construction will involve small-scale civil engineering works including:

- site clearance
- excavation and levelling
- installation of drainage infrastructure
- placement of geotextile and geogrid layers
- placement of stone, sand and soil layers
- construction of sports surfaces and buildings

Plant and machinery will include excavators, dump trucks and compaction equipment.

Materials will be imported from licensed suppliers where required, with some reuse of site-won material where appropriate.

### **2.12 Operational Use**

The development will operate on a seasonal and relatively low-intensity basis.

Use of the site will include:

- weekend matches on the existing pitch during winter
- training on the new pitch (typically one evening per week per group)
- limited summer use for community and youth activities
- use by local organisations including scouts and community groups

Traffic levels will be modest and associated with scheduled activities.

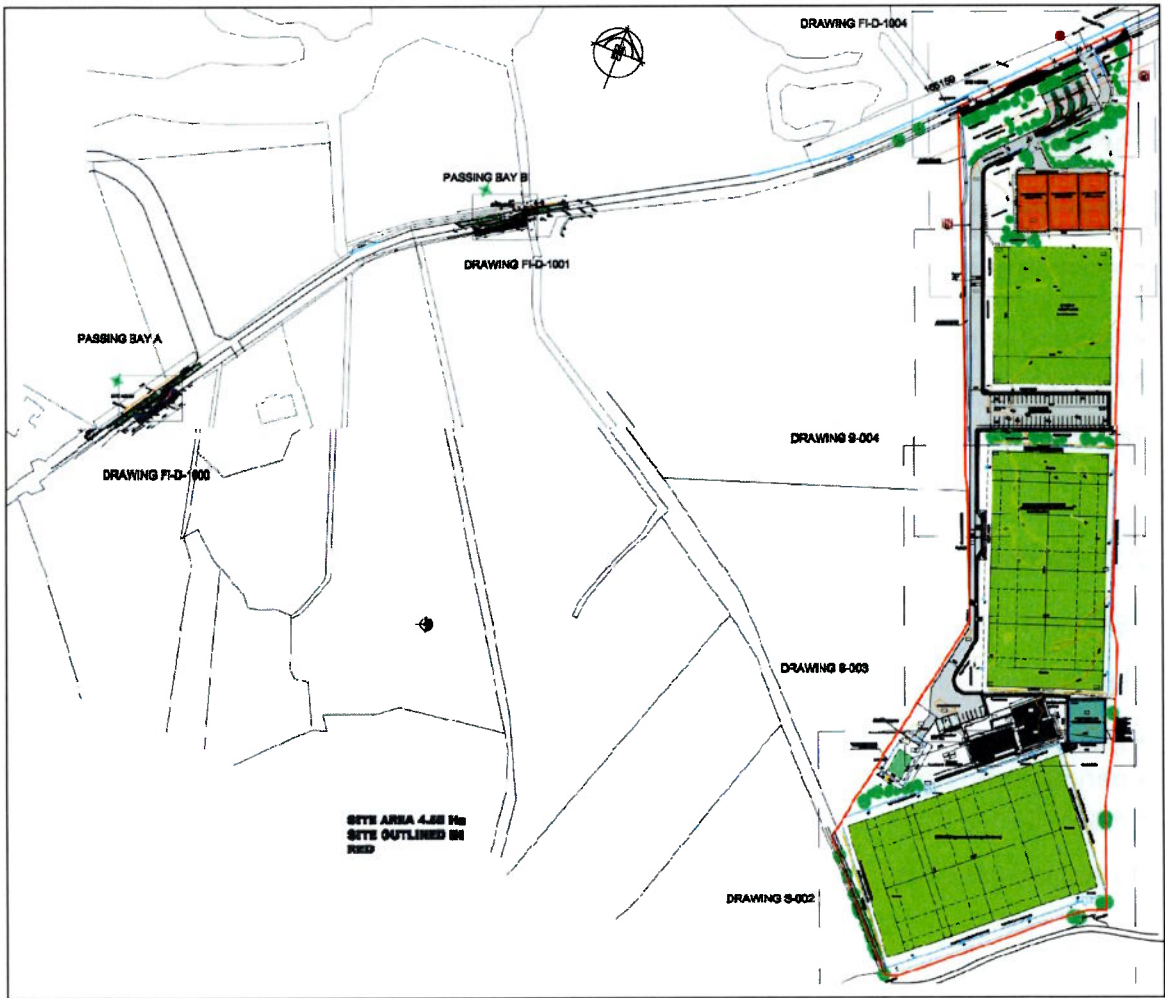
### **2.13 Lighting and Maintenance**

Lighting will be provided on the main pitches only and directed towards playing surfaces.

Maintenance will include:

- grass cutting
- periodic sand top dressing
- application of organic fertiliser (seaweed-based) twice annually

No intensive fertilisation practices are proposed.



Map 1 Proposed Community Sports And Amenity Facility At Lemonfield, Oughterard (plus passing bays)

## 3.0 Methodology

### 3.1 Approach to the Assessment

This Natura Impact Statement (NIS) has been prepared in accordance with the requirements of Article 6(3) of the EU Habitats Directive (92/43/EEC) and the European Communities (Birds and Natural Habitats) Regulations 2011–2021.

The assessment follows the methodology set out in the following guidance documents:

- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – Methodological Guidance of Article 6(3) and 6(4) of the Habitats Directive (European Commission, 2001)
- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DEHLG, 2009)
- Appropriate Assessment Screening for Development Management (Office of the Planning Regulator Practice Note PN01)

The assessment also takes account of the relevant case law of the Court of Justice of the European Union including the Waddenzee (C-127/02), People Over Wind (C-323/17) and Holohan (C-461/17) judgments which establish that Appropriate Assessment must be based on complete, precise and definitive findings capable of removing reasonable scientific doubt regarding the absence of adverse effects on European sites.

### 3.2 Desk Study

A desk study was undertaken in order to gather existing ecological information relating to the site and the surrounding environment. This included a review of the Natura Impact Statement previously prepared for the proposed sports amenity development by MKO Planning and Environmental Consultants, Galway, and the NIS prepared for the passing bays by Aster Environmental Consultants as well as ecological surveys undertaken as part of those earlier assessments.

In addition the following were consulted

- NPWS site synopses and conservation objectives for Lough Corrib SAC and Lough Corrib SPA
- aerial photography and OSI mapping
- planning records for developments within the surrounding area.

The desk study allowed the identification of potential ecological receptors and potential pathways by which the proposed development could interact with nearby European sites.

### 3.3 Previous Ecological Surveys

The proposed development site was previously subject to ecological surveys undertaken as part of the earlier Natura Impact Statements prepared for the amenity development.

These surveys included a detailed habitat survey of the site and surrounding lands using the Fossitt (2000) habitat classification system.

The habitats recorded within the development footprint included:

- drainage ditches (FW4)
- semi-improved dry grassland (GS1)
- wet grassland (GS4)
- scrub (WS1)
- cutover bog (PB4)
- buildings and artificial surfaces (BL3)
- treelines (WL2).

The northern portion of the site was identified as cutover bog habitat that had been historically drained and partially colonised by gorse scrub. The vegetation within this area is dominated by species such as purple moor-grass, bog myrtle, ling heather and cross-leaved heath. Peat depths within the site were recorded as being between approximately 1 and 2 metres.

The southern portion of the site consists primarily of semi-improved grassland and wet grassland habitats dominated by species such as Yorkshire fog, creeping bent, soft rush and creeping buttercup.

The earlier ecological assessment also included inspection of drainage features within the site in order to identify potential hydrological connectivity to downstream watercourses and European sites.

These surveys formed the baseline ecological description for the original Natura Impact Statement submitted with the planning application.

### 3.4 Recent Site Surveys

In order to update the ecological baseline and confirm the current condition of the site, additional field surveys and site inspections were undertaken by Aster Environmental Consultants Limited

- March 2026
- April 2026
- May 2026

The purpose of these surveys was to:

- verify the habitats recorded during the earlier ecological surveys with the aid of drone surveys coupled with ground truthing.

- assess whether any significant changes had occurred in habitat condition
- inspect drainage features within the site
- identify any evidence of protected species
- record bird activity within and around the site.

The recent surveys confirmed that the overall habitat structure of the site remains generally consistent with that described in the earlier surveys, with the site continuing to comprise a mixture of grassland, scrub and areas of previously modified peatland. Changes in Habitat such as the development of the pitch to the south under Section 5 are noted. Please note that the Section 5 pitch is now part of the baseline

Drainage ditches remain present across parts of the site and form part of the local surface water drainage network.

### 3.5 Breeding Bird Surveys

Breeding bird surveys were undertaken during the spring survey season in April 9<sup>th</sup> and May 4<sup>th</sup> 2026. A pre breeding survey in March was carried out to identify habitats to be surveyed and route to be taken through the site.

Two dawn surveys were carried out in suitable weather conditions to record bird activity within and surrounding the site during the breeding season.

These surveys focused on identifying species using the site by sight and by sound. The same transect was walked through the site in both the April and May surveys.

### 3.6 Mammal Survey

A targeted mammal survey was undertaken as part of the site walkover, with particular emphasis on the detection of Eurasian Otter, a qualifying interest of Lough Corrib SAC.

Survey effort focused on habitats with potential to support otter activity, including drainage ditches, wetland margins and boundary features. The survey involved a systematic inspection of these areas for evidence of otter presence, including:

- spraints (faeces)
- holts (resting/breeding sites)
- couches and lie-up areas
- footprints, slides or feeding remains

All drainage features within and adjacent to the site were examined, with particular attention given to accessible banks, crossings and sheltered areas suitable for holt formation.

In addition to otter, the survey recorded any incidental evidence of other mammal species, including tracks, droppings and field signs, encountered during the site inspection.

### **3.7 Survey Limitations**

Ecological surveys are subject to seasonal constraints and the detectability of certain species varies throughout the year.

The earlier MKOS NIS for the site included a winter hen harrier roost survey which was undertaken during the appropriate survey period when communal roosting behaviour occurs.

As the preparation of this revised Natura Impact Statement has taken place outside the winter survey period (November to February), it has not been possible to repeat this Hen Harrier survey at the present time. The habitats present within the site have however been reviewed during recent site visits and although winter hen harrier surveys could not be repeated, we rely on MKO's previous roost survey plus current habitat suitability assessment.

Breeding bird surveys have been undertaken during the appropriate survey period in April and May 2026 and at Dawn as per standard methodology.

## **4.0 Receiving Environment**

### **4.1 Site Location and Landscape Context**

The proposed development site is located at Lemonfield, Oughterard, County Galway approximately 850 m north-east of Oughterard village. The lands are accessed via Pier Road, a narrow local road which runs along the north-western boundary of the site.

The surrounding landscape is typical of the eastern Connemara lowlands and comprises a mosaic of agricultural grasslands, areas of modified peatland, scrub vegetation and scattered rural housing. Small fields are bounded by hedgerows, treelines and drainage ditches reflecting long-established agricultural land use.

The Owenriff River flows to the north of the site and discharges into Lough Corrib a short distance downstream. Lough Corrib represents one of the most significant freshwater systems in Ireland and is designated as both a Special Area of Conservation (SAC) and a Special Protection Area (SPA).

The lands within the development site are currently used for recreational and amenity purposes and include an existing grass sports pitch in the southern portion of the site.

### **4.2 Existing Land Use**

The southern portion of the site has already been developed as a grass playing pitch and is currently used for recreational purposes. The construction of this pitch was previously considered by the planning authority under Section 5 of the Planning and Development Act 2000 (as amended) and determined to constitute exempted development.

As a result the southern area of the site is currently managed as amenity grassland associated with recreational use. Regular mowing and management maintain a short grass sward typical of sports pitches and amenity landscapes.

The remaining areas of the site comprise a mixture of semi-improved grassland, wet grassland, scrub and areas of cutover bog vegetation. These habitats reflect the historic use of the lands for agriculture and peat extraction together with subsequent drainage and natural vegetation succession.

Pier Road forms the north-western boundary of the site and is accompanied by roadside drainage channels that form part of the local drainage network.

### 4.3 Habitats

Habitats within the site were originally identified during ecological surveys undertaken as part of the earlier Natura Impact Statement and have been verified /amended during more recent site visits undertaken for the preparation of this report. The site is characterised predominantly by modified peatland soils that have been subject to long-term drainage and historical agricultural improvement.

The principal habitats recorded within the site include:

- drainage ditches (FW4)
- wet grassland (GS4)
- scrub (WS1)
- cutover bog (PB4)
- buildings and artificial surfaces (BL3)
- treelines (WL2)
- amenity grassland (managed recreational grassland)
- disturbed ground (ED2)

No Annex I habitats occur within the proposed development site. All habitats recorded are modified, locally common habitat types of low to moderate ecological value at local level only, and none display the structure, function or species assemblages necessary to qualify as Annex I habitats under the Habitats Directive

These habitats are described in detail below.

#### 4.3.1 Amenity Grassland (GA2)

The southern portion of the site is dominated by amenity grassland associated with the existing sports pitch.

This habitat comprises a regularly mown and intensively managed sward dominated by grasses including perennial ryegrass (*Lolium perenne*) and Yorkshire fog (*Holcus lanatus*). Common herbaceous species including daisy (*Bellis perennis*), dandelion (*Taraxacum officinale*) and chickweed (*Stellaria media*) are frequent throughout, with creeping buttercup (*Ranunculus repens*) and spearwort (*Ranunculus* spp.) occurring in wetter areas.

Due to ongoing management, botanical diversity is low and the habitat is typical of amenity grassland associated with recreational use. It is considered to be of low ecological value.

#### 4.3.2 Semi-natural Grassland (GS1)

A distinct area of semi-natural grassland occurs on mineral soils within the southern portion of the site.

This area supports a moderately diverse sward characterised by knapweed (*Centaurea nigra*), ribwort plantain (*Plantago lanceolata*), St John's wort (*Hypericum* spp.) and docks (*Rumex* spp.), together with grasses including Yorkshire fog (*Holcus lanatus*) and sweet vernal grass (*Anthoxanthum odoratum*). Dandelion (*Taraxacum officinale*) is also present.

The vegetation reflects relatively dry, mineral soil conditions and reduced influence of peat. This habitat is clearly distinguishable from surrounding peatland and is of moderate ecological value.



Photo 1: Drone picture (March 2026) showing amenity grassland, GS1 grassland and disturbed area ED2.

#### 4.3.3 Treelines and Boundary Woodland (WL2)

Treelines occur along the site boundaries and along sections of the roadside.

These are composed primarily of willow (*Salix* spp.), sycamore (*Acer pseudoplatanus*), hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*). A band of copper beech (*Fagus sylvatica* 'Purpurea') occurs along the upper boundary of the pitch.

The ground flora includes primrose (*Primula vulgaris*), nettle (*Urtica dioica*), coltsfoot (*Tussilago farfara*), dock (*Rumex* spp.), creeping buttercup (*Ranunculus repens*), ivy (*Hedera helix*) and bramble (*Rubus fruticosus*). Ferns such as hart's-tongue fern (*Asplenium scolopendrium*) and lady fern (*Athyrium filix-femina*) are also present.

These features provide minor habitat connectivity and shelter.

#### 4.3.4 Degraded Peatland / Modified Bog (PB4)

The central and northern portions of the site are dominated by peat-based soils supporting a degraded and hydrologically modified peatland system.

Vegetation is characterised by strong dominance of purple moor-grass (*Molinia caerulea*), with extensive areas also supporting rushes (*Juncus* spp.), particularly in wetter zones. Bog myrtle (*Myrica gale*) is locally abundant.

A range of peatland species persist, including bog asphodel (*Narthecium ossifragum*), bog pimpernel (*Anagallis tenella*), carnation sedge (*Carex panicea*), glaucous sedge (*Carex flacca*) and occasional hare's-tail cottongrass (*Eriophorum vaginatum*). Ling heather (*Calluna vulgaris*) occurs locally, while cross-leaved heath (*Erica tetralix*) is present only in small amounts.

Wetter areas support species such as bogbean (*Menyanthes trifoliata*) and cuckoo flower (*Cardamine pratensis*), while drainage-influenced zones contain soft rush (*Juncus effusus*) and sedges (*Carex* spp.).

Bryophyte cover includes *Sphagnum* mosses and *Polytrichum* species, and the ground is soft and waterlogged in places.

The habitat shows clear evidence of modification and drying, including:

- dominance of *Molinia caerulea* and rushes
- areas of exposed peat
- encroachment by gorse (*Ulex europaeus*)
- colonisation by birch (*Betula* spp.) and bramble (*Rubus fruticosus*)

Faunal use is evident, with snipe recorded in wetter areas and mammal activity indicated by tracks and droppings.

There is no evidence of peat extraction, and while classified as PB4 in accordance with Fossitt, this represents a drained and modified peatland system rather than true cutover bog.



Photo 2: Drone photo March 2026 showing degraded Bog (PB4), Scrub (WS1) and drains (FW1)

#### 4.3.5 Scrub (WS1)

Scrub occurs as discrete patches within the site, particularly within areas of drying peatland.

These areas are dominated by gorse (*Ulex europaeus*), with frequent birch (*Betula* spp.) and locally abundant bog myrtle (*Myrica gale*). Bramble (*Rubus fruticosus*) is also present.

This scrub reflects successional processes associated with drying peat soils, and is indicative of ongoing ecological transition.

#### 4.3.6 Disturbed Ground and Spoil (ED2)

A substantial area of disturbed ground occurs within the central and eastern portions of the site.

This habitat is characterised by uneven, clumped substrates and supports vegetation typical of early successional conditions. Species include docks (*Rumex* spp.), sorrel (*Rumex acetosa*), spear thistle (*Cirsium vulgare*), creeping buttercup (*Ranunculus repens*) and plantain (*Plantago* spp.). Soft rush (*Juncus effusus*) occurs in wetter patches.

Grey willow (*Salix cinerea*) is actively colonising this habitat, indicating progression towards scrub. Grasses such as Yorkshire fog (*Holcus lanatus*) and sweet vernal grass (*Anthoxanthum odoratum*) occur in more stabilised areas.

The habitat reflects recent disturbance and is of low ecological value.

#### 4.3.7 Drainage Ditches (FW4)

A network of drainage ditches traverses the site and supports slow-moving or standing water.

Aquatic vegetation includes oblong-leaved pondweed (*Potamogeton polygonifolius*), bogbean (*Menyanthes trifoliata*) and narrow-leaved cattail (*Typha angustifolia*). Marginal vegetation includes yellow flag iris (*Iris pseudacorus*), soft rush (*Juncus effusus*) and sedges (*Carex* spp.).

Frogspawn was recorded along ditch margins, confirming amphibian breeding activity.

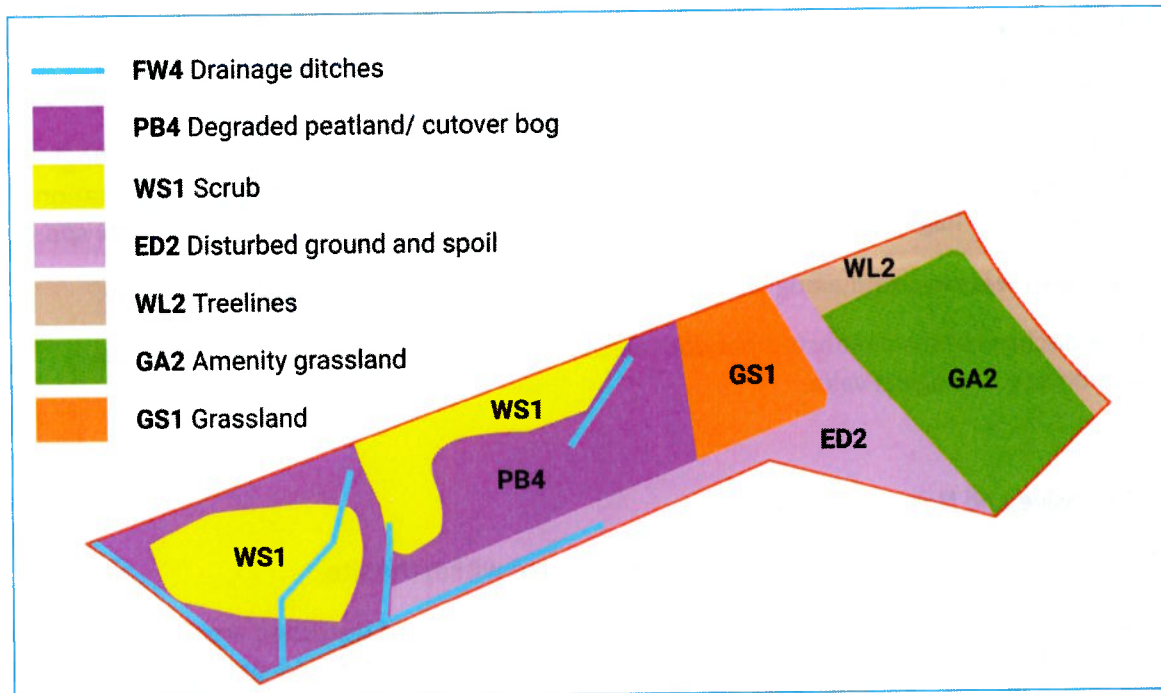
These ditches form a connected network across the site and provide both hydrological function and ecological value.

#### 4.4 Invasive and Non-native Species

A small number of non-native species were recorded within the site.

Montbretia (*Crocsmia × crocosmiiflora*) occurs in roadside and disturbed areas, while a small stand of rhododendron (*Rhododendron ponticum*) is present within mid-site scrub and winter heliotrope (*Petasites fragrans*) occurs along the eastern side of the new pitch at the woodland interface. These species are currently limited in extent and do not dominate any habitat; however, *Rhododendron ponticum* is listed as an invasive alien species under the European Communities (Birds and Natural Habitats) Regulations 2011 and winter heliotrope is recognised as a low-impact invasive species, and both should be subject to appropriate control and biosecurity measures in accordance with those Regulations.

The occurrence and management of these invasive plant species is a matter of compliance with the European Communities (Birds and Natural Habitats) Regulations 2011 and does not influence the Appropriate Assessment conclusions in relation to European sites.



Map 2: Habitat Map

Please note passing bays are not mapped. They entirely consist of Treelines WL2 and hard surfacing

#### 4.5 Fauna

The habitats present within the site provide suitable conditions for a range of common fauna typical of modified peatland and agricultural landscapes.

Targeted surveys included inspection of drainage features and adjacent habitats for evidence of Eurasian Otter, a qualifying interest of Lough Corrib SAC. Survey effort focused on drainage ditches and associated wetland margins.

A single otter spraint was recorded on a drainage ditch at the interface between degraded peatland (PB4) and disturbed ground (ED2), indicating occasional use of the site by this species. No holts, couches or other evidence of breeding or resting sites were identified. The drainage ditches within the site are shallow and narrow and are considered suboptimal habitat for otter when compared to larger watercourses such as the Owenriff River.

Other mammal activity recorded within the site included fox droppings and evidence of mammal movement across the peatland areas, indicating use of the site for foraging and passage. Brown hare were observed within the site during the May survey, and were also recorded in adjacent lands during the March survey, confirming their presence within the wider area.

Amphibian activity was also noted, with frogspawn recorded along the margins of drainage ditches, indicating local breeding by common frog.

Accordingly, the site provides low-value, occasional foraging habitat only, and does not support any key otter resting or breeding features of relevance to Lough Corrib SAC. The site does not support significant habitat for other protected species of relevance to European sites.

#### 4.6 Birds

Bird surveys were undertaken on:

- **21st March 2026** – pre-breeding survey
- **8th April 2026** – early breeding season (dawn survey)
- **4th May 2026** – peak breeding season (dawn survey)

Surveys were carried out using walkover transects, with species recorded visually and aurally. The April and May surveys were undertaken during early morning periods to coincide with peak bird activity and to identify territorial behaviour.

#### Species Recorded

The following species were recorded during site surveys and are presented alongside those identified in the MKO assessment:

Common Name	Scientific Name	BoCCI Status	21 Mar 2026	8 Apr 2026	4 May 2026	MKO Recorded
Meadow Pipit	<i>Anthus pratensis</i>	Red	✓	–	–	✓
Wren	<i>Troglodytes troglodytes</i>	Green	✓	✓	✓	✓
Robin	<i>Erithacus rubecula</i>	Green	✓	✓	✓	✓
Blackbird	<i>Turdus merula</i>	Green	✓	✓	✓	✓
Rook	<i>Corvus frugilegus</i>	Green	✓	✓	✓	✓
Hooded Crow	<i>Corvus cornix</i>	Green	✓	✓	–	–
Magpie	<i>Pica pica</i>	Green	✓	–	–	✓
Woodpigeon	<i>Columba palumbus</i>	Green	✓	✓	–	✓

Common Name	Scientific Name	BoCCI Status	21 Mar 2026	8 Apr 2026	4 May 2026	MKO Recorded
Chaffinch	<i>Fringilla coelebs</i>	Green	✓	–	✓	✓
Dunnock	<i>Prunella modularis</i>	Amber	–	✓	–	–
Blackcap	<i>Sylvia atricapilla</i>	Green	–	✓	–	–
Willow Warbler	<i>Phylloscopus trochilus</i>	Amber	–	✓	✓	–
Goldcrest	<i>Regulus regulus</i>	Green	–	✓	–	–
Chiffchaff	<i>Phylloscopus collybita</i>	Green	–	✓	–	–
Song Thrush	<i>Turdus philomelos</i>	Red	–	✓	–	–
Ring-necked Pheasant	<i>Phasianus colchicus</i>	Not listed	–	✓	✓	–
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Amber	–	✓	–	–
Common Gull	<i>Larus canus</i>	Amber	–	✓	–	–
Swallow (overflying)	<i>Hirundo rustica</i>	Amber	–	–	–	✓
Snipe	<i>Gallinago gallinago</i>	Amber	✓	–	–	✓

All recorded Red/Amber BoCCI species are typical of the wider landscape and that no SPA QI species were recorded using the site.

### Interpretation

The bird assemblage recorded is typical of a modified rural landscape, comprising farmland, scrub and woodland edge habitats.

The majority of species recorded are common and widespread generalists associated with treelines, grassland and scrub. Breeding activity was evident during the April and May surveys, particularly among passerine species such as willow warbler, blackcap and wren.

The occurrence of Red-listed species such as meadow pipit and song thrush reflects broader national population trends rather than any particular ecological importance of the site. These species are associated with widely available habitats in the surrounding landscape.

Snipe were recorded during the March survey in wetter peatland areas, consistent with localised soft ground conditions. However, these areas are limited in extent and fragmented.

**Overall, the site supports a typical assemblage of common breeding and foraging bird species, with no evidence of significant ornithological importance.**

#### **Relationship to Lough Corrib SPA**

The habitats present within the site, comprising amenity grassland, degraded peatland, scrub and disturbed ground, do not provide suitable habitat for bird species associated with Lough Corrib SPA.

In particular:

- no open water habitats are present
- no significant wetland feeding or roosting areas occur
- no habitat suitable for wintering waterbirds is available

No species associated with the SPA were recorded during surveys. All recorded Red/Amber BoCCI species are typical of the wider landscape and that no SPA QI species were recorded using the site.

#### **Conclusion**

The site supports a typical assemblage of common rural bird species associated with modified habitats.

While species of conservation concern were recorded, these are widespread and not dependent on the site. The habitats present are unsuitable for species associated with Lough Corrib SPA, and no such species were recorded.

#### **4.7 Hen Harrier**

MKO undertook targeted winter surveys for hen harrier as part of the ecological assessment, during which no hen harrier activity was recorded within or in the immediate vicinity of the site, and the habitats present were not identified as suitable for this species.

Specific surveys for hen harrier were not undertaken during the current survey period, as site visits were carried out during the breeding season, which is not appropriate for the detection of winter roosting behaviour. A detailed habitat assessment was therefore undertaken to determine site suitability.

The habitats present within the site are limited in extent and comprise modified peatland, amenity grassland and areas of disturbance, all of which are subject to ongoing human activity. These conditions contrast with the extensive, undisturbed open habitats typically used by hen harrier.

No hen harrier were observed during site visits, and the site is considered unsuitable for this species.

#### **4.8 Hydrology**

A preliminary flood risk and hydrological assessment has been undertaken for the site by Hydro-S Engineering Hydrology Consultants Ltd. .

The assessment identifies that the principal flood risk mechanisms at the site are:

- fluvial flooding associated with the Owenriff River and Lough Corrib
- pluvial flooding arising from localised low-lying areas
- groundwater influences linked to regional water levels

The report notes that the site is partially located within Flood Zones A and B, with the remainder within Flood Zone C. It also identifies that drainage ditches within and adjacent to the site form part of the local drainage network and may contribute to surface water conveyance.

Importantly, the report highlights that the drainage system may be influenced by backwater effects from Lough Corrib, with water levels in the Owenriff River and associated drains capable of rising during flood events. The drainage network is therefore considered to represent a potential hydrological pathway linking the site to downstream receiving waters.

The report further notes that pluvial flooding is a relevant mechanism at the site, with existing drains intercepting low-lying areas, and recommends that surface water management measures be implemented to avoid increasing flows within the drainage network.

#### Field Observations and Functional Connectivity

Field observations undertaken during site surveys indicate that the drainage network within and adjacent to the site is highly modified and exhibits limited evidence of active flow.

Drains located along the southern side of Pier Road were observed to be largely stagnant, with standing water present and no visible signs of directional flow. Vegetation within these drains is well established, further indicating low flow conditions.

Multiple field entrances occur along this section of road where access tracks cross roadside drains. At these locations, there was no clear evidence of culverts or pipes facilitating flow beneath the entrances. This pattern was observed both upstream and downstream of the northern site entrance and in the vicinity of the proposed lay-by (Lay-by C).

In addition, no direct evidence was observed of piped connections beneath the road linking the roadside drainage network to the Owenriff River or Lough Corrib.

These observations indicate that, while a theoretical hydrological connection exists via the wider drainage network as identified in the desk-based assessment, the functional connectivity between the site and downstream receiving waters is likely to be limited and attenuated.

The drainage features present are shallow, vegetated and in places stagnant, suggesting low conveyance capacity and a high degree of local water retention. There is no direct discharge from the site to the Owenriff River or Lough Corrib.

Accordingly, any hydrological linkage between the site and the Owenriff River or Lough Corrib is considered to be indirect, diffuse and of low efficiency, rather than representing a defined or actively functioning pathway.

#### 4.9 Summary of Ecological Baseline

The proposed development site comprises a mosaic of habitats associated with modified peatland and agricultural land use, reflecting a long history of drainage, land improvement and more recent disturbance.

The dominant habitat within the site is degraded peatland (PB4), characterised by extensive drainage, drying and vegetation change, with strong dominance of *Molinia caerulea* and rushes (*Juncus* spp.), and frequent occurrence of bog myrtle (*Myrica gale*). While elements of peatland flora persist, the habitat is significantly altered and does not exhibit the structure or function of intact raised bog.

Other habitats present include:

- amenity grassland (GA2) associated with the existing pitch, of low botanical diversity
- semi-natural grassland (GS1) on mineral soils, of moderate ecological value
- scrub (WS1), dominated by gorse (*Ulex europaeus*) and birch (*Betula* spp.), reflecting successional change
- disturbed ground (ED2), associated with recent soil movement and deposition
- drainage ditches (FW4), supporting localised aquatic and marginal vegetation and amphibian activity
- treelines (WL2), providing limited connectivity and shelter

Overall, habitats within the site are common, modified and of generally low to moderate ecological value, with no Annex I habitats identified.

Faunal surveys recorded a range of common mammal and amphibian species. A single spraint of Eurasian Otter was recorded, indicating occasional use of the site; by this QI species.

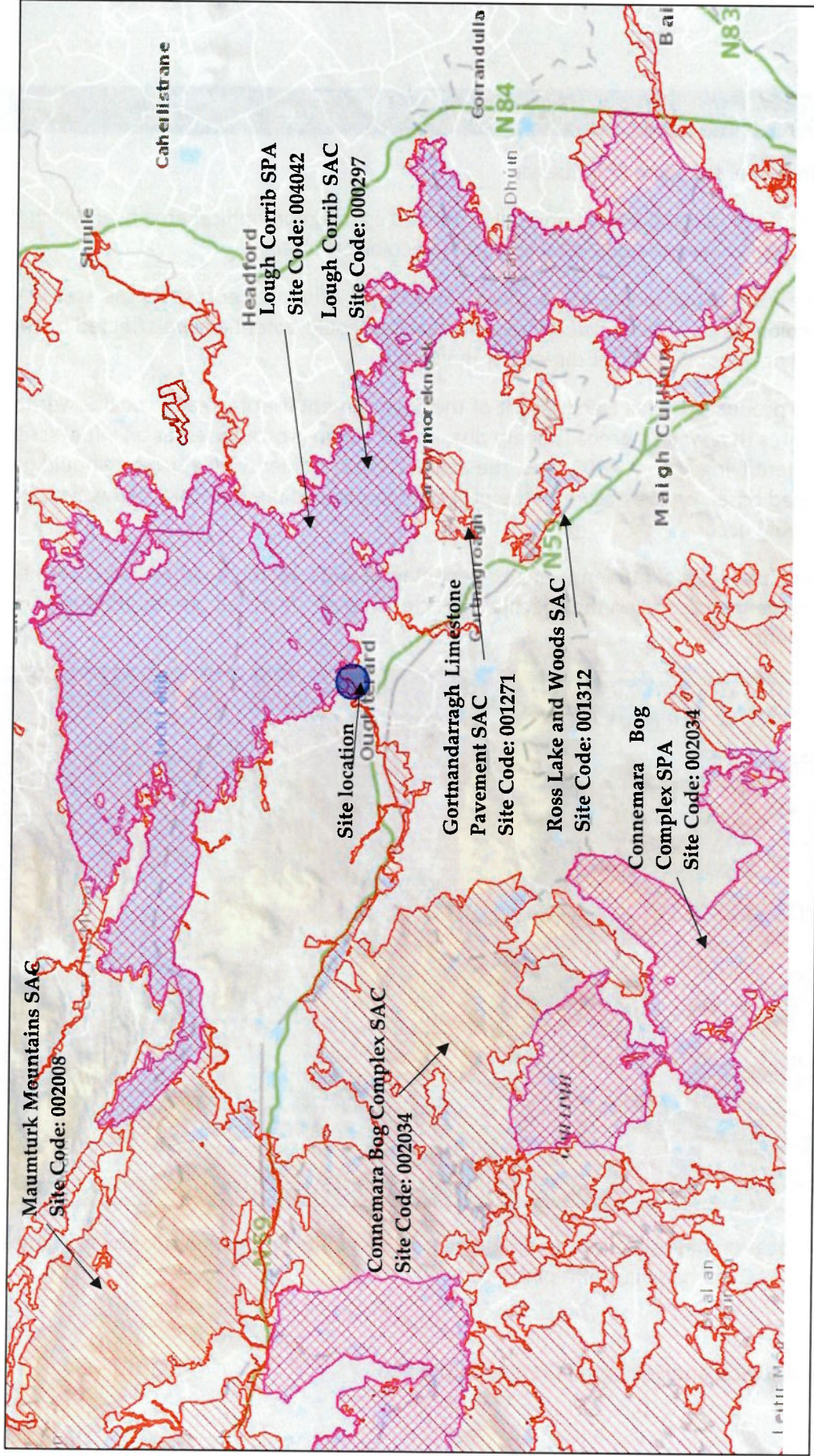
Bird surveys undertaken across pre-breeding and breeding periods recorded a typical assemblage of common farmland and woodland edge species. While a small number of Red and Amber-listed species were recorded, these are widespread and not dependent on the site. No species associated with Lough Corrib were recorded, and the habitats present are unsuitable for such species.

Hen harrier (*Circus cyaneus*), a Special Conservation Interest of Lough Corrib SPA, was not recorded during MKO surveys or during current site visits. Habitat assessment confirms that the site is unsuitable for this species due to its limited extent, fragmented nature and ongoing disturbance, particularly when considered in the context of extensive suitable habitat available in the wider landscape.

Hydrological connectivity is described in Section 5.8 and is characterised as indirect and attenuated

In summary, the site comprises modified habitats of limited ecological value, supporting common and widespread species, with no evidence of habitats or species of high conservation importance. While a hydrological pathway exists, it is considered to be indirect and of low functional significance.





Map 3: Location of the site relative to the Natura 2000 designations. (Reproduced under OSI Licence number EN 0070910)

## 5.0 Zone of Influence and Selection of European Sites

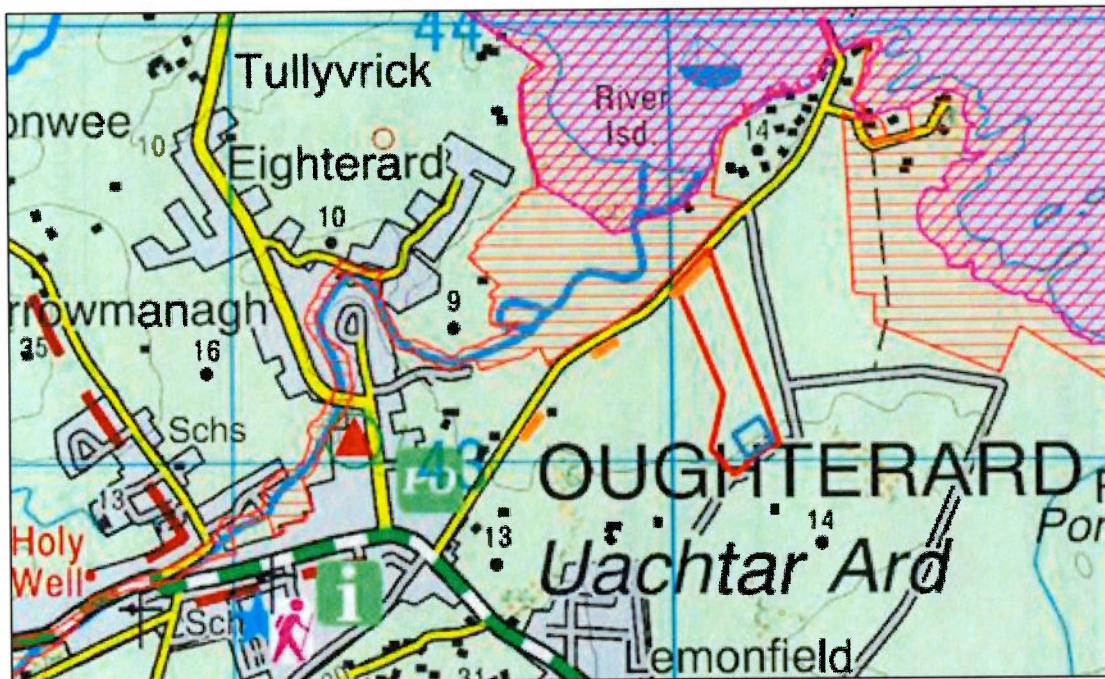
### 5.1 Definition of the Zone of Influence

The Zone of Influence of a development is defined as the geographical area over which the proposed works have the potential to result in ecological effects.

In the context of Appropriate Assessment, the Zone of Influence represents the area within which ecological receptors, including European sites, could potentially be affected by the proposed development either directly or indirectly.

Guidance produced by the Department of the Environment, Heritage and Local Government (2009) notes that while a precautionary distance of 15 km is often used as an initial screening tool for identifying Natura 2000 sites, the actual Zone of Influence of a project should be determined based on the nature of the proposed works and the potential pathways by which effects could occur.

As a result, the Zone of Influence of a project may be considerably smaller than 15 km and should be defined based on the specific characteristics of the development and the receiving environment.



Map 4: Location of Project (red outline) and passing points (orange) in relation to Natura 2000 network (SAC red hatching; SPA pink hatching)

### 5.2 Hydrological and Ecological Context of the Site

The proposed development site contains a number of drainage ditches associated with historical peatland drainage and agricultural land management.

The hydrological connectivity between the site and Lough Corrib therefore represents the principal ecological linkage between the development site and nearby European sites.

The development site itself is located approximately 150 m from the shoreline of Lough Corrib.

### 5.3 Identification of European Sites within the Zone of Influence

European sites within a 15 km radius of the development site were identified using the NPWS online mapping system and site synopses.

A number of European sites occur within this wider geographic area including:

- Lough Corrib SAC (Site Code 000297)
- Lough Corrib SPA (Site Code 004042)
- Connemara Bog Complex SAC
- Connemara Bog Complex SPA
- Maumturk Mountains SAC
- Ross Lake and Woods SAC
- Gortnandarragh Limestone Pavement SAC.

These sites represent a range of ecological designations associated with peatland, freshwater and upland habitats across the Connemara region.

### 5.4 European Sites within the Zone of Influence

Having regard to the scale and nature of the proposed development and the ecological context of the site, the only realistic pathway connecting the development site to a European site is the hydrological connection via the drainage network linking the site to the Owenriff River and subsequently to Lough Corrib.

The European sites that fall within the Zone of Influence of the proposed development are therefore:

- **Lough Corrib SAC (Site Code 000297)**
- **Lough Corrib SPA (Site Code 004042)**

These sites are hydrologically connected to the development site and are therefore considered further in the Appropriate Assessment.

Other European sites located within the wider 15 km search radius occur within separate hydrological catchments and are not connected to the development site by any plausible ecological pathway. All other European sites are screened out due to the absence of plausible hydrological or other pathways; (e.g. Connemara Bog Complex SAC being in a separate catchment).

Given the absence of hydrological connectivity and the nature of the proposed development, these sites are considered to fall outside the Zone of Influence of the project and therefore do not require further assessment within this Natura Impact Statement.

## 6.0 Natura 2000 sites Lough Corrib SAC and SPA

### 6.1 Conservation Objectives

The Habitats Directive states “Any plan or project not directly connected 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 implication for the site in view of the sites **conservation objectives** ...the competent national authorities shall agree to the plan or project only having ascertained that it will not adversely affect the integrity of the site...”

The conservation objectives form the basis of the Appropriate Assessment as it is against these objectives that the assessment is made.

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, are stable or increasing, and
- The specific structure and functions which 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 dynamics data on the species concerned indicate that it is maintaining itself on a long - term basis as a viable component of its natural habitats, and
- The natural range of the species is neither being reduced nor is 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.

## 6.2 Lough Corrib SAC

### Conservation Objectives for Lough Corrib SAC (Site Code 000297)

Code	Habitats	Objective
[3110]	Oligotrophic waters containing very few minerals of sandy plains ( <i>Littorelletalia uniflorae</i> )	<b>To restore</b> the favourable conservation condition
[3130]	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i>	<b>To restore</b> the favourable conservation condition
[3140]	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	<b>To restore</b> the favourable conservation condition
[3260]	Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation	To maintain the favourable conservation condition
[6210]	Semi-natural dry grasslands and scrubland facies on calcareous substrates ( <i>Festuco-Brometalia</i> ) (* important orchid sites)	To maintain the favourable conservation condition
[6410]	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils ( <i>Molinion caeruleae</i> )	To maintain the favourable conservation condition
[7110]	Active raised bogs	An integral part of good quality Active raised bogs (7110) and thus a separate conservation objective has not been set
[7120]	Degraded raised bogs still capable of natural regeneration	An integral part of good quality Active raised bogs (7110) and thus a separate conservation objective has not been set
[7150]	Depressions on peat substrates of the <i>Rhynchosporion</i>	An integral part of good quality Active raised bogs (7110) and thus a separate conservation objective has not been set
[7210]	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	To maintain the favourable conservation condition
[7220]	Petrifying springs with tufa formation ( <i>Cratoneurion</i> )	To maintain the favourable conservation condition
[7230]	Alkaline fens	To maintain the favourable conservation condition
[8240]	Limestone pavements	To maintain the favourable conservation condition

[91A0]	Old sessile oak woods with Ilex and Blechnum in the British Isles	To maintain the favourable conservation condition
[91D0]	Bog woodland	To maintain the favourable conservation condition

Table 1: Conservation Objectives Lough Corrib SAC (Habitats)

### Conservation Objectives for Lough Corrib SAC (Site Code 000297) continued...

[1029]	Margaritifera margaritifera (Freshwater Pearl Mussel)	To restore the favourable conservation condition
[1092]	Austropotamobius pallipes (White-clawed Crayfish)	To maintain the favourable conservation condition
[1095]	Petromyzon marinus (Sea Lamprey)	To restore the favourable conservation condition
[1096]	Lampetra planeri (Brook Lamprey)	To maintain the favourable conservation condition
[1106]	Salmo salar (Salmon)	To maintain the favourable conservation condition
[1303]	Rhinolophus hipposideros (Lesser Horseshoe Bat)	To restore the favourable conservation condition
[1355]	Lutra lutra (Otter)	To maintain the favourable conservation condition
[1833]	Najas flexilis (Slender Naiad)	To maintain the favourable conservation condition
[6216]	Hamatocaulis vernicosus (Slender Green Feather-moss)	To restore the favourable conservation condition

Table 2: Conservation Objectives Lough Corrib SAC (species)

### Lough Corrib SPA

#### Conservation Objectives for Lough Corrib SPA (Site Code 004042)

Code	Habitats	Objective
[A051]	Gadwall (Anas strepera)	To restore the favourable conservation condition
[A056]	Shoveler (Anas clypeata)	To restore the favourable conservation condition
[A059]	Pochard (Aythya ferina)	To restore the favourable conservation condition
[A061]	Tufted Duck (Aythya fuligula)	To restore the favourable conservation condition
[A065]	Common Scoter (Melanitta nigra)	To maintain the favourable conservation condition

[A082]	Hen Harrier ( <i>Circus cyaneus</i> )	To restore the favourable conservation condition
[A125]	Coot ( <i>Fulica atra</i> )	To restore the favourable conservation condition
[A140]	Golden Plover ( <i>Pluvialis apricaria</i> )	To maintain the favourable conservation condition
[A179]	Black-headed Gull ( <i>Chroicocephalus ridibundus</i> )	To restore the favourable conservation condition
[A182]	Common Gull ( <i>Larus canus</i> )	To restore the favourable conservation condition
[A193]	Common Tern ( <i>Sterna hirundo</i> )	To restore the favourable conservation condition
[A194]	Arctic Tern ( <i>Sterna paradisaea</i> )	To restore the favourable conservation condition
[A395]	Greenland White-fronted Goose ( <i>Anser albifrons flavirostris</i> )	To restore the favourable conservation condition
[A999]	Wetland and Waterbirds	To maintain the favourable conservation condition

Table 3. Lough Corrib SPA Conservation Objectives

The conservation objectives above form the basis of this assessment. In relation to conservation condition the bar of “restore” is more difficult to achieve than “maintain” and so this will be considered should significant impacts be identified in relation to the habitats or species for which the site is selected.

### 6.3 Pathways for Impact

The potential for the proposed development to result in effects on European sites arises from a limited number of pathways, having regard to the nature and scale of the works and the characteristics of the receiving environment.

As established in Section 6, the principal pathway linking the development site to Lough Corrib SAC is via the existing drainage network, which connects to the Owenriff River and subsequently to Lough Corrib.

The following potential impact pathways have been identified:

- surface water and sediment transport during construction
- surface water runoff during operation
- disturbance
- habitat modification

Each of these pathways is described below.

#### Surface Water and Sediment Transport (Construction Phase)

Construction activities associated with the proposed development will involve:

- stripping of vegetation
- excavation and levelling of peat soils
- installation of drainage infrastructure
- construction of access roads and passing bays
- placement of stone, sand and soil layers

These activities have the potential to generate sediment, particularly given the presence of **peat soils**, which are highly susceptible to erosion when disturbed.

The site is traversed by a network of drainage ditches which actively convey surface water through the site and connect to roadside drains and downstream watercourses.

The hydrological pathway, as described in Section 5.8, represents the only potential mechanism for impact.

### **Surface Water Runoff (Operational Phase)**

During operation of the development, surface water runoff will arise from:

- Buildings

This runoff may contain low levels of contaminants associated with normal vehicle use, including hydrocarbons, oils and suspended solids.

Surface water from these areas will enter the site drainage system and follow existing pathways through the drainage network.

While the scale of the development is relatively modest, this represents a potential pathway by which pollutants could enter downstream watercourses.

Note both car parking areas and access roads have permeable surfaces.

### **Disturbance**

The operation of the development will involve periodic human activity associated with sporting events, training and community use.

This will include:

- movement of people
- vehicle activity
- noise during matches and training
- artificial lighting of pitches

Disturbance effects are expected to be localised and confined to the development site.

Given the separation distance from Lough Corrib and the absence of direct connectivity to habitats used by waterbirds, disturbance is not considered a significant pathway to the SPA.

### **Habitat Loss and Modification**

The proposed development will result in the modification of habitats within the site footprint, including:

- degraded peatland
- wet grassland
- scrub
- disturbed ground

These habitats are of local ecological value and are not qualifying interests of any European site. No habitat loss will occur within Lough Corrib SAC or SPA.

### Summary of Impact Pathways

The assessment of potential impact pathways indicates that:

- the only pathway linking the development to Lough Corrib SAC is via **surface water drainage**
- the principal risk relates to **sediment transport during construction**
- other pathways are either minor in scale or not connected to the SAC or SPA

Accordingly, the assessment of potential effects on European sites focuses on the potential for changes in water quality and sediment dynamics arising from the proposed development.

### Summary of Impact Pathways

The assessment of potential impact pathways indicates that:

- the only pathway linking the development to Lough Corrib SAC is via surface water drainage
  - the principal risk relates to sediment transport during construction
  - other pathways are either minor in scale or not connected to the SAC or SPA
- Accordingly, the assessment of potential effects on European sites focuses on the potential for changes in water quality and sediment dynamics arising from the proposed development.

### Potential effects in the absence of mitigation

In the absence of mitigation, construction works involving disturbance of peat soils, excavation, drainage works, road works and passing bay construction could give rise to localised increases in suspended solids and a low risk of accidental hydrocarbon or concrete contamination entering the site drainage network. Given the indirect and attenuated hydrological pathway between the site, the Owenriff River and Lough Corrib, such effects would in any event be unlikely to reach Lough Corrib SAC or Lough Corrib SPA at a level capable of affecting their conservation objectives. However, applying the precautionary principle, these risks are treated as requiring mitigation and are assessed on the basis that appropriate construction and operational controls must be fully implemented.

## 6.4 Assessments of the Impacts on QI habitats and Species

### 6.4.1 Lough Corrib SAC

The qualifying interests of Lough Corrib SAC have been reviewed in the context of the impacts of the proposed development. Each habitat and species has been assessed in terms of potential pathways for effect, including hydrological connectivity, disturbance and habitat loss. Those qualifying interests for which no pathway exists are screened out from further assessment. Blue Highlights those taken forward for further consideration.

Code	Habitat	Conservation Objective	Relevance to Proposed Development
3110	Oligotrophic waters	Restore favourable condition	Hydrologically connected via drainage network. Potential sensitivity to sediment and water quality changes. Included in further assessment.
3130	Oligotrophic to mesotrophic standing waters	Restore favourable condition	Sensitive to nutrient and sediment inputs. Indirect pathway via surface water drainage. Included in further assessment.
3140	Hard oligo-mesotrophic waters (Chara spp.)	Restore favourable condition	Dependent on high water clarity and low nutrients. Potential sensitivity to sediment input. Included in further assessment.
3260	Watercourses (Ranunculion vegetation)	Maintain favourable condition	Directly relevant due to connection via Owenriff River. Sensitive to sediment and hydrological changes. Included in further assessment.
7210	Calcareous fens	Maintain favourable condition	Dependent on high water clarity and low nutrients. Potential sensitivity to sediment input. Included in further assessment.
7230	Alkaline fens	Maintain favourable condition	Found on lake edges. Sensitive to nutrient and sediment inputs. Indirect pathway via surface water drainage. Included in further assessment.

Table .3 Lough Corrib SAC : Aquatic Habitats – Relevant to Assessment

Code	Habitat	Conservation Objective	Relevance to Proposed Development
6210	Semi-natural dry grasslands	Maintain favourable condition	No pathway. Not present within or connected to site. Screened out.
6410	Molinia meadows	Maintain favourable condition	No hydrological or spatial connection. Screened out.
7110	Active raised bog	Maintain favourable condition	No pathway. Hydrologically isolated from site. Screened out. Active raised bogs for this natura site refers to the bogs on the south east side of Corrib
7120	Degraded raised bog	Maintain favourable condition	No connection to site. Screened out.
7150	Rhynchosporion depressions	Maintain favourable condition	No pathway. Screened out.
7220	Petrifying springs	Maintain favourable condition	No pathway. Screened out.
8240	Limestone pavement	Maintain favourable condition	No spatial or ecological connection. Screened out.

Code	Habitat	Conservation Objective	Relevance to Proposed Development
91A0	Old oak woodland	Maintain favourable condition	No pathway. Screened out.
91D0	Bog woodland	Maintain favourable condition	No pathway. Screened out.

Table 4. Lough Corrib SAC Terrestrial and Peatland Habitats – Screened Out

Species	Conservation Objective	Relevance to Proposed Development
Freshwater Pearl Mussel	Restore favourable condition	Highly sensitive to sediment and water quality. Hydrological pathway via Owenriff River. Key receptor – included in full assessment.
Atlantic Salmon	Restore favourable condition	Dependent on clean gravels and water quality. Potential pathway via drainage network. Included in assessment.
Sea Lamprey	Maintain favourable condition	Sensitive to sediment and water quality. Found below the weir in Galway. Screened out
Brook Lamprey	Maintain favourable condition	Similar sensitivities to salmon. Included in assessment.
Otter	Maintain favourable condition	Mobile species. Spraint found on the development site near a drain.
Lesser Horseshoe Bat	Maintain favourable condition	No suitable habitat or pathway. Screened out from further assessment.

Table 4. Lough Corrib SAC Terrestrial and Peatland Habitats – Screened Out

The qualifying interests of Lough Corrib SAC have been comprehensively reviewed in the context of the proposed development. Each habitat and species has been assessed with regard to its sensitivity to potential impacts arising from the project, taking into account the nature and scale of the works, the characteristics of the receiving environment, and the presence or absence of ecological pathways linking the site to the SAC.

The principal potential impact mechanism associated with the development relates to changes in water quality, which may arise during both the construction and operational phases.

#### Appropriate Assessment of Water-dependent Habitats – Impact Pathways

Habitat	Key Conservation Objective Targets	Sensitivity	Potential Risk from Proposed Development
Oligotrophic waters (3110)	Maintain/restore very low nutrient status; high water clarity; low phytoplankton; stable chemistry	Extremely sensitive to nutrient enrichment and turbidity	Construction sediment release; nutrient mobilisation; hydrocarbons; operational runoff and wastewater inputs

Habitat	Key Conservation Objective Targets	Sensitivity	Potential Risk from Proposed Development
Oligotrophic to mesotrophic waters (3130)	Maintain low–moderate nutrient levels; clear water; characteristic littoral vegetation	Sensitive to enrichment and suspended solids	Sediment inputs; nutrient enrichment; hydrocarbons; wastewater discharge
Hard oligo-mesotrophic waters ( <i>Chara</i> spp.) (3140)	Maintain clear water to allow light penetration; maintain <i>Chara</i> beds; low nutrients	Very sensitive to turbidity and eutrophication	Increased turbidity from sediment; nutrient enrichment reducing light penetration; hydrocarbon contamination
Watercourses with <i>Ranunculon</i> vegetation (3260)	Maintain clean, well-oxygenated flowing water; stable substrate; low fine sediment	Highly sensitive to siltation and pollution	Sediment mobilisation during construction; hydrocarbon spills; changes in runoff quality
Calcareous fens (7210)	Maintain hydrological regime; base-rich water; low nutrients; intact vegetation structure	Sensitive to hydrological change and pollution	Nutrient enrichment; sedimentation; contamination via drainage pathways
Alkaline fens (7230)	Maintain stable groundwater-fed conditions; low nutrient levels; species-rich vegetation	Highly sensitive to water quality and hydrological changes	Nutrient inputs; sedimentation; alteration of water chemistry

All of the above habitats are dependent on the maintenance of high water quality and stable hydrological conditions, as set out in the Conservation Objectives for Lough Corrib SAC.

The principal risk arising from the proposed development relates to deterioration in water quality, including increased suspended solids, nutrient enrichment and hydrocarbon contamination, during both the construction and operational phases.

#### Appropriate Assessment of Qualifying Species – Impact Pathways

Species	Key Conservation Objective Targets	Sensitivity	Potential Risk from Proposed Development
Freshwater Pearl Mussel ( <i>Margaritifera margaritifera</i> )	Restore favourable condition; maintain clean, well-oxygenated water; very low nutrient levels; stable, silt-free gravels	Extremely sensitive to sedimentation, nutrient enrichment and water quality changes	Construction: sediment mobilisation, increased suspended solids, nutrient release, hydrocarbon spills. Operation: hydrocarbon runoff, wastewater malfunction, nutrient enrichment. Risk pathway via drainage network, though indirect and attenuated

Species	Key Conservation Objective Targets	Sensitivity	Potential Risk from Proposed Development
Atlantic Salmon ( <i>Salmo salar</i> )	Restore favourable condition; maintain access to spawning habitat; clean gravels; good water quality; natural flow regimes	Highly sensitive to siltation, barriers, water quality deterioration	Construction: sediment deposition affecting spawning gravels, turbidity, hydrocarbons. Operation: runoff contamination, wastewater issues. Potential indirect pathway via Owenriff River
Brook Lamprey ( <i>Lampetra planeri</i> )	Maintain favourable condition; clean substrate; good water quality; stable hydrology	Sensitive to fine sediment deposition and water quality changes	Construction: sediment mobilisation, increased turbidity. Operation: hydrocarbon contamination, nutrient inputs. Pathway via drainage network, indirect
Otter ( <i>Lutra lutra</i> )	Maintain favourable condition; maintain habitat availability and prey resources; no disturbance to resting/breeding sites	Sensitive to disturbance, water quality (indirectly via prey), habitat fragmentation	Construction: disturbance from works, potential pollution affecting prey base. Operation: increased human activity, traffic, potential water contamination. Site use limited to occasional foraging; no holts present

All of the above species are qualifying interests of Lough Corrib SAC and are sensitive to changes in water quality, particularly in relation to sedimentation, nutrient enrichment and hydrocarbon contamination.

The principal potential impact mechanism relates to waterborne pathways, with a theoretical connection between the site and the Owenriff River and Lough Corrib via the drainage network. However, as outlined in Section 5.8, this pathway is indirect, diffuse and hydrologically attenuated, reducing the likelihood of significant pollutant transport.

For otter, potential impacts relate primarily to disturbance and indirect effects on prey availability, noting that the site provides only limited and suboptimal habitat, with no evidence of breeding or resting sites.

The section of the Owenriff River downstream of the site is not considered optimal habitat for freshwater pearl mussel due to its depth and flow characteristics, and is located downstream of the main known populations.

The assessment above demonstrates that while a number of qualifying species are associated with the Lough Corrib SAC, the principal sensitivity in the context of the proposed development relates to species dependent on water quality and sediment stability, particularly Freshwater Pearl Mussel.

#### 6.4.2 Lough Corrib SPA

Lough Corrib is designated for a range of wintering waterbirds, breeding species and associated wetland habitats, including:

- wildfowl species such as gadwall (*Anas strepera*), shoveler (*Anas clypeata*), pochard (*Aythya ferina*), tufted duck (*Aythya fuligula*) and Greenland white-fronted goose (*Anser albifrons flavirostris*)
- waterbirds including coot (*Fulica atra*), golden plover (*Pluvialis apricaria*) and gull species
- breeding seabirds including common tern (*Sterna hirundo*) and Arctic tern (*Sterna paradisaea*)
- hen harrier (*Circus cyaneus*)
- the overall wetland and waterbird assemblage

The conservation objectives for the SPA require the maintenance or restoration of favourable conservation condition, which is primarily dependent on:

- the availability and quality of wetland habitats
- the maintenance of suitable feeding and roosting areas
- minimal disturbance
- maintenance of water quality

It is noted that several species have a conservation objective of “restore”, indicating existing pressures and a need to avoid any additional negative effects.

### Site Usage by SPA Species

Bird surveys undertaken in March, April and May 2026, together with the findings of the MKO assessment, did not record any species associated with Lough Corrib SPA within the site.

The habitats present within the site, comprising:

- amenity grassland
- degraded peatland
- scrub and disturbed ground

do not provide suitable habitat for:

- wintering waterbirds
- wetland feeding or roosting species
- breeding tern species
- goose or duck species associated with the SPA

Gull species recorded during surveys were observed flying over the site only and are not associated with habitats present.

There is no evidence that the site is used for:

- feeding
- roosting
- nesting
- commuting

by any qualifying interests of the SPA.

## Pathway Assessment

The only potential pathway for impact on SPA qualifying interests relates to **indirect effects on wetland habitats**, arising from changes in water quality.

This may occur via:

- sediment mobilisation
- nutrient enrichment
- hydrocarbon contamination

during both construction and operational phases.

A hydrological pathway exists via the drainage network linking to the Owenriff River and subsequently Lough Corrib. However, as outlined previously, this pathway is:

- indirect
- diffuse
- hydrologically attenuated

and is therefore of limited functional significance.

There are no pathways for:

- direct disturbance
- habitat loss
- displacement

as SPA habitats do not occur within or adjacent to the site.

## Assessment of Effects on SPA Qualifying Interests

Given the absence of SPA species from the site and the lack of suitable habitat, there is **no direct interaction** between the proposed development and the qualifying interests of Lough Corrib SPA.

Potential effects are limited to indirect impacts on **wetland habitats that support SPA species**, arising from changes in water quality.

As outlined in the SAC assessment, these habitats are sensitive to:

- sedimentation
- nutrient enrichment
- hydrocarbon contamination

However, the potential for such impacts is reduced by:

- the indirect and attenuated nature of the hydrological pathway
- the absence of direct discharge
- the scale and nature of the proposed development

## Conclusion

No qualifying interest species of Lough Corrib SPA were recorded within or adjacent to the site, and the habitats present are unsuitable for such species.

There is no potential for direct impacts, including disturbance, displacement or habitat loss.

Indirect impacts via water quality pathways are considered unlikely given the limited and attenuated hydrological connectivity.

Accordingly, it is concluded that the proposed development will **not adversely affect the integrity of Lough Corrib SPA**, either alone or in combination with other plans or projects, having regard to its conservation objectives.

## 7.0 Cumulative Impacts

Cumulative impacts arise where the effects of the proposed development combine with those of other past, present or reasonably foreseeable future projects and activities, resulting in an increased risk of impact on European sites. In this assessment, cumulative effects have been considered in relation to Lough Corrib SAC and Lough Corrib SPA, with particular regard to shared pathways including surface water runoff, sediment transport, and hydrocarbon or nutrient inputs.

The policy framework for the assessment of cumulative effects is provided by the Galway County Development Plan 2022–2028. In particular, Policy NHB1 requires the protection of designated sites and their ecological integrity, while NHB2 and NHB3 require that all projects be subject to Appropriate Assessment and prohibit developments that would result in adverse effects on European sites, either alone or in combination with other plans or projects. Policy WR1 further requires the protection of water resources, including rivers, lakes and groundwater, in accordance with the requirements of the Water Framework Directive (2000/60/EC). The proposed development has been subject to Appropriate Assessment and incorporates mitigation measures designed to protect water quality, and is therefore consistent with these policy objectives.

A review of planning permissions within the Lemonfield area over the past five years identified a number of small-scale developments, including domestic extensions (Pl. Ref. 212476, 22641, 2361204), a telecommunications structure (Pl. Ref. 21404), a gymnasium and associated infrastructure (Pl. Ref. 20812), and community tennis courts (Pl. Ref. 2261304). These developments are limited in scale, are not associated with significant emissions or discharges, and do not give rise to measurable effects on downstream European sites. The primary related development is the wider Oughterard sports and recreational amenities project, which has been subject to separate Appropriate Assessment and incorporates mitigation measures to protect water quality.

The only plausible pathway for cumulative effects is via the surface water drainage network, which could theoretically contribute to sediment loading, hydrocarbon inputs from increased traffic, or nutrient inputs from wastewater systems. While a modest increase in traffic along Pier Road may occur, any associated hydrocarbon inputs are expected to be minor and will be effectively controlled through drainage design and the use of interceptors.

It is also recognised that the wider Lough Corrib catchment is subject to existing and ongoing pressures, including diffuse nutrient inputs from agricultural activities, runoff from improved

grasslands, and discharges from septic tanks associated with dispersed rural housing. These pressures are reflected in Water Framework Directive assessments, which identify the need to protect and maintain water quality within the Corrib catchment. In this context, the proposed development represents a small-scale project with limited emissions and no direct discharge to surface waters. The hydrological pathway linking the site to Lough Corrib is indirect, diffuse and attenuated, further reducing the potential for cumulative effects.

Having regard to the scale and nature of existing and permitted development, the absence of significant shared impact pathways, the limited and attenuated hydrological connectivity, and the implementation of mitigation measures, it is concluded that the proposed development will not result in any significant cumulative effects on Lough Corrib SAC or Lough Corrib SPA, either alone or in combination with other plans or projects.

No in-combination effect arises that would undermine the achievement of favourable conservation condition or Water Framework Directive objectives.

## **8.0 Mitigation Measures**

The following mitigation measures have been developed in accordance with the precautionary principle to ensure that the proposed development will not adversely affect the integrity of Lough Corrib SAC or Lough Corrib SPA. The measures incorporate recommendations contained within both the MKO Natura Impact Statement for the wider sports development and the Aster Environmental Consultants assessment of the proposed passing bays.

While the hydrological connection between the site and downstream European sites is considered indirect and attenuated, potential risks relating to sediment release, hydrocarbons, surface water runoff and wastewater management have been identified, particularly during construction and periods of heavy rainfall or flooding.

Accordingly, mitigation measures have been incorporated into the project design, construction methodology and operational management to protect water quality, drainage features and qualifying interest habitats and species.

### **8.1 Mitigation through Design**

The design of the proposed development incorporates a number of measures to minimise potential impacts on water quality and downstream European sites.

These include:

- use of a floating construction method to minimise disturbance of underlying peat soils
- retention of existing drainage patterns where possible
- use of permeable surfaces in parking areas and passing bays to reduce runoff rates
- installation of petrol interceptors to treat surface water runoff prior to discharge
- provision of a packaged wastewater treatment system with polishing filter, designed in accordance with EPA guidance
- avoidance of direct discharge to watercourses

These measures reduce the risk of pollutant mobilisation at source and limit the potential for

downstream effects.

## **8.2 Construction Phase Mitigation**

Given the identified risk of sediment mobilisation and pollution during construction, the following measures will be implemented:

### **Timing and Environmental Control**

- Works will be undertaken during dry and stable weather conditions, avoiding periods of heavy rainfall where possible
- No site clearance, vegetation removal, or other potentially disturbing works shall be undertaken during the main bird nesting season (1 March to 31 August. Drain clearance works shall avoid the main amphibian breeding period (February to May inclusive) where possible. In addition, any works with potential to impact mammals such as hares or otters shall be preceded by an ecological inspection to confirm the absence of breeding or resting sites.
- Works will be scheduled to avoid periods of flooding or elevated water levels, noting that hydrological connectivity to the Owenriff River may increase during such events
- An Ecological Clerk of Works (ECoW) will be appointed to supervise all works and ensure compliance with mitigation measures

These measures provide overarching environmental control of the construction phase and are intended to ensure that temporary risks to water quality are avoided before they can affect downstream water-dependent qualifying interests of Lough Corrib SAC.

### **Protection of Drainage Network**

- Existing drains will be protected throughout construction, with no unnecessary disturbance or widening
- Where crossings are required, pipes will be installed and wrapped in permeable geotextile membrane, with clean stone backfill to maintain flow
- Silt fences and/or silt curtains will be installed where works occur near drainage features
- These measures will remain in place during construction and for an appropriate period post-construction to allow stabilisation

These measures are designed to prevent direct mobilisation of sediment or pollutants to the drainage network and thereby protect downstream water-dependent habitats and species within Lough Corrib SAC

### **Sediment and Soil Management**

All excavated soils will be stored away from drainage features and protected using silt fencing

- Soil stockpiles will be covered during adverse weather to prevent runoff
- Care will be taken during topsoil stripping to minimise disturbance and avoid mobilisation of fine material

- Only clean, washed, sediment-free stone will be used in construction
- All stone or fill to be from certified invasive free sources

These measures are designed to prevent significant increases in suspended solids, fine sediment or peat-derived material reaching the drainage network and thereby protect water-dependent habitats 3110, 3130, 3140 and 3260, and species including Freshwater Pearl Mussel, salmon and brook lamprey within Lough Corrib SAC

### **Pollution Prevention**

- Spill kits will be available on-site at all times
- Drip trays will be used under stationary machinery
- Refuelling will be carried out off site
- All machinery will be regularly inspected and maintained
- Concrete will be pre-mixed off site and poured in controlled conditions. No washings to be permitted on site.

These measures are intended to avoid accidental releases of fuels, oils, concrete or other contaminants which could otherwise adversely affect water quality and sensitive aquatic qualifying interests of Lough Corrib SAC.

### **Machinery and Biosecurity**

- All machinery will be cleaned prior to entering the site to prevent the spread of invasive species
- Movement of machinery will be restricted to defined working areas

These measures reduce the risk of secondary pollution and incidental habitat degradation during construction and support the overall protection of downstream European site receptors.

## **8.3 Operational Phase Mitigation**

During operation, the following measures will ensure continued protection of water quality:

### **Surface Water Management**

- All surface water runoff from hardstanding areas will pass through a petrol interceptor prior to discharge. This will have an emergency system to shut down in case of flooding. This is standard.
- Permeable surfaces will be maintained to reduce runoff and promote infiltration
- Drainage systems will be regularly inspected to ensure proper functioning

This will ensure that operational runoff does not measurably alter water quality within the Corrib system in a way that could affect SAC habitats or species, or indirectly affect SPA interests through wetland habitat degradation.

### **Wastewater Treatment**

The wastewater treatment system will be subject to a formal maintenance agreement, including:

- regular inspection
- scheduled emptying
- performance monitoring
- The polishing filter will be maintained to ensure effective treatment prior to discharge

### **Fertilisation**

The pitch will be maintained through periodic sand top dressing and the application of organic seaweed-based fertiliser twice annually. No chemical fertilisers to be applied.

This will ensure that wastewater and pitch management does not give rise to nutrient enrichment, organic loading or contamination of downstream waters in a way that could affect the conservation objectives of Lough Corrib SAC or Lough Corrib SPA.

### **Lighting**

External lighting will be restricted to the main pitches and associated access areas, will be designed and installed to minimise upward and outward light spill and will operate only during defined evening periods associated with training and matches and not after 10pm. In combination with the separation from Lough Corrib and the absence of SPA qualifying interests using the site, this ensures that lighting will not give rise to any significant disturbance

or behavioural effects on waterbirds or other qualifying interests of Lough Corrib SPA.

### **Flood Risk and Contingency**

A precautionary approach to flooding events will be adopted

In advance of forecast heavy rainfall or flooding:

- drainage protection measures will be checked
- vulnerable areas (e.g. car park) will not be used where necessary
  - Non-return valves and control measures will ensure that contaminated runoff does not leave the site

### **Drainage Protection and Long-term Stability**

- Drainage features will be protected through vegetative buffers, geotextile stabilisation and appropriate planting
- Regular inspection will ensure no erosion or direct pathways develop

The main on-site drainage channel will be securely fenced prior to commencement of bulk earthworks to prevent accidental encroachment by machinery, material storage or construction activities, and its banks will be planted with a belt of native birch to provide long-term bank stabilisation, shading and an additional physical buffer against accidental pollution. This measure will help maintain the integrity and function of the drainage feature and reduce the potential for sediment or contaminants to enter the local drainage network.

These measures provide an additional safeguard during periods when hydrological connectivity may temporarily increase, ensuring that contaminants are not mobilised to downstream waters during flood or heavy rainfall events.

### **8.4 Otter Protection Measures**

Although only limited evidence of otter activity was recorded within the site, Eurasian otter (*Lutra lutra*) is a qualifying interest of Lough Corrib SAC and precautionary mitigation measures will therefore be implemented during construction and operation of the proposed development.

The drainage ditches within and adjacent to the site are narrow, shallow and generally stagnant in nature and do not provide optimal habitat for otter when compared to the Owenriff River and associated larger watercourses. No holts, couches or breeding sites were identified during surveys. A single spraint was recorded, indicating occasional use of the site for foraging or passage.

In order to avoid disturbance or indirect impacts on otter and associated aquatic habitats, the following measures will be implemented:

- Construction works will be restricted to daylight hours only.
- No artificial lighting will be directed toward drainage ditches, wetland areas or adjacent habitats during construction.
- Machinery will not be left idling when not in active use.
- Refuelling, storage of fuels and machinery maintenance will take place away from drainage features.
- Spill kits will be available on site at all times and all staff will be informed of spill response procedures.
- Drainage ditches and adjacent wet areas will be protected from sediment release during construction through the use of silt fencing, geotextiles and other appropriate sediment control measures.
- Vegetation clearance will be limited to the minimum necessary to complete the works.
- Any excavations left open overnight will include suitable escape ramps or egress points to prevent accidental trapping of mammals.
- In the unlikely event that evidence of a holt, couch or breeding site is identified during construction, works in that area will cease immediately and advice will be sought from the National Parks and Wildlife Service.

These measures will ensure that the proposed development will not result in disturbance, habitat loss or deterioration in water quality that could affect otter or associated aquatic habitats connected to Lough Corrib SAC.

### **8.5 Monitoring and Environmental Management**

An Ecological Clerk of Works, or other suitably qualified environmental specialist, will oversee compliance with the mitigation measures during construction. All mitigation measures set out in Section 8 of this Natura Impact Statement will be incorporated into a Construction and Environmental Management Plan (CEMP), which shall be prepared in advance of works and implemented in full for the duration of the construction phase. The CEMP shall set out the roles and responsibilities of relevant personnel, site-specific pollution prevention measures, drainage protection measures, monitoring requirements, inspection procedures and incident response procedures. It is assumed that the implementation of the CEMP will be secured by condition of any permission granted. Any consultation or agreement required by the competent authority with the National Parks and Wildlife Service, Inland Fisheries Ireland or other relevant statutory bodies will be incorporated into the CEMP and complied with in full. Any environmental incidents will be recorded and addressed immediately, and corrective measures will be implemented without delay.

### **8.6 Summary of Mitigation Effectiveness**

The mitigation measures outlined above are designed to:

- prevent sediment mobilisation
- control surface water runoff
- eliminate or significantly reduce hydrocarbon risk
- ensure effective wastewater treatment
- protect drainage features and prevent pollutant transport

While a theoretical hydrological connection exists to the Owenriff River and Lough Corrib, this pathway is indirect and hydrologically attenuated, and the implementation of the above measures ensures that no significant impact on water quality will occur.

The assessment identifies that, in the absence of mitigation, there is a potential risk of sediment mobilisation and associated impacts on water quality arising during the construction phase, given the nature of the peat soils and the presence of drainage features. However, the mitigation measures set out in this Natura Impact Statement, including sediment control, protection of drainage pathways, pollution prevention measures and environmental supervision, are designed to avoid or fully control these risks at source. The conclusions of this assessment are therefore predicated on the full and effective implementation of these mitigation measures. With these measures in place, the potential for any adverse effect on the integrity of Lough Corrib SAC and Lough Corrib SPA is avoided.

## 9.0 Conclusion Statement

This Natura Impact Statement has assessed the potential for the proposed community sports and amenity development at Lemonfield, Oughterard, including associated roadside passing bays and drainage works, to adversely affect the integrity of Lough Corrib SAC and Lough Corrib SPA, either alone or in combination with other plans or projects. The assessment has considered the characteristics of the project, the baseline environment, the conservation objectives of the European sites and the limited, indirect hydrological linkage between the development site and Lough Corrib.

The baseline surveys confirm that the site comprises modified habitats of low to moderate ecological value at local level only, including amenity grassland, semi-natural grassland, degraded peatland (PB4), disturbed ground, scrub, drainage ditches and treelines, with no Annex I habitats present. The fauna recorded is a typical assemblage of common species associated with modified rural landscapes, with only otter relevant to the Appropriate Assessment process as a qualifying interest of Lough Corrib SAC due to occasional foraging use of on-site drains. No qualifying interests of Lough Corrib SPA were recorded using the site, and the habitats present are unsuitable for SPA waterbird species.

Hydrological assessment and field observations demonstrate that any connection between the site drainage network, the Owenriff River and Lough Corrib is indirect, diffuse and hydrologically attenuated, involving shallow, vegetated drains with limited conveyance capacity and no direct piped discharge to the European sites. In the absence of mitigation, construction activities involving disturbance of peat soils, excavation, drainage works, road works and passing bay construction could give rise to localised increases in suspended solids and a low risk of accidental hydrocarbon or concrete contamination entering the site drainage network, while operational use could generate low-level runoff from hardstanding areas. Given the attenuated pathway and separation distance, such unmitigated effects would in any event be unlikely to reach Lough Corrib at a magnitude capable of affecting the conservation objectives of Lough Corrib SAC or SPA; however, in accordance with the precautionary principle these risks have been treated as requiring mitigation and have been assessed on that basis.

The project has been designed as a low-impact development, with many potential environmental concerns addressed and mitigated at the design stage. This includes the selection of a floating-style pitch construction, the avoidance of deep excavation works, the use of permeable surfacing within the car parking areas, and the retention of the existing site drainage arrangements, with no additional drainage infrastructure proposed. In addition, two of the three proposed passing bays already exist on site, thereby minimising the extent of new works required.

A suite of targeted construction and operational mitigation measures has been specified to

control these potential pathways, including protection of on-site and roadside drainage features, sediment and soil management, pollution prevention, surface water treatment and attenuation, appropriate wastewater treatment and polishing, and flood risk and contingency measures, all to be implemented through a Construction and Environmental Management Plan under the supervision of an Ecological Clerk of Works or suitably qualified environmental specialist. These measures are designed to prevent significant increases in suspended solids, peat-derived material or contaminants reaching the drainage network and thereby protect water-dependent habitats (3110, 3130, 3140, 3260, 7210, 7230) and species such as Freshwater Pearl Mussel, salmon, brook lamprey and otter in Lough Corrib SAC, and to avoid any indirect degradation of habitats used by qualifying interests of Lough Corrib SPA.

Having regard to the nature and scale of the proposed development, the characteristics of the receiving environment, the indirect and attenuated nature of the hydrological linkage to Lough Corrib and the implementation in full of the mitigation measures described in Section 8, it is concluded that the proposed development, either alone or in combination with other plans or projects, will not adversely affect the integrity of Lough Corrib SAC or Lough Corrib SPA in view of their conservation objectives. The conclusions of this assessment are based on complete, precise and definitive findings regarding the project, the baseline environment and the impact pathways, and there is no reasonable scientific doubt as to the absence of adverse effects on the integrity of the European sites.

## References

- Department of Agriculture, Food and the Marine 2021 Invasive Plant Information Note.
- European Commission 2019 managing Natura 2000 sites the provisions of Article 6 of the habitats directive 92 / 43 / EEC stop office for official publications for the European Communities Luxembourg
- European Commission 2000 managing Natura 2000 sites the provisions of Article 6 of the habitats directive 92 / 43 / EEC stop office for official publications for the European Communities Luxembourg
- European Commission 2002 assessment of plans and projects significantly affecting that or 2000 sites methodological guidance on the provisions of Article 63 and 64 of the habitats directive 92 / 43 / EEC office for official publications for the European Communities Luxembourg
- European Commission 2006 nature and biodiversity cases ruling of the European Court of Justice office for the official publications for the European Communities Luxembourg
- European Commission 2007 guidance document on article 64 of the habitats directive 93/42 EEC clarification of the concepts of alternative solutions imperative reasons of

overriding public interest compensatory measures overall coherence and the opinion of commission

Fossit, J. A. 2000. *A Guide to Habitats in Ireland*. The Heritage Council.

McCarthy Keville O'Sullivan Ltd 2021 Ecological Impact Assessment for Amenity Development, Oughterard, Co. Galway.

NPWS (Accessed March 2026) Natura 2000 Standard Data Form for Lough Corrib SPA (Site Code 004042). National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

NPWS (Accessed March 2026) Site Synopsis for Lough Corrib SPA (Site Code 004042). National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

NPWS (Accessed March 2026) Conservation Objectives for Lough Corrib SPA (Site Code 004042). National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

NPWS (Accessed March 2026) Natura 2000 Standard Data Form for Lough Corrib SAC (Site Code 000297). National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

NPWS (Accessed March 2026) Site Synopsis for Lough Corrib SAC (Site Code 000297). National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

NPWS (Accessed March 2026) Conservation Objectives for Lough Corrib SAC (Site Code 000297). National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

EPA (Accessed March 2026) Environmental Protection Agency online resources, including water quality, catchments, and environmental data. Available at: [www.epa.ie](http://www.epa.ie)

NPWS (Accessed March 2026) National Parks and Wildlife Service online resources, including protected sites, site synopses, conservation objectives, and Natura 2000 documentation.

Available at: [www.npws.ie](http://www.npws.ie)

## Appendix 1: Natura 2000 - 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*), Carlina 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 Version date: 07.03.2022 4 of 5 000297\_Rev22.Docx (*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. Version date: 07.03.2022 5 of 5 000297\_Rev22.Docx 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.

**SITE NAME: LOUGH CORRIB SPA**

**SITE CODE: 004042**

Lough Corrib is the largest lake in the country and is located, for the most part, in County Galway, with a small section in the north extending into County Mayo. The lake can be divided into two parts: a relatively shallow basin in the south, which is underlain by Carboniferous limestone, and a larger, deeper basin to the north, which is underlain by more acidic granite, schists, shales and sandstones. The main inflowing rivers are the Black, Clare, Dooghta, Cregg, Owenriff and the channel from Lough Mask. The main outflowing river is the Corrib, which reaches the sea at Galway City.

The shallow, lime-rich waters of the southern basin of the lake support one of the most extensive beds of Stoneworts (Charophytes) in Ireland. These Chara beds are a very important source of food for waterfowl. In contrast, the northern basin contains more oligotrophic and acidic waters. 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. The lake has numerous islands, which range from relatively bare rocky islets to larger islands with grassland or woodland.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Greenland White-fronted Goose, Gadwall, Shoveler, Pochard, Tufted Duck, Common Scoter, Hen Harrier, Coot, Golden Plover, Black-Headed Gull, Common Gull, Common Tern and Arctic Tern. The site is also of special conservation interest for holding an assemblage of over 20,000 wintering waterbirds. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetlands & Waterbirds.

Lough Corrib is an internationally important site that regularly supports in excess of 20,000 wintering waterbirds including an internationally important population of wintering Pochard (10,107) – except where indicated all figures are five year mean peaks for the period 1995/96 to 1999/2000. The site also supports nationally important populations of wintering Greenland White-fronted Goose (160 - five year mean peak for the period 1994/95 to 1998/99), Gadwall (48), Shoveler (90), Tufted Duck (5,486), Coot (14,426) and Golden Plover (1,727). Other species which occur include Mute Swan (182), Whooper Swan (35), Wigeon (528), Teal (74), Mallard (155), Goldeneye (74), Lapwing (2,424) and Curlew (114).

In winter nationally important numbers of Hen Harrier (8 - four year mean peak count between 2006 and 2009) also utilise the site as a communal roost. Lough Corrib is also a traditional breeding site for gulls and terns, with various islands being used for nesting each year. There are important colonies of Common Tern (37 pairs in 1995) and Arctic Tern (60 pairs in 1995). The site supports substantial colonies of Black-headed Gull (431 pairs in 2000) and Common Gull (186 pairs in 2000), these representing 3% and 11% of the respective all-Ireland totals. Small numbers of Lesser Black-backed Gull, Great Black-backed Gull and Herring Gull have also been recorded breeding within the site.

The site supports approximately half of the national population of nesting Common Scoter (30 pairs in 1995); Lough Corrib was colonised by this rare, Red Data Book species only as recently as the late 1970s/early 1980s.

Lough Corrib SPA is an internationally important site which supports in excess of 20,000 wintering waterbirds, including a population of Pochard that is, itself, of international importance. A further six species of wintering waterfowl have populations of national importance. The site also contains a nationally important communal roost site for Hen Harrier. Lough Corrib is the most important site in the country for breeding Common Scoter. Its populations of breeding gulls and terns are also notable, with nationally important numbers of Black-headed Gull, Common Gull, Common Tern and Arctic Tern occurring. It is of note that several species which regularly occur are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Greenland White-fronted Goose, Hen Harrier, Golden Plover, Common Tern and Arctic Tern. Lough Corrib is a Ramsar Convention site.

