Natura Impact Statement of a Proposed Development at Union, Collooney, Co. Sligo.

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Document Control	
Project Title:	Natura Impact Statement of a Proposed Development at Union, Collooney, Co. Sligo.
Project Reference No:	24-132
Project Description:	Natura Impact Statement of a Proposed Development at Union Collooney, Co. Sligo.
Status:	Final
Client Details:	Kyle & Claire Taheny
Issued By:	Coyle Environmental Ltd., 1st & 2nd Floor Kilmurry House,Castlerea, Co. Roscommon

Document Production and Approval			
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Revision History		
Rev	**Status**	**Date**
0	Draft	03/09/24
1	Final	24/09/24

TABLE OF CONTENTS

1 INTRODUCTION ____ 4
1.1 Requirement for an Appropriate Assessment 4
1.2 The Aim of the Report 4
1.3 Regulatory Context 5

2 METHODOLOGY ____ 9
2.1 Appropriate Assessment 9
2.2 Statement of Competency 11
2.3 Desk Studies & Consultation 11
2.4 Assessment Methodology 12

3 SCREENING ____ 13
3.1 Development Description 13
3.2 Site Location and Surrounding Environment 15
3.3 Natura 2000 Sites Identified 18
3.4 Identification of Potential Impacts 23
3.5 Assessment of Significance 24
3.6 Screening Conclusions 24

4 STAGE II – APPROPRIATE ASSESSMENT ____ 25
4.1 Introduction 25
4.2 Natura 2000 Sites Identified 26
4.3 Summary of Potential Effects 32

5 MITIGATION MEASURES ____ 36

6 APPROPRIATE ASSESSMENT CONCLUSION ____ 40

APPENDIX I - REFERENCES AND FURTHER READING ____ 42

1 INTRODUCTION

1.1 REQUIREMENT FOR AN APPROPRIATE ASSESSMENT

This Natura Impact Assessment was prepared for a proposed residential development in Union, Collooney, Co. Sligo. Having regard to the location of the proposed development site and its proximity to sites designated under the Natura 2000 network, an Appropriate Assessment of the proposed development was prepared in accordance with Article 6 of the Habitats Directive. This NIS will allow the Competent Authority, in this case Sligo County Council, to undertake an Appropriate Assessment of the proposed development, as required under Article 6(3) of the Habitats Directive.

The purpose of the assessment is to determine the appropriateness of the proposed project, in the context of the conservation status of the site or sites. In Ireland, an Appropriate Assessment takes the form of a Natura Impact Statement (NIS), which is a statement of the likely impacts of the plan or project on a Natura 2000 site. The NIS comprises a comprehensive assessment of the plan or project and it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans or projects on one or more Natura 2000 sites in view of the sites' conservation objectives.

1.2 THE AIM OF THE REPORT

This Natura Impact Statement (NIS) has been prepared in accordance with the current guidance (DoEHLG, 2009, Revised February 2010), and it provides an assessment of the potential effects of a proposed development at Union, Collooney, Co. Sligo on certain European sites.

An NIS should provide the information required in order to establish whether or not a proposed development is likely to have a significant impact on certain Natura sites in the context of their conservation objectives and specifically on the habitats and species for which the Natura 2000 conservation sites have been designated.

Accordingly, a comprehensive assessment of the potential impacts of this application was carried out in August 2024 by Noreen McLoughlin, MSc, MCIEEM. This assessment allowed areas of potential ecological value and potential ecological constraints associated with this proposed development to be identified and it also enabled potential ecological impacts associated with the proposed development to be assessed and mitigated for.

1.3 REGULATORY CONTEXT

RELEVANT LEGISLATION

The Birds Directive (Council Directive2009/147/EC) recognises that certain species of birds should be subject to special conservation measures concerning their habitats. The Directive requires that Member States take measures to classify the most suitable areas as Special Protection Areas (SPAs) for the conservation of bird species listed in Annex 1 of the Directive. SPAs are selected for bird species (listed in Annex I of the Birds Directive), that are regularly occurring populations of migratory bird species and the SPA areas are of international importance for these migratory birds.

The EU Habitats Directive (92/43/EEC) requires that Member States designate and ensure that particular protection is given to sites (Special Areas of Conservation) which are made up of or support particular habitats and species listed in annexes to this Directive.

Articles 6(3) and 6(4) of this Directive also call for the undertaking of an Appropriate Assessment for plans and projects not directly connected with or necessary to the management of, but which are likely to have a significant effect on any European designated sites (i.e. SACs and SPAs).

The Water Framework Directive (WFD) (2000/60/EC), which came into force in December 2000, establishes a framework for community action in the field of water policy. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003). The WFD rationalises and updates existing legislation and provides for water management on the basis of River Basin Districts (RBDs). RBDs are essentially administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD. The aim of the WFD is to ensure that waters achieve at least good status by 2027 and that status does not deteriorate in any waters.

Appropriate Assessment and the Habitats Directive

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as

Natura 2000. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

Article 6(4) deals with the steps that should be taken when it is determined, as a result of appropriate assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to 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."

<u>The Appropriate Assessment Process</u>

The aim of Appropriate Assessment is to assess the implications of a proposal in respect of a designated site's conservation objectives.

The 'Appropriate Assessment' itself is an assessment which must be carried out by the competent authority which confirms whether the plan or project in combination with other plans and projects will have an adverse impact on the integrity of a European site.

Screening for Appropriate Assessment shall be carried out by the competent authority as set out in Section 177U(1) and (2) of the Planning and Development Act 2000 (as amended) as follows:

(1) A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development 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.

(2) A competent authority shall carry out a screening for appropriate assessment under subsection (1) before—

(a) a Land use plan is made including, where appropriate, before a decision on appeal in relation to a draft strategic development zone is made, or

(b) consent for a proposed development is given.'

The competent authority shall determine that an Appropriate Assessment is not required if it can be excluded, that the proposed development, individually or in combination with other plans or project will have a significant effect on a European site.

Where the competent authority cannot exclude the potential for a significant effect on a European site, an Appropriate Assessment shall be deemed required.

Where an Appropriate Assessment is required, the conclusions of the Appropriate Assessment Report (Natura Impact Statement (NIS)) should enable the competent authority to ascertain whether the plan or proposed development would adversely affect the integrity of the European site. If adverse impacts on the integrity of a European site cannot be avoided, then mitigation measures should be applied during the appropriate assessment process to the point where no adverse impacts on the site remain. Under the terms of the Habitats Directive consent can only be granted for a project if, as a result of the appropriate assessment either (a) it is concluded that the integrity of any European sites will not be adversely affected, or (b) after mitigation, where adverse impacts cannot be excluded, there

is shown to be an absence of alternative solutions, and there exists imperative reasons of overriding public interest for the project should go ahead.

Section 177(V) of the Planning and Development Act 2000 (as amended) outlines that the competent authority shall carry out the Appropriate Assessment, taking into account the Natura Impact Statement (amongst any other additional or supplemental information). A determination shall then be made by the competent authority in line with the requirements of Article 6(3) of the Habitats Directive as to whether the plan or proposed development would adversely affect the integrity of a European site, prior to consent being given.

2 METHODOLOGY

2.1 APPROPRIATE ASSESSMENT

This NIS has been prepared with reference to the following:

- European Commission (2018). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.
- European Commission (2027). 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.
- European Commission (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.
- European Commission (2007). Clarification of the Concepts of: Alternative Solution, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.
- Department of Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.

The EC Guidance sets out a number of principles as to how to approach decision making during the process. The primary one is 'the precautionary principle' which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty.

When considering the precautionary principle, the emphasis for assessment should be on objectively demonstrating with supporting evidence that:

- There will be no significant effects on a Natura 2000 site;
- There will be no adverse effects on the integrity of a Natura 2000 site;
- There is an absence of alternatives to the project or plan that is likely to have an adverse effect to the integrity of a Natura 2000 site; and
- There are compensation measures that maintain or enhance the overall coherence of Natura 2000.

This translates into a four stage process to assess the impacts, on a designated site or species, of a policy or proposal.

The EC Guidance states that "each stage determines whether a further stage in the process is required". Consequently, the Council may not need to proceed through all four stages in undertaking the Appropriate Assessment.

The four-stage process is:

Stage 1: Screening – The process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether or not these impacts are likely to be significant;

Stage 2: Appropriate Assessment – The consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts;

Stage 3: Assessment of Alternative Solutions – The process which examines alternative ways of achieving objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site;

Stage 4: **Assessment where no alternative solutions exist and where adverse impacts remain –** An assessment of the compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

In complying with the obligations set out in Articles 6(3) and following the guidelines described above, this screening statement has been structured as a stage by stage approach as follows:

- Description of the proposed project;
- Identification of the Natura 2000 sites close to the proposed development;
- Identification and description of any individual and cumulative impacts on the Natura 2000 sites likely to result from the project;
- Assessment of the significance of the impacts identified above on site integrity. Exclusion of sites where it can be objectively concluded that there will be no significant effects;
- Description of proven mitigation measures.

2.2 STATEMENT OF COMPETENCY

This NIS was carried out by Noreen McLoughlin, BA, MSc, MCIEEM. Noreen has an honours degree in Zoology and an MSc in Freshwater Ecology from Trinity College, Dublin and she has been a full member of the Chartered Institute of Ecology and Environmental Management for over 18 years. Noreen has over 20 years' experience as a professional ecologist in Ireland.

2.3 DESK STUDIES & CONSULTATION

Information on the site and the area of the proposed development was studied prior to the completion of this statement. The following data sources were accessed in order to complete a thorough examination of potential impacts:

- National Parks and Wildlife Service - aerial photographs and maps of designated sites, information on habitats and species within these sites and information on protected plant or animal species; conservation objectives, site synopses and standard data forms for relevant designated sites.
- Environmental Protection Agency (EPA)- Information pertaining to water quality.
- National Biodiversity Data Centre (NBDC) – Information pertaining to protected plant and animal species within the study area.
- Dr Designs Architectural Technology and Construction Management – Information regarding the proposed development.
- Sligo County Council – Information on planning history in the area.

2.4 ASSESSMENT METHODOLOGY

The proposed development was assessed to identify its potential ecological impacts and from this, the Zone of Influence (ZoI) of the proposed development was defined. Based on the potential impacts and their ZoI, the Natura 2000 sites potentially at risk from direct, indirect or in-combination impacts were identified. The assessment considered all potential impact sources and pathways connecting the proposed development to Natura 2000 sites, in view of the conservation objectives supporting the favourable conservation condition of the site's Qualifying Interests (QIs) or Special Conservation Interests (SCIs).

The conservation objectives relating to each Natura 2000 site and its QIs/SCIs are cited generally for SACs as "to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or Annex II species for which the SAC has been selected", and for SPAs "to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA".

As defined in the Habitat's Directive, the favourable conservation status of a habitat is achieved when:

- Its natural range and area it covers within that range is stable or increasing;
- 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;

The favourable conservation status of a species is achieved when:

- The 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;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future;
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Where site-specific conservation objectives (SSCOs) have been prepared for a European site, these include a series of specific attributes and targets against which effects on conservation condition, or integrity, can be measured. Where potential significant effects are identified, then these SSCOs should be considered in detail.

3 SCREENING

3.1 DEVELOPMENT DESCRIPTION

Kyle Taheny and Claire Connenlan have indicated their intention to shortly apply to Sligo County Council for planning permission for a residential development on a 0.2ha site in Union, Collooney, Co. Sligo. Planning permission is being sought here for the construction of a new dwelling house and a detached garage. Planning permission also pertains to the installation of a waste water treatment plant and all associated site works.

An extract from the planning drawings is shown in Figure 1.

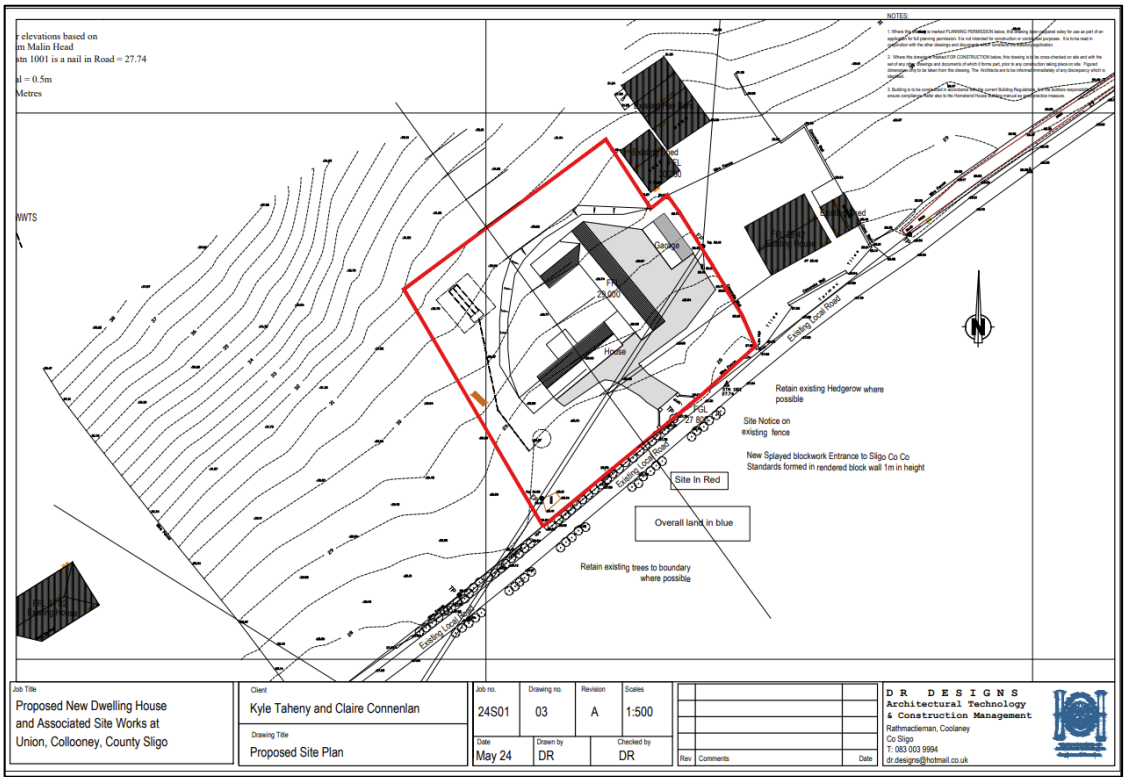


Figure 1 – Extract from Planning Drawings Submitted (Dr Designs)

Wastewater Treatment

The application site is situated within a poor aquifer (Pi) with high vulnerability. It has an R1 groundwater protection response, which means that the proposed risk is acceptable subject to normal good practice. The site characterisation form pertaining to this development (as prepared by Coyle Environmental) has recommended that a tertiary treatment system and infiltration area will be suitable for the conditions on the site. This system will be constructed and operated in accordance with the EPA 2021 Guidelines. It will discharge to groundwater, which in this area is likely to flow in a north-westerly direction.

Surface Water Treatment

Surface water from the site will be attenuated on site by the use of a soak pit.

3.2 SITE LOCATION AND SURROUNDING ENVIRONMENT

The application site is 0.4 hectares and it is located in a rural area in the townland of Union. The site will be accessed via the creation of a new entrance that is just north off a local, third-class road / cul-de-sac. The site is 1.5km north-east of Collooney and 1.6km north-west of Ballygawley. The site is bounded to the south by the local road, to the east by a separate residential site and to the north and west by agricultural land. The site is 1.3km east of the N4 corridor.

The land-use surrounding the site predominantly consists of low intensity agricultural lands and woodlands and the dominant habitats surrounding the site include improved and semi-improved agricultural grasslands, along with the habitats associated with Union Wood which includes oak woodlands, scrub and heath. Other habitats represented in the area include wet grasslands, coniferous woodlands, hedgerows and treelines. The site is close to the Unshin River and its riparian habitats, which include wet grasslands, marsh habitats and treelines.

Site location maps are shown in Figures 2 and 3, whilst an aerial photograph of the site and its surrounding habitats is shown in Figure 4.

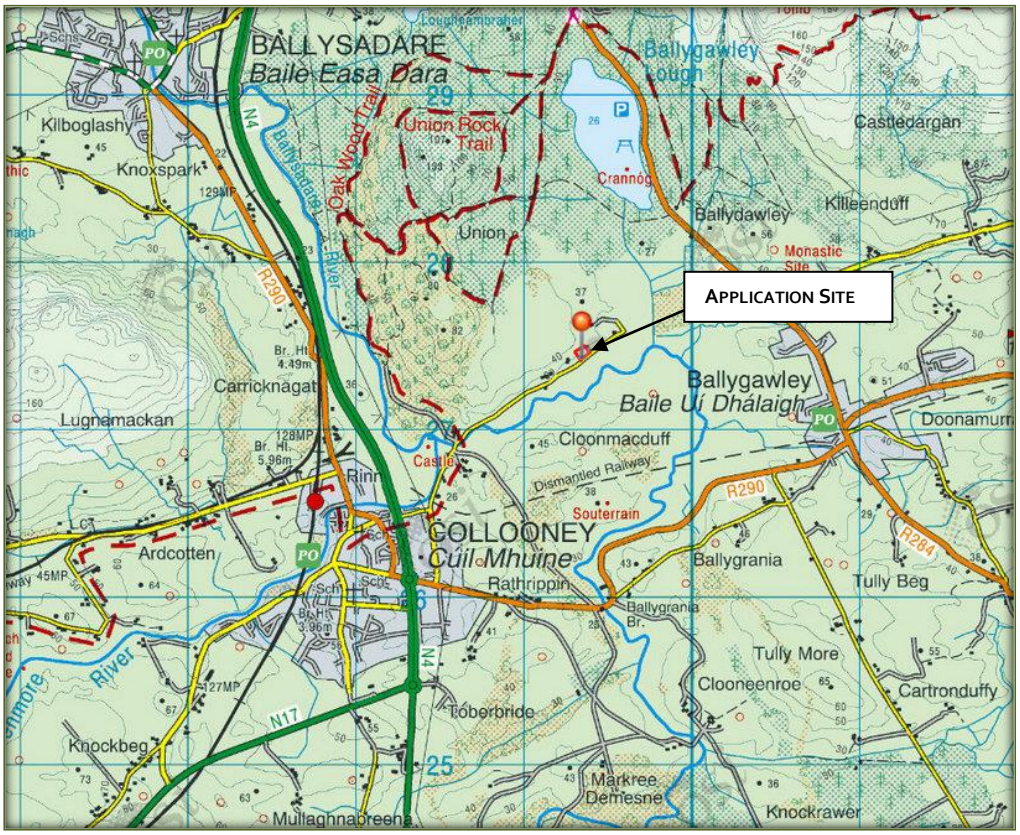


Figure 2 – Site Location Map

Figure 3 – OSI Map Showing Location of the Application Site (Outlined in Red)

HABITATS AND NOTABLE SPECIES

The site does not lie within any area that has been designated for nature conservation purposes. The site encompasses a field that was previously used for agricultural purposes and the dominant habitat within it is Improved Agricultural Grasslands. The south-eastern (roadside) site boundary consists of a fence and a grassy verge. The north-eastern site boundary consists of a block wall. The remaining perimeters remain undefined by any natural feature. There are no features of biodiversity value within the site itself.

The Unshin River flows through a field that lies to the south-east of the site. The habitats associated with the river include depositing low land river, marsh and wet grasslands.

WATER FEATURES AND QUALITY

The application site is located within the Sligo Bay and Drowse Hydrometric Area (35) and Catchment (35), the Owenmore Sub-Catchment (030) and the Unshin Sub-Basin (050). There are no watercourses within the site, however the Unshin River is 100m south-east of the site. The Unshin River flows close to the site in a south-westerly direction towards its confluence with the Ballysodare River at a point approximately 1km south-west of the application site.

The Ballysadare River flows north for a short distance until it enters Ballysadare Bay, at a point 3.6km north-west of the application site.

The EPA have defined the ecological status of the Unshin river at points close to the application site as high ecological status. In 2023, a Q4-5 was recorded from the Unshin River just upstream of its confluence with the Ballysadare River.

The Ballysadare River is noted to be of moderate ecological status at its confluence with the Unshin River and for the remainer of its course towards the bay. Ballysadare Bay is also noted to be of moderate ecological status. Under the requirements of the Water Framework Directive, all watercourses are obliged to meet at least good ecological status.

The site is within the Collooney Groundwater Body and the current status of this waterbody is noted to be good. Within the application site itself, groundwater vulnerability is noted to be high.

Figure 4 – Aerial Photograph of the Site (Outlined in Red) and its Surrounding Habitats © Google

3.3 NATURA 2000 SITES IDENTIFIED

In accordance with the guidelines issued by the Department of the Environment and Local Government, a list of Natura 2000 sites within 15km of the proposed development have been identified and described according to their site synopses, qualifying interests and conservation objectives. In addition, any other sites further than this, but potentially within its zone of interest were also considered. The zone of impact may be determined by an assessment of the connectivity between the application site and the designated areas by virtue of hydrological connectivity, atmospheric emissions, flight paths, ecological corridors etc.

For significant effects to arise, there must be a potential impact facilitated by having a *source*, i.e., the proposed development and activities arising out of its construction or operation, a *receptor*, i.e., the European site and its qualifying interests and a subsequent *pathway* or *connectivity* between the source and receptor, e.g., a water course. The likelihood for significant effects on the European site will largely depend on the characteristics of the source (e.g., nature and scale of the construction works), the characteristics of the existing pathway and the characteristics of the receptor, e.g., the sensitivities of the Qualifying Interests (habitats or species) to changes in water quality.

There are thirteen Natura 2000 designated sites within 15km of the application site. These designated areas and their closest points to the application site are summarised in Table 1 and a map and an aerial photograph showing their locations relative to the application site are shown in Figures 5 and 6. A full description of all these sites can be read on the website of the National Parks and Wildlife Service (npws.ie).

European Site	Distance	Qualifying Interests	Screened In / Out
Unshin River SAC 001898	Adjacent	• Otter (*Lutra lutra*) • Salmon (*Salmo salar*) • Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* • Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) • Molinia meadows on	*Screened In - Having regard to the proximity and potential hydrological connectivity of this SAC to the application site, then potential significant effects upon this SAC and its QIs cannot be ruled out and will be considered further.*

		calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	
Union Wood SAC 000638	1km south-east	• Old sessile oak woods with Ilex and Blechnum in the British Isles	*Screened Out - No significant effects upon this SAC are anticipated given the separation distances involved and the fact that there is no direct hydrological connectivity. There will be no significant effects upon the QI of this site.*
Ballysadare Bay SAC 000622	3.4km north-west	• Estuaries • Mudflats and sandflats not covered by seawater at low tide • Embryonic shifting dunes • Shifting dunes along the shoreline with *Ammophila arenaria* • Fixed coastal dunes with herbaceous vegetation • Humid dune slacks • *Vertigo angustior (*Narrow-mouthed Whorl Snail) • *Phoca vitulina* (Common Seal)	*Screened Out - No significant effects upon this SAC are anticipated given the separation distances involved and the fact that there is no direct hydrological connectivity. There will be no significant effects upon the QI of this site.*
Ballysadare Bay SPA 004129	3.4km north-west	• Light-bellied Brent Goose (*Branta bernicla hrota)* • Grey Plover *(Pluvialis squatarola)* • Dunlin (*Calidris alpina*) • Bar-tailed Godwit *(Limosa lapponica)* • Redshank (*Tringa totanus)* • Wetland and Waterbirds	*Screened Out - No significant effects upon this SPA are anticipated given the separation distances involved and the fact that there is no direct hydrological connectivity. There will be no significant effects upon the QI of this site.*
Lough Gill SAC 001976	4.9km north	• Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation • Old sessile oak woods with Ilex and *Blechnum* in the British Isles • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* • *Austropotamobius pallipes* (White-clawed Crayfish) • *Petromyzon marinus* (Sea Lamprey) • *Lampetra planeri* (Brook Lamprey) • *Lampetra fluviatilis* (River Lamprey) • *Salmo salar* (Salmon) • *Lutra lutra* (Otter)	*Screened Out - This SAC is in a separate catchment to the application site. There is no hydrological connectivity and therefore significant effects upon this site will not arise.*
Cummeen Strand SPA 004035	8.9km north	• Light-bellied Brent Goose (*Branta bernicla hrota)*	*Screened Out - This SPA is in a separate catchment to the*

		• Oystercatcher (*Haematopus ostralegus)* • Redshank (*Tringa totanus)* • Wetland and Waterbirds	*application site. There is no hydrological connectivity and therefore significant effects upon this site will not arise.*
Cummeen Strand/Drumcliff Bay SAC 000627	9.2km north	• Estuaries • Mudflats and sandflats not covered by seawater at low tide • Embryonic shifting dunes • Shifting dunes along the shoreline with *Ammophila arenaria* • Fixed coastal dunes with herbaceous vegetation • *Juniperus communis* formations on heaths or calcareous grasslands • Petrifying springs with tufa formation (Cratoneurion) • Vertigo angustior (Narrow-mouthed Whorl Snail) • *Petromyzon marinus* (Sea Lamprey) • *Lampetra fluviatilis* (River Lamprey) • *Phoca vitulina* (Common Seal)	*Screened Out - This SAC is in a separate catchment to the application site. There is no hydrological connectivity and therefore significant effects upon this site will not arise.*
Templehouse And Cloonacleigha Loughs SAC 000636	10.7km south-west	• Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. • Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation	*Screened Out - This SAC is in a separate catchment to the application site. There is no hydrological connectivity and therefore significant effects upon this site will not arise.*
Drumcliff Bay SPA 004013	13.5km north	• Sanderling (*Calidris alba*) • Bar-tailed Godwit (*Limosa lapponica*) • Wetland and Waterbirds	*Screened Out - This SPA is in a separate catchment to the application site. There is no hydrological connectivity and therefore significant effects upon this site will not arise.*
Sligo/Leitrim Uplands SPA 004187	13.6km north	• Peregrine *(Falco peregrinus)* • Chough (*Pyrrhocorax pyrrhocorax)*	*Screened Out - This SPA is in a separate catchment to the application site. There is no hydrological connectivity and therefore significant effects upon this site will not arise.*
Lough Arrow SAC 001673	13.8km south-east	• Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.	*Screened Out - This SAC is hydrologically upstream of any influence from the application site and significant effects will not arise.*
Lough Arrow SPA 004050	13.8km south-east	• Little grebe *(Tachybaptus ruficollis)* • Tufted duck *Aythya fuligula* • Wetlands & Waterbirds	*Screened Out - This SPA is hydrologically upstream of any influence from the application site and significant effects will not arise.*

Bricklieve Mountains and Keishcorran SAC 001656	13.8km south	• Turloughs • Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) • Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*) • Calcareous and calc-shist screes of the montane to alpine levels (*Thlaspietea rotundifolii*) • Marsh Fritillary *Euphydryas aurinia* • White-clawed Crayfish *Austropotamobius pallipes*	*Screened Out - No significant effects upon this SAC are anticipated given the separation distances involved and the fact that there is no direct hydrological connectivity. There will be no significant effects upon the QI of this site.*

Table 1 – Designated Sites within 15km of the Proposed Development

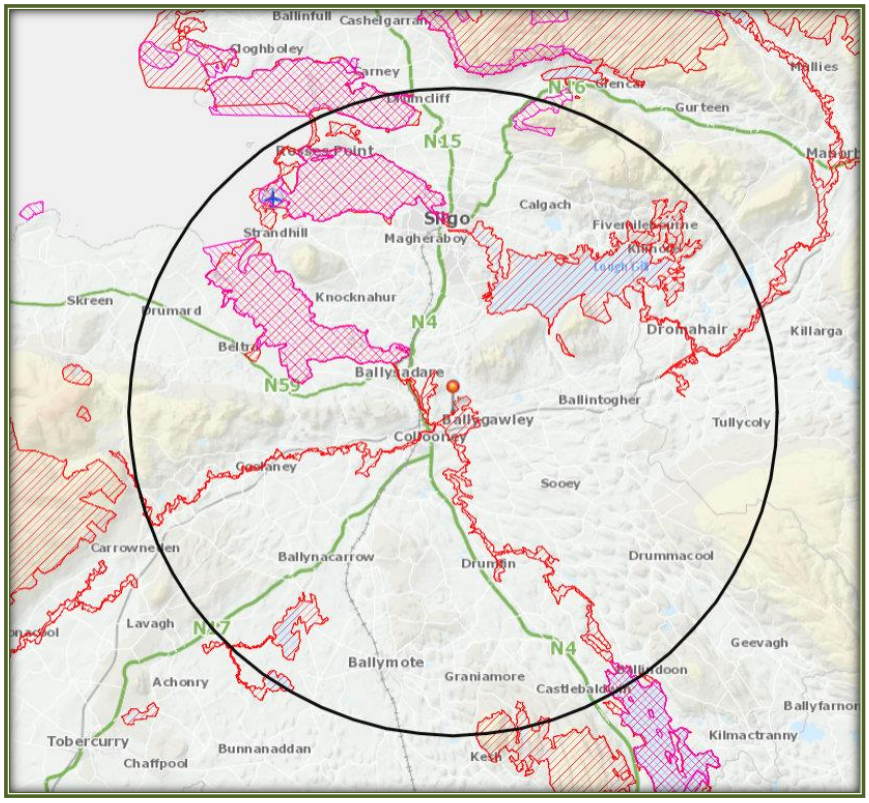


Figure 5 – The Application Site (Pinned) in relation to Natura 2000 Sites within 15km

Figure 6 – The Application Site (Outlined in Red) in relation to the River Unshin SAC (Red Hatching). ***OSI map reproduced under License.***

3.4 IDENTIFICATION OF POTENTIAL IMPACTS

The application site is in close proximity to the Unshin River SAC. Taking a conservative approach, in a worst-case scenario and in the absence of mitigation, an accidental pollution event of a sufficient magnitude during construction or operation, either alone of in-combination with other pollution sources, could potentially affect the water quality in the Unshin River to an extent that subsequently undermines the conservation objectives of the Unshin River SAC. A reduction in either surface or groundwater quality locally has the potential to affect the aquatic habitats and natural conditions that are required to maintain or achieve the specific attributes and targets of the qualifying interests and the conservation objectives that have been defined for these qualifying interest.

Therefore, following an evaluation of the relevant information including the characteristics of the proposed development and the likelihood of significant effects on the sites and with regards to the tenets of the precautionary principal, it is considered in the opinion of this author that it is not possible to exclude, on the basis of objective information, that the proposed development, either individually or in combination with other plans or projects, will have a likely significant effect on the above European sites.

Only those features of the development that have the potential to affect the integrity and conservation objectives of the identified Natura sites and protected species have been considered. A number of factors were examined at this stage and dismissed or carried forward for Appropriate Assessment as relevant. The following areas were examined in relation to potential impacts from the proposed development on the Natura 2000 sites identified:

1. Deterioration of water quality in designated areas identified arising from pollution to surface or groundwater during construction and operation.

2. Deterioration in water quality in designated areas arising from pollution during the operation of the proposed development.

3. Habitat loss and fragmentation.

4. Cumulative impacts with other proposed/existing developments.

3.5 ASSESSMENT OF SIGNIFICANCE

This section considers the list of sites identified in Section 3.3. It can be considered that all sites, with the exception of the Unshin River SAC can be excluded from the remainder of the Appropriate Assessment process. This is based on their distance from the proposed development and the fact that they are outside of the Zone of Influence of these sites and that no direct or indirect significant effects are likely to arise. The remaining concerns will therefore focus upon the protected habitats and species of the Unshin River SAC.

3.6 SCREENING CONCLUSIONS

The proposed development is not directly connected with or necessary to the nature conservation management of the Unshin River SAC. Therefore, following consideration of the location of these Natura 2000 sites in relation to the proposed development at Union, and the potential impacts that may occur, this project must proceed to the next stage of Appropriate Assessment, namely the Natura Impact Assessment.

4 STAGE II – APPROPRIATE ASSESSMENT

4.1 INTRODUCTION

The main objective of this stage (Stage 2, Natura Impact Statement) in the Appropriate Assessment process is to determine whether the proposed development at Union (either alone or in combination with other plans, programmes and projects) will result in significant adverse effects to the integrity of the the Unshin River SAC with respect to this sites structures, species, functions and/or conservation objectives. This stage also outlines the mitigation measures that should be taken in order to avoid any negative impacts of this application, should it receive consent.

In this section, the Natura 2000 sites identified in the previous section will be described in greater detail in terms of their site characteristics and conservation objectives.

SITE SPECIFIC CONSERVATION OBJECTIVES

For the Natura 2000 sites that were screened in, if Site Specific Conservation Objectives were available these were reviewed in light of the proposed development and the potential impacts that might occur. These Site Specific Conservation Objectives (SSCOs) aim to define the favourable conservation condition for the particular habitats or species at that site. They outline certain attributes (e.g., distribution, population structure, water quality) for different species and habitats with targets, which define favourable condition for a habitat or species at a particular site. The maintenance of habitats and species within the Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at national level. Where available, these SSCOs can be downloaded on the NPWS website. Any potential threats to the attributes and targets as defined in these SSCOs were assessed and where necessary, mitigated for.

For each Qualifying Interest of the SAC, the specific conservation objective is either to *maintain or restore* the favourable conservation condition of that interest, by defining a list of attributes and targets which are indicative of the conservation status of that interest. For habitats, the main attributes include habitat area; habitat and community distribution; vegetation structure/composition and physical structure. The main target is to ensure that the habitats are stable or increasing in area and that the other attributes are maintained or restored. For the Annex II species of the SAC, the main attributes are population trend and distribution, whilst the targets aim to ensure that the long term population trends of the species are stable or increasing and that there is no significant decrease in the numbers or

range of areas used by the species, other than that occurring from natural patterns of variation.

4.2 NATURA 2000 SITES IDENTIFIED

RIVER UNSHIN SAC 001898

NPWS Site Summary

The Unshin River has a spring-fed lake, Lough Arrow, as its source and flows north-westwards for some 24 km to reach the sea at Collooney Bay. The river supports a rich aquatic and emergent flora and runs beside or through a wide variety of habitats. The site also includes the Collooney and Owenboy/Owenbeg rivers. The whole site is underlain by Carboniferous limestone.

The Unshin River is an excellent example of a pristine, unmanaged, undrained lowland limestone river and is extremely important as it represents one of only four remaining undrained limestone rivers in Ireland. Such rivers as this are otherwise almost unknown in Europe. It is unpolluted for almost its entire length and supports a species-rich, diverse aquatic flora, several important bird species, fish and several rare riverbank plant species, including Poa palustris. Of particular importance is the population of *Salmo salar*. The site is used by *Lutra lutra*. A good diversity of adjacent habitats is found along its length, including alluvial woodland.

The full NPWS synopsis for this site can be read in Appendix II.

Site Specific Conservation Objectives

Site specific conservation objectives for this site were prepared in 2021 (NPWS, 2021[1]). These SSCOs are outlined in Tables 2 – 7.

Water Courses of Plain to Montaine Levels (3260)

The SSCO for this habitat is to *maintain* its favourable conservation condition which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Km	Area stable or increasing, subject to natural processes
Habitat Distribution	Occurrence	No decline, subject to natural processes
Hydrological regime: river flow	m/s	Maintain appropriate hydrological regimes
Hydrological regime: groundwater discharge	m/s	Maintain appropriate hydrological regimes
Substratum composition: particle size range	Mm	Maintain appropriate substratum particle size range, quality and quantity, subject to natural processes.
Water Quality	Various	Maintain/Restore appropriate water quality to support the

[1] *NPWS (2021) Conservation Objectives: River Unshin SAC. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.*

		natural structure and functioning habitat.
Typical species	Occurrence	Typical species of the relevant habitat sub-types should be present and in good condition.
Floodplain connectivity: area	Hectares	Maintain/Restore the area of active floodplain at and upstream of the habitat.
Riparian habitat: area	Ha	Maintain the area and condition of fringing habitats necessary to support the habitats and its sub-types.

Table 2 – Water Courses of Plain to Montaine Levels

Potential Significant Effects

Potential impacts upon this QI have been considered. This habitat potentially occurs along the River Unshin at points close to the application site. In the absence of mitigation, significant effects upon this QI cannot be ruled out. Any deterioration in surface or groundwater quality locally arising from pollution caused during the construction and operation of the proposed development could affect the attributes, measures and targets that have been set for the maintenance of this habitat at good status within the SAC.

Semi-Natural Dry Grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) [6210]

The SSCO for this habitat is to *restore* its favourable conservation condition which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat Area	Hectares	The area should be stable or increasing, subject to natural processes.
Habitat Distribution	Occurrence	No decline, subject to natural processes.
Vegetation composition: positive indicator species	Number at a representative number of 2m x 2m monitoring stops; within 20m surrounding area of monitoring stops	At least 7 positive indicator species present in monitoring stop or, if 5–6 present in stop, additional species within 20m of stop; this includes at least two 'high quality' positive indicator species present in stop or within 20m of stop
Vegetation composition: negative indicator species %	Percentage cover at a representative number of 2m x 2m monitoring stops	Negative indicator species collectively not more than 20% cover, with cover of an individual species not more than 10
Vegetation composition: non-native species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of non-native species not more than 1%
Vegetation composition: woody species and bracken	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of woody species (except certain listed species) and bracken (*Pteridium aquilinum*) not more than 5%
Vegetation structure: broadleaf herb:grass ratio	Percentage at a representative number of 2m x 2m monitoring stops	Broadleaf herb component of vegetation between 40% and 90%
Vegetation structure: sward height	Percentage at a representative number of 2m x 2m monitoring stops	At least 30% of sward between 5cm and 40cm tall
Vegetation structure: litter	Percentage cover at a representative	Litter cover not more than 25%

	number of 2m x 2m monitoring stops	
Physical structure: bare soil	Percentage cover at a representative number of 2m x 2m monitoring stops	Not more than 10% bare soil
Physical structure: grazing or disturbance	Area in local vicinity of a representative number of monitoring stops	Area of the habitat showing signs of serious grazing or disturbance less than 20m²

Table 3 – SSCOs for Semi-Natural Dry Grasslands

Potential Significant Effects

Potential impacts upon this QI have been considered. Map 3 of the SSCO document maps pockets of this habitat in lands close to the application site. The grassland habitats across the road from the application site may contain elements of this QI. Therefore, significant effects upon this QI cannot be ruled out. See Figure 7 for location of this QI relative to the application site.

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

The SSCO for this habitat is to *restore* its favourable conservation condition which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat Area	Hectares	The area should be stable or increasing, subject to natural processes.
Habitat Distribution	Occurrence	No decline, subject to natural processes.
Vegetation composition: positive indicator species	Number at a representative number of 2m x 2m monitoring stops; within 20m surrounding area of monitoring stops	At least 7 positive indicator species present in monitoring stop or, if 5–6 present in stop, additional species within 20m of stop; this includes at least two 'high quality' positive indicator species present in stop or within 20m of stop
Vegetation composition: negative indicator species%	Percentage cover at a representative number of 2m x 2m monitoring stops	Negative indicator species collectively not more than 20% cover, with cover of an individual species not more than 10%
Vegetation composition: non-native species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of non-native species not more than 1%
Vegetation composition: moss species	Percentage cover at a representative number of 2m x 2m monitoring	Hair mosses (*Polytrichum* spp.) not more than 25% cover
Vegetation composition: woody species and bracken	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of woody species (except certain listed species) and bracken (*Pteridium aquilinum*) not more than 5%
Vegetation structure: broadleaf herb:grass ratio	Percentage at a representative number of 2m x 2m monitoring stops	Broadleaf herb component of vegetation between 40% and 90%

Vegetation structure: sward height	Percentage at a representative number of 2m x 2m monitoring stops	At least 30% of sward between 10cm and 80cm tall
Vegetation structure: litter	Percentage cover at a representative number of 2m x 2m monitoring stops	Litter cover not more than 25%
Physical structure: bare soil	Percentage cover at a representative number of 2m x 2m monitoring stops	Not more than 10% bare soil
Physical structure: grazing or disturbance	Area in local vicinity of a representative number of monitoring stops	Area of the habitat showing signs of serious grazing or disturbance less than 20m²

Table 4 – SSCOs for Molinia Meadows

Potential Significant Effects

Potential impacts upon this QI have been considered. Map 3 of the SSCO document maps pockets of this habitat in lands close to the application site. The grassland habitats across the road from the application site may contain elements of this QI. Therefore, significant effects upon this QI cannot be ruled out. See Figure 7 for location of this QI relative to the application site.

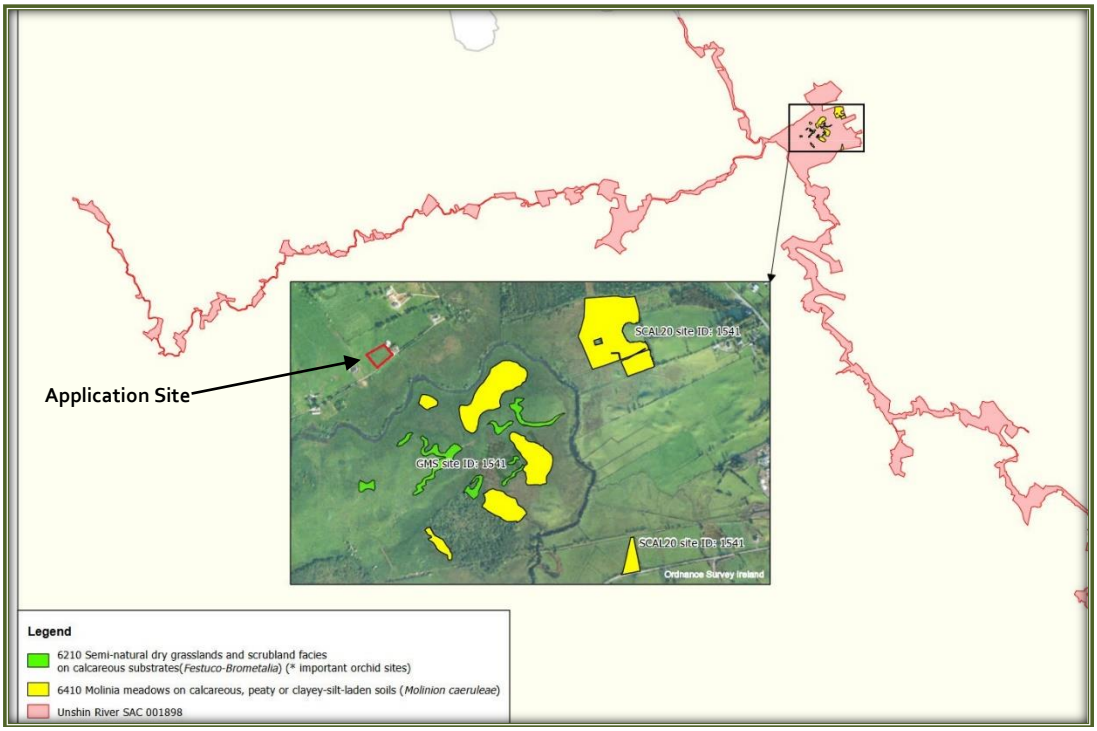


Figure 7 – Location of Semi-Natural Dry Grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) [6210] and Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] in Relation to the Application Site (Outlined in Red)

Alluvial Forests with *Alnus glutinosa* and *Fraxinus excelsior* 91E0

The SSCO for this habitat is to *restore* its favourable conservation condition which is generally defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Ha	Area stable increasing, subject to natural processes
Habitat distribution	Occurrence	No decline, subject to natural processes
Woodland Size	Ha	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size
Woodland Structure: cover and height	Percentage and Metres	Total canopy cover at least 30%; median canopy height at least 7m; native shrub layer cover 10-75%; native herb/dwarf shrub layer cover at least 20% and height at least 20cm; bryophyte cover at least 4%
Woodland Structure: Community Diversity and Extent	Ha	Maintain diversity and extent of community types
Woodland Structure: Natural Regeneration	Seedling: sapling:pole ratio	Seedlings, saplings and pole age-classes of target species for 91E0* woodlands and other native tree species occur in adequate proportions to ensure survival of woodland canopy
Hydrological Regime: Flooding Depth/Height of Water Table	Metres	Appropriate hydrological regime necessary for maintenance of alluvial vegetation
Woodland Structure: Dead Wood	Number per hectare	At least 19 stems/ha of dead wood of at least 20cm diameter
Woodland Structure: Veteran Trees	Number per hectare	No decline
Woodland Structure: Indicators of Local Distinctiveness	Occurrence' Population Size	No decline in distribution and, in the case of red listed and other rare or localised species, population size
Woodland structure: indicators of overgrazing	Occurrence	All five indicators of overgrazing absent
Vegetation Composition: Native Tree Cover	Percentage	No decline. Native tree cover at least 90% of canopy; target species cover at least 50% of canopy
Vegetation Composition: Typical Species	Occurrence	At least 1 target species for 91E0* woodlands present; at least 6 positive indicator species for 91E0* woodlands present
Vegetation Composition: Negative Indicator Species	Occurrence	Negative indicator species cover not greater than 10%; regeneration of negative indicator species absent
Vegetation composition: problematic native species	Percentage	Cover of common nettle (*Urtica dioica*) less than 75%

Table 5 – SSCOs for Alluvial Forests with *Alnus glutinosa* and *Fraxinus excelsior*

Potential Significant Effects

Potential effects upon this QI have been considered. Map 4 of the SSCO document shows the location of this QI within the SAC. All mapped locations are upstream of Collooney and therefore outside of the Zone of Influence of the application site. Significant effects upon this habitat will not arise.

Salmon (1106)

The SSCO for this species is to *maintain* its favourable conservation condition which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Distribution: extent of anadromy	% of river accessible	100% of river channels down to second order accessible from estuary
Adult spawning fish	Number	Conservation Limit (CL) for each system consistently exceeded
Salmon fry abundance	No of fry / 5 mins electrofishing	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry / 5 minute sampling
Out-migrating smolt abundance	Number	No significant decline
Number and distribution of redds	Number and Occurrence	No decline in number and distribution of spawning redds due to anthropogenic causes
Water quality	EPA Q Value	At least Q4 at all sites sampled by the EPA.

Table 6 – SSCOs for Salmon

Potential Significant Effects

The Unshin River and its tributaries are an important habitat for the salmon. The requirements of salmon depend on their life stage but clean, unpolluted water is a requirement throughout the life cycle. They are very sensitive to changes in water quality and increases in sedimentation (<25 mg/L annual average). The main pressures and threats to this species come from agricultural intensification, run-off from agriculture, forestry and household waste waters and poaching.

Potential impacts and subsequent effects upon this species could arise due to a decrease in water quality in the Unshin River. These could arise due to pollution of surface or groundwater during construction. Run-off from the site could be contaminated with silt, cement, hydrocarbons or other chemicals.

Otter (1355)

The SSCO for this species is to *maintain* its favourable conservation condition which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Distribution	% positive survey sites	No Significant Decline
Extent of Terrestrial Habitats	Hectares	No significant decline. Area mapped and calculated as 124.68ha
Extent of Freshwater (River) Habitat	Km	No significant decline. Length mapped and calculated as 66.55km
Couching Sites and Holts	Number	No significant decline
Fish Biomass Available	Kg	No significant decline
Barriers to connectivity	Number	No significant increase

Table 7 – SSCOs for Otter

Potential Significant Effects

The otter occurs throughout the Unshin River system. The presence of this species is positively correlated with good water quality and deterioration of same will lead to impacts upon this species. Otters have two basic requirements – aquatic prey and safe refuges where they can rest. In freshwater areas, the diet of the otter consists of a variety of fish from sticklebacks to salmon and eels, whilst crayfish and frog availability can also be important. Impacts that reduce the quality of, or cause disturbance to, their terrestrial or aquatic habitats are likely to affect otters. The main threats to otters in Ireland are thought to be: (1) habitat destruction, including river drainage and the clearance of bank-side vegetation; (2) pollution, particularly organic pollution resulting in fish kills; (3) disturbance of habitat due to recreational activities, and (4) accidental deaths (NPWS, 2009).

Records for this species exist from the Unshin River and therefore this species occurs within the Zone of Influence of the application site. In Ireland, the territory of female otters in mesotrophic rivers is approximately 7.5 +/- 1.5km in length (Ó Néill, L., 2008), whilst the territories of males otters in mesotrophic and oligotrophic rivers is approximately 13.2 +/- 5.3km in length, with a high degree of variability as territorial males respond quickly to social perturbation.

Potential impacts and subsequent effects upon this species could arise due to a decrease in water quality in the Unshin River. These could arise due to pollution of surface or groundwater during construction. Run-off from the site could be contaminated with silt, cement, hydrocarbons or other chemicals.

Inadequate treatment of surface water run-off during operation could also lead to deteriorations in water quality during the operation of the site.

4.3 SUMMARY OF POTENTIAL EFFECTS

INTRODUCTION

The identification of potential impacts and the assessment of their significance typically requires the identification of the type and magnitude of the impacts. For example, will the impacts be short term or long term, direct, indirect or cumulative and will they occur during construction or operation. This section will establish whether the impacts of the proposed development at Union that were identified in the previous section, are likely to occur and whether or not they are significant. These potential impacts will be examined with respect to the conservation objectives of the Natura 2000 site identified.

In the screening section of this report, the following possible future impacts on the Unshin River SAC were listed. These concerns are again listed below and they will be dealt with in more detail in this section.

1. Deterioration of water quality in designated areas identified arising from pollution to surface or groundwater during construction and operation.

2. Deterioration in water quality in designated areas arising from pollution during the operation of the proposed development.

3. Habitat Loss and Fragmentation

4. Cumulative impacts with other proposed/existing developments.

CONSTRUCTIONAL IMPACTS

Deterioration in Water Quality in Natura 2000 Sites During Site Preparation/Construction

Site preparation and the construction of the proposed development will involve the excavation of soil, the movement of extensive volumes of earth and the pouring of concrete for foundations and other hard surfaces. These works will take place on a site that is approximately 100m from the River Unshin SAC. If appropriate mitigation measures are not taken during construction of the proposed development, then there is the possibility that both surface water quality and groundwater quality could be impacted upon from run off containing silt, soil, hydrocarbons or cement. Run-off could be mobilised directly to the Unshin River or it could be mobilised to local surface water drains that lead to this river. In addition, groundwater vulnerability in the site is high, and groundwater quality can impact upon surface water quality as these two resources mix at the hyporheic zone, which is the region just under a river or stream bed where there is a mixing of shallow ground water and surface water.

Therefore, as there is a potential risk of direct and indirect impacts arising from the site preparation and construction of the proposed development, appropriate mitigation will be required to maintain the water quality within the Unshin River SAC.

Habitat Loss and Fragmentation

The construction works will occur in a site where the dominant habitat is agricultural grassland. This habitat is of no ecological value. However, works will generate a significant amount of topsoil and sub-soil arising from the excavation works. If this material is removed from site and placed on designated lands outside the site in areas of conservation value such

as the protected grassland habitats along the River Unshin, it could lead to habitat loss and fragmentation.

Habitat loss and fragmentation in sensitive areas of biodiversity value within the SACs could also arise due to the introduction and spread of non-native or invasive species during the landscaping of the site.

OPERATIONAL IMPACTS

Deterioration in Water Quality in the Natura 2000 sites Post Construction / Operation

Negative impacts upon water quality locally arising from the operation of this proposed development have also been considered. The most likely source of pollution during the operation of the development is oil contaminated surface water run-off or polluted run-off arising from the in-adequate management of the new treatment plant and percolation area. This may have a negative impact upon local groundwater resources. Groundwater quality can impact upon surface water quality as these two resources mix at the hyporheic zone, which is the region just under a river or stream bed where there is a mixing of shallow ground water and surface water. Mitigation measures to prevent surface water run-off from contaminating the local watercourses will need to be undertaken.

POTENTIAL IN-COMBINATION EFFECTS

This section of the NIS examines whether any other plans or projects have the potential to act cumulatively or in-combination with the proposed development to adversely affect the integrity of the Natura 2000 sites identified, i.e., Unshin River SAC.

The proposed development site is situated within the Owenmore sub-catchment. Therefore, any national, regional or local land use plans, along with any existing or proposed projects, further upstream in the catchment, or in the same groundwater body, have the potential to affect water quality in the Owenmore catchment and therefore also have the potential to act in-combination with the proposed development to affect the above European sites.

Any plan or existing/proposed project that could potentially affect the Natura 2000 sites above in-combination with the proposed development must adhere to the overarching environmental protective policies and objectives of the relevant land use plan. These policies and objectives will ensure the protection of Natura 2000 sites and will include the requirement for any future project to undergo Screening for Appropriate Assessment and/or Appropriate Assessment.

Sligo County Development Plan

Planning policy at the local level is provided by the Sligo County Development Plan 2017–2023. This plan contains a number of objectives and policies relevant to ecology, biodiversity and nature conservation. It also sets out the requirement for proposed developments to be subjected to Appropriate Assessment.

Future Plans / Other Projects

The Sligo County Council planning map tool was used to identify any current or future or projects which may potentially impact on Natura 2000 sites when considered in combination with the proposed development. In the preceding five years, many planning applications have been granted planning permission in the Union / Collooney area. The majority of these pertained to small scale domestic / commercial developments. Where necessary, these applications were screened for AA, or else full AA was deemed necessary and an NIS was submitted. The proposed development will have no significant effects upon any designated site when considered in combination with other developments that have been properly screened or where mitigation is required following AA.

Any future application in the area that has the potential to impact upon the River Unshin SAC will be subjected to Appropriate Assessment as required under Articles 6(3) of the Habitats Directive. This current development will have no cumulative impacts upon the SACs / SPAs identified when considered in combination with any other development that has been screened for no impacts themselves (Stage 1) or where potential impacts have been mitigated against (Stage 2 AA / NIS).

5 MITIGATION MEASURES

In order to avoid any reductions in water quality in the area surrounding the proposed development, a number of mitigation measures must be implemented and followed. These measures will protect the water quality and overall integrity of the River Unshin SAC. Measures have also been suggested that will help to protect the local biodiversity of the surrounding area and to ensure the protection of local wildlife. These are site specific measures and their implementation will ensure the protection of Natura 2000 habitats and species, and the local non-designated ecological receptors. The primary parties responsible for the implementation of these measures include the applicants and the construction team (site manager, site workers).

Pre-Construction and Construction

- Site preparation and construction must be confined to the development site only and should adhere to all standard best practice measures and the measures outlined in this NIS. Work areas should be kept to the minimum area required to carry out the proposed works and the area should be clearly marked out in advance of the proposed works.

- All works associated with the development should be confined to the proposed development site. No disturbances to any area of the Unshin River SAC should occur during the construction or operation of the development.

- Prior to the commencement of developments on site, the site engineer and the contractors should be made aware of the ecological sensitivity of the site and its surrounding habitats. They must be made familiar with the mitigation measures outlined in this NIS and if possible, a statement signed by them acknowledging these mitigation measures should be presented to the Local Authority along with the Notice of Commencement.

- During site clearance and construction, all run-off from the site towards the Unsin River must be intercepted. This will protect both habitats and species that are sensitive to pollution. Therefore, strict controls of erosion, sediment generation and other pollutants associated with the construction process should be implemented. Therefore, it is recommended that prior to the commencement of works, that a silt fence is erected around the entire construction site. The silt fence should be sturdy and constructed of a suitable geotextile membrane to ensure that water can pass through, but that silt will be retained. An interceptor trench will be required in front of this silt fence. The silt fence must be capable of preventing particles of 425µm from passing though.

- There must be no storage of machinery, soil or aggregate in the area between the construction works and the river.

- There must be no removal of the existing riparian vegetation in the area between the proposed construction works and the river.

Pollution Control

- There should be no discharges of contaminated waters to ground or surface waters from these developments, either during the construction or operation of the development. The control and management of hydrocarbons on site will be vital to prevent deteriorations in surface and groundwater quality locally. The following measures must be employed on site:

    - All fuels, lubricants and hydraulic fluids should be kept in secure bunded areas remotely from any watercourse. The bunded area should accommodate 110% of the total capacity of the containers within it. Containers should be properly secured to prevent unauthorised access and misuse.
    - Re-fuelling of vehicles must be carried out off site.
    - There must be minimal maintenance of construction vehicles or plant on site.
    - On-site diesel tanks should be double skinned to 110% of their capacity.
    - Containment stores should be used for refuelling of small plant such as consaws etc.
    - Fuel volumes stored on site should be minimised. Any fuel storage areas should be bunded appropriately for the fuel storage volume for the time period of the construction.
    - Machines used should be regularly inspected for leaks and fitness for purpose.
    - Any hazardous materials should be stored in secure bunded areas.
    - An effective spillage procedure should be put in place with all staff properly briefed.
    - Spill kits should be present in all plant machinery.
    - Oil booms and oil soakage pads should be kept on site to deal with any accidental spillage.
    - Waste oils and hydraulic fluids should be collected in leak-proof containers and removed from site for disposal and recycling

- Best practice concrete / aggregate management measures should be employed on site. These should include:

    - Best practice in bulk-liquid concrete management must be employed on site addressing pouring and handling, secure shuttering, adequate curing times etc.

- Stockpile areas for sands and gravel should be kept to a minimum size, well away from the river and / or local drains (minimum 10m).
- Where concrete shuttering is used, measures should be put in place to prevent against shutter failure and control storage, handling and disposal of shutter oils.
- Concrete trucks must not be washed down on site.
- Activities which result in the creation of cement dust should be controlled by dampening down the areas.
- Raw and uncured waste concrete should be disposed of by removal from the site or by burial on the site in a location and manner which will not impact upon local watercourses.
- Stockpile areas for sands and gravel should be kept to a minimum size, well away from any drain or watercourse.

- During construction, surface water on the site must be controlled and management to avoid any impacts upon local ground or surface water receptors. Construction water should not be discharged directly into any watercourse. Good construction practices such as wheel washers and dust suppression measures must be undertaken. There must be no discharges of silt laden surface water into the public sewer.

- Guidelines within The Construction Industry Research and Information Association (CIRIA) provides guidance on the control and management of water pollution from construction sites ('Control of Water Pollution from Construction Sites, guidance for consultants and contractors', CIRIA, 2001). Guidelines within this document must be followed.

- All waste associated with the development should be disposed of in an environmentally friendly manner. Registered contractors should only be used. This includes any excavated soil. There must be no placement of soil or waste within any area designated as an SAC or SPA.

<u>Site Operation and Landscaping</u>

- The new treatment plant and percolation area must be installed under the supervision of a suitably qualified engineer. It must be operated and maintained in accordance with its design specifications. It should be serviced regularly and emptied annually by a registered contractor.
- During operation, clean water should be directed into on-site soakpits. This is preferable to discharging directly to the river as it will avoid unnecessary pipe work into the river and disturbance to the river banks.

- During operation only low intensity / mammal friendly lighting should be used on the development. This will reduce the impact of any new lighting scheme on local bat populations. Lights should not be directed towards the river or the woodlands. Spotlights and uplighters should not be used. Low level security lighting that comes on and off is recommended. Guidelines are available at https://www.batconservationireland.org/wp-content/uploads/2013/09/BCIrelandGuidelines_Lighting.pdf

- Bare soil should be seeded as soon as possible with grass seed. This will minimise erosion into local drains and watercourses.

- The removal of vegetation with herbicides should be avoided.

- Any landscaping should involve the planting of native Irish species that are indigenous to the site. Suitable species would include birch, oak, willow and alder.

- Site verges and garden should be managed at a low intensity level to provide maximum habitat availability for pollinators.

6 APPROPRIATE ASSESSMENT CONCLUSION

This current NIS has been undertaken to evaluate the potential impacts of the proposed development with regard to the effects upon the conservation objectives and qualifying interests (including the habitats and species) of the Unshin River SAC. It is considered that following mitigation, that the proposed project does not have the potential to significantly affect the conservation objectives of these aforementioned Natura 2000 sites and the integrity of these sites as a whole will not be adversely impacted.

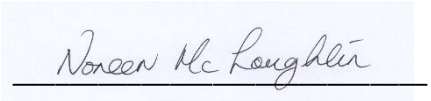
The qualifying interests of the site and their potential to be impacted upon from the potential development were listed in Section 4.2. It is considered that these potential impacts can be successfully mitigated against. With implementation of the mitigation measures there will be no deterioration in water quality or impacts upon any designated habitat or any species dependent on these designated habitats. The attributes and targets which have been set out in order to maintain or restore the favourable conservation condition of these interests in the SAC will not be impacted upon.

In light of the above, it is considered that with the implementation of the mitigation measures, that the proposed works do not have the potential to significantly affect the conservation objectives or qualifying interests of the River Unshin SAC. The integrity of the site will not be adversely affected. Table 19 follows the integrity of the SAC / SPA checklist, which shows that the integrity of the site would not be affected by the proposed development.

Conservation Objective: Does the project have the potential to:	**Yes / No**
Cause delays in progress towards achieving the conservation objectives of the site?	N
Interrupt progress towards achieving the conservation objectives of the site?	N
Disrupt those factors that help to maintain the favourable conditions of the site?	N
Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site?	N
Other Objectives: does the project have the potential to:	
Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem?	N
Change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site?	N

Interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)?	N
Reduce the area of key habitats?	N
Reduce the population of key species?	N
Change the balance between key species?	N
Reduce diversity of the site?	N
Result in disturbance that could affect population size or density or the balance between key species?	N
Result in fragmentation?	N
Result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding, etc.)	N

Table 19 – Integrity of Site Checklist (From NPWS, Information Checklist for AA, Box 6, EC (2002)



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