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Appropriate Assessment Report

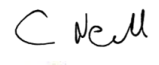
Site to the south of the Hazelwood Road
(R286) on lands at Hazelwood Demesne, Co.
Sligo

Project Details

Project Reference:	AEMP – 559 (A9UC – T6)
Date of Issue:	17 th December 2025 (V1); 4 th June 2026 (V2)
Client:	Golden Hill Developments LTD
Site Address	Site to the south of Hazelwood Road (R286) on lands at Hazelwood Demesne, Co. Sligo. (IGR: G 71461 36102)
Services Provided:	Preparation of an 'Article 6 (3) Appropriate Assessment'

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AVRIO Quality Information

Produced by:	Callum Neill (Ecological Consultant) AVRIO Environmental Management	Signed: 
Reviewed & Approved by:	Fergal Maguire (Principal Ecologist) AVRIO Environmental Management	Signed: 

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Where field investigations were carried out, these investigations have been restricted to a level of detail required to meet the stated objectives of the services. The results of any measurements taken may vary spatially or with time, and further confirmatory analyses should be made after any significant delay in issuing this report.

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1. Introduction

1.1 Background

AVRIO Environmental Management was engaged to undertake an Appropriate Assessment on behalf of Golden Hill Developments LTD for a housing development project located at site to the south of the Hazelwood Road (R286) on lands at Hazelwood Demesne, Co. Sligo (IGR: G 71451 36102).

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 report 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 Directive¹.

The purpose of the assessment is to determine the appropriateness of the proposed project in the context of the conservation status of a European protected 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.

1.2 The Aim of the Report

This Appropriate Assessment 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)² as well as the Office of the Planning Register "OPR Practice Note PN01 – Appropriate Assessment Screening for Development Management"³, and it provides an assessment of the potential effects of a proposed development located to the south of the Hazelwood Road (R286) on lands at Hazelwood Demesne, Co. Sligo (IGR: G 71451 36102). Accordingly, a comprehensive assessment of the potential impacts of this application was carried out between April 2023 and June 2026 by AVRIO.

1.3 Regulatory Context

1.3.1 Legislative Context

The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) aims to maintain or restore the favourable conservation status of habitats and species of community interest across Europe. The requirements of this Directive are transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations) 2011 (S.I. No. 477 of 2011).

¹ 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

² 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;

³ OPR (2021) OPR Practice Note PN01: Appropriate Assessment Screening for Development Management

Under the Directive a network of sites of nature conservation importance have been identified by each Member State as containing specified habitats or species requiring to be maintained or returned to favourable conservation status. In Ireland the network consists of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), and also candidate sites, which form the Natura 2000 network.

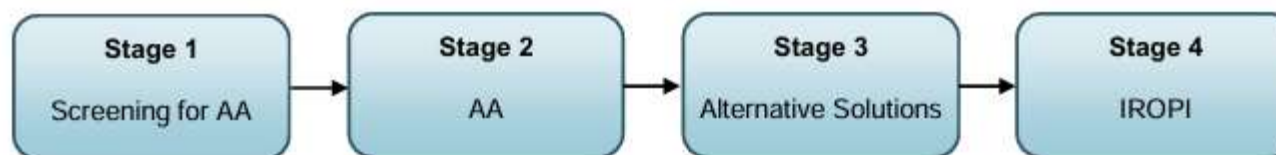
Article 6(3) of the Habitats Directive requires that, in relation to European designated sites (i.e. SACs and SPAs that form the Natura 2000 network), "any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually 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".

A competent authority, in this case Sligo County Council, can only agree to a plan or project after having determined that it will not adversely affect the integrity of the site concerned.

Under article 6(4) of the Directive, if adverse impacts are likely, and in the absence of alternative options, a plan or project must nevertheless proceed for imperative reasons of overriding public interest (IROPI), including social or economic reasons, a Member State is required to take all compensatory measures necessary to ensure the overall integrity of the European site. The European Commission have to be informed of any compensatory measures adopted, unless a priority habitat type or species is present and in which case an opinion from the European Commission is required beforehand (unless for human health or public safety reasons, or of benefit to the environment).

1.3.2 Appropriate Assessment Process

Guidance on the Appropriate Assessment process was produced by the European Commission in 2002, which was subsequently developed into guidance specifically for Ireland by the Department of Environment, Heritage and Local Government (DEHLG) (2009) (revised February 2010). These guidance documents identify a staged approach to conducting an Appropriate Assessment, as shown Figure 1. This was supplemented with guidance from the Office of the Planning Regulator (2021).



The Appropriate Assessment Process (from: Appropriate Assessment of Plans and Projects in Ireland

– Guidance for Planning Authorities, DEHLG, 2009)

1.3.2.1 Stage 1 – Screening for Appropriate Assessment

The initial, screening stage of the Appropriate Assessment is to determine:

- a. whether the proposed plan or project is directly connected with or necessary for the management of the European designated site for nature conservation
- b. if it is likely to have a significant adverse effect on the European designated site, either individually or in combination with other plans or projects

For those sites where potential adverse impacts are identified, either alone or in combination with other plans or projects, further assessment is necessary to determine if the proposals will have an adverse impact on the integrity of a European designated site, in view of the site's conservation objectives (i.e. the process proceeds to Stage 2).

1.3.2.2 Stage 2 – Appropriate Assessment

This stage requires a more in-depth evaluation of the plan or project, and the potential direct and indirect impacts of them on the integrity and interest features of the European designated site(s), alone and in-combination with other plans and projects, considering the site's structure, function and conservation objectives. Where required, mitigation or avoidance measures will be suggested.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where mitigation cannot be achieved, then alternative solutions will need to be considered (i.e. the process proceeds to Stage 3).

1.3.2.3 Stage 3 – Alternative Assessment

Where adverse impacts on the integrity of Natura 2000 sites are identified, and mitigation cannot be satisfactorily implemented, alternative ways of achieving the objectives of the plan or project that avoid adverse impacts need to be considered. If none can be found, the process proceeds to Stage 4.

1.3.2.4 Stage 4 – IROPI (Imperative Reasons for Overriding Public Interest)

Where adverse impacts of a plan or project on the integrity of Natura 2000 sites are identified and no alternative solutions exist, the plan will only be allowed to progress if imperative reasons of overriding public interest (IROPI) can be demonstrated. In this case compensatory measures will be required.

The process only proceeds through each of the four stages for certain plans or projects. For example, for a plan or project, not connected with management of a site, but where no likely significant impacts are identified, the process stops at stage 1. Throughout the process, the precautionary principle must be applied, so that any uncertainties do not result in adverse impacts on a site.

The methodology follows a systematic, step-by-step process designed to evaluate whether development/maintenance works are likely to have significant effects on European Designations e.g., SACs, SPAs, in line with the provisions of the Habitats Directive. The screening process begins with a description of the proposed development and an assessment of the local site characteristics. This is followed by identifying potentially relevant Natura 2000 sites using the Source-Pathway-Receptor (S-P-R) model. The S-P-R model is used to assess whether there are any pathways through which the development could affect the conservation objectives of the identified sites. The next step involves

evaluating the likely significant effects, both direct and indirect, of the proposed development on these sites, considering factors such as the size, nature, and scale of the project. If significant effects cannot be ruled out, a Stage II Appropriate Assessment (Natura Impact Statement (NIS)) may be required.

1.3.3 Additional Sources used to Influence Appropriate Assessment

In addition to the Legislative Context in section 1.3.1 and guidance outlined in section 1.3.2, this Appropriate Assessment has been prepared with regard to the following documents:

1. Council of the European Commission (1992) Council Directive 92/43/EEC of 21st May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.⁴
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.⁵
3. European Commission (2001). 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.⁶
4. European Commission (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.⁷
5. 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.⁸
6. EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.⁹
7. European Commission (2018). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.¹⁰
8. Department of Environment, Heritage, and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.¹¹

⁴ 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;

⁵ 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;

⁶ 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;

⁷ EC (2006) Nature and Biodiversity Cases: Ruling of the European Court of Justice, Office for Official Publications of the European Communities, Luxembourg. European Commission;

⁸ 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;

⁹ EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. Office for Official Publications of the European Communities, Luxembourg. European Commission.

¹⁰ EC (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.

¹¹ 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

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9. National Parks and Wildlife Service (2019). Article 17: The Status of EU Protected Habitats and Species in Ireland.¹²
10. European Communities (Natural Habitats) (Amendment) Regulations 2005¹³;
11. OPR Practice Note PN01: Appropriate Assessment Screening for Development Management, March 2021¹⁴;
12. National Parks and Wildlife Service (NPWS) site synopsis, Natura 2000 data forms, and Conservation Objective.

1.4 Statement of Authority

Callum Neill MSci (Hons): The preparation of this report has been undertaken by Callum Neill. Callum is an Ecologist at AVRIO Environmental Management. Callum has a master's degree in marine biology from Queen's University Belfast. Callum has been undertaking environmental surveys in Northern Ireland and the Republic of Ireland since 2020 including Preliminary Ecological Appraisal (PEA), Preliminary Roost Assessments (PRA) and bat emergence/re-entry surveys on a variety of sites. Callum also has vast experience in leading intertidal surveys and at-sea/marine surveys, working for a variety of non-governmental organisations and academic institutions. Callum has experience contributing to habitat assessments including JNCC Phase I Habitat Surveys and Fossitt Habitat Surveys as well as producing a range of ecological reports including Preliminary Ecological Appraisals, Invasive Species Management Plans, Habitat Regulation Assessments (HRA/AASR/NIS).

Fergal Maguire BSc (Hons), PIEMA: The review and approval of this report was undertaken by Fergal Maguire. Fergal is the General Manager and Principal Ecological Consultant at AVRIO Environmental Management. He holds an NDA and BSc (Hons) in Environmental Science from the Institute of Technology, Sligo. Fergal is a member of the Institute of Environmental Management & Assessment (IEMA), an organisation requiring peer review and a high standard of professional conduct. He has over 12 years of experience within the environmental industry. He has experience contributing to a number of Environmental Impact Assessments, environmental licence and surrender applications, including Industrial Emissions Licences (IEL), Integrated Pollution Control Licences (IPC) and Waste Licences for submission to the Irish Environmental Protection Agency (EPA), Northern Ireland Environment Agency (NIEA), Scottish Environment Protection Agency (SEPA), United Kingdom Environment Agency (EA) and a number of Local Authorities throughout the UK and Ireland. Fergal has extensive experience in the sustainable development and management of a number of IED licenced facilities throughout Ireland, the UK and greater Europe, as well as general consultancy within the waste management, environmental compliance and ecological sectors. Fergal has extensive experience in Ecological Impact Assessments (EcIA), including priority species such as Bats, Badger, Otter, Red Squirrel, Pine Marten and breeding Birds, and habitats assessments including Phase I and Fossitt Habitat Surveys. Fergal has extensive experience in Habitat Regulation Assessments (HRA/AASR/NIS), Ecological Clerk of Works (ECow), Invasive Species Surveys and Management and production of site-specific mitigation proposals for a range of developments throughout Northern Ireland and the Republic of Ireland.

¹² NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report.

¹³ EC (1997) 2006. The European Communities (Natural Habitats) (Amendment) Regulations 2005.

¹⁴ OPR (2021). OPR Practice Note PN01: Appropriate Assessment Screening for Development Management

2. Site Characteristics

2.1 Desk Study

Information pertaining to the proposed site and the surrounding environment was studied and assessed prior to the completion of this assessment. The following data sources were accessed in order to complete a thorough examination of potential impacts:

- National Parks and Wildlife Service (NPWS) online map viewer¹⁵;
- Mammals, Amphibians and Reptiles website¹⁶;
- Ordnance Survey Ireland Map Viewer: Geohive¹⁷;
- Environmental Protection Agency Geographic Information System (EPAGIS)¹⁸;
- National Biodiversity Data Centre (NBDC)¹⁹;
- NPWS Article 17 Metadata and GIS Database²⁰;
- Geological Survey Ireland, Department of the Environment, Climate and Communications Map Viewer²¹;
- Sligo County Council Planning Portal²²;

Results of the Desk Study are described in Section 2.2 below.

2.2 Site Overview

The site is located approximately 2.7km east of Sligo Town Centre, 50.2km southwest of Bundoran Town Centre, and 168km northeast of Galway City Centre. The surrounding area encompasses a variety of features, including agricultural grassland, mixed woodlands, hedgerows, scrub, and the R286 road bisects the site, dividing it into northern and southern sections. Lough Gill and Hazelwood Forest are located to the south of the development. The wider environs include interspersed areas of road, agricultural grassland, watercourses, residential dwellings, commercial properties, hedgerows, scrublands, treelines, and mixed woodlands.

¹⁵ National Parks and Wildlife Service: National Parks & Wildlife Service (npws.ie)

¹⁶ Mammals, Amphibians and Reptiles: <http://www.habitas.org.uk/nimars/>

¹⁷ Ordnance Survey Ireland Map Viewer - GeoHive: <https://webapps.geohive.ie/mapviewer/index.html>

¹⁸ Environmental Protection Agency Geographic Information System : <https://gis.epa.ie/EPAMaps/>

¹⁹ National Biodiversity Data Centre: www.biodiversityireland.ie

²⁰ NPWS Article 17 Metadata and GIS Database: <https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17>

²¹ Geological Survey Ireland Map Viewer: <https://dcenr.maps.arcgis.com/apps/MapSeries/index>

²² Sligo County Council Planning Portal: [Planning](#)



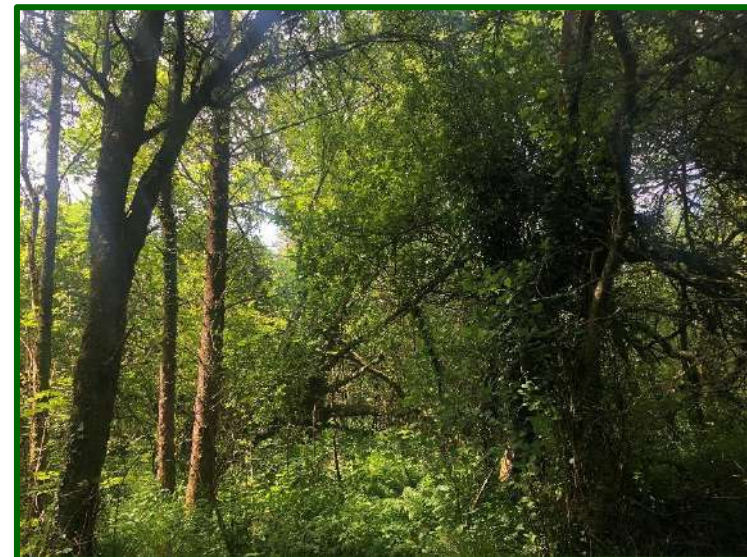
Picture 1: Improved Grassland Field (GA1) at the centre of the application site



Picture 2: Improved Grassland Field (GA1) at the centre of the application site



Picture 3: Immature Woodland (WS2) noted to the southwest of the site adjacent to improved grassland



Picture 4: Mixed Woodland noted to the southwest of the site; this habitat is adjacent to Lough Gill SAC



Picture 5: Hardstanding Path around site (BL3) adjacent to Treeline (WL2)



Picture 6: Fence within Improved Grassland field, with strip of Scrub habitat (WS1) adjacent to Treeline (WL2)



Picture 7: Recolonising Bare Ground (ED3) adjacent to treelines (WL2) within centre of site



Picture 8: Stone Walls and Other Stonework (BL1) on site, to the south of Hazelwood Road



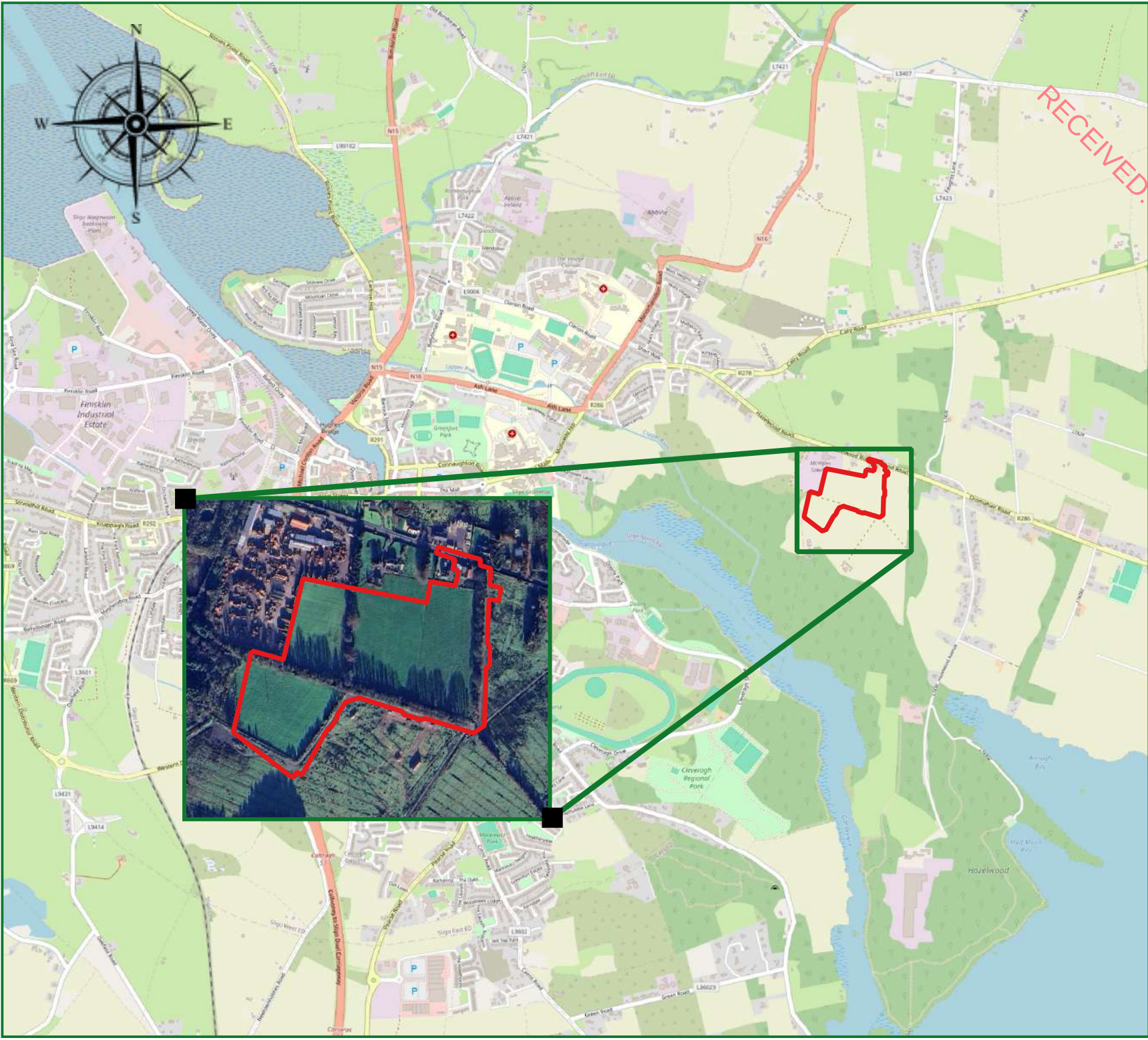
Picture 9: Recolonising Bare Ground (ED3) and Treeline (WL2) noted to the east of the survey area



Picture 10: Buildings noted on-site, associated with an agricultural farm



Picture 11: Drainage Ditch (FW4) to the east of the site; it comprised a shallow depth of water, with a stagnant flow



Legend:

 Site Boundary

Project Title:
AEMP-559
Site south of Hazelwood Road (R286) on lands
at Hazelwood Demesne, Co. Sligo

Drawing Title:
Site Location

Drawn By: CN	Checked By: FM
Project No: 2000559	Drawing No: Figure 1
Scale: 1/25000	Date: 4th June 2026



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2.3 Characteristics of the Proposed Development

2.3.1 Description of the Project

The proposed development comprises the demolition of the existing agricultural structures on site and the construction of a residential development of 99 no. dwellings, a childcare facility and two GAA playing pitches and clubhouse facility, on a site of 8.2 ha located to the south of the Hazelwood Road (R286) on lands at Hazelwood Demesne, Sligo, County Sligo.

The proposed development comprises:

- The demolition of the existing agricultural structures on site (276.8 sq.m)
- The construction of 99 no. residential dwellings consisting of:
 - 10 no. one bedroom units
 - 20 no. two bedroom units
 - 50 no. three bedroom units
 - 7 no. four bedroom units
 - 12 no. five bedroom units.
- The provision of 168 no. car parking spaces and 50 no. bicycle spaces for the residential units;
- The construction of a standalone childcare facility (455 sq.m) with 12 no. designated staff parking spaces and 6 no. drop off spaces;
- The provision of 3,072 sq.m of public open space and 61 sq.m of communal open space;
- Two GAA playing pitches on an area of 1.895 ha to the west and south-west of the residential development;
- A two storey Clubhouse (522 sq.m) with a car parking area providing for 2 no. bus spaces, 30 no. car parking spaces and 6 no. accessible spaces, associated with the GAA Pitches;
- The provision of a new entrance onto the R286 Hazelwood Road for vehicular, pedestrian and cycling access;
- The provision of a new pedestrian footpath and cycle lane (88m) along the R286 Hazelwood Road and a pedestrian crossing; and
- All associated and ancillary infrastructure (including surface water and foul water drainage and water supply), bin storage, internal streets, public lighting, landscaping, boundary treatments and development works.

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2.3.2 Description of the Baseline Ecological Environment

Assessing the impacts of any project and associated activities requires an understanding of the ecological baseline conditions prior to and at the time of the project proceeding. Ecological baseline conditions are those existing in the absence of proposed activities²³.

A walkover of the site was undertaken on 4th May 2023, with an updated walkover survey in November 2025, by a qualified ecologist. Habitat present was identified in accordance with the Heritage Council's 'Guide to Habitats in Ireland'²⁴. Plant nomenclature for vascular plants follows 'New Flora of the British Isles', while mosses and liverworts nomenclature follow 'Mosses and Liverworts of Britain and Ireland - a field guide'. (mention limitations- time of year, overgrown vegetation).

The walkover survey was designed to detect the presence, or likely presence, of a range of protected species and habitats. The walkover survey comprehensively covered the entire study area of the subject development and surrounding habitats.

This section of the report should be read in conjunction with the Ecological Impact Assessment produced by AVRIO, associated for this development (AEMP599 A9UC-T16).

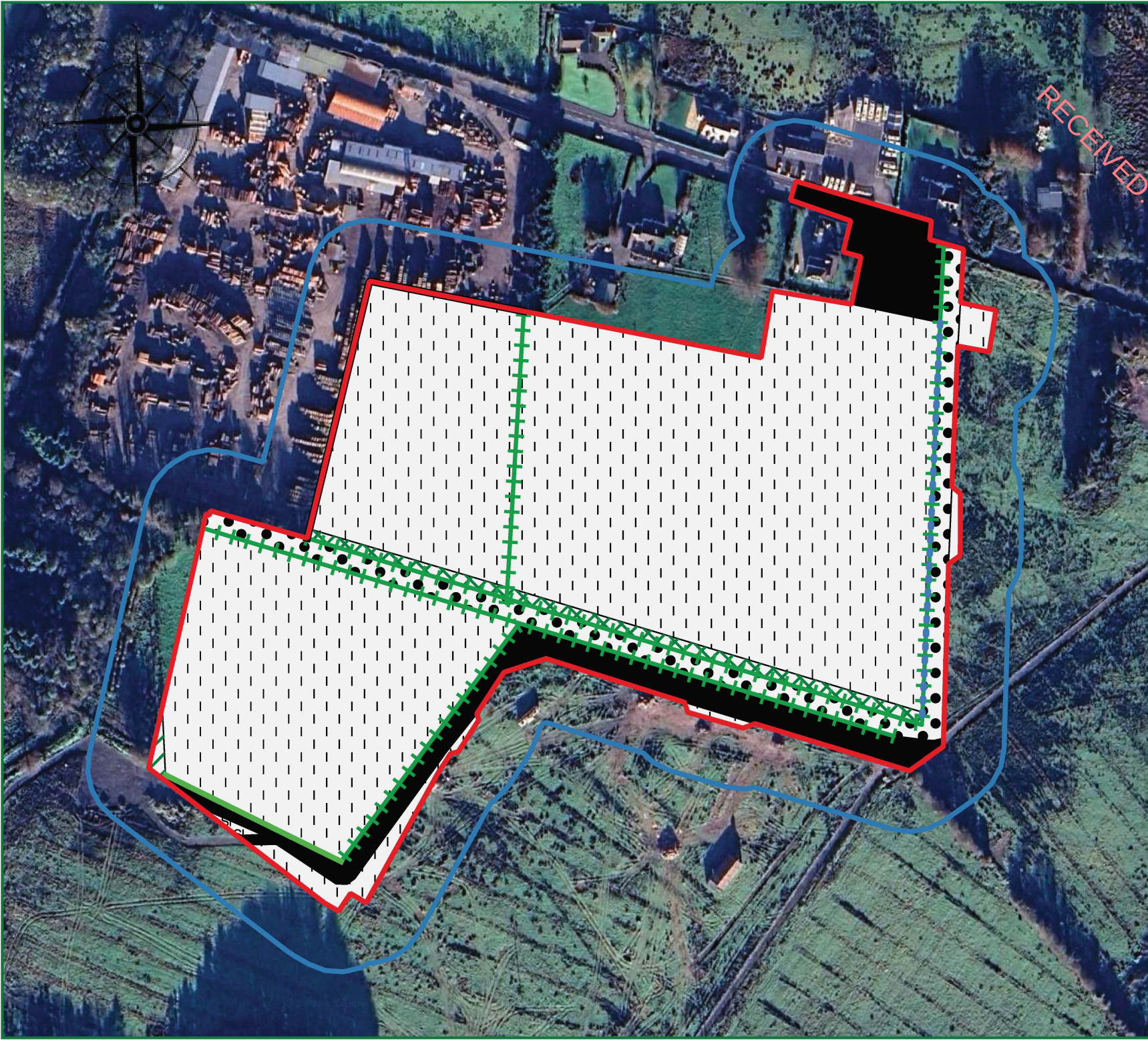
2.3.2.1 Habitats

Habitats located within the site boundary include:

- WD2 – Mixed Broadleaved/Conifer Woodland
- WS2 – Immature Woodland
- WL1/2 – Hedgerow/Treeline
- GS2 – Dry Meadows and Grassy Verges
- GA1 – Improved Agricultural Grassland
- BL3 – Buildings and Artificial Surfaces
- BL1 – Stone Wall and Other Stonework
- ED3 – Recolonising Bare Ground
- WS1 – Scrub
- FW4 – Drainage Ditch

²³ CIEEM, 2018, Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine;

²⁴ Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Dublin: The Heritage Council;



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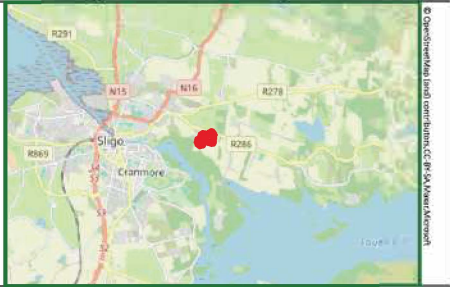
- Site Boundary
- 30m Ecological Survey Buffer
- WS2- Immature Woodland
- WS1- Scrub
- GA1- Improved Grassland
- GS2- Dry Meadows & Grassy Verges
- BL3- Building & Artificial Surfaces
- ED3- Recolonising Bare Ground
- BL1- Stone Wall and Other Stonework
- Drainage Ditch (FW4)
- WL1- Hedgerow
- WL2- Treeline

Project Title:	
AEMP-559	
Site south of Hazelwood Road (R286) on lands at Hazelwood Demesne, Co. Sligo	
Drawing Title:	
Fossitt Habitat Classification	
Drawn By:	Checked By:
CN	FM
Project No:	Drawing No:
2000559	Figure 2
Scale:	Date:
1/2500	4th June 2026



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2.3.2.2 Invasive Species (Flora) Survey

The site, the extended land holding, and the surrounding areas where possible, were comprehensively surveyed and searched for invasive species, focusing on those species listed under the Third Schedule of Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011. 1-no invasive species listed under the Third Schedule of Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 was found on site. Sycamore Maple, a non-scheduled invasive, was noted – further recommendations are provided in the EclA.

2.4.2.3 Species

Commuting and Foraging Bats

Habitats within the site have been assessed as having moderate suitability and local significance for Bats' commuting and foraging activities. Hedgerows, Treelines, Scattered Trees and areas of Woodland within the site act as natural corridors, facilitating Bat movement and linking habitats within the site to suitable foraging grounds beyond its boundaries. Habitats within the surrounding area, including larger areas of woodland and open water bodies associated with Lough Gill to the south, offer optimal habitats for Bat species, enhancing connectivity and foraging opportunities. Analysis conducted using the Bat Landscape mapping tool on the NBDC map viewer revealed that the application site attained an average Bat suitability index score of 36.11, indicating the application site and surrounding environs have a moderate-high suitability for Bat species. Bat Transect surveys of the site showed usage of treelines and foraging and commuting behaviours, with foraging activity primarily recorded within treeline and woodland edge habitats on-site, where linear features and structural diversity provide suitable feeding opportunities. Commuting activity was frequently associated with established hedgerows and treelines, which appeared to function as movement corridors through the landscape. Bats were notably observed arriving on-site or within close proximity of the site from surrounding woodland habitats, including Hazelwood Forest, indicating functional connectivity between the site and the wider landscape.

Bat Roost Assessment for Trees

A Preliminary Roost Assessment (PRA) of the trees on-site was undertaken by AVRIO. 2-no. Trees were noted to possess PRF-I features; these are features that individual Bats or few Bats may use occasionally for roosting purposes.

- T1: T1 was located at IGR: G 71628 36085. It comprised thick ivy (over 5cm in thickness), which could be utilised by an individual/few Bats for roosting purposes.
- T2: T2 was located at IGR: G 71243 35935. It comprised thick ivy (over 5cm in thickness), which could be utilised by an individual/few Bats for roosting purposes.

Based on current site plans, T1 and T2 will be retained during site works. If future site plans include the removal of T1 and T2, they will require soft-felling under a Precautionary Working Method Statement (PWMS) in accordance with Bat Conservation Trust guidelines.

All other trees on site have been assessed as having negligible suitability for roosting Bats due to insufficient roosting features.

2-no. buildings were recorded within the site boundary. The structures observed were associated with the adjoining farm and were being used to house livestock at the time of the survey. The buildings appeared well-worn, likely due to weathering, with small areas of vegetation visible on some of the exterior walls. The Bat roosting potential for these buildings is outlined below. Additionally, building works were noted outwith the site boundary within the extended survey area. These buildings were not surveyed due to access restrictions; however they are outside the scope of works and will not be impacted by the development.

- B1 – B1 comprised an old cattle shed with concrete lower walls and upper sections constructed from metal beams and corrugated iron, finished with a domed roof. The shed was in active use by cattle/livestock during the survey. Externally, large openings in the structure would provide suitable access and flight paths for bats, although these gaps may also leave the interior more exposed. Additional gaps were noted between the corrugated iron sheets. Internally, potential roosting features were identified between the metal beams and the corrugated metal roof, as well as within overlaps in the corrugated metal itself. B1 was assessed as being of Low Bat Roosting Potential.
- B2 – B2 comprised an old cattle shed with concrete lower walls and upper sections constructed from metal beams and corrugated iron, finished with a flat roof. The shed was in active use by cattle/livestock during the survey. Externally, large openings in the structure would provide suitable access and flight paths for bats, although these gaps may also leave the interior more exposed. Additional gaps were noted between the corrugated iron sheets. Internally, potential roosting features were identified between the metal beams and the corrugated metal roof, as well as within overlaps in the corrugated metal itself. B2 was assessed as being of Low Bat Roosting Potential.

Pre-demolition emergence surveys will be required in line with NPWS and BCT guidance, with wildlife licencing/derogation undertaken if required.

Roost Assessment for Walls

A Preliminary Roost Assessment (PRA) of the walls on-site was undertaken by AVRIO. All walls on site have been assessed as having **Negligible Suitability** for roosting Bats due to insufficient roosting features.

Badger (*Meles meles*) Survey

A main badger sett (16-no. entrances) was recorded along the eastern boundary of the site within a treeline habitat. The sett comprised several substantial spoil heaps with clear indicators of recent activity, including snuffle holes and guard hairs. Badgers have been recorded utilising several of these sett entrances, via infrared trail cameras. Additionally, 5-no. Badger outlier setts were recorded within the site boundary. The proposed development includes permanent residential housing within 30m of the sett entrances, To compensate for the loss of the Badger Main Sett, an artificial sett will need to be created and installed. The replacement sett should be situated in a suitable,

well-drained habitat within the Badgers' existing territory and designed to match/exceed the capacity of the natural sett it is replacing e.g., replicating the bulk, chamber, and tunnel network and providing same/greater number of functional entrances) so that it can accommodate the social group displaced by the development. The artificial sett should be well-established prior to exclusion/destructive works to the natural sett, with evidence of Badger uptake/relocation to the artificial sett.

Birds – Wintering & Breeding

Breeding Bird Surveys were undertaken in May and July 2025 and recorded 321 individuals of 27 species on-site and within the immediate surroundings. Two species listed as qualifying interests for Cummeen Strand SPA (Oystercatcher and Redshank) were recorded in small numbers and only transiently, with no evidence of nesting or regular site use. The bird assemblage was dominated by common, generalist species associated with woodland, scrub, and farmland edge habitats, and no significant breeding concentrations were identified. Wintering Bird Surveys, carried out between November 2024 and February 2025, recorded 503 individuals of 31 species, again comprising mainly widespread generalist species, with no SPA qualifying species using the site for roosting or foraging and no functional linkage identified with nearby SPAs.

All species of breeding Birds and their nests are protected under the Wildlife Act (1976/2017) and the European Communities (Birds and Natural Habitats Regulations 2011 (S.I. No. 477 of 2011)). Therefore, vegetation removal on-site must be undertaken outwith the breeding season, which extends from 1st March to 31st August inclusive. If no Birds' nests are found then works can proceed within 48 hours; however, if an active Birds' nest is found then works must stop and an appropriate buffer installed around the nest (usually 5m-15m). The buffer must remain in place until the ecologist confirms the young have fledged. With mitigation as above, there is still a risk of disturbance of nesting Birds due to an increase in ambient noise; however, this will be a non-significant minor temporary impact.

Otter (*Lutra lutra*) Survey

Whilst no evidence of Annex II species, Otter (*Lutra lutra*) was identified on-site, there is the potential for Otter to utilise the site for commuting purposes. Additionally, the species is listed as a Qualifying Interest of Lough Gill SAC, of which the site is hydrologically connected to. It is recommended that all works adhere to relevant Guidance for Pollution Prevention (GPP's) as outlined in a Construction Environmental Management Plan (CEMP). All fuels must be stored within a bunded area at least 10m from any watercourse. Refuelling of vehicles/machinery must be undertaken in a designated area away from any watercourse. Appropriate buffers from the drainage ditch identified within the survey area should be implemented for all site works. These recommendations will ensure that the development does not impact commuting and foraging Otter.

Pine Marten (*Martes martes*) Habitat Suitability Assessment

The application site was deemed of moderate suitability for Pine Marten with areas of woodland and treelines on-site, with habitat connectivity noted to exist between application site and these habitats within the wider environs. Additionally, Pine Marten was noted on a trail camera on-site, which was monitoring the Badger setts. As part of the development works, some sections of treeline will be removed during the construction phase, as such, the potential for impact to this species exists through removal of

suitable habitat Pine Marten may utilise. Given the size and scale of the development and the commonality of these habitats within the wider environs, the loss of these habitats will not have an impact on the conservation status of this species. Prior to tree-felling works, a suitable pre-construction survey for Pine Marten species has been carried out to establish if there are any dens present and ensure safeguarding of this European protected species.

Red Squirrel (*Sciurus vulgaris*) Habitat Suitability Assessment

Red Squirrel (*Sciurus vulgaris*) is likely to occur in the wider area, based on suitability of habitat e.g., woodland habitat present to the southwest of the application site, Hazelwood Forest (extensive within the wider environs). This is corroborated by records from the NBDC database it was last recorded on the 01/11/2017 (NBDC). Red Squirrel is protected under the Wildlife Act (as amended). The site was deemed of moderate suitability for Red Squirrel with small areas of Woodland and Treelines on-site offering potential opportunity for the creation of dreys (although limited) and these habitats being found in the surrounding environs. The extended environs were deemed to be of moderate suitability for the species. The Application Site is considered to be of **local importance** for Red Squirrel as they may utilise the site and are known to be present within the wider environs. Current development works will see the retention of the majority of treelines and woodland on-site and therefore impacts to commuting and foraging habitat are expected to be low from a habitat perspective.

Common Lizard (*Zootoca vivipara*) Habitat Suitability Assessment

The habitats on-site were assessed to be of poor suitability for Common Lizard species. The Improved Agricultural Grassland habitat which made up the majority of the site was not suitable for Common Lizard. The habitat appeared well-managed i.e., low species diversity, and uniform grass height; the lack of suitable basking spots renders this habitat suboptimal. Some areas of potential basking were noted to the southwestern boundary of the site (GS2), where sward height was slightly higher; this is small in scale and would only likely support an individual or few Lizards at any time. Several stone walls were also identified around the boundary of the site, associated with Hazelwood Road and the Sawmill; given the high levels of disturbance in these areas (commercial property, national road) and unsuitable surrounds e.g., roadway, concrete yard, it is unlikely that Common Lizard would utilise these areas. Scrub and Treeline habitat on-site may provide suitable vegetation cover for the species, although as stated, given the lack of suitable basking spots adjacent, it is unlikely that they would be utilised for these purposes. Additionally, there are no previous records of the species within 2km of the application site (NBDC Database). As such, the site was assessed as being of no importance to Common Lizard and there will be negligible impact on Common Lizard as a result of site works.

Butterfly Habitat Suitability Assessment

The habitats on-site were assessed to be of low suitability for Butterfly species. The Improved agricultural grassland which dominated the site habitats was of low species diversity and lacked suitable swards for Butterfly foraging. This habitat is considered of local importance only and is commonly present in the wider environs. Treelines and Scrub habitat may offer suitable foraging habitat when in flower, and additionally offer refuge to Butterfly, similar to the functions of woodland. The majority of Treelines and

all Woodland habitats will be retained during works, with scrub habitat being removed; therefore, the limited function the site plays for Butterfly will be retained, as well as also being widespread in the surrounding environs. The Annex II listed Marsh Fritillary was also considered, with the species having been recorded within 2km of the application site, most recently on the 31/12/2010; however, no evidence of the species or its food plant, Devil's-Bit Scabious, was identified on-site. The habitats on-site were of negligible suitability for Marsh Fritillary. The application site is considered to be of low importance for Butterfly, excluding Annex II Marsh Fritillary (no importance), and there will be negligible impact on Butterfly as a result of site works.

Smooth Newt (*Lissotriton vulgaris*) Habitat Suitability Assessment

The habitats on-site were assessed to be sub-optimal for Smooth Newt with watercourses on-site and within the 30m buffer surveyed around the site noted as being shallow and stagnant; they comprised no suitability for breeding purposes e.g., depth of watercourse, lack of instream vegetation. Areas of Pooling were noted outwith the site works area and ecological survey buffer (associated with Alluvial Woodland); these areas may provide suitable breeding for the species. Therefore, overall, the site was deemed sub-optimal for breeding purposes, although suitable breeding habitat is potentially available outwith the survey area. Suitable terrestrial habitats on-site included scrub and woodland habitats. Smooth Newt are known to utilise suitable terrestrial habitat within close proximity of their breeding areas, rarely moving past 500m²⁵²⁶. Scrub habitat will be removed as part of site works, however given its widespread nature of the habitat and others that provide this function, it will be of negligible impact. Additionally, the species has been recorded within 2km of the site on NBDC maps. Accordingly, whilst the overall impact is deemed negligible.

Common Frog (*Rana temporaria*) Habitat Suitability Assessment

Common Frog may occur locally within the study area, particularly in wet areas, drainage ditches and unmanaged grassland, as well as meadows prior to mowing. Common frog is listed in Annex V of the EU Habitats Directive; and protected under the Wildlife Act, 1976 and Wildlife (Amendment) Act, 2000. Frogs are considered widespread in Ireland. The current Red Data List status of common frog is *least concern* (King et al, 2011).

Protected Fish, Aquatic Invertebrates, and Marine Mammals Habitat Suitability Assessment

The drainage ditch lacked suitability for usage by Fisheries or Marine Mammals. Suitable habitat for these species was noted in the wider environs, including within Lough Gill, the Garavogue Watercourse, and the Garavogue Estuary downstream of the site. Protected Pinniped and Fisheries species have been previously recorded within 2km of the application site (NBDC), and may utilise suitable habitats within Sligo Bay, the Garavogue Watercourse, and Lough Gill to the south and west of the application site, to which

²⁵ Moor, H. et al. (2024): Conservation Biology. Building pondscapes for amphibian metapopulations

²⁶ Mulkeen, C.J. et al. (2017). Ecological Engineering. Habitat Suitability assessment of constructed wetlands for the smooth newt (*Lissotriton vulgaris*): A comparison with natural wetlands

the application site is hydrologically and hydrogeologically connected. It is recommended that all works adhere to relevant Guidance for Pollution Prevention (GPP's) as outlined in a Construction Environmental Management Plan (CEMP).

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3. Establishment of a Source-Pathway-Receptor Model

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:

- The most up-to-date GIS spatial datasets for European designated sites and water catchments were downloaded from the NPWS website²⁷ and the EPA website²⁸ on the 28th of November 2025. These datasets were utilised to identify European Sites that could feasibly be affected by the proposed development;
- The assessment was completed in line with the Office of the Planning Regulator 2021 “OPR Practice Note – PN01: Appropriate Assessment Screening for Development Management”, aiming to establish a “Source-Pathway-Receptor” model and if likely significant effects are anticipated via this pathway.
- The Zone of Influence was determined by identifying plausible pathway distances from the source, by considering the scope and scale of works. This is assessed on a site-by-site basis.
- In relation to Special Protection Areas, in the absence of any specific European or Irish guidance in relation to such sites, the Scottish Natural Heritage (SNH) Guidance, ‘Assessing Connectivity with Special Protection Areas (SPA)’ (2016) was consulted²⁹. This document provides guidance in relation to the identification of connectivity between proposed developments and Special Protection Areas. The guidance considers the distances species may travel beyond the boundary of their SPAs and provides information on dispersal and foraging ranges of bird species that are frequently encountered when considering plans and projects;
- 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 assessment;
- The site synopses and conservation objectives, as per the appropriate datasets, were consulted and reviewed when preparing this report (28th of November 2025).
- Each European Designations was assessed on an individual basis, as well as each Qualifying Interest in line with OPR guidance. This report summarises assessments undertaken by AVRIO Environmental Management for this Appropriate Assessment Report.

Where potential pathways for Significant Effect are identified, the site is included within the Likely Zone of Impact, and further assessment is required.

²⁷NPWS Protected Site Synopses and maps available on <http://www.npws.ie/en/ProtectedSites/>;

²⁸ EPA maps available on [EPA Maps](#)

²⁹ Scottish Natural Heritage (SNH) (July 2013) Assessing Connectivity with Special Protection Areas (SPA);

3.2 SPR Model – Source

3.2.1 Scope of Works

The proposed development comprises the demolition of the existing agricultural structures on site and the construction of a residential development of 99 no. dwellings, a childcare facility and two GAA playing pitches and clubhouse facility, on a site of 8.2 ha located to the south of the Hazelwood Road (R286) on lands at Hazelwood Demesne, Sligo, County Sligo.

The proposed development comprises:

- The demolition of the existing agricultural structures on site (276.8 sq.m)
- The construction of 99 no. residential dwellings consisting of:
 - 10 no. one bedroom units
 - 20 no. two bedroom units
 - 50 no. three bedroom units
 - 7 no. four bedroom units
 - 12 no. five bedroom units.
- The provision of 168 no. car parking spaces and 50 no. bicycle spaces for the residential units;
- The construction of a standalone childcare facility (455 sq.m) with 12 no. designated staff parking spaces and 6 no. drop off spaces;
- The provision of 3,072 sq.m of public open space and 61 sq.m of communal open space;
- Two GAA playing pitches on an area of 1.895 ha to the west and south-west of the residential development;
- A two storey Clubhouse (522 sq.m) with a car parking area providing for 2 no. bus spaces, 30 no. car parking spaces and 6 no. accessible spaces, associated with the GAA Pitches;
- The provision of a new entrance onto the R286 Hazelwood Road for vehicular, pedestrian and cycling access;
- The provision of a new pedestrian footpath and cycle lane (88m) along the R286 Hazelwood Road and a pedestrian crossing; and
- All associated and ancillary infrastructure (including surface water and foul water drainage and water supply), bin storage, internal streets, public lighting, landscaping, boundary treatments and development works.

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3.2.2 Potential Sources of Impact

3.2.2.1 Construction Phase

During the construction phase, potential sources of impact include soil disturbance, which may result in increased sediment runoff into the soil and drainage ditch. The improper handling of chemicals or fuels on-site poses a risk of spills, potentially contaminating the soil also if not carefully managed. Dust emissions from earthworks and machinery could degrade local air quality, while noise and vibrations from construction activities may disrupt sensitive wildlife or habitats. Additionally, the removal of the existing vegetation on site to accommodate the works could result in habitat disturbance and biodiversity loss.

3.2.2.2 Operational Phase

During the operational phase, potential impacts include the discharge of untreated surface water runoff, which could percolate into the soil and contribute to contamination if not adequately managed. Similarly, the discharge of untreated foul water runoff poses risks to the soil and groundwater quality, necessitating the implementation of effective wastewater treatment systems. Variations in drainage patterns resulting from the development could alter natural water flow, potentially leading to localised flooding or waterlogging if proper drainage infrastructure is not in place.

3.2.2.3 Decommissioning Phase

As the development on-site is considered to be permanent, there is no envisioned decommissioning stage of the project. Therefore, no effects are anticipated with regard to decommissioning activities for the application site. The carrying out of demolition or maintenance activities on the site is anticipated to result in comparable disturbances to those outlined in earlier sections relating to the construction phase of the project.

3.3 SPR Model – Pathway

3.3.1 Surface Water Pathway

The site is within the Sligo Bay Catchment area (35) and the Bonet_SC_030 (35_10) sub-catchment area. A small drainage ditch was noted on-site to the eastern site boundary, comprising a shallow, stagnant flow, and is likely utilised for run-off from the agricultural fields. This ditch flows along the eastern boundary of the site, connecting into the Sligo watercourse to the southwest of the site EPA code: IE_WE_35G010200 (segment code: 35_4047)) and eventually discharges into the Garavogue Estuary. Through this, the watercourse is flows through Lough Gill SAC.

Consideration was also given to European Designations which have potential to be connected via pollutants discharging into the Garavogue River and further Sligo Bay. This included Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA. These European Designations have been screened in for further assessment. Further, outwith Sligo Bay, several other European Designations are housed namely Drumcliff Bay SPA, Ballysadare Bay SPA, and Ballysadare Bay SAC. While a theoretical hydrological pathway may exist between the site and between the aforementioned designations, the potential for pollutants to reach these in significant concentrations is low. The pathway

is functionally broken due to the substantial natural attenuation, and tidal dilution associated with Sligo Bay, and the overall distance pollutants would be required to travel. Therefore, further European Designations via this pathway have been screened out.

To summarise, a Surface Water Pathway exist between the site and 3-no European Designated Sites:

- [001976] Lough Gill SAC;
- [000627] Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC; and,
- [004035] Cummeen Strand SPA.

Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Cummeen Strand SPA, and Lough Gill SAC will be carried forward for further assessment for Surface Water Pathways.

3.3.2 Groundwater Pathway

Geological Survey Ireland states that groundwater bodies are delineated based on the continuity of flow within ecosystems and the capacity for environmental impacts on surface ecosystems³⁰. The site is entirely encompassed within the Carrowmore East Groundwater Body (IE_WE_G_0042). The Groundwater Body (GWB) covers an area of 58km² and occupies an area around Lough Gill. The land surface is characterised by an upland area to the east which slopes towards Lough Gill and the coast. It comprises regionally important karstified aquifers, dominated by conduit flow; the main discharges are to springs, streams, rivers, and lakes. Overall, groundwater flow direction will be towards Lough Gill (although the karstified nature of the bedrock means that locally, groundwater flow direction can be highly variable). On the precautionary principle, a groundwater pathway can be determined to Lough Gill SAC.

Consideration was also given to European Designations which have potential to be connected via pollutants discharging into Lough Gill from the groundwater body and carrying out along the Garavogue River and further Sligo Bay. This included Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC and Cummeen Strand SPA. These European Designations have been screened in for further assessment. Further, outwith Sligo Bay, several other European Designations are housed namely Drumcliff Bay SPA, Ballysadare Bay SPA, and Ballysadare Bay SAC. While a theoretical hydrogeological pathway may exist between the site and between the aforementioned designations, the potential for pollutants to reach these in significant concentrations is low. The pathway is functionally broken due to the substantial natural attenuation, and tidal dilution associated with Sligo Bay, and the overall distance pollutants would be required to travel through a GWB and watercourse. Therefore, further European Designations via this pathway have been screened out.

³⁰ Water Framework Directive (WFD) – Approach to Delineation of Groundwater Bodies: [Approach to Delineation of Groundwater Bodies](#)

Aside from Lough Gill SAC and Cummeen Strand/Drumcliff Bay (Sligo) Bay SAC, there are no further European Designated sites within Carrowmore East Groundwater Body (IE_WE_G_0042).

To summarise, a Groundwater Pathway exist between the site and 3-no European Designated Sites:

- [001976] Lough Gill SAC;
- [000627] Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC; and,
- [004035] Cummeen Strand SPA.

Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Cummeen Strand SPA, and Lough Gill SAC will be carried forward for further assessment for Groundwater Pathways.

3.3.3 Land & Air Pathways

3.3.3.1 Land Pathways

Distance Measurements (metres) from European Designations within close proximity to the development were calculated, utilising EPA map viewer³¹.

Lough Gill SAC lies within 50m of the southwestern site boundary; as such, a land pathway exists to this SAC. Outwith this, the next closest European designation is Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, located approx. 2.05km west of the site. Given this, there are no land pathways from the development site to any other European designated sites.

Indirect Land pathways were also assessed for Special Protected Areas (SPA) within a 15km radius of the site. The SPAs of interest were as follows:

- [004013] Drumcliff Bay SPA – Sanderling; Bar-tailed Godwit; Wetland and Waterbirds
- [004035] Cummeen Strand SPA – Light-bellied Brent Goose; Oystercatcher; Redshank; Wetland and Waterbirds
- [004129] Ballysadare Bay SPA – Light-bellied Brent Goose; Grey Plover; Dunlin; Bar-tailed Godwit; Redshank; Wetland and Waterbirds
- [004187] Sligo/Leitrim Uplands SPA – Peregrine; Chough
- [004234] Ballintemple and Ballygilgan SPA – Barnacle Goose

No qualifying interest species of these SPAs were recorded in large aggregations within the site or its surroundings during the bird surveys (See results incorporated into Ecological Impact Assessment for this development). Therefore, functionally-linked/indirect land pathways can be ruled out.

Lough Gill SAC will be carried forward for further assessment for Land Pathways.

³¹EPA Map Viewer (2024): [EPA Maps](#)

BS 5228-1:2009+A1:2014 describes that noise impacts within 50m to 300m of a receptor are significant depending on the equipment and activities. Beyond this, noise attenuation due to distance, barriers, and terrain often reduces the impact. Noise levels decrease with distance due to geometric spreading and environmental factors. For a point source, the attenuation reduces by approximately 6db for every doubling of distance. For instance, at 10m from the source, the baseline noise could be 85dB for a specific machine; at 20m from the source, it would be 79dB, and at 40m from the source, it would be 73dB³².

To understand the disturbance caused by noise, it is essential to understand the baseline noise conditions. The development is situated in Hazelwood Demesne, within County Sligo, in a relatively natural/rural area (45dB³³). The site itself comprises farmland situated adjacent to active commercial business such as “John McHale Sawmill” and “Feehily’s Sligo Travel”, which would raise the ambient noise level. Additionally, there is a main road (Hazelwood Road – R286) present adjacent to the site (Passenger Car at 65mph at 25ft– 77dB³⁴).

It is important to clarify the extent of the proposed development works, the scope of machinery/tools to be used, as well as the duration of disturbance. The proposed development will involve the construction of a new housing development, comprising 99-no. properties and associated amenities. The project will require the use of heavy machinery, including excavators, and other specialised equipment for site preparation, landscaping, and infrastructure upgrades. The duration of the works will involve temporary but impactful disturbances, such as noise, dust, and increased traffic in the area.

Based on this, potential sources of noise from the proposed works may include:

- Use of Heavy Machinery e.g., Excavators (typically 85dB at 50ft distance)
- Hand-held Power Tools (maximum of 120dB at source³⁵)
- Transportation of Equipment and Personnel – Heavy Machinery as mentioned above, as well as increased traffic to a site
- Material Handling e.g., concrete pouring, movement of stone etc.

³² BSI (British Standard Institution) (2014). BS 5228-1:2009+A1:2104 – Code of Practice for Noise and Vibrations Control on Construction and Open Sites

³³ IAC Acoustics: Comparative Examples of Noise Levels: [Comparative Examples of Noise Levels - IAC Acoustics](#)

³⁴ IAC Acoustics: Comparative Examples of Noise Levels: [Comparative Examples of Noise Levels - IAC Acoustics](#)

³⁵ IAC Acoustics: Comparative Examples of Noise Levels: [Comparative Examples of Noise Levels - IAC Acoustics](#)

At the source, a sporadic use of a Power Tool/Excavator for works will exert a sound level of 120dB; after review of the works, this is likely the source of greatest source of noise disturbance. Using the distance calculation outlined in BS 5228-1, an 120dB point noise from an excavator/power tools would require a distance of 512m to achieve ambient noise levels less than usual levels (approx. 50-60 dB, with passing of cars and trains at approx. 80 dB). In this case, to account for potential variations in tool usage for site works, the precautionary principle has been applied to add an additional buffer of 10%, therefore determining a Zone of Influence of approx. 565m.

Lough Gill SAC lies adjacent to the southwestern site boundary; as such, a noise pathway exists to this SAC. Outwith this, the next closest European designation is Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, located approx. 2.05km west of the site. Given this, there are no noise pathways from the development site to any other European designated sites.

Lough Gill SAC will be carried forward for further assessment for Noise Pathways.

3.3.3.2.2 Dust

Guidance on distances for the Zone of Influence was taken from guidelines from the Institute of Air Quality Management (IAQM)'s "Guidance on the Assessment of Dust from Demolition and Construction". This states that an Ecological Receptor via dust pollution is present if it is within 50m of the site boundary or 50m of routes used by construction vehicles on public highways. Given the distance from possible site entrances to the nearest designated sites, which is 635m at its closest point, no European designations are within the zone of influence for dust pathways.

Lough Gill SAC lies adjacent to the southwestern site boundary; as such, a dust pathway exists to this SAC. Outwith this, the next closest European designation is Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, located approx. 2.05km west of the site. Given this, there are no dust pathways from the development site to any other European designated sites.

Lough Gill SAC will be carried forward for further assessment for Dust Pathways.

3.4 SPR Model – Receptor

The site is connected to 3-no. European Designations via viable pathways. These are:

- [001976] Lough Gill SAC;
- [000627] Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC; and,
- [004035] Cummeen Strand SPA.

Table 3-1. Summary of Screened-In European Designations and S-P-R model establishment for each pathway

European Designated site	Surface Water	Groundwater	Land	Air (Noise)	Air (Dust)
[000627] Cummeen Strand/ Drumcliff Bay SAC					
[004035] Cummeen Strand SPA					
[001976] Lough Gill SAC					

KEY: **RED** = S-P-R model established for designated site; **GREEN** = Absence of S-P-R Model.

A source-pathway-receptor model has been established to these designations at site level. However, individual qualifying interests (QI) associated with these sites may or may not be viable receptors to impacts via the above pathways. S-P-R connections to individual qualifying interests are outlined in Table 3-2 below.

Table 3-2: Assessment of Qualifying Interests for Lough Gill SAC, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, and Cummeen Strand SPA

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
[001976] Lough Gill SAC ³⁶			
[3150] Natural Eutrophic Lakes with Magnopotamion or Hydrocharition – type vegetation	Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation in Ireland are poorly studied but are known to occur mainly in lowland, base-rich lakes of the midlands and northeast. They support a high diversity of pondweeds (e.g., <i>Potamogeton lucens</i> , <i>P. praelongus</i> , <i>P. perfoliatus</i>) along with other submerged and floating plants such as <i>Myriophyllum spicatum</i> , <i>Sagittaria sagittifolia</i> , <i>Ceratophyllum demersum</i> and <i>Lemna trisulca</i> .	Surface Water Via surface water, pollutants will travel and discharge into SLIGO (IE_WE_35G010200), to the south of the site and carry out into Garavogue River/Estuary and further Sligo Bay. The positioning of this QI is not within this path, means that there is no viable pathway to this QI. Groundwater At its closest point this QI is approx. 1.04km away from the site works area (southeast); although not its closest point, given the unpredictable nature of the karstified aquifer, precautionarily this connection is viable. This QI is mainly fed by surface water (rivers, streams, runoff), and whilst not usually groundwater-dependent, it cannot be completely ruled-out. Land At its closest point, this QI is approx. 1.04km away from the site works area. Therefore, it is outwith the Zone of Influence for Land Pathways and will not be considered further. Air (Noise) This QI is not suspected to Noise Pathways, given it is a sessile habitat. Air (Dust) At its closest point, this QI is approx. 1.04km away from the site works area. Therefore, it is outwith the Zone of Influence for Dust Pathways and will not be considered further.	<u>Yes:</u> Groundwater
[6210] Semi-Natural Dry Grassland and Scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>)	Calcareous grassland in Ireland consists of species-rich plant communities growing on shallow, well-drained, lime-rich soils, often found on eskers, limestone outcrops, and limestone pavement, with the Burren, Aran Islands, and Dartry Mountains being	Surface Water Via surface water, pollutants will travel and discharge into SLIGO (IE_WE_35G010200), to the south of the site and carry out into Garavogue River/Estuary and further Sligo Bay. The positioning of this QI is not within this path, means that there is no viable pathway to this QI. Groundwater	<u>No</u>

³⁶ NPWS Conservation Objectives – Lough Gill SAC: [Site specific cons obj](#)

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
	key areas. These grasslands support a diverse mix of calcicole herbs and grasses, including wild carrot, lady's bedstraw, quaking-grass, and glaucous sedge, with high-quality examples featuring orchids and specialised Burren species such as spring gentian and bloody crane's-bill.	At its closest point this QI is approx. 3.5km away from the site works area (east); and away from Lough Gill, where the majority of groundwater is likely to flow. Additionally, these grasslands occur on dry, shallow, well-drained calcareous soils and as such are not groundwater-fed. Once discharged into Lough Gill, the flow toward Sligo Bay takes pollutants away from this QI. Land At its closest point this QI is approx. 3.5km away from the site works area (east). Therefore, it is outwith the Zone of Influence for Land Pathways and will not be considered further. Air (Noise) This QI is not suspected to Noise Pathways, given it is a sessile habitat. Air (Dust) At its closest point this QI is approx. 3.5km away from the site works area (east). Therefore, it is outwith the Zone of Influence for Dust Pathways and will not be considered further.	
[91A0] Old Sessile Oak Woods with Ilex and Blechnum in the British Isles	Old oak woodland in Ireland typically develops on podzolised or other acidic, well-drained soils, mostly in upland, southern, and western regions, with additional scattered occurrences elsewhere. It includes several subtypes: a western oceanic form rich in bryophytes, lichens, and filmy ferns due to high rainfall; a drier, more species-poor subtype on less rocky ground; and a more base-rich subtype with greater tree and herb diversity. These woodlands are characterised by sessile oak, alongside holly, downy birch, and rowan, with an understorey of honeysuckle, ivy, bilberry, numerous ferns, great wood-rush.	Surface Water Via surface water, pollutants will travel and discharge into SLIGO (IE_WE_35G010200), to the south of the site and carry out into Garavogue River/Estuary and further Sligo Bay. The positioning of this QI is not within this path, means that there is no viable pathway to this QI. Groundwater At its closest point this QI is approx. 6.1km away from the site works area (southeast); once discharged into Lough Gill, the flow toward Sligo Bay takes pollutants away from this QI. Additionally, this habitat occurs on well-drained soils, with moisture coming primarily from precipitation and soil water. Land At its closest point this QI is approx. 6.1km away from the site works area (southeast). Therefore, it is outwith the Zone of Influence for Land Pathways and will not be considered further. Air (Noise) This QI is not suspected to Noise Pathways, given it is a sessile habitat. Air (Dust) At its closest point this QI is approx. 6.1km away from the site works area (southeast). Therefore, it is outwith the Zone of Influence for Dust Pathways and will not be considered further.	<u>No</u>

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
[91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)	Alluvial woodland in Ireland includes several variants, the most widespread being ash–alder riparian forests that develop along lowland and upland watercourses. These woodlands form on heavy soils subject to periodic flooding yet remain well-drained during low water. They support a rich herb layer with species such as meadowsweet, wild angelica, wood dock, sedges, lesser celandine, wood anemone, remote sedge, gypsywort, and water avens. Another form is the tall willow gallery forest, occurring beside river channels and on river islands where roots are frequently submerged; these are dominated by white willow, osier, and almond willow, with alder uncommon, and have a lush ground flora including reed canary-grass, nettle, and meadowsweet.	Surface Water Via surface water, pollutants will travel and discharge into SLIGO (IE_WE_35G010200), to the south of the site and carry out into Garavogue River/Estuary and further Sligo Bay. This pathway passes through the spatial extent of this QI, and therefore given the interchange of surface water and groundwater pollutants, a pathway to this QI is viable. Groundwater At its closest point this QI is approx. 63m away from the site works area (west); once discharged into Lough Gill, the flow toward Sligo Bay takes pollutants away from this QI. Additionally, this habitat is strongly influenced by groundwater; water-tolerant and rely on high water table, often occurring where soils are saturated. Land At its closest point this QI is approx. 63m away from the site works area (west). Therefore, it is outwith the Zone of Influence for Land Pathways and will not be considered further. Air (Noise) This QI is not suspected to Noise Pathways, given it is a sessile habitat. Air (Dust) At its closest point this QI is approx. 63m away from the site works area (west). Precautionarily, this QI is assessed as being within the Zone of Influence for Dust.	<u>Yes:</u> Surface Water Groundwater Dust
[1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	The white-clawed crayfish (<i>Austropotamobius pallipes</i>), Ireland's largest freshwater arthropod, favours cool, well-oxygenated, lime-rich waters but can tolerate notable variation in these conditions. It requires diverse habitats, with juveniles sheltering among roots, gravel, or aquatic plants, while adults depend on stones or earthen banks for cover. An omnivore, it relies more heavily on animal food when young. Although commonly linked with high-quality waters, in Ireland it can persist in more moderate conditions. Today it is regarded less as a water-quality indicator and more as a keystone heritage species,	Surface Water Via the surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) may provide suitable habitat for the species to utilise. As such, a pathway to this QI is viable. Groundwater NPWS have mapped previous records of White-Clawed Crayfish within Lough Gill SAC; the closest of these is approx. 9.9km southeast of the site works area. Under the precautionary principle, White Clawed Crayfish could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site. As such, discharged pollutants may impact this species and as such it has been ruled in for viable groundwater pathways. Land Under the precautionary principle, Sea Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is	<u>Yes:</u> Surface Water Groundwater

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
	valued for its size, longevity, and ecological importance.	440m south of the site; the watercourse on-site was deemed unsuitable for the species. Therefore, it is outwith the Zone of Influence for Land Pathways and will not be considered further. Air (Noise) This QI is not subjected to Noise Pathways, due to the fundamental differences in sound propagation between air and water. When airborne sound waves encounter a water surface, they experience substantial energy loss, with the majority reflecting off rather than transmitting into the water. As such, there is no viable noise pathway to this QI. Air (Dust) Under the precautionary principle, White Clawed Crayfish could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site. This habitat falls outside the Zone of Influence for Dust.	
[1095] Sea Lamprey (<i>Petromyzon marinus</i>)	The life cycle of the sea lamprey (<i>Petromyzon marinus</i>) contains both a marine phase and a freshwater phase. Adult sea lamprey living as external parasites on host fish or marine mammals at sea grow in length from 60 to 100cm before migrating in spring into freshwater to excavate redds or spawning nests in gravelled areas of large rivers. Sea Lamprey has been recorded in the Garavogue River.	Surface Water Via the surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) may provide suitable habitat for the species to utilise. As such, a pathway to this QI is viable. Groundwater NPWS have not mapped areas/hotspots of Sea Lamprey within Lough Gill SAC. Under the precautionary principle, Sea Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site. As such, discharged pollutants may impact this species and as such it has been ruled in for viable groundwater pathways. Land Under the precautionary principle, Sea Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site; the watercourse on-site was deemed unsuitable for the species. Therefore, it is outwith the Zone of Influence for Land Pathways and will not be considered further. Air (Noise) This QI is not subjected to Noise Pathways, due to the fundamental differences in sound propagation between air and water. When airborne sound waves encounter a water surface, they experience substantial energy loss, with the	<u>Yes:</u> Surface Water Groundwater

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
		majority reflecting off rather than transmitting into the water. As such, there is no viable noise pathway to this QI. Air (Dust) Under the precautionary principle, Sea Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site. This habitat falls outside the Zone of Influence for Dust.	
[1096] Brook Lamprey (<i>Lampetra planeri</i>)	The brook lamprey (<i>Lampetra planeri</i>) is Ireland's smallest lamprey species, reaching only 15–18 cm and, unlike sea and river lampreys, is non-parasitic and entirely freshwater-resident. Adults spawn in spring, creating shallow nests in small gravels in slow-flowing areas. The larvae, or ammocoetes, drift downstream to silty riverbeds or margins, where they burrow and live as filter feeders for several years. After metamorphosing into young adults, they overwinter and then migrate short distances upstream to spawn in gravel-rich zones, dying soon after reproduction.	Surface Water Via the surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) may provide suitable habitat for the species to utilise. As such, a pathway to this QI is viable. Groundwater NPWS have not mapped areas/hotspots of Brook Lamprey within Lough Gill SAC. Under the precautionary principle, Brook Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site. As such, discharged pollutants may impact this species and as such it has been ruled in for viable groundwater pathways. Land Under the precautionary principle, Sea Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site; the watercourse on-site was deemed unsuitable for the species. Therefore, it is outwith the Zone of Influence for Land Pathways and will not be considered further. Air (Noise) This QI is not subjected to Noise Pathways, due to the fundamental differences in sound propagation between air and water. When airborne sound waves encounter a water surface, they experience substantial energy loss, with the majority reflecting off rather than transmitting into the water. As such, there is no viable noise pathway to this QI. Air (Dust) Under the precautionary principle, Brook Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site. This habitat falls outside the Zone of Influence for Dust.	<u>Yes:</u> Surface Water Groundwater
[1099] River Lamprey (<i>Lampetra fluviatilis</i>)	The river lamprey (<i>Lampetra fluviatilis</i>) breeds in freshwater rivers and streams. Adults spawn in spring, excavating shallow nests in riverine sections	Surface Water	<u>Yes:</u> Surface Water

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
	comprising fine gravels and small stones. After hatching, the larvae or 'ammocoetes' drift or swim downstream to areas of riverbed or margins with fine silt deposits. They burrow into this bed material where they live as filter feeders over a period of years before transforming into young adult fish and migrating downriver to estuarine and marine habitats. River Lamprey has been recorded in the Garavogue River and further upstream in the tributaries of Lough Gill.	Via the surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) may provide suitable habitat for the species to utilise. As such, a pathway to this QI is viable. Groundwater NPWS have not mapped areas/hotspots of River Lamprey within Lough Gill SAC. Under the precautionary principle, River Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site. As such, discharged pollutants may impact this species and as such it has been ruled in for viable groundwater pathways. Land Under the precautionary principle, Sea Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site; the watercourse on-site was deemed unsuitable for the species. Therefore, it is outwith the Zone of Influence for Land Pathways and will not be considered further. Air (Noise) This QI is not subjected to Noise Pathways, due to the fundamental differences in sound propagation between air and water. When airborne sound waves encounter a water surface, they experience substantial energy loss, with the majority reflecting off rather than transmitting into the water. As such, there is no viable noise pathway to this QI. Air (Dust) Under the precautionary principle, River Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site. This habitat falls outside the Zone of Influence for Dust.	Groundwater
[1106] Salmon (<i>Salmo salar</i>)	Atlantic salmon are native to the North Atlantic, including Irish rivers. Most spend two years in freshwater, then migrate to sea and return after one winter as grilse, or after two winters as spring salmon. Some survive spawning and return to spawn again.	Surface Water Via the surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) may provide suitable habitat for the species to utilise. As such, a pathway to this QI is viable. Groundwater NPWS have not mapped areas/hotspots of Salmon within Lough Gill SAC. Under the precautionary principle, Salmon could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site. As such, discharged pollutants may impact this species and as such it has been ruled in for viable groundwater pathways.	<u>Yes:</u> Surface Water Groundwater

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
		Land Under the precautionary principle, Sea Lamprey could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site; the watercourse on-site was deemed unsuitable for the species. Therefore, it is outwith the Zone of Influence for Land Pathways and will not be considered further. Air (Noise) This QI is not subjected to Noise Pathways, due to the fundamental differences in sound propagation between air and water. When airborne sound waves encounter a water surface, they experience substantial energy loss, with the majority reflecting off rather than transmitting into the water. As such, there is no viable noise pathway to this QI. Air (Dust) Under the precautionary principle, Salmon could potentially utilise all habitats within Lough Gill, and as such the closest potential suitable habitat is 440m south of the site. This habitat falls outside the Zone of Influence for Dust.	
[1355] Otter (<i>Lutra lutra</i>)	Otters in Ireland depend on two key needs: abundant aquatic prey and safe resting refuges. They inhabit rivers, lakes, and coastal areas where food is plentiful and bank-side vegetation provides good cover. As opportunistic predators, their diet is highly varied—coastal otters feed on fish, crabs, and molluscs, while freshwater individuals consume a wide range of fish from sticklebacks to salmon and eels, with crayfish and frogs also becoming important at certain times or in particular locations.	Surface Water Via the surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) may provide suitable habitat for the species to utilise. As such, a pathway to this QI is viable. Groundwater NPWS have mapped commuting corridors of Otter within Lough Gill SAC; the closest of these is approx. 1.04km southeast of the site works area. However, Otter can utilise a wide range of terrestrial and aquatic habitats within Lough Gill SAC, including up to the boundary of the SAC itself, adjacent to the site works area. Therefore, groundwater pathways exist to suitable habitat for Otter, both terrestrial and aquatic, in which they create holts/resting places, forage, and commute. Land Otter can utilise a wide range of terrestrial and aquatic habitats within Lough Gill SAC, including up to the boundary of the SAC itself, adjacent to the site works area. Additionally, habitat on-site may be utilised by Otter and be functionally linked. Under the precautionary principle, land pathways may exist to this QI, given the location of the European Designation and suitable terrestrial habitat for Otters.	Yes: Surface Water Groundwater Land Noise Dust

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
		Air (Noise) Otter can utilise a wide range of terrestrial and aquatic habitats within Lough Gill SAC, including up to the boundary of the SAC itself, adjacent to the site works area. Under the precautionary principle, noise pathways may exist to this QI, given the location of the European Designation and suitable terrestrial habitat for Otters. Air (Dust) Otter can utilise a wide range of terrestrial and aquatic habitats within Lough Gill SAC, including up to the boundary of the SAC itself, adjacent to the site works area. Under the precautionary principle, dust pathways may exist to this QI, given the location of the European Designation and suitable terrestrial habitat for Otters.	
[000627] Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC³⁷			
[1130] Estuaries	Estuaries are coastal inlets influenced by both freshwater and seawater, forming dynamic, highly productive habitats that support a wide range of coastal species. They act as vital feeding, breeding, and resting areas for birds and mammals and often contain a mosaic of associated habitats, including Annex I mudflats, along with boulder and cobble fringes around their edges. Estuarine seabeds vary from coarse substrates and bedrock to fine sands and mud, depending on location. Their ecological conditions are shaped largely by the degree and speed of freshwater–saltwater mixing, which is controlled by factors such as river size, estuary shape, wind, wave action, and tidal state.	Surface Water Estuaries have been mapped within Garavogue River/Estuary, approx. 2.05km west of the site. Via the aforementioned surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) and carry out further to this SAC and QI. Therefore, a viable surface water pathway is present. Groundwater Estuaries have been mapped within Garavogue River/Estuary, approx. 2.05km west of the site. Via the aforementioned groundwater pathway, pollutants will percolate into Lough Gill and travel outward toward this Qualifying Interest. Therefore, a viable groundwater pathway is present.	Yes: Surface Water Groundwater

³⁷ NPWS Conservation Objectives – Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC: [Site specific cons obj](#)

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
[1140] Mudflats and sandflats not covered by seawater at low tide	Tidal mudflats and sandflats habitat is comprised of the intertidal section of the coastline where sands and muds dominate. They are dynamic ecosystems, dependent on the balance of natural accretion and erosion. Sligo Harbour receives the waters of the Garavogue River, which flows from Lough Gill, while Drumcliff Bay receives the Drumcliff River which flows from Glencar Lough. At low tide extensive areas of intertidal flats are exposed in both of these sheltered estuarine bays. The intertidal flats support a diverse macrofauna, with invertebrate species such as lugworm (<i>Arenicola marina</i>), common cockle (<i>Cerastoderma edule</i>), sand mason worm (<i>Lanice conchilega</i>), Baltic tellin (<i>Macoma balthica</i>), spire shell (<i>Hydrobia ulvae</i>) and common mussel (<i>Mytilus edulis</i>) being frequent. Of particular note is the presence of the eelgrasses <i>Zostera noltii</i> and <i>Z. angustifolia</i> beds in both bays.	Surface Water Mudflats/Sandflats have been mapped within Garavogue River/Estuary, approx. 2.05km west of the site. Via the aforementioned surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) and carry out further to this SAC and QI. Therefore, a viable surface water pathway is present. Groundwater Mudflats/Sandflats have been mapped within Garavogue River/Estuary, approx. 2.05km west of the site. Via the aforementioned groundwater pathway, pollutants will percolate into Lough Gill and travel outward toward this Qualifying Interest. Therefore, a viable groundwater pathway is present.	<u>Yes:</u> Surface Water Groundwater
[2110] Embryonic shifting dunes	Embryonic shifting dunes are low sand mounds, generally less than a metre high, occurring between the high tide mark and the partially stabilised marram (white) dunes. Embryonic shifting dunes are unstable habitats where wind-blown sand is common and they are still vulnerable to saltwater intrusion. Shifting Marram dunes are found in a number of locations, including Rosses Point, Strandhill, Coney Island and Yellow Strand. In the latter three areas, the areas of shifting dunes are linked at least to some extent to recent disturbance (e.g. erosion, storm breaches, etc.).	Surface Water Embryonic Shifting Dunes have been mapped at the mouth of Garavogue Estuary, approx. 10.3km west of the site works area. Via the aforementioned surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) and carry out further to this SAC and QI. Whilst the QI is a substantial distance away from the site works area, given the nature of the development comprising both a construction and continuous operational phase, it cannot be ruled out at this stage. Groundwater Embryonic Shifting Dunes have been mapped at the mouth of Garavogue Estuary, approx. 10.3km west of the site works area. Via the aforementioned groundwater pathway, pollutants will percolate into Lough Gill and travel outward toward this Qualifying Interest. Whilst the QI is a substantial distance away from the site works area, given the nature of the development comprising	<u>Yes:</u> Surface Water Groundwater

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
		both a construction and continuous operational phase, it cannot be ruled out at this stage.	
[2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)	Fixed dune grassland is found behind Yellow Strand, and the main species are Sand Sedge (<i>Carex arenaria</i>) and Smooth Meadow-grass (<i>Poa pratensis</i>), with associated species including Lady's Bedstraw (<i>Galium verum</i>), Mouse-ear Hawkweed (<i>Hieracium pilosella</i>), Common Milkwort (<i>Polygala vulgaris</i>), Common Dog-violet (<i>Viola riviniana</i>), Mountain Everlasting (<i>Antennaria dioica</i>), Common Spotted-orchid (<i>Dactylorhiza fuchsii</i>), Early Marsh-orchid (<i>D. incarnata</i>), Frog Orchid (<i>Coeloglossum viride</i>) and Autumn Lady's-tresses (<i>Spiranthes spiralis</i>). Some areas of fixed dune at the site are suffering from under-grazing (e.g. north of Strandhill), and have a rank vegetation dominated by Marram, with species such as Red Fescue (<i>Festuca rubra</i>), Creeping Willow (<i>Salix repens</i>), Daisy (<i>Bellis perennis</i>) and Wild Thyme (<i>Thymus praecox</i>) also occurring. A relatively species-poor example of the habitat is found at Rosses Point, but typical species like Marram, Red Fescue, Lady's Bedstraw, Harebell (<i>Campanula rotundifolia</i>), Kidney Vetch (<i>Anthyllis vulneraria</i>) and Common Mouse-ear (<i>Cerastium fontanum</i>) do occur here.	Surface Water Fixed Coastal Dunes with Herbaceous Vegetation have been mapped at the mouth of Garavogue Estuary, approx. 10.2km west of the site works area. Via the aforementioned surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) and carry out further to this SAC and QI. Fixed dunes typically form further inland, where sands have stabilized. As they lie beyond the reach of tidal inundation, pollutants carried by wave action along the coast are unlikely to reach this qualifying interest. Groundwater Fixed Coastal Dunes with Herbaceous Vegetation have been mapped at the mouth of Garavogue Estuary, approx. 10.2km west of the site works area. Via the aforementioned groundwater pathway, pollutants will percolate into Lough Gill and travel outward toward this Qualifying Interest. Fixed dunes typically form further inland, where sands have stabilized. As they lie beyond the reach of tidal inundation, pollutants carried by wave action along the coast are unlikely to reach this qualifying interest.	No
[2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	White dunes are dunes which are partly stabilised and dominated by marram (<i>Ammophila arenaria</i>). They tend to be taller than embryonic shifting dunes and form further inland from these. The dunes are actively created by marram, which traps sand, but vegetation	Surface Water Shifting Dunes along the shoreline with <i>Ammophila arenaria</i> have been mapped at the mouth of Garavogue Estuary, approx. 10.4km west of the site works area. Via the aforementioned surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) and carry out further to this SAC and QI. Whilst the QI is a substantial distance away from the site works area, given the nature of	<u>Yes:</u> Surface Water Groundwater

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
	cover is incomplete. The dunes can build and erode quickly because of the presence of bare sand.	the development comprising both a construction and continuous operational phase, it cannot be ruled out at this stage. Groundwater Shifting Dunes along the shoreline with <i>Ammophila arenaria</i> have been mapped at the mouth of Garavogue Estuary, approx. 10.4km west of the site works area. Via the aforementioned groundwater pathway, pollutants will percolate into Lough Gill and travel outward toward this Qualifying Interest. Whilst the QI is a substantial distance away from the site works area, given the nature of the development comprising both a construction and continuous operational phase, it cannot be ruled out at this stage.	
[5130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands	In Ireland a juniper formation is defined as a discrete area supporting 50 or more juniper plants where no plant is more than 20 m from another. An area with Juniper (<i>Juniperus communis</i>) scrub is found on a gravel hill with species-rich fixed dune vegetation. Other species present in this area include Marram, Autumn Gentian (<i>Gentianella amarella</i>), Red Fescue, Lady's Bedstraw, Common Bird's-foot-trefoil, Harebell, Yellow-wort (<i>Blackstonia perfoliata</i>), Thyme leaved Sandwort (<i>Arenaria serpyllifolia</i>), Common Whitlowgrass (<i>Erophila verna</i>), Hoary Whitlowgrass (<i>Draba incana</i>), Devil's-bit Scabious (<i>Succisa pratensis</i>) and Early Hair-grass (<i>Aira praecox</i>).	Surface Water <i>Juniperus communis</i> formations on heaths or calcareous grasslands have been mapped approx. 11.2km northwest of the site works area. Via the aforementioned surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) and carry out further to this SAC and QI. Fixed dunes typically form further inland, where sands have stabilized. As they lie beyond the reach of tidal inundation, pollutants carried by wave action along the coast are unlikely to reach this qualifying interest. Groundwater <i>Juniperus communis</i> formations on heaths or calcareous grasslands have been mapped approx. 11.2km northwest of the site works area. Via the aforementioned groundwater pathway, pollutants will percolate into Lough Gill and travel outward toward this Qualifying Interest. This QI typically form further inland. As they lie beyond the reach of tidal inundation, pollutants carried by wave action along the coast are unlikely to reach this qualifying interest.	No
[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (*important orchid sites)	An area of approximately 3.7 hectares of Orchid-rich Calcareous Grassland, is reported to occur near Rosses Point, according to the Irish Semi-natural Grasslands Survey, 2010.	Surface Water This QI is approx. 8.5km northwest of the site works area. Via the aforementioned surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) and carry out further to this SAC and QI. Fixed dunes typically form further inland, where sands have stabilized. As they lie beyond the reach of tidal inundation, pollutants carried by wave action along the coast are unlikely to reach this qualifying interest. Groundwater:	No

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
		This QI is approx. 8.5km northwest of the site works area, and therefore, is not within the Zone of Influence (ZOI) for direct groundwater impacts. Via the aforementioned groundwater pathway, pollutants will percolate into Lough Gill and travel outward toward this Qualifying Interest. This QI typically form further inland. As they lie beyond the reach of tidal inundation, pollutants carried by wave action along the coast are unlikely to reach this qualifying interest.	
[7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>)	Petrifying springs are lime-rich water sources where tufa is actively deposited and where characteristic species of bryophytes are dominant or abundant. The emerging spring water is rich in carbon dioxide and dissolved calcium carbonate. On contact with the atmosphere, carbon dioxide is outgassed, and calcium carbonate is deposited as tufa. The resulting ecological conditions, with high pH and constant inundation by water and deposition of precipitated calcium carbonate, constitute a challenging environment for plants and animals, and the communities associated with petrifying springs are therefore highly specialised. The site has a good example of petrifying springs with tufa formations, with several species of bryophyte typical of the <i>Cratoneurion</i>. The springs occur along seepage zones in clay sea cliffs on the northern side of Sligo Harbour.	Surface Water This QI is located approx. 5.1km northwest of the site works area, within the boundaries of Garavogue Estuary, forming on seepage zones in clay sea cliffs. Petrifying springs rely on permanent irrigation, usually from upwelling groundwater sources or seepage sources; this QI falls within Rosses Point GWB, where there is a high degree of interconnection between groundwater and surface water. Via the aforementioned surface water pathway, pollutants will discharge into SLIGO (IE_WE_35G010200) and carry out further to this SAC and QI where interconnection within the GWB may exist. Therefore, a pathway cannot be ruled out at this stage. Groundwater: This QI is located approx. 5.1km northwest of the site works area, within the boundaries of Garavogue Estuary, forming on seepage zones in clay sea cliffs. Petrifying springs rely on permanent irrigation, usually from upwelling groundwater sources or seepage sources; this QI falls within Rosses Point GWB, where there is a high degree of interconnection between groundwater and surface water. Via the aforementioned groundwater pathway, pollutants will percolate into Lough Gill and travel outward toward this Qualifying Interest, where interconnection within the GWB may exist. Therefore, a pathway cannot be ruled out at this stage.	<u>Yes:</u> Surface Water Groundwater
[1014] <i>Vertigo angustior</i> (Narrow-mouthed Whorl Snail)	<i>Vertigo angustior</i> is one of eight species of whorl snail living in Ireland. The whorl snails are amongst the smallest of the Irish land molluscs. Its distribution is primarily western, mainly found on the Atlantic facing dune systems from Kerry to Donegal. It is considered to be under threat in Ireland and Europe and was assessed as Vulnerable on the Irish Red List. All whorl snails favour damp or wet habitats, where they live	Groundwater: Areas of this QI have been mapped by NPWS at the mouth of Garavogue Estuary/Sligo Bay, approx. 10.4km west of the site works area. The narrow-mouth Whorl Snail requires stable, permanently moist habitats and is highly vulnerable to physical disturbance; habitats such as grey fixed dunes, coastal marshes, and wet base-rich meadows are ideal habitats for this species. The aforementioned habitats are not within the tidal influence, forming further	No

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
	mostly in moss, leaves and decaying vegetation, and feed on bacterial films and decaying vegetation. <i>V. angustior</i> occurs in a variety of habitats including dune and coastal grassland, fen, marsh, saltmarsh and floodplains. Despite the wide range of habitats, the exact conditions it demands are rare; much of the habitat that is “almost correct” is devoid of the snail, while in other sites the appropriate ecotone is restricted to a narrow band only a few metres wide. This rare snail has been recorded from sand dunes at Killaspugbrone.	inland. Therefore, via the pathway of which pollutants will take from the site works area (percolate into GWB, then discharge into Lough Gill), there is not a viable pathway to this QI.	
[1095] <i>Petromyzon marinus</i> (Sea Lamprey)	The life cycle of the sea lamprey (<i>Petromyzon marinus</i>) contains both a marine phase and a freshwater phase. Adult sea lamprey living as external parasites on host fish or marine mammals at sea grow in length from 60 to 100cm before migrating in spring into freshwater to excavate redds or spawning nests in gravelled areas of large rivers. Sea Lamprey has been recorded in the Garavogue River.	Surface Water Sea Lamprey are sensitive to changes in estuaries and freshwater ecosystems. Contamination to surface water flowing into suitable habitat for this QI from site works could affect water quality, prey availability, or the structure of aquatic habitats, within the boundaries of this QI as well as in suitable habitat closer to the site works area. Groundwater: Sea Lamprey are sensitive to changes in estuaries and freshwater ecosystems, and groundwater plays a crucial role in maintaining water levels and quality in their habitats, such as rivers, streams, and wetlands. Contamination or alterations to groundwater flow from site works could affect water quality, prey availability, or the structure of aquatic habitats, within the boundaries of this QI as well as in suitable habitat closer to the site works area. A source-pathway-receptor connection via groundwater is considered and as such, this QI is screened in for further assessment due to its indirect effect.	<u>Yes:</u> Surface Water Groundwater
[1099] <i>Lampetra fluviatilis</i> (River Lamprey)	The river lamprey (<i>Lampetra fluviatilis</i>) breeds in freshwater rivers and streams. Adults spawn in spring, excavating shallow nests in riverine sections comprising fine gravels and small stones. After hatching, the larvae or ‘ammocoetes’ drift or swim downstream to areas of riverbed or margins with fine silt deposits. They burrow into this bed material	Surface Water River Lamprey are sensitive to changes in estuaries and freshwater ecosystems. Contamination to surface water flowing into suitable habitat for this QI from site works could affect water quality, prey availability, or the structure of aquatic habitats, within the boundaries of this QI as well as in suitable habitat closer to the site works area. Groundwater:	<u>Yes:</u> Surface Water Groundwater

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
	where they live as filter feeders over a period of years before transforming into young adult fish and migrating downriver to estuarine and marine habitats. River Lamprey has been recorded in the Garavogue River and further upstream in the tributaries of Lough Gill.	River Lamprey are sensitive to changes in estuaries and freshwater ecosystems, and groundwater plays a crucial role in maintaining water levels and quality in their habitats, such as rivers, streams, and wetlands. Contamination or alterations to groundwater flow from site works could affect water quality, prey availability, or the structure of aquatic habitats, within the boundaries of this QI as well as in suitable habitat closer to the site works area. A source-pathway-receptor connection via groundwater is considered and as such, this QI is screened in for further assessment due to its indirect effect.	
[1365] <i>Phoca vitulina</i> (Harbour Seal)	In Ireland harbour seals occur in estuarine, coastal and fully marine areas and also occupy regular haul-out sites about which animals breed, moult, rest and engage in social activity. Such sites tend to be found in enclosed sheltered bays, although the species may also occur on offshore islands and rocky skerries. The breeding season takes place mainly between May and July each year when pups are born and nursed for a period of about three weeks. Mating also takes place at breeding sites or in the water nearby. The harbour seal (<i>Phoca vitulina</i>), also known as the common seal, is the smaller of two seal species that commonly breed around the coast of Ireland and inhabit its inshore and offshore waters. Drumcliff Bay is important for the presence of a breeding population of Common Seal. Ardboline and Horse Islands on the western side of the site are also important as haul-out areas for this species. A minimum population of 12–15 individuals was estimated from counts made in various month in 2007 and 2008.	Surface Water Harbour seals primarily inhabit marine and coastal environments, for hauling out purposes as well as breeding; they utilise aquatic/marine habitats for foraging and commuting purposes. Contamination to surface water flowing into suitable habitat for this QI from site works could affect water quality, prey availability, or the structure of aquatic habitats, within the boundaries of this QI as well as in suitable habitat closer to the site works area. Groundwater: Harbour seals primarily inhabit marine and coastal environments, for hauling out purposes as well as breeding; they utilise aquatic/marine habitats for foraging and commuting purposes. NPWS have mapped the closest breeding/resting habitat at 13.5km away via groundwater to surface water pathway from the site works area; however, their mapped range comprises habitat as close as 2.05km mapped by NPWS within the boundaries of the SAC, as well as also being able to utilise habitat approx. 440m away. Contamination or alterations to groundwater flow from site works could result in localised changes in water composition, indirectly affecting marine food webs. A source-pathway-receptor connection via groundwater is considered and as such, this QI is screened in for further assessment due to its indirect effect.	<u>Yes:</u> Surface Water Groundwater

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
[004035] Cummeen Strand SPA ³⁸			
[A130] Oystercatcher (<i>Haematopus ostralegus</i>), Wintering population	The Oystercatcher (<i>Haematopus ostralegus</i>) is a striking wader with bold black and white plumage, a long, bright orange-red bill, and distinctive yellow eyes. Found along Ireland's coastlines, particularly in estuaries, mudflats, and sandy beaches, Oystercatchers feed primarily on molluscs, such as cockles and mussels, using their strong bills to pry open shells. They are highly social birds, often seen in pairs or larger groups, especially during the winter months when they form large flocks. Oystercatchers are known for their loud, piping calls and are often seen running along the shoreline or probing the sand and mud for food. Cummeen Strand supports nationally important populations of Oystercatcher.	Surface Water Foraging habitat of bird species within Cummeen Strand SPA are influenced by tidal processes, and therefore pollutants within surface water may affect salinity and nutrient levels of these habitats, impacting quality and suitability of feeding habitats. A source-pathway-receptor connection via surface water is considered and as such, this QI is screened in for further assessment due to its indirect effect. Groundwater While the primary foraging habitats of many bird species within Cummeen Strand SPA are influenced by tidal processes, some estuarine areas may be affected by groundwater inputs that regulate salinity and nutrient levels. Contamination or changes to groundwater flow from site activities could potentially impact water quality and the suitability of feeding habitats. A source-pathway-receptor connection via groundwater is considered and as such, this QI is screened in for further assessment due to its indirect effect.	<u>Yes:</u> Surface Water Groundwater
[A999] Wetlands and Waterbirds	Wetlands and Waterbirds is a key habitat and biodiversity feature, combining both the varied wetland ecosystems and the bird species that rely on them. Wetlands are vital habitats for many bird species, particularly waterbirds, providing essential resources such as feeding, nesting, and shelter. These habitats include estuaries, mudflats, reedbeds, and shallow freshwater and coastal wetlands. Waterbirds, such as waders, waterfowl, and seabirds, rely on wetlands for foraging and breeding.	Surface Water Foraging habitat of bird species within Cummeen Strand SPA are influenced by tidal processes, and therefore pollutants within surface water may affect salinity and nutrient levels of these habitats, impacting quality and suitability of feeding habitats. A source-pathway-receptor connection via surface water is considered and as such, this QI is screened in for further assessment due to its indirect effect. Groundwater While the primary foraging habitats of many bird species within Cummeen Strand SPA are influenced by tidal processes, some estuarine areas may be affected by groundwater inputs that regulate salinity and nutrient levels. Contamination or changes to groundwater flow from site activities could potentially impact water quality and the suitability of feeding habitats. A source-pathway-receptor connection via groundwater is considered and as such, this QI is screened in for further assessment due to its indirect effect.	<u>Yes:</u> Surface Water Groundwater

³⁸ NPWS Conservation Objectives – Cummeen Strand SPA: [Site specific cons obj](#)

Qualifying Interest	Description of Qualifying Interest	Description of Source-Pathway-Receptor Connection for Screened-In Pathways	Source-Pathway-Receptor Achieved
[A162] Redshank (<i>Tringa tetanus</i>), Wintering population	The Redshank (<i>Tringa tetanus</i>) is a medium-sized wader, easily recognized by its striking red legs, long bill, and distinctive call. In breeding plumage, it has a mottled brown and white body, with a darker back and a pale underbelly, while in winter, it appears more muted with grey-brown plumage. Redshanks are commonly found along Ireland's coasts, particularly in estuaries, mudflats, and wetlands, where they feed on small invertebrates, such as worms, molluscs, and crustaceans. They forage by probing the mud with their bills, often in shallow waters. Cummeen Strand supports nationally important populations of Redshank.	Surface Water Foraging habitat of bird species within Cummeen Strand SPA are influenced by tidal processes, and therefore pollutants within surface water may affect salinity and nutrient levels of these habitats, impacting quality and suitability of feeding habitats. A source-pathway-receptor connection via surface water is considered and as such, this QI is screened in for further assessment due to its indirect effect. Groundwater While the primary foraging habitats of many bird species within Cummeen Strand SPA are influenced by tidal processes, some estuarine areas may be affected by groundwater inputs that regulate salinity and nutrient levels. Contamination or changes to groundwater flow from site activities could potentially impact water quality and the suitability of feeding habitats. A source-pathway-receptor connection via groundwater is considered and as such, this QI is screened in for further assessment due to its indirect effect.	<u>Yes:</u> Surface Water Groundwater
[A046] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>), Wintering Population	The Light-bellied brent goose is a Small dark goose, with a black head, neck and breast, and dark-brown upperparts and pale underparts. Almost whitish flanks, and small white crescent on the upperparts of the neck visible at close range. The species is a winter migrant from high-Arctic Canada. Most occur in Ireland between October and April. During the winter, it feeds mostly on eel-grass, which grows on muddy estuaries, and also on grasslands, usually when coastal supplies have been depleted at estuarine sites. Cummeen Strand supports an internationally important of Light-bellied Brent Geese.	Surface Water Foraging habitat of bird species within Cummeen Strand SPA are influenced by tidal processes, and therefore pollutants within surface water may affect salinity and nutrient levels of these habitats, impacting quality and suitability of feeding habitats. A source-pathway-receptor connection via surface water is considered and as such, this QI is screened in for further assessment due to its indirect effect. Groundwater While the primary foraging habitats of many bird species within Cummeen Strand SPA are influenced by tidal processes, some estuarine areas may be affected by groundwater inputs that regulate salinity and nutrient levels. Contamination or changes to groundwater flow from site activities could potentially impact water quality and the suitability of feeding habitats. A source-pathway-receptor connection via groundwater is considered and as such, this QI is screened in for further assessment due to its indirect effect.	<u>Yes:</u> Surface Water Groundwater

In summary, the following Qualifying Interests of the screened-in European Designations have demonstrated a Source-Pathway-Receptor model to the development site:

[001976] Lough Gill SAC

- [3150] Natural Eutrophic Lakes with Magnopotamion or Hydrocharition – type vegetation

RECEIVED: 19/06/2026

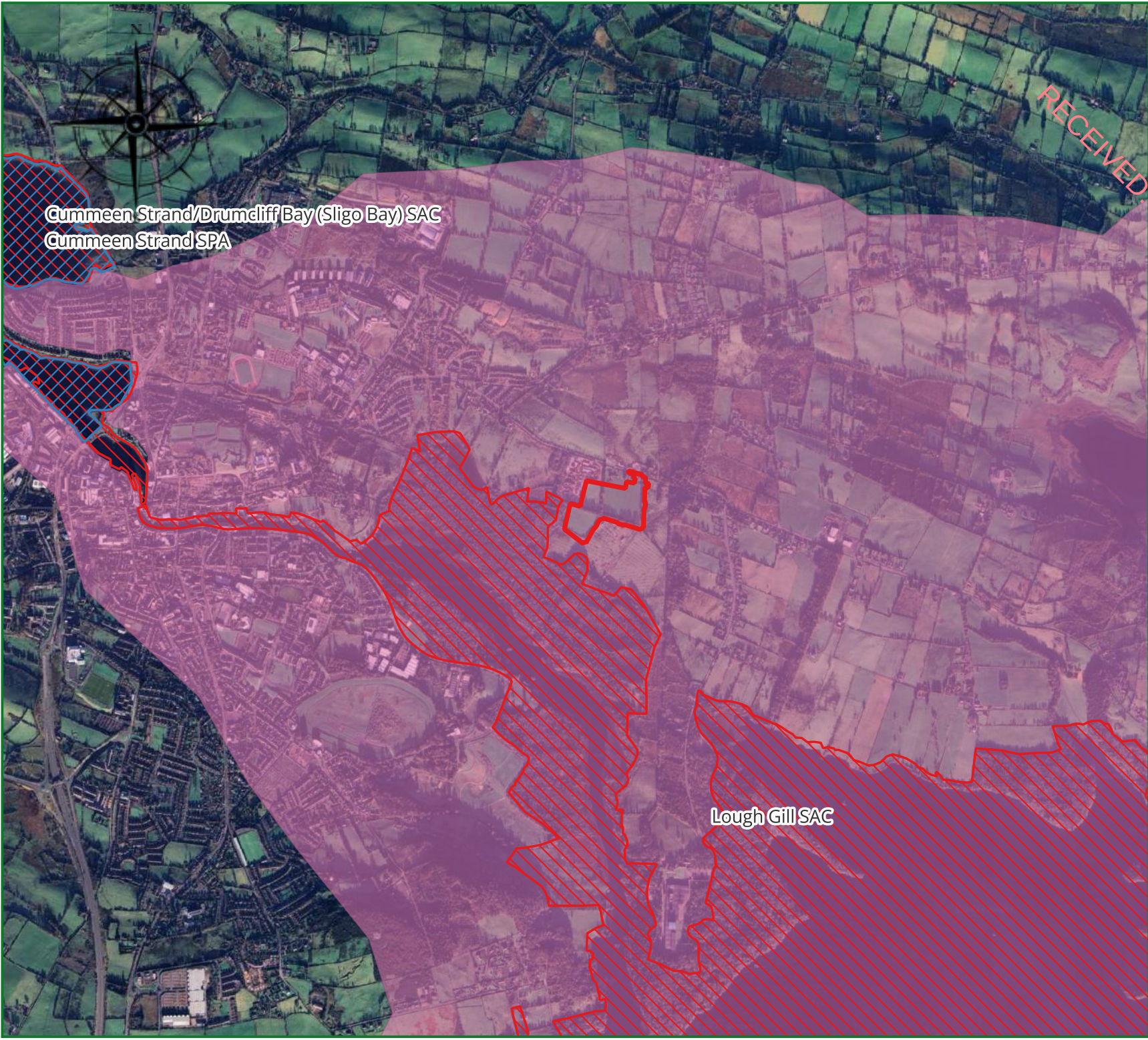
- [91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)
- [1092] White-clawed Crayfish (*Austropotamobius pallipes*)
- [1095] Sea Lamprey (*Petromyzon marinus*)
- [1096] Brook Lamprey (*Lampetra planeri*)
- [1099] River Lamprey (*Lampetra fluviatilis*)
- [1106] Salmon (*Salmo salar*)
- [1355] Otter (*Lutra lutra*)

[000627] Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC

- [1130] Estuaries
- [1140] Mudflats and sandflats not covered by seawater at low tide
- [2110] Embryonic shifting dunes
- [2120] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)
- [7220] Petrifying springs with tufa formation (*Cratoneurion*)
- [1095] *Petromyzon marinus* (Sea Lamprey)
- [1099] *Lampetra fluviatilis* (River Lamprey)

[004035] Cummeen Strand SPA

- [A046] Brent Goose (*Branta bernicla hrota*)
- [A130] Oystercatcher (*Haematopus ostralegus*)
- [A162] Redshank (*Tringa tetanus*)
- [A999] Wetlands and Waterbirds

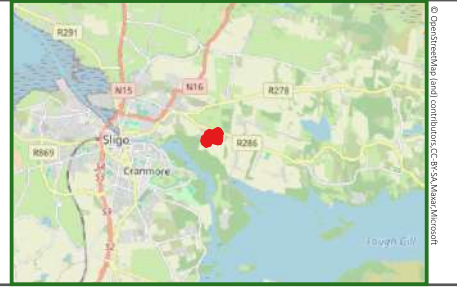


- Legend:
-  Site Boundary
 -  Surface Water Catchment
 -  SPA- Special Protected Area
 -  SAC- Special Area of Conservation

Project Title:	
AEMP-559	
Site south of Hazelwood Road (R286) on lands at Hazelwood Demesne, Co. Sligo	
Drawing Title:	
Screened-In European Designations: Surface Water	
Drawn By:	Checked By:
CN	FM
Project No:	Drawing No:
2000559	Figure 3
Scale:	Date:
1/25000	4th June 2026

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Legend:

-  Site Boundary
-  Bedrock Aquifer
-  SPA- Special Protected Area
-  SAC- Special Area of Conservation

Project Title:	
AEMP-559	
Site south of Hazelwood Road (R286) on lands at Hazelwood Demesne, Co. Sligo	
Drawing Title:	
Screened-In European Designations: Groundwater	
Drawn By:	Checked By:
CN	FM
Project No:	Drawing No:
2000559	Figure 4
Scale:	Date:
1/25000	4th June 2026



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Legend:

-  Site Boundary
-  SAC- Special Protected Area

Project Title:	
AEMP-559	
Site south of Hazelwood Road (R286) on lands at Hazelwood Demesne, Co. Sligo	
Drawing Title:	
Screened-In European Designations: Land and Air	
Drawn By:	Checked By:
CN	FM
Project No:	Drawing No:
2000559	Figure 5
Scale:	Date:
1/25000	4th June 2026



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4. Potential Impact on Conservation Objectives of Screened-in European Designations

4.1.1 Designated Sites

Source-Pathway-Receptor Models were established for 3-no. European Designations, namely Lough Gill SAC, Cummeen Strand SPA, and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC. This section provides the background information of the Natura 2000 sites screened to require assessment and the underlying reasoning behind this assessment, including the Conservation Objectives of the 3-no. European Designations that are at risk of impact as a result of the proposed works. Information has been reviewed from the National Parks and Wildlife Service website.

4.1.2 [001976] Lough Gill SAC

Identified Pathways to Designation: Surface Water, Groundwater, Land, Air – Noise & Dust

This site includes Lough Gill, Doon Lough to the north-east, the Bonet River (as far as, but not including, Glenade Lough), and a stretch of the Owenmore River near Manorhamilton in Co. Leitrim. Lough Gill itself, 2 km east of Sligo town, lies at a geological junction of ancient metamorphic rocks which produce acid groundwater, and limestone which dissolves in the groundwater.

Lough Gill is a large lake, being 8 km long, and has steep limestone shores and underwater cliffs. It is over 20 m deep in places. The lake appears to be naturally eutrophic. The aquatic macrophyte flora is very limited, probably due to the rapid increase in depth around most of the margin. Species such as pondweeds (*Potamogeton* spp.) are present, as well as Shoreweed (*Littorella uniflora*). Where the lake shore has a shallow gradient, some swamp vegetation occurs, mainly dominated by Common Reed (*Phragmites australis*), with Common Club-rush (*Scirpus lacustris*) and sedges (*Carex* spp.).

The Old Oak Woodlands within this site are dominated by oak (*Quercus* spp.), Rowan (*Sorbus aucuparia*) and willows (*Salix* spp.). A number of interesting tree species occur. Strawberry Tree (*Arbutus unedo*) is found in its most northerly site in the world. Yew (*Taxus baccata*) occurs in abundance. Bird Cherry (*Prunus padus*), a Red Data Book species, is also found, as is the nationally scarce Rock Whitebeam (*Sorbus rupicola*). Some areas of conifer plantation occur in association with these woodlands.

There is a fringe of deciduous woodland along most of the length of the Garvoge River. In parts it is dense and impenetrable, with a very wet marshy underlayer. Some areas are dominated by Rusty Willow (*Salix cinerea* subsp. *oleifolia*), with Alder (*Alnus glutinosa*) also occurring commonly. Other tree species present include Goat Willow (*Salix caprea*), Hazel (*Corylus avellana*), Rhododendron (*Rhododendron ponticum*) and Cherry Laurel (*Prunus laurocerasus*). Both of the latter species are invasive aliens. In the understorey, species such as Guelder-rose (*Viburnum opulus*), Gipsywort (*Lycopus europaeus*) and Skullcap (*Scutellaria galericulata*) are found.

Reedswamp is also common along the river. Another area of alluvial wet woodland is found at the mouth of the Bonet River. Here there is dense willow (*Salix* sp.) scrub, along

with Reed Canary-grass (*Phalaris arundinacea*), and also areas where Alder and Goat Willow are dominant.

Areas of unimproved wet and dry grassland also occur within the site, the former particularly by the lake and the latter well developed in the north-east of the site and in the vicinity of O'Rourke's Table. Orchid-rich Calcareous Grassland, a priority habitat listed on Annex I of the E.U. Habitats Directive, has been reported from Clogher Beg, according to the Irish Semi-natural Grasslands Survey, 2010. Heath covered hillsides above the woods are dominated by Heather (*Calluna vulgaris*). The site also supports several rare plant species, including Yellow Bird's-nest (*Monotropa hypopitys*), the lady's-mantle species *Alchemilla glaucescens*, Ivy Broomrape (*Orobancha hederaceae*), Black Bryony (*Tamus communis*), Intermediate Wintergreen (*Pyrola media*) and Bird's-nest Orchid (*Neottia nidus-avis*). There is also an unconfirmed record for Melancholy Thistle (*Cirsium helenioides*) from the eastern side of the site. Both the woods and the mountains are used by a large herd of Fallow Deer.

The site is of considerable importance for the presence of four Red Data Book fish species that are listed on Annex II of the E.U. Habitats Directive - Brook Lamprey (*Lampetra planeri*), River Lamprey (*Lampetra fluviatilis*), Sea Lamprey (*Petromyzon marinus*) and Atlantic Salmon (*Salmo salar*). The Lough Gill system gets a very early run of spring salmon, while the Bonet holds stocks of salmon from spring right through to the end of the season. White-clawed Crayfish (*Austropotamobius pallipes*), Otter and Pine Marten are well established on this site, the first two are both Annex II species. The woodlands have a fauna which includes several rare snail species.

Lough Gill supports low numbers of wintering waterfowl, mostly Mallard (<150), Tufted Duck (20-30) and Goldeneye (<20). A small colony of Common Tern breed on the islands (20 pairs in 1993), while Kingfisher are found on the lake and rivers. Both of these species are listed on Annex I of the E.U. Birds Directive. A colony of Black headed Gulls (63 pairs in 1992) occurs with the terns. The woods support a good diversity of bird species including Jay, Woodcock and Blackcap. The site is of importance for four habitats listed on Annex I of the E.U. Habitats Directive, including two with priority status. It is also noted for the high number of rare or scarce animal and plant species.

Conservation Objectives (N.B.: Conservation Objectives in bold are at risk of impact by proposed development works).

- **To restore the favourable conservation condition of Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation in Lough Gill SAC**
- To restore the favourable conservation condition of Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) in Lough Gill SAC
- To restore the favourable conservation condition of Old sessile oak woods with Ilex and Blechnum in the British Isles in Lough Gill SAC
- **To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)* in Lough Gill SAC**
- To maintain the favourable conservation condition of White-clawed Crayfish (*Austropotamobius pallipes*) in Lough Gill SAC
- To restore the favourable conservation condition of Sea Lamprey (*Petromyzon marinus*) in Lough Gill SAC

- To restore the favourable conservation condition of Brook Lamprey (*Lampetra planeri*) in Lough Gill SAC
- To restore the favourable conservation condition of River Lamprey (*Lampetra fluviatilis*) in Lough Gill SAC
- To restore the favourable conservation condition of Atlantic Salmon (*Salmo salar*) in Lough Gill SAC
- To maintain the favourable conservation condition of Otter (*Lutra lutra*) in Lough Gill SAC

4.1.3 [000627] Cummeen Strand /Drumcliff Bay (Sligo Bay) SAC

Identified Pathways to Designation: Surface Water, Groundwater

Site Synopsis

This large coastal site extends from Cullamore in the north-west to Killaspug in the south-west, and from Sligo town in the south-east to Drumcliff village in the northeast. It encompasses two large, shallow bays, Drumcliff Bay and Sligo Harbour, and both Ardboline and Horse Island. Sand dunes and sand hills at Rosses Point, Killaspug, Yellow Strand and Coney Island are included, as are grasslands at Ballintemple and Ballygilgan (Lissadell), along with a variety of other habitats such as woodland, saltmarsh, sandy beaches, boulder beaches, shingle, fen, freshwater marshes, rocky sea cliffs and lakes. The site is largely underlain by Carboniferous limestone, but acidic rocks are also found on the Rosses Point peninsula. At Serpent Rock in the north-western section of the site the most complete section of the northwestern Carboniferous strata is exposed. Here are found an excellent series of fossilised corals which, in some strata, stand out from the rock matrix.

The dominant habitats on the site are estuaries and intertidal sand and mud flats. Sligo Harbour receives the waters of the Garavogue River, which flows from Lough Gill, while Drumcliff Bay receives the Drumcliff River which flows from Glencar Lough. At low tide extensive areas of intertidal flats are exposed in both of these sheltered estuarine bays. The intertidal flats support a diverse macrofauna, with invertebrate species such as lugworm (*Arenicola marina*), common cockle (*Cerastoderma edule*), sand mason worm (*Lanice conchilega*), Baltic tellin (*Macoma balthica*), spire shell (*Hydrobia ulvae*) and common mussel (*Mytilus edulis*) being frequent. Of particular note is the presence of the eelgrasses *Zostera noltii* and *Z. angustifolia* beds in both bays. Areas of saltmarsh fringe both bays in places. Sand dune habitats are rare and threatened in Europe and three types are found in this site - embryonic dunes, Marram (*Ammophila arenaria*) dunes and fixed dunes. Embryonic dunes, with characteristic species including Sand Couch (*Elymus farctus*), occur at the southern end of the sand spit at Rosses Point. Shifting Marram dunes are found in a number of locations, including Rosses Point, Strandhill, Coney Island and Yellow Strand. In the latter three areas, the areas of shifting dunes are linked at least to some extent to recent disturbance (e.g. erosion, storm breaches, etc.). Fixed dune grassland is found behind Yellow Strand, and the main species are Sand Sedge (*Carex arenaria*) and Smooth Meadow-grass (*Poa pratensis*), with associated species including Lady's Bedstraw (*Galium verum*), Mouse-ear Hawkweed (*Hieracium pilosella*), Common Milkwort (*Polygala vulgaris*), Common Dog-violet (*Viola riviniana*), Mountain Everlasting (*Antennaria dioica*), Common Spotted-orchid (*Dactylorhiza fuchsii*), Early Marsh-orchid (*D. incarnata*), Frog Orchid (*Coeloglossum viride*) and Autumn Lady's-tresses (*Spiranthes spiralis*). Some areas of fixed dune at the site are suffering from under-grazing (e.g. north of Strandhill), and have a rank vegetation dominated by Marram, with species such as

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Red Fescue (*Festuca rubra*), Creeping Willow (*Salix repens*), Daisy (*Bellis perennis*) and Wild Thyme (*Thymus praecox*) also occurring. A relatively species-poor example of the habitat is found at Rosses Point, but typical species like Marram, Red Fescue, Lady's Bedstraw, Harebell (*Campanula rotundifolia*), Kidney Vetch (*Anthyllis vulneraria*) and Common Mouse-ear (*Cerastium fontanum*) do occur here. An area with Juniper (*Juniperus communis*) scrub is found on a gravel hill with species-rich fixed dune vegetation. Other species present in this area include Marram, Autumn Gentian (*Gentianella amarella*), Red Fescue, Lady's Bedstraw, Common Bird's-foot-trefoil, Harebell, Yellow-wort (*Blackstonia perfoliata*), Thyme leaved Sandwort (*Arenaria serpyllifolia*), Common Whitlowgrass (*Erophila verna*), Hoary Whitlowgrass (*Draba incana*), Devil's-bit Scabious (*Succisa pratensis*) and Early Hair-grass (*Aira praecox*). An area of approximately 3.7 hectares of Orchid-rich Calcareous Grassland, a habitat listed with priority status on Annex I of the E.U. Habitats Directive, is reported to occur near Rosses Point, according to the Irish Semi-natural Grasslands Survey, 2010. Wetlands on the site include Doonweelin Lake, a freshwater lake on the Rosses Point peninsula, which supports interesting vegetation communities that reflect the juxtaposition of the underlying acidic and basic rocks. Ardtermon Fen, a small, floristically-rich area of freshwater marsh, swamp, wet grassland and fen is situated at the back of the Yellow Strand sand hills.

The site includes small areas of Hazel (*Corylus avellana*) and Ash (*Fraxinus excelsior*) woodland on limestone (e.g. Cummeen Wood), and several other stands of mixed woodland and wet willow (*Salix spp.*) woodland (as at Ardtermon Fen). Cliff-top grassland is common in the north-western part of the site. This is typically dominated by Red Fescue and White Clover (*Trifolium repens*), with associated species including Daisy, Common Bird's-foot-trefoil (*Lotus corniculatus*), plantains (*Plantago coronopus*, *P. lanceolata* and *P. maritima*), Bulbous Buttercup (*Ranunculus bulbosus*), Common Scurvygrass (*Cochlearia officinalis*), Field Wood-rush (*Luzula campestris*) and Spring Sedge (*Carex caryophyllea*). The site has a good example of petrifying springs with tufa formations, with several species of bryophyte typical of the Cratoneurion. The springs occur along seepage zones in clay sea cliffs on the northern side of Sligo Harbour. The site has a very rich and diverse flora, on account of the wide variety of habitats found, and the presence of both basic and acidic substrates. Several rare, Red Data Book species have been recorded from the site, including Rough Poppy (*Papaver hybridum*) which is also listed under the Flora (Protection) Order, 2015, Hoary Whitlowgrass and Yellow Saxifrage (*Saxifraga aizoides*). Both Drumcliff Bay and Cummeen Strand are important for the large numbers of waterfowl which use them in autumn/winter, including Ringed Plover, Redshank, Lapwing, Knot, Bar-tailed Godwit, Oystercatcher, Curlew, Golden Plover, Dunlin, Turnstone, Brent Goose, Grey Heron, Teal, Wigeon, Mallard, Shelduck and Red breasted Merganser. The fields at Lissadell and Ballintemple support one of the largest populations of Barnacle Goose in the country (c. 2,000 in winters of 1995/96 and 1996/97). Both Drumcliff Bay and Cummeen Strand have been designated as Special Protection Areas under the E.U. Birds Directive. The important feeding site for Barnacle Goose at Lissadell is a Statutory Nature Reserve. The islands in the north-western section of the site hold important seabird colonies. A Cormorant colony of national importance occurs on Ardboline and Horse Islands, with a total of 261 pairs in 1998. Herring Gull and Great Black-backed Gull also breed on both islands. Common Tern formerly bred on both islands. The islands are also used by Barnacle Goose from the adjacent mainland, which roost or seek refuge here. The low sea cliffs on the adjacent mainland at Ballyconnell and Roskeeragh Points also support small numbers of seabirds, and both Black Guillemot and Fulmar nest there. Choughs feed in the sandy/grassy areas of the site and one pair is known to nest. Several of the bird species that use the site are listed on Annex I of the E.U.

Birds Directive, i.e. Barnacle Goose, Chough, Golden Plover and Bar-tailed Godwit. At least five species listed on Annex II of the E.U. Habitats Directive are found within this site. Drumcliff Bay is important for the presence of a breeding population of Common Seal. Ardboline and Horse Islands on the western side of the site are also important as haul-out areas for this species. A minimum population of 12–15 individuals was estimated from counts made in various month in 2007 and 2008. Sea Lamprey and River Lamprey have been recorded in the Garavogue River, and River Lamprey are also known from further upstream in the tributaries of Lough Gill. The Marsh Fritillary butterfly is found at Rosses Point, while the rare snail *Vertigo angustior* has recently been recorded from sand dunes at Killaspugbrone. Cummeen Strand/Drumcliff Bay (Sligo Bay) is an important site of high conservation significance, which includes a wide variety of habitat types, including several listed on Annex I of the E.U. Habitats Directive, several species listed on Annex II of this Directive, large and important populations of waterfowl and seabirds, and several rare plant species.

Conservation Objectives (N.B: Conservation Objectives in bold are those with potential for affect from site works, after applying Source-Pathway-Receptor Model).

- To maintain the favourable conservation condition of Estuaries in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To maintain the favourable conservation condition of Embryonic shifting dunes in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To restore the favourable conservation condition of *Juniperus communis* formations on heaths or calcareous grasslands in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To restore the Favourable conservation condition of Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To maintain the favourable conservation condition of Petrifying springs with tufa formation (Cratoneurion) in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To maintain the favourable conservation condition of Narrow-mouthed Whorl Snail in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To restore the favourable conservation condition of Sea Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To maintain the favourable conservation condition of River Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,
- To maintain the favourable conservation condition of Harbour Seal in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC,

4.1.4 [004035] Cummeen Strand SPA

Identified Pathway to Designation: Surface Water, Groundwater

Cummeen Strand is a large shallow bay stretching from Sligo Town westwards to Coney Island. It is one of three estuarine bays within Sligo Bay and is situated between Drumcliff Bay to the north and Ballysadare Bay to the south. The Garavogue River flows into the bay and forms a permanent channel. At low tide, extensive sand and mud flats are exposed. These support a diverse macro-invertebrate fauna which provides the main food supply for the wintering waterfowl. Invertebrate species such as Lugworm (*Arenicola marina*), Ragworm (*Hediste diversicolor*), Cockles (*Cerastoderma edule*), Sand Mason (*Janice conchilega*), Baltic Tellin (*Macoma balthica*), Spire Shell (*Hydrobia ulvae*) and Mussels (*Mytilus edulis*) are frequent. Of particular note is the presence of eelgrass (*Zostera noltii* and *Z. angustifolia*) beds, which provide a valuable food stock for herbivorous wildfowl. The estuarine and intertidal flat habitats are of conservation significance and are listed on Annex I of the E.U. Habitats Directive. Areas of salt marsh fringe the bay in places and provide roosting sites for birds during the high tide periods. Sand dunes occur at Killaspug Point and Coney Island, with a shingle spit at Standalone Point near Sligo Town. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Oystercatcher and Redshank. 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 Wetland & Waterbirds. Cummeen Strand supports important concentrations of wintering waterfowl, including an internationally important Light-bellied Brent Goose flock (223) and nationally important populations of Oystercatcher (680) and Redshank (408). Other species occurring include Shelduck (86), Wigeon (149), Teal (54), Mallard (145), Red breasted Merganser (15), Golden Plover (428), Lapwing (695), Knot (165), Sanderling (14), Dunlin (539), Bar-tailed Godwit (85), Curlew (430), Greenshank (13) and Turnstone (62) - all figures are mean peak counts for 4 of the 5 winters between 1995/96 and 1999/2000. Whooper Swan (7) also uses the site, though not regularly. Cummeen Strand SPA is of high ornithological importance with one species, Light bellied Brent Goose, occurring in numbers of international importance. In addition, the site supports nationally important populations of a further two species. The regular presence of Golden Plover and Bar-tailed Godwit is of particular note as these species are listed on Annex I of the E.U. Birds Directive. The site is also important as a component of the much larger Sligo Bay complex. Cummeen Strand is a Ramsar Convention site.

Conservation Objectives (N.B.: Conservation Objectives in bold are at risk of impact by proposed development works).

- To maintain the favourable conservation condition of Light-bellied Brent Goose in Cummeen Strand SPA,
- To maintain the favourable conservation condition of Oystercatcher in Cummeen Strand SPA,
- To maintain the favourable conservation condition of Redshank in Cummeen Strand SPA,
- To maintain the favourable conservation condition of wetland habitat in Cummeen Strand SPA as a resource for the regularly occurring migratory waterbirds that utilise it.

4.2 Impact on Screened-in QIs and Affected Attributes & Targets

The anticipated impacts on the screened-in Qualifying Interests (QIs) were evaluated in accordance with the Attributes and Targets specified in their Conservation Objectives. This assessment was informed by detailed information obtained from site-specific webpages available on the NPWS website. The findings of this evaluation are summarised in **Table 4** below.

Table 4: Anticipated Impacts on Screened-in Qualifying Interests of Lough Gill SAC, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, and Cummeen Strand SPA.

Screened-in Qualifying Interest	Conservation Objectives	Identified Pathway of Impact	Anticipated Impacts to QI from Works	Attribute & Target affected
[001976] Lough Gill SAC ³⁹				
[3150] Natural Eutrophic Lakes with Magnopotamion or Hydrocharition – type vegetation	To restore the favourable conservation condition of Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation in Lough Gill SAC	Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site. This QI is situated in Lough Gill and as such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Vegetation Composition – Typical species present, in good condition, and demonstrating typical abundances and distribution Hydrological regime: water level fluctuations - Maintain appropriate hydrological regime necessary to support the habitat Lake substratum quality - Maintain appropriate substratum type, extent and chemistry to support the vegetation Nutrients - Maintain/restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species Phytoplankton composition/biomass – Maintain/restore appropriate water quality to support the habitat,
[91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion</i>)	To restore the favourable conservation condition of Alluvial forests	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated. Additionally, a surface water pathway exists and interchange with the GWB may occur. This QI is fed by groundwater, and as such, pollutants over the course of the construction and	Hydrological regime: flooding depth/height of water table - Appropriate hydrological regime necessary for maintenance of alluvial vegetation

³⁹ NPWS Conservation Objectives – Lough Gill SAC: [Site specific cons obj](#)

<i>incanae, Salicion</i> <i>albae</i>)	with Alnus glutinosa and Fraxinus excelsior (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)* in Lough Gill SAC		operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	
[1092] White-clawed Crayfish (<i>Austropotamobius</i> <i>pallipes</i>)	To maintain the favourable conservation condition of White-clawed Crayfish (<i>Austropotamobius</i> <i>pallipes</i>) in Lough Gill SAC	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site. Additionally, a direct surface water pathway also exists, although on-site watercourses are unsuitable for usage. This QI can utilise habitat within Lough Gill for foraging/commuting purposes. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	River water quality – At least Q3-4 at all sites sampled by EPA Lake water quality – Maintain appropriate water quality, particularly pH and nutrient levels, to support the natural structure and functioning of the habitat
[1095] Sea Lamprey (<i>Petromyzon marinus</i>)	To restore the favourable conservation condition of Sea Lamprey (<i>Petromyzon</i> <i>marinus</i>) in Lough Gill SAC	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site. Additionally, a direct surface water pathway also exists, although on-site watercourses are unsuitable for usage. This QI can utilise habitat within Lough Gill for foraging/commuting purposes. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Larval lamprey in fine sediment – Larval lamprey present in SAC catchment Extent and distribution of spawning and nursery habitat – No decline in extent and distribution of spawning and nursery beds
[1096] Brook Lamprey (<i>Lampetra planeri</i>)	To restore the favourable conservation condition of Brook Lamprey (<i>Lampetra planeri</i>) in Lough Gill SAC	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site. Additionally, a direct surface water pathway also exists, although on-site watercourses are unsuitable for usage. This QI can utilise habitat within Lough Gill for foraging/commuting purposes. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Larval lamprey in fine sediment – Larval lamprey present in SAC catchment Extent and distribution of spawning and nursery habitat – No decline in extent and distribution of spawning and nursery beds
[1099] River Lamprey (<i>Lampetra fluviatilis</i>)	To restore the favourable conservation	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site. Additionally,	Larval lamprey in fine sediment – Larval lamprey present in SAC catchment

	condition of River Lamprey (<i>Lampetra fluviatilis</i>) in Lough Gill SAC		a direct surface water pathway also exists, although on-site watercourses are unsuitable for usage. This QI can utilise habitat within Lough Gill for foraging/commuting purposes. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Extent and distribution of spawning and nursery habitat – No decline in extent and distribution of spawning and nursery beds
[1106] Salmon (<i>Salmo salar</i>)	To restore the favourable conservation condition of Atlantic Salmon (<i>Salmo salar</i>) in Lough Gill SAC	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site. Additionally, a direct surface water pathway also exists, although on-site watercourses are unsuitable for usage. This QI can utilise habitat within Lough Gill for foraging/commuting purposes. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Water quality – At least Q4 at all sites sampled by EPA
[1355] Otter (<i>Lutra lutra</i>)	To maintain the favourable conservation condition of Otter (<i>Lutra lutra</i>) in Lough Gill SAC	Surface Water, Groundwater, Land, Noise, Dust	This QI can utilise aquatic habitat of Lough Gill SAC for foraging purposes, as well as terrestrial habitat for holt creation/resting sites. Therefore, increased pollutants within the groundwater habitat hinder the suitability of these habitats for this QI for these purposes and reduce its overall distribution. Additionally, the close proximity of the site boundary to the site works area, and the presence of suitable terrestrial habitat for Otter within this area and on-site, may led to land pathways from unmitigated construction works leading to fatalities/reduction of suitable habitat for the species, as well as disturbance of the area to the species as a result of increased human presence.	Distribution – No significant decline Extent of terrestrial habitat – No significant decline. Area mapped and calculated as 193.91ha along riverbanks/ lake shoreline/around ponds Couching sites and holts – No significant decline Fish biomass available – No significant decline
[000627] Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC⁴⁰				
[1130] Estuaries	To maintain the favourable conservation condition of Estuaries in Cummeen	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site, and further into Sligo Bay where this QI is situated. Additionally, a direct surface water pathway is also present. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this	Community distribution – Conserve the following community types in a natural condition: Intertidal fine sand with <i>Peringia ulvae</i> and <i>Pygospio elegans</i> community complex; Estuarine mixed sediment to sandy mud with <i>Hediste diversicolor</i> and <i>oligochaetes</i> community complex; Fine sand

⁴⁰ NPWS Conservation Objectives – Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC: [Site specific cons obj](#)

	Strand/Drumcliff Bay (Sligo Bay) SAC		QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	with Angulus spp. and Nephtys spp. community complex; Sand to mixed sediment with amphipods community; Intertidal reef community
[1140] Mudflats and sandflats not covered by seawater at low tide	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site, and further into Sligo Bay where this QI is situated. Additionally, a direct surface water pathway is also present. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Community distribution – Conserve the following community types in a natural condition: Intertidal fine sand with Peringia ulvae and Pygospio elegans community complex; Estuarine mixed sediment to sandy mud with Hediste diversicolor and oligochaetes community complex; Fine sand with Angulus spp. and Nephtys spp. community complex; Sand to mixed sediment with amphipods community; Intertidal reef community
[2110] Embryonic shifting dunes	To maintain the favourable conservation condition of Embryonic shifting dunes in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site, and further into Sligo Bay where this QI is situated. Additionally, a direct surface water pathway is also present. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Physical structure: functionality and sediment supply – Maintain the natural circulation of sediment and organic matter, without any physical obstructions
[2120] Shifting dunes along the shoreline with Ammophila arenaria (white dunes)	To restore the favourable conservation condition of Shifting dunes along the shoreline with Ammophila arenaria ('white dunes') in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site, and further into Sligo Bay where this QI is situated. Additionally, a direct surface water pathway is also present. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Physical structure: functionality and sediment supply – Maintain the natural circulation of sediment and organic matter, without any physical obstructions
[7220] Petrifying springs with tufa formation (Cratoneurion)	To maintain the favourable conservation condition of	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site, and further into Sligo Bay where this QI is situated. Additionally, a surface water	Hydrological regime: height of water table; water flow – Maintain appropriate hydrological regimes

	Petrifying springs with tufa formation (Cratoneurion) in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC		pathway also exists, with interconnection between the GWB. Petrifying springs rely on permanent irrigation, usually from upwelling groundwater sources or seepage sources; this QI falls within Rosses Point GWB, where there is a high degree of interconnection between groundwater and surface water. Over the course of construction and operational phases of development, there may be a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Water quality – Maintain oligotrophic and calcareous conditions
[1095] <i>Petromyzon marinus</i> (Sea Lamprey)	To restore the favourable conservation condition of Sea Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site. Additionally, a direct surface water pathway also exists, although on-site watercourses are unsuitable for usage. This QI can utilise habitat within Lough Gill for foraging/commuting purposes, as well as habitats within the bounds of the SAC. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Distribution: extent of anadromy – No barriers for migratory life stages of lamprey moving from freshwater to marine habitats and vice versa
[1099] <i>Lampetra fluviatilis</i> (River Lamprey)	To maintain the favourable conservation condition of River Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site. Additionally, a direct surface water pathway also exists, although on-site watercourses are unsuitable for usage. This QI can utilise habitat within Lough Gill for foraging/commuting purposes, as well as habitats within the bounds of the SAC. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Distribution: extent of anadromy – No barriers for migratory life stages of lamprey moving from freshwater to marine habitats and vice versa
[1365] <i>Phoca vitulina</i> (Harbour Seal)	To maintain the favourable conservation condition of Harbour Seal in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site. Additionally, a direct surface water pathway also exists, although on-site watercourses are unsuitable for usage. This QI can utilise habitat within Lough Gill for foraging/commuting purposes, as well as habitats within the bounds of the SAC for hauling out. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable	Disturbance – Human activities should occur at levels that do not adversely affect the harbour seal population at the site

			conservation objective from this QI, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	
[004035] Cummeen Strand SPA ⁴¹				
[A130] Oystercatcher (<i>Haematopus ostralegus</i>), Wintering population	To maintain the favourable conservation condition of Oystercatcher in Cummeen Strand SPA	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site, and further into Sligo Bay where this QI utilises habitats for wintering. Additionally, a direct surface water pathway is also present. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI and its associated habitats, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Distribution – No significant decrease in the range, timing and intensity of use of areas by redshank, other than that occurring from natural patterns of variation
[A999] Wetlands and Waterbirds	To maintain the favourable conservation condition of wetland habitat in Cummeen Strand SPA as a resource for the regularly occurring migratory waterbirds that utilise it	Surface Water, Groundwater	Via groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site, and further into Sligo Bay where this QI and associated habitats are present. Additionally, a direct surface water pathway is also present. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI and its associated habitats, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Habitat Area – The permanent area occupied by the wetland habitat should be stable and not significantly less than 1732 hectares, other than that occurring from natural patterns of variation
[A162] Redshank (<i>Tringa tetanus</i>), Wintering population	To maintain the favourable conservation condition of Redshank in Cummeen Strand SPA	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site, and further into Sligo Bay where this QI utilises habitats for wintering. Additionally, a direct surface water pathway is also present. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI and its associated habitats, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Distribution – No significant decrease in the range, timing and intensity of use of areas by redshank, other than that occurring from natural patterns of variation

⁴¹ NPWS Conservation Objectives – Cummeen Strand SPA: [Site specific cons obj](#)

[A046] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>), Wintering Population	To maintain the favourable conservation condition of Light-bellied Brent Goose in Cummeen Strand SPA	Surface Water, Groundwater	Via a groundwater to surface water pathway, pollutants from the site works area could percolate into the GWB on which the site is situated, and discharge into Lough Gill south of the site, and further into Sligo Bay where this QI utilises habitats for wintering. Additionally, a direct surface water pathway is also present. As such, pollutants over the course of the construction and operational phases of development may cause a divergence from the favourable conservation objective from this QI and its associated habitats, by impacting the listed Attributes & Targets from listed for this QI by NPWS.	Distribution – No significant decrease in the range, timing and intensity of use of areas by redshank, other than that occurring from natural patterns of variation
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5. Cumulative Impacts

5.1 Existing Threats/Pressures to Screened-in European Designations

An assessment for the potential for cumulative/combined effects with other pressures/threats in each ‘screened in’ Natura 2000 site was undertaken, using relevant documents available on the NPWS website. This included the Conservation Objectives Supporting Document, Site Synopsis, and the Natura 2000 Standard Data Form, as well as “EU 2019 – The Status of EU Protected Habitats and Species in Ireland”. Currently, no site-specific information published by NPWS is available online, regarding the existing threats and pressures for the following sites:

- [001976] Lough Gill SAC
- [000627] Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC
- [004035] Cummeen Strand SPA

As such, the precautionary principle has been utilised, assuming that in-combination impacts are present with screened-in Qualifying Interests identified at the “Likely Significant Effects on Works Alone” in Table 5-1 above.

5.2 Other Plans and Projects

An extensive search and examination were carried out inclusive of any plans and projects with the potential for cumulative effects on all designated sites downstream of the development site when considered in conjunction with the works proposed as part of this development.

The Sligo County Council Planning register was consulted reviewing planning applications within the locality of the development site, applications within the last 5 years, including any proposed plans and developments still under consideration, were assessed for their potential cumulative impacts.

The assessment considered the following development plans:

- Northern & Western Regional Assembly Regional Spatial and Economic Strategy 2020-2032⁴²
- National Biodiversity Action Plan 2017-2021⁴³
- Ireland’s 4th National Biodiversity Action Plan 2023-2030⁴⁴

⁴² Northern & Western Regional Assembly Regional Spatial and Economic Strategy 2020-2032: [NWRA-RSES-2020-2032.pdf](#)

⁴³ National Biodiversity Action Plan 2017-2021: [National Biodiversity Action Plan English.pdf](#)

⁴⁴ Ireland’s 4th National Biodiversity Action Plan: [www.gov.ie/pdf/?file=https://assets.gov.ie/293802/02ba17a9-fef0-45f2-b0f1-b3ed19ddf358.pdf#page=null](#)

- Sligo County Development Plan 2024-2030⁴⁵

The review for this Appropriate Assessment of the Sligo County Development Plan 2024 – 2030 primarily focused on policies and objectives related to Natura 2000 sites and natural heritage. Additionally, policies and objectives concerning sustainable land use were also considered. The results of this assessment are outlined in Table 5-1 below.

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⁴⁵Sligo County Development Plan 2024-2030: [Sligo County Development Plan 2024-2030](#)

Table 5-1: Cumulative Impact Assessment of development when considered with surrounding developments

Plans		Key Policies and Objectives directly related to European Sites and Biodiversity in the Zone of Influence	Potential Cumulative Impacts on European Sites
Sligo Development (2024–2030) ¹⁴⁵ :	County Plan	<u>POLICIES</u> Policy P-DSNC-1: Protect and maintain the conservation status of all natural heritage sites designated or proposed for designation in accordance with European and national legislation and agreements. These include Special Areas of Conservation (SAC), Special Protection Areas (SPA), Natural Heritage Areas (NHA), proposed Natural Heritage Areas (pNHA), Ramsar Sites, Statutory Nature Reserves, as identified by the Minister for Culture, Heritage and the Gaeltacht, and any other sites that may be proposed for designation during the lifetime of this Plan. In addition, the Council will identify, maintain and develop non-designated areas of high nature conservation value which serve as linkages or ‘stepping stones’ between protected sites in accordance with Article 10 of the Habitats Directive. Policy P-DSNC-4: Ensure that all development proposals are subject to the process of Screening for Appropriate Assessment and subsequent stages of Appropriate Assessment, as relevant, carried out to the satisfaction of the Planning Authority, in consultation with National Parks and Wildlife Service, as appropriate. <u>OBJECTIVES</u> Objective O-DSNC-1:	Local County Planning Systems were consulted on 28th of November 2025. Projects identified near the site within the last five years were reviewed in conjunction with the Policies and Objectives of the Regional and Local Development plans. Several planning applications have been granted planning permission or are under review in the preceding five years, and where necessary, these applications were accompanied by Appropriate Assessments Screening Reports (AASRs), Natura Impact Statements (NISs), and Environmental Impact Assessments (EIA) where required. Applications subject to EIA procedure in proximity to the site work area are listed below: Applications subject to EIA procedure: - App. 2024146 (25/08/2024) – Phased ten-year plan for conservation and development of Hazelwood House and specified buildings, expansion of existing distillery, expansion of existing maturation capacity inc. services connection to Uisce Eireann municipal network. - App. 2021118 (03/06/2021) – Recommencement of quarry operations, deepening of the previously permitted quarry area by 2 no. extractive benches, recommencement of aggregate processing Applications NOT subject to EIA procedure: - App. 2560024 (29/01/2025) – Construction of 28m2 single storey side extension and associated works - App. 20373 (18/08/2021) – Development consisting of (1) removal of existing boat storage containers, (2) construction of new boat house consisting of boat storage to the ground floor with dressing rooms, gymnasium and meeting rooms to the first floor and associated siteworks and services. Please note this application will be accompanied by a Natura Impact Statement. - App. 2460283 (27/10/2024) – A 10 YEAR PLANNING PERMISSION TO BE DEVELOPED ON A PHASED BASIS, COMPRISING 1) CONSERVATION AND

¹⁴⁵ Sligo County Development Plan (2024–2030): [Sligo County Development Plan 2024–2030](#) | [Sligo County Council's Online Consultation Portal](#)

Identify any areas of high nature conservation value which are of major importance for wild fauna and flora in accordance with Article 10 of the Habitats Directive, and which have not been previously identified.

Objective O-DSNC-2:

Undertake appropriate surveys and collect data to provide an evidence-base to assist the Council in meeting its obligations under Article 6 of the Habitats Directives (92/43/EEC) as transposed into Irish Law, subject to available resources.

DEVELOPMENT OF HAZELWOOD HOUSE, A PROTECTED STRUCTURE (RPS NO. 293SE), INCLUDING ITS ADJOINING WINGS AND EXTENSIONS FOR PUBLIC ASSEMBLY, AND OFFICE USE, WITH RETAIL IN THE GROUND FLOOR OF THE EAST WING ACCESSED FROM THE STABLEYARD AND STAFF FACILITIES IN THE WEST WING COMPRISING: I) DEMOLITION OF THREE STOREY CONCRETE ESCAPE STAIR EXTENSION (18.75 SQ. M.) AND ADJOINING THREE STOREY TOILET BLOCK EXTENSION (4 SQ. M) AND INSERTION OF NEW PLATFORM LIFT WITHIN THE HOUSE TO PROVIDE UNIVERSAL ACCESS TO THE LOWER GROUND FLOOR (BASEMENT), GROUND FLOOR AND FIRST FLOOR; II) REALIGNMENT OF THE TERRACES TO THE SOUTH OF HAZELWOOD HOUSE AND EXTENSION TOWARDS THE DISTILLERY BUILDING; III) INSTALLATION OF AN 'EYE-CATCHER' (FOCAL POINT) WITHIN THE GARDEN; IV) PROVISION OF SCREENING OF THE FACADE OF THE DISTILLERY BUILDING ALONG WITH EXTERNAL PLANTING TO THE FOREGROUND; 2) CONSERVATION AND DEVELOPMENT OF THE STABLE BUILDINGS TO THE EAST OF HAZELWOOD HOUSE TO PROVIDE A NEW CAFÉ AND RECEPTION IN THE SOUTH RANGE WITH A NEW SINGLE STOREY EXTENSION ON THE SOUTHERN ELEVATION OF THE BUILDING (97 SQ. M.) AND VISITOR WC'S, STORAGE, TASTING ROOMS AND A MICRO-DISTILLERY IN THE NORTH RANGE; 3) WORKS WITHIN THE WALLED GARDEN TO THE WEST OF HAZELWOOD HOUSE COMPRISING: I) CONSERVATION AND REPAIR WORKS TO THE MASONRY WALLS AND CIRCULAR STRUCTURE, II) THE CONSERVATION AND DEVELOPMENT OF THE RUINED OUTBUILDING TO SERVE AS A GARDENER'S WORKSHOP AND THE PROVISION OF A POLYTUNNEL ADJACENT TO IT; 4) CONSERVATION AND REPAIR OF THE FORMER PUMP HOUSE AND WINDMILL BASE TO THE WEST OF HAZELWOOD HOUSE ON THE SHORELINE WITH THE GARAVOGUE RIVER (PROTECTED STRUCTURE (RPS NO. 292SE); 5) PROVISION OF NEW VISITOR CAR PARKS, ONE TO THE EAST OF THE STABLEYARD AND ONE IN THE FORMER SAWMILL YARD, WITH ASSOCIATED LANDSCAPING, TO REPLACE EXISTING CAR PARK PROVIDING 156 NO. PARKING SPACES (INCLUDING 10 NO. ACCESSIBLE CAR-PARKING SPACES, 15 NO. EV PARKING SPACES, 4 MINI BUS SPACES AND 6 COACH SPACES) AND PROVISION OF SHELTERED ARRIVAL AREA UNDER A CANOPY STRUCTURE (19.38 SQ. M.); 6) PROVISION OF 24 NO. CYCLE PARKING SPACES AND SHELTERED, GATED PARKING (C. 81 SQ. M.) FOR SMALL SITE MAINTENANCE VEHICLES TO THE NORTH EAST OF THE NORTHERN RANGE OF THE STABLEYARD; 7) THE EXPANSION OF THE DISTILLERY CAPACITY FROM 1 MILLION

LITRES OF PURE ALCOHOL (MLPA) PER ANNUM TO 2 MLPA PER ANNUM COMPRISING: I) THE DEMOLITION OF A 7,212.6 SQ.

- App. 20127 (23/06/2020) – Development consisting of the construction of a new flat roof, 2-storey, 4-bedroom, 430.55sqm house with open first floor balcony/deck to the south together with associated works, all located to the west of the existing main house on the footprint of an existing derelict house. The house will be connected to previously approved treatment plant reg. ref. 18/412. The proposed development is in the curtilage of Hazelwood House, a protected structure (RPS ref. 293SE). A Natura Impact Statement accompanies this application.
- App. 21225 (07/09/2022) – Development consisting of carrying out the reinstatement of a stone breakwater and the removal of silt build up from a boat slipway. A Natura Impact Statement will accompany this application.
- App. 2460214 (12/08/2024) – alterations to front, side and rear elevations, roof and ridge height of existing dwelling. Part single-storey, part two-storey extension to rear and side of existing dwelling. Widening of existing vehicular entrance and all ancillary siteworks
- App. 2360266 (21/04/2024) – A one and a half storey dwelling, domestic garage, proprietary wastewater treatment unit and percolation area and associated site works
- App. 2460156 (01/07/2024) – to install a new wastewater treatment system with percolation
- App. 2560136 (04/06/2025) – alterations to elevations and for a porch extension to an existing granny flat approved under PL 08/823 at Shaw's Avenue, Hazelwood, Co. Sligo
- App. 2360303 (21/02/2024) – for the construction of a new extension to the side and rear of our existing dwelling house, alterations to the existing dwelling house, new effluent treatment system, new percolation area, and all associated site works

Any future individual application that has the potential to impact upon a Natura 2000 site will be subject to Appropriate Assessment as required under Articles 6(3) of the Habitats Directive. These reports will be reviewed by the environmental agency and/or appropriate authority and will only proceed when screened out at either Stage 1 or Stage 2 with appropriate mitigation.

		County Development Plans were comprehensively reviewed, with particular reference to Policies and Objectives that relate to biodiversity, protected species and designated sites. Upon implementation of appropriate mitigation measures, there is no risk of contamination from the proposal. Cumulative negative impacts when considered in conjunction with the current proposals were assessed as negligible. No developments or projects identified within the Development Plan were found to occur in the wider area surrounding the development. There are no concerns about additional live projects/developments located within proximity. Therefore, it is considered that there will be no additive effect for significant cumulative or in-combination impacts on the environment because of the development.
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6. The Test of Likely Significance

The key test in screening is to establish whether any likelihood of significant effects on European Sites can be ruled out. Once the relevant European Sites and their Qualifying Interests have been identified, this test must be applied.

- Likely – A risk or possibility of effects occurring that cannot be ruled out based on objective information
- Significant – Effects that would undermine the conservation objectives of the European sites, either alone or in-combination with other plans and projects. This depends on:
 - The Ecological Characteristics of the species/habitat e.g., structure, function, conservation status
 - The character, magnitude, duration, consequences, and probability of the impacts occurring.

Table 6 below summarises the findings of this assessment.

Qualifying Interest	Conservation Objective	Effects from Works Anticipated	Potential for Significant Effects
[001976] Lough Gill SAC ¹⁴⁶			
[3150] Natural Eutrophic Lakes with Magnopotamion or Hydrocharition – type vegetation	To restore the favourable conservation condition of Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation in Lough Gill SAC	Pollutants may reach this Qualifying Interest via identified groundwater pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. The QI is mainly fed by surface water, although groundwater usage cannot be ruled out. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Groundwater
[91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	To restore the favourable conservation condition of Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)* in Lough Gill SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. The QI is strongly influenced by groundwater; water-tolerant and rely on high water table, often occurring where soils are saturated. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i>

¹⁴⁶ NPWS Conservation Objectives – Lough Gill SAC: [Site specific cons obj](#)

			Surface Water Groundwater
[1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	To maintain the favourable conservation condition of White-clawed Crayfish (<i>Austropotamobius pallipes</i>) in Lough Gill SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within Lough Gill, potentially as close as 440m away. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[1095] Sea Lamprey (<i>Petromyzon marinus</i>)	To restore the favourable conservation condition of Sea Lamprey (<i>Petromyzon marinus</i>) in Lough Gill SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within Lough Gill, potentially as close as 440m away. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[1096] Brook Lamprey (<i>Lampetra planeri</i>)	To restore the favourable conservation condition of Brook Lamprey (<i>Lampetra planeri</i>) in Lough Gill SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within Lough Gill, potentially as close as 440m away. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[1099] River Lamprey (<i>Lampetra fluviatilis</i>)	To restore the favourable conservation condition of River Lamprey (<i>Lampetra fluviatilis</i>) in Lough Gill SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within Lough Gill, potentially as close as 440m away. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase,	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater

[1106] Salmon (<i>Salmo salar</i>)	To restore the favourable conservation condition of Atlantic Salmon (<i>Salmo salar</i>) in Lough Gill SAC	pollutants may build up over time in significant concentration to cause impact. Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within Lough Gill, potentially as close as 440m away. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[1355] Otter (<i>Lutra lutra</i>)	To maintain the favourable conservation condition of Otter (<i>Lutra lutra</i>) in Lough Gill SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within Lough Gill, potentially as close as 440m away. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. In addition, terrestrial habitats which buffer the site boundary (woodland) and additionally on-site can be utilised for holt creation, along with smaller watercourses within the SAC; therefore, land pathways to this QI cannot be ruled out, and as such impacts to holts or resting places may cause fatal/significant impacts to the Otter of Lough Gill SAC. Based off current site plans, a buffer zone (Forestry Protected Area) to the southwest of the site will be retained with no impact to land pathways. Additionally, no evidence of Otter was noted on-site itself. For Noise and Dust pathways, the temporary nature of the works will result in some levels of disturbance, considering the widespread availability of habitat for Otter throughout the SAC and the anthropogenic impacts already located at this area (Sawmill), it is unlikely that noise or dust would cause a significant impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[000627] Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC ¹⁴⁷			

¹⁴⁷ NPWS Conservation Objectives – Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC: [Site specific cons obj](#)

[1130] Estuaries	To maintain the favourable conservation condition of Estuaries in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI is present approx. 2.05km west and will be subject to pollutants from the site. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[1140] Mudflats and sandflats not covered by seawater at low tide	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI is present approx. 2.05km west and will be subject to pollutants from the site. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[2110] Embryonic shifting dunes	To maintain the favourable conservation condition of Embryonic shifting dunes in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI is present approx. 10.3km west and will be subject to pollutants from the site. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	To restore the favourable conservation condition of Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes') in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI is present approx. 10.4km west and will be subject to pollutants from the site. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>)	To maintain the favourable conservation condition of Petrifying springs with tufa formation (<i>Cratoneurion</i>) in	Pollutants may reach this Qualifying Interest via identified groundwater and surface pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective.	<u>No – No Likely Significant Effects Anticipated to this QI</u>

	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	At the stage of reaching this QI, the groundwater/surface water pollutants will have discharged; to impact this QI, high levels of interconnection between the surface water and GWB would be required to occur, which is deemed unlikely given the tidal flow of the estuary toward the Atlantic Ocean. As such, significant impacts are ruled out for this QI.	
[1095] <i>Petromyzon marinus</i> (Sea Lamprey)	To restore the favourable conservation condition of Sea Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within Lough Gill, potentially as close as 440m away, as well as within its own SAC. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[1099] <i>Lampetra fluviatilis</i> (River Lamprey)	To maintain the favourable conservation condition of River Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within Lough Gill, potentially as close as 440m away, as well as within its own SAC. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[1365] <i>Phoca vitulina</i> (Harbour Seal)	To maintain the favourable conservation condition of Harbour Seal in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within Lough Gill, potentially as close as 440m away, as well as within its own SAC. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater

[004035] Cummeen Strand SPA ¹⁴⁸

[A130] Oystercatcher (<i>Haematopus ostralegus</i>), Wintering population	To maintain the favourable conservation condition of Oystercatcher in Cummeen Strand SPA	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within the SPA. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[A999] Wetlands and Waterbirds	To maintain the favourable conservation condition of wetland habitat in Cummeen Strand SPA as a resource for the regularly occurring migratory waterbirds that utilise it	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within the SPA. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[A162] Redshank (<i>Tringa tetanus</i>), Wintering population	To maintain the favourable conservation condition of Redshank in Cummeen Strand SPA	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within the SPA. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i> Surface Water, Groundwater
[A046] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>), Wintering Population	To maintain the favourable conservation condition of Light-bellied Brent Goose in Cummeen Strand SPA	Pollutants may reach this Qualifying Interest via identified groundwater and surface water pathways, posing a risk to the targets and attributes for this QI in Table 5-1, shifting it from the favourable conservation objective. This QI can utilise aquatic habitats within the SPA. Runoff or Percolated pollutants may discharge and cause a decrease in habitat suitability/prey availability, in turn impacting this QI. Given that there is no envisioned	<u>Yes - Likely Significant Effects Anticipated to this QI</u> Likely significant effects are anticipated from site works alone via identified impact pathways due to the proximity and potential to negatively impact conservation objectives without mitigation. <i>Effects by the following Pathways:</i>

¹⁴⁸ NPWS Conservation Objectives – Cummeen Strand SPA: [Site specific cons obj](#)

		end to the operational phase, pollutants may build up over time in significant concentration to cause impact.	Surface Water, Groundwater
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7. Conclusion of Stage 1 Appropriate Assessment Screening Report

The Stage 1 Appropriate Assessment Screening for the development site to the south of the Hazelwood Road (R286) on lands at Hazelwood Demesne, Co. Sligo has concluded that there is potential for likely significant effects on the following Natura 2000 sites; Lough Gill SAC, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, and Cummeen Strand SPA. These effects may arise from specific pathways of impact associated with the construction activities or throughout the operational phase. Table 7 below summarises the findings of this screening assessment.

The identified impacts could comprise the conservation objectives of the identified Qualifying Interests of the European Designations. As such, the application site does not screen out at Stage 1 Appropriate Assessment Screening and is required to proceed to a **Stage 2 Appropriate Assessment**.

Table 7: Conclusion of the Development Site Appropriate Assessment Stage 1 Screening

European Designation	Qualifying Interests on which Likely Significant Effects may occur
[001976] Lough Gill SAC	- [3150] Natural Eutrophic Lakes with Magnopotamion or Hydrocharition – type vegetation - [91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) - [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>) - [1095] Sea Lamprey (<i>Petromyzon marinus</i>) - [1096] Brook Lamprey (<i>Lampetra planeri</i>) - [1099] River Lamprey (<i>Lampetra fluviatilis</i>) - [1106] Salmon (<i>Salmo salar</i>) - [1355] Otter (<i>Lutra lutra</i>)
[000627] Cummeen Strand/ Drumcliff Bay (Sligo Bay) SAC	- [1130] Estuaries - [1140] Mudflats and Sandflats not covered by seawater at low tide - [2110] Embryonic shifting dunes - [2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) - [1095] <i>Petromyzon marinus</i> (Sea Lamprey) - [1099] <i>Lampetra fluviatilis</i> (River Lamprey) - [1365] <i>Phoca vitulina</i> (Harbour Seal)
[004035] Cummeen Strand SPA	- [A046] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) - [A130] Oystercatcher (<i>Haematopus ostralegus</i>) - [A162] Redshank (<i>Tringa tetanus</i>) - [A999] Wetlands and Waterbirds

8. Stage 2 – Appropriate Assessment

Stage 2 of the Appropriate Assessment process is where a detailed evaluation is carried out to assess the potential effects of a plan or project on the integrity of a Natura 2000 site. This stage is triggered if Stage 1 (Screening) indicates that significant effects cannot be ruled out. The assessment examines the direct, indirect, and cumulative impacts on the site's conservation objectives and qualifying features, outlined in Stage 1. Mitigation measures are considered to mitigate adverse impacts.

8.1 Sources of Impact

During the construction phase, several activities may pose environmental risks. Disturbance of the soil can lead to increased sediment runoff, potentially impacting water quality within the aquifer or watercourses. Improper handling or storage of chemicals and fuels presents a risk of spills, which could contaminate the groundwater body/watercourses if not carefully controlled. Furthermore, the removal of existing vegetation may result in a temporary loss of biodiversity.

During the operational phase, potential impacts include the discharge of untreated surface water runoff, which may percolate into the soil/watercourses, contributing to contamination if not effectively managed. Similarly, the release of untreated foul water runoff poses risks to soil, and groundwater quality, necessitating the implementation of reliable wastewater treatment systems. Changes in drainage patterns arising from the development may alter natural water flow, potentially leading to localised flooding or waterlogging in the absence of adequate drainage infrastructure.

As the development on-site is considered to be permanent, there is no envisioned decommissioning stage of the project. Therefore, no effects are anticipated with regard to decommissioning activities for the application site. The carrying out of demolition or maintenance activities on the site is anticipated to result in comparable disturbances to those outlined in earlier sections relating to the construction phase of the project.

Source-Pathway-Receptor Models were established to 3-no. European Designations via surface water and groundwater pathways, with potential for likely significant effects. Without mitigation, it is likely that significant affects to the Qualifying Interests of these European Designations will occur if appropriate mitigation is not implemented. The 3-no. European Designations with an established Source-Pathway-Receptor from the site works area are as follows:

- [001976] Lough Gill SAC;
- [000627] Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC; and,
- [004035] Cummeen Strand SPA.

8.1.1 Source of Impact via Surface Water Pathways

The following sources of impact are identified as potentially impacting upon the above European Designations through surface water pathways:

- **Release of Suspended Solids:** Drainage activities may increase suspended solids in watercourses, reducing water quality, smothering aquatic habitats, and impacting species such as fish and invertebrates.
- **Release or Alteration of Nutrient Levels:** Disturbance of soils and vegetation can release nutrients, potentially causing eutrophication, algal blooms, and oxygen depletion in aquatic ecosystems.
- **Changes to Water Levels and Channel Morphology:** Works may alter flow regimes and water levels, leading to habitat loss, increased erosion, and changes in sediment deposition, which can affect aquatic species.
- **Chemical Spills and Leaks:** Accidental spills of fuels, oils, or other pollutants can contaminate water bodies, harming aquatic life and reducing habitat suitability for sensitive species.
- **Waste and Debris:** Improperly managed waste may enter habitats, causing pollution, entanglement, or ingestion risks for wildlife, and degrading habitat quality.
- **Untreated Runoff during the Operational Phase:** Untreated runoff during the operational phase has the potential to adversely affect surface water and surrounding habitats. If not appropriately managed, pollutants may carry sediments, pollutants, and other contaminants into nearby water bodies, leading to the degradation of water quality and associated ecological impacts. There is also a risk of soil contamination, which may affect both terrestrial and aquatic ecosystems.
- **Untreated Foul Water during the Operational Phase:** Untreated foul water generated during the operational phase poses a significant risk to soil quality, and surface water resources. Discharges of foul water without appropriate treatment can lead to contamination, resulting in the deterioration of water quality and potential harm to aquatic life and dependent ecosystems. In addition, the infiltration of untreated foul water into soils may contribute to long-term degradation of water quality.

8.1.2 Source of Impact via Groundwater Pathways

The following sources of impact are identified as potentially impacting upon the above European Designations through groundwater pathways:

- **Release or alteration of nutrient levels:** The site works can lead to an increase in the flow of nutrients, such as nitrogen (NO_3) and phosphorus (PO_4), into the groundwater within the groundwater body. These nutrients may percolate through the soil into deeper aquifers, potentially contaminating the groundwater and discharging into Lough Gill. Nitrates, due to their high mobility, can travel deeper into the groundwater system, affecting water quality, while phosphates, though less mobile, can accumulate in the sub-surface over time. A reduction in vegetation coverage decreases the soil's ability to absorb and filter water, accelerating nutrient loading into the groundwater and potentially leading to long-term contamination risks as these nutrients discharge into Lough Gill and transversing further.
- **Chemical Spills and Leaks:** Spills or leaks of fuels, oils, lubricants, paints, solvents, or alkaline concrete washout water from construction activities could contaminate the groundwater body and its discharge into Lough Gill. Additionally, potential increase of vehicular movement during the operational phase could result in similar impacts.

These pollutants have the potential to degrade aquatic habitats, introduce toxic substances, alter the chemistry of the water, and reduce oxygen levels, which may harm aquatic life and reduce the river's suitability for supporting its Qualifying Interests (QIs).

- **Untreated Runoff during the Operational Phase:** Untreated runoff during the operational phase has the potential to adversely affect local groundwater bodies and surrounding habitats via groundwater pathways. If not appropriately managed, pollutants may percolate through groundwater and carry sediments, pollutants, and other contaminants into nearby water bodies, leading to the degradation of water quality and associated ecological impacts. There is also a risk of soil contamination where groundwater infiltrates the ground, which may affect both terrestrial and aquatic ecosystems.
- **Untreated Foul Water during the Operational Phase:** Untreated foul water generated during the operational phase poses a significant risk to soil quality, and groundwater resources. Discharges of foul water without appropriate treatment can lead to contamination, resulting in the deterioration of water quality and potential harm to aquatic life and dependent ecosystems. In addition, the infiltration of untreated foul water into soils may contribute to long-term degradation of groundwater pollution.

8.2 Impact Assessment

The Impact Assessment of a Stage 2 Appropriate Assessment considers the likely significant effects of screened in Qualifying Interests of the European Designations, and whether residual effects will still be present with the implementation of avoidance/mitigation measures. Impact Assessments for each Screened-in European Designation are outlined in the following tables:

- o **Table 7-1:** Impact Assessment of [001976] Lough Gill SAC
- o **Table 7-2:** Impact Assessment of [000627] Cummeen Strand/ Drumcliff Bay SAC
- o **Table 7-3:** Impact Assessment of [004035] Cummeen Strand SPA

8.2.1 Do-Nothing Scenario

Under a "Do Nothing" scenario, the proposed development site would remain in its current condition, without intervention or construction activities. The site comprises mature broadleaved treelines, with improved grassland fields utilised for agricultural practices.

Succession and Vegetation Changes: In the absence of any development, the site would continue to function as a managed agricultural landscape. The improved grassland fields are likely to remain in their current state, maintained through grazing or mowing regimes that prevent natural succession. The mature broadleaved treelines would continue to provide structural stability and ecological continuity, although gaps or ageing within the treeline may gradually reduce habitat quality if not actively managed. The small woodland area to the southwest, associated with the Lough Gill SAC boundary, would be expected to mature further, with natural regeneration occurring where conditions allow.

Habitat Quality and Ecological Value: The existing habitats provide a moderate ecological resource, supporting nesting birds, bats, small mammals, and invertebrates. The treelines likely function as commuting corridors for bat species associated with the nearby SAC, while the woodland edge provides sheltered habitat and potential foraging areas. Under a do-nothing scenario, these ecological functions would remain broadly unchanged. However, lack of active management may lead to gradual decline in treeline quality, reduced connectivity if individual mature trees deteriorate, and reduced ecological diversity within the improved grassland due to continued intensive agricultural management.

Hydrological and Soil Conditions: The absence of an onsite watercourse would mean no direct changes to the site's surface water regime or soil conditions. If left unmanaged, dense vegetation cover during succession practices could also influence natural drainage patterns.

No Introduction of Construction-Related Impacts: Without construction, the site would avoid potential impacts such as dust pollution, habitat disturbance, and changes to local hydrology.

No Socioeconomic Benefits: The lack of development would mean no contribution to local housing needs, economic activity, or infrastructure improvements. The site would remain in its current underutilised state, with limited ecological or community value.

8.2.2 In-Combination Effects

An extensive search and examination were carried out inclusive of any plans and projects with the potential for cumulative effects on all designated sites downstream of the application site when considered in conjunction with the works proposed as part of this development. The Irish Planning register (An Bord Pleanála) was consulted reviewing planning applications within the locality of the application site, applications within the last 5 years, including any proposed plans and developments still under consideration were assessed for their potential cumulative impacts. Several planning applications have been granted planning permission or are under review in the preceding five years, and where necessary, these applications were accompanied by Appropriate Assessments Screening Reports (AASRs), Natura Impact Statements (NISs), and Environmental Impact Assessments (EIA) where required. These applications are expected to result in minimal disruption, such as change of use of buildings, construction of single dwellings and single-storey extensions to dwellings. Any future individual application that has the potential to impact upon a Natura 2000 site will be subject to Appropriate Assessment as required under Articles 6(3) of the Habitats Directive.

8.2.3 Results of Impact Assessment

See below the Results of Impact Assessment for screened-in Qualifying Interests of [001976] Lough Gill SAC, [000627] Cummeen Strand/Drumcliff Bay SAC, and [004035] Cummeen Strand SPA, and with the implementation of mitigation measures where appropriate.

Table 8-1: Impact Assessment of [001976] Lough Gill SAC

[001976] Lough Gill SAC

Source of Impact	S-P-R Model determined for QI	Effects on Attribute and Target Prior to Mitigation/Avoidance	Avoidance/Mitigation Measures	Anticipated Impacts from Works with implementation of mitigation measures
Groundwater Pathways				
Release or alteration of nutrient levels	[3150] Natural Eutrophic Lakes with Magnopotamion or Hydrocharition – type vegetation	The release of suspended solids, alteration of nutrient levels, changes to water levels, chemical spills, and waste disposal can all negatively impact downstream Qualifying Interests (QIs) and the habitats they utilise through groundwater pathways within the groundwater body, discharging into Lough Gill, and therefore this SAC. Suspended solids can impair water quality, smother habitats, and disrupt ecosystems. Nutrient imbalances, leading to eutrophication, can harm aquatic life by fuelling algal blooms and depleting oxygen levels. Chemical spills and waste introduce harmful toxins and debris, further degrading both water quality and the suitability of habitats for downstream Qualifying Interests. These may occur during the operational phase through untreated runoff and untreated foul water.	To mitigate environmental risks during the construction phase and operational phase to downstream designations and their QIs via groundwater pathways, the following measures should be implemented: Negate Impacts during Construction Phase: - Implementation of a Construction Environmental Management Plan (CEMP) Negate Impacts during Operational Phase: - Installation of Sustainable Drainage System (SuDs) - Installation of Class I Interceptor (or alternative) - Installation of Wastewater Treatment system. This mitigation is outlined further in the Appendix of this report	None
Changes to water levels/channel morphology	[91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)			
Chemical Spills and Leaks	[1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>)			
Untreated Runoff during the Operational Phase	[1095] Sea Lamprey (<i>Petromyzon marinus</i>)			
Untreated Foul Water during the Operational Phase	[1096] Brook Lamprey (<i>Lampetra planeri</i>)			
	[1099] River Lamprey (<i>Lampetra fluviatilis</i>)			
	[1106] Salmon (<i>Salmo salar</i>)			
	[1355] Otter (<i>Lutra lutra</i>)			
Surface Water Pathways				
Release or alteration of nutrient levels	[91E0] Alluvial forests with <i>Alnus glutinosa</i> and	The release of suspended solids, alteration of nutrient levels, changes to water levels, chemical spills, and waste disposal can all	To mitigate environmental risks during the construction phase and operational phase to	None

[001976] Lough Gill SAC

Source of Impact	S-P-R Model determined for QI	Effects on Attribute and Target Prior to Mitigation/Avoidance	Avoidance/Mitigation Measures	Anticipated Impacts from Works with implementation of mitigation measures
Changes to water levels/channel morphology	<i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)	negatively impact downstream Qualifying Interests (QIs) and the habitats they utilise through surface water pathways, carrying from the site to the registered watercourse and discharging into Lough Gill/Garavogue Estuary, and therefore this SAC. Suspended solids can impair water quality, smother habitats, and disrupt ecosystems. Nutrient imbalances, leading to eutrophication, can harm aquatic life by fuelling algal blooms and depleting oxygen levels. Chemical spills and waste introduce harmful toxins and debris, further degrading both water quality and the suitability of habitats for downstream Qualifying Interests. These may occur during the operational phase through untreated runoff and untreated foul water.	downstream designations and their QIs via surface water pathways, the following measures should be implemented: Negate Impacts during Construction Phase: - Implementation of a Construction Environmental Management Plan (CEMP) Negate Impacts during Operational Phase: - Installation of Sustainable Drainage System (SuDs) - Installation of Class I Interceptor (or alternative) - Installation of Wastewater Treatment system. This mitigation is outlined further in the Appendix of this report	
Chemical Spills and Leaks	[1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>)			
Untreated Runoff during the Operational Phase	[1095] Sea Lamprey (<i>Petromyzon marinus</i>)			
Untreated Foul Water during the Operational Phase	[1096] Brook Lamprey (<i>Lampetra planeri</i>)			
	[1099] River Lamprey (<i>Lampetra fluviatilis</i>)			
	[1106] Salmon (<i>Salmo salar</i>)			
Release of Suspended Solids	[1355] Otter (<i>Lutra lutra</i>)			

KEY: RED = RESIDUAL EFFECTS EXPECTED AFTER MITIGATION/AVOIDANCE; GREEN = NO RESIDUAL EFFECTS EXPECTED AFTER MITIGATION/AVOIDANCE

Table 8-2: Impact Assessment of [000627] Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

[000627] Cummeen Strand/Drumcliff Bay SAC

Source of Impact	S-P-R Model determined for QI	Effects on Attribute and Target Prior to Mitigation/Avoidance	Avoidance/Mitigation Measures	Anticipated Impacts from Works with implementation of mitigation measures
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Groundwater Pathways

Release or alteration of nutrient levels	[1130] Estuaries [1140] Mudflats and Sandflats not covered by seawater at low tide	The release of suspended solids, alteration of nutrient levels, changes to water levels, chemical spills, and waste disposal can all negatively impact downstream Qualifying Interests (QIs) and the habitats they utilise through groundwater pathways within the groundwater body, discharging into Lough Gill, and therefore this SAC. Suspended solids can impair water quality, smother habitats, and disrupt ecosystems. Nutrient imbalances, leading to eutrophication, can harm aquatic life by fuelling algal blooms and depleting oxygen levels. Chemical spills and waste introduce harmful toxins and debris, further degrading both water quality and the suitability of habitats for downstream Qualifying Interests. These may occur during the operational phase through untreated runoff and untreated foul water.	To mitigate environmental risks during the construction phase and operational phase to downstream designations and their QIs via groundwater pathways, the following measures should be implemented: Negate Impacts during Construction Phase: - Implementation of a Construction Environmental Management Plan (CEMP) Negate Impacts during Operational Phase: - Installation of Sustainable Drainage System (SuDs) - Installation of Class I Interceptor (or alternative) - Installation of Wastewater Treatment system. This mitigation is outlined further in the Appendix of this report	None
Changes to water levels/channel morphology	[2110] Embryonic shifting dunes			
Chemical Spills and Leaks	[2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)			
Untreated Runoff during the Operational Phase	[1095] <i>Petromyzon marinus</i> (Sea Lamprey) [1099] <i>Lampetra fluviatilis</i> (River Lamprey)			
Untreated Foul Water during the Operational Phase	[1365] <i>Phoca vitulina</i> (Harbour Seal)	These sources of impact may percolate via groundwater pathways (GWB) and discharge into Lough Gill, and further to this SAC where they may impact the identified QIs and suitable habitat for other QIs. There is potential for the development to cause significant cumulative effects.		

Surface Water Pathways

Release or alteration of nutrient levels	[1130] Estuaries [1140] Mudflats and Sandflats not covered by seawater at low tide	The release of suspended solids, alteration of nutrient levels, changes to water levels, chemical spills, and waste disposal can all negatively impact downstream Qualifying Interests (QIs) and the habitats they utilise through surface water pathways, carrying from the site to the registered watercourse and discharging into Lough	To mitigate environmental risks during the construction phase and operational phase to downstream designations and their QIs via surface water pathways, the following measures should be implemented:	None
Changes to water levels/channel morphology	[2110] Embryonic shifting dunes			

[000627] Cummeen Strand/Drumcliff Bay SAC

Source of Impact	S-P-R Model determined for QI	Effects on Attribute and Target Prior to Mitigation/Avoidance	Avoidance/Mitigation Measures	Anticipated Impacts from Works with implementation of mitigation measures
Chemical Spills and Leaks	[2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	Gill/Garavogue Estuary, and therefore this SAC. Suspended solids can impair water quality, smother habitats, and disrupt ecosystems. Nutrient imbalances, leading to eutrophication, can harm aquatic life by fuelling algal blooms and depleting oxygen levels. Chemical spills and waste introduce harmful toxins and debris, further degrading both water quality and the suitability of habitats for downstream Qualifying Interests. These may occur during the operational phase through untreated runoff and untreated foul water. These sources of impact may runoff into the drainage ditch on-site and flow into the registered watercourse (SLIGO) discharging into Garavogue Estuary and further this SAC, where they may impact the identified QIs and suitable habitat for other QIs. There is potential for the development to cause significant cumulative effects.	Negate Impacts during Construction Phase: - Implementation of a Construction Environmental Management Plan (CEMP) Negate Impacts during Operational Phase: - Installation of Sustainable Drainage System (SuDs) - Installation of Class I Interceptor (or alternative) - Installation of Wastewater Treatment system. This mitigation is outlined further in the Appendix of this report	
Untreated Runoff during the Operational Phase	[1095] <i>Petromyzon marinus</i> (Sea Lamprey)			
Untreated Foul Water during the Operational Phase	[1099] <i>Lampetra fluviatilis</i> (River Lamprey)			
Release of Suspended Solids	[1365] <i>Phoca vitulina</i> (Harbour Seal)			

KEY: **RED** = RESIDUAL EFFECTS EXPECTED AFTER MITIGATION/AVOIDANCE; **GREEN** = NO RESIDUAL EFFECTS EXPECTED AFTER MITIGATION/AVOIDANCE

Table 8-3: Impact Assessment of [004035] Cummeen Strand SPA

[004035] Cummeen Strand SPA				
Source of Impact	S-P-R Model determined for QI	Effects on Attribute and Target Prior to Mitigation/Avoidance	Avoidance/Mitigation Measures	Anticipated Impacts from Works with implementation of mitigation measures
Groundwater Pathways				
Release or alteration of nutrient levels		The release of suspended solids, alteration of nutrient levels, changes to water levels, chemical spills, and waste disposal can all	To mitigate environmental risks during the construction phase and operational phase to	None

[004035] Cummeen Strand SPA

Source of Impact	S-P-R Model determined for QI	Effects on Attribute and Target Prior to Mitigation/Avoidance	Avoidance/Mitigation Measures	Anticipated Impacts from Works with implementation of mitigation measures
Changes to water levels/channel morphology	[A046] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A130] Oystercatcher (<i>Haematopus ostralegus</i>) [A162] Redshank (<i>Tringa tetanus</i>) [A999] Wetlands and Waterbirds	negatively impact downstream Qualifying Interests (QIs) and the habitats they utilise through groundwater pathways within the groundwater body, discharging into Lough Gill, and therefore this SAC. Suspended solids can impair water quality, smother habitats, and disrupt ecosystems. Nutrient imbalances, leading to eutrophication, can harm aquatic life by fuelling algal blooms and depleting oxygen levels. Chemical spills and waste introduce harmful toxins and debris, further degrading both water quality and the suitability of habitats for downstream Qualifying Interests. These may occur during the operational phase through untreated runoff and untreated foul water. These sources of impact may percolate via groundwater pathways (GWB) and discharge into Lough Gill, and further to this SAC where they may impact the identified QIs and suitable habitat for other QIs. There is potential for the development to cause significant cumulative effects.	downstream designations and their QIs via groundwater pathways, the following measures should be implemented: Negate Impacts during Construction Phase: - Implementation of a Construction Environmental Management Plan (CEMP) Negate Impacts during Operational Phase: - Installation of Sustainable Drainage System (SuDs) - Installation of Class I Interceptor (or alternative) - Installation of Wastewater Treatment system. This mitigation is outlined further in the Appendix of this report	
Chemical Spills and Leaks				
Untreated Runoff during the Operational Phase				
Untreated Foul Water during the Operational Phase				

Surface Water Pathways

Release or alteration of nutrient levels	[A046] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A130] Oystercatcher (<i>Haematopus ostralegus</i>) [A162] Redshank (<i>Tringa tetanus</i>)	The release of suspended solids, alteration of nutrient levels, changes to water levels, chemical spills, and waste disposal can all negatively impact downstream Qualifying Interests (QIs) and the habitats they utilise through surface water pathways, carrying from the site to the registered watercourse and discharging into Lough Gill/Garavogue Estuary, and therefore this SAC. Suspended solids can impair water quality, smother habitats, and disrupt ecosystems. Nutrient imbalances, leading to eutrophication, can harm aquatic life	To mitigate environmental risks during the construction phase and operational phase to downstream designations and their QIs via surface water pathways, the following measures should be implemented: Negate Impacts during Construction Phase:	None
Changes to water levels/channel morphology				
Chemical Spills and Leaks				

[004035] Cummeen Strand SPA

Source of Impact	S-P-R Model determined for QI	Effects on Attribute and Target Prior to Mitigation/Avoidance	Avoidance/Mitigation Measures	Anticipated Impacts from Works with implementation of mitigation measures
Untreated Runoff during the Operational Phase	[A999] Wetlands and Waterbirds	by fuelling algal blooms and depleting oxygen levels. Chemical spills and waste introduce harmful toxins and debris, further degrading both water quality and the suitability of habitats for downstream Qualifying Interests. These may occur during the operational phase through untreated runoff and untreated foul water. These sources of impact may runoff into the drainage ditch on-site and flow into the registered watercourse (SLIGO) discharging into Garavogue Estuary and further this SAC, where they may impact the identified QIs and suitable habitat for other QIs. There is potential for the development to cause significant cumulative effects.	- Implementation of a Construction Environmental Management Plan (CEMP) Negate Impacts during Operational Phase: - Installation of Sustainable Drainage System (SuDs) - Installation of Class I Interceptor (or alternative) - Installation of Wastewater Treatment system. This mitigation is outlined further in the Appendix of this report	
Untreated Foul Water during the Operational Phase				
Release of Suspended Solids				

KEY: RED = RESIDUAL EFFECTS EXPECTED AFTER MITIGATION/AVOIDANCE; GREEN = NO RESIDUAL EFFECTS EXPECTED AFTER MITIGATION/AVOIDANCE

9. Assessment of Potential Impacts to Designations

At Stage 1 Screening Test of Likely Significance, undertaken by AVRIO Environmental Management between July 2023 and December 2025, demonstrated that the proposed development was likely to cause degradation to sensitive European Designations within the Zone of Impact; namely, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Cummeen Strand SPA, and Lough Gill SAC. Potential impacts were identified through surface water and groundwater pathways. The prevention of contaminants and sediments from entering or affecting these pathways during the construction phase and operational phase is therefore critical. Where these pathways can be effectively managed or eliminated, potential impacts on the integrity of these sites will be significantly reduced, ensuring no detrimental effects are likely to occur.

The implementation and installation of the following mitigation measures will prevent the source (contaminants, silts, sediments) from entering the pathways (Groundwater Body/Surface Water Pathways), therefore not adding to/increasing the total pollutant concentrations of the receptor (Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Cummeen Strand SPA) in the construction and operational phases of the development.

- Implementation of a robust Construction Environmental Management Plan (CEMP). The CEMP should incorporate best practices for all aspects of the construction phase and provide clear protocols for managing surface water runoff and percolation through Drumcliff/Strandhill Groundwater Body groundwater body (see Appendix A);
- The installation of appropriate Sustainable Drainage Systems (SuDs) to align on-site drainage with natural greenfield water processes/runoff rates (see Appendix B);
- The installation of appropriate surface water treatment in the form of a Class 1 interceptor (see Appendix C);
- The installation of appropriate foul water treatment in the form of connection to public sewer system or an appropriately sized wastewater treatment system with a percolation area that is appropriately managed by a wastewater treatment management company (see Appendix D).

To conclude, upon the implementation of the appropriate mitigation measures stated above, the proposed development will not adversely impact European designations identified within the likely zone of influence during Stage 1 Screening.

Appendix A – Recommended Contents of a Construction Environmental Management Plan

The Principal Contractor should implement the following mitigation measures into a CEMP to ensure environmental and ecological issues are prevented as a result of construction activities on-site: *(Note: These are recommendations for a CEMP; a detailed site-specific CEMP should be developed in line with recommendations prior to the commencement of works).*

- Construction workers should take all possible steps to avoid impacts on wildlife, habitats, and designated sites. Environmental awareness and a responsible attitude towards the natural environment are essential. The environmental objectives of the construction phase of the development should include minimising the generation of pollutants (i.e., dust, sediment, waste etc.), ensure no pollution incidents occur and minimise disturbance to wildlife while protecting and enhancing biodiversity;
- Prior to any works undertaken, appropriate measures should be implemented to prevent any pollution inputs into the surrounding drains and areas likely to be affected through surface water runoff. If runoff is still likely to occur, surface water should be managed to ensure it does not run into excavations, over disturbed ground or onto haul roads.

Surface & Ground Water Management

- Surface water drains, check dams, silt fencing, sediment traps (dynamic separator, straw bales, straw wattles etc., as deemed necessary prior to works commencing), and geotextile materials will be installed where necessary during the construction phase of the development. These measures will protect the surrounding surface and ground water, drains and waterbodies from any sediment (loose soil and debris) that may arise in the event of surface or ground water runoff on-site;
- Existing surface water channels or, where necessary new appropriately sized channels will be installed to collect and channel all surface water runoff.
- Appropriately sized gravel check dams will be installed within all sediment management surface water channels to minimise sediment mobilisation. All surface water channels will be directed to appropriately sized and designed sediment traps;
- Where dewatering from excavated areas is required, water should be pumped to a suitably sized portable settlement tank with silt bags included at the outlet to assist in sediment removal. The location of this system if required should be determined in conjunction with an ECoW on-site prior to dewatering works being undertaken;
- Stockpiles will be kept to a minimum. If soil stockpiling is required, they will be covered with geotextile material, and a silt fence will be erected at the toe of said stockpiles to minimise sediment mobilisation. A perimeter channel will be installed around the base of the stockpiles and directed towards the on-site sediment management channels, which will capture and re-treat any excess stockpile surface water runoff. Timeframes, the soil is stockpiled, and stripped grounds are exposed, will be kept to a minimum.

Sediment Management

- Silt fencing and geotextile materials will be installed during the construction phase of the development. These measures will protect the adjacent watercourse from any sediment (loose soil and debris) that may arise in the event of surface water runoff on-site.
- Silt fencing will be installed along the site boundary to include between the adjacent watercourses and the main site;
- Appropriately sized channels will be installed, as detailed above, to collect and channel all surface water runoff. Appropriately sized gravel check dams will be installed within all sediment management surface water channels to minimise sediment mobilisation. All surface water channels will be directed to an appropriately sized and designed sediment traps;
- Earthworks should not be undertaken during heavy periods of rain;
- Daily inspection and monitoring of sediment management measures and their effectiveness will be undertaken. Maintenance measures will be implemented as required. Waste will be disposed of in accordance with the Waste Hierarchy using licenced contractors

Fuels, Oils, Chemicals, Liquids & Hazardous Materials

- All fuels, oils, chemicals, liquids and hazardous materials will be stored in a designated location with an impervious base and adequately bunded. This area should be located within the construction compound or at an alternative agreed location to secure these materials from possible accidental or intentional damage. This storage location must be located on level ground at least 10 meters from any drain, ditch or possible route of connectivity with the designations. This area must have appropriate signage;
- All material containers will be clearly labelled and stored in resealable containers;
- Bunding must have a minimum capacity of 110% of the volume of the largest tank or 25% of the total storage capacity, whichever is greater. Bunding will be impermeable to the substance being stored;
- Where a Contractor is responsible for materials stored in a bunded area, that Contractor will implement measures for the regular inspection of bunds and emptying of rainwater (when uncontaminated);
- Material storage areas will be at a safe distance from live construction activities;
- All fuels, oils, chemicals, liquids and hazardous materials brought on-site must be accompanied by a Safety Data Sheet (SDS). These products will be stored in accordance with any specific requirements of the SDS;
- A complete register of all SDS's in use on-site will be maintained. Copies of all SDS's will be retained;
- Careful ordering of materials to minimise quantities present on-site;

- Daily inspection and monitoring of fuels, oils, chemicals, liquids and hazardous materials management measures and their effectiveness will be undertaken. Maintenance measures will be implemented as required. Waste will be disposed of in accordance with the Waste Hierarchy using licenced contractors.

Cement, Concrete, Grout & On-Site Washing Facilities

- If concrete is mixed on-site, such activities will be carried out on an impermeable designated area located at least 10 meters from any watercourse or surface water drain to reduce the risk of runoff entering a watercourse;
- Surplus dry concrete, cement and grout will be used elsewhere on-site if possible. Where this is not possible, this material will be disposed of off-site at a suitable disposal facility and transported using a registered waste carrier;
- Excess concrete shall be returned to the batching plant where possible;
- Concrete mixing and delivery lorries shall return to the batching plants for washout;
- All vehicles and equipment used for on-site activities shall be washed out in a designated bunded washout area, specifically designed to contain such wash water. The washout area will be located at least 10 meters away from any watercourse or other elements sensitive to contamination to reduce the risk of runoff entering a watercourse;
- No detergents shall be used in any on-site washdown processes;
- Wash waters will be stored to allow solids to settle out and recirculated to minimise the risk of pollution. Recirculation of wash water will ensure reduced water usage on-site;
- Daily inspection and monitoring of cement, concrete, grout and on-site washing facilities management measures and their effectiveness will be undertaken. Maintenance measures will be implemented as required. Waste will be disposed of in accordance with the Waste Hierarchy using licenced contractors.

Air Quality – Dust Minimisation

- All construction-related traffic will have speed restrictions on unsurfaced roads to 15 kmph;
- Any site roads with the potential to give rise to dust will be regularly watered, as appropriate, during dry and windy conditions;
- Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy conditions;
- The designated public roads outside the site and the main transport routes to the site will be periodically inspected for cleanliness and cleaned as necessary;
- Material handling systems and material storage areas will be designed and laid out to minimise exposure to wind;
- The transport of soils or other material, which has significant potential to generate dust, will be undertaken in tarpaulin-covered vehicles where necessary;

- Daily inspection and monitoring of dust minimisation measures and their effectiveness will be undertaken.

Noise Minimisation

Best Practicable Means (BPM) of noise control will be applied during construction works to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors arising from construction activities.

The general principles of noise management are given below:

Control at source:

- Equipment – noise emissions limits for equipment brought to site;
- Equipment – method of directly controlling noise e.g. by retrofitting controls to plant and machinery;
- Equipment - indirect method of controlling noise e.g. acoustic screens;
- Equipment - indirect method of controlling noise e.g. benefits and practicality of using alternative construction methodology to achieve the objective e.g. vibratory piling techniques or hydro demolition as opposed to more conventional but noisier techniques; selection of quieter tools/machines; application of quieter processes.

Control across the site by:

- Administrative and legislative control;
- Control of working hours;
- Control of delivery areas and times;
- Careful choice of compound location;
- Physically screening site;
- Control of noise via Contract specification of limits;
- Noise Monitoring, to check compliance with noise level limits, cessation of works until an alternative method is found;
- Many of the activities which generate noise can be mitigated to some degree by careful operation of machinery and use of tools.

Ecological Clerk of Works

Due to the sensitive nature of the site. The CEMP will include for the provision of an Ecological Clerk of Works (ECoW) for the duration of the construction phase, as required.

- An Ecological Clerk of Works (ECoW) will be appointed as part of the construction process;
- The ECoW will be an experienced ecologist and shall have the authority to stop or delay the works, if necessary, should there be an ecological issue;

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- The ECoW will carry out weekly monitoring visits at a minimum;
- The ECoW may appoint an appropriately qualified deputy to carry out monitoring visits;
- There will be clear point of contact within the project team for the ECOW so that issues can be easily raised, and any urgent problems on the ground can be communicated to the works team;
- The ECoW will be 'on call' to deal with any ecological issues as they arise.

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Appendix B – Sustainable Drainage Systems

Sustainable drainage is a broad term centred on clear objectives related to both volumetric and quality control on storm runoff and the promotion of habitat diversity. The objectives are:

- Volumetric
 - Reduce runoff rate and reduce risk of flooding
 - Reduce additional runoff volumes and frequencies resulting from paved surface
 - Promote natural groundwater recharge minimising impacts on surface water bodies
- Quality
 - Minimise impact on groundwater aquifers through treatment and filtration
 - Reduce pollutant concentration in discharge
 - Control and containment of accidental spills
- Promote habitat diversity

Paving in a rural area will result in a larger volume of runoff and a higher discharge peak rate. There is also a lesser volume of base flow to rivers and streams, thereby reducing flow rates in such water bodies. By adopting the above SuDS objectives, these effects are minimised through mimicking the greenfield site conditions, i.e. conditions prior to development.

The volumetric and qualitative effects of paving (CIRIA C697 2007) can be summarised as follows:

- Changes to streamflow
 - Increase in runoff volumes
 - Increase in peak runoff rates
 - Flooding
- Changes to stream morphology
 - Stream widening
 - Erosion
 - Loss of riparian habitat

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- Channel bed profile
- Water Quality impacts
 - Loss of pool riffle structure
 - Impacts on aquatic diversity (dissolved and particulate phase)
 - Siltation
 - Reduce O₂
 - Base metals (lead, zinc, copper, nickel, chromium, cadmium) and PAHs
 - De-icing salt – normally rock salt and grit but also cyanide, phosphates as anti-caking and corrosion inhibitors, heavy metals, urea and ethylene glycol.

Examples of SuDs:

- Rainwater harvesting systems can collect rainwater from roofs and other paved surfaces for use on-site.
- Green roofs, where a planted soil layer is constructed on a roof to create a living surface, can reduce surface runoff.
- Pervious pavements provide a hard surface that can be used for pedestrians or vehicles while allowing rainwater to pass through to the soil or underground storage.
- Bioretention systems (including rain gardens) collect runoff, allowing it to pond temporarily on the surface before filtering through vegetation and underlying soils.
- Trees capture rainwater and provide evapotranspiration, biodiversity, and shade.
- Swales, detention basins, ponds and wetlands slow the flow of water, store and treat runoff while draining it through the site and encouraging biodiversity.
- Soakaways and infiltration basins promote infiltration as an effective means of controlling runoff and supporting groundwater recharge.
- Controlled flow-limiting attenuated surface water to greenfield runoff rates to align on-site drainage with natural greenfield water processes.

For more information on SuD's, please refer to CIRIA C753 – The SuDS Manual – London, 2015

Recommended SuD's, as detailed above, include but are not limited to appropriately scaled attenuation and hydrobreak. Installations of appropriately scaled equipment will ensure green field runoff rates.

Appendix C – Class 1 Interceptor or Suitable Alternative

A suitably sized Class 1 oil separator/interceptor. This Class 1 system should be designed to achieve a discharge concentration of Less than 5mg/l. An example of such a system is Kingspan NSB Range, as detailed below.

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Klargester Bypass Separators

NSB RANGE



Concentration
Less than

5
 MG/L

Bypass separators are used when it is considered an acceptable risk to not provide full treatment for very high flows, such as where the risk of a large spillage and heavy rainfall occurring at the same time is small. Typical applications include surface car parks, roadways and lightly contaminated commercial areas.

Product Benefits

- Light and easy to install.
- Inclusive of silt storage volume.
- Fitted inlet/outlet connectors.
- Vent points within necks.
- Oil alarm system available (required by EN 858-1 and PPG3).
- Extension access shafts for deep inverts.
- Maintenance from ground level.
- GRP or polyethylene construction (subject to model).

Performance & Compliance

- › Fully compliant and tested to EN 858-1.
- › Bypass separators are tested by British standards institute (BSI).
- › Certified flow and process performance assessing effluent qualities to the requirements of EN 858-1.
- › The unit is designed to treat the 'first flush' - 10% of peak flow. The calculated drainage areas served by each separator are indicated according to the formula given by PPG3 NSB = $0.0018A(m^2)$.
- › Class I separators are designed to achieve a concentration of less than 5mg per litre.

Appendix D – On Site Wastewater Treatment System

A suitably sized on-site wastewater treatment system should be installed where connection to the public sewer system is not possible. This on-site wastewater treatment system should be large enough to cater for the proposed development. It is recommended that any sewage treatment system which will service the development is fit for purpose and has the ability to accept the required volumes of waste. Any outflow should be treated within the system to ensure that polluted water does not enter the downstream environments. A management contract should be developed with a wastewater treatment management company to ensure the appropriate management of the system. The sewage treatment system should be regularly serviced and de-sludged in accordance with manufacturers guidelines to ensure it is operating sufficiently at all times.