AVRIO

Appropriate Assessment Screening & Natura Impact Statement

Lord Edward Street and Joe Banks Road, Sligo, Co. Sligo

Project Details

Project Reference:	AEMP – 354 (A456-T33)
Date of Issue:	8th August 2024
Client:	Carnarvon Limited
Site Address	Lord Edward Street and Joe Banks Road, Sligo, Co. Sligo
Services Provided:	Preparation of an 'Article 6 (3) Appropriate Assessment Screening & Natura Impact Statement'

AVRIO Quality Information

Prepared by:	Callum Neill (Ecological Consultant) AVRIO Environmental Management	Signed: 
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Unless otherwise stated in this report, the assessments made assume that the sites and facilities will continue to be used for their current purpose without significant changes.

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.

Contents

1. Introduction

1.1 Remit

AVRIO Environmental Management Limited, hereafter "AVRIO", has been appointed by Carnarvon Limited to undertake an Appropriate Assessment Screening and subsequent Natura Impact Statement for a student accommodation development project located at Lord Edward Street and Joe Banks Road, Sligo, Co. Sligo (Irish Grid Reference: G 68702 35911).

As part of this application, the planning authority requested further information in the form of a Natura Impact Statement. The request additionally highlighted the below.

"Furthermore, the applicant may be required to give Notice in an approved newspaper under Section 34 (8) (b) of the Planning & Development Act 2000 (as amended) if the further information received is considered to contain significant additional data. ***You are advised that you shall not give notice in an approved newspaper UNLESS AND UNTIL requested in writing by the Planning Authority****. You are also advised that, in such circumstances, the 4 week period for determining the application will run from the date on which notice of the publication is given to the Planning Authority."*

1.2 Requirement for an Appropriate Assessment

This Appropriate Assessment Screening and Natura Impact Assessment was prepared for a proposed development at Lord Edward Street and Joe Banks Road, Sligo, Co. Sligo. Having regard to the location of the application 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 Directive[1].

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. The NIS comprises a comprehensive assessment of the plan or project, and it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans or projects on one or more Natura 2000 sites in view of the sites' conservation objectives.

1.3 The Aim of the Report

This Appropriate Assessment Screening 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

[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

Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018)[2] as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010)[3], and it provides an assessment of the potential effects of the proposed student accommodation development project located at Lord Edward Street and Joe Banks Road, Sligo, Co. Sligo.

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

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

1.4 Regulatory Context

1.4.1 Relevant Legislation

1.4.1.1 The Birds Directive

- The Birds Directive (Council Directive2009/147/EC) recognises that certain species of Birds should be subject to special conservation measures concerning their habitats[4]. The Directive requires that Member States take measures to classify the most suitable areas as Special Protection Areas (SPAs) for the conservation of Bird species listed in Annex 1 of the Directive. SPAs are selected for Bird species (listed in Annex I of the Birds Directive), that are regularly occurring populations of migratory Bird species, and the SPA areas are of international importance for these migratory Birds.

1.4.1.2 The EU Habitats Directive

- The EU Habitats Directive (92/43/EEC) requires that Member States designate and ensure that particular protection is given to sites (Special Areas of Conservation) which are made up of or support particular habitats and species listed in annexes to this Directive.[5] Articles 6(3) and 6(4) of this Directive also call for the undertaking of an Appropriate Assessment for plans and projects not directly connected with or necessary to the management of, but which are likely to have a significant effect on any European designated sites (i.e. SACs and SPAs).

[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]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;
[4] European Communities (Conservation of Wild Birds) Regulations, 1985, SI 291/1985 & amendments – http://www.irishstatutebook.ie;
[5] European Communities (Natural Habitats) Regulations, SI 94/1997, SI 233/1998 & SI 378/2005 – http://www.irishstatutebook.ie;

1.4.1.3 The Water Framework Directive

- The Water Framework Directive (WFD) (2000/60/EC), which came into force in December 2000, establishes a framework for community action in the field of water policy. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003)[6]. The WFD rationalises and updates existing legislation and provides for water management on the basis of River Basin Districts (RBDs). RBDs are essentially administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD. The aim of the WFD is to ensure that waters achieve at least good status by 2021 and that status does not deteriorate in any waters.

1.4.2 Appropriate Assessment & Habitats Directive

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest at a favourable conservation status[7]. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC)[8].

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for plans or projects affecting Natura 2000 sites[9]. Article 6(3) establishes the requirement for Appropriate Assessment:

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

Article 6(4) deals with the steps that should be taken when it is determined, as a result of appropriate assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case[10].

Article 6(4) states:

[6] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.
[7] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora
[8] Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild Birds
[9] 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
[10] EC (2007b) Interpretation Manual of European Union Habitats. Version EUR 27. European Commission, DG Environment;

"If in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

1.4.3 Screening for Appropriate Assessment

Screening is the process of determining whether an Appropriate Assessment is required for a plan or project. Under Part XAB of the Planning and Development Act, 2000, as amended, screening must be carried out by the Competent Authority. Section 177U of the Planning and Development Act, 2000, as amended, states[11]

'A screening for appropriate assessment shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site'.

The Competent Authority's determination as to whether an Appropriate Assessment is required must be made on the basis of objective information and should be recorded. The Competent Authority may request information to be supplied to enable it to carry out a screening.

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

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

1.4.4 Natura Impact Statement

Where an Appropriate Assessment is required, the Competent Authority may require the applicant to prepare a Natura Impact Statement. The term Natura Impact Statement (NIS) is defined in legislation[12]. A NIS, where required, should present the data, information, and analysis necessary to reach a definitive determination as to 1) the implications of the plan or project, alone or in combination with other plans and projects, for a European site in view of its conservation objectives, and 2) whether there will be adverse effects on the integrity of a European site. The NIS should be underpinned by the best scientific knowledge, objective information and by the precautionary principle. This

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

Appropriate Assessment Screening and Natura Impact Statement has been prepared in compliance with the provision of section 177U of the Planning & Development Act 2010 as amended.

1.5 Statement of Authority

Callum Neill MSci (Hons): The preparation of this report has been undertaken by Callum. 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).

Jack Hamill BSc (Hons): This report has been reviewed by Jack Hamill. Jack is an ecologist at AVRIO Environmental Management. Jack graduated with a bachelor's degree of Science in Marine Science from the University of Ireland, Galway. Jack has experience overseeing environmental monitoring surveys in his previous roles both in Australia and Canada, he has been undertaking environmental surveys in Northern Ireland and the Republic of Ireland since 2023 including Invasive Species Surveys (ISS), Preliminary Roost Assessments (PRA), baseline ecological surveys and Bat emergence/re-entry surveys on a variety of sites throughout Ireland. Jack 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, ECoW reports, Invasive Species Management Plans, Habitat Regulation Assessments (HRA/AASR/NIS).

Fergal Maguire NDA, BSc (Hons), PIEMA: This report has been approved by Fergal Maguire. Fergal is the General Manager and Principal Environmental and 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 (E.A.) and a number of Local Authorities throughout the U.K. and Ireland. Fergal has extensive experience in the sustainable development and management of a number of IED licenced facilities throughout Ireland, the U.K. 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 Martin 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.

2. Methodology

2.1 Appropriate Assessment

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

1. Council of the European Commission (1992) Council Directive 92/43/EEC of 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.[13]
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.[14]
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.[15]
4. European Commission (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.[16]
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.[17]
6. EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.[18]
7. European Commission (2018). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.[19]
8. Department of Environment, Heritage, and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.[20]
9. National Parks and Wildlife Service (2019). Article 17: The Status of EU Protected Habitats and Species in Ireland. [21]
10. European Communities (Natural Habitats) (Amendment) Regulations 2005[22];

[13] 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;
[14] 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;
[15] 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;
[16] EC (2006) Nature and Biodiversity Cases: Ruling of the European Court of Justice, Office for Official Publications of the European Communities, Luxembourg. European Commission;
[17] 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;
[18] EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. Office for Official Publications of the European Communities, Luxembourg. European Commission.
[19] 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.
[20] 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
[21] NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report.
[22] EC (1997) 2006. The European Communities (Natural Habitats)(Amendment) Regulations 2005.

The EC Guidance sets out a number of principles as to how to approach decision-making during the process. The primary one is 'the precautionary principle, which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty.[23]

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

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

This translates into a four-stage process to assess the impacts, on a designated site or species, of a policy or proposal.[24]

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

The four-stage process is:

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

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

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

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

[23] DEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. DEHLG, Dublin;
[24] DEHLG (2010). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Revision, February 2010. Department of the Environment, Heritage and Local Government;

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

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

2.2 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 viewer[25];
- Ordnance Survey Ireland Map Viewer: Geohive[26];
- Environmental Protection Agency Geographic Information System (EPAGIS)[27];
- National Biodiversity Data Centre (NBDC)[28];
- NPWS Article 17 Metadata and GIS Database[29];
- Geological Survey Ireland, Department of the Environment, Climate and Communications Map Viewer[30];
- Sligo County Council Planning Portal[31];
- Vincent Hannon Architects[32]

[25] National Parks and Wildlife Service: National Parks & Wildlife Service (npws.ie)
[26] Ordnance Survey Ireland Map Viewer - GeoHive: https://webapps.geohive.ie/mapviewer/index.html
[27] Environmental Protection Agency Geographic Information System: https://gis.epa.ie/EPAMaps/
[28] National Biodiversity Data Centre: www.biodiversityireland.ie
[29] NPWS Article 17 Metadata and GIS Database: https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17
[30] Geological Survey Ireland Map Viewer: https://dcenr.maps.arcgis.com/apps/MapSeries/index
[31] Sligo County Council Planning Portal: Sligo County Council Planning Portal
[32] Vincent Hannon Architects – Site Sketch Layout

2.3 Site Location & Current Use

The development site is located at Lord Edward Street and Joe Banks Road, Sligo, Co. Sligo (Grid Reference: G 68702 35911). The site is located approximately 450m northwest of Sligo town centre, 22.21km northwest of Castlebaldwin village centre, and 47.6km northeast of Ballina town centre. The application site is currently a derelict brownfield site situated within Sligo town, characterised by overgrown scrub and vegetated patches. The site is completely surrounded by roadways, hardstanding areas, and a mix of residential and commercial properties associated with Sligo town centre. To the north of the site lies Lord Edward Street and Sligo train station and Sligo Bus station with associated parking, while to the east, there are the Joe Banks Road, Quayside shopping centre with its associated parking facilities, and the Garavogue River. Southward, the site is bordered by additional residential properties, Church Hill Road, amenity grasslands, and Kingsbridge Sligo Private Hospital. To the west, residential properties, the Gateway Community Centre, Wolfe Tone Street, and Sligo Rovers FC football stadium are situated.

Picture 1: Scrub (WS1) identified within application site

Picture 2: Scrub (WS1) in scattered patches along eastern boundary wall of application site

Picture 3: Dry Calcareous and Neutral Grassland (GS1) growing between Scrub habitats on-site

Picture 4: Stone Walls and Other Stonework (BL1) at northern boundary of the site

Picture 5: Buildings and Artificial Surfaces (BL3) located outwith western boundary of the site.

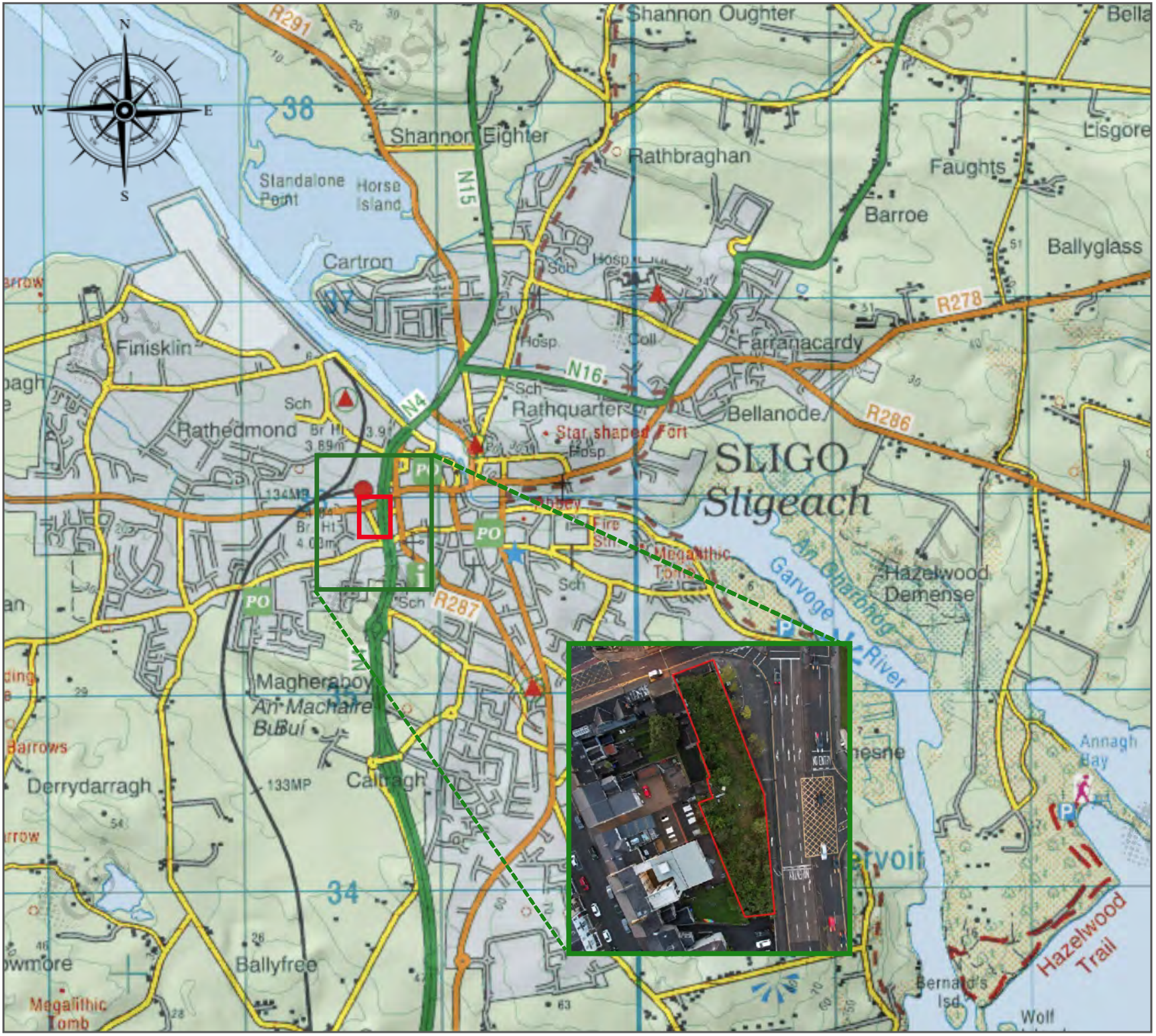
Picture 6: Scattered Parkland and Trees (WD5) – Immature scattered trees growing within Scrub habitat on-site.

Picture 7: Access track leading into application site from the west between Building 3 and 4.

Picture 8: Immature scattered trees (WD5) growing within Scrub habitat at eastern boundary of site.

Picture 9: Cherry trees growing within pedestrian footpath outwith eastern boundary wall of site.

Picture 10: Dense area of Scrub growing along northeastern edge of application site. Ornamental/Non-native Shrub – Buddleia growing within area of Scrub



Legend:

Site Boundary

Project Title: AEMP-2000354 Lord Edward Street, Sligo, Co. Sligo	
Drawing Title: Site Location Map	
Drawn By: JH	Checked By: FM
Project No: 2000354	Drawing No: Figure 1
Scale: 1/450	Date: 1st July 2024

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2.4 Characteristics of the Development

2.4.1 Description of the Project

The development will consist of:

- 1 No. 3 Storey Student Accommodation Building containing 32 No. bedrooms, associated living/kitchen spaces, circulation and service areas.
- 1 No. Ground Floor Retail Unit.
- Pedestrian, cycle and vehicular access/egress
- All associated car parking, bin storage, landscaping, boundary treatments, pedestrian links, public lighting, service connections and all associated site works.

For the lands located at Lord Edward Street and Joe Banks Road, Sligo, Co. Sligo (G 68702 35911).

The project will include in-built mitigation measures, outlined in the Ecological Impact Assessment (Document Reference: AEMP – 354 (A456-T6)) produced by AVRIO Environmental Management for this development. These include:

- The implementation of an effective and robust Construction Environmental Management Plan (CEMP), ensuring that best practice is applied to all aspects of the constriction phase.
- The installation of appropriate surface water treatment in the form of a Class 1 interceptor.
- 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.

The CEMP follows the below guidance:

- NIEA Guidance for Pollution Prevention (GPP's):
  - GPP 1: Understanding your environmental responsibilities – Good environmental practices;
  - GPP 2: Above ground oil storage tanks;
  - GPP 3: Use and design of oil separators in surface water drainage systems;
  - GPP 4: Treatment and disposal of wastewater where there is no connection to the public foul sewer;
  - GPP 5: Works and maintenance in or near water;
  - GPP 6: Working on construction and demolition sites;
  - GPP 8: Safe storage and disposal of used oils;

- GPP 13 Vehicle washing and cleaning;
- GPP 20: Dewatering underground ducts and chambers;
- GPP 21: Pollution incident response planning;
- GPP 22: Dealing with spills;
- GPP 26: Safe storage - drums and intermediate bulk containers

- NIEA Pollution Prevention Guidance Notes (PPG's)
  - PPG 7: Safe Storage – The safe operation of refuelling facilities;
  - PPG 18: Managing fire water and major spillages;
- CIRIA Report C532 Control of Water Pollution from construction sites;
- CIRIA Report C741 Environmental Good Practice on Site guide (4th Edition);
- BS6031:2009 Code of Practice for Earthworks; and
- BS 5930 2015: Code of Practice for Site Investigations.

As mentioned in section 1.1 above, due to the request of a Stage 2 NIS by Sligo County Council, this report has been prepared under the assumption that the in-built mitigation measures highlighted above have not yet been implemented into the description of the project.

2.4.2 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 activities[34].

A walkover of the site was undertaken on the 16th of April 2024 by a qualified ecologist, and habitats present were identified in accordance with the Heritage Council's 'Guide to Habitats in Ireland'[35]. 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'.

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.

[34] CIEEM, 2018, Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine;
[35] Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Dublin: The Heritage Council;

2.4.2.1 Habitats

Habitats located within the site and immediate environs include:

- Scrub (WS1)
- Dry Calcareous and Neutral Grassland (GS1)
- Scattered Trees and Parkland (WD5)
- Ornamental/Non-native Shrub (WS3)
- Buildings and Artificial Surfaces (BL3)
- Stone Walls and Other Stonework (BL1)

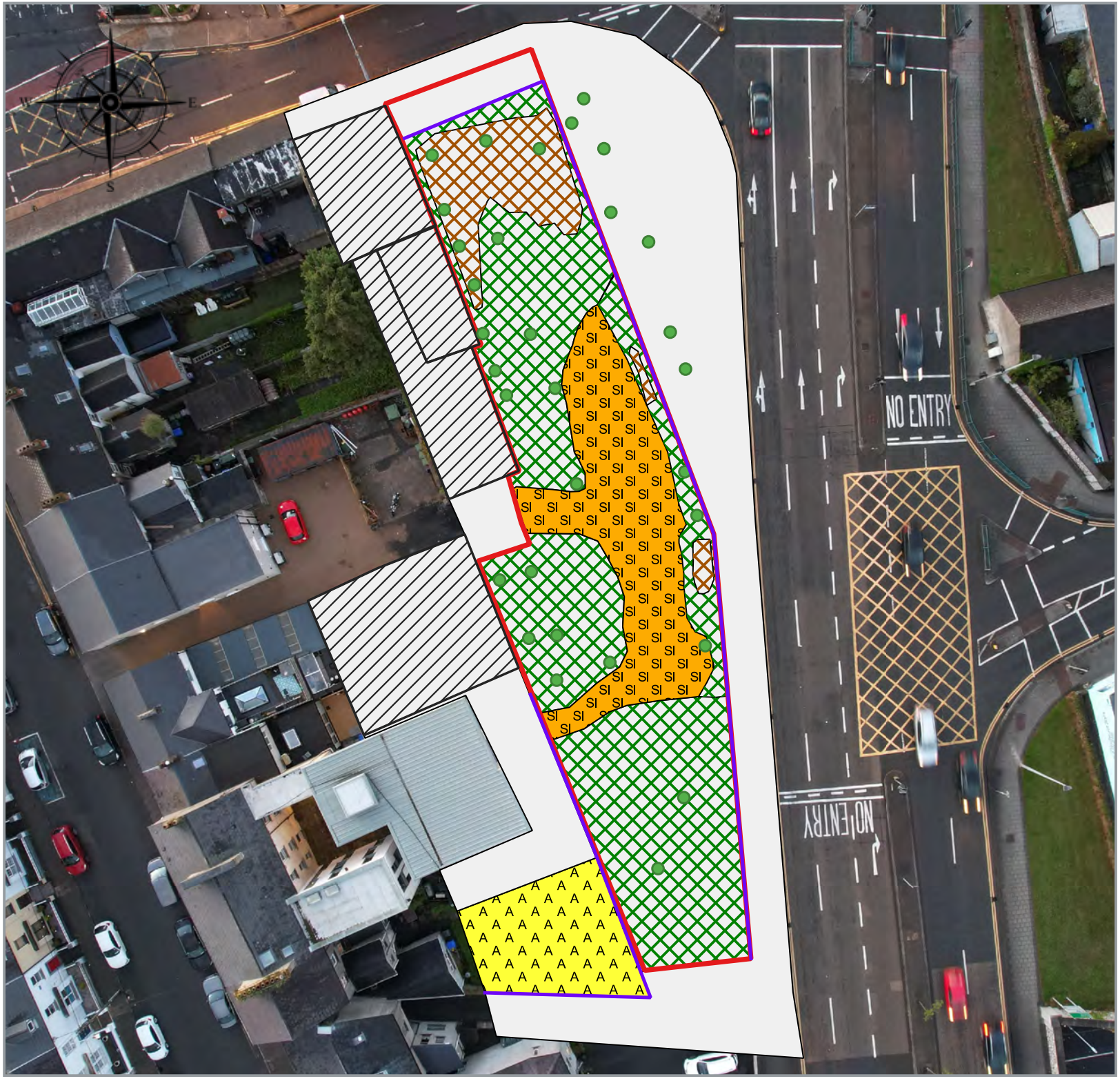
2.4.2.3 Invasive Species (Flora) Survey

Throughout the habitat survey, the site was searched for invasive weed species, focusing on those species listed on the Third Schedule of Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011[36]. Invasive species included in this list include Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*), Giant Knotweed (*Fallopia sachalinensis*), Giant Rhubarb (*Gunnera manicata*), Himalayan Balsam (*Impatiens glandulifera*), Himalayan Knotweed (*Polygonum polystachyum),* Bohemian Knotweed (*Fallopia bohemica*) and Rhododendron (*Rhododendron ponticum*).

The invasive species survey carried out by AVRIO did not identify any species listed under the Third Schedule of of Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011. However, the non-scheduled invasive species Buddleia (*Buddleja davidii*) and Sycamore *(Acer pseudoplatanus)* were identified on-site scattered throughout the Scrub habitats. Buddleia and Sycamore are not currently listed under the Third Schedule in the Republic of Ireland (Irish Statutory Instrument 477/2011); however, both are listed as a medium-impact invasive species by Invasives Ireland. Considering such, due care and consideration should be given to the management of Buddleia and Sycamore within the site to ensure this species does not disperse, spread, or cause to grow elsewhere as part of development works. To this extent, it is recommended that invasive species on-site are managed and removed from the site effectively.

Recommended management options for Buddleia and Sycamore are outlined in the Ecological Impact Assessment, associated with this development.

[36] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora [Habitats Directive] and Directive 2009/147/EC [codified version of Directive 79/409/EEC as amended] [Birds Directive] transposed into Irish law as European Communities [Birds and Natural Habitats] Regulations 2011 [SI 477/2011].



Legend:

- Site Boundary
- Building Outline
- WS1- Scrub
- GS1- Dry Calcareous and Neutral Grassland
- BL3- Buildings and Artificial Surfaces
- WS3- Ornamental/Non-native Shrub
- BL1- Stone Walls and Other Stonework
- WD5- Scattered Trees and Parkland

Project Title: AEMP-2000354 Lord Edward Street, Sligo, Co. Sligo	
Drawing Title: Fossitt Habitats Map	
Drawn By: JH	Checked By: FM
Project No: 2000354	Drawing No: Figure 2
Scale: 1/450	Date: 1st July 2024

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2.4.2.4 Protected Species (Fauna) Survey

A full breakdown of survey results, conclusions, and mitigation measures in regard to Protected Species are outlined in the Ecological Impact Assessment (Document Reference: AEMP – 354 (A456-T6)) produced by AVRIO Environmental Management for this development.

2.4.2.4.1 Bat Roost Assessment for Trees

All Trees within the site works area were assessed as having negligible Bat Roost Potential. No further survey is required.

2.4.2.4.2 Bat Roost Assessment for Buildings/Structures

No Buildings within the site works area were assessed as having negligible Bat Roost Potential. No further survey is required. 4-no. Buildings outwith the western boundary of the application site were assessed as having roosting potential for Bats. Buildings 1 and 2 as shown in Appendix E below were assessed as moderate potential for roosting Bats, Buildings 3 and 4 were assessed as having low potential for roosting Bats. All Buildings were outwith the application site boundary and no modification works will be undertaken upon them as a result of this development. As such, no further surveys are required for these Buildings.

A section of the boundary wall to the northeast of the application site was assessed to have low potential for roosting Bats. This section of wall required one emergence survey undertaken between May and August inclusive in line with NPWS and BCT guidelines. After the subsequent Bat emergence survey was carried out on this section of wall it was concluded there were no Bats roosting within this structure. As such, the removal of this wall will not have a negative effect on any Bat species present within the locality.

2.4.2.4.3 Habitat Suitability for Bats

The site was deemed low suitability for commuting and foraging Bat species; the habitats on-site provided poor connectivity to suitable habitat in the wider environs, and the site is situated within the built-up urban location of Sligo town centre, thus rendering it low suitability for Bats e.g., high volumes of artificial lighting and noise associated with urban infrastructure. However, some suitable habitats for the species can be found within the local environs however, e.g., treelines and hedgerows, a small area of Woodland habitat approx. 68m to the west of the site and the Garavogue River to the east. Additionally, the locality of the application site attained an average Bat suitability index score of 36.11, indicating the surrounding environs of the application site have a moderate-high suitability for Bat species. Suitable mitigation measures have been outlined in the associated Ecological Impact Assessment, to negate any impact to commuting and foraging Bats.

2.4.2.4.4 Badger Activity Survey and Habitat Suitability Assessment

No direct evidence of Badger was identified during the ecological survey e.g., setts, latrines, snuffle holes, and Habitats on-site were deemed sub-optimal for sett creation, foraging, and commuting purposes, only possessing a small amount of Scrub habitat which is widespread in the wider environs. Badger has been recorded within 2km of the

application site, most recently on the 02/03/2015 (NBDC Database). Therefore, it cannot be ruled out that Badgers do not utilise the site for commuting and foraging purposes. Suitable mitigation measures have been outlined in the associated Ecological Impact Assessment, to negate any impact to commuting and foraging Badger.

2.4.2.4.5 Breeding Bird Survey

Habitats on-site e.g., Scrub or Broadleaved Scattered Trees were assessed as suitable for use by breeding Birds. Suitable mitigation measures have been outlined in the associated Ecological Impact Assessment, to negate any impact to breeding Birds.

Cummeen Strand SPA is the closest Special Protection Area to the development, located approximately 444m northeast of the development to the site; it is noted to support an international important population of Annex I Light-bellied Brent Goose (223), and nationally important populations of Annex I species: Golden Plover (428) and Bar-tailed Godwit (85). Bar-tailed Godwit listed on Annex I of the E.U. Birds Directive has been previously recorded within 2km of the site on the NBDC database on (31/12/2011). The habitats on-site, however, were deemed to be of low foraging potential for Bar-tailed Godwit and the application site's habitats are of more suitability to support common Bird species associated with urban settings, such as House Sparrows *(Passer domesticus)*, Starlings *(Sturnus vulgaris)*, Barn Swallows *(Hirundo rustica)*, and Common Pigeons *(Columba livia)*.

2.4.2.4.6 Otter Activity Survey and Habitat Suitability Assessment

No direct evidence of Otter was identified during the ecological survey e.g., spraints, "green spots", holts etc. Habitats on-site were deemed sub-optimal for holt creation by the species, as well as sub-optimal for commuting and foraging purposes. The site has a hydrogeological link to suitable habitat for Otter in the wider environs, namely the Garavogue River. The implementation of the Construction Environmental Management Plan (CEMP) will ensure that there are no adverse impacts to the aforementioned habitats in the Garavogue River, mitigating potential impacts to any Otter using these habitats.

Additionally, while no evidence of holts of resting areas was noted during the survey, Otter have been noted within 2km of the application site (NBDC Maps), last recorded on 21/11/2015. Suitable mitigation measures have been outlined in the associated Ecological Impact Assessment, to negate any impact to commuting and foraging Otter.

2.4.2.4.7 Pine Marten Habitat Suitability Assessment

The application site itself lacks suitable habitats for Pine Marten, as no preferred habitats of the species e.g., Woodland or Treelines were identified within the site boundaries. Scattered Trees present within the application site were of insufficient size and scale to offer suitable habitat for the species. Moreover, the site is situated within a built-up urban environment in Sligo town, surrounded by roadways and extensive buildings, and offered no habitat connectivity to any suitable habitat in the wider environs. As such the site was deemed of negligible suitability for Pine Marten.

2.4.2.4.8 Red Squirrel Habitat Suitability Assessment

The application site itself lacks suitable habitats for Red Squirrel, as no preferred habitats of the species e.g., Woodland or Treelines were identified within the site boundaries. Scattered Trees present within the application site were of insufficient size and scale to offer suitable habitat for the species. Moreover, the site is situated within a built-up urban environment in Sligo town, surrounded by roadways and extensive buildings, and offered no habitat connectivity to any suitable habitat in the wider environs. As such the site was deemed of negligible suitability for Red Squirrel.

2.4.2.4.9 Common Lizard Habitat Suitability Assessment

The application site provided suitable habitat for Common Lizard for basking purposes. Areas of dense Scrub and overgrown Neutral Grassland habitat on-site may provide suitable vegetation coverage for the species, additionally, stone walls identified around the boundary of the site may also offer suitable basking spots for the species. However, the site lacked suitable hibernation or breeding habitat for the species and offered no habitat connectivity to extended environs offering suitable breeding spots.

2.4.2.4.10 Butterfly Habitat Suitability Assessment

The application site was assessed to be of low suitability for Butterfly species. The Scrub and Dry Calcareous and Neutral Grassland which dominated the site habitats was of low species diversity and lacked suitable swards for Butterfly foraging. Annex II listed Marsh Fritillary has 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 Butterfly, including Marsh Fritillary.

2.4.2.4.11 Smooth Newt Habitat Suitability Assessment

The application site was assessed to be sub-optimal for Smooth Newt. There are no previous records of the species on NBN Atlas (within 5km of the application site) or NBDC (within 2km of the application site) databases. A Newt HSI index was not undertaken on-site due to the absence of areas of standing water on-site.

2.4.2.4.12 Common Frog Habitat Suitability Assessment

The application site was assessed to be sub-optimal for Common Frog; no watercourses were identified on-site or within the surveyed area, and no other suitable habitats where present for the species to utilise.

2.4.3 Description of the Baseline Geological Environment

2.4.3.1 Bedrock Geology

Bedrock under the site is known as the 'Dartry Limestone Formation' consisting of Dark fine-grained cherty limestone. The dominant facies are massive to thick-bedded, mostly very fine-grained and dark wackestone, locally rich in sponge spicules. Bedding is picked out by lines of chert nodules. There is pervasive dolomitisation and silicification[37].

Foraminiferans, calcareous algae and rugose corals from many sections in the Glencar Limestone, Dartry Limestone, Bricklieve Limestone and Meenymore formations in north-western Ireland have been analysed. Results from the fauna and microflora suggest that these formations constitute the early to late Asbian for the Glencar Limestone Formation and lower Bricklieve Limestone Formation (Cf6β-Cf6γ foraminiferal subzones), and the upper part of the late Asbian for the Dartry Limestone Formation and upper Bricklieve Limestone Formation (Cf6γ Subzone). The succeeding Meenymore Formation in the studied area is assigned to the Brigantian (Cf6δ Subzone). Goniatite biozonal schemes established previously for equivalent strata to the east in the Cuilcagh Mountains that are not in harmony with the dating proposed here are discussed.[38]

2.4.3.2 Aquifer Classification

The aquifer classification at the site is classed as a 'Regionally Important Aquifer - Karstified (conduit) - Bedrock which is Generally Moderately Productive'. A description of this aquifer is detailed below:

'Karstification' is the process whereby limestone is slowly dissolved away by percolating waters. It most often occurs in the upper bedrock layers and along certain fractures, fissures and joints, at the expense of others. Karstification frequently results in the uneven distribution of permeability through the rock, and the development of distinctive karst landforms at the surface (e.g., swallow holes, caves, dry valleys), some of which provide direct access for recharge/surface water to enter the aquifer. The landscape is characterised by largely underground drainage, with most flow occurring through the more permeable, solutionally-enlarged, interconnected fissure/conduit zones, which may be several kilometres long. Groundwater velocities through fissures/conduits may be high and aquifer storage is frequently low. Groundwater often discharges as large springs (>2,000 m 3/d), which range from regular and dependable to highly variable ('flashy'). There is a strong interconnection between surface water and groundwater[39]

The degree of karstification ranges from slight to intense. Geological Survey of Ireland recognises two types of karst aquifer: those dominated by diffuse flow (Rkd) and those like the aquifer classified above dominated by conduit flow (Rkc)[40].

[37] Geological Survey Ireland: https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aaac3c228
[38] Cózar, Pedro, et al. "Biostratigraphical Dating of Upper Viséan Limestones (NW Ireland) using Foraminiferans, Calcareous Algae and Rugose Corals." *Irish Journal of Earth Sciences*, vol. 23, 2005, p. 1-23. *Project MUSE*, doi:10.1353/ijes.2005.0000.
[39] Geological Survey Ireland Map Viewer: https://dcenr.maps.arcgis.com/apps/MapSeries/index

2.4.3.3 Groundwater Vulnerability

Groundwater Vulnerability is a term used to represent the natural ground characteristics that determine the ease with which groundwater may be contaminated by human activities. More scientifically, groundwater vulnerability embodies the characteristics of the intrinsic geological and hydrogeological features at a site that determine the ease of contamination of groundwater. The vulnerability category assigned to a site or an area is thus based on the relative ease with which infiltrating water and potential contaminants may reach groundwater in a vertical or sub-vertical direction. As all groundwater is hydrologically connected to the land surface, it is the effectiveness of this connection that determines the relative vulnerability to contamination. Groundwater that readily and quickly receives water (and contaminants) from the land surface is considered to be more vulnerable than groundwater that receives water (and contaminants) more slowly, and consequently in lower quantities. Additionally, the slower the movement and the longer the pathway, the greater is the potential for attenuation of many contaminants[40].

The Geological Survey Ireland classifies the groundwater vulnerability at the site to be in the vulnerability category of Moderate[41].

2.4.3.4 Groundwater Flow Direction

Exact directions of groundwater flow have not been established for the site in question, however, for the purposes of this assessment the precautionary principle is implemented, and a worst-case scenario is used. The direction of groundwater flow follows a path through an aquifer from areas of high-water levels to areas where water levels are low. Water flows through aquifers to discharge points some distance down-gradient at a spring or offshore into the sea[42].

In this instance, water may percolate through a “Regionally Important Aquifer – Karstified” into the Garavogue River within 450m to the east of the site, and further into Sligo Bay and the Atlantic Ocean.

[40] Geological Survey Ireland - Groundwater Vulnerability: https://www.gsi.ie/en-ie/programmes-and-projects/groundwater/activities/understanding-ireland-groundwater/groundwater-vulnerability/Pages/default.aspx
[41] Geological Survey Ireland Map Viewer: https://dcenr.maps.arcgis.com/apps/MapSeries/index
[42] Geological Survey Ireland Map Viewer: https://dcenr.maps.arcgis.com/apps/MapSeries/index

Bedrock Aquifer: Regionally Important Aquifer - Karstified		Bedrock polygons 100k ITM 2018: Darty Limestone Formation					National Groundwater Vulnerability		
Aquifer Category:	Category Description:	New Code:	Unit Name:	Description:	Formation:	Lithological Description:	Soil Permeability code:	Depth to Bedrocks (m):	Vulnerability Category:
Regionally Important Aquifer - Karstified	Rkc	CDDART	Dartry Limestone Formation	Dark fine-grained cherty limestone	Dartry Limestone Formation	The dominant facies is massive to thick-bedded, mostly very fine-grained and dark wackestone, locally rich in sponge spicules. Bedding is picked out by lines of chert nodules	M	---	Moderate

Legend:

- Site Boundary
- SACs- Special Areas of Conservation
- SPAs- Special Protection Areas

Project Title:

AEMP-2000354
Lord Edward Street, Sligo, Co. Sligo

Drawing Title:
Hydrogeology Map

Drawn By:	Checked By:
JH	FM
Project No:	Drawing No:
2000354	Figure 3
Scale:	Date:
1/200000	1st July 2024

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3. Identification of Relevant NATURA 2000 Sites

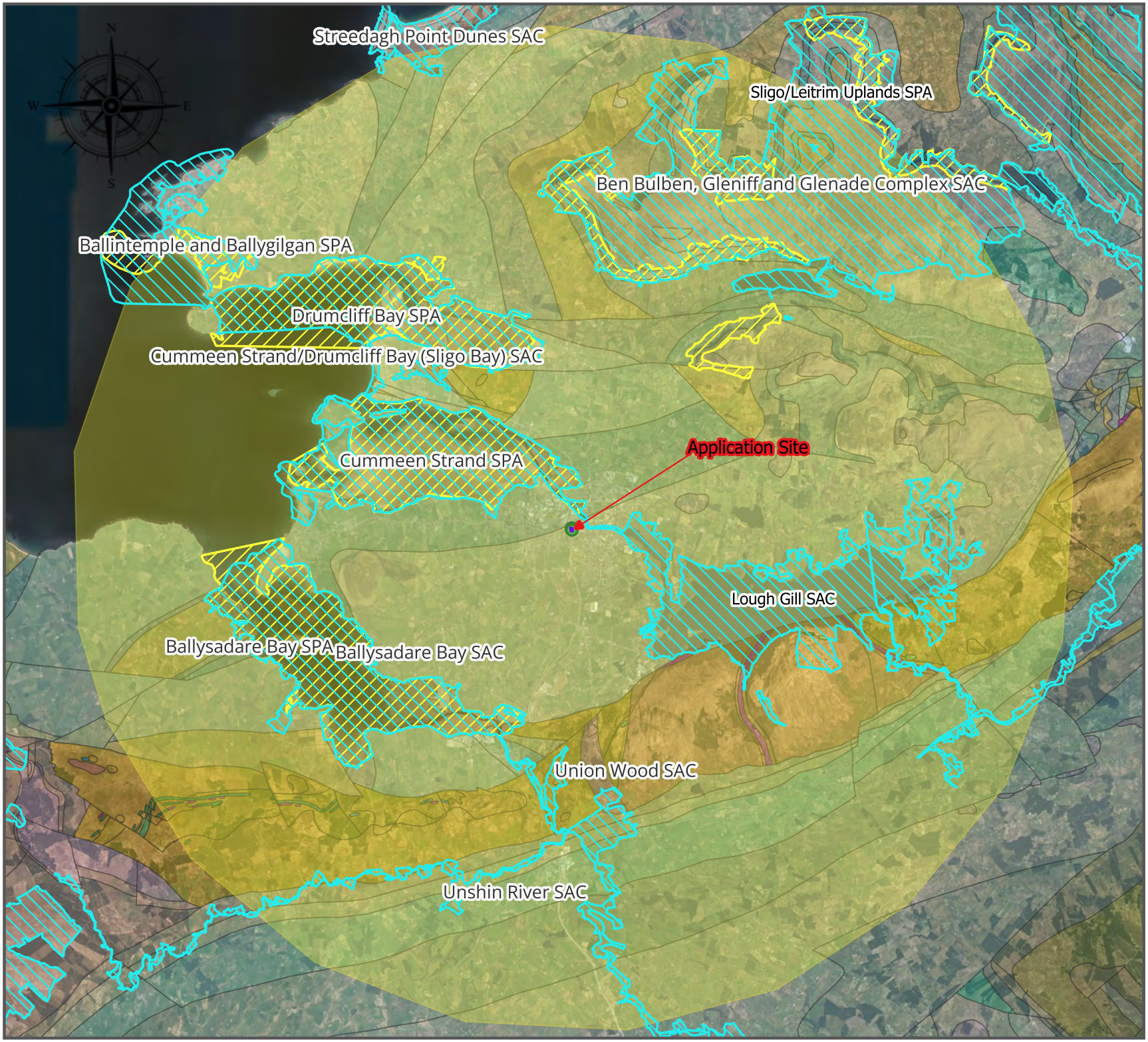
3.1 Identification of the European Sites within 15km of the Application Site

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 website[43] and the EPA website[44] on the 28th of June 2024. These datasets were utilised to identify European Sites that could feasibly be affected by the proposed development;
- All European Sites within a distance of 15km surrounding the development site were identified and are detailed in Figure 4 below. In addition, the potential for connectivity with European Sites at distances greater than 15km from the proposed development was also considered. In this case, the proposed project does not give rise to the potential for likely significant effects on European Sites located beyond the 15km zone;
- 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 consulted[45]. 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;
- Table 3-1 provides details of all relevant European Sites identified in the preceding steps and assesses which are within the likely Zone of Impact. The assessment considers any likely direct or indirect impacts of the proposed development, both alone and in combination with other plans and projects, on European Sites by virtue of the following criteria: size and scale, land-take, distance from the European Site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements and duration of construction, operation and decommissioning were considered in this screening assessment;
- The site synopses and conservation objectives, as per the appropriate datasets, were consulted and reviewed when preparing this report (28th June 2024). Figure 4 details the location of the proposed development in relation to all European sites within 15km in the Republic of Ireland;

Where potential pathways for Significant Effect are identified, the site is included within the Likely Zone of Impact, and further assessment is required. Table 3-1 below identifies all Natura 2000 sites within a 15km zone of the application site, and further identifies if each site is within the Zone of Impact. Figure 4 provides a map depicting the above.

[43] NPWS Protected Site Synopses and maps available on http://www.npws.ie/en/ProtectedSites/;
[44] EPA maps available on EPA Maps
[45] Scottish Natural Heritage (SNH) (July 2013) Assessing Connectivity with Special Protection Areas (SPA);



Legend:

- Site Boundary
- 15km Zone of Influence
- SACs- Special Areas of Conservation
- SPAs- Special Protection Areas

Project Title:
AEMP-2000354
Lord Edward Street, Sligo, Co. Sligo

Drawing Title:
Natura 2000 Designations within 15km of the Application Site

Drawn By:	Checked By:
JH	FM
Project No:	Drawing No:
2000354	Figure 4
Scale:	Date:
1/150000	1st July 2024

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Table 3-1: Identification of NATURA 2000 Sites within 15km Zone of Application Site

European Sites and Code	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 28/06/2024	Conservation Objectives	Likely Zone of Impact Determination
Special Areas of Conservation (SAC)			
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC [000627] Distance: 419m northeast of Development	➢ [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) ➢ [2130] Fixed Dunes coastal dunes with herbaceous vegetation (grey dunes)* ➢ [5130] *Juniperus communis* formations on heaths or calcareous grasslands ➢ [6210] Orchid-rich Calcareous Grassland* ➢ [7220] Petrifying Springs with tufa formation (*Cratoneurion)** ➢ [1014] Narrow-mouthed Whorl Snail (*Vertigo angustior)* ➢ [1095] Sea Lamprey (*Petromyzon marinus)* ➢ [1099] River Lamprey (*Lampetra fluviatilis)* ➢ [1365] Common (Harbour) Seal (*Phoca vitulina)*	Detailed conservation objectives for this site (Version 1, December 2021) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 419m southwest of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. No hydrological connection exists between the application site and this European Designation. There is a hydrogeological connection between the application site and this European Designation via groundwater movements from the site, discharging into the Garavogue River and further into Sligo Bay. Sligo Bay itself is hydrologically linked to this European Designation, and further its qualifying interests. This feature is a potential pollutant pathway from the application site to this European Designation. Indirect Impacts are anticipated. **This European Designation is within the likely zone of impact, and further assessment is required.**
Lough Gill SAC [0001976] Distance: 430m east of Development	➢ [3150] Natural Eutrophic Lakes *Magnopotamion* or *Hydrocharition* - type vegetation ➢ [6210] Semi–natural dry grasslands and scrubland facies on calcaerious substrates (*Festuco-Brometalia*) (*important orchid sites) ➢ [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles ➢ [91E0] Alluvial Forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)**	Detailed conservation objectives for this site (Version 1, December,2021) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 430m west of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. No hydrological connection exists between the application site and this European Designation. There is a hydrogeological connection between the application site and this European Designation via groundwater movements from the site, discharging into the Garavogue River. Given the tidal mixing dynamics of estuaries, water flow can move both out to sea and return to Garavogue watercourse within Lough Gill SAC,

	➢ [1092] White-clawed Crayfish (*Austropotamobius pallipes)* ➢ [1095] Sea Lamprey (*Petromyzon marinus)* ➢ [1096] Brook Lamprey (*Lampetra planeri)* ➢ [1099] River Lamprey (*Lampetra fluviatilis)* ➢ [1106] Atlantic Salmon (*Salmo salar)* ➢ [1355] Otter (*Lutra lutra)*		depending on tidal direction. Therefore, a hydrogeological relationship exists between the application site and Lough Gill SAC. This feature is a potential pollutant pathway from the application site to this European Designation. Indirect Impacts are anticipated. **This European Designation is within the likely zone of impact, and further assessment is required.**
Ballysadare Bay SAC [000622] Distance: 5.69km southwest of Development	➢ [1130] Estuaries ➢ [1140] Mudflats and sandflats not covered by seawater at low tide ➢ [2110] Embryonic Shifting Dunes ➢ [2120] Shifting dunes along the shoreline with *Ammophilia arenaria* (white dunes) ➢ [2130] Fixed coastal Dunes with herbaceous vegetation (Grey Dunes)* ➢ [2190] Humid Dune Slacks ➢ [1014] Narrow-mouthed Whorl Snail (*Vertigo angustior)* ➢ [1365] Common (Harbour) Seal *(Phoca vitulina)*	Detailed conservation objectives for this site (Version 1, November,2013) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 5.69km northeast of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. No hydrological connection exists between the application site and this European Designation. There is a hydrogeological connection between the application site and this European Designation via groundwater movements from the site, discharging into the Garavogue River and further into Sligo Bay. Sligo Bay itself is hydrologically linked to this European Designation, and further its qualifying interests. This feature is a potential pollutant pathway from the application site to this European Designation. Indirect Impacts are anticipated. **This European Designation is within the likely zone of impact, and further assessment is required.**
Union Wood SAC [000638] Distance: 6.45km south of Development	➢ [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	Detailed conservation objectives for this site (Version 1, January 2021) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 6.45km north of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. There is no hydrological or hydrogeological connection between the application site and this European Designation. No indirect impacts are anticipated. **This European Designation is not within the Likely Zone of Impact.**
Unshin River SAC [001898]	➢ [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	Detailed conservation objectives for this site (Version 1,	The application site is located 6.61km northeast of this European Designation. There is no spatial overlap or no

Distance: 6.61km southwest of Development	➢ [6210] Semi–natural dry grasslands and scrubland facies on calcaerious substrates (*Festuco-Brometalia*) (*important orchid sites) ➢ [6410] *Molinia* Meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae)* ➢ [91E0] Alluvial Forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae*)* ➢ [1106] Atlantic Salmon (*Salmo salar*) ➢ [1355] Otter (*Lutra lutra*)	December,2021) were reviewed as part of the assessment and are available at www.npws.ie	direct land take from this European Designation. No direct impacts are anticipated. There is no hydrological or hydrogeological connection between the application site and this European Designation. No indirect impacts are anticipated. **This European Designation is not within the Likely Zone of Impact.**
Benbulben, Gleniff and Glenade Complex SAC [000623] Distance: 7.49km northeast of Development	➢ [1013] Geyer's Whorl Snail (*Vertigo geyeri)* ➢ [1355] Otter (*Lutra lutra)* ➢ [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation ➢ [4010] Northern Atlantic wet heaths with *Erica tetralix* ➢ [4030] European dry heaths ➢ [4060] Alpine and Boreal heaths ➢ [5130] *Juniperus communis* formations on heaths or calcareous grasslands ➢ [6210] Semi-natural dry grasslands and scrubland facies on calcareous substratres *(Festuco-Brometalia*) (*important orchid sites) ➢ [6230] Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* ➢ [6430] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels ➢ [7130] Blanket bogs (* if active bog) ➢ [7140] Transition mires and quaking bogs ➢ [7220] Petrifying springs with tufa formation (*Cratoneurion)* ➢ [7230] Alkaline fens	Detailed conservation objectives for this site (Version 1, December 2021) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 7.49km southwest of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. There is no hydrological or hydrogeological connection between the application site and this European Designation. No indirect impacts are anticipated. **This European Designation is not within the Likely Zone of Impact.**

	➢ [8110] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) ➢ [8120] Calcaerous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*) ➢ [8210] Calcaerous rocky slopes with chasmophytic vegetation		
Streedagh Point Dunes SAC [001680] Distance: 14.05km northwest of Development	➢ [1140] Mudflats and sandflats not covered by seawater at low tide ➢ [1220] Perennial vegetation of Stony Banks ➢ [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae)* ➢ [1410] Mediterranean salt meadows (*Juncetalia maritime)* ➢ [2120] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) ➢ [2130] Fixed Dunes coastal dunes with herbaceous vegetation (grey dunes)* ➢ [1014] Narrow-mouthed Whorl Snail (*Vertigo angustior)*	Detailed conservation objectives for this site (Version 1, March 2015) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 14.05km southeast of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. No hydrological connection exists between the application site and this European Designation. There is a hydrogeological connection between the application site and this European Designation via groundwater movements from the site, discharging into the Garavogue River and further into Sligo Bay. Sligo Bay itself is hydrologically linked to this European Designation, and further its qualifying interests. This feature is a potential pollutant pathway from the application site to this European Designation. Indirect Impacts are anticipated. **This European Designation is within the likely zone of impact, and further assessment is required.**
Special Protected Areas (SPA)			
Cummeen Strand SPA [004035] Distance: 444m northeast of Development	➢ [A046] Light-bellied Brent Goose (*Branta bernicla hrota*) ➢ [A130] Oystercatcher (*Haematopus ostralegus*) ➢ [A162] Redshank (*Tringa totanus*) ➢ [A999] Wetland and WaterBirds	Detailed conservation objectives for this site (Version 1, September 2013) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 444m southwest of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. No hydrological connection exists between the application site and this European Designation. There is a hydrogeological connection between the application site and this European Designation via groundwater movements from the site, discharging into the Garavogue River and further into Sligo Bay. Sligo Bay

			itself is hydrologically linked to this European Designation, and further its qualifying interests. This feature is a potential pollutant pathway from the application site to this European Designation. Indirect Impacts are anticipated. **This European Designation is within the likely zone of impact, and further assessment is required.**
Drumcliff Bay SPA [004013] Distance: 5.17km northwest of Development	➢ [A144] Sanderling (*Calidris alba*) ➢ [A157] Bar-tailed Godwit (*Limosa lapponica*) ➢ [A999] Wetland and WaterBirds	Detailed conservation objectives for this site (Version 1, September 2013) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 5.17km southeast of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. No hydrological connection exists between the application site and this European Designation. There is a hydrogeological connection between the application site and this European Designation via groundwater movements from the site, discharging into the Garavogue River and further into Sligo Bay. Sligo Bay itself is hydrologically linked to this European Designation, and further its qualifying interests. This feature is a potential pollutant pathway from the application site to this European Designation. Indirect Impacts are anticipated. **This European Designation is within the likely zone of impact, and further assessment is required.**
Ballysadare Bay SPA [004129] Distance: 5.55km southwest of Development	➢ [A046] Light-bellied Brent Goose (*Branta bernicla hrota*) ➢ [A141] Grey Plover (*Pluvialis squatarola*) ➢ [A149] Dunlin (*Calidris alpina*) ➢ [A157] Bar-tailed Godwit (*Limosa lapponica*) ➢ [A162] Redshank (*Tringa totanus*) ➢ [A999] Wetland and WaterBirds	Detailed conservation objectives for this site (Version 1, October 2013) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 5.55km northeast of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. No hydrological connection exists between the application site and this European Designation. There is a hydrogeological connection between the application site and this European Designation via groundwater movements from the site, discharging into the Garavogue River and further into Sligo Bay. Sligo Bay itself is hydrologically linked to this European Designation, and further its qualifying interests.

			This feature is a potential pollutant pathway from the application site to this European Designation. Indirect Impacts are anticipated. **This European Designation is within the likely zone of impact, and further assessment is required.**
Sligo/Leitrim Upland SPA [004187] Distance: 6.02km northeast of Development	➢ [A103] Peregrine (*Falco peregrinus*) ➢ [A346] Chough (*Pyrrhocorax pyrrhocorax*)	Detailed conservation objectives for this site (Version 1, October 2016; updated October 2022) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 6.02km southwest of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. There is no hydrological or hydrogeological connection between the application site and this European Designation. No indirect impacts are anticipated. **This European Designation is not within the Likely Zone of Impact.**
Ballintemple & Ballygilgan SPA [004234] Distance: 8.40km northwest of Development	➢ [A045] Barnacle Goose (*Branta leucopsis)*	Detailed conservation objectives for this site (Version 1, October 2022) were reviewed as part of the assessment and are available at www.npws.ie	The application site is located 8.40km southeast of this European Designation. There is no spatial overlap or no direct land take from this European Designation. No direct impacts are anticipated. There is no hydrological or hydrogeological connection between the application site and this European Designation. No indirect impacts are anticipated. **This European Designation is not within the Likely Zone of Impact.**

3.2 Identifying Impacted Qualifying Features from Designated Sites

The following designations have been identified as having a hydrogeological connection to the application site: Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Point Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. No direct impacts are anticipated on these designations, as proposed works will be undertaken outwith their boundaries. Indirect impacts are anticipated on these designations. Table 3-2 – Table 3-8 identifying the qualifying features of these designations that may be impacted by the proposed development.

Table 3-2: Qualifying Interests of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC

Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC							
Qualifying Interest	**Pathway**	**Conservation Status**	**Threats & Pressures**	**Conservation Objectives**	**Attribute**	**Target**	**Potential for Effects**
[1130] Estuaries	This qualifying interest is comprised of costal inlets with a significant freshwater influence. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and declining".	The main threats to this qualifying interest come from various sources of pollution, including domestic wastewater, agriculture, and marine aquaculture, alien invasive species, such as the Pacific oyster (*Magallana gigas*).	To maintain the favourable conservation condition of Estuaries in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Habitat Area	The permanent habitat area is stable or in creasing, subject to natural processes	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and this qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Community extent	Maintain the extent of the *Zostera*-dominated community and the *Mytilidae*-dominated community complex, subject to natural processes	
					Community structure: *Zostera* density	Conserve the high quality of the *Zostera*-dominated community, subject to natural processes	
					Community structure: *Mytilus edulis* density	Conserve the high quality of the *Mytilidae*-dominated community complex, subject to natural processes	
					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	

[1140] Mudflats and sandflats not covered by seawater at low tide	This qualifying interest is comprised of the intertidal section of the coastline where sands and muds dominate. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and deteriorating".	The main threats and pressures include anthropogenic impacts include land claims for development, recreational activities, dredging, pollution/nutrient sedimentation, and provision of recreation facilities.	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	Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and this qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Community extent	Maintain the extent of the *Zostera*-dominated community and the *Mytilidae*-dominated community complex, subject to natural processes.	
					Community structure: *Zostera* density	Conserve the high quality of the *Zostera*-dominated community, subject to natural processes	
					Community structure: *Mytilus edulis* density	Conserve the high quality of the *Mytilidae*-dominated community complex, subject to natural processes	
					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 crustaceans and *Scololepis (Scololepis) squamata* community complex; • Fine sand with *Angulus spp*. and *Nephtys spp*. community complex.	
[2110] Embryonic Shifting Dunes	This qualifying interest consists of low sand mounds, generally less than a metre high, which occur between the high tide mark and the partially stabilised marram (white) dunes. Due to their presence at the high tide mark, a potential pollution pathway cannot be ruled out. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and stable".	The main threats and pressures include recreational activities e.g., watersports, and coastal defences, these can interfere with the sediment dynamics of the qualifying interest.	To maintain the favourable conservation condition of Embryonic shifting dunes in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Habitat area	Area stable or increasing, subject to natural processes including erosion and succession. For subsites mapped: • Coney Island - 0.67ha, • Rosses Point - 32.27ha, • Strandhill - 0.18ha, • Yellow Strand - 0.83ha.	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and this qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and
					Habitat distribution	No decline, subject to natural processes	
					Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	

	via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest				Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Vegetation composition: plant health of foredune grasses	More than 95% of sand couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*) should be healthy (i.e. green plant parts above ground and flowering heads present)	
					Vegetation composition: typical species and subcommuniti es	Maintain the presence of species-poor communities with typical species: sand couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*)	
					Vegetation composition: negative indicator species	Negative indicator species (including non-native species) to represent less than 5% cover	
[2120] Shifting dunes along the shoreline with *Ammophila arenaria* (White Dunes)	This qualifying interest consists of dunes which are partly stabilised, and areas dominated by marram. They tend to form further inland than embryonic shifting dunes. Therefore, there is no pathway between the application site, and this qualifying interest.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and stable".	The main threats and pressures include changes in water bodies conditions, fishing and harvesting aquatic resources, pollution to surface waters, shipping lanes and ports, urbanization and human habitation pollution to marine waters and other human disturbances.	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	Habitat area	Area increasing, subject to natural processes including erosion and succession. For sub-sites mapped: • Coney Island - 0.46ha, • Rosses Point - 0.17ha, • Strandhill - 0.10ha, • Yellow Strand - 0.47ha.	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Habitat distribution	No decline, or change in habitat distribution, subject to natural processes	
					Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	
					Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
					Vegetation composition:	95% of marram grass (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*) should be healthy	

					plant health of dune grasses		
					Vegetation composition: typical species and sub-communities	Maintain the presence of species-poor communities dominated by marram grass (*Ammophila arenaria*) and/or lyme grass (*Leymus arenarius*)	
					Vegetation composition: negative indicator species	Negative indicator species (including non-natives) to represent less than 5% cover	
[2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)	This qualifying interest is relatively sheltered with sand mobility greatly reduced compared to other dune habitats and has developed a closed carpet of vegetation. Due to the sheltered nature of these habitats, there is no pathway between this qualifying interest and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "bad and deteriorating".	The threats to the habitat come from over-stabilisation (through techniques to prevent sand drift), a lack of appropriate grazing levels, growth of native and non-native (introduced) scrub, afforestation, and alien species. The most significant concern across the range of sites is the impact of atmospheric nutrient deposition.	To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Habitat Area	Area increasing, subject to natural processes including erosion and succession. For sub-sites mapped: • Coney Island - 15.06ha; • Rosses Point - 21.89ha; • Strandhill - 40.14ha; • Yellow Strand - 19.16ha.	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Habitat distribution	No decline, or change in habitat distribution, subject to natural processes	
					Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	
					Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
					Vegetation structure: bare ground	Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes	
					Vegetation structure: sward height	Maintain structural variation within sward	
					Vegetation composition: typical species and	Maintain range of subcommunities with typical species listed in Ryle et al. (2009)	

					subcommunities		
					Vegetation composition: negative indicator species (including *Hippophae rhamnoides*)	Negative indicator species (including non-natives) to represent less than 5% cover	
					Vegetation composition: scrub/trees	No more than 5% cover or under control	
[5130] *Juniperus communis* formations on heaths or calcareous grasslands	This qualifying interest is defined as a discrete area supporting 50+ juniper plants where no plant is more than 20m from another. Formations are mostly associated with lowland dry calcareous and neutral grassland, and potentially on coastal dunes and at higher altitudes. There is no pathway between this qualifying interest and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "favourable and stable".	Pressures to this qualifying interest include overgrazing, erosion, and small areas of juniper scrub removal (although these are not considered to be significant)	To restore the favourable conservation condition of *Juniperus communis* formations on heaths or calcareous grasslands in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Formation Area	Area stable or increasing, subject to natural process	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Habitat distribution	No decline	
					Juniper population size	At least 50 plants per population	
					Formation structure: cover and height	Well-developed structure with an open to closed cover of juniper up to or exceeding 0.45m in height with associated species	
					Formation structure: community diversity and extent	Appropriate community diversity and extent	
					Formation structure: cone bearing plants	At least 10% of plants bearing cones	
					Formation structure: seedling recruitment	At least 10% of juniper plants within the formation are seedlings	
					Formation structure: amount of	Mean percentage of each juniper plant dead not more than 10%	

					each plant dead		
					Vegetation composition: typical species	A variety of typical native species with a minimum of 10 species present (excluding negative indicator species	
					Vegetation composition: negative indicator species	Negative indicator species, particularly non-native invasive species, absent or under control	
[7220] Petrifying springs with tufa formation (*Cratoneurion*)	This qualifying interest consists of lime-rich water sources where tufa is actively deposited and where characteristic species of bryophytes are dominant or abundant. Due to the location of this QI within the SAC, there is no pathway between this qualifying interest and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and deteriorating".	Main threats and pressures include Extensive grazing or undergrazing by livestock, Agricultural activities generating diffuse pollution to surface or ground waters, Agricultural activities generating air pollution, Active abstractions from groundwater, surface water or mixed water for agriculture.	To maintain the favourable conservation condition of Petrifying springs with tufa formation (*Cratoneurion*) in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Habitat Area	Area stable or increasing, subject to natural process	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Habitat distribution	No decline	
					Hydrological regime: height of water table; water flow	Maintain appropriate hydrological regimes	
					Water quality	Maintain oligotrophic and calcareous conditions	
					Vegetation composition: typical species	Maintain typical species	
[1014] Narrow-mouthed Whorl Snail (*Vertigo angustior*)	This qualifying interest favour damp or wet habitats, where they live mostly in moss, leaves and decaying vegetation, and feed on bacterial films and decaying vegetation. *V. angustior* occurs in a variety of habitats including dune and coastal grassland, fen, marsh, saltmarsh, and floodplains. It cannot be ruled out therefore that, during potential coastal flooding, a pollution pathway from the	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and deteriorating".	The main threats and pressures include weather changes including droughts and changes in waterbody conditions.	To maintain the favourable conservation condition of Narrow-mouthed Whorl Snail in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Distribution: Occupied Sites	No decline. There is one known location for this species in this SAC (which overlaps two 1km squares).	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation. This qualifying interest utilises the site during various stages of its lifecycle, which may be impacted when flooded.
					Presence on transect	Adult or sub-adult snails are present in four of the grassland zones on the transect where optimal or sub-optimal habitat occurs	
					Presence	Adult or sub-adult snails are present in at least 6 other places at the site with a wide geographical spread (minimum of 8 sites or 75% of sites sampled)	
					Transect habitat quality	At least 75m of habitat along the transect is classed as optimal and 150m of habitat along the transect is classed as suboptimal or optimal	

	application site to this QI doesn't exist. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest				Transect optimal wetness	Soils, at time of sampling, are damp (optimal wetness) and covered with a layer of humid thatch for more than 130m along the transect	Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Habitat extent	12-15ha of the site optimal and a further 11-14ha sub-optimal. Optimal habitat is defined as fixed dune, species-rich grassland dominated by red fescue (*Festuca rubra*), with sparse marram grass (*Ammophila arenaria*), lady's bedstraw (*Galium verum*), eyebright (*Euphrasia sp.*), mouse-ear-hawkweed (*Pilosella officinarum*) and other low growing herbs. Vegetation height 10-30cm. Habitat growing on damp, friable soil covered with a layer of humid, open structured thatch. Sub-optimal habitat is defined as for optimal but either vegetation height is less than 10cm or between 30 and 50cm; or the vegetation contains mounds of moss or willow (*Salix spp.*) scrub; or the soil is dry and sandy; or the thatch is wetter with a denser structure	
[1095] Sea Lamprey (*Petromyzon marinus*)	The life cycle of this qualifying interest 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 graveled areas of large rivers. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "bad and stable".	Main threats include obstacles blocking access to spawning grounds, poor water quality loss of substrate for spawning, overfishing, habitat modification resulting in uniform channel structure, juvenile mortality, eutrophication, bait digging and management of aquatic and bank vegetation for drainage purposes.	To restore the favourable conservation condition of Sea Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Distribution: extent of anadromy	No barriers for migratory life stages of lamprey moving from freshwater to marine habitats and vice versa	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation. The qualifying interest utilises this site during various stages of its lifecycle. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.

	European Designation and this qualifying interest and the habitat it utilises.						
[1099] River Lamprey (*Lampetra fluviatilis*)	This qualifying interest breeds in freshwater rivers and streams, migrating to marine habitats as a young adult, and returning to freshwater habitats to spawn, before they die. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and this qualifying interest and the habitat it utilises.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "unknown".	Main threats include obstacles blocking access to spawning grounds, poor water quality loss of substrate for spawning, overfishing, habitat modification resulting in uniform channel structure, juvenile mortality, eutrophication, bait digging and management of aquatic and bank vegetation for drainage purposes.	To maintain the favourable conservation condition of River Lamprey in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Distribution: extent of anadromy	No barriers for migratory life stages of lamprey moving from freshwater to marine habitats and vice versa	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation. The qualifying interest utilises this site during various stages of its lifecycle. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
[1365] Harbour seal (*Phoca vitulina*)	This qualifying interest 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. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "favourable and stable".	The main threats to Harbour Seal include hunting, environmental contaminants, infectious disease, human disturbance and reduction of fish stocks.	To maintain the favourable conservation condition of Harbour Seal in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	Access to suitable habitat	Species range within the site should not be restricted by artificial barriers to site use.	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation. The qualifying interest utilises this site during various stages of its lifecycle. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying
					Breeding behaviour	Conserve the breeding sites in a natural condition	
					Moulting behaviour	Conserve the moult haul-out sites in a natural condition	
					Resting behaviour	Conserve the resting haul-out sites in a natural condition	
					Disturbance	Human activities should occur at levels that do not adversely affect the Harbour seal population at the site	

	Sligo Bay itself is connected to this European Designation and this qualifying interest and the habitat it utilises.						interest as a result of the proposed development.

Table 3-3: Qualifying Interests of Lough Gill SAC

Lough Gill SAC							
Qualifying Interest	**Pathway**	**Conservation Status**	**Threats & Pressures**	**Conservation Objectives**	**Attribute**	**Target**	**Potential for Effects**
[3150] Natural Eutrophic Lakes with Magnopotamion or Hydrocharition type vegetation	This qualifying interest occurs in lowland, base-rich lakes, and is associated with large lakes in large catchments and with small productive lakes. The vegetation within requires mesotrophic waters. Polluted water from the application site may discharge into Garavogue River via groundwater movements. Given the tidal mixing dynamics of estuaries, water may return to the Garavogue watercourse within Lough Gill SAC, consequently resulting in a hydrogeological connection. The location of this QI makes it susceptible to this pollution pathway.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate but stable".	The main threats and pressures to this qualifying interest include eutrophication from intensively farmed land.	To restore the favourable conservation condition of Natural eutrophic lakes with Magnopotamion or Hydrocharition type vegetation in Lough Gill SAC	Habitat Area	Area stable or increasing, subject to natural processes	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River. Given the tidal mixing dynamics of estuaries, water may return to the Garavogue watercourse within Lough Gill SAC, consequently resulting in a hydrogeological connection to this European Designation and qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Habitat Distribution	No decline, subject to natural processes	
					Vegetation Composition: Typical Species	Typical species present, in good condition, and demonstrating typical abundances and distribution	
					Vegetation Composition: Characteristic Zonation	All characteristic zones should be present, correctly distributed and in good condition	
					Vegetation Distribution: Maximum depth	Maintain maximum depth of vegetation, subject to natural processes	
					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	
					Transparency	Maintain/restore appropriate Secchi transparency. There should be no decline in Secchi depth/transparency	
					Nutrients	Maintain/restore the concentration of nutrients in the water column to	

						sufficiently low levels to support the habitat and its typical species	
					Phytoplankton biomass	Maintain appropriate water quality to support the habitat, including high chlorophyll a status	
					Phytoplankton composition	Maintain/restore appropriate water quality to support the habitat, including high phytoplankton composition status	
					Attached algae biomass	Maintain/restore trace/absent attached algal biomass (<5% cover)	
					Macrophyte status	Restore high/good macrophyte status	
					Acidification status	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes	
					Water colour	Maintain/restore appropriate water colour to support the habitat	
					Dissolved organic carbon	Maintain/restore appropriate organic carbon levels to support the habitat	
					Turbidity	Maintain/restore appropriate turbidity to support the habitat	
					Fringing Habitat: Area and condition	Maintain the area and condition of fringing habitats necessary to support the natural structure and functioning of the habitat	
[6210] Semi-Natural dry grasslands and scrubland facies on calcareous substrates	This qualifying interest comprises species-rich plant communities on shallow, well-drained calcareous substrates. It is considered a priority habitat if it is an important orchid site. This habitat includes a mixture of grasses and herbs, with calcicole species typically	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "bad and stable".	Pressures to this qualifying interest include overgrazing, erosion, and small areas of juniper scrub removal (although these are not considered to be significant)	To restore the favourable conservation condition of Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*	Habitat distribution	No decline, subject to natural processes	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Habitat Area	Area stable or increasing, subject to natural processes	
					Vegetation composition: positive indicator species	At least 7 positive indicator species present in monitoring stop or, if 5–6 present in stop, additional species within 20m of stop; this includes at least two 'high quality' positive indicator species present in stop or within 20m of stop	

(*Festuco-Brometalia*)	frequent. It usually occurs on obvious geological features such as eskers, outcropping limestone rock and in association with limestone pavement. Given the location of this QI, there are no potential impacts anticipated on this qualifying interest.			important orchid sites) in Lough Gill SAC	Vegetation composition: negative indicator species	Negative indicator species collectively not more than 20% cover, with cover of an individual species not more than 10%	
					Vegetation composition: nonnative species	Cover of non-native species not more than 1%	
					Vegetation composition: woody species and bracken	Cover of woody species (except certain listed species) and bracken (*Pteridium aquilinum*) not more than 5%	
					Vegetation structure: broadleaf herb:grass ratio	Broadleaf herb component of vegetation between 40% and 90%	
					Vegetation structure: sward height	At least 30% of sward between 5cm and 40cm tall	
					Vegetation structure: litter	Litter cover not more than 25%	
					Physical structure: bare soil	Not more than 10% bare soil	
					Physical structure: grazing or disturbance	Area of the habitat showing signs of serious grazing or disturbance less than 20m²	
[91A0] Old Sessile Oak woods with *Ilex* and *Blechnum* in the British Isles	This qualifying interest occurs on podzolized soils in uplands as well as non-waterlogged acid soils. Typical species include Sessile Oak, Holly, and Downy Birch etc. Areas of this habitat are adjacent to the watercourse and may	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying	The main threats and pressures include invasive species such as Rhododendron, cherry laurel, and beech, as well as overgrazing by deer.	To restore the favourable conservation condition of Old sessile oak woods with Ilex and Blechnum in the British Isles in Lough Gill SAC	Habitat Area	Area stable or increasing, subject to natural processes.	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River. Given the tidal mixing dynamics of
					Habitat Distribution	No decline, subject to natural processes.	
					Woodland size	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and “small” woods at least 3ha in size	

	be subject to a potential pathway in high-water. Therefore, there is a potential pollution pathway between this qualifying interest and the application site.	interest is "Bad and deteriorating".			Woodland structure: cover and height	Total canopy cover at least 30%; median canopy height at least 11m; native shrub layer cover 10-75%; native herb/dwarf shrub layer cover at least 20% and height at least 20 cm; bryophyte cover at least 4%	estuaries, water may return to the Garavogue watercourse within Lough Gill SAC, consequently resulting in a hydrogeological connection to this European Designation and qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Woodland structure: community diversity and extent	Maintain diversity and extent of community types	
					Woodland structure: natural regeneration	Seedlings, saplings and pole age-classes of target species for 91A0 woodlands and other native tree species occur in adequate proportions to ensure survival of woodland canopy	
					Woodland structure: dead wood	At least 19 stems/ha of dead wood of at least 20cm diameter	
					Woodland structure: veteran trees	No decline	
					Woodland structure: indicators of local distinctiveness	No decline in distribution and, in the case of red listed and other rare or localised species, population size	
					Woodland structure: indicators of overgrazing	All four indicators of overgrazing absent	
					Vegetation composition: native tree cover	No decline. Native tree cover at least 90% of canopy; target species cover at least 50% of canopy	
					Vegetation composition: typical species	At least 1 target species for 91A0 woodlands present; at least 6 positive indicator species for 91A0 woodlands present	

					Vegetation composition: negative indicator species	Negative indicator species cover not greater than 10%; regeneration of negative indicator species absent	
[91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)*	This qualifying interest is most common in Ireland in the form of Riparian forests of Ash and Alder of temperate and Boreal Europe lowland and hill watercourses. They are periodically inundated by the annual rise of river levels but otherwise, have well-drained and aerated soils during low water. Areas of this habitat are adjacent to the watercourse and may be subject to a potential pathway in high-water. Therefore, there is a potential pollution pathway between this qualifying interest and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "bad and deteriorating".	The main threats and pressures include Invasive alien species, in particular sycamore (*Acer pseudoplatanus*), beech (*Fagus sylvatica*), Indian balsam (*Impatiens glanduilifera*), and currant species (*Ribes nigrum* and *R. rubrum*). The QI is also subject to small area losses due to clear-felling.	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	Habitat distribution	No decline, subject to natural processes	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River. Given the tidal mixing dynamics of estuaries, water may return to the Garavogue watercourse within Lough Gill SAC, consequently resulting in a hydrogeological connection to this European Designation and qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Habitat Area	Area stable or increasing, subject to natural processes	
					Woodland size	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size	
					Woodland structure: cover and height	Total canopy cover at least 30%; median canopy height at least 7m; native shrub layer cover 10-75%; native herb/dwarf shrub layer cover at least 20% and height at least 20cm; bryophyte cover at least 4%	
					Woodland structure: community diversity and extent	Maintain diversity and extent of community types	
					Woodland structure: natural regeneration	Seedlings, saplings, and pole age-classes of target species for [91E0] woodlands and other native tree species occur in adequate proportions to ensure survival of woodland canopy	
					Hydrological regime: flooding depth/height of water table	Appropriate hydrological regime necessary for maintenance of alluvial vegetation	
					Woodland structure: dead wood	At least 19 stems/ha of dead wood of at least 20cm diameter	
					Woodland structure: veteran trees	No decline	

					Woodland structure: indicators of local distinctiveness	No decline in distribution and, in the case of red listed and other rare or localised species, population size	
					Woodland structure: indicators of overgrazing	All five indicators of overgrazing absent	
					Vegetation composition: native tree cover	No decline. Native tree cover at least 90% of canopy; target species cover at least 50% of canopy	
					Vegetation composition: negative indicator species	Negative indicator species cover not greater than 10%; regeneration of negative indicator species absent	
					Vegetation composition: problematic native species	Cover of common nettle (*Urtica dioica*) less than 75%	
					Vegetation composition: typical species	At least 1 target species for 91E0* woodlands present; at least 6 positive indicator species for 91E0* woodlands present	
[1092] White-clawed Crayfish (*Austropotamobius pallipes*)	This qualifying interest prefers relatively cool temperatures and adequate dissolved oxygen and lime, although tolerating significant fluctuations in these parameters. Habitat heterogeneity is important; juveniles live among submerged tree roots, gravel or macrophytes, while larger crayfish must have stones to hide under, or an	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "bad and deteriorating".	The main threats and pressures to this qualifying interest include existential threat from twin impacts of non-indigenous crayfish species (NICS) (direct predation and competition) and Crayfish place, a water-borne disease caused by the oomycete *Aphanomyces astaci*	To maintain the favourable conservation condition of White-clawed Crayfish (*Austropotamobius pallipes*) in Lough Gill SAC	Distribution	No reduction from baseline	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River. Given the tidal mixing dynamics of estuaries, water may return to the Garavogue watercourse within Lough Gill SAC, consequently resulting in a hydrogeological
					Population Structure: Recruitment	Juveniles and females with eggs in at least 50% of positive samples taken at appropriate time and methodology	
					Population Size	No reduction from baseline of 0.25	
					Negative Indicator Species	No non-indigenous crayfish species present	
					Disease	No instances of disease	
					River Water Quality	At least Q3-4 at all sites sampled by EPA	

	earthen bank in which to burrow. The species is omnivorous, with juveniles more reliant than adults on animal foods. The white-clawed crayfish is generally associated with good quality waters but in Ireland it can occur in water of lower quality. Given the characteristics of this Qualifying Interest, there is a pollution pathway between it and the application site.				Lake Water Quality	Maintain appropriate water quality, particularly pH and nutrient levels, to support the natural structure and functioning of the habitat	connection to this European Designation. The qualifying interest utilises this site during various stages of its lifecycle. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Habitat Quality: Heterogeneity	No decline from the baseline	
[1095] Sea Lamprey (*Petromyzon marinus*)	The life cycle of this qualifying interest 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. Given the characteristics of this Qualifying Interest, there is a pollution pathway between it and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "bad and stable".	Main threats include obstacles blocking access to spawning grounds, poor water quality loss of substrate for spawning, overfishing, habitat modification resulting in uniform channel structure, juvenile mortality, eutrophication, bait digging and management of aquatic and bank vegetation for drainage purposes.	To restore the favourable conservation condition of Sea Lamprey (*Petromyzon marinusin*) Lough Gill SAC	Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River. Given the tidal mixing dynamics of estuaries, water may return to the Garavogue watercourse within Lough Gill SAC, consequently resulting in a hydrogeological connection to this European Designation. The qualifying interest utilises this site during various stages of its lifecycle. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Annual run size	Annual run size should reflect that expected under near-natural conditions	
					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]	This qualifying interest is non-parasitic and non-	According to the NPWS 2019	According to the NPWS 2019 Status of EU	To restore the favourable	Distribution	Access to all water courses down to first order streams	

Brook Lamprey (*Lampetra planeri*)	migratory as an adult, living its entire life in freshwater. Adults spawn in spring, excavating shallow nests in relatively small-sized gravels in areas of reduced flow. After hatching, the larvae ('ammocoetes') drift or swim downstream to areas of river bed or margins with fine silt deposits. They burrow into this substrate and live as filter feeders over a period of years before transforming into young adult fish. The young adults overwinter before migrating short distances upstream to gravelled areas where they spawn. Given the characteristics of this Qualifying Interest, there is a pollution pathway between it and the application site.	Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "Favourable".	Protected Habitats & Species in Ireland, there area extensive areas of suitable habitat and no significant pressure impacting this species.	conservation condition of Brook Lamprey (*Lampetra planeri*) in Lough Gill SAC	Distribution in suitable habitat	Not less than 50% of sample sites with suitable habitat positive for larval brook/river lamprey	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River. Given the tidal mixing dynamics of estuaries, water may return to the Garavogue watercourse within Lough Gill SAC, consequently resulting in a hydrogeological connection to this European Designation. The qualifying interest utilises this site during various stages of its lifecycle. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Population structure of larvae	At least three age/size classes of larval brook/river lamprey present	
					Larval lamprey density in fine sediment	Mean density of brook/river larval lamprey in sites with suitable habitat at least 5/m²	
					Extent and distribution of spawning and nursery habitat	No decline in extent and distribution of spawning and nursery beds	
[1099] River Lamprey (*Lampetra fluviatilis*)	This qualifying interest breeds in freshwater rivers and streams, migrating to marine habitats as a young adult, and returning to freshwater habitats to spawn, before they die. Given the characteristics of this Qualifying Interest, there is a pollution pathway between it and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "unknown".	Main threats include obstacles blocking access to spawning grounds, poor water quality loss of substrate for spawning, overfishing, habitat modification resulting in uniform channel structure, juvenile mortality, eutrophication, bait digging and management of aquatic and bank vegetation for drainage purposes.	To restore the favourable conservation condition of River Lamprey (*Lampetra fluviatilis*) in Lough Gill SAC	Distribution	Access to all water courses down to first order streams	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River. Given the tidal mixing dynamics of estuaries, water may return to the Garavogue watercourse within Lough Gill SAC, consequently resulting in a hydrogeological connection to this European Designation. The qualifying interest utilises this site during various stages of its lifecycle.
					Distribution in suitable habitat	Not less than 50% of sample sites with suitable habitat positive for larval brook/river lamprey	
					Population structure of larvae	At least three age/size classes of larval brook/river lamprey present	
					Larval lamprey density in fine sediment	Mean density of brook/river larval lamprey in sites with suitable habitat at least 5/m²	
					Extent and distribution of spawning and nursery habitat	No decline in extent and distribution of spawning and nursery beds	

							Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
[1106] Atlantic Salmon (*Samo salar*)	The life cycle of this qualifying interest 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 graveled areas of large rivers. Given the characteristics of this Qualifying Interest, there is a pollution pathway between it and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "bad and stable".	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and stable".	Impacts on this species include pollution and pesticides of watercourses that otters utilise, conflicts with fishermen i.e., getting tangled in fishing gear, and infrastructure developments e.g., roads, housing	Distribution: extent of anadromy	100% of river channels down to second order accessible from estuary	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River. Given the tidal mixing dynamics of estuaries, water may return to the Garavogue watercourse within Lough Gill SAC, consequently resulting in a hydrogeological connection to this European Designation. The qualifying interest utilises this site during various stages of its lifecycle. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Adult spawning fish	Conservation limit (CL) for each system consistently exceeded	
					Salmon fry abundance	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 minutes sampling	
					Out-migrating smolt abundance	No significant decline	
					Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes	
					Water quality	At least Q4 at all sites sampled by EPA	
[1355] Otter (*Lutra lutra*)	This qualifying interest can utilise the habitat within the European Designation for foraging/feeding behaviours and can use habitats adjacent to the river for holt/natal creation. Given the characteristics of this Qualifying Interest, there is a pollution	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is	Impacts on otters include pollution and pesticides of watercourses that otters utilise, conflicts with fishermen i.e., getting tangled in fishing gear, and infrastructure developments e.g., roads, housing	To maintain the favourable conservation condition of Otter (*Lutra lutra*) in Lough Gill SAC	Distribution	No significant decline	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River. Given the tidal mixing dynamics of estuaries, water may return to the Garavogue watercourse within
					Extent of Terrestrial Habitat	No significant decline	
					Extent of Freshwater Habitat: River	No significant decline	
					Extent of Freshwater Habitat: Lake	No significant decline	

	pathway between it and the application site.	"favourable and stable".			Couching sites and holts	No significant decline	Lough Gill SAC, consequently resulting in a hydrogeological connection to this European Designation. The qualifying interest utilises this site during various stages of its lifecycle. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Fish biomass available	No significant decline	
					Barriers to connectivity	No significant increase	

Table 3-4: Qualifying Interests of Ballysadare Bay SAC

Ballysadare Bay SAC							
Qualifying Interest	**Pathway**	**Conservation Status**	**Threats & Pressures**	**Conservation Objectives**	**Attribute**	**Target**	**Potential for Effects**
[1130] Estuaries	This qualifying interest is comprised of costal inlets with a significant freshwater influence. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and declining".	The main threats to this qualifying interest come from various sources of pollution, including domestic wastewater, agriculture, and marine aquaculture, alien invasive species, such as the Pacific oyster (*Magallana gigas*).	To maintain the favourable conservation condition of Estuaries in Ballysadare Bay SAC	Habitat Area	The permanent habitat area is stable or incr easing, subject to natural processes	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and this qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Community extent	Maintain the extent of the *Zostera*-dominated community, subject to natural processes	
					Community structure: *Zostera* density	Conserve the high quality of the *Zostera*-dominated community, subject to natural processes	
					Community distribution	Conserve the following community types in a natural condition: • Intertidal sand with *Angulus tenuis* community complex; • Muddy sand to sand with *Hediste diversicolor*, *Corophium volutator* and *Peringia ulvae* community complex; • Fine sand with polychaetes community complex; • Sand with bivalves, nematodes and crustaceans community complex; • Intertidal reef community complex; • Subtidal reef community complex.	

[1140] Mudflats and sandflats not covered by seawater at low tide	This qualifying interest is comprised of the intertidal section of the coastline where sands and muds dominate. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and deteriorating".	The main threats and pressures include anthropogenic impacts include land claims for development, recreational activities, dredging, pollution/nutrient sedimentation, and provision of recreation facilities.	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Ballysadare Bay SAC	Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and this qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Community extent	Maintain the extent of the *Zostera*-dominated community, subject to natural processes.	
					Community structure: *Zostera* density	Conserve the high quality of the *Zostera*-dominated community, subject to natural processes	
					Community distribution	Conserve the following community types in a natural condition: • Intertidal sand with *Angulus tenuis* community complex; • Muddy sand to sand with *Hediste diversicolor*, *Corophium volutator* and *Peringia ulvae* community complex	
[2110] Embryonic Shifting Dunes	This qualifying interest consists of low sand mounds, generally less than a metre high, which occur between the high tide mark and the partially stabilised marram (white) dunes. Due to their presence at the high tide mark, it cannot be ruled out that a pollution pathway doesn't exist. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and stable".	The main threats and pressures include recreational activities e.g., watersports, and coastal defences, these can interfere with the sediment dynamics of the qualifying interest.	To maintain the favourable conservation condition of Embryonic shifting dunes in Ballysadare Bay SAC	Habitat area	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Strandhill - 1.08ha.	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and this qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Habitat distribution	No decline or change in habitat distribution, subject to natural processes	
					Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	
					Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
					Vegetation composition: plant health of foredune grasses	More than 95% of sand couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*) should be healthy (i.e., green plant parts above ground and flowering heads present)	
					Vegetation composition: typical	Maintain the presence of species-poor communities with typical species: sand	

	its location, this qualifying interest				species and subcommunities	couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*)	
					Vegetation composition: negative indicator species	Negative indicator species (including non-native species) to represent less than 5% cover	
[2120] Shifting Dunes along the shoreline with *Ammophila arenaria* (White Dunes)	This qualifying interest consists of dunes which are partly stabilised, and areas dominated by marram. They tend to form further inland than embryonic shifting dunes. Therefore, there is no pathway between the application site, and this qualifying interest.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and stable".	The main threats and pressures include changes in water bodies conditions, fishing and harvesting aquatic resources, pollution to surface waters, shipping lanes and ports, urbanization and human habitation pollution to marine waters and other human disturbances.	To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') in Ballysadare Bay SAC	Habitat area	Area stable or increasing, subject to natural processes including erosion and succession.	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Habitat distribution	No decline, or change in habitat distribution, subject to natural processes	
					Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	
					Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
					Vegetation composition: plant health of dune grasses	95% of marram grass (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*) should be healthy	
					Vegetation composition: typical species and subcommunities	Maintain the presence of species-poor communities dominated by marram grass (*Ammophila arenaria*) and/or lymegrass (*Leymus arenarius*)	
					Vegetation composition: negative indicator specie	Negative indicator species (including non-natives) to represent less than 5% cover	
					Habitat area	Area increasing, subject to natural processes including erosion and succession	

[2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)	This qualifying interest is relatively sheltered with sand mobility greatly reduced compared to other dune habitats and has developed a closed carpet of vegetation. Due to the sheltered nature of these habitats, there is no pathway between this qualifying interest and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "bad and deteriorating".	The threats to the habitat come from over-stabilisation (through techniques to prevent sand drift), a lack of appropriate grazing levels, growth of native and non-native (introduced) scrub, afforestation, and alien species. The most significant concern across the range of sites is the impact of atmospheric nutrient deposition.	To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Ballysadare Bay SAC.	Habitat Area	Area stable or increasing, subject to natural processes including erosion and succession. For sub-site mapped: Strandhill - 56.07ha.	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Habitat distribution	No decline, or change in habitat distribution, subject to natural processes	
					Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	
					Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
					Vegetation structure: bare ground	Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes	
					Vegetation structure: sward height	Maintain structural variation within sward	
					Vegetation composition: typical species and subcommunities	Maintain range of subcommunities with typical species listed in Ryle et al. (2009)	
					Vegetation composition: negative indicator species (including *Hippophae rhamnoides*)	Negative indicator species (including non-natives) to represent less than 5% cover	
					Vegetation composition: scrub/trees	No more than 5% cover or under control	

[2190] Humid Dune Slacks	This qualifying interest is topographically the lowest-lying region within a dune system. Dune slacks can remain flooded for 2-6 months per year with fluctuations depending on precipitation and evapotranspiration. Therefore, when flooded, there is a potential for polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and deteriorating".	The main threats and pressures include Intensive grazing or overgrazing by livestock, Disruption to the natural sediment regime, Recreational activities, and Nitrogen Deposition.	To restore the favourable conservation condition of Humid Dune Slacks in Ballysadare Bay SAC	Habitat Area	Area stable or increasing, subject to natural processes including erosion and succession. For sub-site mapped: Strandhill - 1.83ha.	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and this qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Habitat distribution	No decline or change in habitat distribution, subject to natural processes.	
					Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	
					Physical structure: hydrological and flooding regime	Maintain natural hydrological regime	
					Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
					Vegetation structure: bare ground	Bare ground should not exceed 5% of dune slack habitat, with the exception of pioneer slacks which can have up to 20% bare ground	
					Vegetation structure: vegetation height	Maintain structural variation within sward	
					Vegetation composition: typical species and sub-communities	Maintain range of sub-communities with typical species listed in Delaney et al. (2013)	
					Vegetation composition: cover of *Salix repens*	Maintain less than 40% cover of creeping willow (*Salix repens*)	
					Vegetation composition: negative	Negative indicator species (including non-natives) to represent less than 5% cover	

					indicator species		
					Vegetation composition : scrub/trees	No more than 5% cover or under control	
[1014] Narrow-mouthed Whorl Snail (*Vertigo angustior*)	This qualifying interest favour damp or wet habitats, where they live mostly in moss, leaves and decaying vegetation, and feed on bacterial films and decaying vegetation. *V. angustior* occurs in a variety of habitats including dune and coastal grassland, fen, marsh, saltmarsh, and floodplains. Due to the sheltered nature of these habitats, there is no pathway between this qualifying interest and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and deteriorating".	The main threats and pressures include weather changes including droughts and changes in waterbody conditions.	To maintain the favourable conservation condition of Narrow-mouthed Whorl Snail in Ballysadare Bay SAC	Distribution: occupied sites	No decline. There is one known location for this species in this SAC (which overlaps two 1km squares).	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Presence on transect	Adult or sub-adult snails are present in all three of the habitat zones on the transect (minimum four samples)	
					Presence	Adult or sub-adult snails are present in at least 6 other places at the site with a wide geographical spread (minimum of 8 sites or 75% of sites sampled)	
					Transect habitat quality	At least 75m of habitat along the transect is classed as optimal and 150m of habitat along the transect is classed as suboptimal or optimal	
					Transect optimal wetness	Soils, at time of sampling, are damp (optimal wetness) and covered with a layer of humid thatch for more than 130m along the transect	
					Habitat extent	At least 45ha of the site in at least optimal/sub-optimal condition. Optimal habitat is defined as fixed dune, species-rich grassland dominated by red fescue (*Festuca rubra*) and marram (*Ammophila arenaria*), with sparse oxeye daisy (*Leucanthemum vulgare*), dandelion (*Taraxacum sp.*), ribwort plantain (*Plantago lanceolata*) and other low growing herbs. Vegetation height 20- 50cm. Habitat growing on damp, friable soil covered with a layer of humid, open structured thatch. Sub-optimal habitat is defined as above but either vegetation height is less than 10cm or above 50cm; or the soil is dry and sandy; or the thatch is wetter with a denser structure	
[1365]	This qualifying interest occurs in estuarine, coastal, and fully marine	According to the NPWS 2019 Status of EU	The main threats to Harbour Seal include hunting, environmental	To maintain the favourable conservation	Access to suitable habitat	Species range within the site should not be restricted by artificial barriers to site use.	**There are potential effects anticipated on this qualifying interest.**

Harbour seal (*Phoca vitulina*)	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. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest and the habitat it utilises.	Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "favourable and stable".	contaminants, infectious disease, human disturbance, and reduction of fish stocks.	condition of Harbour Seal in Ballysadare Bay SAC.			Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation. This qualifying interest utilises the habitat within Ballysadare Bay SAC at various stages of its life-cycle. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.

Table 3-5: Qualifying Interests of Streedagh Point Dunes SAC

Streedagh Point Dunes SAC							
Qualifying Interest	**Pathway**	**Conservation Status**	**Threats & Pressures**	**Conservation Objectives**	**Attribute**	**Target**	**Potential for Effects**
[1140] Mudflats and sandflats not covered by seawater at low tide	This qualifying interest is comprised of the intertidal section of the coastline where sands and muds dominate. Polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and deteriorating".	The main threats and pressures include anthropogenic impacts include land claims for development, recreational activities, dredging, pollution/nutrient sedimentation, and provision of recreation facilities.	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Streedagh Point SAC	Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and this qualifying interest.
					Community distribution	Conserve the following community types in a natural condition: • Sand with *Pygospio elegans* and *Cerastorderma edule* community complex • Mobile sand with *Haustorius arenarius* and polychaetes community complex	

	movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest.						Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
[1220] Perennial Vegetation of Stony Banks	This QI occurs along the coast where shingles accumulate to form elevated ridges or banks above the high tide mark. Therefore, there is no pathway between this qualifying interest and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and stable".	The main threats and pressures are associated with coastal defences, which can interfere with sediment dynamics, recreational activities, and shingle removal.	To maintain the favourable conservation condition of Perennial vegetation of stony banks in Streedagh Point Dunes SAC	Habitat Area	Area stable or increasing, subject to natural processes, including erosion and succession	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Habitat Distribution	No decline, or change in habitat distribution, subject to natural processes.	
					Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	
					Vegetation structure: zonation	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
					Vegetation composition: typical species and sub-communities	Maintain the typical vegetated shingle flora including the range of sub-communities within the different zones	
					Vegetation composition: negative indicator species	Negative indicator species (including non-natives) to represent less than 5% cover	
[1330] Atlantic Salt Meadows (*Glauco-Puccinellietalia maritimae*)	This habitat encompasses saltmarsh vegetation containing perennial flowering plants that are regularly inundated by the sea. Due to this regular flooding, polluted water from the application site may discharge into Garavogue River and	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is	The main threats and pressures are agricultural, including ecologically unsuitable grazing regimes and land reclamation, and the invasive nonnative species, common cord grass (*Spartina anglica*)	To maintain the favourable conservation condition of Atlantic Salt Meadows (Glauco-Puccinellietalia maritimae) in Streedagh Point Dunes SAC	Habitat Area	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: • Streedagh Point - 12.82ha.	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and this qualifying interest.
					Habitat Distribution	No decline or change in habitat distribution, subject to natural processes.	
					Physical structure: sediment supply	Maintain natural circulation of sediments and organic matter, without any physical obstructions	

	further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest.	"inadequate and declining".			Physical structure: creeks and pans	Maintain creek and pan structure, subject to natural processes, including erosion and succession	Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Physical structure: flooding regime	Maintain natural tidal regime	
					Vegetation structure: Zonation	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
					Vegetation Structure: vegetation height	Maintain structural variation within sward	
					Vegetation structure: vegetation cover	Maintain more than 90% area outside creeks vegetated	
					Vegetation composition: typical species and sub-communities	Maintain range of sub-communities with typical species listed in SMP (McCorry and Ryle, 2009)	
					Vegetation Structure: negative indicator species – *Spartina anglica*	There is currently no common cordgrass (*Spartina anglica*) recorded at this SAC. This species should be prevented from establishing here	
[1410] Mediterranean Salt Meadows (*Juncetalia maritimi*)	This habitat occupies the upper zone of saltmarshes and usually occur adjacent to the boundary with terrestrial habitats. Similarly, to [1330], flooding may occur in this habitat. Due to this, polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and declining".	The main threats and pressures include agricultural practices, overgrazing of livestock, and land-reclamation practices	To maintain the favourable conservation condition of Mediterranean Salt Meadows (*Juncetalia maritimi*) in Streedagh Point Dunes SAC	Habitat Area	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Streedagh Point - 12.82ha.	**There are potential effects anticipated on this qualifying interest.** Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and this qualifying interest. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying
					Habitat Distribution	No decline or change in habitat distribution, subject to natural processes.	
					Physical structure: sediment supply	Maintain natural circulation of sediments and organic matter, without any physical obstructions	
					Physical structure: creeks and pans	Maintain creek and pan structure, subject to natural processes, including erosion and succession	
					Physical structure: flooding regime	Maintain natural tidal regime	

	application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest.				Vegetation structure: Zonation	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	interest as a result of the proposed development.
					Vegetation Structure: vegetation height	Maintain structural variation within sward	
					Vegetation structure: vegetation cover	Maintain more than 90% area outside creeks vegetated	
					Vegetation composition: typical species and sub-communities	Maintain range of sub-communities with typical species listed in SMP (McCorry and Ryle, 2009)	
					Vegetation Structure: negative indicator species – *Spartina anglica*	There is currently no common cordgrass (*Spartina anglica*) recorded at this SAC. This species should be prevented from establishing here	
[2120] Shifting Dunes along the shoreline with *Ammophila arenaria* (White Dunes)	This qualifying interest consists of dunes which are partly stabilised, and areas dominated by marram. They tend to form further inland than embryonic shifting dunes. Therefore, there is no pathway between the application site, and this qualifying interest.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and stable".	The main threats and pressures include Intensive grazing or overgrazing by livestock, disturbance to the habitat by recreational activities etc., and Nitrogen Deposition.	To restore the favourable conservation condition of shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) in Streedagh Points Dunes SAC	Habitat Area	Area increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Streedagh Point - 2.12ha.	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Habitat Distribution	No decline, or change in habitat distribution, subject to natural processes.	
					Physical Structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	
					Vegetation structure: Zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
					Vegetation composition: plant health of dune grasses	More than 95% of marram grass (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*) should be healthy (i.e. green plant parts above ground and flowering heads present)	
					Vegetation composition: typical species and sub-communities	Maintain the presence of species-poor communities dominated by marram grass (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*)	

					Vegetation composition: negative indicator species	Negative indicator species (including non-natives) to represent less than 5% cover	
[2130] Fixed dunes with herbaceous vegetation (grey dunes)	This qualifying interest is relatively sheltered with sand mobility greatly reduced compared to other dune habitats and has developed a closed carpet of vegetation. Due to the sheltered nature of these habitats, there is no pathway between this qualifying interest and the application site.	According to the NPWS 2019 Status of EU Protected Habitats & Species in Ireland, the overall status of this qualifying interest is "bad and deteriorating".	The main threats and pressures include over-stabilisation (through techniques to prevent sand drift), a lack of appropriate grazing levels, growth of native and non-native (introduced) scrub, afforestation, and alien species. The most significant concern across the range of sites is the impact of atmospheric nutrient deposition.	To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation (grey dunes) in Streedagh Points Dunes SAC	Habitat Area	Area increasing, subject to natural processes including erosion and succession. For sub-site mapped: Streedagh Point- 82.44ha.	**No potential for Effects** Given the lack of pathways, type and scale of development, and characteristics of this habitat, there will be no impact on this qualifying interest as a result of proposed works at the application site.
					Habitat Distribution	No decline, or change in habitat distribution, subject to natural processes.	
					Physical structure: functionality and sediment supply	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	
					Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	
					Vegetation structure: bare ground	Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes	
					Vegetation structure: sward height	Maintain structural variation within sward	
					Vegetation composition: typical species and sub-communities	Maintain range of sub-communities with typical species listed in Ryle et al. (2009)	
					Vegetation composition: negative indicator species (including *Hippophae rhamnoides*)	Negative indicator species (including non-natives) to represent less than 5% cover	
					Vegetation composition: scrub/trees	No more than 5% cover or under control	
[1014] Narrow-mouthed	This qualifying interest favour damp or wet habitats, where they live mostly in moss, leaves	According to the NPWS 2019 Status of EU Protected	The main threats and pressures include weather changes including droughts and	To maintain the favourable conservation condition of	Distribution: occupied sites	No decline. Streedagh Dunes can be considered as a single site for this species as the area of habitat is continuous. This overlaps with five	**There are potential effects anticipated on this qualifying interest.**

Whorl Snail *Vertigo angustior*	and decaying vegetation, and feed on bacterial films and decaying vegetation. *V. angustior* occurs in a variety of habitats including dune and coastal grassland, fen, marsh, saltmarsh, and floodplains. It cannot be ruled out therefore that, during potential coastal flooding, polluted water from the application site may discharge into Garavogue River and further Sligo Bay via percolation through groundwater movements from the application site. Sligo Bay itself is connected to this European Designation and, due to its location, this qualifying interest.	Habitats & Species in Ireland, the overall status of this qualifying interest is "inadequate and deteriorating".	changes in waterbody conditions.	Narrow-mouthed Whorl Snail in Streedagh Points Dunes SAC		1km squares, G6350, G6450, G6551, G6552 and G6651.	Potential pollution pathway via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation. Due to the use of habitat by the qualifying interest, it cannot be ruled out that during coastal flooding a potential pathway does not exist. Therefore, a source-receptor-pathway model can be produced between this qualifying interest and the application site. Indirect impacts are anticipated on this qualifying interest as a result of the proposed development.
					Occurrence in suitable habitat	No decline. A minimum of 60% positive samples in areas of habitat that are optimal/suboptimal; 20% in areas defined as sub-optimal	
					Optimal soil wetness	127.5m of the established monitoring transect assessed as optimal wetness; at least 75% of sampling stops assessed as optimal wetness	
					Habitat Extent	Stable or increasing, subject to natural processes. Area of habitat that is in at least sub-optimal condition is at least 105ha	

Table 3-6: Qualifying Interests of Cummeen Strand SPA

Cummeen Strand SPA						
Special Conservation Interest	**Closest Proximity**	**Pathway**	**Conservation Status**	**Threats & Pressures**	**Conservation Objective**	**Potential for Effects**
[A046] Light-bellied Brent Goose (*Branta bernicla hrota*)	Wintering populations of this species are widespread in a range of coastal habitats. The closest recorded population is recorded at Ballysadare Bay (324.5m southwest of the application site). However, Cummeen Strand provides optimal habitat for the species; it is a large shallow bay stretching from Sligo Town to Coney Island and supports an internationally important wintering population of Light-bellied Brent Goose (23).	The site is hydrogeologically linked to Cummeen Strand SPA which is 444m northeast of the application site via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation. This provides a potential pollution pathway between the SPA and the application site. This will have adverse impacts on the water quality within the SPA, as well as habitats within the SPA. This may cause a loss of suitable habitat and/or food availability to the species listed as "special conservation interest". There will be no direct pathways i.e., noise disturbance or land-take, due to the distance from the application site to the SPA	Within Cummeen Strand SPA, the current population trend for this species is considered favourable	Threats and Pressures directly associated with the species mentioned include significant changes in land management of adjoining habitat, aquaculture, bait digging – commercial or 'recreational' and shellfish gathering, beach sand and gravel extraction, boat disturbance (commercial and recreational) – injury from boats and a potential increase in pollution of water, lack of coastal protection schemes, drainage, dredging, enhanced bird competitions, fishing (commercial and recreational), loss of intertidal habitat, loss of open water habitat, alteration of habitat quality of inter-tidal habitat, alteration of habitat quality of open water habitat, loss of high tide roosts, threat of introduced species, introduction of power cables, disturbance caused by recreational activities, disturbance by research activities, alteration of system dynamics and wildfowl	To maintain the favourable conservation condition of each listed species in Cummeen Strand SPA To maintain the favourable conservation conditions of the wetland habitat in Cummeen Strand SPA as a resource for migratory waterbirds that utilise it.	**There are potential effects anticipated on this qualifying interest.** Potential pollution via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and the qualifying interests that utilise this designation. This may lead to a potential degradation in water quality, impacting fish populations within the SPA, reducing the Bird species' food availability, and may increase competition between the species and anglers within the SPA. All species, for which the site is designated, will be exposed to the same potential effects.
[A130] Oystercatcher (*Haematopus ostralegus*)	Wintering populations of this species are widespread in a range of coastal habitats, particularly on open sandy coasts; they nest principally on shingle beaches, dunes, salt marshes, and rocky shores. The closest recorded population is recorded at Ballysadare Bay (324.5m southwest of the application site). However, Cummeen Strand provides optimal habitat for the species; it is a large shallow bay stretching from Sligo Town to Coney Island and supports a nationally important wintering population of Oystercatcher (680).		Within Cummeen Strand SPA, the current population trend for this species is considered favourable			
[A162] Redshank (*Tringa totanus*)	Wintering populations of this species are widespread in a range of coastal habitats, favouring mudflats, large esturaies and inlets; they nest on the ground in grassy tussocks, in wet, marshy areas and occasionally heather. The closest recorded population is recorded at Ballysadare Bay (324.5m southwest of the application site). However, Cummeen Strand provides optimal habitat for the species; it is a large		Within Cummeen Strand SPA, the current population trend for this species is considered unfavourable			

	shallow bay stretching from Sligo Town to Coney Island and supports an internationally important wintering population of Redshank (408).					
[A999] Wetland and Waterbirds	The wetland habitat area was estimated as 1732ha using OSi data and relevant orthophotographs. At its closest point, Cummeen Strand SPA is 1.29km to the north of the application site.		N/A			

Table 3-7: Qualifying Interests of Drumcliff Bay SPA

Drumcliff Bay SPA						
Special Conservation Interest	**Closest Proximity**	**Pathway**	**Conservation Status**	**Threats & Pressures**	**Conservation Objective**	**Potential for Effects**
[A144] Sanderling (*Calidris alba*)	Wintering populations of this species are widespread in a range of coastal habitats. The closest recorded population is recorded at Ballysadare Bay (324.5m southwest of the application site). However, Drumcliff Bay provides optimal habitat for the species; it is an estuarine inlet, comprising of an inner sheltered estuarine habitat and an outer area of shallow seawater. It supports a nationally important wintering population of Sanderling (237).	The site is hydrogeologically linked to Drumcliff Bay SPA which is 5.17km northwest of the application site via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation. This provides a potential pollution pathway between the SPA and the application site. This will have adverse impacts on the water quality within the SPA, as well as habitats within the SPA. This may cause a loss of suitable habitat and/or food availability to the	Within Drumcliff Bay SPA, the current population trend for this species is considered highly unfavourable	Threats and Pressures directly associated with the species mentioned include significant changes in land management of adjoining habitat, aquaculture, bait digging – commercial or 'recreational' and shellfish gathering, beach sand and gravel extraction, boat disturbance (commercial and recreational) – injury from boats and a potential increase in pollution of water, lack of coastal protection schemes, drainage, dredging, enhanced bird competitions, fishing (commercial and recreational), loss of intertidal habitat, loss of open water habitat, alteration of habitat quality of inter-tidal habitat, alteration of habitat quality of open water habitat, loss of high tide roosts, threat of introduced species, introduction of power cables, disturbance caused by recreational activities, disturbance by research activities, alteration of system dynamics and wildfowl.	To maintain the favourable conservation condition of each listed species in Drumcliff Bay SPA To maintain the favourable conservation conditions of the wetland habitat in Drumcliff Bay SPA as a resource for migratory waterbirds that utilise it.	**There are potential effects anticipated on this qualifying interest.** Potential pollution via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and the qualifying interests that utilise this designation. This may lead to a potential degradation in water quality, impacting fish populations within the SPA, reducing the Bird species' food availability, and may increase competition between the species and anglers within the SPA. All species, for which the site is designated, will be exposed to the same potential effects.
[A157] Bar-tailed Godwit (*Limosa lapponica*)	Wintering populations of this species are widespread in a range of coastal habitats. The closest recorded population is recorded at Ballysadare Bay (324.5m southwest of the application site). However, Drumcliff Bay provides optimal habitat for the species; it is an estuarine inlet, comprising of an inner sheltered estuarine habitat and an outer area of shallow seawater. It supports a nationally		Within Drumcliff Bay SPA, the current population trend for this species is considered favourable			

	important wintering population of Bar-tailed Godwit (336).	species listed as "special conservation interest".				
[A999] Wetland and Waterbirds	The wetland habitat area was estimated as 1843ha using OSi data and relevant orthophotographs. At its closest point, Drumcliff Bay SPA is 5.45km to the north of the application site.	There will be no direct pathways i.e., noise disturbance or land-take, due to the distance from the application site to the SPA	N/A			

Table 3-8: Qualifying Interests of Ballysadare Bay SPA

Ballysadare Bay SPA						
Special Conservation Interest	**Closest Proximity**	**Pathway**	**Conservation Status**	**Threats & Pressures**	**Conservation Objective**	**Potential for Effects**
[A046] Light-bellied Brent Goose (*Branta bernicla hrota)*	Wintering populations of this species are widespread in a range of coastal habitats. The closest recorded population is within the Ballysadare Bay SPA (324.5m southwest of the application site). The site is optimal for the species, bolstering an internationally important population (188).	The site is hydrogeologically linked to Ballysadare Bay SPA which is 5.5km southwest of the application site v via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation. This provides a potential pollution pathway between the SPA and the application site. This will have adverse impacts on the water quality within the SPA, as well as habitats within the	Within Ballysadare Bay SPA, the current population trend for this species is considered favourable	Threats and Pressures directly associated with the species mentioned include significant changes in land management of adjoining habitat, aquaculture, bait digging – commercial or 'recreational' and shellfish gathering, beach sand and gravel extraction, boat disturbance (commercial and recreational) – injury from boats and a potential increase in pollution of water, lack of coastal protection schemes, drainage, dredging, enhanced bird competitions, fishing (commercial and recreational), loss of intertidal habitat, loss of open water habitat, alteration of habitat quality of inter-tidal habitat, alteration of habitat quality of open water habitat, loss of high tide roosts, threat of introduced species, introduction of power	To maintain the favourable conservation condition of each listed species in Ballysadare Bay SPA To maintain the favourable conservation conditions of the wetland habitat in Ballysadare Bay SPA as a resource for migratory waterbirds that utilise it.	**There are potential effects anticipated on this qualifying interest.** Potential pollution via a regionally important aquifer (Karstified) with moderate groundwater vulnerability, which discharges into Garavogue River and further Sligo Bay. Sligo Bay itself is hydrologically connected to this European Designation and the qualifying interests that utilise this designation. This may lead to a potential degradation in water quality, impacting fish populations within the SPA, reducing the Bird species' food availability, and may increase competition between the species and anglers within the SPA. All species, for which the site is designated, will be exposed to the same potential effects.
[A149] Dunlin (*Calidris alpina*)	Wintering populations of this species are widespread in a range of coastal habitats, especially on tidal mudflats and estuaries. The closest recorded population is within the Ballysadare Bay SPA (324.5m southwest of the application site). The site is optimal for the species, bolstering a nationally important population (1420).		Within Ballysadare Bay SPA, the current population trend for this species is considered intermediate unfavourable			
[A157] Bar-tailed Godwit (*Limosa lapponica*)	Wintering populations of this species are entirely coastal, although they are largely confined to estuaries. The closest recorded population is within the Ballysadare Bay SPA (324.5m southwest of the application site). The site is optimal for the species, bolstering a nationally important population (251).		Within Ballysadare Bay SPA, the current population trend for this species is considered highly unfavourable			
[A141] Grey Plover (*Pluvialis squatarola*)	Wintering populations of this species are exclusively coastal, most often on large muddy estuaries. The closest recorded population is within the Ballysadare Bay SPA (324.5m southwest of the application site). The site is optimal for the species, bolstering a nationally important population (435).		Within Ballysadare Bay SPA, the current population trend for this species is considered			

		SPA. This may cause a loss of suitable habitat and/or food availability to the species listed as "special conservation interest". There will be no direct pathways i.e., noise disturbance or land-take, due to the distance from the application site to the SPA	intermediate unfavourable	cables, disturbance caused by recreational activities, disturbance by research activities, alteration of system dynamics and wildfowl		
[A162] Redshank (*Tringa totanus*)	Wintering populations of this species are associated with mudflats, large estuaries, and inlets. The closest recorded population is within the Ballysadare Bay SPA (324.5m southwest of the application site)		Within Ballysadare Bay SPA, the current population trend for this species is considered intermediate unfavourable			
[A999] Wetland and Waterbirds	The wetland habitat area was estimated as 2130ha using OSi data and relevant orthophotographs. At its closest point, Ballysadare Bay SPA is 324.5m to the southwest of the application site.		N/A			

3.3 Natura 2000 Impact Assessment

The potential impacts of the proposed development on the Natura 2000 sites identified above are described in Table 3-9 below.

Table 3-9: Natura 2000 Impact Assessment

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on nearby Natura 2000 site:
The proposed works could significantly affect the integrity of the site structure at the designated locations i.e., Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Point Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. A hydrogeological connection exists from the proposed site to the designated areas, and in the absence of mitigation, this connection is likely to result in adverse impacts on these sites. The application site is located at its closest proximity to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, 419m to the southwest, Lough Gill SAC, 430m to the west, Ballysadare Bay SAC, 5.69km to the northeast, Streedagh Point Dunes SAC, 14.05km to the southeast, Cummeen Strand SPA, 444m to the southwest, Drumcliff Bay SPA, 5.17km to the southeast, and Ballysadare Bay SPA, 5.55km to the northeast. Furthermore, a direct source-pathway-receptor linkage has been identified between the works site and the designated sites, suggesting the potential for negative impacts to occur.
Describe any likely direct, indirect, or secondary impacts of the project (either alone or in combination with other plans or projects) on the nearby Natura 2000 sites by virtue of:
Size & Scale: Although the size and scale of the works are relatively small, there is a linkage between the works site and designated sites downstream through a source–pathway–receptor connection. Consequently, impacts may still occur. **Land-take:** There will be no land-take from any designated site. There will be no interference with the boundaries of any designated site. No direct impacts are anticipated.

Distance from Natura 2000 Site (or key features of the site): At its closest point, the application site is located at its closest proximity to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, 419m to the southwest, Lough Gill SAC, 430m to the west, Ballysadare Bay SAC, 5.69km to the northeast, Streedagh Point Dunes SAC, 14.05km to the southeast, Cummeen Strand SPA, 444m to the southwest, Drumcliff Bay SPA, 5.17km to the southeast, and Ballysadare Bay SPA, 5.55km to the northeast. These sites have direct source-pathway-receptor linkages between them and the development site and are within the zone of influence.

Resource Requirements (water abstraction etc.): No resources will be taken from any Natura 2000 site, and there are no resource requirements that will impact on any designated site. No direct impacts are anticipated.

Emissions: Neither the construction nor the operation of the proposed works will result in any emissions to the identified SACs or SPAs. There is potential for run-off (untreated or other) from the works site directly to the designations, in the absence of mitigation.

Excavation Requirements: Excavated material from the construction will be used on-site. Any remaining material will be disposed of in a responsible manner at a licensed facility away from any designated sites or areas of conservation value.

Transportation requirements: There will be no additional transportation requirements resulting from the proposed development and associated works that will have any impact on the Natura 2000 sites identified.

In-Combination / Cumulative Impacts: The project was considered in combination with other developments or proposed developments in the area, and potential cumulative impacts were considered (Sligo County Council Planning Portal). A number of planning applications within the location of Sligo, Co. Sligo, have been granted planning permission or are under review in the preceding five years, and where necessary, these applications were accompanied by Appropriate Assessment reports (Stage I / Stage II). Any future individual application that has the potential to impact upon a Natura 2000 site will be subject to Appropriate Assessment (AA) as required under Articles 6(3) of the Habitats Directive. The proposed development will not lead to any cumulative impacts upon any designated site when considered in combination with other developments that have been adequately screened for AA or where mitigation measures have been included as part of a Stage 2 AA for these developments.

Duration of Construction, Operation & Decommissioning: Once construction begins, the development should be complete within 12-24 months.

Describe any likely changes to the nearby Natura 2000 sites arising as a result of:

Reduction of habitat area: The proposed development lies outside the boundaries of any Natura 2000 site identified above. There will be no reduction of designated habitat area within any SAC, SPA, pSPA or RAMSAR site. The application site is located at its closest proximity to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, 419m to the southwest, Lough Gill SAC, 430m to the west, Ballysadare Bay SAC, 5.69km to the northeast, Streedagh Point Dunes SAC, 14.05km to the southeast, Cummeen Strand SPA, 444m to the southwest, Drumcliff Bay SPA, 5.17km to the southeast, and Ballysadare Bay SPA, 5.55km to the northeast. These designated sites have direct source-pathway-receptor linkages between them and the development site and are within the zone of influence. There is potential for impacts upon the habitats qualifying interests of the designated sites within 15km of the

development which are hydrologically connected to the development site. Several qualifying interest features of these designated sites are within the zone of influence and would be affected without mitigation measures. There will be no interference with the boundaries of any SAC, SPA, or RAMSAR sites.

Disturbance to Key Species: The proposed development lies outside the boundaries of any Natura 2000 site identified above. Several identified designations are within the zone of influence of the development; therefore, there may be disturbance to key species associated with these designated sites.

- Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC – Narrow-mouthed Whorl Snail (*Vertigo angustior*); Sea Lamprey (*Petromyzon marinus*); River Lamprey (*Lampetra fluviatilis*); Harbour Seal (*Phoca vitulina*).
- Lough Gill SAC – Sea Lamprey (*Petromyzon marinus*); Brook Lamprey (*Lampetra planeri*); River Lamprey (*Lampetra fluviatilis*); Atlantic Salmon (*Salmo salar*); Otter (*Lutra lutra*).
- Ballysadare Bay SAC - Narrow-mouthed Whorl Snail (*Vertigo angustior*); Harbour Seal (*Phoca vitulina*).
- Streedagh Point Dunes SAC - Narrow-mouthed Whorl Snail (*Vertigo angustior*).
- Ballysadare Bay SPA – Light-bellied Brent Goose (*Branta bernicla hrota*); Dunlin (*Calidris alpina*); Bar-tailed Godwit (*Limosa lapponica*); Grey Plover (*Pluvialis squatarola*); Redshank (*Tringa totanus*).
- Cummeen Strand SPA - Light-bellied Brent Goose (*Branta bernicla hrota*); Oystercatcher (*Haematopus ostralegus*); Redshank (*Tringa totanus*).
- Drumcliff Bay SPA – Sanderling (*Calidris alba*); Bar-tailed Godwit (*Limosa lapponica*).

Habitat or species fragmentation: There will be no habitat or species fragmentation within any SAC, SPA, pSPA, or RAMSAR site. No ecological corridors between the proposed site and any designated site exist, which could cause habitat, or species fragmentation, therefore, no habitat or species fragmentation will occur.

Reduction in species density: There will be no reduction in species density within any SAC, SPA, pSPA or RAMSAR site.

Changes in key indicators of conservation value (water quality etc.): There is potential for negative impacts on surface water quality within Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Point Dunes SAC, Ballysadare Bay SPA, Cummeen Strand SPA, and Drumcliff Bay SPA as there is a direct source-pathway-receptor linkage between watercourses on site and designated sites.

Describe any likely impacts on the nearby Natura 2000 sites as a whole in terms of:

Interference with the key relationships that define the structure or function of the site: It is considered likely that there will be any impacts on the key relationships that define the structure or function of any Natura 2000 sites identified if mitigation is not provided.

Provide indicators of significance as a result of the identification of effects set out above in terms of:

Loss - Estimated percentage of lost area of habitat: None

Fragmentation: None

Disruption & disturbance: Disturbance of key species

Change to key elements of the site (e.g., water quality etc.): Changes to water quality

4. Article 6(3) Appropriate Assessment Screening Statement & Conclusions

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

The following sites have been identified as within the likely zone of impact, and further appropriate assessment is required[46]. Qualifying interests assessed as potentially being indirectly impacted are bolded.

1. Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC [000627][47] located 419m to the northeast of the application site:
   - Estuaries [1130]
   - Mudflats and sandflats not covered by seawater at low tide [1140]
   - Embryonic shifting dunes [2110]
   - Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]
   - Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]
   - *Juniperus communis* formations on heaths or calcareous grasslands [5130]
   - Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia*) (* important orchid sites) [6210]
   - Petrifying springs with tufa formation (Cratoneurion) [7220]
   - *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]
   - *Petromyzon marinus* (Sea Lamprey) [1095]
   - *Lampetra fluviatilis* (River Lamprey) [1099]
   - *Phoca vitulina* (Harbour Seal) [1365]
2. Lough Gill SAC [001976][48] is located 430m to the east of the application site
   - Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150]
   - Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]

[46] NPWS Protected Site Synopses and maps available on http://www.npws.ie/en/ProtectedSites/;
[47] NPWS Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC: Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC | National Parks & Wildlife Service (npws.ie)
[48] NPWS Lough Gill SAC: Lough Gill SAC | National Parks & Wildlife Service (npws.ie)

- Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]
- *Austropotamobius pallipes* (White-clawed Crayfish) [1092]
- *Petromyzon marinus* (Sea Lamprey) [1095]
- *Lampetra planeri* (Brook Lamprey) [1096]
- *Lampetra fluviatilis* (River Lamprey) [1099]
- *Salmo salar* (Salmon) [1106]
- *Lutra lutra* (Otter) [1355]

3. Ballysadare Bay SAC [000622][49] is located 5.69km to the southwest of the application site:
   - Estuaries [1130]
   - Mudflats and sandflats not covered by seawater at low tide [1140]
   - Embryonic shifting dunes [2110]
   - Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]
   - Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]
   - Humid dune slacks [2190]
   - *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]
   - *Phoca vitulina* (Harbour Seal) [1365]
4. Streedagh Point Dunes SAC [001680][50] located 14.05km to the northwest of the application site:
   - Mudflats and sandflats not covered by seawater at low tide [1140]
   - Perennial vegetation of stony banks [1220]
   - Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]
   - Mediterranean salt meadows (*Juncetalia maritimi*) [1410]
   - Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]
   - Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]

[49] NPWS Ballysadare Bay SAC: Ballysadare Bay SAC | National Parks & Wildlife Service (npws.ie)
[50] NPWS Streedagh Point Dunes SAC: Streedagh Point Dunes SAC | National Parks & Wildlife Service (npws.ie)

- *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]

5. Cummeen Strand SPA [004035][51] located 444m to the northeast of the application site:
   - Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
   - Oystercatcher (*Haematopus ostralegus*) [A130]
   - Bar-tailed Godwit (*Limosa lapponica*) [A157]
   - Redshank (*Tringa totanus*) [A162]
   - Wetland and Waterbirds [A999]
6. Drumcliff Bay SPA [004013][52] located 5.17km to the northwest of the application site:
   - Sanderling (*Calidris alba*) [A144]
   - Bar-tailed Godwit (*Limosa lapponica*) [A157]
   - Wetland and Waterbirds [A999]
7. Ballysadare Bay SPA [004129][53] located 5.55km to the southwest of the application site:
   - Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
   - Grey Plover (*Pluvialis squatarola*) [A141]
   - Dunlin (*Calidris alpina*) [A149]
   - Bar-tailed Godwit (*Limosa lapponica*) [A157]
   - Redshank (*Tringa totanus*) [A162]
   - Wetland and Waterbirds [A999]

[51] NPWS Cummeen Strand SPA: Cummeen Strand SPA | National Parks & Wildlife Service (npws.ie)
[52] NPWS Drumcliff Bay SPA: Drumcliff Bay SPA | National Parks & Wildlife Service (npws.ie)
[53] NPWS Ballysadare Bay SPA: Ballysadare Bay SPA | National Parks & Wildlife Service (npws.ie)

5. Site Identification & Screening

This section provides the background information of the Natura 2000 sites screened to require assessment and the underlying reasoning behind this assessment. In total, 12-no. designations have been identified within 15km of the site. The majority of these designations, due to the benign nature of the development, can be screened out due to distance from the site, no hydrological or hydrogeological connection and no direct land-take or disturbance to qualifying species.

The application site is not located within any Natura 2000 site; however, 7-no. designations are located within proximity. These include Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Point Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. These designations have been identified in terms of the potential for indirect adverse impacts to arise as a result of the proposed development of the site.

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

Distance: 419m northeast of the application site.

Site Synopsis Overview

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

- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- Embryonic shifting dunes [2110]
- Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]
- Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]

- *Juniperus communis* formations on heaths or calcareous grasslands [5130]
- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210]
- Petrifying springs with tufa formation (Cratoneurion) [7220]
- *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]
- *Petromyzon marinus* (Sea Lamprey) [1095]
- *Lampetra fluviatilis* (River Lamprey) [1099]
- *Phoca vitulina* (Harbour Seal) [1365]

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.

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 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

- 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 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; and
- To maintain the favourable conservation condition of Harbour Seal in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC.

Lough Gill SAC [000627]

Distance: 430m east of the application site.

Site Synopsis Overview

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.

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

- [3150] Natural Eutrophic Lakes
- [6210] Orchid-rich Calcareous Grassland*
- [91A0] Old Oak Woodlands
- [91E0] Alluvial Forests*
- [1092] White-clawed Crayfish (*Austropotamobius pallipes*)
- [1095] Sea Lamprey (*Petromyzon marinus*)
- [1096] Brook Lamprey (*Lampetra planeri*)
- [1099] River Lamprey (*Lampetra fluviatilis*)
- [1106] Atlantic Salmon (*Salmo salar*)
- [1355] Otter (*Lutra lutra*)

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 Garavoge 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 (*Orobanche hederae*), 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 island (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 also noted for the high number of rare of scarce animal and plant species.

Conservation Objectives

- 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; and,
- To maintain the favourable conservation condition of Otter (*Lutra lutra*) in Lough Gill SAC.

Ballysadare Bay SAC [000622]

Distance: 5.69km southwest of the application site

Site Synopsis Overview

Ballysadare Bay extends for about 10km westwards from the town of Ballysadare, Co. Sligo, and is the most southerly of three inlets of the larger Sligo Bay. The estuarine channel of the Ballysadare River winds its way through the bay, finally reaching the open sea near the spit at Strandhill dunes. The bay is underlain by sedimentary rocks of limestones, sandstones, and shales, which are exposed as low cliffs and small sections of bedrock shore at several locations. Knocknarea Mountain overlooks the site.

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

- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- Embryonic shifting dunes [2110]
- Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]
- Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]
- Humid dune slacks [2190]
- *Vertigo angustior* (Narrow-mouthed Whorl Snail) [1014]

- *Phoca vitulina* (Harbour Seal) [1365]

Ballysadare Bay contains extensive intertidal sand and mudflats, approximately 1,500 ha in extent overall. The mud provides an abundance of food for wildfowl, in the form of colonising plants such as Eelgrass (*Zostera marina*) and Tasselweed (*Ruppia maritima*), as well as numerous species of invertebrates on which both wildfowl and waders feed. Well-developed salt marshes occur at several locations around the bay. Typical species of these areas are Sea Rush (*Juncus maritimus*), Saltmarsh Rush (*Juncus gerardi*), Creeping Bent (*Agrostis stolonifera*) and Parsley Water-dropwort (*Oenanthe lachenalii*). In hollows and ditches, Sea Arrowgrass (*Triglochin maritima*), Sea Club-rush (*Scirpus maritimus*), Sea Milkwort (*Glaux maritima*), Thrift (*Armeria maritima*), Sea Plantain (*Plantago maritima*), Sea Aster (*Aster tripolium*) and Red Fescue (*Festuca rubra*) occur. Particularly interesting species found on the salt marshes are Flowering Rush (*Butomus umbellatus*), Slender Spike-rush (*Eleocharis uniglumis*) and Hard Grass (*Parapholis strigosa*).

There is a large sand dune system at Strandhill which has been relatively undisturbed by grazers. The dune system is highly dynamic, with the tip of the peninsula actively growing and displaying a good, though limited, example of embryonic shifting dunes. The characteristic species found in this habitat type include Sand Couch (*Elymus farctus*), Spear-leaved Orache (*Atriplex prostrata*) and Sea Rocket (*Cakile maritima*). Shifting marram dunes are fairly extensive in the area also, occurring along the entire seaward side of the spit, and they are especially active towards the tip. While Marram (*Ammophila arenaria*) is the dominant species, Colt's foot (*Tussilago farfara*), Red Goosefoot (*Chenopodium rubrum*) and Cat's-ear (*Hypochoeris radicata*) can also be found. The seaward dunes reach considerable heights (up to 20 m). They are very steep on the seaward edge, but to the east of this there is an undulating expanse of dune hills.

The largest proportion of the dune system is made up of fixed dunes, a priority habitat listed on Annex I of the E.U. Habitats Directive. Once one moves landward, in from the Marram dunes, there is a low-growing, closed sward which is particularly species-rich, with Field Wood-rush (*Luzula campestris*), Kidney Vetch (*Anthyllis vulneraria*), Bee Orchid (*Ophrys apifera*), Oxeye Daisy (*Leucanthemum vulgare*), Common Centuary (*Centaurium erythraea*), Wild Thyme (*Thymus praecox*), Harebell (*Campanula rotundifolia*), Burnet Rose (*Rosa pimpinellifolia*), Carline Thistle (*Carlina vulgaris*) and Fairy Flax (*Linum catharticum*). The fixed dune areas are also rich in bryophytes and lichens. Moss species include *Tortula ruraliformis, Homalothecium lutescens, Ditrichum flexicaule* and *Hypnum cupressiforme*, while lichens (*Peltigera spp. and Cladonia spp*.) are also present. Some humid dune slacks occur amongst the fixed dunes. Characteristic species include Creeping Willow (*Salix repens*), Carnation Sedge (*Carex panicea*), Jointed Rush (*Juncus articulatus*) and the relatively uncommon Marsh Helleborine (*Epipactis palustris*).

A range of habitats fringe the bay, adding diversity to the site as a whole. Some of these areas have particular features of interest, e.g. the old oyster farm at Tanrego is important for waterfowl, while the uncommon plant species Ivy Broomrape (*Orobanche hederae*) occurs in scrubland adjacent to the bay.

Two animals listed on Annex II of the E.U. Habitats Directive occur within the site: The Bay supports a colony of Common Seal (maximum count of 257 in the all-Ireland survey of 2003), and the rare snail, *Vertigo angustior*, occurs in dune slacks and hollows in the dunes at Strandhill.

Ballysadare Bay is important for a range of waterfowl species in autumn and winter and is part of the larger Sligo Bay complex. Brent Goose occur in internationally important numbers, while a further seven species have populations of national importance. These are as follows, with numbers referring to the average peaks over winters 1994/95 - 1997/98: Brent Goose (259), Red-breasted Merganser (48), Oystercatcher (796), Grey Plover (231), Dunlin (1129), Bar-tailed Godwit (431), Redshank (481) and Greenshank (24). The presence of Bar-tailed Godwit, and also smaller numbers of Golden Plover (66), is of particular note as these species are listed on Annex I of the E.U. Birds Directive.

The bay is little-used for fishing or boating, but marsh shooting is common in the upper reaches. Aquaculture is little-developed in this bay compared to nearby Sligo and Drumcliff Bays. Dune systems are sensitive to developments which alter their structure. Grazing is also a critical factor; the correct level of grazing maintains an open, species-rich sward, but the presence of too many grazers causes damage to the vegetation and may exacerbate dune erosion. Agricultural improvement, and particularly the application of fertilisers, threatens dune vegetation, leading to the eventual loss of species diversity.

Ballysadare Bay is of high ecological value for its range of good-quality coastal habitats. Actively developing dune systems are rare on the west coast and the sand dune system at Strandhill is of particular interest as a large and intact example of a habitat type that is under general threat from development. The rarity of intact dune systems is recognised in the listing of fixed dunes as a priority habitat on Annex I of the E.U. Habitats Directive. The salt marshes at Ballysadare Bay are relatively good examples for the west coast, and that at Abbeytown is unusual as it is forming on quarry waste. The presence of two Annex II species within the site adds further importance. Furthermore, the bay supports nationally important numbers of waterfowl

Conservation Objectives:

- To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Ballysadare Bay SAC;
- To maintain the favourable conservation condition of Embryonic shifting dunes in Ballysadare Bay SAC;
- To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') in Ballysadare Bay SAC;
- To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Ballysadare Bay SAC;
- To restore the favourable conservation condition of Humid dune slacks in Ballysadare Bay SAC;
- To maintain the favourable conservation condition of Narrow-mouthed Whorl Snail in Ballysadare Bay SAC; and,
- To maintain the favourable conservation condition of Harbour Seal in Ballysadare Bay SAC.

Streedagh Point Dunes SAC [001680]

Distance: 14.05km northwest of the application site

Site Synopsis Overview

Streedagh Point Dunes SAC is a sand dune and estuary system, and lies approximately 4 km west of Grange, a small village about 16 km north of Sligo town. The site consists of a tombolo formation, with a shingle spit overlain by sand dunes joining Conors Island to Streedagh Point. The landward side of the site comprises an area of sand flats, the estuary of the River Grange. The underlying bedrock is of stratified sedimentary rocks - argillaceous and oolitic limestones, conglomerates and chert; some strata are rich in fossils.

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

- [1140] Tidal Mudflats and Sandflats
- [1220] Perennial Vegetation of Stony Banks
- [1330] Atlantic Salt Meadows
- [1410] Mediterranean Salt Meadows
- [2120] Marram Dunes (White Dunes)
- [2130] Fixed Dunes (Grey Dunes)*
- [1014] Narrow-mouthed Whorl Snail (*Vertigo angustior*)

Sand dunes extend along the length of the spit and cover the southern half of Conors Island. A boulder beach extends along the entire seaward side of the system. The dunes are accreting on the landward side and eroding on the northern, seaward side.

The embryo dunes are colonised primarily by Sea Sandwort (*Honkenya peploides)*, Sea Campion (*Silene vulgaris subsp. maritima*) and small amounts of Sand Couch (El*ymus farctus*). At this site this habitat occurs in association with, and grades into, perennial vegetation of stony banks. A ridge of shifting marram dunes occurs along the entire length of the dune system. These are dominated by Marram (*Ammophila arenaria*), but include Colt's-foot (*Tussilago farfara*), clovers (*Trifolium spp*.), Ribwort Plantain (*Plantago lanceolata)* and Common Bird's-foot-trefoil (*Lotus corniculatus*).

The fixed dunes, which are a priority habitat on Annex I of the E.U. Habitats Directive, are well-developed. They contain some large sand hills and dune slacks, and are rich in plant species, particularly small herbs. Plant species occurring include Daisy (*Bellis perennis*), Wild Pansy (*Viola tricolor subsp. curtisii*), Wild Carrot (*Daucus carota*), Bulbous Buttercup (*Ranunculus bulbosus*), Field Wood-rush (*Luzula campestris*), Bramble (*Rubus fruticosus agg*.), Wild Thyme (*Thymus praecox*), Biting Stonecrop (*Sedum acre*), Common Cornsalad (*Valerianella locusta*), Rue-leaved Saxifrage (*Saxifraga tridactylites*), Bee Orchid (*Ophrys apifera*) and Pyramidal Orchid (*Anacamptis pyamidalis)*. The dune slacks are rich in sedges (*Carex spp*.), with rushes (*Juncus spp*.) and Variegated Horsetail (*Equisetum variegatum*) also found.

The estuary of the River Grange consists of intertidal sandflats with areas of saltmarsh around the margins. The area of intertidal flats is fairly extensive, and extends for approximately 4 km. Saltmarsh on the site supports Thrift (*Armeria maritima*), Sea Plantain (*Plantago maritima*), Red Fescue (*Festuca rubra*), Lax-flavoured Sea-lavender (*Limonium humile*), Sea Rush (*Juncus maritimus*), Common Scurvygrass (*Cochlearia officinalis*), glassworts (*Salicornia spp.*) and turf fucoids (*dwarfed seaweeds*). Both Atlantic and Mediterranean types of saltmarsh are well-represented at the site.

The estuary is used by moderate numbers of wintering waterfowl (all figures are average maximum counts for 1995/96 - 1998/99): Ringed Plover (14), Grey Plover (41), Brent Goose (30), Oystercatcher (113), Dunlin (298), Curlew (43) and Redshank (48). The site is also used by Terns and Chough, although these species do not nest here. The main land uses within the site are sheep grazing and recreation, both of which have led to some erosion in the dunes, although in places grazing has maintained a short sward used by geese and Choughs for feeding. The site contains a diversity of habitats and supports a wide range of vegetation communities and plant species. Six habitats found on the site are listed on Annex I of the E.U. Habitats Directive. The presence of fixed dunes, a habitat given priority status on this Annex, is of particular note. The site is also important for the presence of the rare snail, Vertigo angustior. The presence of wintering waterfowl adds to the significance of this site and the geological interest of Streedagh Point enhances its overall importance.

Conservation Objectives

- To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Streedagh Point Dunes SAC
- To maintain the favourable conservation condition of Perennial vegetation of stony banks in Streedagh Point Dunes SAC
- To restore the favourable conservation condition of Atlantic salt meadows (*Glauco Puccinellietalia maritimae*) in Streedagh Point Dunes SAC
- To maintain the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Streedagh Point Dunes SAC
- To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') in Streedagh Point Dunes SAC
- To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Streedagh Point Dunes SAC
- To maintain the favourable conservation condition of Narrow-mouthed Whorl Snail in Streedagh Point Dunes SAC

Cummeen Strand SPA [4035]

Distance: 444m northeast of the application site

Site Synopsis Overview

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 (*Lanice 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), Redbreasted 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

- 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

Drumcliff Bay SPA [4013]

Distance: 5.17km northwest of the application site

Site Synopsis Overview

Drumcliff Bay, Co. Sligo is the most northerly of Sligo Bay's three estuarine inlets. The bay comprises an inner area of sheltered estuarine habitat and an outer area of shallow seawater. It extends 9 km east to west from Drumcliff village to Raghly Point. Drumcliff Bay is the estuary of the Drumcliff River, a substantial river flowing from Glencar Lough to the east. The inner part of Drumcliff Bay is sheltered by a sandy/grassy peninsula extending north from Rosses Point. The northern part of the bay is fringed by fine sandy beaches - Ballygilgan Strand, Lissadell Strand and Ardtermon Strand. Salt marsh occurs in the most sheltered areas and at low tide, extensive inter-tidal flats are exposed. A bed of Dwarf Eelgrass (*Zostera noltii*) occurs near the south-eastern corner of the bay.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Sanderling and Bar-tailed Godwit. 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.

Drumcliff Bay SPA is of importance as it supports nationally important populations of two species of wintering waterfowl: Sanderling (237) and Bar-tailed Godwit (336) – all figures are four-year mean peaks for four of the five winters between 1995/96 and 1999/2000.

Other species that occur regularly include Whooper Swan (45), Light-bellied Brent Goose (74), Shelduck (75), Wigeon (138), Teal (57), Long-tailed Duck (14), Redbreasted Merganser (20), Great Northern Diver (13), Oystercatcher (356), Ringed Plover (139), Lapwing (155), Knot (107), Dunlin (559), Curlew (177) and Redshank (138).

Drumcliff Bay SPA is of national importance for its winter populations of Sanderling and Bar-tailed Godwit, and the site supports a good diversity of other waterfowl species. Of note is that three of the species which occur regularly (Whooper Swan, Great Northern Diver and Bar-tailed Godwit) are listed on Annex I of the E.U. Birds Directive. Part of Drumcliff Bay SPA is a Wildfowl Sanctuary.

Conservation Objectives

- To maintain the favourable conservation condition of Sanderling in Drumcliff Bay SPA
- To maintain the favourable conservation condition of Bar-tailed Godwit in Drumcliff Bay SPA
- To maintain the favourable conservation condition of wetland habitat in Drumcliff Bay SPA as a resource for the regularly occurring migratory waterbirds that utilise it

Ballysadare Bay SPA [4129]

Distance: 5.55km southwest of the application site

Site Synopsis Overview

Ballysadare Bay extends for approximately 10 km westwards from the town of Ballysadare, County Sligo. It is the most southerly of three inlets that form the eastern part of the larger Sligo Bay complex. The estuarine channel of the Ballysadare River winds its way through the bay, finally reaching the open sea near the Strandhill Dunes sand spit. The bay is underlain by sedimentary rocks of limestones, sandstones and shales which are exposed as low cliffs and small sections of bedrock shore at several locations.

The bay contains extensive intertidal sand and mudflats. The flats support good populations of macro-invertebrates which are important food items for wintering waterfowl. Common species present include the polychaete worms *Hediste diversicolor, Arenicola marina, Lanice conchilega and Nepthys hombergii*, and the bivalves *Cerastoderma edule, Macoma balthica and Scrobicularia plana*. Also present on the intertidal flats are the vascular plants Eelgrass (*Zostera marina*) and Beaked Tasselweed (*Ruppia maritima*), which provide food for herbivorous wildfowl. Well-developed salt marshes, which provide roosting sites for birds at high tide, occur at several locations around the bay. The sandy beaches around the Strandhill peninsula are used by roosting birds.

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, Grey Plover, Dunlin, Bar-tailed Godwit 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.

Ballysadare Bay is important for a range of waterfowl species in autumn and winter. The population of Light-bellied Brent Goose (188) is of international importance (all figures are mean peak counts for four winters in the period 1995/96 to 1999/2000). The populations of four other species are of national importance, i.e., Grey Plover (70), Dunlin (1,420), Bar-tailed Godwit (251) and Redshank (435). A range of other species occurs, including Whooper Swan (15), Shelduck (55), Wigeon (617), Teal (179), Mallard (304), Goldeneye (17), Red-breasted Merganser (26), Cormorant (43), Oystercatcher (518), Ringed Plover (96), Golden Plover (301), Lapwing (467), Curlew (508), Greenshank (22), Turnstone (40), Black-headed Gull (261) and Common Gull (203).

Ballysadare Bay SPA is of high ornithological importance - it supports a Light-bellied Brent Goose population of international importance as well as nationally important populations of four other wintering waterfowl species. The presence of Bar-tailed Godwit, Golden Plover and Whooper Swan is of particular note as these species are listed on Annex I of the E.U. Birds Directive. The site forms an important component of the larger Sligo Bay complex

Conservation Objectives

- To maintain the favourable conservation condition of Light-bellied Brent Goose in Ballysadare Bay SPA
- To maintain the favourable conservation condition of Grey Plover in Ballysadare Bay SPA
- To maintain the favourable conservation condition of Dunlin in Ballysadare Bay SPA
- To maintain the favourable conservation condition of Bar-tailed Godwit in Ballysadare Bay SPA
- To maintain the favourable conservation condition of Redshank in Ballysadare Bay SPA
- To maintain the favourable conservation condition of the wetland habitat in Ballysadare Bay SPA as a resource for the regularly-occurring migratory waterbirds that utilise it

5.2 Favourable Conservation Status

The purpose of designating and managing Natura 2000 sites is to maintain at or restore to 'favourable conservation status' the habitats and species listed within the Directives for which the sites are notified; individual conservation objectives encapsulate an overall aim of maintaining or achieving favourable conservation status for each feature and maintaining the integrity of the site as a whole.

Favourable conservation status of a habitat is achieved when:

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

The favourable conservation status of a species is achieved when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Article 6(3) of the Habitats Directive requires that prior assessment be conducted regarding the established conservation objectives for each designated site. A general conservation objective encapsulating an overall aim of maintaining 'favourable conservation status' has been applied in relation to each Natura 2000 site and in relation to each site feature for the purposes of initial analysis.[54]

5.3 Screening Matrix

No direct impacts to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA are anticipated due to the scale and nature of the development and upon the existing habitats and species on-site. However, the site is hydrogeologically connected to protected areas via groundwater bodies which form pollution pathways into the European designated sites detailed above; therefore, a screening matrix has been applied to assess the following potential impacts of the proposed development.

5.4 Potential Pathways

- Contaminated surface water runoff from the construction phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA;
- Discharge of untreated surface water runoff from the operational phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA; and,
- Discharge of untreated foul water runoff from the operational phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA.

Garavogue River lies 450m to the east of the site. Water may percolate through a "Regionally Important Aquifer – Karstified" into the Garavogue River connecting to Lough Gill SAC or continue further into Sligo Bay and the Atlantic Ocean which connects to the other aforementioned European Designations. Therefore, the prevention of contaminants, silts, sediments, polluted surface water, and untreated foul water, from entering minor watercourses/field drains hydrogeologically connected to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA during construction

[54] 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

and throughout the operational phase of the development is vital. Where this pathway can be eliminated, this will significantly reduce the potential impacts on the integrity of these sites, ensuring no detrimental impacts are likely to occur.

Table 5-1: Stage 1 Test of Likely Significance (TOLS) of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA.

Description of project/development	The current site comprises Scrub (WS1), Dry Calcareous and Neutral Grassland (GS1), Fixed Dunes (CD3), Buildings and Artificial Surfaces (BL3), Ornamental/Non-native Shrub (WS3), Scattered Trees and Parkland (WD5), and Stone Wall and Other Stonework (BL1). The development will consist of: o 1 No. 3 Storey Student Accommodation Building containing 32 No. bedrooms, associated living/kitchen spaces, circulation and service areas. o 1 No. Ground Floor Retail Unit. o Pedestrian, cycle and vehicular access/egress o All associated car parking, bin storage, landscaping, boundary treatments, pedestrian links, public lighting, service connections and all associated site works.
Designated site(s)	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA
Description of likely impacts on designated sites	1. Contaminated surface water runoff from the construction phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. 2. Discharge of untreated surface water runoff from the operational phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA; and, 3. Discharge of untreated foul water runoff from the operational phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA.
Likely impacts (direct, indirect or secondary impacts) on the designations	
Size and scale	The site is physically separated from the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC by 419m, Lough Gill SAC by 430m, Ballysadare Bay SAC by 5.69km, Streedagh Point Dunes SAC by 14.05km, Cummeen Strand SPA by 444m, Drumcliff Bay SPA by 5.17km, and Ballysadare Bay SPA by 5.55km. The site is relatively small in scale.

Land-take	The proposal does not require any land taken from within any SAC/SPA
Distance from designations or key features of the site	The site is physically separated from the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC by 419m, Lough Gill SAC by 430m, Ballysadare Bay SAC by 5.69km, Streedagh Point Dunes SAC by 14.05km, Cummeen Strand SPA by 444m, Drumcliff Bay SPA by 5.17km, and Ballysadare Bay SPA by 5.55km.
Resource requirements	The proposal does not require any resources from within any SAC/SPA.
Excavation requirements	The proposal does not require any excavation from within either SAC/SPA.
Transport requirements	All transportation requirements will be achieved using the existing public road network, and the creation of an access track to an existing public road network. It will not result in significant effects on the designated sites.
Duration of construction	Estimated 18-24 months
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site as a result of:	
Reduction of Habitat	The proposal will not result in the reduction of habitat within any SAC/SPA or areas of supporting natural and semi-natural habitat.
Disturbance to Key species	No disturbance was predicted due to setback distance.
Habitat Fragmentation	During the construction and operational phase, no habitats are to be fragmented, which could be important for any species for which the designations are held.
Reduction of Species Diversity	During the construction and operational phase, the development is not considered to directly reduce the populations of species for which the designations occur. A multitude of factors can influence the reduction of species; however, this proposed development is considered to have a negligible effect upon them.

The test of likely significance (TOLS) at Stage 1 has indicated that the proposal is likely to have an effect on Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA, causing degradation to the sensitive selection features as detailed above. Therefore, as indirect impacts are likely to occur and based on the precautionary approach, a Stage 2 Appropriate Assessment must be undertaken.

6. Stage 2- Appropriate Assessment

6.1 Potential Pathway - Mitigation Proposals

Mitigation proposals to ensure no adverse effect on any Natura 2000 site identified within the likely zone of impact highlighted above are detailed below.

- Contaminated surface water runoff from the construction phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. These pollution pathways can be managed through an effective and robust Construction Environmental Management Plan (CEMP) ensuring that best practice is applied to all aspects of the construction phase.
- Discharge of untreated surface water runoff from the operational phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. These pollution pathways can be managed through the implementation of a sustainable drainage system utilising a Class 1 interceptor or suitable alternative; and,
- Discharge of untreated foul water runoff from the operational phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. These pollution pathways can be managed by connecting foul water to a public sewer system, or alternatively an appropriately sized on-site wastewater treatment system with a percolation area can be utilised if foul wastewater proposals are not directed to a public sewer.

The following tables 6-1 to 6-5 present mitigation, assessment of mitigation and findings.

Table 6-1: Stage 2 Appropriate Assessment: Construction Phase Surface Water Runoff - Mitigation Measures

Mitigation measures to be introduced?	How will the measures avoid adverse effects on the integrity of the site?	How will the measures reduce the adverse effects on the integrity of the site?	Provide evidence of how they will be implemented and by whom?

Contaminated surface water runoff from the construction phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. These pollution pathways can be managed through an effective and robust Construction Environmental Management Plan (CEMP) ensuring that best practice is applied to all aspects of the construction phase. (See Appendix A for the required outline of a Construction Environmental Management Plan).	Source and pathway to receptors have been controlled, managed and/or removed as part of the implementation of the CEMP and measures therein concerning construction activities. No adverse impacts are predicted.	Once a source and pathway to receptors have been controlled, managed and/or removed as part of the implementation of the CEMP. These measures remove the potential for adverse effects on the integrity of the N2K sites.	A CEMP should be required as part of planning approval/conditions and formal approval for the same with the planning authority. The principal contractor will be responsible for the implementation of the CEMP.
	Provide evidence of the degree of confidence in their likely success.	Provide a timescale, relative to the project or plan, when they will be implemented.	Explain the proposed monitoring scheme and how any mitigation failure will be addressed.
	If a CEMP is implemented, the pollution source and pathway is controlled, managed and/or removed; therefore, no pollutant can enter pathways, ensuring no adverse effects on N2K sites. Authors are confident in the likely success of these mitigation measures.	Throughout the duration of the construction phase of the development.	Mitigation procedures will be managed by the Ecological Clerk of Works (ECoW) and the principal contractor, daily checks shall be undertaken and recorded, and documentation will be retained on a continuous basis to ensure implementation and compliance. Issues raised will be addressed by the principal contractor.

Table 6-2: Stage 2 Appropriate Assessment: Discharge of Unrestricted Surface Water - Mitigation Measures

Mitigation measures to be Introduced	How will the measures avoid adverse effects on the integrity of the site?	How will the measures reduce the adverse effects on the integrity of the site?	Provide evidence of how they will be implemented and by whom?
Discharge of untreated surface water runoff from the operational phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay	The use of Sustainable Drainage Systems (SuDS) (attenuation and flow break) on-site will align on-site surface water drainage with natural water processes, eliminating unrestricted surface water discharge. The source of pollution is eliminated through the Installation of an appropriately sized Sustainable Drainage System. Such equipment will reduce site runoff rates to that of greenfield levels.	Installation of appropriately sized Sustainable Drainage Systems and Class 1 Petrol Interceptor will reduce potential contaminant sources (unrestricted flow) in surface water runoff. Eliminating the pollutant source eliminates potential. These measures remove the potential for adverse effects on the integrity of the N2K sites. No adverse impacts are predicted.	Equipment should be installed and maintained in accordance with the design spec and installation requirements as laid out by the equipment manufacturer. The principal contractor will be responsible for installing equipment.

SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. These pollution pathways can be managed through the implementation of a sustainable drainage system utilising a Class 1 interceptor or suitable alternative (See Appendix B for further detail on SUD's requirements). (See Appendix C for further details on Interceptor requirements).	Additionally, installation of an appropriately sized Class 1 interceptor or suitable alternative will reduce potential contaminant concentrations (silt and hydrocarbons) in surface water discharge runoff to acceptable concentrations throughout the duration of the operation phase. No adverse impacts are predicted.		
	Provide evidence of the degree of confidence in their likely success.	Provide timescale, relative to the project or plan, when they will be implemented.	Explain the proposed monitoring scheme and how any mitigation failure will be addressed.
	Sustainable Drainage Systems (SuDS) are drainage systems that are considered to be environmentally beneficial, causing minimal or no long-term detrimental damage. They are often regarded as a sequence of management practices, control structures and strategies designed to efficiently and sustainably drain surface water while minimising pollution and managing the impact on water quality of local water bodies. Restricting surface water discharge through implementing a system in line with engineers' drainage calculations and best practice ensuring greenfield runoff rates will eliminate downstream effects on designations. Approved technical specifications of equipment including Class 1 Petrol Interceptors will ensure appropriate discharge pollutant concentrations are adhered to. Authors are confident in the likely success of these mitigation measures.	This system will be installed during the construction phase and operational throughout the operational phase of the development.	This system will be installed, monitored, and serviced as per manufacturers' guidelines.

Table 6-3: Stage 2 Appropriate Assessment: Discharge of Untreated Foul Water- Mitigation Measures

Mitigation measures to be Introduced	How will the measures avoid adverse effects on the integrity of the site?	How will the measures reduce the adverse effects on the integrity of the site?	Provide evidence of how they will be implemented and by whom?
Discharge of untreated foul water runoff from the operational phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. These pollution pathways can be managed by connecting foul water to a public sewer system, or alternatively an appropriately sized on-site wastewater treatment system with a percolation area can be utilised if foul wastewater proposals are not directed to a public sewer. (see Appendix D for further details on on-site wastewater treatment system requirements).	Installation of an appropriately sized on-site wastewater treatment system with a percolation area or discharging foul water to the public sewers will reduce the potential for foul water discharge runoff throughout the duration of the operation phase. No adverse impacts are predicted.	Installation of an appropriately sized on-site wastewater treatment system with a percolation area or discharging foul water to the public sewers will reduce the potential for foul water discharge runoff. No adverse impacts are predicted.	Equipment should be installed and maintained in accordance with the design spec and installation requirements as laid out by the equipment manufacturer. The principal contractor will be responsible for installing equipment.
	Provide evidence of the degree of confidence in their likely success.	Provide timescale, relative to the project or plan, when they will be implemented.	Explain the proposed monitoring scheme and how any mitigation failure will be addressed.
	Approved technical specifications of such equipment will ensure appropriate discharge pollutant concentrations are adhered to. Authors are confident in the likely success of these mitigation measures.	This system will be installed during the construction phase and operational throughout the operational phase of the development.	This system will be installed, monitored, and serviced as per manufacturers' guidelines.

Table 6-4: Stage 2 Appropriate Assessment

Describe the elements of the project or plan (alone or in combination with other projects or plans) that are likely to give rise to significant effects on the site (from screening assessment).	The development site is located at Lord Edward Street and Joe Banks Road, Sligo, Co. Sligo (Grid Reference: G 68702 35911). The site is located approximately 450m northwest of Sligo town centre, 22.21km northwest of Castlebaldwin village centre, and 47.6km northeast of Ballina town centre. The application site is currently a derelict brownfield site situated within Sligo town, characterised by overgrown scrub and vegetated patches. The site is surrounded by roadways, hardstanding areas, and a mix of residential and commercial properties associated with Sligo town centre. To the north of the site lies Lord Edward Street and Sligo train station and Sligo Bus station with associated parking, while to the east, there are the Joe Banks Road, Quayside shopping centre with its associated parking facilities, and the Garavogue River. Southward, the site is

	bordered by additional residential properties, Church Hill Road, amenity grasslands, and Kingsbridge Sligo Private Hospital. To the west, residential properties, the Gateway Community Centre, Wolfe Tone Street, and Sligo Rovers FC football stadium are situated. o Contaminated surface water runoff from the construction phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. These pollution pathways can be managed through an effective and robust Construction Environmental Management Plan (CEMP) ensuring that best practice is applied to all aspects of the construction phase. o Discharge of untreated surface water runoff from the operational phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. These pollution pathways can be managed through the implementation of a sustainable drainage system utilising a Class 1 interceptor or suitable alternative. o Discharge of untreated foul water runoff from the operational phase via percolation into a regionally important aquifer (Karstified) with moderate groundwater vulnerability which is hydrogeologically connected to protected sites causing degradation of overall environmental and ecological quality of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA. These pollution pathways can be managed by connecting foul water to a public sewer system, or alternatively an appropriately sized on-site wastewater treatment system with a percolation area can be utilised if foul wastewater proposals are not directed to a public sewer.
Conservation objectives	<u>Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC Conservation Objectives:</u> ➢ 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 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; and ➢ To maintain the favourable conservation condition of Harbour Seal in Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC. <u>Lough Gill SAC Conservation Objectives:</u>

- 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; and,
- To maintain the favourable conservation condition of Otter (*Lutra lutra*) in Lough Gill SAC.

<u>Ballysadare Bay SAC Conservation Objectives:</u>

- To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Ballysadare Bay SAC;
- To maintain the favourable conservation condition of Embryonic shifting dunes in Ballysadare Bay SAC;
- To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') in Ballysadare Bay SAC;
- To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Ballysadare Bay SAC;
- To restore the favourable conservation condition of Humid dune slacks in Ballysadare Bay SAC;
- To maintain the favourable conservation condition of Narrow-mouthed Whorl Snail in Ballysadare Bay SAC;
- To maintain the favourable conservation condition of Harbour Seal in Ballysadare Bay SAC.

<u>Streedagh Point Dunes SAC Conservation Objectives:</u>

- To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Streedagh Point Dunes SAC
- To maintain the favourable conservation condition of Perennial vegetation of stony banks in Streedagh Point Dunes SAC
- To restore the favourable conservation condition of Atlantic salt meadows (*Glauco Puccinellietalia maritimae*) in Streedagh Point Dunes SAC
- To maintain the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Streedagh Point Dunes SAC
- To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') in Streedagh Point Dunes SAC
- To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Streedagh Point Dunes SAC

<u>Cummeen Strand SPA Conservation Objectives:</u>

- 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; and ➢ 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. <u>Drumcliff Bay SPA Conservation Objectives:</u> ➢ To maintain the favourable conservation condition of Sanderling in Drumcliff Bay SPA; ➢ To maintain the favourable conservation condition of Bar-tailed Godwit in Drumcliff Bay SPA; and ➢ To maintain the favourable conservation condition of wetland habitat in Drumcliff Bay SPA as a resource for the regularly occurring migratory waterbirds that utilise it. <u>Ballysadare Bay SPA Conservation Objectives:</u> ➢ To maintain the favourable conservation condition of Light-bellied Brent Goose in Ballysadare Bay SPA; ➢ To maintain the favourable conservation condition of Grey Plover in Ballysadare Bay SPA ➢ To maintain the favourable conservation condition of Dunlin in Ballysadare Bay SPA; ➢ To maintain the favourable conservation condition of Bar-tailed Godwit in Ballysadare Bay SPA; ➢ To maintain the favourable conservation condition of Redshank in Ballysadare Bay SPA; ➢ To maintain the favourable conservation condition of the wetland habitat in Ballysadare Bay SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.
Describe how the project or plan will affect key species and key habitats	The locations of proposed works, the nature of the construction activities and the potential proposed surface and foul water disposal methods on-site are likely to increase sediment, hydrocarbons, and other pollutants, including surface water bodies, groundwater features and other pollutant pathways. These features are potential pathway from the development site to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA for potentially contaminated runoff, causing degradation to the sensitive qualifying interests of designations within the zone of influence. Due to the distance from the Natura 2000 site, it is not anticipated there will be direct disturbance to the qualifying features of Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Points Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA from site operations, such as the movement of people and machinery.
Describe how the integrity of the site (determined by structure and function and conservation objects) is likely to be affected by the project or plan.	Degradation of the adjacent aquatic and terrestrial environments from contaminated surface water runoff (silts, hydrocarbons, surface and foul water) as a result of construction and operational phases of the development. Such degradation would have a direct impact on designated species and habitats.

Mitigation measures are to be introduced to avoid adverse effects on the integrity of the site.	- Implementation of an effective and robust Construction Environmental Management Plan (CEMP), to ensure best practice is maintained throughout works on-site. - The implementation of a sustainable drainage system utilising a Class 1 interceptor or suitable alternative - Connecting foul water to the public sewer system, or an appropriately sized on-site wastewater treatment system with a percolation area can be utilised if foul wastewater proposals are not directed to public sewer.

7. Likely Cumulative Impact (In-Combination)

7.1 Other Plans and Projects

The potential for the proposed works to contribute to a cumulative impact on European Sites was considered. The National Planning Application Database for Sligo County Council[55] was consulted on the 8th of August 2024. Additional projects identified in the townland and within close proximity to the site within the last five years were reviewed in conjunction with the Policies and Objectives of the Draft Sligo County Development Plan 2024-2030 and were considered as part of this assessment. Table 7-1 below details such considerations.

Table 7-1: 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	Assessment of Potential Impact on European Sites
Draft Sligo County Development Plan 2024-2030[56]	Objective O- INW-2 Require that runoff from a developed area does not result in deterioration of downstream watercourses or habitats, and that pollution generated by a development is treated within the development area prior to discharge to local watercourses. Policy P-BD-1 Protect, conserve, enhance and sustainably manage the natural heritage, biodiversity, geological heritage, landscape, and environment of County Sligo. Policy P-BD-2 Protect and, where possible, enhance the plant and animal species and their habitats that have been identified under EU Habitats Directive (92/43/EEC), the EU Birds Directive (2009/147/EC), European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011) as amended, Flora (Protection) Order 2015, the Wildlife Act 1976 (as amended), and the Wildlife (Amendment) Act 2000 as amended,	The Sligo County Development Plan underwent a comprehensive review, specifically examining Policies and Objectives related to the Natura 2000 network and other natural heritage concerns. Upon evaluation in conjunction with the current proposal, no potential for cumulative impacts was identified. There are no protected habitats within the site. The proposal includes: o 1 No. 3 Storey Student Accommodation Building containing 32 No. bedrooms, associated living/kitchen spaces, circulation and service areas; o 1 No. Ground Floor Retail Unit; o Pedestrian, cycle and vehicular access/egress; and, o All associated car parking, bin storage, landscaping, boundary treatments, pedestrian links, public lighting, service connections and all associated site works. 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 HRA reports (Stage I / Stage II). The majority of 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 AASR as required under Articles 6(3) of the Habitats Directive.

[55] Sligo County Council Planning Applications Online, Available at: https://www.sligococo.ie/planning/SearchPlanningApplications/
[56] Sligo County Development Plan (Draft) 2024-2030, Available at: https://consult.sligococo.ie/sites/default/files/Natura%20Impact%20Report%20in%20support%20of%20the%20AA%20for%20the%20Draft%20Sligo%20CDP.pdf

	including all statutory instruments made under each act. Policy P-BD-3 Ensure that the ecological impact of all development proposals on habitats and species are appropriately assessed by suitably qualified professionals, in accordance with best practice guidelines, taking full account of the precautionary principle where uncertainty exists. Policy P-BD-4 Minimise adverse impacts of proposed developments on existing habitats (whether designated or not) by including mitigation and/or compensation measures as appropriate. 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-2 Promote the maintenance and, as appropriate, achievement of 'favourable conservation status' of habitats and species in association with the NPWS. Policy P-DSNC-3 Carry out an appropriate level of assessment for all development plans, land-use plans and projects that	A list of planning applications near the site that have been granted in the past 5 years or are currently under review are listed below. ➢ App no. 19471 (20/11/2019): Development consisting of the conversion of domestic garage to habitable accommodation and replacement of existing garage door with a window on the front facade, and all associated site development works. ➢ App no. 20113 (14/04/2020): Development consisting of permission for the demolition of an existing two storey building and the construction of a new two storey residential building comprising 4 no. apartments and all associated site works and services. ➢ App no. 2158 (26/02/2021): Development consisting of the following; (1) the removal of 4 No. existing floodlight pylons, (2) the erection of 2 No. new floodlight pylons with LED type lighting, (3) the upgrade of existing floodlighting to LED type, together with all associated site works ➢ App no. 19301 (24/07/2019): Development consisting of permission for a period of 5 years for construction of a temporary surface car park to be used by Dunnes Stores customers and staff. Entry and exit to the temporary car park will be via the existing Dunnes Stores car park including a new vehicular exit onto Adelade Street from the temporary car park. The proposed development includes ancillary site works including the repair and replacement of boundary walls, surface drainage, public lighting, cycle parking and new pay & display parking machines. ➢ App no. 19262 (02/07/2019): Development consisting of the extension and alteration as follows:- 1. Demolition of single storey portion of existing dwelling (which forms part of a terrace) to the rear 2. Construction of a two-storey extension to the rear of existing dwelling. 3. Internal alterations to the existing building to accommodate the conversion of the attic room to a bedroom, along with the addition of a box dormer with windows to the rear and roof windows to the front. 4. Addition of two windows to the side gable of the existing structure. 5. Extension to rear shed. 6. All with associated site works and alterations. ➢ App no. 1942 (12/02/2019): Development consisting of the retention and completion of partially constructed two storey flat roof rear extension along with all ancillary site works. ➢ App no. 22187 (26/05/2022): Development consisting of construction of two-storey extension to rear comprising kitchen on ground floor and shower room on first floor and associated site works. ➢ App no. 1960 (25/02/2019): Development consisting of, demolition existing extension, and construction of a new extension to the rear of existing dwelling house, and all associated site development works.

	the Council authorizes or proposes to undertake or adopt, to determine the potential for these plans or projects to impact on designated sites, proposed designated sites or associated ecological corridors and linkages in accordance with the Habitats Directive. All appropriate assessments shall be in compliance with the provisions of Part XAB of the Planning and Development Act 2000 (as amended). 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. Policy P-PS-1 Ensure that development does not have a significant adverse impact incapable of satisfactory mitigation on plant, animal or Bird species protected by law. Policy P-NCODS-2 Ensure that development proposals, where relevant, improve the ecological coherence of the Natura 2000 network and encourage the retention and management of landscape features that are of major importance for wild fauna and flora as per Article 10 of the Habitats Directive. Policy P- INW-3 Ensure that all proposed greenfield residential and commercial developments use sustainable drainage systems (SUDS) in accordance with best current practice, ensuring protection of the integrity of wetland sites in the adjoining area, including their hydrological regime. Policy P-INV-2 Require all development proposals to address the presence of invasive alien species on proposed development sites and (if necessary) require applicants to prepare and submit an Invasive Species	➢ App no. 22400 (24/11/2022): Development consisting of demolition of existing structures on site and the construction of the following: 1) New Spectator Stand at the Church Hill Road end comprising facilities that are ancillary to the function of the football club such as reception, shop, catering facilities, kitchen, hospitality areas, gym, offices, meeting rooms, toilets and storage. 2) New spectator stand in place of the existing Jinks Avenue Stand comprising changing rooms, shop, laundry, toilets and storage. 3) New roof to existing spectator stand at the Railway end and provision of new toilets underneath. 4) Minor amendments to the existing Tracey Avenue stand to accommodate new TV gantry position, screening to the side elevations and toilets. 5) New turnstiles to the rear of the Jinks Avenue stand. 6) New pedestrian access gate to Church Hill Road. 7) Re-configured carparking area with new site lighting, together with all associated landscaping, site services, signage and site works. ➢ App no. 2190 (16/03/2021): Development consisting of new 3 storey Imaging Centre (1,036m2) with associated plant, office and consultation rooms and all associated site development works. ➢ App no. 20393 (18/11/2020): Development consisting of (a) the construction of a 2 storey theatre block 3,714 m2, (b) the construction of external stores 66 m2, (c) the expansion of existing carpark to provide total of 96 spaces, (d) the construction of an ESB Sub Station, (e) alterations to public boundary wall along Ray MacSharry Road, alterations to existing site entrance, and other associated site works and services. ➢ App no. 20301 (07/09/2020): Development consisting of (a) the installation of a Relocatable MRI Unit (63m2), (b) the installation of a Modular Clinical Support Unit (56.5m2), and other associated site development works and services. ➢ App no. 19471 (20/11/2019): Development consisting of a rear double storey extension (46.5 sqm) in the place of the existing double storey extension (14sqm). The works shall provide kitchen, living, WC and laundry spaces. Other works to include associated internal alterations, a new first floor level terrace, the reinstatement of the timber sliding sash windows, a new pedestrian access gate to the rear, new sheds and site works. ➢ App no. 21193 (25/05/2021): Development consisting of a rear double storey extension (46.5 sqm) in the place of the existing double storey extension (14sqm). The works shall provide kitchen, living, WC and laundry spaces. Other works to include associated internal alterations, a new first floor level terrace, the reinstatement of the timber sliding sash windows, a new pedestrian access gate to the rear, new sheds and site works. ➢ App no. 19401 (26/09/2019): Development consisting of 1. Erection of associated signage on the unit's facade. 2 Elevational alterations and upgrade works. 3. All associated site works necessary to facilitate the development.

	Management Plan, in compliance with the provisions of the European Communities (Birds and Natural Habitats) Regulations 2011-2015. Policy P- INW-5 Ensure that proposed developments do not adversely affect groundwater resources and groundwater-dependent habitats and species.	➢ App no. 1988 (13/09/2019): Development consisting of the renovation of the existing stone coach house building located to the rear and within the site confines of 16 Quay Street, Sligo, Co, Sligo, a Protected Structure with unique identity number 145. Permission is also sought for the construction of an office extension to the existing coach house building and for the change of use of the existing coach house building into an office along with all associated site works and services. ➢ App no. 1987 (13/09/2019): Development consisting of the renovation of the existing stone coach house building located to the rear and within the site confines of the protected structure with unique identity number 146. Permission is also sought for the construction of an office extension to the existing coach house building and for the change of use of the existing coach house building into an office along with all associated site works and services. ➢ App no. 22272 (09/08/2022): Development consisting of change of use of dwelling house for use for short term letting with all associated works.

8. Assessment of Potential Impacts to Designations

The proposed development at stage one screening test of likely significance has demonstrated that the proposal is likely to cause degradation to the sensitive Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Point Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA's aquatic environments from contaminated surface or ground water runoff. The prevention of contaminants, silts, and sediments from entering the sites pollution pathways hydrogeologically connected to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Point Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA during construction and throughout the operational phase is therefore vital. Where this pathway can be eliminated, this will significantly reduce the potential impacts on the integrity of these sites so that no detrimental impacts are likely to occur.

The implementation and installation of the following mitigation measures will prevent the source (contaminants, silts, and sediments) from entering the pathways (the sites drainage pathways), therefore not adding to/increasing the total pollutant concentrations of the receptor (Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, Lough Gill SAC, Ballysadare Bay SAC, Streedagh Point Dunes SAC, Cummeen Strand SPA, Drumcliff Bay SPA, and Ballysadare Bay SPA).

- The implementation of an effective and robust Construction Environmental Management Plan (CEMP) to ensure best practice is maintained throughout work on-site (see Appendix A);
- The implementation of a sustainable drainage system utilising a Class 1 interceptor or suitable alternative (see Appendix B and 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 managed by a wastewater treatment management company (see Appendix D).

There are no concerning additional live projects/developments located within proximity. Therefore, it is considered that there is no additive effect for significant cumulative or in combination impacts on the Natura 2000 network to occur as a result of the development.

Appendix A - Construction Environmental Management Plan Requirements

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:

- 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.

<u>Surface & Ground Water Management</u>

- 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.

<u>Sediment Management</u>

- 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 kph;
- 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 hydrodemolition 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;
- 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.

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 rummcfnoff rates
  - Flooding
- Changes to stream morphology
  - Stream widening
  - Erosion
  - Loss of riparian habitat

- 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 Examples

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.

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 carparks, 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

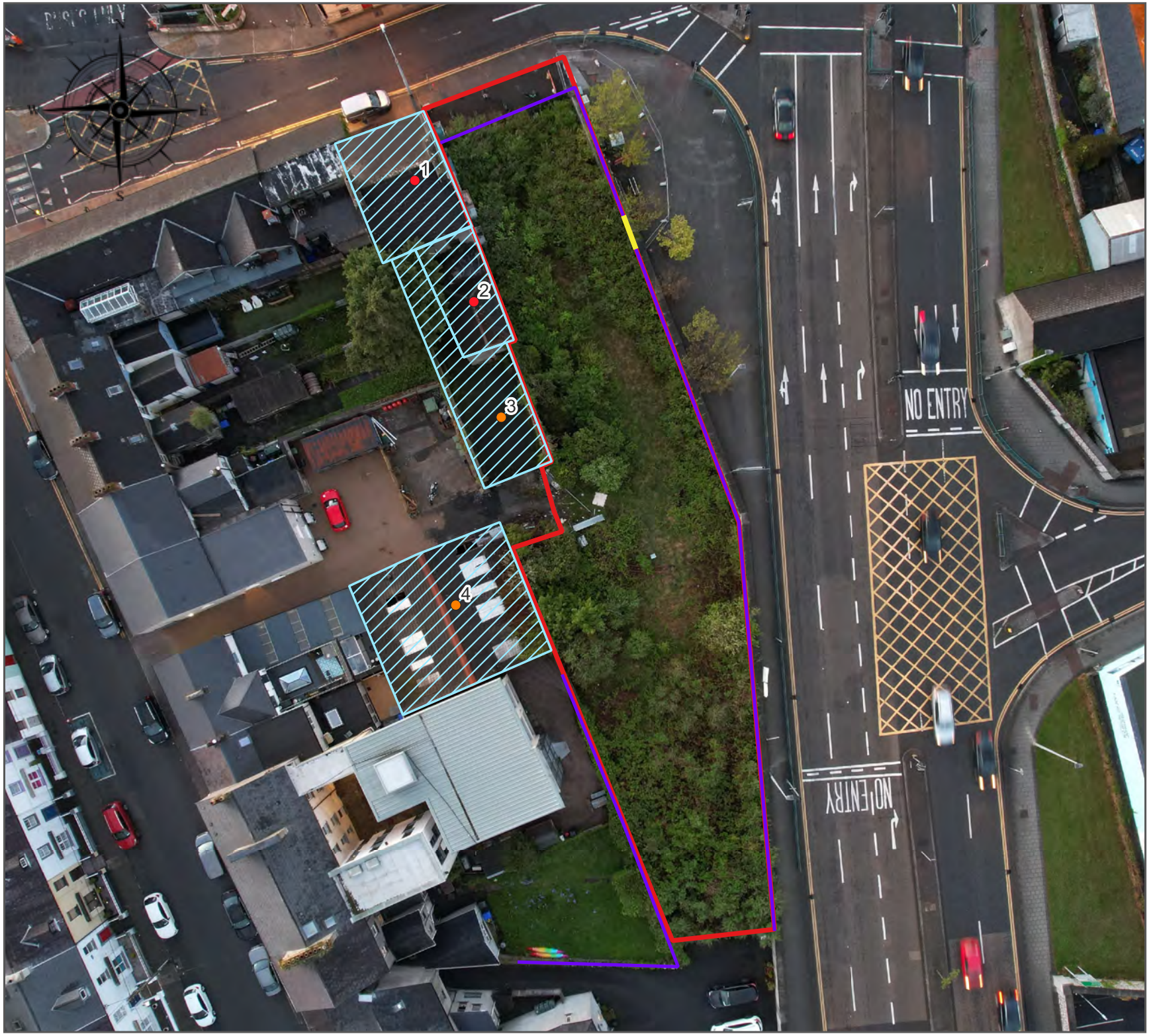
- Fully compliant and tested to EN 858-1.
- Bypass separators are tested by British standards institute (BSI).
- Certified flow and process performance assessing effluent qualities to the requirements of EN 858-1.
- The unit is designed to treat the 'first flush' - 10% of peak flow. The calculated drainage areas served by each separator are indicated according to the formula given by PPG3 NSB = 0.0018A(m2).
- 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 drawn up 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.

An example of such a system is the WCS Environmental Engineering's, HiPAF® midi and modular that caters for developments from 60 up to 2,000 population equivalent (PE) as detailed below.

Appendix E – Daytime Bat Walkover (DBW)
Appendix F – Current Site Plan



Legend:

- Site Boundary
- Building Outline
- Low BRP Wall
- Negligible BRP Wall
- Medium BRP Building (outside site boundary)
- Low BRP Building (outside site boundary)

Project Title: AEMP-2000354

Lord Edward Street, Sligo, Co. Sligo

Drawing Title:

Daytime Bat Walkover Survey Map

Drawn By:	Checked By:
JH	FM
Project No:	Drawing No:
2000354	Appendix E
Scale:	Date:
1/450	1st July 2024

AVRIO

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Co. Fermanagh, BT74 7JL

Website: www.avrio-env.com
Email: info@avrio-env.com
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LORD EDWARD STREET

JOE BANKS ROAD

PROPOSED RAISED PLANTERS

SMALL UNIT GRANITE SLAB PAVING AS PER SLIGO PUBLIC REALM PLAN.

PROPOSED PLANTING TO BE CO-ORDIANTED WITH SLIGO COCO

GRASSED OPEN SPACE

FFL + 5.95m

PROPOSED BUILDING FFL + 6.25m

RIGHT OF WAY

BIN STORAGE AREA

EV POINT

BIKE STAND

SN No. 1

SN No. 2

STN 1000 5.91

STN 1001 5.89

STN 2000 5.97

Conc Pad

Concrete

Gravel Driveway

Paving Slabs

Railing

Crossing

garden

GRASS

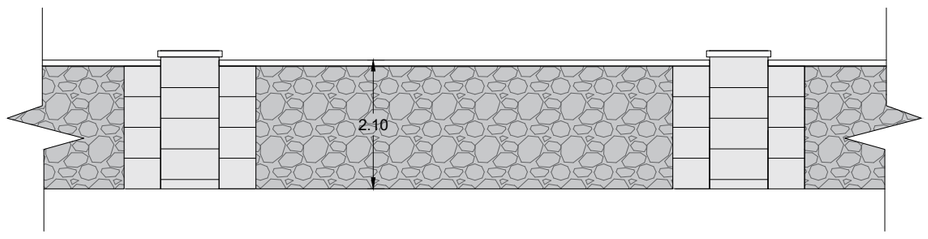
SHED

TARMAC

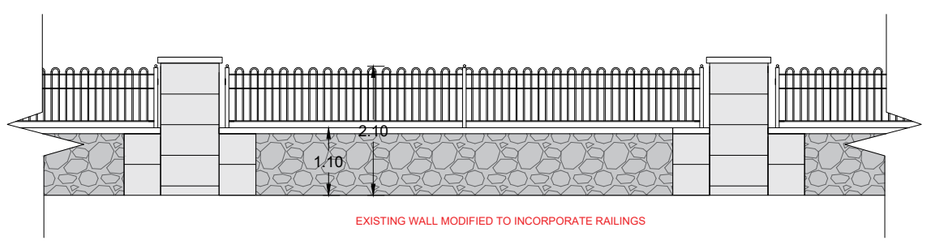
BOUNDARY WALL RETAINED

KEY

+ 60.50	Spot Height
SV / ET / W	Water Valve / Gully Trap
	Kerb Channel
LP	Lamppost
Sign	Sign Post
	Bollard
STN 1000 100.00	Control Station
	Telecom



TYPICAL EXISTING BOUNDARY DETAIL
SCALE 1:100



EXISTING WALL MODIFIED TO INCORPORATE RAILINGS

PROPOSED BOUNDARY DETAIL
SCALE 1:100

PLANNING

EXTENT OF SITE TO WHICH THIS APPLICATION APPLIES

OUTLINE OF SITE UNDER APPLICANTS CONTROL

SN POSITION OF SITE NOTICES

RIGHT OF WAY

Rev	Description	By	Date
–	–	–	–

VINCENT HANNON ARCHITECTS

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Suite 4 Cloch Mhíle,
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Doorly Park Road,
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T: 071 915 0022

Dublin
81 Amiens Street
Dublin 1,
D01 N2F5
T: 01 876 4600

E: info@vha.ie
www.vha.ie

Client: Carnavon Ltd.,

Project: Lord Edward Street Student Accommodation

Drawing Description: Proposed Site Layout

Scale: 1:250

Status: PLANNING

Drawing No: 230516-XXX-DR-VHA-AR-102

Rev: P1

Date: 24.01.2024 | Drawn by: JC | Checked by: VHA