CLIENT: Calry Development Association

PROJECT: Lady Anne Walk, Hazelwood, Co Sligo. Appropriate Assessment (Natura Impact Statement)

Prepared by: AONA Environmental Consulting Ltd.

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REPORT CONTROL

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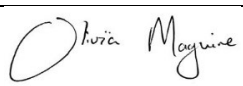
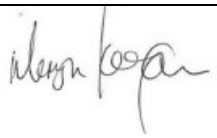
Author:	Olivia Maguire, B.Sc, M.Sc.	Signed:	
Review By:	Mervyn Keegan, B.Sc, M.Sc.	Signed:	

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Executive Summary

This Natura Impact Statement (NIS) has been prepared by AONA Environmental Consulting Ltd on behalf of Calry Development Association (the applicant) who is seeking permission for the upgrade of an existing walkway known locally as the Lady Anne Walk at Hazelwood Demesne, Co Sligo.

Appropriate Assessment is the consideration of the impact on the integrity of the Natura 2000 site of the project, either alone or in combination with other plans or projects, with respect to the site's ecological structure and function, and conservation objectives. Additionally, mitigation of these effects can be considered. A Screening for Appropriate Assessment was completed and determined the need for full Appropriate Assessment (NIS).

Potential impacts to European sites within the project ZoI were examined in Stage 1, Screening for AA. Twelve European sites are situated within a 15km radius of the site, two of which are within the project ZoI supporting either direct or indirect connectivity through ground and surface water features providing a pathway for potential impacts; namely, Lough Gill SAC and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC. The main qualifying features of these designated sites have been outlined and assessed in full in this report.

With the implementation of best practice construction methods and proposed mitigation measures as detailed in this report, it can be concluded that there will be no significant effects on the integrity of Lough Gill SAC and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC.

It is therefore considered that the next stage of the Appropriate Assessments is not required as the development will not result in any adverse effects on the integrity for any Natura 2000 site. A determination of the need to advance in the Appropriate Assessment process will be decided upon by the Competent Authority.

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1 INTRODUCTION

1.1 Background

This document has been prepared by AONA Environmental Consulting Ltd. to allow the relevant competent authority to conduct an Appropriate Assessment in accordance with the requirements of Article 6(3) of the Habitats Directive (Directive 92/43/EEC). The development which is subject to this Appropriate Assessment relates to the upgrade of an existing walkway known locally as the Lady Anne Walk at Hazelwood Demesne, Co Sligo. The information has been prepared on behalf of the applicant, Calry Development Association.

This NIS has been prepared in accordance with the requirements of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive), and with the provisions of Part XAB of the Planning and Development Act, 2000 (as amended).

The purpose of this NIS is to provide an examination, analysis and evaluation of the potential impacts of the proposed walking trail on European sites and to present findings and conclusions with respect to the proposed walking trail in light of the best scientific knowledge in the field. This NIS will inform and assist the competent authority, in carrying out its Appropriate Assessment as to whether or not the proposed walking trail will adversely affect the integrity of any European sites, either alone or in combination with other plans and projects, taking into account their conservation objectives.

The proposed walking trail is neither connected with nor necessary to the management of any European sites.

The footprint of the proposed walking trail is for the most part within Lough Gill SAC (Site Code: 001976). This report contains the Screening for Appropriate Assessment (Stage 1) which evaluates the potential for significant impacts from the proposed walking trail itself, or in combination with other plans and projects, on designated European nature conservation sites in view of the conservation objectives of those sites. Specifically Stage 1 assesses those European Sites within the zone of influence of the proposed project. Where the Stage 1 screening indicates that significant effects are likely to occur from a proposed project on European Sites in relation to their qualifying interests, special conservation interests and conservation objectives, the process moves to Stage 2. This Natura Impact Statement (NIS) Report is prepared, and any mitigation measures deemed necessary to avoid or reduce potential adverse impacts from the project are identified and explained.

1.2 Legislative Context

1.2.1 European Law

Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora ('the Habitats Directive') is European Community legislation aimed at nature conservation. The Habitats Directive requires that where a plan or project is likely to have a significant effect on a European site (s), (and where the plan or project is not directly connected with or necessary to the nature conservation management of the European site), the plan or project will be subject to 'Appropriate Assessment' (AA) to identify any implications for the European site(s) in view of the site's Conservation Objectives. Specifically, Article 6(3) of the Habitats Directive states:
'Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In 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 concerned and, if appropriate, after having obtained the opinion of the general public.'

Case law of the European Court of Justice (ECJ) has determined that AA is required, if likely significant effects cannot be excluded on the basis of objective information. Case law has also clarified that measures intended to avoid or reduce harmful effects on European sites, must not be considered when determining whether it is necessary to carry out an AA.

1.2.2 Irish Law

In the context of the Proposed Development, the Habitats Directive is transposed into Irish law by Part XAB of the Planning and Development Act 2000 (as amended) ('the Planning Acts'), and the Planning and Development Regulations 2001 as amended ('the Planning Regulations').

Under Section 177U (1) of the Planning Acts, a screening for AA of the Proposed Development shall be carried out by the competent authority (in this case, An Bord Pleanála) to assess in view of best scientific knowledge, if that Proposed Development, individually or in combination with other plans or projects, is likely to have a significant effect(s) on any European sites.

Under Section 177U (5) of the Planning Acts, the competent authority shall determine that an AA of a Proposed Development is required if it cannot be excluded, on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site(s).

AA is the process provided for under Article 6 (3) of the Habitats Directive to determine whether a project or plan could 'adversely affect the integrity' of any European sites, either alone or in combination with other plans or projects, in light of the conservation objectives of the European sites in question.

Section 177T(1) and (2) provide that a NIS is 'a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a Proposed Development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites' and specifies that it 'shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites'. The Court of Justice of the European Union (CJEU) has made a number of rulings in relation to Appropriate Assessment, regarding when it is required, its purpose and the standards it should meet. Two of the key rulings include, Case C-127/02 Waddenzee where the CJEU found that 'Any plan or project not directly connected with or necessary to the management of the site is to be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects' and that the plan or project may only be authorised 'where no reasonable scientific doubt remains as to the absence of such effects', and Case C-258/11 where the CJEU found that '[The Appropriate Assessment] cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned'.

In this report, consideration also has been given to the evolution in interpretation and application of directives and national legislation arising from recent case-law studies of the European and Irish courts, in respect of Article 6 of the Habitats Directive.

2 METHODOLOGY

2.1 Guidance and Approach

This NIS has been prepared having regard to the following documents.

European Commission Guidance:

- *Guidance document on assessment of plans and projects in relation to Natura 2000 sites: a summary*, (European Commission, 2022)
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2001)
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* ((European Commission, 2019)
- *Nature and Biodiversity Cases – Ruling of the European Court of Justice* (European Commission 2006)
- *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 European Commission (European Commission, January 2007).
- *Article 6 of the Habitats Directive – Rulings of the European Court of Justice* (European Commission Final Draft September 2014

National Guidance:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision);
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPWS 1/10 & PSSP 2/10 (NPWS, 2010)
- *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal* (Chartered Institute of Ecology and Environmental Management, 2019)
- *Guidelines on the Information to be contained in Environmental Impact Assessment Reports* (EPA, August 2017)

The following documents were referenced during the desk-top study to inform the Appropriate Assessment and the baseline ecology information:

- Online data available on European sites and habitats/species as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie, including conservation objectives documents
- Online data available on protected species as held by the National Biodiversity Data Centre (NBDC) from www.biodiversityireland.ie, specifically related to the records recorded within the 1 km grid square (ITM) – G7135. Results found no records of any species for which the Lough Gill SAC is designated within the project site or surrounding 1 km environs[1].
- Birds of Conservation Concern in Ireland (Gilbert et al, 2021), available at https://birdwatchireland.ie/birds-of-conservation-concern-in-ireland/
- Information on the surface water network and surface water quality in the area available from www.epa.ie
- Information on soils, geology and hydrogeology in the area available from the Geological Survey Ireland (GSI) online Spatial Resources service. Available from https://www.gsi.ie/en-ie/data-and-maps/Pages/Groundwater.aspx
- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie
- GeoHive online mapping (https://geohive.ie/index.html)
- Information on the proposed walking trail supplied by Coillte and Sligo Co Co.
- Sligo and Environs Development Plan 2010-2016
- Sligo County Development Plan 2017-2023

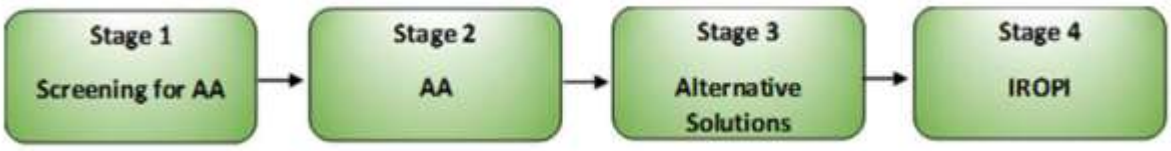
[1] www.biodiversity.ie accessed 10th September 202

- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes' (NRA, 2005);
- CIRIA C648 Control of Water Pollution from Linear Construction Projects: Technical Guide (Murnane et al., 2006);
- CIRIA C649 Control of Water Pollution from Linear Construction Projects: Site Guide (Murnane et al., 2006);
- 'Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors' (CIRIA, 2001);
- IFI Guidelines on Protection of Fisheries during Construction Works in and adjacent to Waters" (IFI, 2016);
- UK Environment Agency: • PPG5 Pollution Prevention Guidelines Works and Maintenance in / or near Water; PPG21 Incident Response Planning; PPG22 Dealing with Spills.

2.2 Appropriate Assessment Process

The Department of the Environment Heritage and Local Government Guidelines (DELHG, 2009), outlines the European Commission's methodological guidance (EC, 2002). This guidance promotes a four-stage process in completing an AA. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required. Throughout the process, the precautionary principle must be applied, so that any uncertainties do not result in adverse impacts on a site. These guidance documents identify a staged approach to conducting an AA, as shown in Figure 2.1:

Figure 2-1 The Appropriate Assessment Process (from: Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities, DEHLG, 2009)



Stage 1: Screening – Initial screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):

- whether a plan or project is directly connected to or necessary for the management of the site, and
- whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its conservation objectives.

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

Stage 2: Appropriate Assessment - This stage requires a more in-depth evaluation of the plan or project, and the potential direct and indirect impacts of them on the integrity and interest features of the European designated site(s), alone and in-combination with other plans and projects, taking into account the site's structure, function and conservation objectives. Where required, mitigation or avoidance measures will be suggested.
The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where mitigation cannot be achieved, then alternative solutions will need to be considered (i.e. the process proceeds to Stage 3).

Stage 3: Alternative Solutions - Where adverse impacts on the integrity of Natura 2000 sites are identified, and mitigation cannot be satisfactorily implemented, alternative ways of achieving the

objectives of the plan or project that avoid adverse impacts need to be considered. If none can be found, the process proceeds to Stage 4.

Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)/Derogation - This stage is required where an alternative solution is not available. In this situation, the project can only proceed for Imperative Reasons of Overriding Public Interest (IROPI), despite the plan or project resulting in adverse effects on European Site(s). This stage provides for an assessment of compensation measures to maintain or enhance the overall coherence of the Natura 2000 network. The Commission must be informed of the compensatory measures. Compensatory measures must be practical, implementable, likely to succeed, proportionate and enforceable, and they must be approved by the Minister.

Source-Pathway-Receptor Model: The assessment of potential effects on European sites is conducted following a standard source pathway-receptor model , where, in order for an effect to be established all three elements of this mechanism must be in place. The absence or removal of one of the elements of the model is sufficient. to conclude that a potential effect is not of any relevance or significance. In the interest of this report, receptors are the ecological features that are known to be utilised by the qualifying interests or special conservation interests of a European site. A source is any identifiable element of the proposed project provision that is known to interact with ecological processes. The pathways are any connections or links between the source and the receptor. This report provides information on whether direct, indirect and cumulative adverse effects could arise from the proposed walking trail.

2.3 Statement of Competence

The assessment was carried out by Olivia Maguire of AONA Environmental Consulting Ltd., who has considerable experience in environmental consultancy and biodiversity conservation, including undertaking numerous Article 6 assessments under the EU Habitats Directive. Olivia is a member of the Institute of Ecology and Environmental Management and operates in accordance with their code of professional conduct.

2.4 Consultations

Coillte, CST Group Chartered Consulting Engineers and Sligo Co. Co. engineers have discussed the project in detail and have walked the proposed route and agreed on a trail design. In early November both Ger O Donnell the District Conservation Officer (01/11/2023) at National Parks and Wildlife Service and the Development Applications Unit (DAU) (03/11/2023) were consulted, but no comment to date has been received (09/11/2023). Sligo County Council had previously consulted with NPWS (Tim Broderick) in 2021/2022 on an early proposal for a walking trail at Hazelwood, but a different route was being considered at this stage.

3 PROJECT DESCRIPTION AND RECEIVING ENVIRONMENT

3.1 Description of Proposed Development

The project includes the provision of a walking trail to connect to existing walking infrastructure. Sligo County Council aim to provide a walking trail that is accessible and safe for all users. The design will deliver a walking route partly along existing trails/forest roads with rerouting in other areas.

The recreational trail, known locally as Lady Anne Walk is ultimately anticipated to run from Hazelwood to Sligo town. This assessment is looking at a section which extends from the existing Demesne loop trail at Hazelwood, along an existing trackway due north, onto the Hazelwood Road adjacent to McHale's Sawmills. The overarching objectives of the project are to encourage more use of recreational walkways and to provide a more accessible walkway along a route currently used by walkers in the area.

The project includes the provision of a small footbridge and a 3 metre wide walking trail. The trail footprint is for the main on existing trail or on Coillte haul roads that have become overgrown over the years. The proposed works are around the same level as the existing ground. It is envisaged that minimal further earth moving activities will be required for the completion of this development. No trees will be removed as per instructions from Coillte. The extent of the proposed works is shown in Figure 3-1 and outlined below.

Figure 3-1 Proposed Walking Trail Route

The anticipated works to facilitate the walking trail will involve:

- Excavation of acceptable/ unacceptable material and importation of subbase along the project route: The trail will be scrapped clear with a 4-tonne 360 excavator, with the scrapped material side cast and levelled along the trail route, with care taken not to cause any standing water.
- Construction of gravel trail: The material used will be geotextile, which will be laid onto cleared existing trail with two 150mm layers of Cl 804 stone laid and compacted. A further layer of 50mm Quarry dust may be used on top of the trail. Quarry dust is used as a permeable top dressing or blinding layer for surfacing of paths.
- Installation of timber footbridge and foundations: No in stream works will take place. At the first crossing point shown in Figure 3-1 above, a structure will be placed spanning the dry open drain comprising a timber footbridge with handrails to aid safe crossing. This bridge spanning the open drain will rest on foundations far enough back from the edge of

the drain so as to not weaken the sides and cause any material to collapse into the drain. This will be an absolute minimum of one metre from the top of the bank. Material arising from excavation of foundations for the footbridge will be rearranged on site where possible. Concrete foundations for the footbridge will be poured(as stated already an absolute minimum of one metre from the top of the banks to ensure nothing falls into the dry open drain) and the bridge lifted and fixed into place.

- Signage: Signage and trail guidance providing trail users with vital information thus raising awareness and consequently improving its level of protection.

3.1.1 Construction Methodology

It is envisaged that construction of the walking trail will be undertaken in a single phase and will be short in duration, requiring approximately 6 weeks along the entire length. The Contractor will prepare a construction programme for the construction phase. An outline construction Environmental Management Plan (CEMP) undertaken by CST Group; Sligo is provided in Appendix I. The purpose of this Outline Construction Environmental Management Plan (CEMP) document is to briefly outline the general activities required for the implementation of the proposed walking trail at Hazelwood, Sligo and associated works. Once appointed, it will be the responsibility of the Main Contractor to prepare and submit a detailed CEMP for the authority's approval. This CEMP will be a live document that will be updated throughout the project lifecycle by the Main Contractor as required.

The machinery required is small in scale, by necessity to allow access along the existing pathways. The following is a list of plant, tools and equipment that will be required on site:

- 4-tonne 360 Degree excavator
- 3-tonne tracked dumpers
- 120 Hamm 3-tonne roller
- Vans, Hand Tools, Electrical Tools

There are no ongoing maintenance or management proposals for the trail. Once installed the development will be a long-term feature within the woodland and will facilitate sustainable pedestrian traffic along the trail. Any maintenance work will follow the route of the trail and will comprise works of a smaller scale than those proposed for the construction phase.

3.2 Receiving Environment

3.2.1 Survey Methods

A desktop study was undertaken in advance of the field study walkovers to identify the ecological habitats present within the proposed walking trail footprint and Zone of Influence. The desktop study and appraisal of the habitats within the study area was undertaken using the sources of information outlined above in section 2.1.

Data was collected through a series of site walkover surveys conducted in May (29th May) and September 2023 (September 5th, 10th and 12th). The aim of these surveys was to characterise the ecological constraints and extent/quality of the qualifying interests of the Lough Gill SAC within the route options corridor. This data covered the trail footprint and surrounding area. A habitat survey of the study area was conducted following standard guidelines set out in 'Best practice guidance for habitat surveys and mapping' developed by the Heritage Council of Ireland. Habitats were classified using habitat descriptions and codes published by the Heritage Council in Fossitts 'A Guide to Habitat Types in Ireland. Plant species nomenclature follows Rose's 'The Wild Flower Key: How to identify wild flowers, trees and shrubs in Britain and Ireland'. A list of the dominant and notable plant species was taken for each habitat type. Particular emphasis was given to the possible occurrence of rare or legally protected plant species (as listed in Flora Protection Order 1999) or Red-listed plant species (Curtis & McGough 1985, Wyse Jackson et al. 2016).

Observations were made for fauna species present or likely to occur on site. Emphasis was placed on mammals and birds, and especially for species listed in the respective Red lists, namely Colhoun and Cummins (2013), and Marnell et al. (2009). For mammals, searches were focused on signs of their presence, such as tracks, feeding marks and droppings, as well as direct observations. For otters, the survey was modified from the Chanin & Smith (2003) 'rapid assessment' method and searches for otters extended approximately 100m from the proposed route. For bats, the main focus was on evaluation of suitable habitats to support roosting bats; however, an ecological assessment of habitat suitability was undertaken throughout the site. The assessment process undertaken for bats followed the BCT Guidelines. Bird species were recorded by sight and sound during all field visits. During all surveys, particular attention was given to assessing the presence of rare or protected species. Each species identified was assessed in term of the EU Habitat Directive (92/43/EEC), Bird Directive (2009/147/EC), the Wildlife Act (1976), the Wildlife Amendment Act (2000) and the Red Data Lists for threatened and protected species, published on the NPWS website (www.npws.ie).

The areas where the proposed walking trail route comes within 200m of watercourses or ditches which have hydrological connectivity to watercourses, and at each of the proposed trail crossing points, were examined in detail.

3.2.2 Limitations

It is considered that there are no significant limitations to the present assessment of the ecological importance of the site.

3.2.3 Habitats

The Hazelwood Demesne is located on a peninsula between Lough Gill (to the south and east) and the Garvogue River (adjacent to its western boundary). The main property south of the proposed development (Hazelwood House) is a three-storey 18th century Palladian-style residence. In the 1960s, a large factory was built to the south of this property. The residence and factory have been used for a range of public services and private industry, but all activity ceased in 2006. In May 2016, planning permission for the development of a whiskey distillery and visitor centre was granted. Hazelwood House and the former factory are surrounded by a large expanse of ancient / long established broadleaved woodland, which extends along the valley of the Garvogue River to the north-west of the site. With the exception of the Hazelwood Demesne, the rest of the peninsula is owned by Coillte and is managed for public amenity and nature conservation.

A large portion of Hazelwood is designated as Annex 1 Alluvial Priority habitat under the EU Habitats Directive. Coillte Nature has been undertaking a major project to remove invasive rhododendron, laurel and dogwood species from 30 hectares of the alluvial woodlands, close to the area already cleared under the earlier EU LIFE Project. This will improve the biodiversity of the site by providing space and light for lots of different species of ground flora to grow and allow the woodland to regenerate naturally. Coillte also improved the habitat by felling some non-native conifers (e.g. norway spruce and western hemlock) and non-native broadleaves (beech, horse chestnut and sycamore) that have spread into the area, using a Continuous Cover Forestry (CCF) approach. In some cases, native trees will grow naturally in the gaps. Where they do not, Coillte will plant them and protect them from animals that might eat them. This will make the forest multi-generational, improve its structural diversity and enhance its resilience to climate change.

The proposed walking trail commences along the existing pathway along the original entrance avenue to Hazlewood House. This will connect with a recently constructed trail north of the Coillte maintenance sheds which links onto Hazelwood Avenue and a recently refurbished trail to the south proceeding to Hazelwood House.

The main habitats recorded are listed in Table 3-1 below and shown in Figure 3-2. Protected habitats and species recorded during the site visit included the designated SAC habitat features: Otter.

Table 3.1: Habitats recorded along the proposed route running south to north

Habitat	Habitat Code
Drainage ditches	FW4
Conifer Plantation	WD4
Recently-felled woodland	WS5
Immature woodland	WS2
Mixed Broadleaved Woodland	WD1
Wet pedunculate oak-ash woodland	WN4
Mixed Broadleaved/Conifer Woodland	WD2
Wet Grassland	GS4
Depositing/lowland rivers	FW2
Drainage Ditches	FW4
Stone walls and other stonework	BL1
Treeline/ Hedgerow	WL2/WL1
Buildings and artificial surfaces	BL3
Agricultural Grassland	GA1

Conifer Plantation WD4
Sitka Spruce (*Picea sitchensis*) plantation planted in 1996. A low lying plantation west of the proposed trail and north of the proposed trail as shown in Figure 3-2. The parcel north of the trail is within Lough Gill SAC designated boundary.

This woodland comprised of Sitka Spruce with frequent Rhododendron and Cherry Laurel (*Prunus laurocerasus*) throughout. Very little ground flora present, with occasional Male Fern (*Dryopteris filix-mas*), Harts-tongue fern (*Asplenium scolopendrium*) and Sycamore (*Acer pseudoplatanus*) seedlings. Coillte has planned works for clearfelling and reforestation, for biodiversity enhancement. (Coillte: S002-FL0028 (1) and (2). (A badger sett was noted here, see below for further details). **NOTE**: It was observed on the last day of field survey (12/09/2023), these works had commenced.

Immature woodland WS2
This area of woodland east of the proposed trail has been felled in the last few years and has since developed into immature woodland, comprising Birch (*Betula pubescens*) and Alder (*Alnus glutinosa*) with occasional Ash (*Fraxinus excelsior*), Willow (*Salix* spp.), Scots Pine (*Pinus sylvestris*) and Cherry Laurel.

Scrub WS1
The trail emerges from the conifer plantation and crosses over a dry drainage ditch, c.2m wide. A proposed footbridge will be installed over this drainage ditch. The path will then proceed through an ESB 110kV wayleave. Vegetation here comprises Alder, Willow, and Hazel (*Corylus avellana*) scrub with frequent grasses and mosses, with Rosebay Willowherb (*Chamaenerion angustifolium*), Bramble (*Rubus fruticosus* agg.), Meadowsweet (*Filipendula ulmaria*), and Wood-rush (*Luzula sylvatica*).

Recently-felled woodland WS5
A larger expanse of recently felled conifer plantation, planted in the 1950s is located south of the proposed trail which is currently a Coillte haul road. This area comprised of Norway Spruce (*Picea abies*) and Lawson Cypress (*Chamaecyparis lawsoniana*) with frequent Scots Pine and abundant stands of the invasive species; Cherry Laurel and Rhododendron. The systematic removal of these invasive species has also taken place. Occasional broadleaved trees comprising Birch, Ash, Sycamore, Willow, Alder and Holly (*Ilex aquifolium*) with Scots Pine is noted. This area lies within Lough Gill SAC and is adjoined by alluvial woodland to the west and south.

Mixed Broadleaved Woodland WD1
Proceeding west is an area of mixed broadleaved woodland, comprising Birch, Ash, Sycamore and Beech with an understorey dominated by Laurel and Rhododendron.

Wet pedunculate oak-ash woodland WN4
This woodland is located immediately west and south of the proposed trail southwest of Mc Hales Sawmills. It corresponds to the priority habitat, '*alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-padion, Alnion incanae, Salicion albae) (91E0)'. This type of woodland is associated with areas that are flooded or waterlogged in winter but which dry out in summer. It occurs on periodically-flooded alluvial sites that are well above the limits of regular inundation, and on drumlins and other sites with heavy, poorly-drained clay soils that are subject to waterlogging. This woodland is dominated with Ash, Oak, Alder Hazel, Hawthorn (*Crataegus monogyna*), Holly and willows. The ground flora typically comprises Meadowsweet with Primrose (*Primula vulgaris*), Enchanter's-nightshade (*Circaea lutetiana*), Ivy (*Hedera helix*) and Bramble.

A first order stream runs through this area which flows into the Copper River which in turn flows in a north-westerly direction through the north of Sligo town and empties in Sligo Bay c. 2.5km downstream of the project area (Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC)

Mixed Broadleaved/Conifer Woodland WD2
This woodland comprises a range of woodland and scrub habitats which have developed on relatively flat, alluvial soils. A wide variety of tree species occur including Willow, Alder, Ash Pedunculate Oak (*Quercus robur*), Beech (*Fagus sylvatica*), Sycamore and Norway spruce. The invasive shrub species Rhododendron and Cherry Laurel are locally frequent and removal of these species is planned over the next few years. Plans for Coillte to thin this woodland are also underway. The area lies within the Lough Gill SAC and is adjoined by alluvial woodland to the south and west with agricultural grassland to the north and east. The proposed trail will run between this woodland and the alluvial woodland to the south and west. An area of wet grassland (**GS4**) is also present to the west of the trail immediately north of the priority alluvial woodland.

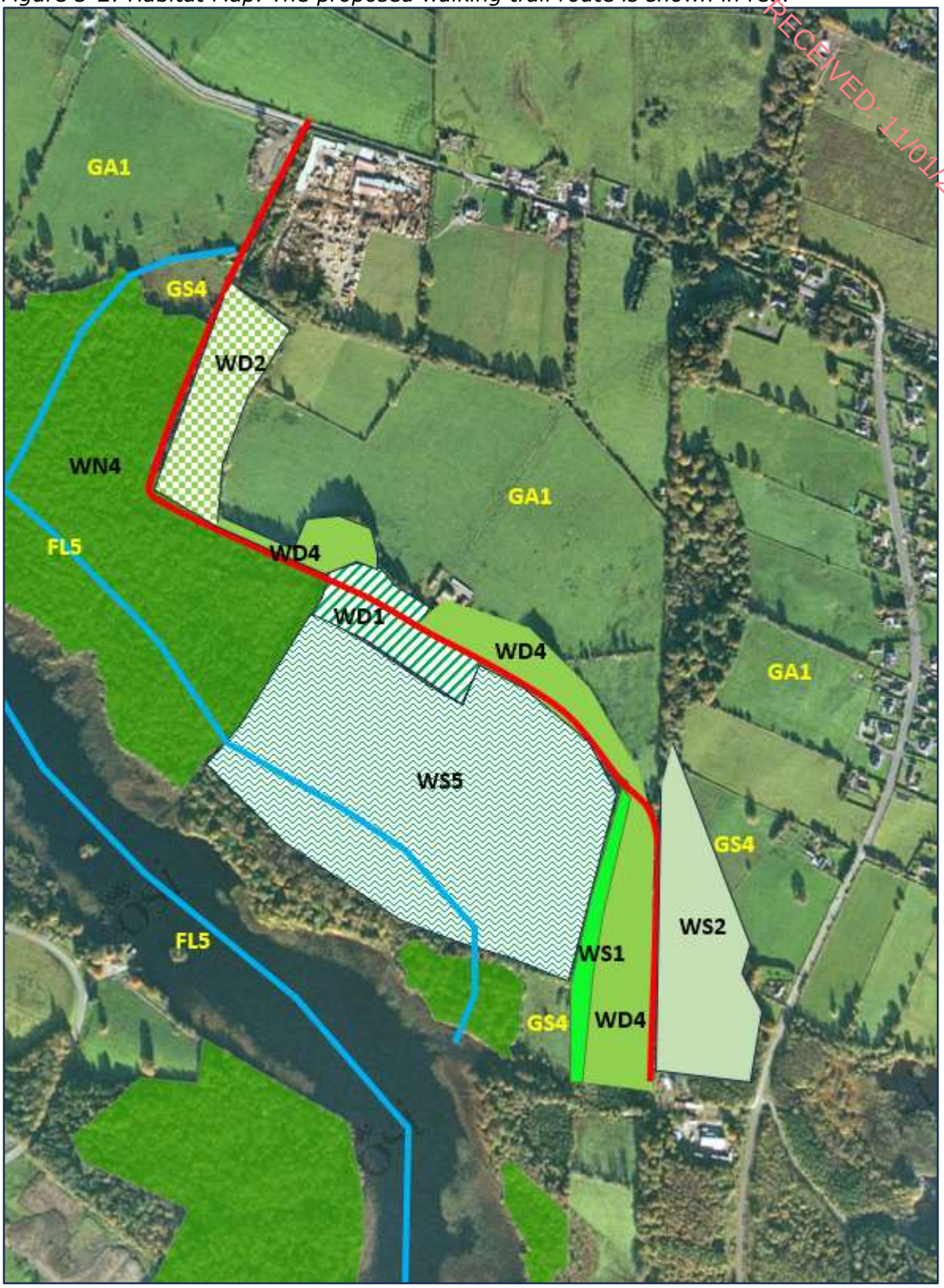
Depositing/lowland rivers FW2
The receiving waters in the vicinity of the proposed trail are the Copper River which flows in a north-westerly direction, through the north of Sligo town and empties into Sligo bay, downstream of the project area. The Garavogue river lies to the west and south of the proposed trail. These streams are lined by trees providing bankside habitats for aquatic (Crayfish, invertebrate) and terrestrial species (e,g: birds) alike.

Drainage Ditches FW4
Drainage ditches and ponded areas typically occurred along woodland boundaries and some may have been modified natural channel which feed into streams. Connectivity is therefore present, and all ditches will need to be considered in this context when undertaking works.

Stone walls and other stonework BL1
The northern section of the proposed trail is fringed by stone wall with Mc Hales Sawmills located to the east (**BL3**) and improved agricultural grassland to the west (**GA1**)

Treeline/ Hedgerow WL2/WL1
Treelines and hedgerows were recorded throughout the vicinity of the proposed walking trail, usually at the edge of woodlands, fringing the existing trail and along the stone wall west of Mc Hales Sawmills. Species recorded were Oak, Ash, Willow, Sycamore, Alder, Hawthorn, Blackthorn, Holly, Scots Pine, Lawson Cypress and Bramble.

Figure 3-2: Habitat Map. The proposed walking trail route is shown in red.



3.2.4 Species

Otter

Otter are listed under Annex IV of the Habitats Directive and are therefore legally protected, both within and outside of the Natura 2000 network. The presence of Otter has been identified by a

possible Otter Holt and Couch and adjacent Otter trackway along the watercourse in the dense Alluvial woodland c.86m west of the trail near McHales Sawmill as shown in Figure 3-3. This watercourse flows into the Copper River which flows into Sligo Bay. An Otter spraint was detected on a log under a footbridge, approximately 210m west of the proposed walking trail as shown in Figure 3-4. This watercourse flows directly from the Garavogue River to the Copper River. Signs of otter activity noted were within close proximity of larger drainage channels in the woodland. Given the suitability of habitat, Otters are likely to travel through the wet woodland occasionally to frequently.

Figure 3-3: Possible Otter couches, holt and trackway along the watercourse

Figure 3-4: Otter Spraint ~ 210m west of the proposed walking trail

Plates

Possible Holt

Trackway

Spraint

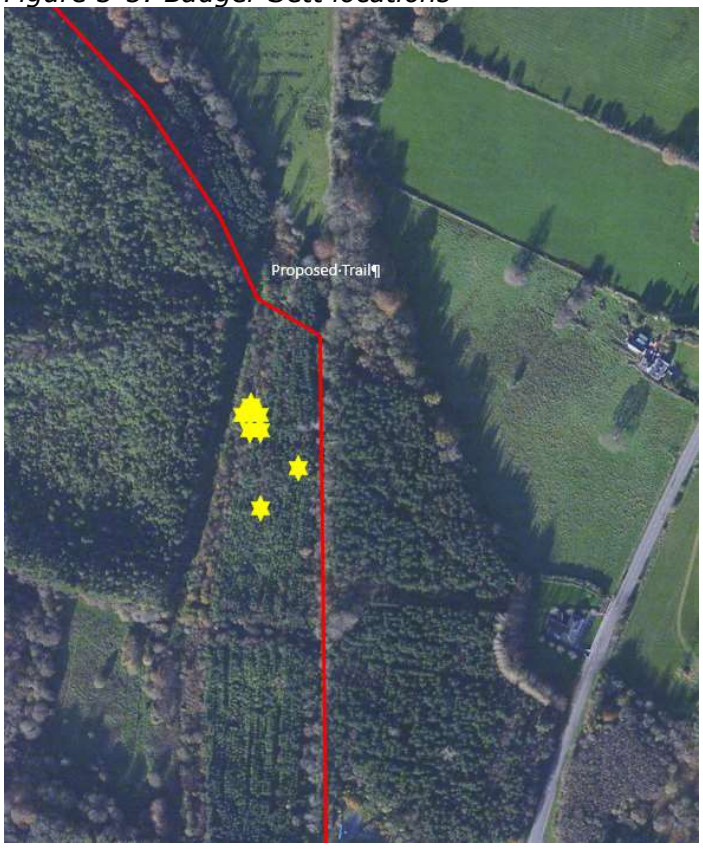
Badger

Badgers and their setts are protected under the provisions of the Wildlife Act, 1976, and the Wildlife Amendment Act, 2000. It is an offence to intentionally kill or injure a protected species or to wilfully interfere with or destroy the breeding site or resting place of a protected wild animal.

Badger habitats are generally found in areas of deciduous or mixed woodlands which are near farmland or open ground. They have made good use of hedgerow systems in Ireland and have also adapted to life in parks and large gardens. They will establish their dens known as setts in any area where the soil is dry and allows for easy excavation.

The presence of Badger has been identified by a number of subsidiary/outlying setts in WD4 Conifer plantation west of the proposed walking trail as shown in Figure 3-5. They appear to be occasionally used, possibly in the past year. **NOTE**: It was observed during field survey on the 12/09/2023 that felling operations had commenced and some of these badger setts were no longer evident on the ground. Those setts fringing the plantation were still visible.

Figure 3-5: Badger Sett locations



Plates: Bader setts



Birds
A range of common bird species were noted during the field survey including blackbird (*Turdus Merula)*, hooded crow (*Corvus cornix*), robin (Erithacus rubecula), woodpigeon (*Columba palumbus*), song thrush (*Turdusphilomelos*), chaffinch (Fingilla coelebs), song thrush (Turdus philomelos), wren (Troglodytes troglodytes), blackcap (*Sylvia atricapilla*) and goldcrest (*Regulus regulus*) all of which were noted to fly over the site.

Bats
The National Biodiversity Data Centre records indicate that Lesser Noctule, Natterer's, Daubentons, Brown Long-eared, Soprano and Pipistrelle Bats have all been recorded in this area (1 km grid square (ITM) – G7135 in 2008). During field survey trees adjacent to the trail were assessed for roost suitability. Trees within the footprint of the rail and surrounding area were identified as having negligible bat roost potential. Most of the area has been felled and bats have become accustomed to surrounding habitat. Where felling has taken place, trees and shrubs along the trail has been retained to maintain suitable feeding and commuting habitat for bats. No trees will be removed to make way for the proposed walking trail.

Other faunal records
The Red squirrel (*Sciurus vulgaris*) is protected under the Irish Wildlife Act 1976 and the Irish Wildlife Amendment Act 2000, meaning it is illegal to intentionally injure, hunt or kill the animal. It is also listed under Annex III of the Bern Convention for Conservation of European Wildlife and Natural Habitats.

As a result of the pine martin (*Martes martes*), historical decline during the last century, the species is protected under both national and international legislation: EU Habitats Directive [92/43/EEC] Annex V; Wildlife Act, 1976; Wildlife (Amendment) Act 2000.

The National Biodiversity Data Centre records indicate that Pine Martin and Red squirrel were recorded in the woodland during surveys undertaken in 2013 and 2015 respectively. No evidence of either species was detected on the day of survey, but these species are believed to be common and likely to be present.

3.2.5 Non-Native Species

Large stands of Rhododendron and laurel are present throughout the site. Coillte Nature has been undertaking a major project to remove invasive Rhododendron, Laurel and Dogwood (*Cornus* sp.) species from 30 hectares of the alluvial woodlands, close to the area already cleared under the earlier EU LIFE Project. This will improve the biodiversity of the site by providing space and light for lots of different species of ground flora to grow and allow the woodland to regenerate naturally. Coillte also improved the habitat by felling some non-native conifers (e.g. Norway Spruce and Western Hemlock) and non-native broadleaves (Beech, Horse Chestnut And Sycamore) that have spread into the area, using a Continuous Cover Forestry (CCF) approach. In some cases, native

trees will grow naturally in the gaps. Where they do not, Coillte will plant them and protect them from animals that might eat them. This will make the forest multi-generational, improve its structural diversity and enhance its resilience to climate change.

3.2.6 Hydrology

The proposed walking trail is located in the Sligo Bay and Drowse catchment area and the Bonet_SC_030 sub catchment. This area includes the Lough Gill SAC which includes in particular the Copper River and the Garavogue rivers, which run in close proximity to the proposed walking trail footprint. From a WFD perspective it is necessary that the works do not affect the potential for these rivers to attain 'good' or higher WFD status. The Garavogue River was identified as 'at Risk' of not achieving good status. Recent Q value monitoring scores indicate 3 (poor) for water quality at two stations on the Garavogue river. Figure 3-6 below shows the location of the monitoring station 'Monitoring Station D/S Hazelwood/N. of Cleveragh', indicated by the green dot in the figure.

Figure 3-6: Location of monitoring station on the Garavogue River Monitoring Station D/S Hazelwood/N. of Cleveragh

Figure 3-7 shows the latest monitoring results for 2021 and historically since 1971.

Figure 3-7: Monitoring Results

GARAVOGUE **35G01**

Date Surveyed (last survey year only): 21/07/21

Biological Quality Rating (Q Values)

Station Code	1971	1973	1977	1980	1986	1990	1994	1997	2000	2003	2006	2009	2012	2015	2018	2021
RS35G010100					4	4										
RS35G010200	5	4	4	4	4	4	4	4	4	4-5	4-5	4	4	3	3	3

Most Recent Assessment:

The site sampled on the Garavogue river remained in poor ecological condition in 2021 and the site was dominated by Gammarus, one of the tolerant taxa.

Station Details

Station Code	Station Location	WFD Waterbody Code	Easting	Northing	Local Authority
RS35G010100	D/s Hazelwood/N. of Cleveragh	IE_WE_35G010200	171113	335211	Sligo County Council
RS35G010200	Sligo: The Mall	IE_WE_35G010200	169519	335977	Sligo County Council

3.2.7 Hydrogeology

The Groundwater Body (GWB) management unit here is known as Carrowmore East. The GWB occupies an area around L. Gill. The aquifer in the region here is a regionally important karstified aquifer dominated by conduit flow with moderate groundwater vulnerability within the study area. The underlying bedrock is a dark, fine-grained, cherty, limestone and subsoils are shale / sandstone till, and soils are acid brown earths / brown podzolics (deep, well-drained, derived from acidic materials). Considering the relatively flat topography of the proposed site and the high permeability of the bedrock and soils, it is expected that most rainwater would percolate to ground rather than flowing over land. However, during periods of high rainfall some material may flow over land in a westerly direction towards the Copper River and Garvogue River. These factors will thus be considered within the Stage 2 assessment to assess possible deleterious effects on nearby Natura 2000 sites.

4 SCREENING FOR APPROPRIATE ASSESSMENT

4.1 Introduction

This stage of the process identifies any potential significant affects to European sites from a project or plan, either alone or in combination with other projects or plans. A series of questions are asked in order to determine:

- Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of a European site.
- Whether the project will have a potentially significant effect on a European site, either alone or in combination with other projects or plans, in view of the site's conservation objectives or if residual uncertainty exists regarding potential impacts.

An important element of the AA process is the identification of the "'conservation objectives", "Qualifying Interests" (QIs) and/ or "Special Conservation Interests" (SCIs) of European sites requiring assessment. QIs are the habitat features and species listed in Annexes I and II of the Habitats Directive for which each European Site has been designated and afforded protection. SCIs are wetland habitats and bird species listed within Annexes I and II of the Birds Directive. It is also vital that the threats to the ecological / environmental conditions that are required to support QIs and SCIs are considered as part of the assessment.

The following NPWS Generic Conservation Objectives have been considered in the screening:

- For SACs, to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected; and

- For SPAs, to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

Where available, Site-Specific Conservation Objectives (SSCOs) designed to define favourable conservation status for a particular habitat or species at that site have been considered.

Favourable conservation status of a habitat is achieved when: its natural range, and area it covers within that range, are stable or increasing; the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; 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; 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.

4.2 European Sites within the Zone of Influence

The Department of the Environment (2009) Guidance on AA recommends a 15 km buffer zone be considered. Although sites beyond this buffer zone would be considered if relevant, a review of all sites within this zone has allowed a determination to be made that in the absence of significant hydrological links the characteristics of the proposed project will not impose effects beyond the 15 km buffer.

Connectivity between the sites and the works area was examined within the screening study. A standard source-receptor-pathway conceptual model was used to identify 'relevant' European sites (i.e. those which could be potentially affected) as explained in section 2.2 above.

The identification of source-pathway-receptor connection(s) between the proposed walking trail and European sites essentially is the process of identifying which European sites are within the Zone of Influence (ZoI) of the proposed walking trail, and therefore potentially at risk of significant effects. The ZoI is defined as the area within which the proposed walking trail could affect the receiving environment such that it could potentially have significant effects on the QI habitats or QI/SCI species of a European site, or on the achievement of their conservation objectives (as defined in CIEEM, 2018).

Sites are screened out based on one or a combination of the following criteria:

- The existence of potential for pathways for significant effects, such as hydrological links, proposed project proposals and the site to be screened;
- The distance of the relevant site from the proposed project boundary; and
- The existence of a link between identified threats or vulnerabilities at a site to potential impacts that may arise from the proposed project.

The 12 European sites located within 15km of the proposed works are outlined in Table 4-1

Table 4-1: Screening of European Sites

Site Name (Code)	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects
Lough Gill SAC (001976)	0Km	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] 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]	The proposed walking trail lies within the SAC. There is the possible loss of very small areas of priority alluvial wet woodland habitat to make way for the 3m wide pathway. This is envisaged to be minimal, as the trail is currently c.3m wide and overgrown. There are hydrological pathways for effects, and pathways for disturbance effects to QI species. Therefore, mitigation measures are required.	Yes
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC (000627)	1.9 km	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]	There are hydrological pathways for effects, and pathways for disturbance effects to Lamprey species. Therefore, mitigation measures are required.	Yes
Cummeen Strand SPA (004035)	2.2 km	Light-bellied Brent Goose (Branta bernicla hrota) [A046] Oystercatcher (Haematopus ostralegus) [A130] Redshank (Tringa totanus) [A162]	The hydrological pathway is through the marine environment and there are	No

		Wetland and Waterbirds [A999]	considerable dilution effects. Therefore, mitigation measures are not required.	
Sligo/Leitrim Uplands SPA (004187)	4.6 km	Peregrine falcon (Falco peregrinus) [A103], Red-billed chough (Pyrrhocorax pyrrhocorax) [A346]	The SPA is sensitive to hydrological interaction and disturbance effect to the SCI species as well as direct land use management. There are no pathways for effects to the land use management at the SPA, given the distances between the SPA and the proposed walking trail, there will be no noise pollution or disturbance effects at this distance. Therefore, no further consideration is required.	
Drumcliff Bay SPA (004013)	6.3 km	Sanderling (Calidris alba) [A144] Bar-tailed Godwit (Limosa lapponica) [A157] Wetland and Waterbirds [A999]	There are no pathways for effects to the land use management at the SPA, given the distances between the SPA and the proposed walking trail there will be no noise pollution or disturbance effects at this distance. The hydrological pathway is through the marine environment and there are considerable dilution effects. There are no effects identified to the European site. Therefore, no further consideration is required	No
Union Wood SAC (000638)	6.5 km	Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]	The SAC is sensitive to direct land use management for the terrestrial habitats. There are no pathways for effects identified, therefore, no further consideration is required.	No
Ballysadare Bay SAC (000622)	6.9 km	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]	There are no pathways for effects from the proposed walking trail to the terrestrial habitats and the hydrological pathway introduces significant dilution effects. This combined with the small-scale nature of the potential sources for effects, ensure there will be no impact to the European site. Therefore, no further consideration is required.	No
Ballysadare Bay SPA(004129)	6.9 km	light-bellied Brent Goose (Branta bernicla hrota) [A046] Grey Plover (Pluvialis squatarola) [A141]	The SPA is sensitive to hydrological interaction and disturbance effect to the SCI species as	No

		Dunlin (Calidris alpina) [A149] Bar-tailed Godwit (Limosa lapponica) [A157] Redshank (Tringa totanus) [A162] Wetland and Waterbirds [A999]	well as direct land use management. There are no pathways for effects to the land use management at the SPA, given the distances between the SPA and the proposed walking trail, there will be no noise pollution or disturbance effects at this distance. The hydrological pathway is through the marine environment and there is considerable dilution effects. There are no effects identified to the European site. Therefore, no further consideration is required.	
Unshin River SAC (001898)	7.4 km	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355]	The SAC is sensitive to hydrological interactions, effecting trophic structure as well as vulnerable species; as well as direct land use management for the terrestrial habitats. There are no pathways for effects from the proposed walking trail to the terrestrial habitats and there is no hydrological connection between the two sites. Therefore, no further consideration is required	No
Ben Bulben, Gleniff and Glenade Complex SAC (000623)	~7 km	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Northern Atlantic wet heaths with Erica tetralix [4010] European dry heaths [4030] Alpine and Boreal heaths [4060] 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] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Blanket bogs (* if active bog) [7130] Transition mires and quaking bogs [7140]	The SAC is sensitive to hydrological interactions, effecting trophic structure as well as vulnerable species; as well as direct land use management for the terrestrial habitats. There are no pathways for effects from the proposed walking trail to the terrestrial habitats and there is no hydrological connection between the two sites. Therefore, no further consideration is required	No

		Petrifying springs with tufa formation (Cratoneurion) [7220] Alkaline fens [7230] Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) [8110] Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii) [8120] Calcareous rocky slopes with chasmophytic vegetation [8210] Vertigo geyeri (Geyer's Whorl Snail) [1013] Lutra lutra (Otter) [1355]		
Ballintemple and Ballygilgan SPA (004234)	~7 km	Barnacle Goose (Branta leucopsis) [A045]	The SPA is sensitive to hydrological interaction and disturbance effect to the SCI species as well as direct land use management. There are no pathways for effects to the land use management at the SPA, given the distances between the SPA and the proposed walking trail. The hydrological pathway is through the marine environment and there is considerable dilution effects. Therefore, no further consideration is required.	No
Glenade Lough SAC (001919)	~14 km	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150] Austropotamobius pallipes (White-clawed Crayfish) [1092] Najas flexilis (Slender Naiad) [1833]	The SAC is sensitive to hydrological interactions, effecting trophic structure as well as vulnerable species. There is no hydrological connection between the two sites. Therefore, no further consideration is required	No
Streedagh Point Dunes SAC (001680)	~14 km	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] Vertigo angustior (Narrow-mouthed Whorl Snail) [1014]	The SAC is sensitive to hydrological interactions, effecting trophic structure as well as vulnerable species; as well as direct land use management for the terrestrial habitats. There are no pathways for effects from the proposed walking trail to the terrestrial habitats and the hydrological pathway introduces significant dilution effects. There will be no effects to the European site. Therefore, no further consideration is required.	No

4.3 Assessment of Connectivity

Connectivity between the sites and the works area was assessed and those sites deemed to be within the project ZoI and therefore at risk of potential impact as a result of the proposed development were defined.

The proposed development supports direct and indirect connectivity with the following European sites, which were then assessed in greater detail as part of the Screening exercise:

- Lough Gill SAC (Site Code: 001976);
- Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC (Site Code: 000627);

The remaining European sites as listed in Table 4-1 above, do not support connectivity with the proposed development and therefore, there is no potential for impact.

The footprint of the proposed walking trail is located within Lough Gill SAC and consequently supports both connectivity to this European Site. In addition, the proposed walking trail supports connectivity with Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC, being hydrologically connected via the Copper river and Garavogue River.

The following activities associated with the project construction phase that may impact European sites supporting direct and indirect connectivity are as follows:

- Clearance of the proposed walking trail footprint leading to exposure of soil and parent material and consequent run-off to adjoining and interconnected channels and watercourses providing connectivity to designated European sites;
- General construction related materials such as aggregates, hydrocarbons and bituminous materials being released from the proposed walking trail footprint entering the surrounding environment and the European sites within the project ZoI;
- The siting of installations (Footbridge) in or close to European Sites and their associated activities may have an impact on the qualifying habitats and species of the identified European sites, through disturbance or temporary displacement;

The proposed operational phase is unlikely to impact European sites. Potential impacts such as disturbance effects to SAC species of Qualifying Interest by trail users can be mitigated by best practice design, and where required, site specific mitigation.

4.4 Direct, Indirect or Secondary Impacts

4.4.1 Size and Scale

Given the nature and scale of the project and the proximity to the identified European sites and works taking place in the vicinity of a number of surface waters, the following impacts associated with size and scale may result in:

- Loss of habitat directly under trail footprint;
- Negative impacts to water quality of European sites supporting connectivity to the proposed works through run-off during the project construction phase; and
- Increased footfall in the area resulting in greater disturbance effects to species associated with European sites.

4.4.2 Land-take

The proposed walking trail will be for the main part located along the footprint of existing pathway, which lies within Lough Gill SAC for the majority of the proposed route. Here the existing trail is 3-5m wide so no habitat loss within the SAC will occur. Approximately 50m x 3m of land take within the conifer plantation and scrub will be lost to make way for the new section of trail. This area is outside the Lough Gill SAC boundary.

4.4.3 Distance from European Sites or key features of the site

The proposed walking trail lies within, adjacent to, or supports connectivity with two European sites within the proposed walking trail ZoI. Therefore, the proposed walking trail could potentially have significant impacts on European sites within the project ZoI in this respect.

4.4.4 Resource Requirements

The proposed walking trail will require aggregates during the construction phase and timber and concrete for the footbridge installation. Fuel will be consumed by construction equipment. This is small scale and it is not likely that the proposed trail will have a significant impact on European sites within the project ZoI in relation to resource requirements.

4.4.5 Emissions

There is potential for emissions associated with the proposed walking trail to affect two environmental receptors water and air. Emissions going to water could include sediment, silt and hydrocarbons associated with construction activities. The emission of unattenuated construction materials would impact the receiving watercourses causing potential indirect impacts to European sites in the absence of best practice construction measures.

It is not anticipated that the extent of such emissions to air will have a negative effect on the qualifying features of those European sites within the project ZoI.

4.4.6 Excavation Requirements

Topsoil stripping and shallow excavation works will be required along the footprint of the proposed walking trail. Excavation works will not be deep or extensive in any one area, but it is likely that all of the proposed walking trail footprint will support excavation works to some extent over a period of approximately 6 weeks. Excavations in proximity and adjacent to watercourses designated or supporting connectivity with European sites, could result in negative impacts as a result of run-off.

4.4.7 Transport Requirements

During construction there will be transport within the land-take boundary of the proposed walking trail. This will involve transport of material onto the site. Existing forest tracks, roads etc. will be used therefore, this is not anticipated to result in negative impacts to those European sites within the project ZoI.

4.4.8 Duration of construction, operation and decommissioning

The proposed walking trail will be constructed over a time period of approximately 6 weeks and any resulting effects will be temporary in nature. The construction phase of the proposed walking trail has the potential to cause negative impacts to the identified European sites in the absence of best practice design and site specific mitigation measures.

The proposed operational phase is long-term in nature; however it is not anticipated that effects resulting from the operational phase of the proposed walking trail (disturbance due to ongoing usage, run-off from hard surfaces etc.) on the European sites within the project ZoI will be significant. Such potential impacts can be addressed through the implementation of best practice design and construction measures and where required, site specific mitigation measures. The trail is already in existence and is a well-used facility.

4.5 AA Screening Findings and Key Potential Impacts

Assessment of potential effects on European sites is conducted utilising a standard source-pathway model (see approach referred to under Sections 2.2 and 4.2). The 2001 European Commission AA guidance outlines the following potential changes that may occur at a designated site, which may result in effects on the integrity and function of that site: loss/reduction of habitat area; habitat or species fragmentation; disturbance to key species; reduction in species density; changes in key indicators of conservation value (water quality etc.); and climate change.

4.5.1 Reduction of Habitat

The construction of the proposed walking trail will be mostly limited to the footprint of the existing trail. The existing trail is currently a minimum of 3m wide and overgrown by grass and ruderal vegetation. hence requiring scraping of top layer of vegetation to restore a 3m width. Works will not cause a reduction of habitat within the SAC, nor direct loss of alluvial wet woodland.

An area c. 50m x 3m which lies outside the SAC, within the conifer plantation and scrub to the East, will be taken to make way for the new section of trail.

Works may result in short-term, temporary indirect impacts to the in-situ drainage regime during the construction phase that could in turn impact surface or groundwater-dependent habitats associated with or supporting European sites within the project zone of influence.

4.5.2 Disturbance to Key Species

The proposed walking trail supports connectivity with and is within the ZoI of three European sites. The Copper River is located immediately to the west of the proposed trail, near McHales Sawmill. This river is within Lough Gill SAC and is directly hydrologically connected to Cummeen Strand/Drumcliff Bay SAC.

There may be potential for disturbance to otters (*Lutra lutra*), a qualifying feature of Lough Gill SAC during construction works. An Otter Holt and Couch and adjacent Otter trackway were identified along the watercourse in the dense Alluvial woodland c.86m west of the trail near McHales Sawmill as shown in Figure 3-3. The operational phase elements of the project could result in disturbance to Otter though human presence.

Construction works adjacent to the Copper River could potentially impact on water quality, which could indirectly impact on lamprey species, a qualifying interest of Cummeen Strand/Drumcliffe Bay SAC.

4.5.3 Habitat or species fragmentation

There will be no habitat or species fragmentation within Lough Gill SAC as the proposed walking trail will follow the existing track. Outside of the SAC the new section of trail will traverse through conifer plantation and scrub. Given the narrow width of the trail and lack of suitable habitat for Otter there will be no habitat or species fragmentation resulting.

The operational phase elements of the project could result in minor habitat disturbance within Annex I priority habitat or within habitat which supports Annex II species if off trail visitor movements occurred.

4.5.4 Reduction in Species Density

It is unlikely that there will be a significant direct loss of species density to those European sites within the project ZoI as a result of the proposed walking trail. However localised species reduction may occur temporarily due to potential displacement or disturbance effects during the construction phase. This is possible given the nature of the proposed work in the vicinity of

watercourses, possibly affecting specific species of conservation interest for these European sites without effective mitigation measures being implemented.

The operational phase of the proposed walking trail is not anticipated to result in any long-term negative impacts to the species density of qualifying features of those European sites within the project ZoI.

4.5.5 Changes in Key Indicators of Conservation Value

Key indicators of conservation value for European sites within the project ZoI include the ecological, hydrological and hydrogeological integrity of their habitats and dependent species. Clearance of vegetation, altering existing drainage patterns and working in proximity and over water courses has the greatest potential to interfere with the structure and function of specific habitats and impact the species dependant on such habitats. This could potentially cause a reduction in the key indicators of conservation value of the European sites within the project ZoI without effective mitigation measures being implemented.

4.5.6 Climate Change

The proposed walking trail will not result in significant negative effects contributing to climate change that could in turn affect the conservation objectives of the European sites within the project ZoI.

4.6 Likely Impacts on the European Sites as a whole in terms of interference with key relationships that define the structure and function of the site

The proposed walking trail has been assessed for impacts to key relationships and functions of the identified European sites within the project ZoI. Given the direct overlap and indirect connectivity to European sites, there is a risk of interference to qualifying habitats and species for those European sites without effective mitigation measures being implemented.

The chief risk is a temporary reduction in water quality, alteration of stream morphology and some possible disturbance to habitats and species listed in Annex I and Annex II of the EU Habitats Directive during construction.

4.7 Indicators of Significance as a result of the identification of effects set out above in terms of:

4.7.1 Loss

Works will be restricted to the existing footprint and no trees will be removed. There are no new linear features proposed within the SAC. The removal of top layer vegetation along the existing trail will not lead to direct loss of the priority alluvial wet woodland habitat.

There will be no alteration to the local hydrology resulting from the proposed works as water movement will not be impeded along the trail or in the surrounding habitat.

4.7.2 Fragmentation

There will be no habitat or species fragmentation during construction phase within Lough Gill SAC as the proposed walking trail will follow the existing track. Minor temporary fragmentation may occur during the operational phase if off trail visitor movements occurred.

4.7.3 Disruption

Some temporary disruption may occur to aquatic qualifying features of identified European sites during the construction phase when working at or in proximity to water crossings. No disruptions are expected to occur to the European site network during the operational phase.

4.7.4 Disturbance

Some temporary disturbance may occur during the construction phase of the project to qualifying species within the European sites. Should this occur, it is expected to result in temporary displacement and conditions to revert back to their original status following completion of the construction phase.

No significant disturbances to the European site network are anticipated during the operational phase of the project.

4.7.5 Changes to key elements of the site

Changes to key elements of European sites within the project ZoI may be influenced during the construction phase, particularly where construction works adjoin or are located within European sites. Potential changes could include the disturbance of key habitat(s) used by species of qualifying interest. Other changes, in the absence of best practice and mitigation being implemented may include changes to water quality of receiving watercourses within the project ZoI with consequent, knock-on effects to in-situ species of qualifying interest.

4.7.6 Invasive species threat

Habitat degradation as a result of introducing/spreading non-native invasive species is also a potential threat to habitats within the European sites concerned.

4.8 Screening Conclusion

Potential impacts to European sites within the project ZoI have been examined in this Stage 1, Screening for AA. Twelve European sites are situated within a 15km radius of the site, two of which are within the project ZoI supporting either direct or indirect connectivity through ground and surface water features.

Potential impacts as a result of the proposed walking trail development will predominantly be during the project construction phase where work will be undertaken within or in proximity to priority habitats and watercourses designated as European sites or supporting connectivity to European sites. Release of deleterious construction materials, such as aggregates and hydrocarbons, from the project footprint to these watercourses represents potential sources of impact to those European sites within the project ZoI, in the absence of suitably defined best practice, construction design and site specific mitigation.

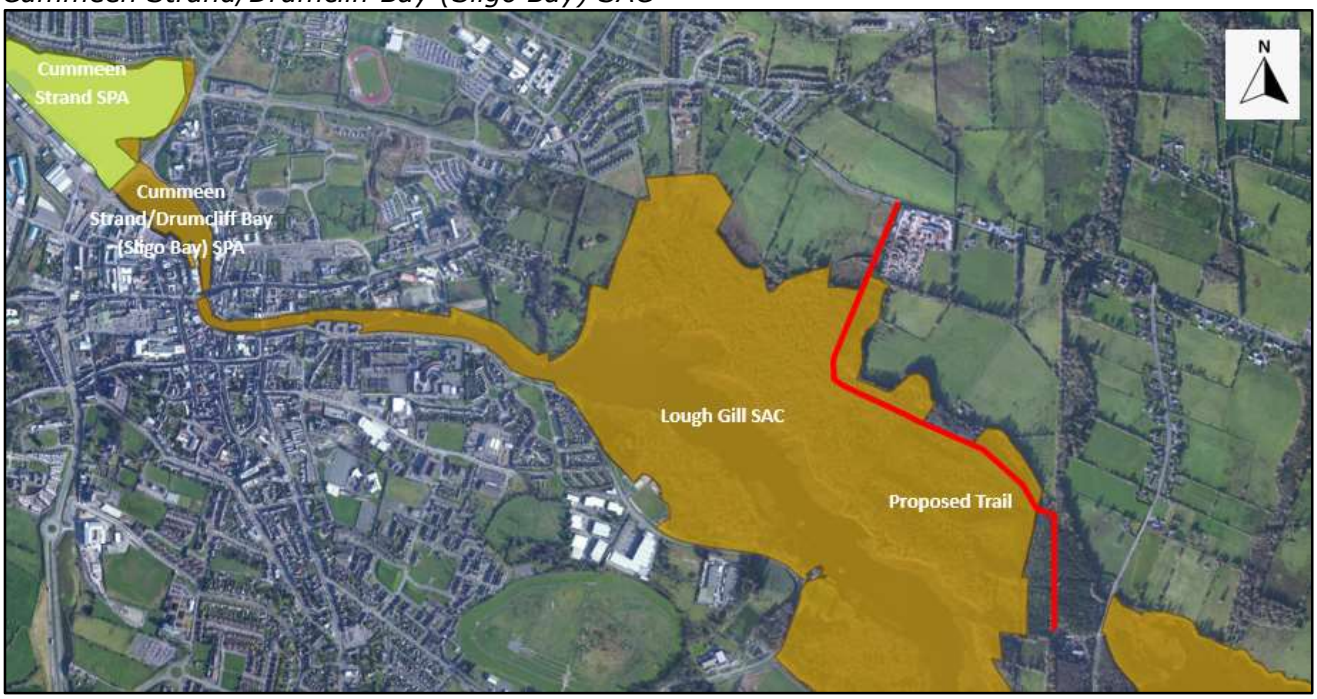
As a result of the findings of this report and the potential impacts that could occur to the European sites within the project ZoI, **an Appropriate Assessment in line with Article 6(3) of the European Habitats Directive (92/43/EEC) is required for this project.**

5 NATURA 2000 SITES WITHIN THE ZONE OF INFLUENCE

5.1 European Site Designations

The proposed walking trail is located within Lough Gill SAC and is hydrologically connected to Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC c. 1.9km to the west .These sites are considered at risk of likely significant effects as a result of the proposed development. These sites are displayed in Figure 5-1 below ,relative to the proposed walking trail route.

Figure 5-1: Natura 2000 sites considered in the scope of the stage 2 NIS -Lough Gill SAC and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC



The following table provides a summary of the Qualifying Interests of each of the European sites under consideration for potential impact as a result of the proposed works, with the specific conservation targets for each qualifying interest.

Table 5-1: Natura 2000 sites relative to their specific conservation attributes, measures and targets

Natura 2000 Site	Qualifying Interest	Conservation Attribute/Measure /Target
Lough Gill SAC	**Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150],**	Habitat Area/Hectares/ Area Stable or increasing, subject to natural processes
		Habitat Distribution/Occurrence/No Decline, subject to natural processes
		Vegetation composition: typical species/ Occurrence/Typical species present, in good condition, and demonstrating typical abundances and distribution
		Vegetation distribution: maximum depth/Metres/Maintain maximum depth of vegetation, subject to natural processes
		Hydrological regime/Metres/maintain appropriate hydrological regime necessary to support the habitat
		Lake substratum quality/ Various/Maintain appropriate substratum type, extent and chemistry to support the vegetation
		Transparency/Metres/Maintain/restore appropriate Secchi transparency. There should be no decline in Secchi depth/transaprency
		Nutrients/ Njg/l P; mg/l N/ Maintain/restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species
		Phytoplankton biomass/ Njg/l chlorophyll a/ Maintain appropriate water quality to support the habitat, including high chlorophyll a status
		Phytoplankton composition/ EPA phytoplankton composition metric/ Maintain/restore appropriate water quality to support the habitat, including high phytoplankton composition status
		Attached algal biomass/ Algal cover/ Maintain/restore trace/absent attached algal biomass (
		Macrophyte status/ EPA macrophyte metric (The Free Index)/ Restore high/good macrophyte status
		Acidification status/ pH units, mg/l/ Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes
		Water colour/ mg/l PtCo/ Maintain/restore appropriate water colour to support the habitat
		Dissolved organic carbon (DOC)/ mg/l/ Maintain/restore appropriate organic carbon levels to support the habitat
		Turbidity/ Nephelometric turbidity units/ mg/l SS/ other appropriate units/ Maintain/restore appropriate turbidity to support the habitat
		Fringing habitat: area and condition/Hectares/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 (Festuco-Brometalia) (* important orchid sites)	Habitat Area/Hectares/ Area Stable or increasing, subject to natural processes
		Habitat Distribution/Occurrence/No Decline, subject to natural processes
		Vegetation composition: positive indicator species/ Number at a representative number of 2m x 2m monitoring stops; within 20m surrounding area of monitoring stops/ At least 7 positive indicator species present in monitoring stop or, if 5–6 present in stop, additional species within 20m of stop; this includes at least two 'high quality' positive indicator species present in stop or within 20m of stop.
		Vegetation composition: negative indicator species/ Percentage cover at a representative number of 2m x 2m monitoring stops/ Negative indicator species collectively not more than 20% cover, with cover of an individual species not more than 10%

		Vegetation composition: nonnative species/ Percentage cover at a representative number of 2m x 2m monitoring stops/ Cover of non-native species not more than 1%
		Vegetation composition: woody species and bracken/Percentage at a representative number of monitoring stops/Cover of woody species (except certain listed species) and bracken (Pteridium aquilinum) not more than 5% cover
		Vegetation structure: broadleaf herb: grass ratio/Percentage at a representative number of 2m x 2m monitoring stops/Broadleaf herb component of vegetation between 40 and 90%
		Vegetation structure: sward height/Percentage at a representative number of 2m x 2m monitoring stops/At least 30% of sward between 5cm and 40cm tall
		Vegetation structure: litter/Percentage at a representative number of 2m x 2m monitoring stops/Litter cover not more than 25%
		Physical structure: bare soil/ Percentage at a representative number of 2m x 2m monitoring stops/Not more than 10% bare soil
		Physical structure: grazing or disturbance/Area in local vicinity of a representative number of monitoring stops/Area of the habitat showing signs of serious grazing or other disturbance less than 20m²
	91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles	Habitat area /Hectares/Area stable or increasing, subject to natural processes;
		Habitat distribution/Occurrence/No decline, subject to natural processes
		Woodland size /Hectares/Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size.
		Woodland structure: cover and height /Percentage; metres;Centimetres/ 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%
		Woodland structure: community diversity and extent /Hectares /Maintain diversity and extent of community types
		Woodland structure: natural regeneration /Seedling:sapling:pole ratio/ Seedlings, saplings and pole age-classes of target species for 91A0 woodlands and other native tree species occur in adequate proportions to ensure survival of woodland canopy
		Woodland structure: dead wood /m³ per hectare; number per hectare/ At least 19 stems/ha of dead wood of at least 20cm diameter
		Woodland structure: veteran trees /Number per hectare/No decline
		Woodland structure: indicators of overgrazing/Occurrence/ All four indicators of overgrazing absent
		Vegetation composition: native tree cover/Percentage/ No decline. Native tree cover at least 90% of canopy; target species cover at least 50% of canopy
		Vegetation composition: typical species/Occurrence/ At least 1 target species for 91A0 woodlands present; at least 6 positive indicator species for 91A0 woodlands present
		Vegetation composition: negative indicator species/Occurrence/ Negative indicator species cover not greater than 10%; regeneration of negative indicator species absent.
	91E0 Alluvial forests with Alnus glutinosa	Habitat area/Hectares/Area stable or increasing, subject to natural processes
		Habitat distribution/Occurrence/No decline subject to natural processes.

	and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*	Woodland size/Hectares/Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size
		Woodland structure: cover and height/Percentage;metres; centimetres/ 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/Hectares/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/Metres/ Appropriate hydrological regime necessary for maintenance of alluvial vegetation
		Woodland structure: dead wood/ Number per hectare/ At least 19 stems/ha of dead wood of at least 20cm diameter
		Woodland structure: veteran trees/ Number per hectare/No decline
		Woodland structure: indicators of local distinctiveness/ Occurrence; population size/ No decline in distribution and, in the case of red listed and other rare or localised species, population size
		Woodland structure: indicators of overgrazing/Occurrence/ All five indicators of overgrazing absent
		Vegetation composition: native tree cover/Percentage/ No decline. Native tree cover at least 90% of canopy; target species cover at least 50% of canopy
		Vegetation composition: typical species/Occurrence/ At least 1 target species for 91E0* woodlands present; at least 6 positive indicator species for 91E0 * woodlands present
		Vegetation composition: negative indicator species/Occurrence/ Negative indicator species cover not greater than 10%; regeneration of negative indicator species absent.
		Vegetation composition: problematic native species/Perentage/ Common nettle (Urtica dioica) is a positive indicator species for 91E0* but, in some cases, it may become excessively dominant. Increased light and nutrient enrichment are factors which favour proliferation of common nettle (Daly et al., in prep.)
	1092 White-clawed Crayfish Austropotamobius pallipes To maintain the favourable conservation condition of White-clawed Crayfish	Distribution/ Occurrence/ No reduction from baseline
		Population structure: recruitment/Percentage occurrence of Juveniles and females with eggs/ Juveniles and females with eggs in at least 50% of positive samples taken at appropriate time and methodology
		Population size/ Catch per unit effort/ No reduction from baseline of 0.25
		Negative indicator species/Occurrence/ No non digenous crayfish species
		Disease /Occurrence/ No instances of disease
		River water quality/ EPA Q value/At least Q3-4 at all sites sampled by EPA
		Lake water quality/ Water chemistry measures/ Maintain appropriate water quality, particularly pH and nutrient levels, to support the natural structure and functioning of the habitat
		Habitat quality heterogeneity: Occurrence of positive habitat features / No decline from baseline
	1095 Sea Lamprey Petromyzon marinus	Distribution: extent of anadromy/ % of river accessible/Greater than 75% of main stem length of rivers accessible from estuary
		Annual run size/Number of Sea Lamprey nests/Annual run size should reflect that unexpected under near-natural conditions

		Larval lamprey in fine sediment/ Larval lamprey/m²/ Larval lamprey present in SAC catchment
		Extent and distribution of spawning and nursery habitat/ m² and occurrence/ No decline in extent and distribution of spawning and nursery beds
	1096 Brook Lamprey Lampetra planeri	Distribution/% of River accessible/ access to all water courses down to 1st order streams
		Distribution in suitable habitat/ Percentage of positive sites in 2nd order channels (and greater), downstream of spawning areas/ Not less than 50% of sample sites with suitable habitat positive for larval brook/river lamprey
		Larval lamprey density in fine sediment/ Larval lamprey/m² / Mean density of brook/river larval lamprey in sites with suitable habitat at least 5/m²
		extent distribution of spawning and nursery habitat/m2 and occurrence/ no decline in extent and distribution of spawning and nursery beds
	1099 River Lamprey Lampetra fluviatilis	Distribution/% of River accessible/ access to all water courses down to 1st order streams
		Distribution in suitable habitat/ Percentage of positive sites in 2nd order channels (and greater), downstream of spawning areas/ Not less than 50% of sample sites with suitable habitat positive for larval brook/river lamprey
		Population structure of larvae/Number of age/size classes/At least three age/size classes of larval brook/river lamprey present
		Larval lamprey density in fine sediment/ Larval lamprey/m² / Mean density of brook/river larval lamprey in sites with suitable habitat at least 5/m²
		extent distribution of spawning and nursery habitat/m2 and occurrence/ no decline in extent and distribution of spawning and nursery beds
	1106 Salmon Salmo salar	Distribution: extent of anadromy/ % of River accessible/100% of River channels down to 2nd order accessible from estuary
		adult spawning fish/ number /conservation limit(CL) for each system consistently exceeded
		salmon fry abundance/ number of fry/5 minutes electrofishing maintain or exceed 0+ fry mean catchment wide abundance threshold value. currently set at 17 salmon fry/5 min electrofishing
		Out-migrating smolt abundance/ number /no significant decline/
		number and distribution of redds/ number and occurrence/ no decline in number and distribution of spawning redds due to anthropogenic causes
		water quality/ EPAPA Q- value/ at least Q4 at all sites sampled by EPA
	1355 Otter Lutra lutra	Distribution/% positive survey sites/ no significant decline
		Extent of terrestrial habitat/ hectares/ no significant decline
		Extent of freshwater (River) habitat/km / no significant decline
		Extent of freshwater (Lake) habitat/ hectares/ no significant decline
		Couching sites and holts/ Number/ no significant decline
		Fish biomass available/Kg / no significant decline
		Barriers to connectivity/ number/ no significant increase
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	**1130 Estuaries**	Habitat area/ Hectares/ The permanent habitat area is stable or increasing, subject to natural processes. S
		Community extent/Hectares/Maintain the extent of the Zostera-dominated community and the Mytilidae-dominated community complex, subject to natural processes

		Community structure: Zostera density/ Shoots/m² /Conserve the high quality of the Zostera-dominated community, subject to natural processes
		Community structure: Mytilus edulis density /Individuals/m² /Conserve the high quality of the Mytilidae-dominated community complex, subject to natural processe
		Community distribution/ Hectares/ 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	Habitat area/ Hectares /The permanent habitat area is stable or increasing, subject to natural processes.
		Community extent /Hectares/ Maintain the extent of the Zostera-dominated community and the Mytilidae-dominated community complex, subject to natural processes
		Community structure: Zostera density/ Shoots/m² /Conserve the high quality of the Zostera-dominated community, subject to natural processes
		Community structure: Mytilus edulis density/ Individuals/m² /Conserve the high quality of the Mytilidae-dominated community complex, subject to natural processes
		Community distribution/ Hectares /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	Habitat area /Hectares /Area stable or increasing, subject to natural processes including erosion and succession.
		Habitat distribution/ Occurrence/ No decline, subject to natural processes
		Physical structure: functionality and sediment supply/ Presence/absence of physical barriers /Maintain the natural circulation of sediment and organic matter, without any physical obstructions
		Vegetation structure: zonation/ Occurrence/ Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
		Vegetation composition: plant health of foredune grasses /Percentage cover /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 subcommunities/ Percentage cover /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/ Percentage cover /Negative indicator species (including non-native species) to represent less than 5% cover
	2120 Shifting dunes along the shoreline with Ammophila arenaria (white dunes)	Habitat area /Hectares /Area increasing, subject to natural processes including erosion and succession
		Habitat distribution/ Occurrence/ No decline, or change in habitat distribution, subject to natural processes
		Physical structure: functionality and sediment supply /Presence/ absence of physical barriers/ Maintain the natural circulation of sediment and organic matter, without any physical obstructions

		Vegetation structure: zonation/ Occurrence /Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
		Vegetation composition: plant health of dune grasses/ Percentage cover /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) Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details
		Vegetation composition: typical species and subcommunities /Percentage cover at a representative number of monitoring stops/ Maintain the presence of species-poor communities dominated by marram grass (Ammophila arenaria) and/or lymegrass (Leymus arenarius)
		Vegetation composition: negative indicator species/ Percentage cover /Negative indicator species (including non-natives) to represent less than 5% cover
	2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)	Habitat area/ Hectares /Area increasing, subject to natural processes including erosion and succession.
		Habitat distribution/ Occurrence/ No decline, or change in habitat distribution, subject to natural processes
		Physical structure: functionality and sediment supply /Presence/ absence of physical barriers /Maintain the natural circulation of sediment and organic matter, without any physical obstructions
		Vegetation structure: zonation /Occurrence /Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
		Vegetation structure: bare ground/ Percentage cover/ Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes
		Vegetation structure: sward height/ Centimetres/ Maintain structural variation within sward
		Vegetation composition: typical species and subcommunities /Percentage cover at a representative sample of monitoring stops /Maintain range of subcommunities with typical species listed in Ryle et al. (2009)
		Vegetation composition: negative indicator species/ (including Hippophae rhamnoides) Percentage cover/ Negative indicator species (including non-natives) to represent less than 5% cover
		Vegetation composition: scrub/trees /Percentage cover/ No more than 5% cover or under control
	5130 Juniperus communis formations on heaths or calcareous grasslands	Formation area/ Hectares Area /stable or increasing, subject to natural processes
		Habitat distribution /Occurrence /No decline
		Juniper population size /Number /At least 50 plants per population
		Formation structure: cover and height /Percentage and metres /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/ Hectares /Appropriate community diversity and extent
		Formation structure: cone bearing plants /Percentage /At least 10% of plants bearing cones
		Formation structure: seedling recruitment/ Percentage/ At least 10% of juniper plants within the formation are seedlings
		Formation structure: amount of each plant dead /Mean percentage/ Mean percentage of each juniper plant dead not more than 10%
		Vegetation composition: typical species /Occurrence/ A variety of typical native species with a minimum of 10 species present (excluding negative indicator species

		Vegetation composition: negative indicator species/ Occurrence/ Negative indicator species, particularly non-native invasive species, absent or under control
	7220 Petrifying springs with tufa formation (Cratoneurion)	Habitat area /Square metres /Area stable or increasing, subject to natural processes
		Habitat distribution /Occurrence/ No decline
		Hydrological regime: height of water table; water flow /Metres; metres per second/ Maintain appropriate hydrological regimes
		Water quality /Water chemistry measures /Maintain oligotrophic and calcareous conditions
		Vegetation composition: typical species /Occurrence /Maintain typical species
	1014 Marsh Snail Vertigo angustior	Distribution: occupied sites/ Number /No decline. There is one known location for this species in this SAC (which overlaps two 1km squares)
		Presence on transect /Occurrence/ Adult or sub-adult snails are present in four of the grassland zones on the transect where optimal or sub-optimal habitat occurs (minimum 5 samples)
		Presence/ Occurrence/ 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 /Metres/ 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 /Metres /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/ Hectares/ 12-15ha of the site optimal and a further 11-14ha suboptimal. 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.), mouseear-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	Distribution: extent of anadromy /% of estuary accessible/ No barriers for migratory life stages of lamprey moving from freshwater to marine habitats and vice versa
	1099 River Lamprey Lampetra fluviatilis	Distribution: extent of anadromy/ % of estuary accessible /No barriers for migratory life stages of lamprey moving from freshwater to marine habitats and vice versa
	1365 Harbour seal Phoca vitulina	Access to suitable habitat /Number of artificial barriers/ Species range within the site should not be restricted by artificial barriers to site use
		Breeding behaviour/ Breeding sites/ Conserve the breeding sites in a natural condition
		Moulting behaviour/ Moult haul-out sites/ Conserve the moult haulout sites in a natural condition.
		Resting behaviour/ Resting haul-out sites/ Conserve the resting haulout sites in a natural condition
		Disturbance /Level of impact /Human activities should occur at levels that do not adversely affect the harbour seal population at the site

6 APPROPRIATE ASSESSMENT - NATURA IMPACT STATEMENT

6.1 Impact Assessment

This chapter assesses the screened in Natura 2000 site in more detail and examines where potentially adverse impacts may arise from the sources of impact identified above. Where potentially significant adverse impacts are identified, avoidance and mitigation measures are proposed to offset these impacts. These are discussed in the following sections.

6.2 Identification of Potential Sources of Impact

This section further examines the source -pathway – receptor links that could potentially result in adverse impacts arising on the screened in Natura 2000 sites. The sections below detail which of the possible pathways of impact (i.e. surface water, groundwater, land and air) have been identified as potentially affecting each of the screened-in Natura 2000 sites, and the key Qualifying Interests within each site, which may be most at risk.

Two Natura 2000 sites were identified as potentially being impacted upon by the proposed walking trail development; Lough Gill SAC and Cummen Strand/Drumcliff Bay (Sligo Bay) SAC. Not all qualifying interests within each of the European sites were identified as potentially being at risk from sources of impact. Table 6-1 outlines the following sources of impact to each QI within the identified European designated site in the ZoI.

Table 6-1: Impact evaluation table

Site Name/Code	Characterisation of potential effects	Qualifying Interests	Potential Impacts	Avoidance/Mitigation Measures	Residual Impact
Lough Gill SAC /001976	Threats and pressures for the SAC are: removal of hedges and copses or scrub, sylviculture, forestry, grazing in forests or woodland, paths, tracks, cycling tracks, continuous urbanisation, dispersed habitation, disposal of inert materials, motorized nautical sports, invasive non-native species, modifying structures of inland water courses and management of aquatic and bank vegetation for drainage purposes.	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0], Petromyzon marinus (Sea Lamprey) [1095], Lampetra planeri (Brook Lamprey) [1096], Lampetra fluviatilis (River Lamprey) [1099], Salmo salar (Salmon) [1106], Lutra lutra (Otter)([1355]	The main potential threats to the wetland habitats and species arising from proposed works are the significant release of sediment or nutrients into watercourses. Potential threats arising from the project are: • Release of significant sediment to receiving waters • Release of significant levels of nutrients into the water, which could lead to oxygen depletion in the water. • Release of chemicals (pesticides, fuels, hydraulic oils) into watercourses. • Disturbance to Otters Lamprey and Salmon **HABITAT** ***Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) (91E0)*** This woodland habitat occurs within the project area and is particularly frequent in areas which are prone to flooding by the adjoining Garvaogue river and Copper River ***SPECIES*** ***Lamprey spp*** The main potential threats to the species arising from the proposed works are the significant release of sediment or nutrients into watercourses. Significant sedimentation can bury	The following mitigation measures are detailed in Section 7 below. **HABITAT** ***Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) (91E0)*** Restrict proposed works to within the footprint of the trail development. Do not extend into adjoining areas of alluvial woodland. Protect these areas (i.e. area is fenced/ suitably protected prior to construction).	No adverse effects

			stony/gravelly spawning beds; while significant nutrient release leads to oxygen depletion in the water. ***Salmon*** Atlantic salmon have a complex life cycle, spending most of their adult life at sea, but hatchling and juvenile stages are in fresh waters. Young and spawning salmon are vulnerable to declines in water quality: inputs of nutrients, sediment and pollutants. The main potential threats to the species arising from proposed works are significant release of sediment or nutrients into watercourses ***Otter*** Otters utilise freshwater and coastal habitats. The main threats to otters are considered to be destruction or degradation of their riverbank habitat, and water pollution, which could impact on prey availability (Reid et al. 2013) and potential for disturbance during the construction phase.	***SPECIES*** In order to protect these aquatic species, mitigation measures that are integral to the project will be adhered to, in order to ensure no release of silt/sediment, nutrients or chemicals to receiving waters. Construction works will only take place during daytime hours to minimise potential disturbance to Otters. Construction works are greater than 30m from the potential Otter holt and couch, which is the recommended distance to avoid disturbance (NIEA, no date). The path is already in use and it will not have lighting in the operational phase, which will limit use to daytime.	
		Lakes with Magnopotamion or Hydrocharition - type vegetation [3150],	Direction of water flow of the Copper River and The Garavogue River flows away from this habitat.	No mitigation measures necessary.	No adverse effects
		Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0],	This habitat is threatened by a variety of damaging operations such as clearance, overgrazing and invasion of exotic shrubs such as Rhododendron ponticum. This woodland habitat does not occur within the project area.	No mitigation measures necessary.	No adverse effects
		Semi-natural dry grasslands and scrubland facies on calcareous	The main threats to the dry calcareous grassland habitat include agricultural intensification, undergrazing and scrub encroachment. The habitat does not	No mitigation measures necessary.	No adverse effects

		substrates (Festuco-Brometalia) (* important orchid sites) [6210].	occur within the project area and within the SAC, areas of Orchid-rich Calcareous Grassland have been recently reported from Clogher Beg (Lough Gill SAC site synopsis) which is located c. 2 kilometres east of the project area. In view of the terrestrial nature of this habitat and the relatively long separation distance between areas of the habitat and the project area adverse effects are not possible		
		Crayfish	There are no records of Crayfish from the Copper River.	No mitigation measures necessary.	No adverse effects
Cummeen Strand/Drumcliff Bay SAC	The known threats and pressures for the SAC are: Agricultural intensification, dispersed habitation, disposal of inert materials, walking horse riding and non-motorised vehicles, intensive fish farming, off-road motorized driving, golf course, camping and caravans, wildlife watching, trampling, overuse, invasive non-native species, burning down, dumping, depositing and dredged deposits, sea defence or coastal protection works, tidal barges.	Petromyzon marinus (Sea Lamprey) [1095 Lampetra fluviatilis (River Lamprey) [1099] Petrifying springs with tufa formation (Cratoneurion) [7220]	There is a risk of indirect impacts on this SAC, which is hydrologically connected via the Garvogue River and the Copper River. The main potential threats to aquatic species arising from proposed works are the significant release of sediment or nutrients into watercourses. Potential threats arising from the project are: • Release of significant sediment to receiving waters • Release of significant levels of nutrients into the water, which could lead to oxygen depletion in the water. • Release of chemicals (pesticides, fuels, hydraulic oils) into watercourses. • Disturbance to Lamprey	In order to protect these aquatic species, the standard mitigation measures that are integral to the project will be adhered to, in order to ensure no release of silt/sediment, nutrients or chemicals to receiving waters as detailed in Section 7 below	No adverse effect
		Estuaries [1130]	Due to the marine/coastal nature of habitat and the relatively low impact of the works proposed within the project site, there is no possibility for significant effects on mudflat habitat.	No mitigation required	No adverse effect

		Mudflats and sandflats not covered by seawater at low tide [1140]	Due to the marine/coastal nature of habitat and the relatively low impact of the works proposed within the project site, there is no possibility for significant effects on mudflat habitat.	No mitigation required	
		Phoca vitulina (Harbour Seal) [1365]	Due to the marine/coastal nature of habitat and the relatively low impact of the works proposed within the project site, there is no possibility for significant effects on mudflat habitat.	No mitigation required	
		Embryonic shifting dunes [2110]	This coastal habitat is located approximately 10 kilometres west of the project area. Due to the nature of the proposed work within the project area, and the relatively large separation distance involved there is no possibility for significant effects on the habitat	No mitigation required shifting dunes.	No adverse effect
		Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120]	This coastal habitat is located approximately 10 kilometres west of the project area. Due to the nature of the proposed work within the project area, and the relatively large separation distance involved there is no possibility for significant effects on the habitat	No mitigation required	No adverse effect
		Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]	This coastal habitat is located approximately 10 kilometres west of the project area. Due to the nature of the proposed work within the project area, and the relatively large separation distance involved there is no possibility for significant effects on the habitat	No mitigation required	No adverse effect
		Vertigo angustior (Narrow-mouthed Whorl Snail) [1014	Within the SAC this species is confined to areas of sand dune habitat at Strandhill which is located approximately c. 11 kilometres to the west of the project area. There is no hydrological connection between the project area and these areas of sand dune habitat, therefore there is no potential for an adverse effect on this species.	No mitigation required.	No adverse effect
		Juniperus communis formations on	No mitigation required as there is no possibility of significant effect on the	No mitigation required.	No adverse effect

		heaths or calcareous grasslands [5130]	habitat Fixed coastal dunes with herbaceous vegetation (grey dunes). Due to the nature of the proposed work within the project area, and the relatively large separation distance involved there is no possibility for significant effects on the habitat		
		Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]	The main threats to the dry calcareous grassland habitat include agricultural intensification, undergrazing and scrub encroachment. Within this SAC approximately 3.7 hectares of dry calcareous grassland habitat is found near Rosses Point. This area is located approximately 10 kilometres west of the project area. Due to the nature of the proposed work within the project area, and the relatively large separation distance involved there is no possibility for significant effects on the habitat.	No mitigation required	No adverse effect

6.3 In-Combination Effects with Other Plans and Projects

Article 6 of the EU Habitats Directive and Regulation 15 of the European Communities (Natural Habitats) Regulations state that any plan or project that may, either alone or in combination with other plans or projects, significantly affect a Natura 2000 site should be the subject of an Appropriate Assessment. The assessment of in-combination impacts is therefore an important part of the assessment process.

Cumulative impacts refer to a series of individually impacts that may, in combination, produce a significant impact. The underlying intention of this in combination provision is to take account of cumulative impacts from existing or proposed plans and projects and these will often only occur over time. The proposed works could theoretically create a cumulative impact.

Four other approved developments were identified in the surrounding area: the Hazelwood Distillery and Visitor's Centre (planning reference 15296), an associated wastewater treatment plan (18412) and Spillage and Pond at Hazelwood Distillery (20180), and the replacement of a derelict dwelling (20127). Natura Impact Statements (prepared by NM Ecology Ltd) were submitted for all four planning applications, and it was concluded that the developments would not have significant impacts on Natura 2000 sites, subject to the implementation of mitigation measures.

A Natura Impact Statement (NIS) was prepared by EIS in support of the Appropriate Assessment (AA) of the Wild Roots Festival at Hazelwood in February 2022 which covered the whole Festival area (adjacent to the proposed project site) and some of the surrounding Hazelwood, Sligo area. The NIS concluded that the Wild Roots Festival at Hazelwood Sligo is not foreseen to give rise to any significant adverse effects on designated European sites, alone or in combination with other plans or projects.

The proposed walking trail site is included in the green belt of the *Sligo and Environs Development Plan* 2010-2016 (which has been extended, pending an update), for which the planning objective is to "*prevent encroachment of development in environmentally-sensitive and visually vulnerable areas*". It is noted that Hazelwood House and the associated factory building have been converted to a whiskey distillery, and that some associated construction and planning works are ongoing. However, the greenbelt zoning will prevent any other major developments in the vicinity of the site, so future development in the area would be small in scale and unlikely to cause cumulative / in-combination impacts with the proposed development.

The continuing biodiversity restoration works by Coillte Nature will likely take several years and will require regular follow-ups in the future to ensure that any re-growing invasive species are also removed and killed. Forest workers cut down the invasive plants branch by branch and feed them into the chipping machine. Every branch of rhododendron – even small stems – must be retrieved from the forest floor. Even the smallest part of the plant left behind can grow roots within a few weeks, potentially re-establishing itself and leading to further recolonisation. Once an area has been felled and chipped, the stumps are treated with herbicide to kill them. Using herbicide in any habitat should only be done when absolutely necessary and with great caution, but in a Special Area of Conservation like Hazelwood's alluvial forest, this is even more important, especially as it might be carried downstream with negative impacts. Strict protocols exist in sensitive, wet habitats like these and Coillte work closely with the National Parks and Wildlife Service to figure out the safest and most effective way to tackle the infestation while protecting the habitat.

In addition Coillte routinely submit licence applications to the Forest Service, Department of Food, Agriculture and the Marine for forest management operations such as tree felling, forest road construction and aerial fertilisation. Coillte submit licence applications for afforestation also. Coillte is committed to carrying out its operations in full compliance with all applicable laws, directives and regulations, national and European, as well as voluntary external accredited forest certification schemes to which Coillte subscribe. The Forest Service are the competent authority for the implementation of the requirements of the EU Habitats and Birds Directives in relation to

licenced forestry applications in Ireland. A Natura Impact Statement for continuous cover forest project SO02-FL0022, SO02- FL0023, SO02-FL0024 and SO02-FL0025, located in the vicinity of Hazelwood Demesne, Co. Sligo was undertaken in October 2020 which assessed some of the habitats mentioned above in which the proposed walking trail development traverses. The proposed extraction route for the tree felling operations in this area is 3m wide, which is the same route proposed for the walking trail development. The NIS includes mitigation measures including exclusion zones for machinery, timing of works during felling and restoration, silt and sediment control during felling and restoration, reforestation and chemical control and monitoring and contingency plans. The NIS concluded that when the mitigation measures are implemented, the project, individually or in combination with other plans and projects, will not have any residual adverse effects on the integrity of any of the European Sites within the ZoI, in view of their conservation objectives and in view of best scientific knowledge.

The implementation of these other plans and projects will result in positive in combination effects to Lough Gill SAC. The implementation of these plans and projects will have a positive impact for the biodiversity. It will not contribute to in combination or cumulative impacts with the proposed development.

7 MITIGATION MEASURES

This section presents the mitigation measures that will be implemented during construction and operation to avoid or reduce the potential impacts of the proposed walking trail on **Lough Gill SAC and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC.** All of the mitigation measures will be implemented in full and represent best practice effective controls for the protection of the receiving environment. The proposed walking trail was prepared in an iterative manner whereby the project design (including the trail route, outline CEMP (attached in Appendix I)) and AA documents have informed subsequent versions of the other. These mitigation measures ensure that there will be no significant effects to the ecological integrity of any European site from implementation of the proposed walking trail.

7.1 Mitigation Measures during Construction

- Contractor will produce a Construction Management Plan that will include a detailed programme of works and will ensure that all construction activities are undertaken in a satisfactory and safe manner.
- The construction contractor will be required to implement the following specific mitigation measures as a condition if granted permission all of which will be incorporated into the CEMP, for release of hydrocarbons, polluting chemicals, sediment/silt and contaminated waters control:
- All works crossing watercourses, are to be carried out as per guidelines given by TII (2005) Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes and by Inland Fisheries Ireland (2016). Guidelines on Protection of Fisheries during Construction works in and adjacent to waters.
- To prevent incidental damage by machinery or by the deposition of spoil during site works, any habitats earmarked for protection (Alluvial woodland) will be securely fenced or sign posted early in the construction phase, clearly visible to construction workers.
- Restrict proposed works to within the footprint of the trail development do not extend into adjoining areas of alluvial woodland.
- Protect these areas (i.e. area is fenced/ suitably protected prior to construction).
- Machines not to traverse into alluvial forest habitat.
- In order to mitigate risk of suspended solids and / or slits entering watercourses during the construction phase, the extent of excavation operations should be limited to no greater than two days of construction activities. No further excavations should be undertaken until such time as the excavated area has been backfilled and sealed
- Provision of sediment control measures to be in place before earthworks commence.

- Specific measures to prevent the release of sediment over baseline conditions in the nearby water environment, during the works. These measures include, but are not limited to, the use of silt fences, silt traps, filter materials, buffer zones etc
- Provision of exclusion zones and barriers (*e.g.* silt fences) between earthworks, stockpiles and temporary surfaces to prevent sediment washing into the existing drainage systems and hence to the downstream receiving water environment.
- Site compounds should not be located near any water course, and with no pathway of connectivity to surface water / drains nearby. The compound should be located a minimum of 10m from any watercourse, with the storage of materials, fuels, chemicals & oils etc. greater than 10m from any surface water drain. Due to the nature of the works, it is envisaged that storage of construction material will be kept to a minimum, with the compound required for accommodating welfare facilities and overnight safe storage of machinery. Due to the confined nature of the works area it will not be possible to accommodate a contractor's compound directly adjacent to the works area. A suitable compound will be agreed on local authority/Coillte lands remote from the works area. The Contractor will ensure that the site compound will be serviced as required and will be secured with appropriate fencing/hoarding.
- Topsoil stripping must be kept to an absolute minimum.
- Weather conditions will be taken into account when planning construction activities to minimise risk of run-off from the site. All earthworks, soil loosening, drainage, replacement of topsoil, emplacement of sand overlays, etc. shall take place only when the ground is dry and in dry weather. All machine work on the site shall cease when the ground is wet and in wet weather.
- Any fuels or chemicals (including hydrocarbons or any polluting chemicals) will be stored in a designated, secure bunded area(s) to prevent any seepage of potential pollutants into the local surface water network. These designated areas will be clearly sign-posted and all personnel on site will be made aware of their locations and associated risks.
- All mobile fuel bowsers shall have a spill kit and all operatives must have spill response training. Fuel containing equipment such as portable generators shall be placed on drip trays. All fuels and chemicals required to be stored on-site will be clearly marked. Care and attention will be taken during refuelling and maintenance operations. Particular attention will be paid to gradient and ground conditions, which could increase risk of discharge to waters.
- Robust and appropriate Spill Response Plan and Environmental Emergency Plan will be prepared prior to works commencing and they will be communicated, resourced and implemented for the duration of the works. Emergency procedures/precautions and spillage kits will be available and construction staff will be trained and experienced in emergency procedures in the event of accidental fuel spillages.
- Implementation of measures to minimise waste and ensure correct handling, storage and disposal of waste (most notably wet concrete).
- Works will primarily take place during hours of daylight to minimise disturbance to any roosting birds and/or feeding nocturnal mammal species.
- Works will avoid the wintering bird season (September to March). This will minimise the disturbance to any wintering/migratory bird species utilising the area during this period.
- Adequate mitigation measures will ensure that impacts on watercourses are limited during the construction phase and that severance of otter home ranges, resulting from any construction works is only temporary. Otters are highly adaptable and depending on the type of development, can often live comfortably within its vicinity. Minor works are proposed close to a watercourse that otters are simply using for foraging and commuting within their territory. It is recommended an otter survey be undertaken ca. two weeks prior to work commencing, during periods of suitable weather when otter signs are visible, in order to assess the need for disturbance licences.
- Noise and light will be mitigated by restricting works to normal working hours and ensuring there is no artificial lighting outside of those hours (otter are crepuscular species).
- It is recommended a badger survey be undertaken prior to work commencing. It is an offence to disturb badgers or damage an active sett. Works will avoid the badger breeding season of December to June inclusive. No heavy machinery should be used within 30m of badger setts (unless carried out under licence); lighter machinery (generally wheeled

vehicles) should not be used within 20m of a sett entrance; light work, such as digging by hand or scrub clearance should not take place within 10m of sett entrances.
- All of the above measures implemented on site will be monitored throughout the duration of construction to ensure that they are working effectively, to implement maintenance measures if required/applicable and to address any potential issues that may arise.

Although the trail does not require crossing a river/stream/drainage channel. Works will take place adjacent to watercourses so the following mitigation measures apply:
- The release of suspended solids should be minimised during works
- Install sediment management measures ie: silt curtains near all drainage crossings while work on the trail is ongoing and in accordance with best practice guidelines;
- Ensure increased sediment levels are not generated when removing the sediment control measure
- Monitor the effectiveness of the installed sediment control measures to ensure they are working adequately
- Site compound areas to be located no less than 100m from river crossings
- Retain bankside vegetation near crossings to ensure no increase in sediment mobilization to water courses;
- No large machinery to approach the river crossing to within 50m

7.2 Biosecurity Measures

- Full biosecurity measures – both land (plant) and aquatic should be put in place.
- An Invasive Species survey will be carried out by a suitably qualified person prior to commencement to ensure that any material being moved contains no Invasive Species that could compromise the integrity of SAC.
- Where landward clearance for access is required, full checks for invasive non-native species to be undertaken in advance, and avoidance of infested areas plus use of geotextile base layer on access track to prevent any contact with seed bank
- To minimise the spread of Rhododendron on site, the following biosecurity measures should be undertaken:
    - All machinery coming on and off site should be free from adhering material.
    - Any rhododendron which needs to be pruned or felled should be taken off site and immediately chipped

7.2 Operational Stage Mitigation Measures

- Information signage will inform the public of the biodiversity value of the habitats through which the trail passes, and request that they stay on the path to avoid damaging these habitats
- Dogs should be kept on a lead to protect wildlife.
- Supply of adequate litter bins to reduce littering by users of the trail.

8 CONCLUSIONS

This NIS has assessed each of the two European sites within the zone of influence of the proposed walking trail and the potential impact sources and pathways in the context of the proposed works. The potential impacts have been assessed in light of each European site's special conservation interests for habitats and species, and whether those predicted impacts would adversely affect the integrity of those sites: **Lough Gill SAC and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC.** There are no other European sites at risk of effects from the proposed walking trail.

The assessment identifies mitigation measures to avoid and minimise these effects so that the structure and function of these European sites is not affected, thus demonstrating that the proposed walking trail can be mitigated to avoid adverse impact.

By incorporating the mitigation measures set out above into the proposal in their entirety, the aspects of the proposal considered in this appropriate assessment are judged to have no residual adverse impacts upon the integrity of Lough Gill SAC and Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC.

Through analysis and evaluation of the relevant information, including in particular the nature of the predicted impacts from the proposed walking trail, it can be concluded that the proposed walking trail **will not adversely affect (either directly or indirectly) the integrity of any European site, either alone or in combination with other plans or projects.** This concludes the Stage 2 Appropriate Assessment process. A determination of the need to advance in the Appropriate Assessment process will be decided upon by the Competent Authority.

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APPENDIX I

Construction Environmental Management Plan Walking Trail, Hazelwood, Sligo

CST Engineers, Sligo

Construction Environmental Management Plan

Walking Trail, Hazelwood, Sligo

On behalf of **Sligo County Council**

Prepared by

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Civil
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Date 13th December 2023

Document History

Revision History:		R0	R1					
Purpose of Issue:	P=Preliminary C=Comment I=Information FC=Fire Cert PL=Planning T=Tender CT=Contract CN=Construction	I	PL					
Date:		11 08 23	13 12 23					
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Checked By:		SS	SS					
Approved By:		SS	FF					

1. Introduction

The purpose of this Outline Construction Environmental Management Plan (CEMP) document is to briefly outline the general activities required for the implementation of the proposed Walking Trail at Hazelwood, Sligo and associated works. Once appointed, it will be the responsibility of the Main Contractor to prepare and submit a detailed CEMP for the authority's approval. The CEMP will be a live document that will be updated throughout the project lifecycle by the Main Contractor as required.

Regardless of the form of contract, the Contractor will be contractually bound by any conditions arising from the site constraints identified and specified, all Statutory Regulations governing the works, and any additional measures or modifications that may be imposed on the proposed development by Sligo County Council or An Bord Pleanála.

2. Description of the Works

2.1 Project Background

The proposed Walking Trail project is located in a Coillte owned forest in Hazelwood, Sligo. The project includes the provision of a walking trail to connect to existing walking infrastructure. Sligo County Council aim to provide a walking trail that is accessible and safe for all users. The design will deliver a walking route partly along existing trails/forest roads with rerouting in other areas.

The proposed works area is predominantly within a wooded area owned by Coillte. The extent of this application is shown on Drawing No. 123285-3000.

The overarching objectives of the project are to:

- Encourage more use of recreational walkways.
- Provide a more accessible walkway along a route currently used by some walkers in the area.

The location of the site is shown in Figure 1.

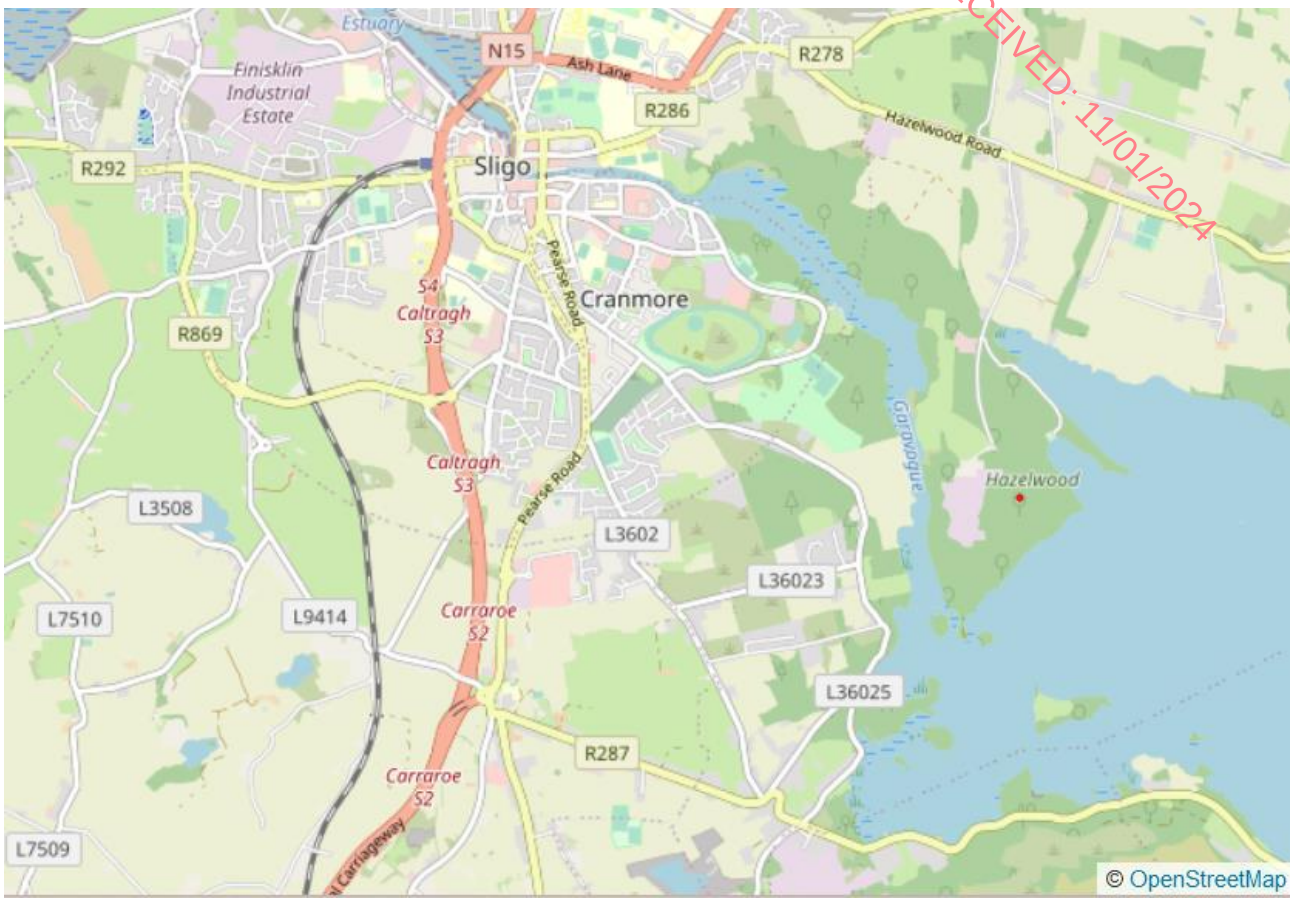

Figure 1: Site Location

2.2 Proposed Development

The proposed walking trail is located at Hazelwood, Sligo, Co Sligo. The works area includes a Coillte wooded area. The extent of this application is shown on Drawing No. 123285-3000. The project includes the provision of a small bridge and a walking trail. The trail will be 3 metres wide.

Nature of the works

The proposed works, as outlined on the accompanying drawing will involve:

(i) Excavation of acceptable/ unacceptable material and importation of subbase.

(ii) Construction of gravel walkways.

(iii) Installation of timber footbridge and foundations

(iv) Signage.

The extent of the proposed works is shown in Figure 2.

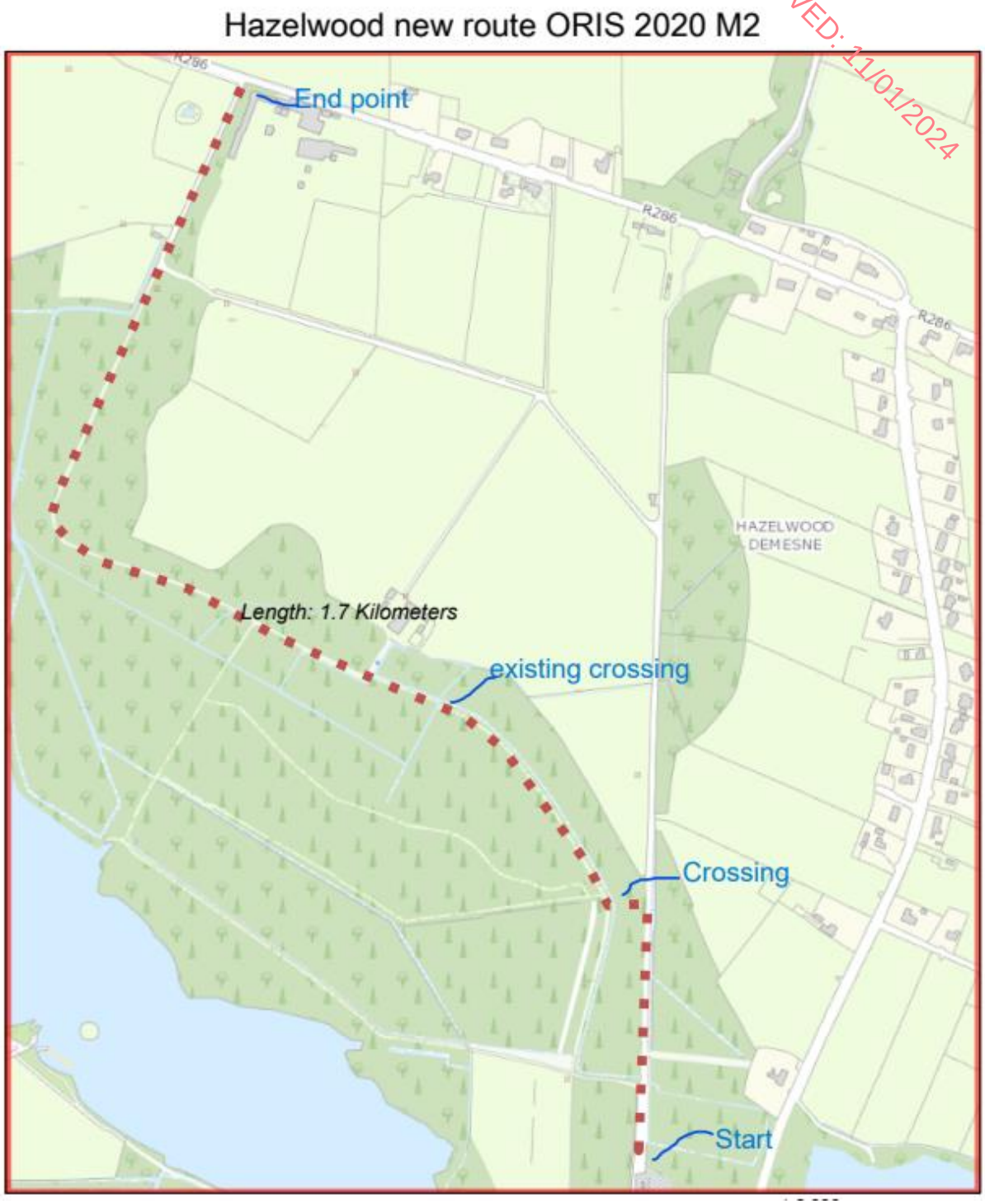

Figure 2 – Extent of proposed works.

3. Indicative Construction Programme

The construction programme for the works associated with the proposed works will be as set out in the Works Requirements.

It is envisaged that construction of the walking trail will be undertaken in a single phase. The Contractor will prepare a construction programme for the construction.

4. Site Set-Up and Security

The Main Contractor will be required to submit a site layout plan that will detail the proposed location of their site compound. The compound should be located a minimum of 10m from any watercourse, with the storage of materials, fuels, chemicals & oils etc. greater than 10m from any surface water drain. Due to the nature of the works, it is envisaged that storage of construction material will be kept to a minimum, with the compound required for accommodating welfare facilities and overnight safe storage of machinery. Due the confined nature of the works area it will not be possible to accommodate a contractor's compound directly adjacent to the works area. A suitable compound will be agreed on local authority/Coillte lands remote from the works area. The Contractor will ensure that the site compound will be serviced as required and will be secured with appropriate fencing/hoarding. As Project Supervisor Construction Stage (PSCS), the Contractor will be responsible for site security, and they are to ensure that the site and site compound are adequately secured at all times.

As with the other construction activities that are being carried out within the Sligo County Council area, activities associated with the construction compounds will be subject to restrictions to the nature and timing of operations so that they do not cause undue disturbance to neighbouring areas and communities.

5. Site Access

Due to the nature of the works, site access may be via more than one location off the road network.

The Main Contractor will be responsible for all site accesses and works activity and must ensure the continued operation of the public road with minimal delay impacts from their operations.

The management of construction traffic on the public road network around the development is a critical part of the overall project and must be actively managed by the Contractor.

The Contractor must submit a CEMP to the Local Authority for approval. Haulage vehicle movements will be fully coordinated to comply with the requirements of the agreed plan:

a) Construction vehicles must not stop or park along routes open to public traffic that result in delays / congestion at any time;

b) Haulage vehicles must not travel in convoys greater than two vehicles at any time;

c) All off-loading of deliveries will take place within the works area, remote from the public areas and will access via the agreed construction access point/s;

d) Temporary car parking facilities for the construction workforce will be provided remote from the public road and will be agreed with either Sligo County Council or other private landowners with suitable areas for parking of vehicles.

e) Monitoring and control of construction traffic will be ongoing during construction works.

6. Material Storage and Delivery

Although envisaged to be minimal, the Contractor will ensure that all materials are adequately stored and secured in their site compound with only materials required for the days ongoing operation stored within the various individual works areas. Stone will be stored at the 3 locations outlines below. Storage of all materials should be located at least 10m from any surface water drains or open watercourse.

The Contractor will ensure the roads adjacent to the site are kept clean and free of debris.

7. Preliminary Construction Traffic Management Plan

The following sets out the Preliminary Construction Traffic Management Plan (CTMP) for the proposed development.

This CTMP sets out how the works will be constructed ensuring minimal adverse impact on the external interfaces in the local environment. This plan will be issued to the successful contractor for the works for use as a basis for a construction stage plan.

Any subsequent use or development of the plan shall be the responsibility of the Contractor alone.

7.1 Access Arrangements

The proposed development is located predominantly within a wooded area owned by Coillte as shown in Figure 2. Refer to Section 5 above for access to the construction. The main access will be via the current forestry road.

7.2 Construction Programme and Phasing

7.2.1 Programme

It would be anticipated that the construction programme will be 6 weeks.

7.2.2 Construction Phase

The nature of the works that will be carried out are largely similar to those which would be anticipated with a project of this nature. Each phase of the construction of the development project will be largely broken down into four stages: Site clearance, drainage & foundation excavation, import of sub-base, laying of surfacing materials, installation of signs, foundations for the timber footbridges and installation of the bridges.

7.3 Construction Traffic

7.3.1 Site Access and Egress

Refer to section 5 above for details of proposed site access.

All works required within the public road area to facilitate the above will have traffic management compliant with Chapter 8 of the Traffic Signs Manual.

7.3.2 Reduction of Adverse Impact on the Local Roads

To reduce the amount of deleterious material being deposited on roads adjacent to the site road sweeping will be conducted as necessary.

7.3.3 Potential Interface with Other Projects

No other construction projects are currently ongoing in the immediate vicinity of the site. If, during the construction of this development, other developments come on stream the appointed Contractor will need to coordinate with other Contractors as required to ensure a smooth interface between projects.

There may be a number of PSCS's operating in the locality at any one time on individual sites. It will be the responsibility of the appointed Contractor as PSCS to ensure that delivery and haul routes, site access and egress points and potential crossing points associated with the site are fully coordinated and agreed with other Contractors in advance of the works commencing.

7.3.4 Traffic Liaison Officer

The Contractor shall appoint a Traffic Liaison Officer who shall be responsible for the preparation, updating and monitoring of the CTMP.

8. Outline Construction Approach

8.1 Construction Working Space

Construction working space will be set out in the detailed construction management plan at construction stage.

Construction access routes, haulage and delivery routes to the site are set out in Section 5 and will be agreed with Sligo County Council in advance of works commencing onsite.

The Contractor will prepare Construction Method Statements for all activities. Monitoring of any hazardous materials stored on site will be addressed in the construction CEMP.

8.2 Outline Works Description

8.2.1 Fencing, Site Set-up and Formation of Site Access/Egress

Each area of the works will be secured with hoarding/fencing details of which are to be agreed with Coillte/Sligo County Council. This will involve providing a hoarding/fencing to prevent unauthorised access.

The site compound will be secured to prevent public access.

The Contractor will be responsible for the security of the site. The Contractor will be required to:

1. Operate a Site Induction Process for all site staff;
2. Ensure all site staff shall have current 'Safe Pass' cards and appropriate PPE;
3. Install adequate site hoarding/fencing;
4. Maintain site security at all times.

Material (Stone) will be stockpiled at the 3 locations outlined below for this project. After completion these areas will be left as they were found.

- At Coillte yard in Hazelwood
- At the first crossing point on the 3m wide trail.
- At the end point near McHale's sawmill.

8.2.2 Site Clearance and Demolition

The existing site is primarily woodland with a walking trail already in place for some of the route. The proposed works are at or about the same level as the existing ground. It is envisaged that minimal further earth moving activities will be required for the completion of this development. No trees will be removed as per instructions from Coillte.

8.2.3 Construction Sequence

The construction of the proposed trail will involve excavation of soil, laying of geotextile, import of granular sub-base and surfacing materials as required, together with foundations for timber footbridges and their installation. The construction methodology and programme of these activities will be dictated by the Contractor.

Trails

Material arising from excavation of foundations for the trails will be rearranged on site where possible. Placement and compaction of subbase and surfacing for the new trails will be laid on a geotextile. The subbase will be laid in 2 no. 150mm compacted layers. A further 50mm of quarry dust may be used to finish off the top of the path to smooth it out.

The reroute trail is all on top of existing trail or Coillte haul roads that have been overgrown over the years, but it all has a good foundation. The trail will be scrapped clear with a 4-tonne 360 excavator with the scrapped material side cast and levelled along the trail route, with care taken not to cause any standing water.

The existing crossing point will be left alone with just a cleaning of both sides of the pipework manually (that is no machinery involved) as it is working well at the moment and is showing no signs of needing repair.

Footbridge

There will be no in stream works at all. At the crossing point as shown on the drawing above a structure will span the currently dry open drain with suitable materials, predominantly timber, and create a bridge with handrails to aid safe crossing. The bridge spanning the open drain will rest on foundations far enough back from the edge of the drain so as to not weaken the sides and cause any material to collapse into the drain. This will be an absolute minimum of one metre from the top of the bank. Material arising from excavation of foundations for the footbridge will be rearranged on site where possible. Concrete foundations for the footbridge will be poured (as stated already an absolute minimum of one metre from the top of the banks to ensure nothing falls into the dry stream) and the bridge lifted/slid into place.

8.2.4 Construction Phasing

The development is to be constructed in a single phase in a 6-week period. The Contractor must outline detailed proposals within the Construction Management Plan to accommodate construction traffic.

8.2.5 Construction Methodology

The material used will be geotextile, which will be laid onto cleared existing trail with two 150mm layers of Cl 804 stone laid and compacted. A further layer of 50mm Quarry dust may be used to finish off the top of the path to smooth it out. A timber footbridge is also required.

Work Site Set Up:

1. The Contractor and sub-Contractors must adhere to all site induction, management arrangements for machinery use including the lift, use of welfare etc. The site induction must be undertaken before work commences.
2. All staff/operatives will be briefed on the extent and nature of the works and any special safety requirements identified within the body of this document upon arrival on site.
3. Each Operative/Supervisor will have read and signed this method statement. All workers will be made aware of the particular issues involved in this project.
4. The work area will be cordoned off/manned to ensure that there will be no interference from the public. All operatives to wear life jackets while working over or next to water. No operatives to work on their own over the water.

Sequence of Works

1. The area on the land where the installation work is being undertaken is to be cordoned off and an exclusion zone set up. Signage is to be strategically posted warning of dangers associated with
2. Each operative, supervisor, or manager shall be fully site inducted in strict accordance with agreed site-specific induction procedures prior to commencement of any works or role on site.

Deliveries

1. The driver is responsible for the safety of the load until it arrives to site.
2. Prior to departure from yard the driver must check the load and report any non-conformity to the loading supervisor.
3. The driver has the authority to refuse to move the load if not satisfied the load is safe.
4. It is the responsibility of the driver to fix securing chains or straps and ensure they are properly tensioned.
5. When securing the load, the driver must ensure that the units are adequately protected to prevent damage. Chain Guards may be used.
6. It will be the responsibility of the Supervisor to direct the loads to the appropriate location on the site.
7. On arrival to site, it is responsibility of the driver to ensure safe access is available and to position the load in accordance with the Installation crew supervisor's direction.
8. The driver has the authority to refuse to position his vehicle in any location, which he deems to be unsafe. When in position the driver will remove the security chains or straps and responsibility for the load passes at that time to the Crew Foreman.

Offloading the Footbridge

1. A visual inspection will be carried out by the Foreman to check for any defects before unloading the unit.
2. Offloading is carried out under the supervision of the Site Foreman.

3. The area will be barriered off/manned where the unit is being offloaded.
4. The lift can them commence.
5. No one must ride on the unit during the lift.
6. The slinger/signaller must be safely down from the trailer before the load can be lifted.
7. Tag lines are to be used to guide/control the load while off-loading.

Plant & Equipment

All equipment and tools on site will be of sound construction and will meet the statutory requirements applicable to those tools or equipment. Refer to risk assessment specific control measures for tools and equipment.

All lifting gear is to be certified. Copies of the certificates are to be made available for inspection and forwarded to the contractor/sub-contractor before entering the site. Operators of all the plant will fill in weekly inspection sheets detailing any defects if any.

The following is a list of plant, tools and equipment that will be required on site:

- 4-tonne 360 Degree excavator
- 3-tonne tracked dumpers
- 120 Hamm 3-tonne roller
- Vans, Hand Tools, Electrical Tools

All plant will be maintained to high standard and will be refuelled in a specified area away from all watercourses and a spill kit will be on site.

9. Environmental Management

Environmental impacts during construction will be mitigated or reduced in agreement with Sligo County Council.

The Contractor will be required to produce a CEMP for Employer's Representative/ Local authority approval prior to works commencement. This plan will develop further the elements as discussed in this report specifically for the site. The plan shall also incorporate:

- Construction Method Statements
- Pollution Protection Plan
- Species Protection Plan
- Biosecurity Management Plan
- Surface Water Management Plan

The main items to be allowed for within the CEMP are included below:

9.1 Flooding

- **Surface Water – Contamination**
  - In order to mitigate risk of suspended solids and / or slits entering watercourses during the construction phase, the extent of excavation operations should be limited to no greater than two days of construction activities. No further excavations should be undertaken until such time as the excavated area has been backfilled and sealed. Detailed methodology for the protection of watercourses and surface water drainage by means of sediment silt traps, silt fencing, buffer zones etc. should be included in the final CEMP.

9.2 Ground Conditions

The proposed works areas require an excavation to a depth of circa 300mm. All disposal is proposed on-site. It is not anticipated that the site works, or excavation works will impact on the underlying bedrock geology.

9.3 Invasive Species

The works may include areas of construction including invasive species. A separate Biosecurity plan produced for these works should be prepared if invasive species are encountered. The final CEMP should include detailed methodology for the removal and disposal of invasive species where required.

9.4 Material Storage

Excavation to foundation level for works will involve the excavation of material. This excavated material will be replaced on site. Any temporary stockpiling of material, if required, will take place at place at least 10m

from any watercourse. All materials required for the construction of the works will be delivered to the site as required. There will be a requirement to temporarily store some materials on site and these will be kept a minimum of 10m from any watercourse. Volumes of material stored on site will be small.

9.5 Waste Storage

It is not anticipated that waste storage will be required on site.

9.6 Pollution Control

Any fuel storage will be located within the site compound fence line, securely bunded and set back remote from the watercourses and located at least 50m from lake and greater than 10m from any surface water drain. Spill kits will be provided at all fuel storage areas and with all machinery.

Appropriate storage and settlement facilities will be provided on site. The construction company will locate the areas of high risk early in the process. Areas of high risk include

- Fuel and chemical storage
- Refuelling Areas
- Vehicle and Equipment washing areas
- Site Compound

Fuel, oils and chemicals will be stored on an impervious base with a bund. Concrete lorries will not be permitted to wash out on site apart from cleaning the chute into a container and then emptied into a skip.

Concrete will be delivered to the works via ready-mix wagons. The use of concrete and subsequent wash down of vehicles and storage / disposal of washdown water should be included in the final CEMP.

During the construction works there will be ongoing monitoring and auditing to be carried out on machinery & equipment, sediment management, storage of fuels & materials, noise and vibration etc. The final CEMP will include details of the inspection intervals and the measure to be implemented on audit findings.

The final CEMP should include details of the Emergency Response Procedure (ERP) in case of environmental emergency.

10. Waste Management Plan

The Main Contractor will be required to prepare a detailed waste management plan for the project. This will be included in the overall construction management plan that will be submitted to the local authority.

11. Communications and Local Stakeholder Management

The Contractor will, as required, liaise with owners of the local properties in advance of works commencing onsite. The Contractor will use a competent sign provider and all signage used will meet the requirements of the Safety, Health & Welfare at Work (General Applications) Regulations 2007 and Chapter 8 Traffic Signs Manual.

12. Construction Noise, Dust and Vibration

The Contractor will be required to clearly indicate how they plan on monitoring noise, dust and vibration throughout the course of the project. This will be especially critical in relation to the excavation of materials in extended periods of dry weather. The Contractor will also be required to clearly outline the mitigation measures they plan on putting in place to ensure any breaches in the baselines are mitigated.

The Contractor shall arrange for maintaining site tidiness/cleanliness, including measures to minimise the movement of wind-blown material, building materials and dust.

Noise and vibration monitoring to be in accordance with the following standards:

- BS 5228
- ISO 4866
- BS 7385
- RE DIGEST 403

13. Working Hours

The proposed hours of work on site will be 08:00 hrs to 19:00 hrs Monday to Friday and 08:00 hrs to 14:00 hrs Saturday unless otherwise specified. Any working hours outside the normal construction working hours will be agreed with Sligo County Council. The planning of such works will take consideration of sensitive receptors, in particular any nearby residences.

14. Lighting

Appropriate lighting will be provided as necessary at construction compounds. All lighting will be installed so as to minimise light spillage from the site.

15. Construction Employment

Construction employment numbers may vary depending on the construction stage of the project and the actual approach adopted by the Contractor. However, it is anticipated that there will be a workforce of no more than 5 people on site.

16. Conclusion

This document has provided an outline construction environmental management plan for the proposed development of a Walking Trail at Hazelwood, Sligo, Co Sligo.

The project includes a footbridge and walking trails at each end to connect to existing walking infrastructure.

The proposed works area is within a forest owned by Coillte.

The works include:

(i) Excavation of acceptable/ unacceptable material and importation of subbase.

(ii) Construction of gravel walkways.

(iii) Installation of foundations for a footbridge.

(iv) Installation of the footbridge.

(v) Signage.

The proposed hours of work on site will be 08:00 hrs to 19:00 hrs Monday to Friday and 08:00 hrs to 14:00 hrs Saturday unless otherwise specified by approval conditions. Any working hours outside the normal construction working hours will be agreed with Sligo County Council. It is anticipated that there will be a workforce of no more than 5 people employed.

The Main Contractor will be required to prepare a detailed CEMP for the project, taking into account this outline plan.