Appropriate Assessment Screening Report

Proposed Amenity Development, Glenfarne Wood, Co. Leitrim



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Appendix 1: Proposed Boardwalk Design Drawings

Document Details

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Project Number: 01122022

Document Type: Appropriate Assessment Screening Report

	Rev.	Status	Issue Date	Author
Ī	01	Draft	29/11/2023	James Owens
Ī	02	Final	03/12/2023	James Owens



1 Introduction

1.1 Project Background

This report has been prepared by Oran Ecology on behalf of Coillte Teoranta for the proposed outdoor amenity development at Glenfarne Wood, Glenfarne, Co. Leitrim.

This report has been prepared to provide the necessary information to allow the competent authority to conduct an Article 6(3) Screening for Appropriate Assessment of the proposed development. This Appropriate Assessment Screening report (AASR) has been prepared in accordance with the provisions of the Habitats Directive 92/43/EEC and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011).

The proposed project is not directly connected with, or necessary for, the management of any European Site, therefore, the project has been subject to the Appropriate Assessment process.

In addition to the above legislation, this report was prepared in accordance with the following European, national and DEHLG guidance documents on Appropriate Assessment:

- Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities.
 DoEHLG, 2009;
- DAFM 2019 Circular 08/2019 Appropriate Assessment
- Assessment of plans and projects significantly affecting Natura 2000 sites; Methodological Guidance on the provisions of Articles 6(3) and (4) of the Habits Directive 92/43/EEC. European Commission, 2002;
- EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission,
- Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission,
- EC (2018) Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats Directive' 92/43/EEC. European Commission,
- European Communities (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission
- EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. European Commission
- NRA (2009) Guidelines for Assessment of Ecological Impacts of National Roads Schemes, National Roads Authority, Dublin
- CIEEM (2018) Institute of Ecology and Environmental Management Guidelines for Ecological Impact Assessment



1.2 Legislative Context

Appropriate Assessment

The Habitats Directive 92/43/EEC 92/43/EEC provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of through the establishment and conservation of an EU-wide network of sites known as Natura 2000. The Habitats Directive has been transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011) as amended and Part XAB of the Planning and Development Act, 2000, as amended. This requires that a consenting or competent authority undertake an Appropriate Assessment (AA) if a plan or project is likely to have the potential for significant effects on European Sites.

The obligation to undertake an AA derives from Article 6(3) and 6(4) of the Habitats Directive. Both involve a number of steps and tests that need to be applied in sequential order. Article 6(3) is concerned with the strict protection of sites, while Article 6(4) is the procedure for allowing derogation from this strict protection in certain restricted circumstances. An AA is a focused and detailed impact assessment of the implications of the plan or projects, alone and in combination with other plans and projects, on the integrity of a Natura 2000 site, in view of its conservation objectives. Assessments should be undertaken on the basis of best scientific evidence and methods.

Stages of Appropriate Assessment Process

There are four stages involved in the Appropriate Assessment process. The Department of Environment, Heritage and Local Government (DoEHLG) has issued a document entitled Appropriate Assessment of Plans and Projects in Ireland: guidance for planning authorities (2009), which outlines the details of these stages. This document states that it is the responsibility of the competent authority to undertake the AA. The assessment should be based on sufficient relevant information such as that submitted by the proponent of the plan.

Stage 1 - Screening

The first step in AA is Screening for an AA. This requires a description of the project, identification and description of relevant Natura 2000 sites, and an assessment of likely effects of the proposed project. The process identifies the likely impacts on a European Site (Natura 2000) of a project or plan, which is not directly connected to or necessary for the management of the site, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant. If these are not deemed to be potentially significant, then there is no need to conduct a full AA. The Screening Stage is carried out to determine whether there is a requirement to proceed with a more detailed assessment and undertake Appropriate Assessment (Stage 2).

Stage 2 – Appropriate Assessment

Here, consideration needs to be given to the impact of the plan or project on the integrity of the Natura 2000 site(s), either alone or in-combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. This requires identification of the conservation objectives of relevant Natura 2000 site(s) that may be affected by the project. The type



of impact should be identified. Additionally, where there may be adverse impacts, an assessment of the potential mitigation of those impacts is required.

Stage 3 - Assessment of Alternative Solutions

If the potential impacts are still considered to be significant or unknown after the Appropriate Assessment stage, then alternative ways of implementing the project are considered at this stage. If no alternative solutions are possible, then it is considered whether the project or plan may go ahead regardless, if imperative reasons of overriding public interest (IROPI) are found.

Stage 4 - Imperative Reasons of Overriding Public Interest (IROPI)

If significant negative impacts on the Natura 2000 site are unavoidable, and no alternative solutions may be found, then this stage involves the consideration of whether the project or plan may go ahead despite these effects, for 'imperative reasons of overriding public interest' (IROPI).

1.2.1 Screening Assessment

This report details Stage 1, the preparation of an AASR to provide the competent authority with the information necessary for them to determine whether an Appropriate Assessment is required, in accordance with current DoEHLG (2010) guidance and follows the following steps;

- Determination if the project is directly connected with or necessary to the management of a European site.
- Description of the project.
- Assessment of potential source-pathway-receptor models to determine relevant zones of influence.
- Description of the baseline environment within relevant zones of influence.
- Identification of any links with European sites (defined as 'relevant' European sites) having regard for their Conservation Objectives.
- The use of Screening matrices to determine if Likely Significant Effects (LSEs) could arise due to the links with European sites having regard for:
 - o Source-pathway-receptor models and zones of influence;
 - o Known distribution and ranges of QI;
 - o Likely ranging behaviours of mobile QIs and SCIs beyond their European sites; and,
 - o Potential in-combination effects with other plans or projects.
- Conclusion of the assessment with a Screening Statement.

The assessment is informed by a field survey and desk study undertaken in January 2020 and December 2019. The assessment in this report is considered in the absence of any mitigation measures.

The following sources were used to gather information;

- Review of online web-mappers: NPWS, EPA, Water Framework Directive and Geo Hive
- Review of NPWS Conservation Objectives, Site Synopses and Natura Standard Data Forms
- Review of EU Habitats Directive Article 17 Reports (2019, 2013, 2007)
- Review of other plans and projects within the area



1.3 Statement of Competency

This report and general ecological walkover survey were carried out by ecologist James Owens (B.Sc., M.Sc.) who has relevant academic qualifications and is a competent expert in the Appropriate Assessment process. James has seven years' experience as an ecologist and has prepared numerous Appropriate Assessment Screening Reports for residential developments, renewable energy developments and forestry licences.



2 Project Description

2.1 Site Location

The proposed development site is located in Glenfarne Wood and within the townlands of Laghty, Ardmoneen, Carrickrevagh and Moneyduff, Co. Leitrim (ITM Grid Ref. X 602372 Y 839019). A site location map is provided in Figure 2.1.

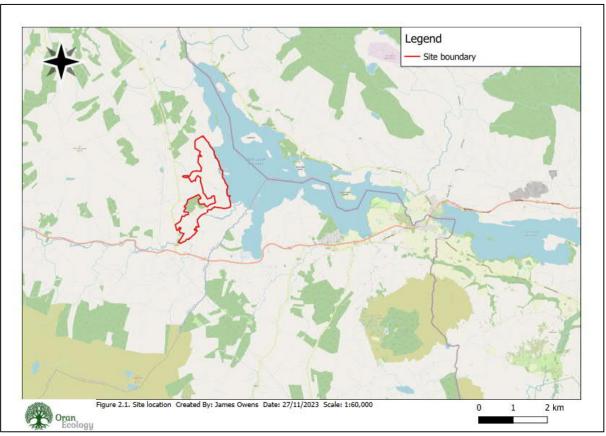


Figure 2.1 Site location

2.2 Characteristics of the Project

Coillte Teoranta intend to develop and enhance amenity facilities at Glenfarne Wood. The proposed development will consist of the following elements;

- Provision of an amenity starting point at the gate lodge entrance consisting of a carpark, service building, playground and sensory trail.
- Glenfarne River greenway
- Lake slipway and forest bathing area consisting of new carparking facilities, new trails and forest bathing areas
- Long Tom's View (Myle's Big Stone) panoramic platform
- Native tree arboretum
- Ladies View changing place
- Floating boardwalk
- Upgrades to existing forest roads and signage
- Wastewater treatment system and surface water drainage



Lighting

The proposed development site layout is shown in Figure 2.2 and Figure 2.3. The design drawings for the proposed boardwalk are given in Appendix 1.

2.2.1 Main Elements of the Proposed Development

Glenfarne Wood Gate Lodge Entrance / Amenity Start Point

An information point will be provided for visitors arriving at Glenfarne Wood. The proposed development includes an information point and small parking area for vehicles and bicycles, located adjacent to the new trails. As is currently the case the main car parking provision will be nearly 3km into the wood close to the lake and the existing car park. This small car park and orientation point addresses a known issue that new visitors are uncertain and need clearer information. This facility will also provide a small trail head for a river side greenway link to the main trailhead.

Main Trailhead

A new trailhead centre point for the wood is proposed, which shall connect to the existing trail network as well as the proposed greenway from the Gate Lodge entrance. The proposed trailhead centre point includes a service building, vehicle and bicycle parking, sheltered event space, open playground and sensory trail.

Service Building

The changing rooms and toilet building will also include a small office and storage facility.

Congregation Area

The extended roof of the Service Building will provide a rudimentary shelter to form part of a congregation area. The congregation area is suitable for small groups of circa 30 for casual interaction, as a meeting point, a small group performance area or for an outdoor lecture. The alignment of the space with the service block and storage/shelter area provides electrical and other services and supports the use of this area as an adventure activities base. The shelter can be operated as either a rudimentary shelter for participants in bad weather or as a partially enclosed interpretive space.

Playground

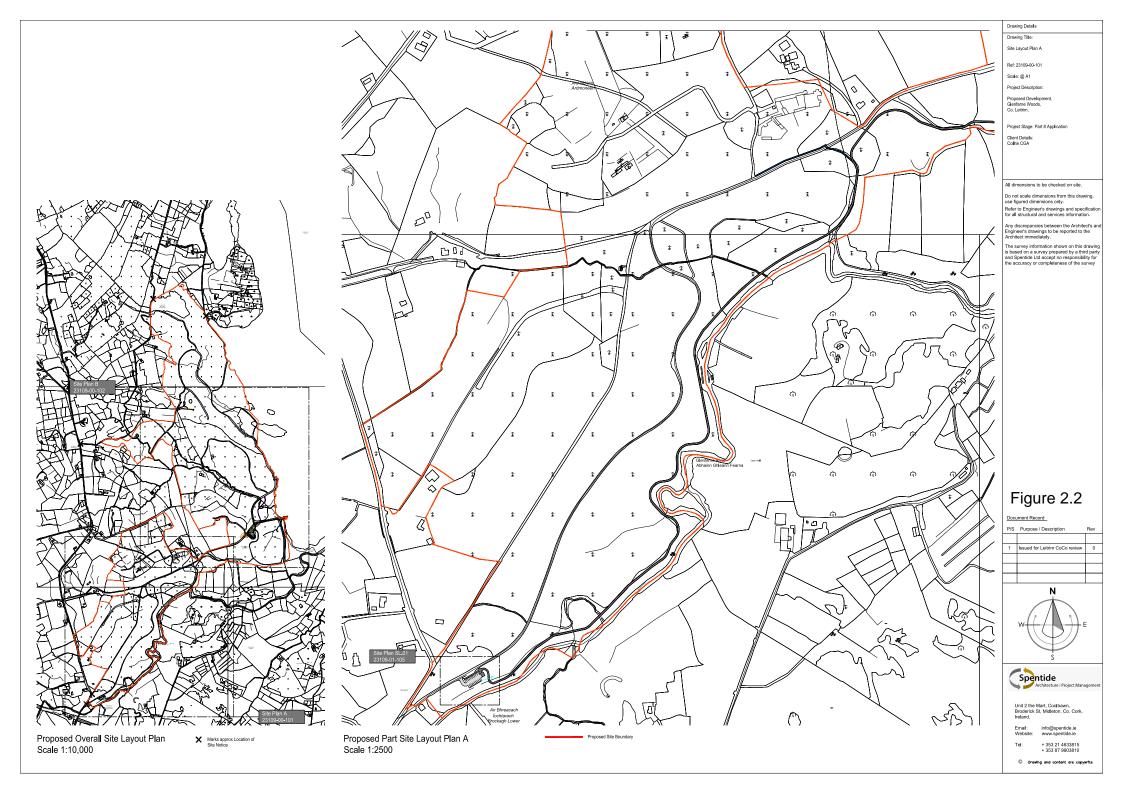
The playground features will blend between the trees, and they will be primarily manufactured from wood. A peripheral fence will be installed to prevent child wandering, appropriate parental sightlines throughout and strategically placed benches for oversight will also be included. Individual play items include a see-saw, low ropes course, slide, balance trail and a climbing frame.

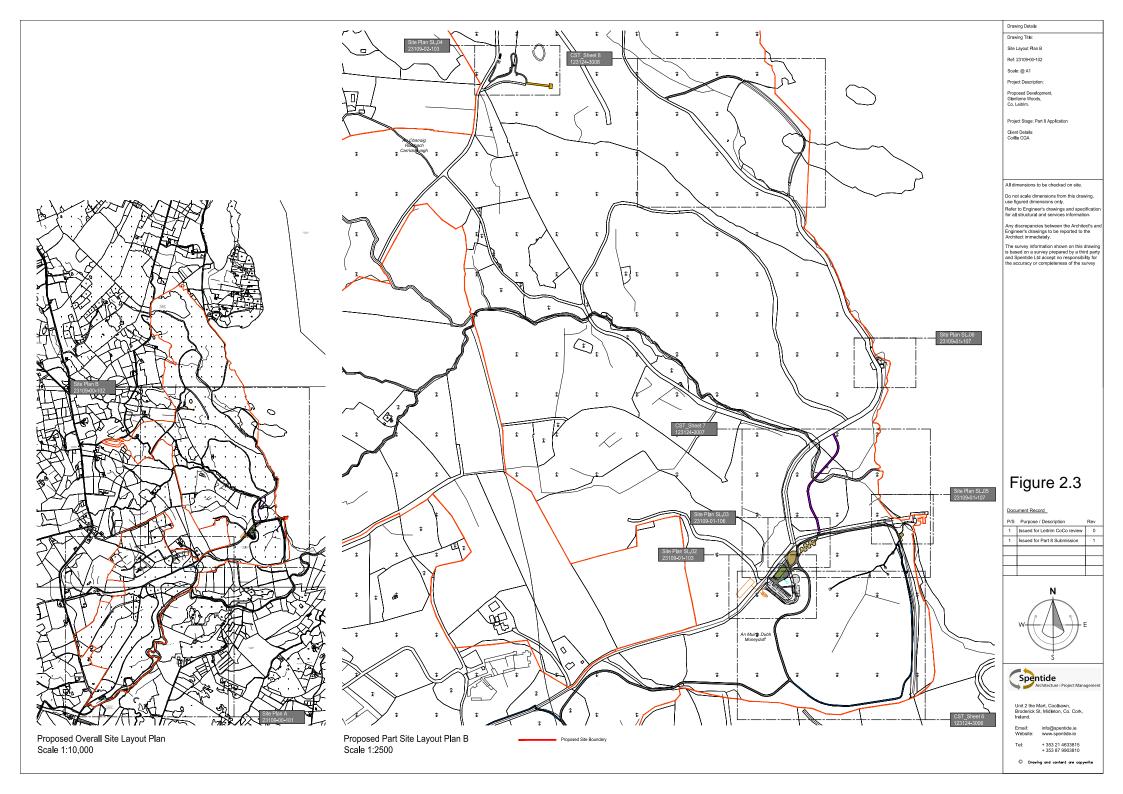
Sensory Trail

The proposed sensory trail includes features, surfaces, objects and plants that stimulate the senses. This trail shall be calming with scented plants, wildlife friendly plants, a therapeutic space for people to recuperate, a learning zone with things to touch and smell and fully universal accessible garden.

Lake Slipway & Forest Bathing

The current car park is located at the slipway but it becomes overcrowded and lead to issues in accessing the slipway. Therefore, the area is being redesigned and the main car parking provision moved approximately 200m further west from the slipway and expanded to cope with the larger visitor numbers anticipated. The proposed development includes vehicle control measures,







designated parking for slipway users only, a new trail access point, additional picnic benches and bike parking. The current interpretive and information points will also be enhanced. From the slip way area a new trail will provide access to four specifically designed forest bathing locations. These locations have been specifically located a in the adjacent forest to provide green based contemplative spaces one of which will be universally accessible. Forest bathing will be facilitated by simple sitting structures.

Glenfarne Wood River Lake: Greenway

A key element of the Glenfarne Wood Options Report, and the subsequent Strategic Plan was to provide a connecting spine to the various outdoor recreation resources within the wood from the Gate Lodge entrance via Glenfarne Hall ruins to the Trailhead and lake.

A greenway standard trail will start at the Gate Lodge entrance and run parallel to the Glenfarne River. As the rivers meanders away from the forest the proposed trail will link in with ruins of Glenfarne Hall before descending through a cutting to the new Trailhead.

The Glenfarne Wood project and specially the River Lake Greenway element has the potential to connect Glenfarne Wood and the Sligo Leitrim Northern Counties Railway (SLNCR) Greenway when this Greenway is completed. This connectivity between Glenfarne Wood and the SLNCR Greenway positions Glenfarne as an important hub and adds value to the Greenway experience.

Long Tom's View (Myle's Big Stone) Panoramic Platform

The existing Glenfarne Cycle and Walk Loop leads to one of the high points in the Wood known as 'Long Toms' where a glacial erratic boulder 'Myle's Big Stone' was deposited. The ground here falls steeply towards the lake and where a multi access viewing platform extending out from the Myles Big Stone will provide a panorama of the forest and the lake which cannot be otherwise seen within the forest. This wooden platform will stand above the treeline and will include two panorama information panels.

The Native Tree Arboretum

An arboretum is a specific collection and demonstration of trees designed to promote conservation and engage in public outreach and education to protect and preserve trees. The theme of the Glenfarne arboretum is a section or series of native trees which represent various parts of the County.

The proposed arboretum will be developed in an area of mature conifer plantation which has been approved under licence LM07-FL0030 by the Department of Agriculture, Food and the Marine.

Ladies View Changing Place

Ladies View is an already popular open water swimming location facilitated by stepped access into the lake. A simple sheltered changing screen is planned to provide basic facilities for users.

Floating Boardwalk

A floating boardwalk is proposed from just beyond Ladies View out to the wooded Bilberry Island and back to shore.

The proposed boardwalk will be constructed using one of two potential construction methodologies. Both construction methods are taken into consideration in this assessment. One method involves constructing the boardwalk using an anchor block and chain method and the second method involves piling to support the boardwalk. Each 15m long x 3m wide x 1m CCP pontoon unit will be delivered to



site using extendable flatbed trailers by a heavy haulage contractor. In the case of the block anchor method, the concrete blocks will be delivered to the site at the same time as the pontoons. The pontoon units will be lifted into the water using a mobile crane. The size of the crane is yet to be confirmed. The certificates for the crane and lifting equipment must be made available before entering the site.

Further details of the proposed construction methods are given below.

Anchor block and chain method

Assembly of CCP walkway

- Once all the CCP units have been unloaded and moved to the install area, the connection of the units will take place.
- The location for the positioning of the anchor blocks will be marked out with a total station or GPS and the locations marked with temporary floating marker buoys.
- The first CCP unit nearest to the bank will be towed into place using the workboat and positioned to its install location and temporarily secured. The mooring chain should then be connected to the anchor block that is currently on the workboat which is then moved to corresponding install position as set out in the mooring design. Once over the associated location the block should be slowly lowered down to the lake bed. This is to be repeated for each of the chain and anchor positions
- The 2nd CCP unit will then be positioned into place with the workboat and joined to the first at the connection points with the skewed ends through the connector boxes with end-to-end connectors fed through and loosely tightened. Once in place then the anchor blocks are to be added like on the first unit. This is to be repeated for each of the remaining CCP units until the walkway is in place
- Once all CCP units are in place then the end-to-end connectors can be tightened up to ensure that the walkway is secure and matches the layout and also make any necessary adjustments to the mooring chains to ensure that they are acting as required and keeping the floating walkway in position.
- The same process is repeated for the 2nd walkway.

Installation of access gangways

The hinged gangways shall be brought into position by placing on the Corresponding CCP
units prior to being towed into final install position and once all is in place then the hinged
end can be lifted into position onto the concrete shore blocks (by others) with the hinge pins
inserted and ensure that the gangway rollers are centred on the pontoons and rolling freely
with the flap falling uniformly.

Installation of handrails on walkway

- The actual design of the handrails is yet to be determined so fixing methods may vary based on design chosen.
- Once the main floating walkway is in place and connections tightened then the railings can
 be fitted. The railing posts are to be fitted down to the concrete deck at regular intervals as
 per the design with the fixing anchors securing them in place, this is repeated for all posts on
 both sides of the walkway



• Once all posts are in place then the rails between shall be fitted to the preinstalled fixing holes / brackets along the length of the walkway at both sides, all connections to be checked and tightened as needed to give uniformity across the walkways.

Piling method

Installation of piles

Installation of new steel piles, circa 4nr dimensions at circa 10 meter intervals, pile structures into sediments to depths of approximately 3 m (min 50% of pile length above bed level). Piling will be carried out by a side grip rig with side grip hammer attachment working from a self-propelled barge.

Piles will be delivered to site on extendable trailers and offloaded by the side grip rig from the lake area adjacent to the existing roadway. The side rig will self load piles which will be installed at the locations as directed by the client to level or refusal. The barge will be positioned to accommodate the rigs reach to install the pile, over the front or side of the barge. If appropriate floating silt barriers will be employed.

Once the pile is in position and the verticality checked in both planes, the operator will be instructed to commence driving the pile. He will engage the vibro hammer and exert a downward force from the main boom/dipper arm to drive the pile. After the initial first section of the pile has been driven, the position and verticality of the pile will be checked. If the pile is not within the contract requirements, the pile will be extracted and the process commenced again. Once the pile is in a satisfactory position, the hammer will stop driving and the jaws released. The hammer will then be repositioned further up the pile and reclamped to drive the next section of pile.

Where localised obstructions are encountered, where possible installation will continue. This will be notified to the client and instruction will be sought with regards to the next action to be taken.

The barge is self-propelled however a workboat will be on site to assist with manoeuvring. The workboat will be used to transfer personnel from shore to the pontoon and used to assist manoeuvring the pontoon by tying up alongside or to the stern to move the pontoon as a composite unit.

Assembly of CCP walkway

Once all the CCP units have been unloaded and moved to the install area, the connection of the units will take place.

The first CCP unit nearest to the bank will be towed into place using the workboat and positioned to line up the pile (installed by others) with the pile guide bracket connected around the pile and to the side of the CCP unit in the provided fixing position.

The 2nd CCP unit will then be positioned into place with the workboat and joined to the first at the connection points with the skewed ends through the connector boxes with end-to-end connectors fed through and loosely tightened and the pile bracket added. This is to be repeated for each of the remaining CCP units until the walkway is in place.

Once all CCP units are in place then the end-to-end connectors can be tightened up to ensure that the walkway is secure and matches the layout and also make any necessary adjustments to the pile brackets to ensure that they are moving smoothly.

The same process is repeated for the 2nd walkway.



Installation of access gangways and fixed platform

- The fixed platform shall be brought to install site using the workboat and lifted into position lining up the frame with the installed support piles and lowered into position. The platform will then be secured using the brackets and fixings.
- With the fixed platform in position then the fixed gangway can be positioned into place, this
 will either be carried out by a small shoreside mobile crane or from the workboat. The fixed
 gangway is to be lined up with the shore block, cast by others, and with the fixed platform on
 the piles. It is to be lowered into position and connected to the brackets and the fixings
 tightened.
- The hinged gangways shall be brought into position by placing on the Corresponding CCP units prior to being towed into final install position and once all is in place then the hinged end can be lifted into position onto the fixed platform or the concrete shore block (by others) with the hinge pins inserted and ensure that the gangway rollers are centred on the pontoons and rolling freely with the flap falling uniformly.
- Once the gangways are in place the railings should be added to the fixed raised platform to provide protection.

Installation of handrails on walkway

Handrail installation will follow the same process as that described above for the block and anchor construction.

2.2.2 Trail Construction

The proposed Glenfarne River-Lake Greenway will be 3m wide and consist of a bound surface. Two spurs off the greenway, one to the ruins of Glenfarne Hall and the other, an alternative route to the slip way, will both be 2m wide and unbound. The proposed trail in the arboretum will be 2m wide and unbound. The trial in the Forest Bathing will be 1m wide and unbound for the most part, access to the first sit spot will be wider at 2m to facilitate universal access.

Where crossing of a stream or larger drains is required a clearspan wooden bridge will be used. Small land drains will be culverted.

2.2.3 Associated Site Works and Services

It is proposed to install a wastewater treatment system for the main service building. The wastewater treatment system will consist of an O'Reilly Oakstown EN Treatment system (50PE System) or similar certified system, Ecoflo Coco Filter and gravel pressurised bed which will be installed in accordance with BS 6297 (2007) Code of Practice for the design and installation of drainage fields for use in wastewater treatment and the EPA's Wastewater treatment manual - Treatment systems for small communities, business, leisure centres and hotels (1999). Figure 2.4 shows the layout of the proposed wastewater treatment system.



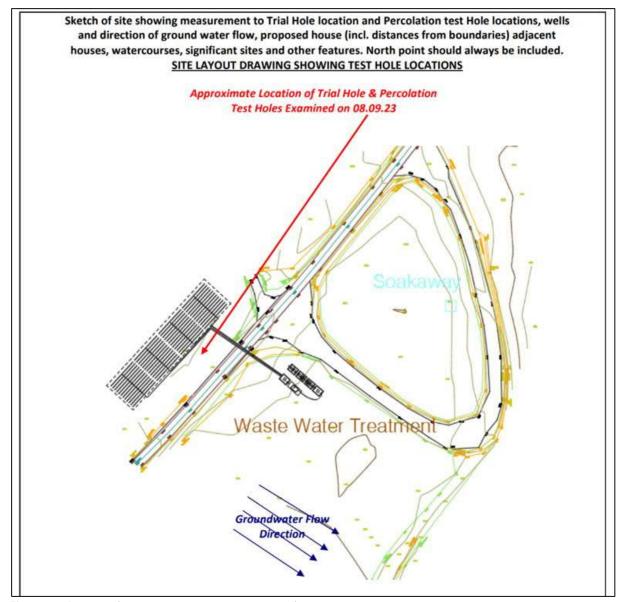


Figure 2.4 Proposed wastewater treatment system layout

Proposed new carparks will be constructed from Tarmacadum. The surface water run-off will be collected and passed through petrol interceptors. The water will be discharged to the ground via appropriately constructed soakaways.

New public lighting is proposed around the service building and adjacent carpark only for the safe use of the building after daylight hours. No further public lighting proposed in this development. The following will apply to lighting at the site;

- Column lights are kept under 8m, 6m high proposed.
- Directional downlights do not exceed the 70o angle above the vertical plane. Lighting of treelines, hedgerows and scrub to be avoided/minimised.
- Lights with a high UV component, such as metal halide, mercury vapour and tungsten halogen.
- 3000K LED lanterns will be employed to meet the requirement of Public Lighting design standards.



Minor works are proposed to the existing forestry roads, primarily limited too, the construction of vehicle passing points, erection of directional signage, construction of a vehicle height restriction barrier at the lake slipway and general road line markings to direct vehicles.

Only native species will be used where landscaping is required.

2.3 Summary of the Receiving Environment

Ecological walkover surveys of the site were carried out on the 14th December 2022 and 29th May 2023. Habitats were recorded in accordance with A Guide to Habitats in Ireland (Fossitt, 2000).

The walking trails are located within Conifer plantation (WD4), Oak-birch-holly woodland (WN1) dominated by birch, existing forest roads and tracks categorised as Spoil and bare ground (ED2) and Mesotrophic lakes (FL4). The Glenfarne River-Lake Greenway begins at the south-western corner of the site where a small car-park area is proposed within an area of mature Sitka spruce (Picea sitchensis) Conifer plantation (WD4) and an existing Coillte forest road categorised as Spoil and bare ground (ED2) (Plate 2.1). The trail then runs adjacent to the Glenfarne River, categorised as Upland/eroding rivers (FW1), for approximately half of the trail length in a north-easterly direction (Plate 2.2). The landward side of the river is dominated by immature Sitka spruce Conifer plantation (WD4) and a fringing Treeline (WL2) of mature beech (Fagus sylvatica) trees initially (Plate 2.3). The remainder of the Treeline (WL2) contained a mix of beech, ash (Fraxinus excelsior), willow (Salix sp.) and holly (*Ilex aquifolium*). The trail crosses a small modified unnamed stream (approximately 0.5m. wide) which connects to the Glenfarne River and which was also categorised as Eroding/upland rivers (FW1). Scattered shrubs of Rhododendron (Rhododendron ponticum) and cherry laurel (Prunus laurocerasus) were recorded in parts adjacent to the river. The greenway trail then splits with one spur passing through immature Conifer plantation (WD4) in a westerly direction to rejoin an existing forest road and provide access to the remains of Glenfarne Hall which is within mature Conifer plantation (WD4). The main trail continues east through immature Conifer plantation (WD4), Mixed broadleaved/conifer woodland (WD2) and mature Conifer plantation (WD4) (Plate 2.4). The Mixed broadleaved/conifer woodland (WD2) consisted of mature Scot's pine (Pinus sylvestris), beech, Sitka spruce, pedunculate oak (Quercus robur), holly and downy birch (Betula pubescens). Rhododendron was recorded occasionally in parts of the woodland. Ground flora was relatively species-poor and consisted of broad buckler-fern (Dryopteris dilatata), wood sorrell (Oxalis acetosella) and the bryophytes Rhytidiadelphus triquetrus, Eurhynchium striatum and Thuidium tamariscinum. The trail splits into two again with one path leading north to the proposed carpark and main services area with the second trail veering east though Conifer plantation (WD4) before turning north along the eastern side of the forestry and adjacent to an existing track which leads back to the slipway area. A spur comes off this trail in a westerly direction into the Conifer plantation (WD4) to where the forest bathing area (sit-spots) are proposed. The existing slipway area is categorised as Buildings and artificial surfaces (BL3).

The proposed main services block, play areas and carpark will be constructed within an area of prethicket Sitka spruce Conifer plantation (WD4) which is fringed by immature willow and birch (Plate 2.5). A proposed trail will go north from this into a proposed arboretum area. This is currently overmature Conifer plantation (WD4) consisting of Scots pine and Sitka spruce, some of which has been windblown. A Drainage ditch (FW4) with a low flow passes through this area of woodland. The arboretum trail then connects back on to an existing forest road and leads to Ladys View which is categorised as Buildings and artificial surfaces (BL3). The forest road continues north to the proposed floating boardwalk area. The road runs adjacent to Lough MacNean Upper, which is categorised as Mesotrophic lakes (FL4), and mature Conifer plantation (WD4) occurs on the landward side of the road



(Plate 2.6). The proposed boardwalk crosses the lake to Bilberry Island. The island consisted of Norway spruce (*Picea abies*) dominated Conifer plantation (WD4) which contained numerous boulders, especially along the shoreline (Plate 2.6). The shoreline was composed of fringing broadleaf trees such as willow and birch. Ground flora on the island consisted of wood sorrel, great wood-rush (*Luzula sylvatica*) and *Rhytidiadelphus triquetrus*. The Mesotrophic lake (FL4) habitat in the vicinity of the proposed boardwalk was characterised by common club rush (*Schoenoplectus lacustris*), common reed (*Phragmites australis*), reedmace (*Typha latifolia*), lesser pond sedge (*Carex acutiformis*) and yellow water lily (*Nuphar lutea*)

The proposed boardwalk connects back to land again in an area of Oak-birch-holly woodland (WN1) (Plate 2.7). This woodland was characterised by downy birch, some of which was planted and relatively small (5m high), with holly and willow occurring at lesser frequency. A small stream (0.5m wide), categorised as Eroding/upland rivers (FW1), flowed through the woodland (Plate 2.8). The field layer was characterised by bracken (*Pteridium aquillinum*), bramble (*Rubus fruticosus* agg.), foxglove (*Digitalis purpurea*), wood sorrel, hard fern (*Blechnum spicant*) and great wood-rush with remote sedge (*Carex remota*) occurring close to the stream. Rhododendron shrubs were frequently occurring on the boundary between this woodland and the adjacent mature Conifer plantation (WD4) which was dominated by Scots pine. The trail then connects back to the existing forest road network. An area of immature planted oak and birch with scattered mature Scots pine was recorded outside the proposed development boundary adjacent to these habitats and categorised as Mixed broadleaved woodland (WD1).

The last piece of the proposed development consists of a viewing point within an area of immature and mature Conifer plantation (WD4) comprised of Sitka spruce with immature birch also regenerating.

Rhododendron ponticum was recorded in a number of locations within woodland habitats and within and adjacent to the proposed walking trails. Rhododendron is listed under the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). None of the habitats recorded within or adjacent to the proposed development footprint corresponded to habitats listed under Annex I of the EU Habitats Directive.





Plate 2.1 Conifer plantation (WD4) at the location of the amenity start point and beginning of greenway



Plate 2.2 The Glenfarne River (FW1) along part of the proposed greenway route





Plate 2.3 Treeline (WL2) and young Conifer plantation (WD4) along the route of the proposed greenway



Plate 2.4 Young conifer plantation (WD4) and Mixed broadleaved/conifer woodland (WD2) along part of the trail





Plate 2.5 Young conifer plantation (WD4) and existing forest road (ED2) at the location of the proposed services area and new carpark



Plate 2.6 Lough MacNean Upper (FL4) looking across to Bilberry Island





Plate 2.7 Example of birch dominated Oak-birch-holly woodland (WN1)



Plate 2.8 Small stream (FW10 which flows through the birch woodland (WN1)



3 Identifying European Sites within the likely Zone of Impact of the Proposed Development

Table 3.1 lists all European sites within the Likely Zone of Influence and provides an assessment on the potential for likely significant effects as a result of the proposed development on the Qualifying Interests (QIs)/Special Conservation Interests (SCIs) of each European Site. European sites within 15km of the proposed development were taken to be within the Likely Zone of Influence, following Appropriate Assessment of Plans and Projects in Ireland: guidance for planning authorities (DoEHLG, 2009). Sites outside the 15km zone were also considered but no connectivity was identified.

The potential for significant effects to occur from the proposed development on European sites was assessed using the source-pathway-receptor model. This conceptual model is a standard tool in environmental assessment. In order for an effect to occur, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism means there is no likelihood for the effect to occur. In the context of the proposed works, the model comprises:

- Source (s) e.g. sediment run-off from proposed works;
- Pathway (s) e.g. drains and streams connecting to a European site;
- Receptor (s) Qualifying habitats and species of European sites.

If the potential for significant effects to occur on a European site is identified, then further assessment is required. Effects are considered in light of the conservation objectives of the Annex I habitats and Annex II species for which each European site is designated.

The assessment takes into consideration any likely direct or indirect effects of the proposed development on European sites, both alone and in-combination with other plans and projects, with regard to the following criteria: size and scale, land-take, distance from the European site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements and duration of construction, operation and decommissioning. The assessment does not take into account any measures intended to avoid or reduce any harmful effects of the proposed development on European sites. The following resources were consulted to inform the assessment;

- NPWS site synopsis, Natura standard data forms and conservation objectives for the relevant European sites with potential source-receptor-pathways to the proposed development; and
- EPA hydrological catchment data (www.epa.ie)
- Geological Survey of Ireland (GSI) data (www.gsi.ie)

A map showing European Sites within 15km of the proposed development is shown in Figure 3.1.

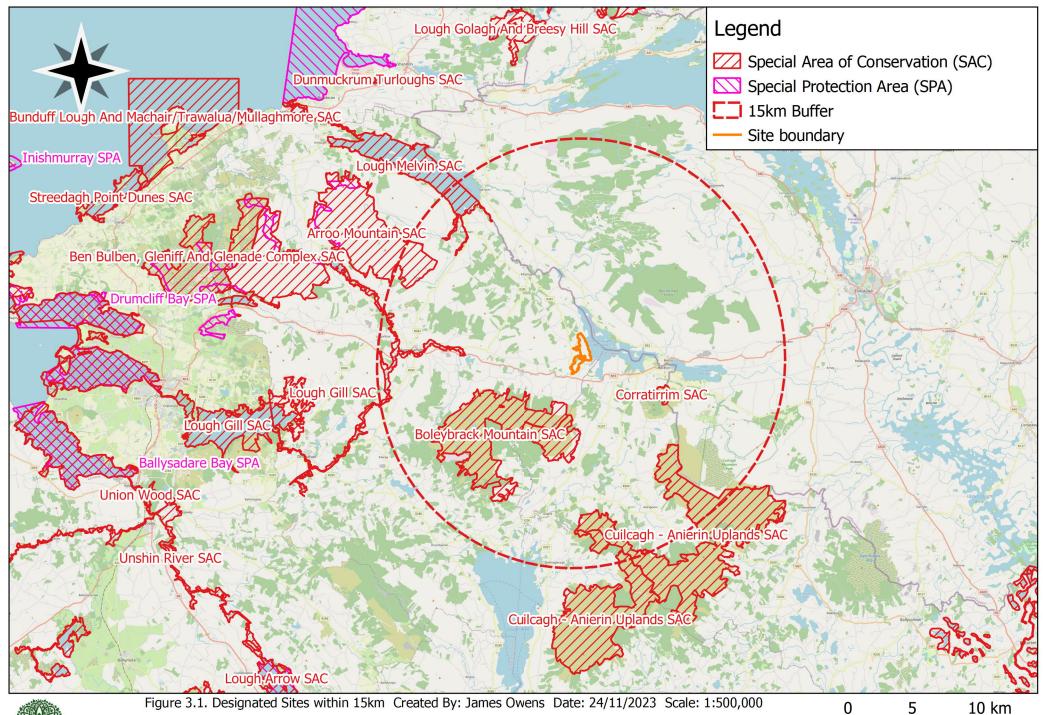


Figure 3.1. Designated Sites within 15km Created By: James Owens Date: 24/11/2023 Scale: 1:500,000 Oran Ecology



Table 3.1 Assessment of Sites Within the Likely Zone of Influence

European Site, Code	Qualifying Interest(s)(QI's) / Special	Zone of Likely Influence Screening	Possibility
and Distance from the	Conservation Interest(s)(SCIs)		for Likely
Proposed	(* indicates Priority Annex I Habitats) as		Significant
Development	reviewed on the 01/12/2023		Effects
Boleybrack Mountain	 Natural dystrophic lakes and ponds [3160] 	The proposed development site is located entirely outside the	No
SAC [002032]	 Northern Atlantic wet heaths with Erica tetralix [4010] 	boundary of the European Site and therefore there is no potential for direct effects.	
4.1km	 European dry heaths [4030] 		
	 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] 	The proposed works area is located over 4km from the designated site. No pathway for effect was identified with regard to the terrestrially dependent QI habitats.	
	Blanket bogs (* if active bog) [7130]	The proposed development site is located in the same surface water catchment (Macnean Loughs connector_SC_010) as the European site. However, the European site is located up-catchment of the	
		proposed development site and no surface water connection exists between the proposed development site and the surface water dependent QI habitat.	
		No pathways for direct or indirect effects were identified and therefore the designated site is not considered further in this assessment.	
Corratirrim SAC [000979]	Limestone pavements [8240]	The proposed development site is located entirely outside the boundary of the European Site and therefore there is no potential	No
5.8km		for direct effects.	
		The proposed works area is located over 5km from the designated	
		site. No pathway for effect was identified with regard to the terrestrially dependent QI habitat.	
		No pathways for direct or indirect effects were identified and therefore the designated site is not considered further in this assessment.	



Cuilcagh - Anierin Uplands SAC [000584]	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110]	The proposed development site is located entirely outside the boundary of the European Site and therefore there is no potential for direct effects.	No
9.3 km	 Natural dystrophic lakes and ponds [3160] Northern Atlantic wet heaths with Erica tetralix [4010] European dry heaths [4030] Alpine and Boreal heaths [4060] 	The proposed works area is located over 9km from the designated site. No pathway for effect was identified with regard to the terrestrially dependent QI habitats.	
	 Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] Blanket bogs (* if active bog) [7130] Transition mires and quaking bogs [7140] Petrifying springs with tufa formation (Cratoneurion) [7220] 	Part of the European site is located within an entirely separate river catchment (Shannon) to the proposed development site (Erne) and the remaining part of the European site are located in separate subcatchments (MacneanTribCuilcaghMountains_SC_010; Swanlinbar_SC_010; Blackwater[Newtowngore]_SC_010) to the proposed development site. Therefore, no surface water connectivity exists between the proposed development site and the European site.	
	 Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) [8110] Siliceous rocky slopes with chasmophytic vegetation [8220] Hamatocaulis vernicosus (Slender Green 	The proposed development site is located within a separate groundwater catchment (Ballintempo) to the European site (Glenade/Dowra; Lough Allen Upland; Anerin-Cuilcagh East; Cladagh-Swanlinbar). Therefore, no effects on groundwater dependent QIs are anticipated.	
	Feather-moss) [6216]	No pathways for direct or indirect effects were identified and therefore the designated site is not considered further in this assessment.	
Lough Gill SAC [001976] 9.5km	 Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150] 	The proposed development site is located entirely outside the boundary of the European Site and therefore there is no potential for direct effects.	No
7.5811	 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] 	The proposed works area is located within a separate surface water catchment (Erne) to the European site (Sligo Bay). No surface water connection exists between the proposed development site and the European site.	



	 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 works area is located over 5km from the designated site. No pathway for effect was identified with regard to the terrestrially dependent QI habitat. No pathways for direct or indirect effects were identified and therefore the designated site is not considered further in this assessment.	
Lough Melvin SAC [000428] 12.8km	 Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355] 	The proposed development site is located entirely outside the boundary of the European Site and therefore there is no potential for direct effects. The European site is located up-catchment and within a separate surface water sub-catchment (Drowes_SC_010) to the proposed development site (Macnean Loughs connector_SC_010). Therefore, no surface water connection exists between the proposed development site and the European site. The proposed works area is located over 12km from the designated site. No pathway for effect was identified with regard to the terrestrially dependent QI habitat. No pathways for direct or indirect effects were identified and therefore the designated site is not considered further in this assessment.	No
Arroo Mountain SAC [001403] 13.7km	 Northern Atlantic wet heaths with Erica tetralix [4010] European dry heaths [4030] Alpine and Boreal heaths [4060] Blanket bogs (* if active bog) [7130] Petrifying springs with tufa formation (Cratoneurion) [7220] 	The proposed development site is located entirely outside the boundary of the European Site and therefore there is no potential for direct effects. The European site is located up-catchment and within a separate surface water sub-catchment (Drowes_SC_010) to the proposed development site (Macnean Loughs connector_SC_010). Therefore, no surface water connection exists between the proposed development site and the European site.	No



	 Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii) [8120] Calcareous rocky slopes with chasmophytic vegetation [8210] 	The proposed development site is located within a separate groundwater catchment (Ballintempo) to the European site (Glenade; Glenaniff; Rossinver). Therefore, no effects on groundwater dependent QI are anticipated. The proposed works area is located over 12km from the designated site. No pathway for effect was identified with regard to the terrestrially dependent QI habitats.	
		No pathways for direct or indirect effects were identified and therefore the designated site is not considered further in this assessment.	
Donegal Bay SPA [004151] 30.2km (94km surface water distance)	 Great Northern Diver (Gavia immer) [A003] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Common Scoter (Melanitta nigra) [A065] Sanderling (Calidris alba) [A144] Wetland and Waterbirds [A999] 	The proposed development site is located entirely outside the boundary of the European Site and therefore there is no potential for direct effects. The proposed development site is within the Erne surface water catchment which discharges to Donegal Bay over 90km surface water distance away. Due to the size and scale of the proposed development, the hydrological distance from the European site and the dilution effect of the intervening waterbodies which include Upper Lough McNean, Lower Lough McNean, Lower Lough Erne and Assaroe Reservoir, pollution related effects are not anticipated. The proposed development site is outside the core foraging range of the SCI species. No disturbance/displacement related effects are anticipated. No pathways for direct or indirect effects were identified and therefore the designated site is not considered further in this assessment.	No



3.1 In-combination Assessment

The proposed development was considered in combination with other plans and projects in the area that could result in cumulative effects on European sites.

A search of the online planning system for Leitrim County Council for existing, proposed and approved projects recent planning applications within the past five years was undertaken on the 01/12/2023 for the townlands of Laghty, Ardmoneen, Carrickrevagh and Moneyduff. Refused, withdrawn and incomplete information applications were not included in the assessment. No planning applications were returned for the townland of Laghty, Ardmoneen or Moneyduff.

The following planning application was returned for Carrickrevagh;

Pl. Ref. 22150 elevational changes to the existing dwelling granted under parent planning ref 03/1396 and upgrade of wastewater treatment system.

The proposed arboretum will be developed within an area where the following forestry felling licence has been applied for;

LM07-FL0030

The following other plans and projects that were considered in the assessment;

• The Leitrim County Development Plan 2023-2029 was reviewed and considered as part of this assessment. The review focused on policies and objectives that relate to Natura 2000 sites.

No pathway for significant effects was identified in relation to any European site as a result of the proposed project when considered on its own. In the review of other plans and projects described above, no additional pathways for effect on European sites were identified as a result of those plans or projects. Neither was there any potential for additional effects resulting from the combination of the various projects and plans in association with the proposed development.



4 Conclusion and Screening Statement

The Appropriate Assessment Screening considered potential effects which may arise as a result of the proposed works at Gelnfarne Forest, Co. Leitrim.

Through an assessment of the pathways for effects and an evaluation of the proposed development, taking account of the processes involved it can be concluded at this stage that there will be no likely significant effects on the qualifying interests or the special conservation interest species of any designated European site.

It is concluded beyond reasonable scientific doubt, in consideration of best scientific knowledge and on the basis of objective information that the proposed project will not result in significant effects on any European site whether direct, indirect, or in-combination, in view of the conservation objectives of the habitats or species for which it was designated, either alone or in-combination with other plans or projects.



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Appendix 1: Proposed Boardwalk Design Drawings



