



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE &
PLANNING

EAST GALWAY ECO PARK

Appropriate Assessment Screening Report

Prepared for:
Galway County Council



Comhairle Chontae na Gaillimhe
Galway County Council

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APPROPRIATE ASSESSMENT SCREENING REPORT

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Abstract: This document is to inform the Competent Authority in carrying out their statutory obligations relating to the Habitats Directive requirement for Appropriate Assessment for plans and projects seeking consent. Appropriate Assessment is required under Article 6 (3) of the Habitats Directive for any project or plan that may give rise to significant effects on a European (Natura 2000) site.

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1. INTRODUCTION

Fehily Timoney and Company (FT)¹ was commissioned by Galway County Council to prepare an Appropriate Assessment Screening Report, as required by Article 6(3) of the Council Directive 92/43/EEC (Habitats Directive). The preparation of the Appropriate Assessment (AA) screening report is for the proposed development of an amenity and biodiversity park at the former landfill in East Galway.

This report presents an examination of whether the proposed project is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is based on best available scientific knowledge. This report has been prepared to inform the competent authority in completing their statutory obligation to carry out a Screening for AA.

1.1 Legislative Context

Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) provides legal protection for habitats and species of European importance. The Directive requires that where a plan or project is likely to have a significant effect on a European Site, while not directly connected with or necessary to the nature conservation management of the site, it will be subject to 'Appropriate Assessment' to identify any implications for the European site in view of the site's Conservation Objectives. Specifically, Article 6(3) of the Habitats Directive states:

"6(3) Any plan or project not directly connected with or necessary to the management of the site (Natura 2000 sites) but likely to have significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

The competent authority must carry out a screening for appropriate assessment to assess, in view of best scientific knowledge, if the development, individually or in combination with another plan or project is likely to have a significant effect on the European site. 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, an appropriate assessment of its implications for the European Site(s) in view of the Site's conservation objectives is required to be carried out.

The provisions of Article 6(3) do not apply where the proposed plan or project is 'connected with or necessary to the management of the site'. In this case, the proposed project is not directly connected with or necessary to the management of any European site(s).

¹ Details on the contributors to this report are provided in Appendix 1.



1.2 Methodology

1.2.1 Guidance

The assessment was conducted in accordance with the following guidance:

- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg (European Commission, 2002).
- This document was updated by Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Commission Notice (2021) Brussels, 28.9.2021 C(2021) 6913 final (European Commission, 2021).;
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin (2009, updated 2010) (Environment Heritage and Local Government, 2009);
- *A guide to habitats in Ireland*, J. A. Fossitt (2000), Heritage Council;
- Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission (2019). Brussels, (2019/C 33/01). OJ C 33, 25.1.2019;
- Interpretation Manual of European Union Habitats. Version EUR 28. (European Commission, 2013);
- OPR Practice Note PN01 Appropriate Assessment Screening for Development Management, (Office of the Planning Regulator, 2021).

1.2.2 Process

The process of determining the likelihood of significant effects from a proposed project on European sites is an iterative process centred around a Source-Pathway-Receptor (S-P-R) model. 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 mechanism is sufficient to conclude that a potential effect is not of any relevance or significance.

- Source(s) – e.g., pollutant run-off, noise, removal of vegetation, etc.;
- Pathway(s) – functional link, or ecological pathway e.g., groundwater connecting to nearby qualifying wetland habitats; and,
- Receptor(s) –the qualifying habitats and species of European sites and ecological resources supporting those habitats/species.

In the context of this report, a source is any identifiable element of the proposed project that is known to interact with the receiving environment. A receptor is the Qualifying Interests (QI)² for an SAC or Special Conservation Interests (SCI)³ for an SPA or an ecological feature that is known to be utilised by the QI/SCI. In practice, the term Qualifying Interests also applies to SCIs (and is used in this document for simplicity). A pathway is any connection or link between the source and the receptor.

² SACs are areas designated under the Habitats Directive to conserve habitats listed in Annex I of the Directive and plant and animal species listed in Annex II. Collectively these are referred to as the 'Qualifying Interests' or 'QIs' of the SAC.

³ SPAs are sites classified under the Birds Directive to protect rare or vulnerable bird species listed in Annex I to the Directive as well as regularly occurring migratory species and wetlands. Wetland habitats that support internationally



The assessment commences with a description of the project, along with a description of the receiving environment and the associated sources for impacts to the receiving environment. All elements of the project are presented including the project location and existing baseline environment. The type of impacts that are likely due to the project (Source) are identified having regard to the spatial and temporal scale of the project, resource requirements and likely emissions. These sources are then used to define the zone of influence (Zol) of the project as detailed in Section 2.3.

The European Commission Notice (2021) on the 'Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC, states that in identifying European sites (Natural 2000 sites), which may be affected by the project, the following should be identified:

- Any European sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;
- Any European sites within the likely zone of influence of the plan or project. European sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g., water) and various types of waste, discharge or emissions of substances or energy;
- European sites whose connectivity or ecological continuity can be affected by the plan or project.

The Zol of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have potential effects on the Qualifying Interests of a European site. The OPR (2021) practice note states that the Zone of Influence must be established on a case-by-case basis using the S-P-R framework and not by arbitrary distances (such as 15 km). Section 3.1 sets out the detailed rationale for the identification of relevant European sites within the Zol based on the sources of impacts arising from the proposed project. Subsequently, an assessment is undertaken with respect to potential connectivity (Pathways) to European Sites and their qualifying interests/special conservation interests are identified.

Having regard to the European Commission Communication on the Precautionary Principle (European Commission, 2021) the:

“absence of scientific evidence on the significant negative effect of an action cannot be used as justification for approval of this action. When applied to Article 6(3) procedure, the precautionary principle implies that the absence of a negative effect on Natura 2000 sites has to be demonstrated before a plan or project can be authorised. In other words, if there is a lack of certainty as to whether there will be any negative effects, then the plan or project cannot be approved.”

Where significant effects are determined to be likely, or where there is uncertainty regarding the likelihood of significant effects, the project will be required under law to be subjected to Appropriate Assessment.

This AA screening is based on best scientific knowledge and has utilised ecological expertise. In addition, a detailed online review of published scientific literature 'grey' literature was conducted. This included a detailed review of the National Parks and Wildlife website including mapping and available reports for relevant sites and in particular sensitive qualifying interests/special conservation interests described and their conservation objectives.

important populations of migratory birds may be coastal or inland. Collectively, these species and habitats are referred to as the 'Special Conservation Interests' of the SPA.



2. DESCRIPTION OF THE PROJECT

2.1 Receiving Environment

The proposed project is located in the townlands of Killagh More, Ballybaun and Ballintober, approximately 2.5km southwest of Kilconnell village, Co. Galway. The proposed project site is approximately 58.3 hectares.

The site currently contains the capped landfill, associated landfill infrastructure, extensive open areas of grassland and woodland, and a network of tracks that can be readily converted to amenity trails. The former landfill site is undergoing aftercare and is being managed by GCC in accordance with an Industrial Emissions (IE) licence enforced by the EPA (W0178-02).

According to survey work carried out by Beo Ecology (2021) the site contains the following habitats (identified according to Fossitt, 2000); buildings and artificial surfaces (BL3), recolonising bare ground (ED3), artificial lakes and ponds (FL8), reed and large sedge swamps (FS1), amenity grassland (GA2), grassy verges (GS2), recolonising bare ground (ED3), wet grassland (GS4), cutover bog (PB4), broadleaved woodland (WD1), mixed broadleaved/conifer woodland (WD2), conifer plantation (WD4), scrub (WS1), immature woodland (WS2). Raford 29 (River Waterbody Code IE_WE_29R010100; Segment Code 29_21) is a first order water body that arises adjacent to the northeast of the proposed project site and flows in a northerly direction alongside the access road within the site. Clooncallis (River Waterbody Code IE_WE_29R010100; Segment code 29_522) Clooncallis merges with Raford 29 approximately 1.2km north-northwest of the site. This section of Raford 29 has been categorised as 'Not at risk' of failing to meet its objectives under the Water Framework Directive by the EPA.

The surrounding area is dominated by improved grassland (510) and wet grassland (540), with areas of cutover bog (630), raised bog (610), bare peat (640), coniferous forest (410), transitional forest (430) and scrub (450) also present, per Tailte Éireann National Land Cover (2018). The grasslands comprise of medium-to-large fields with many areas of low stone walls used for field boundaries. The surrounding area also includes elevated areas, as well as lakes and ponds (820), rivers and streams (810) and nearby turloughs. The closest turlough to the project site is Woodbury Turlough (2km), though this is not a qualifying interest of a SAC. There were no records of Flora Protection Order species within the project site, or within the 10km grid squares the project site occupies (M72, M73). No invasive species, listed under the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 [S.I.447/2011], have been recorded within or adjacent to the project site.

The following field surveys were undertaken to inform this report:

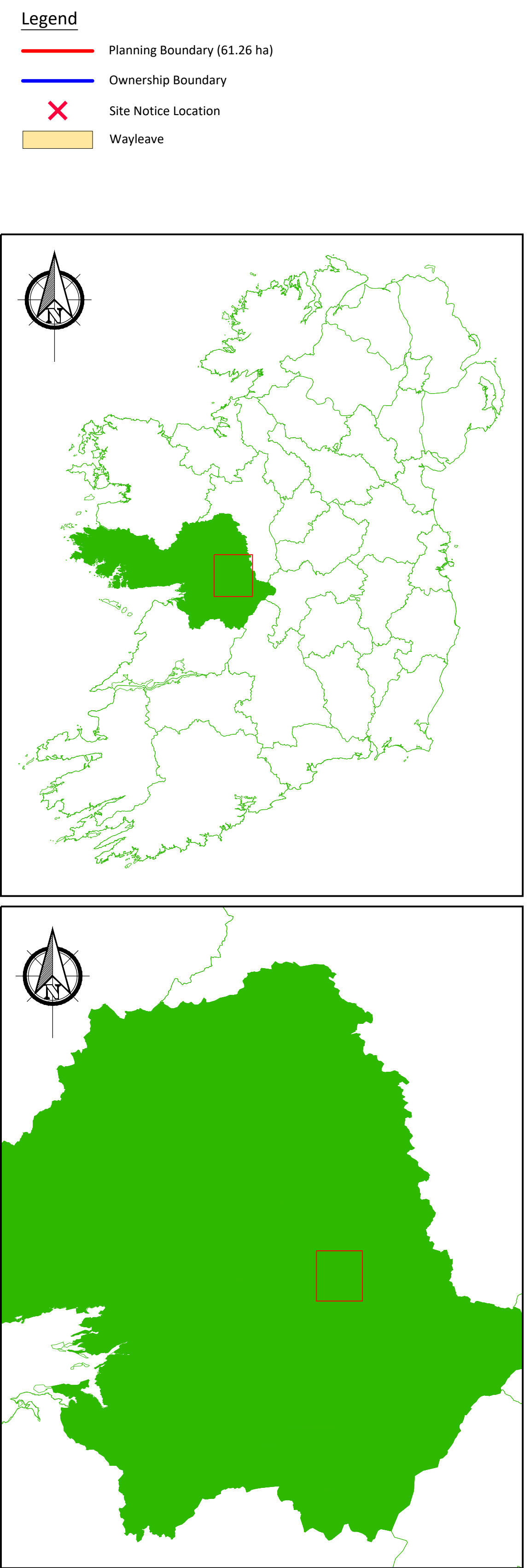
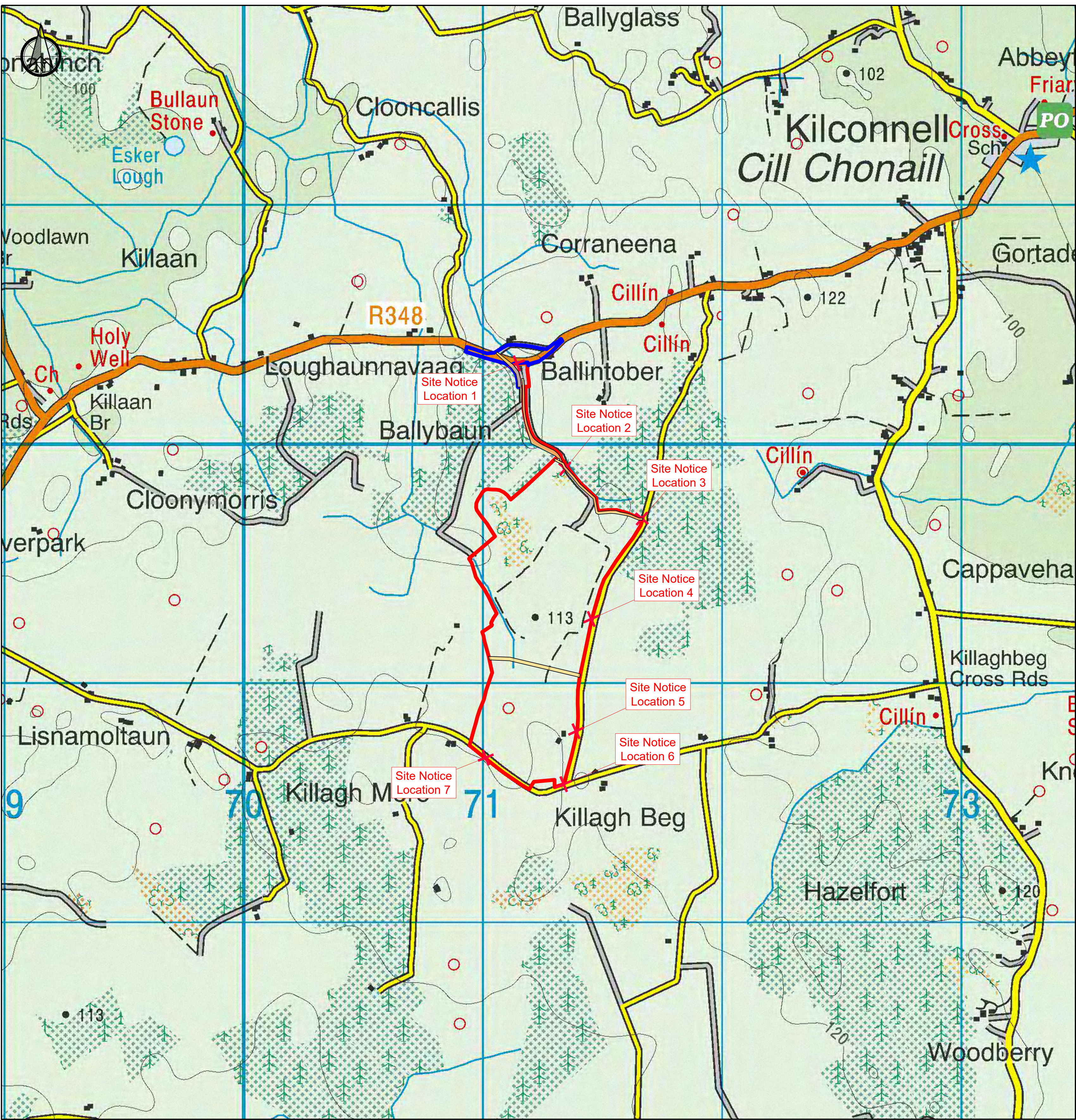
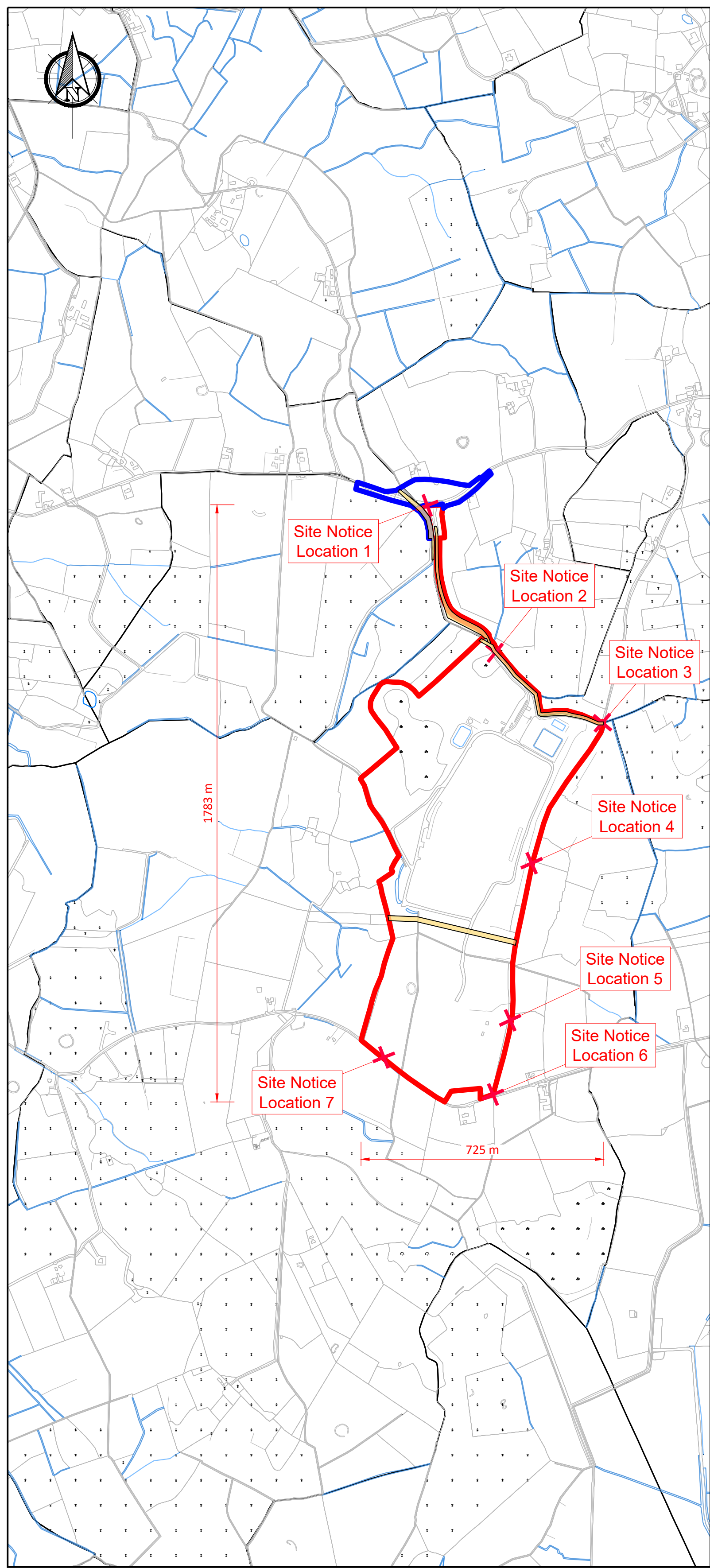
- Mammal survey carried out by Beo Ecology in 2021;
- Breeding bird survey carried out by JL Ecology in 2022;
- Bat Roost Assessment and survey carried out by FGE Consulting in 2021.

The following online resources have been used to inform this report:

- Bat Conservation Ireland (<https://www.batconservationireland.org/>);
- Botanical Society of Britain and Ireland (<https://database.bsbi.org/>);
- Environmental Protection Agency (<https://gis.epa.ie/EPAMaps/>);
- Google Maps (<https://www.google.com/maps>);
- Inland Fisheries Ireland (<https://opendata-figis.hub.arcgis.com/>);



- National Biodiversity Data Centre (<https://maps.biodiversityireland.ie/>);
- National Parks and Wildlife Service (<https://www.npws.ie/>).
- Tailte Éireann (<https://www.tailte.ie/en/>)



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Rev.	Description	App By	Date
A	ISSUE FOR DISCUSSION	RD	09.11.23

PROJECT		CLIENT		
EAST GALWAY ECO PARK		 Comhairle Chontae na Gaillimhe Galway County Council		
SHEET		Date	Project number	Scale (@ A1-)
SITE LOCATION MAP 1:10,000		09.11.23	P22-032	1:10000
		Drawn by	Drawing Number	Rev
		NS	P22-032-0100-0001	A
		Checked by		
		GL		



2.2 Project Description

2.2.1 Description of the Project

Galway County Council (GCC) seek consent for the development of an amenity and biodiversity park to be known as 'East Galway Eco Park' at the former East Galway landfill site situated at Killagh More, Ballybaun (E.D. Killaan), Ballintober (E.D. Killaan), Ballinasloe, Galway. The footprint of the development site is 58.3 hectares.

The former landfill site is undergoing aftercare and is being managed by GCC in accordance with an Industrial Emissions (IE) licence enforced by the EPA (W0178-02).

The proposed project involves the conversion of a pre-existing landfill site into an amenity parkland. A carpark will be developed on the existing paved area, with toilet and changing room facilities constructed adjacent to the carpark. A space will be developed for a mobile café too.

The parklands will contain a pathway constructed on the pre-existing trail within the project site. A number of amenity features will be constructed along the pathway including; an amphitheatre, adventure/sensory play path, pump track, and a fenced-off dog park.

Security fencing will be placed around the former landfill maintenance and operation areas, and around the house to the southeast of the project site.

2.2.2 Scope, Size and Scale

The proposed project will consist of the following works:

- The erection of park entrance signage (11.0 m x 2.1 m and 5.0 m x 2.1 m) at the main entrance to the site.
- The development of road-markings, signage and a traffic barrier arrangement at the point the existing site access road enters the main body of the site, to prevent and minimize conflict between amenity park users and occasional landfill maintenance and aftercare related traffic.
- The installation of fencing to restrict access to former landfill maintenance and operation areas (total length of fencing – 3,825 m).
- The development of an on-site parking areas at a central area at the main body of the site, with 88 no. of bicycle parking spaces, 57 no. of car parking spaces including six no. electric vehicle charging spaces, three no. of accessible parking spaces, one no. accessible electric vehicle charging space and 24 no. electric vehicle ready charging spaces.
- The development of a circulation area for a mobile café (335 m² in area), adjacent to the on-site parking area.
- The development of a toilet and changing room facility on-site (principle dimensions – 12.2m x 3.0m x 2.5 m high).
- The development of an amphitheatre on-site to the rear of the parking and circulation areas (principle dimensions – 18.0 m x 20.0 m)
- The development of a dedicated activity zone at a central area on-site for the carrying out of a variety of recreational activities (4,500 m² in area)
- The development of a pump track at a central area on-site (principle dimensions – 60.0 m x 35.0 m, 2,100 m² in area.)



- The development of a fenced off dog park at a central area on-site (2,000 m² in area), with surrounding fencing and gated access 240 m in length
- The conversion of a network of existing tracks on-site to amenity trails. This network of amenity trails to be developed will interlink all of the proposed development components listed above. The following amenity trails will be developed on-site:
 - Adventure trail (Ca. 1.0 km in distance)
 - Picnic trail (Ca. 0.6 km in distance)
 - Small loop (Ca. 0.9 km in distance)
 - Main loop (Ca. 2.0 km in distance)
 - Perimeter loop (Ca. 3.6 km in distance)
 - Dome trail (Ca. 0.5 km in distance). This dome path will traverse the area of the existing landfill cap on-site.
- The development of an adventure/sensory play path with nature play elements on-site.
- The use of the proposed development site as an amenity and biodiversity park to be known as 'East Galway Eco Park.'

2.2.3 Demolition

Low level demolition works will be required throughout the project site. These works will include excavation of existing gravel and ground to depths of up to 300mm, breaking out of existing asphalt surfaces, trenching for foul water, water supply and electrical cabling, clearance of existing shrub at the main entrance and along existing paths, and the removal of topsoil at the main entrance. There will be additional excavation of ground for post foundations for the dog park (300mm x 300mm x 600mm).

2.2.4 Outline Drainage

The proposed project will consist of over the edge drainage across the project site. Foul water from the toilet facilities will be discharged to a macerator pump prior to discharge to the on-site leachate system. Stream crossing construction works will involve the construction of a single span crossing over the stream. The footprint of the structure will not encroach on the waterbody itself, utilise pre-cast concrete components, and all works will be carried out in dry conditions only.

2.2.5 Road Access

Access to the site will be via the R348. No road upgrades or road widening is required. No additional access roads will need to be constructed.

2.2.6 Waste and Emissions

Waste and emissions will arise from typical concreting and asphaltting construction methods. Additional waste will arise from excavation.

2.2.7 Working Hours and Workforce

The hours of construction activity will avoid unsociable hours and will be agreed with the planning authority in advance of site start. It is anticipated that this will restrict working hours at the site during the construction phase to between 07:00 to 19:00 Monday to Friday inclusive and to between 07:00 to 13:00 on Saturdays. Work on Sundays or public holidays will only be conducted in exceptional circumstances and subject to prior notification insofar as possible with the local community. The construction phase will last for a period of 40-48 weeks.



2.2.8 Services

Electrical cabling will be required to connect the EV charging points in the car park, and from the administration building to the access control barrier.

2.2.9 Construction Materials

Approximate construction materials volumes:

- Base material for entrance - Clause 804 or similar
- 1.2m high timber fencing - 3,500m
- 2.4m high V-mesh paladin fencing - 325m
- Gro-grid infilled with gravel - 2,265m²
- Asphalt surfacing - 87m²
- Quarry dust finish - 5.5km
- Grass/reinforced safagrass/bark mulch surface - 4,500m²
- Linear meres of asphalt for cycle tracks - 280m
- 1.2m high paladin fencing - 240m

2.2.10 Vehicles and Machinery

List of typical machinery/vehicles:

- Tracked excavators
- Mobile crane
- Grader
- Front loader
- Dumper
- Ride-on roller
- Tipper lorry

2.2.11 Fuel and Oil

Refuelling will be required for construction plant/vehicles.



2.3 Potential Interactions of the Proposed Project on the receiving environment

Having regard to the European Commission (2021) guidance document and the OPR (2021) practice note, the potential impacts of any project on the receiving environment can include the following:

- Land Use Change (Size/area/changes to the environment/long term functional use/intensity);
- Surface water run-off carrying suspended silt and contaminants, into local watercourses;
- Project related activities (noise, vibration, lighting, human presence, structures, etc) leading to disturbance / displacement of species.

These potential impacts are further examined in defining the Zone of Influence (Zol) of the project to identify likely significant effects through the Source-Pathway-Receptor assessment (Section 3.1).



Table 2-1: Identification of sources for impacts arising from the proposed project that have potential for interactions with the receiving environment

Project Features ⁴	Spatial and temporal scale of project interactions
Land Use Change (Size / area / changes to the environment / long term functional use / intensity)	<i>Construction Phase</i> The proposed project will develop an amenity area on a pre-existing landfill site. There will be public access to the site with the development of a car park, toilet and changing room facilities, set-down area for a mobile café, and a range of amenities across the trails. The existing tracks on-site will be converted into amenity trails. There will be temporary increased activity due to construction traffic and associated works on the site. <i>Operational Phase</i> The site will be utilised for recreational purposes by members of the public. The site will be maintained year-round with the intention to keep the site suitable for the public and to promote and enhance the ecological value of the site. <i>Decommissioning Phase</i> This is a permanent project. There will be no decommissioning phase.

⁴ 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, 2021), the likely impacts of the project are set out relative to the following project features:

- size (e.g. in relation to direct land-take)
- overall affected area including the area affected by indirect impacts (e.g. noise, turbidity, vibrations)
- physical changes in the environment (e.g. modification of riverbeds or morphology of other water bodies, changes in the density of forest cover)
- changes in the intensity of an existing pressure (e.g. increase in noise, pollution or traffic)
- resource requirements (e.g. water abstraction, mineral extraction)
- emissions (e.g. nitrogen deposition) and waste (and whether they are disposed of on land, water or in the air)
- transportation requirements (e.g. access roads)
- duration of construction, operation, decommissioning, etc.
- temporal aspects (timing of the different stages of a plan or project)



Project Features ⁴	Spatial and temporal scale of project interactions
Surface water run-off carrying suspended silt and contaminants, into local watercourses	<i>Construction Phase</i> During construction there will be resource requirements related to materials such as cement and building waste. The site will utilise a combination of over the edge drainage and natural percolation to ground for the construction phase. The majority of the project site drains into the Rford subcatchment (SC_010), with a small section in the southeast draining into the Suck subcatchment (SC_080). A single stream crossing will be constructed as part of the proposed project along one of the walking trails. This crossing will utilise pre-cast concrete, with works carried out under dry working conditions (i.e. the works area will be isolated from flow to allow the construction). Earthworks will be required in the construction of the activity zone, pump track, dog park and amphitheater. These works will be temporary and span across the entirety of the works. <i>Operational Phase</i> The proposed project will continue to utilise over the edge drainage and natural percolation to ground during its operation. This level of water run-off will be comparable to current levels within the project site. Wastewater from the toilet facilities will be discharged to a macerator pump prior to discharge to the on-site leachate system. <i>Decommissioning Phase</i> This is a permanent project. There will be no decommissioning phase.
Project related activities (noise, vibration, lighting, human presence, structures, etc) leading to disturbance / displacement of species	<i>Construction Phase</i> There will be increased noise and vibrations within the proposed site during construction of the new carpark, toilet and changing room facilities and the conversion of existing trails into amenity pathways, with additional developments throughout the project site located along this pathway. Project related activities are identified to be small-scale-likely to affect the local environment (within 500m). <i>Operational Phase</i> There will be increased noise and activity from public access to the site. Access to the site will be limited to daylight hours (08:30 to 16:30). As such, these activities and effects will be constrained to these times. There will be no additional lighting placed within the site. <i>Decommissioning Phase</i> This is a permanent project. There will be no decommissioning phase.



3. SCREENING FOR APPROPRIATE ASSESSMENT

3.1 Identification of European Sites within the Zone of Influence of the Proposed Project

The OPR (2021) AA Screening practice note states that the Zone of Influence must be established on a case-by-case basis using the Source-Pathway-Receptor model. The S-P-R model has been used to identify the ZoI to ensure that relevant European sites are identified. The S-P-R model minimises the risk of overlooking distant or obscure effect pathways, while also avoiding an over reliance on buffer zones (e.g. 15 km), within which all European sites should be considered. This approach follows the DoEHLG (2009 rev 2010) guidance on AA which states that:

“For projects, the distance could be much less than 15 km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects”.

In order for an effect to occur all three elements of this mechanism must be in place. The absence of one of the elements of the mechanism means there is no likelihood for the effect to occur. The potential impacts of the proposed development are set out in Section 2.3 of this report. The impact is essentially the ‘source’ in the S-P-R model.

These impacts may be very localised and confined to the proposed project site with no potential connectivity to a European site and therefore no potential for effects. Alternatively, where an ecological or functional pathway exists, they may give rise to a potential effect to a Qualifying Interest of a European site. This section of the report identifies the potential pathways to European sites emanating from these potential sources of impact.

The dominant ecological pathways to consider are:

- Direct physical interactions or changes to the local environment;
- Air dispersal (noise, dust, odour emissions etc.);
- Hydrological interactions; and
- Dispersal patterns of mobile species.

The potential impacts of the proposed project on the receiving environment (identified in Table 2.1) are as follows:

- Land- Use change
- Surface water run-off; and
- Project related activities (noise, vibration, lighting, human presence, structures, etc) leading to disturbance / displacement of species.



The European Commission Notice (2021) on the 'Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC, states that in identifying European sites (Natural 2000 sites), which may be affected by the project, the following should be identified:

- Any European sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;
- Any European sites within the likely zone of influence of the plan or project. European sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g., water) and various types of waste, discharge or emissions of substances or energy;
- European sites whose connectivity or ecological continuity can be affected by the plan or project.

As such the potential impacts of the project as presented in Table 2.1 are assessed under the following criteria to determine likely zone of influence or ecological connectivity:

- Potential effects on watercourses with hydrological connectivity to European sites;
- Potential effects to groundwater / hydrogeology with connectivity to European sites;
- Potential effects to mobile SCI from surrounding SPAs - all SPA's within 15 km and SPA's within 25km designed for Greylag and Barnacle Geese were examined using Geographic Information System (GIS) mapping as this represents the species core foraging ranges;
- Potential effect to mobile QI species based on the known home ranges of such species e.g. for otter any SAC's within 10km that are designated for otter were considered;
- European sites geographically overlapping or adjacent to any of the actions or aspects of the proposed project (noise, lighting and dust).

The findings of the ZOI assessment are presented in Table 3.1.



Table 3-1: Screening assessment of the potential effects arising from the proposed project on European sites within the Zone of Influence and Pathway Consideration Zone (listed according to distance)

Site Code	Site Name	Distance (km)	Qualifying Features (qualifying interests & special conservation interests)	Potential Effects	Pathway for Significant Effects
000297	Lough Corrib SAC	10.9	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110], Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130], Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140], Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-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], Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the	There are no hydrological pathways nor any other vectors for the sources identified in Section 2.3. The SAC and proposed project site are located in different sub-catchments. The project site is outside the range of the mobile species, Lesser Horseshoe Bat (10km5). It is possible that the site is within the range for otter, although the distance between sites, availability of suitable habitat in the immediate vicinity of the SAC and the presence of a road network between the proposed site and the SAC makes it unlikely that an individual would travel between the two. Based on the nature of the works and the distance of the SAC to the project site, there are no sources for effects with pathways to this site. Therefore, no further consideration is required.	No

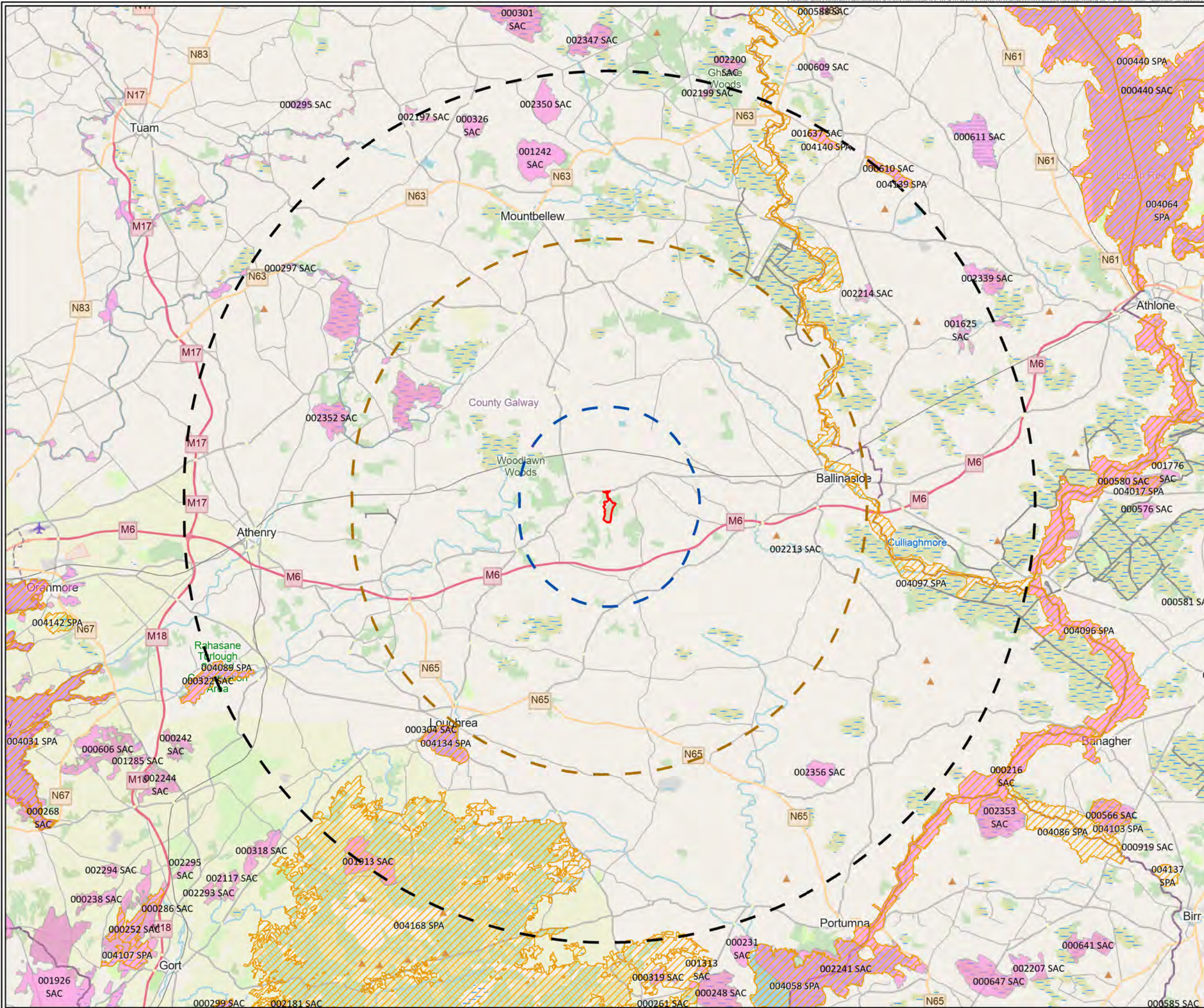
⁵ Collins, J. (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London.



Site Code	Site Name	Distance (km)	Qualifying Features (qualifying interests & special conservation interests)	Potential Effects	Pathway for Significant Effects
			Rhynchosporion [7150], Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210], Petrifying springs with tufa formation (Cratoneurion) [7220], Alkaline fens [7230], Limestone pavements [8240], Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0], Bog woodland [91D0], Margaritifera margaritifera (Freshwater Pearl Mussel) [1029], Austropotamobius pallipes (White-clawed Crayfish) [1092], Petromyzon marinus (Sea Lamprey) [1095], Lampetra planeri (Brook Lamprey) [1096], Salmo salar (Salmon) [1106], Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303], Lutra lutra (Otter) [1355], Najas flexilis (Slender Naiad) [1833], Hamatocaulis vernicosus (Slender Green Feather-moss) [6216]		
002213	Glenloughan Esker SAC	10.9	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]	The site is designated for terrestrial habitats. There are no sources for effects with pathways to this site. Therefore, no further consideration is required.	No



Site Code	Site Name	Distance (km)	Qualifying Features (qualifying interests & special conservation interests)	Potential Effects	Pathway for Significant Effects
004097	River Suck Callows SPA	12.1	Whooper Swan (<i>Cygnus cygnus</i>) [A038], Wigeon (<i>Anas penelope</i>) [A050], Golden Plover (<i>Pluvialis apricaria</i>) [A140], Lapwing (<i>Vanellus vanellus</i>) [A142], Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395], Wetland and Waterbirds [A999]	This site is designated for waterbird species that winter in Ireland, relying on wetlands to feed. This habitat type is not within the proposed project site. The following QI species are present year-round in Ireland; Whooper Swan, Golden Plover, and Lapwing. Whooper Swan have been recorded breeding on lakes in the midlands and in Northern Ireland. Golden Plover breed in heather moors, blanket bogs and acidic grasslands, limited to the uplands in the northwest of Ireland. Lapwing breed on open farmland. These habitat types are not within the proposed project site. No further consideration is required.	No
000322	Rahasane Turlough SAC	22.62	Turloughs [3180]	This site is hydrologically linked to the project site through the Ráford River. Due to the scale of the project, use of pre-cast concrete over a single watercourse crossing, the requirement to construct the bridge crossing under dry works conditions and temporary nature of the construction works, there is no pathway for significant effects.	No



- Legend**
- Site Boundary
 - 5km Site Buffer
 - 15km Site Buffer
 - 25km Site Buffer
 - Special Area of Conservation (SAC)
 - Special Protection Area (SPA)

TITLE: Special Areas of Conservation and Special Protected Areas	
PROJECT: East Galway Eco Park Development	
FIGURE NO: 3-1	
CLIENT: Galway County Council	
SCALE: 1:225,000	REVISION: 0
DATE: 2/19/2024	PAGE SIZE: A3



3.2 Screening Conclusion

The results of the S-P-R modelling process identified that, given the scale and nature of the potential sources identified in Table 2.1, there are no likely significant effects identified to any European sites. The AA screening process has considered potential effects which may arise during all phases of the proposed project. Through an assessment of the pathways for effects and an evaluation of the sources for impacts, taking account of the processes involved and the distance of separation from European sites, it has been evaluated that there are no likely significant effects on the qualifying interests, special conservation interest or the conservation objectives of any designated European site.



4. REFERENCES

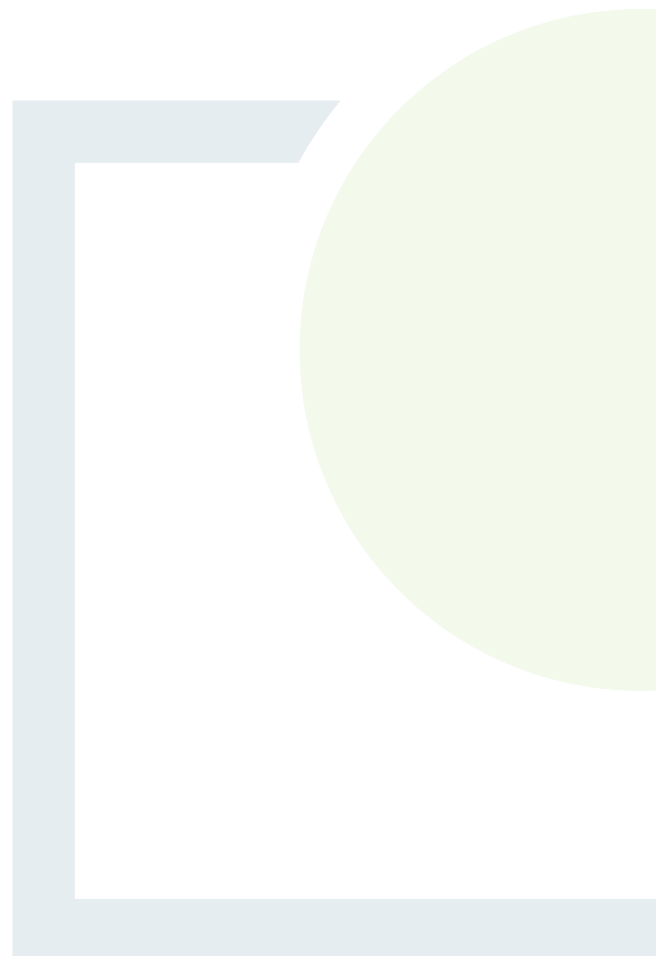
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APPENDIX 1

Statement of Authority



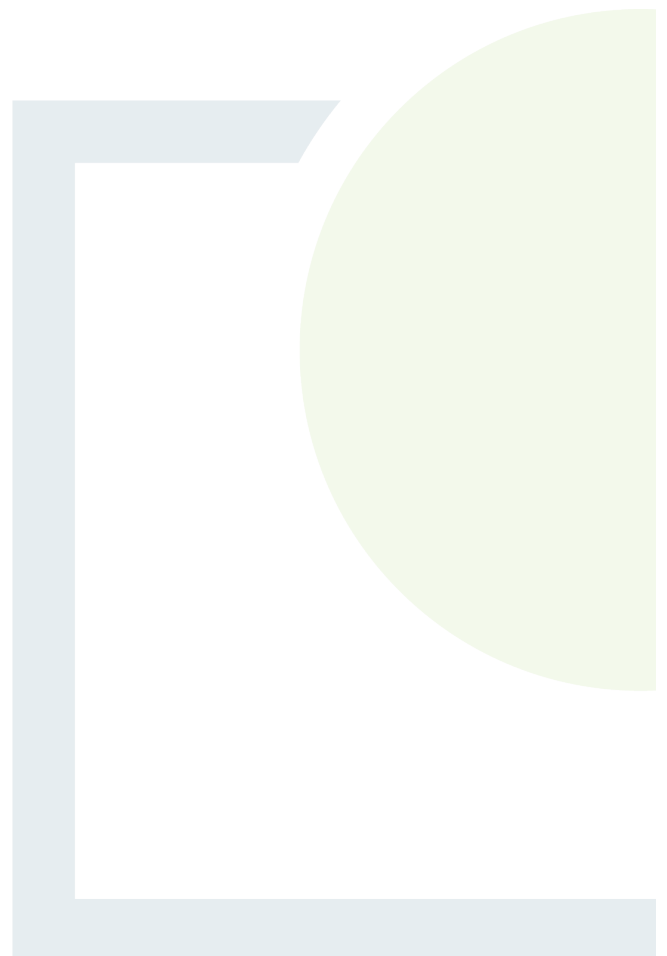
Surveyor	Surveys Completed	Biography
Jack Glennon	Report Author	Jack is a Graduate Ecologist with over 1 year's previous experience in the environmental planning sector. He has competency in undertaking a range of ecological surveys including ornithological, habitat, mammal and invasive species surveys. He has produced a number of reports based on the findings of these surveys including Appropriate Assessment Screenings, Breeding Bird Reports and Invasive Species Management Plans.
Rita Mansfield	Report Reviewer	Rita is a Principal Ecologist and Project Manager with 19 years' previous experience as a technical lead within the environmental and planning services sector. She specialises in statutory consent and environmental assessment for large scale public infrastructure projects in the energy, water (including flood relief schemes) and transport sectors. She is a qualified ecologist with experience in environmental impact assessment, planning applications (conventional and strategic infrastructure development), climate adaptation, Appropriate Assessment, foreshore licensing, Water Framework Directive, integrated catchment management, and stakeholder engagement. Rita has held numerous licences under the Wildlife Act and Habitats Directive for disturbance to species which included mitigation (e.g. construction of artificial otter holt, bat exclusion). Rita has provided advice on ecological / environmental design to various private and public sector clients, which included the development of contract requirements for Transport Infrastructure Ireland (TII) for contracts tendered using both the PPP and D&B.



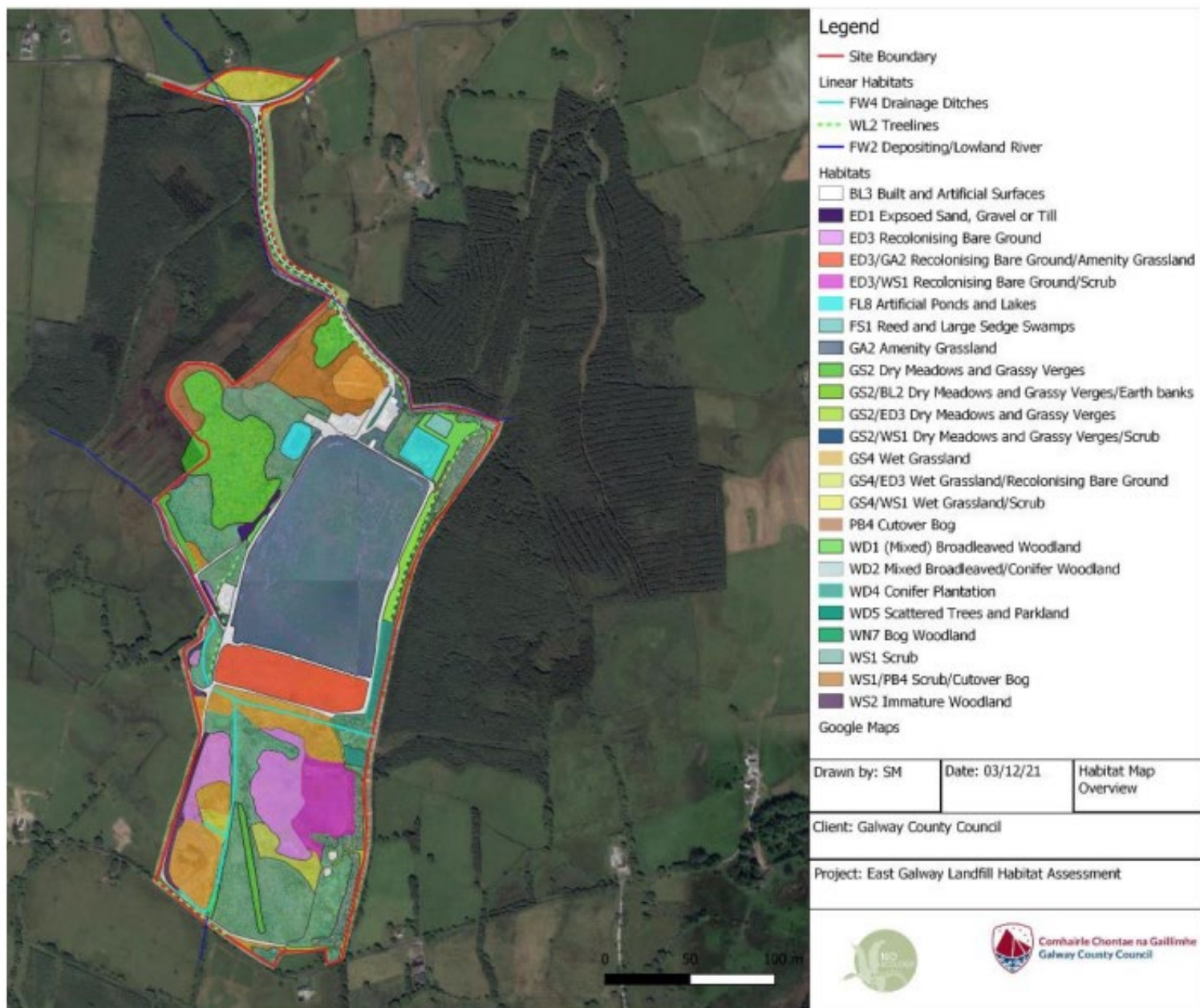
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APPENDIX 2

Habitat map



Proposed Project Site Habitat Map

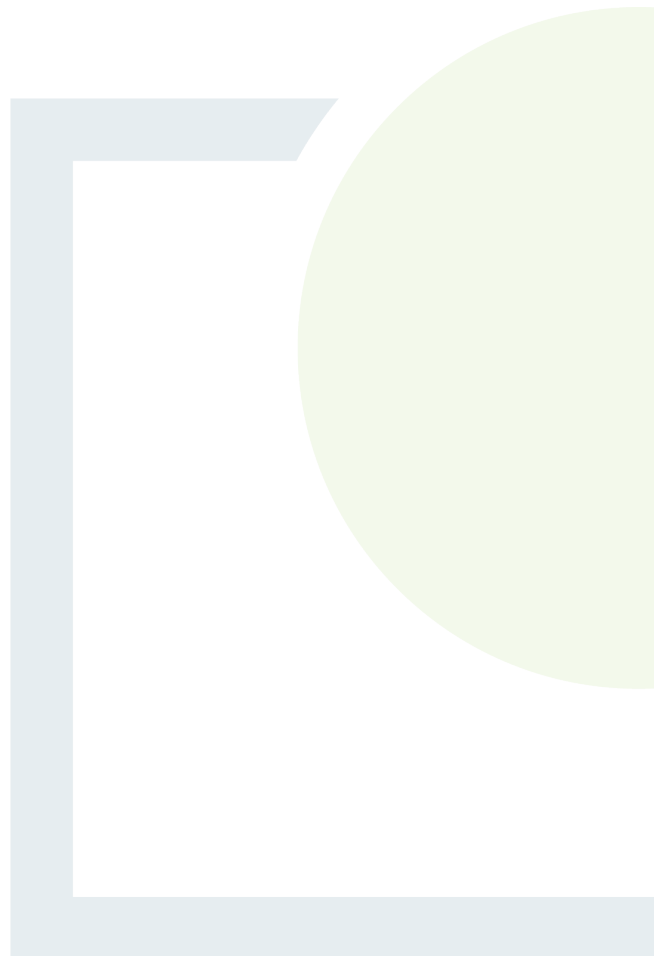




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APPENDIX 3

Background Information on
European Sites



European Sites within the Zone of Influence of the project including their Qualifying Interests, Known Threats and Pressures

Site Code	Site Name	Qualifying Feature	Pressures Codes	Known Threats and Pressures
000297	Lough Corrib SAC	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110], Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> [3130], Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140], Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260], Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210], <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410], Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the <i>Rhynchosporion</i> [7150], Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210], Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220], Alkaline fens [7230], Limestone pavements [8240], Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0], Bog woodland [91D0], <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029], <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092], <i>Petromyzon marinus</i> (Sea Lamprey) [1095], <i>Lampetra planeri</i> (Brook Lamprey) [1096], <i>Salmo salar</i> (Salmon) [1106], <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303], <i>Lutra lutra</i> (Otter) [1355], <i>Najas flexilis</i> (Slender Naiad) [1833], <i>Hamatocaulis vernicosus</i> (Slender Green Feather-moss) [6216]	A04, C01.01, E01.01, J02.15, A04.03, A10.01, B01, E01.03, D01, D03.01.02, A02.01, C01.03.02, J02.01.03, H01.08, I01, A08, G05, E03.01	Grazing, Sand and gravel extraction , Continuous urbanisation, Other human induced changes in hydraulic conditions, Abandonment of pastoral systems lack of grazing, Removal of hedges and copses or scrub, Forest planting on open ground, Dispersed habitation, Roads, paths and railroads, Piers or tourist harbours or recreational piers, Agricultural intensification, Mechanical removal of peat, Infilling of ditches, dykes, ponds, pools, marshes or pits, Diffuse pollution to surface waters due to household sewage and waste waters, Invasive non-native species, Fertilisation, Other human intrusions and disturbances , Disposal of household or recreational facility waste
002213	Glenloughaun Esker SAC	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]	A02.01, I02, A08, B01.01, A04, A04.01.03, A04.03, C01.01	Agricultural intensification, Problematic native species, Fertilisation, Forest planting on open ground (native trees), Grazing, Intensive horse grazing, Abandonment of pastoral systems lack of grazing, Sand and gravel extraction

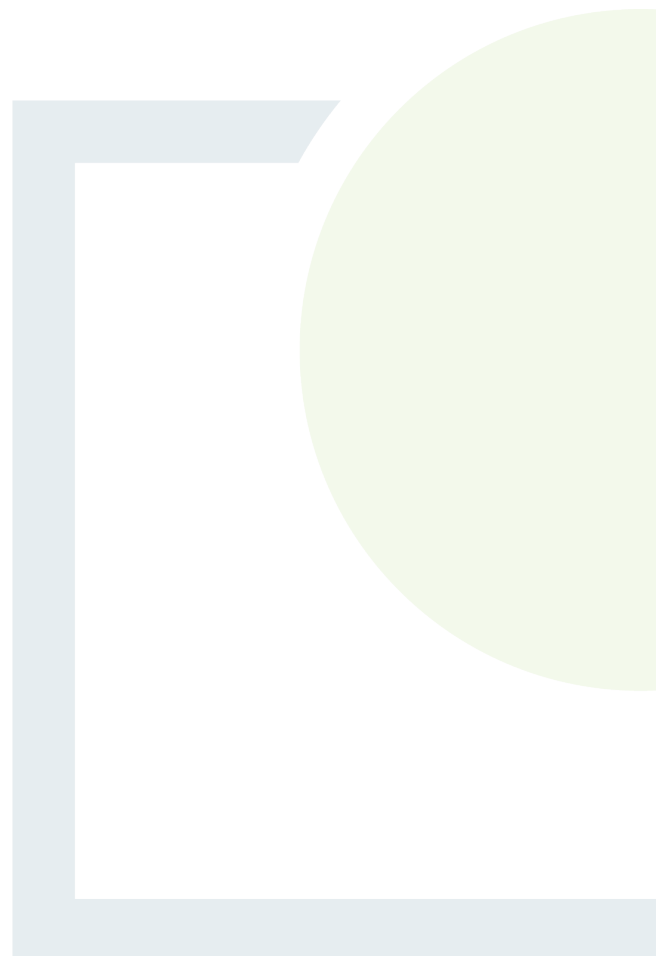
Site Code	Site Name	Qualifying Feature	Pressures Codes	Known Threats and Pressures
004097	River Suck Callows SPA	Whooper Swan (<i>Cygnus cygnus</i>) [A038], Wigeon (<i>Anas penelope</i>) [A050], Golden Plover (<i>Pluvialis apricaria</i>) [A140], Lapwing (<i>Vanellus vanellus</i>) [A142], Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395], Wetland and Waterbirds [A999]	A04, A03, F02.03, A08, B, G01.01, F03.01, E01.03	Fertilisation, Sylviculture, forestry, Nautical sports, Hunting, Dispersed habitation
000322	Rahasane Turlough SAC	Turloughs [3180]	E03.01, A10.01, A04.01.05, A02.01, H01.08, A08, X, F03.01, H02.06, J02.01, J02.10, J02.05, E03.03	Disposal of household or recreational facility waste, Removal of hedges and copses or scrub, Intensive mixed animal grazing, Agricultural intensification, Diffuse pollution to surface waters due to household sewage and waste waters, Fertilisation, No threats or pressures, Hunting, Diffuse groundwater pollution due to agricultural and forestry activities, Landfill, land reclamation and drying out, general, Management of aquatic and bank vegetation for drainage purposes, Modification of hydrographic functioning, general, Disposal of inert materials



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APPENDIX 4

Further Information on the
Qualifying Interests of SACs
That Have Undergone
Assessment



EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[1029]	Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)	The pressures facing this species come from a wide variety of sources (e.g. pollution from urban wastewater, development activities, farming and forestry), often quite removed from the species' habitat. Flow changes, caused by land drainage are also a significant pressure facing the species.	A26, A31, B23, B27, C05, D02, F12, F28, F31, F33	Agricultural activities generating diffuse pollution to surface or ground waters, Drainage for use as agricultural land, Forestry activities generating pollution to surface or ground waters, Modification of hydrological conditions, or physical alteration of water bodies and drainage for forestry (including dams), Peat extraction, Hydropower (dams, weirs, run-off-the-river), including infrastructure, Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water, Modification of flooding regimes, flood protection for residential or recreational development, Other modification of hydrological conditions for residential or recreational development, Abstraction of ground and surface waters (including marine) for public water supply and recreational use.	Surface water dependent. Highly sensitive to hydrological change. Very highly sensitive to pollution.
[1092]	White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	The main pressures facing this species is related to the non-indigenous crayfish species (NICS) and Crayfish Plaque, a waterborne disease specific to freshwater crayfish.	I01, I05	Invasive alien species of Union concern, Plant and animal diseases, pathogens and pests	Invasive species, disease, surface water dependent. Highly sensitive to hydrological change. Very highly sensitive to pollution.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[1095]	Sea Lamprey(Petromyzon marinus)	Most of the pressures on Sea Lampreys are associated with hydropower infrastructure, reduction of prey populations due to overharvesting, drainage and the use of both natural and synthetic fertilisers. Changes in rainfall due to climate change is also considered a significant pressure on the species.	A19, A20, A31, D02, G01, N01, N02, N03, X0	Application of natural fertilisers on agricultural land, Application of synthetic (mineral) fertilisers on agricultural land, Drainage for use as agricultural land, Hydropower (dams, weirs, run-off-the-river), including infrastructure, Marine fishing and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species, Temperature changes (e.g. rise of temperature & extremes) due to climate change, Increases or changes in precipitation due to climate change, Threats and pressures from outside the Member State	Marine water dependent. Low sensitivity to hydrological changes. Coastal development, trampling from recreational activity.
[1096]	Brook Lamprey (Lampetra planeri)	Most of the pressures on Brook Lampreys are associated with drainage for agriculture, the use of both natural and synthetic fertilisers, tree removal. Infrastructure related to hydropower along with pollution to ground and surface water and the discharge of waste water are also considered pressures.	A19, A20, A31, B09, D02, F11, F12, N01, N02	Application of natural fertilisers on agricultural land, Application of synthetic (mineral) fertilisers on agricultural land, Drainage for use as agricultural land, Clear-cutting, removal of all trees, Hydropower (dams, weirs, run-off-the-river), including infrastructure, Pollution to surface or ground water due to urban runoffs, Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water, Temperature changes (e.g. rise of temperature & extremes) due to climate change	Surface water dependent. Highly sensitive to hydrological change. Availability of suitable spawning ground is a considerable issue for the species.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[1106]	Salmon (<i>Salmo salar</i>)	Known pressures include exploitation at sea in commercial fisheries, interceptory fisheries in coastal waters, aquaculture and predation. In addition, the negative influence of climate change on prey structure as well as alterations in habitat and water quality are also pressures on the species.	A25, A26, B23, D02, F12, F28, G11, G19, G20, I02, J01, K05, L06, N01	Agricultural activities generating point source pollution to surface or ground waters, Agricultural activities generating diffuse pollution to surface or ground waters, Forestry activities generating pollution to surface or ground waters, Hydropower (dams, weirs, run-off-the-river), including infrastructure, Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water, Modification of flooding regimes, flood protection for residential or recreational development, Illegal harvesting, collecting and taking, Other impacts from marine aquaculture, including infrastructure, Abstraction of water, flow diversion, dams and other modifications of hydrological conditions for freshwater aquaculture, Other invasive alien species (other than species of Union concern), Mixed source pollution to surface and ground waters (limnic and terrestrial), Physical alteration of water bodies, Interspecific relations (competition, predation, parasitism, pathogens), Temperature changes (e.g. rise of temperature & extremes) due to climate change.	Disease, parasites and barriers to movement.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[1303]	Lesser horseshoe bat (<i>Rhinolophus hipposideros</i>)	The pressures facing Lesser Horseshoe Bats are associated with human disturbance (e.g. noise, light and heat pollution, construction or conversion of urban and recreational areas, including the removal of small landscape features and trees).	A05, A14, B09, F01, F02, F24, H08, L06, M08	Removal of small landscape features for agricultural land parcel consolidation, Livestock farming (without grazing), Clear-cutting, removal of all trees, Conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions), Construction or modification (e.g. of housing and settlements) in existing urban or recreational areas, Residential or recreational activities and structures generating noise, light, heat or other forms of pollution, Other human intrusions and disturbance not mentioned above (Dumping, accidental and deliberate disturbance of bat roosts (e.g. caving)), Interspecific relations (competition, predation, parasitism, pathogens), Flooding (natural processes)	Temperature fluctuations in their roosts. Resource availability. Habitat connectivity. Lighting and noise effects. Urbanisation.
[1355]	Otter (<i>Lutra lutra</i>)	There are no pressures facing this species	Xxp, Xxt	No pressures, No threats	Surface and marine water dependent. Moderately sensitive to hydrological change. Sensitivity to pollution.
[1833]	Slender Naiad (<i>Najas flexilis</i>)	The species is pressured by enrichment (eutrophication), acidification, peatland damage and the physical alteration of water bodies.	A25, A26, B23, C05, F12, F33, I02, K04, K05	Agricultural activities generating point source pollution to surface or ground waters, Agricultural activities generating diffuse pollution to surface or ground waters, Forestry activities generating pollution to surface or ground waters, Peat extraction, Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water,	Changes in management. Changes in nutrient or base status. Moderately sensitive to hydrological change.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
				Abstraction of ground and surface waters (including marine) for public water supply and recreational use, Other invasive alien species (other than species of Union concern), Modification of hydrological flow, Physical alteration of water bodies	
[3110]	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	This habitat is under significant pressure from eutrophication, and from drainage and other damage to peatland. Damage to peatland can result in hydrological changes in lakes, increased organic matter, water colour and turbidity, changes in sediment characteristics, acidification and enrichment.	A26, A31, B23, B27, C05, F12	Agricultural activities generating diffuse pollution to surface or ground waters, Drainage for use as agricultural land, Forestry activities generating pollution to surface or ground waters, Modification of hydrological conditions, or physical alteration of water bodies and drainage for forestry (including dams), Peat extraction, Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
[3130]	Oligotrophic to mesotrophic standing waters with vegetation (Littorelletea uniflorae and/or Isoeto-Nanojuncetea)	The majority of pressures this habitat is under is associated with drainage, agriculture, peat extraction, forestry and wastewaters.	A25, A26, B23, C05, F12, I02, K04, K05	Agricultural activities generating point source pollution to surface or ground waters, Agricultural activities generating diffuse pollution to surface or ground waters, Forestry activities generating pollution to surface or ground waters, Peat extraction, Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water, Other invasive alien species (other than species of Union concern), Modification of hydrological flow, Physical alteration of water bodies	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[3140]	Hard oligo-mesotrophic waters with benthic vegetation of muskgrass(<i>Chara</i> spp.)	The hard-water lake habitat is under significant pressure from eutrophication, the primary sources of nutrient and organic pollution being agriculture and municipal and industrial wastewaters.	A25, A26, A31, B23, B27, C05, F12, F13, F33, I02	Agricultural activities generating point source pollution to surface or ground waters, Agricultural activities generating diffuse pollution to surface or ground waters, Drainage for use as agricultural land, Forestry activities generating pollution to surface or ground waters, Modification of hydrological conditions, or physical alteration of water bodies and drainage for forestry (including dams), Peat extraction, Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water, Plants, contaminated or abandoned industrial sites generating pollution to surface or ground water, Abstraction of ground and surface waters (including marine) for public water supply and recreational use, Other invasive alien species (other than species of Union concern)	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
[3260]	Water courses of plain to montane levels with vegetation(<i>Ranunculo fluitantis</i> and <i>Callitricho-Batrachion</i>)	The majority of pressures on this habitat are caused by damage through hydrological and morphological change, eutrophication and other water pollution.	A25, A26, B23, C05, F11, F12, F13, K01, K04, K05	Agricultural activities generating point source pollution to surface or ground waters, Agricultural activities generating diffuse pollution to surface or ground waters, Forestry activities generating pollution to surface or ground waters, Peat extraction, Pollution to surface or ground water due to urban runoffs, Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water,	Surface water dependent Highly sensitive to hydrological change and direct physical interactions.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
				Plants, contaminated or abandoned industrial sites generating pollution to surface or ground water, Abstraction from groundwater, surface water or mixed water, Modification of hydrological flow, Physical alteration of water bodies	
[6210]	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)* important orchid sites	The significant pressures related to this habitat are mainly associated with agricultural intensification causing loss of species-rich communities, or abandonment of farmland resulting in succession to scrub.	A02, A09, A10, C01, I02, I04	Conversion from one type of agricultural land use to another (excluding drainage and burning), Intensive grazing or overgrazing by livestock, Extensive grazing or undergrazing by livestock, Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell), Other invasive alien species (other than species of Union concern), Problematic native species	Changes in management such as grazing regime. Changes in nutrient or base status. Changes to vegetation composition. Introduction of alien species.
[6410]	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	The main pressures on the habitat are associated with agricultural intensification (e.g. land drainage, fertiliser application), undergrazing and forestry.	A02, A06, A10, A14, A31, B01	Conversion from one type of agricultural land use to another (excluding drainage and burning), Abandonment of grassland management (e.g. cessation of grazing or of mowing), Extensive grazing or undergrazing by livestock, Livestock farming (without grazing), Drainage for use as agricultural land, Conversion to forest from other land uses, or afforestation (excluding drainage)	Changes in management such as grazing regime. Changes in nutrient or base status. Changes to vegetation composition. Introduction of alien species.
[7110]	Active raised bogs	The main pressures on active raised bog are peat extraction, drainage, afforestation and burning.	A11, B01, C05, K02, N01	Burning for agriculture, Conversion to forest from other land uses, or afforestation (excluding drainage), Peat extraction, Drainage, Temperature changes (e.g. rise of temperature & extremes) due to climate change	Surface water interactions. Groundwater isolated system with sensitivities related to the bog basin. Drainage and land use management are the key things.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[7120]	Degraded raised bogs still capable of natural regeneration	The main pressure on degraded bogs come from peat extraction, drainage, afforestation and burning.	A11, B01, C05, K02, N01	Burning for agriculture, Conversion to forest from other land uses, or afforestation (excluding drainage), Peat extraction, Drainage, Temperature changes (e.g. rise of temperature & extremes) due to climate change	Surface water interactions. Groundwater isolated system with sensitivities related to the bog basin. Drainage and land use management are the key things.
[7150]	Depressions on peat substrates of the Rhynchosporion	The main pressures on the habitat are associated with impacts on the supporting bog habitats, especially overgrazing, burning, peat extraction, drainage and conversion to forestry.	A09, A11, B01, C05, K02, N01	Intensive grazing or overgrazing by livestock, Burning for agriculture, Conversion to forest from other land uses, or afforestation (excluding drainage), Peat extraction, Drainage, Temperature changes (e.g. rise of temperature & extremes) due to climate change	Surface and ground water interactions. Drainage and land use management are the key things.
[7210]	Calcareous fens with species of mariscus sedge and bog cotton (Cladium mariscus and Caricion davallianae)	Overgrazing, groundwater pollution, abandonment of grassland management and drainage are pressures associated with this habitat.	A06, A09, C05, J01, K01, K02, K04	Abandonment of grassland management (e.g. cessation of grazing or of mowing), Intensive grazing or overgrazing by livestock, Peat extraction, Mixed source pollution to surface and ground waters (limnic and terrestrial), Abstraction from groundwater, surface water or mixed water, Drainage, Modification of hydrological flow	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.
[7220]	Petrifying springs with tufa formation (Cratoneurion)	Pressures related to this habitat are associated with drainage, pollution to ground and surface waters, recreational activities, infrastructure, overgrazing and abandonment of grassland management.	A06, A10, E01, F07, H08, J01, K02, K04, L02	Abandonment of grassland management (e.g. cessation of grazing or of mowing), Extensive grazing or undergrazing by livestock, Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels), Sports, tourism and leisure activities, Other human intrusions and disturbance not mentioned above	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
				(Dumping, accidental and deliberate disturbance of bat roosts (e.g. caving)), Mixed source pollution to surface and ground waters (limnic and terrestrial), Drainage, Modification of hydrological flow, Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices)	
[7230]	Alkaline fens	The main pressures facing this habitat are land abandonment (and associated succession), overgrazing, drainage and pollution.	A06, A09, A26, J01, K01, K02, K04, L02, N02, N03	Abandonment of grassland management (e.g. cessation of grazing or of mowing), Intensive grazing or overgrazing by livestock, Agricultural activities generating diffuse pollution to surface or ground waters, Mixed source pollution to surface and ground waters (limnic and terrestrial), Abstraction from groundwater, surface water or mixed water, Drainage, Modification of hydrological flow, Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices), Temperature changes (e.g. rise of temperature & extremes) due to climate change, Increases or changes in precipitation due to climate change	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.
[8240]	Limestone pavements	The main pressures facing this habitat are associated with conversion to agricultural land and housing construction, as well as scrub encroachment caused by undergrazing.	A01, A10, C01, F01, I02	Conversion into agricultural land (excluding drainage and burning), Extensive grazing or undergrazing by livestock, Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell),	Erosion, overgrazing and recreation.

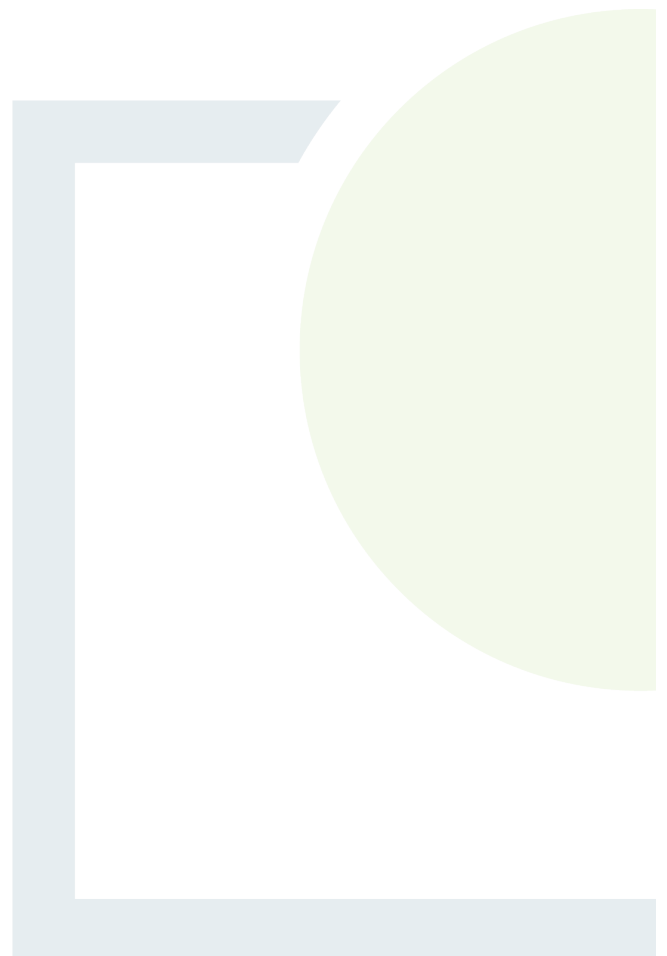
EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
				Conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions), Other invasive alien species (other than species of Union concern)	
[91A0]	Old sessile oak woods with Ilex and Blechnum in the British Isles	The significant pressure facing this habitat are associated with invasive non-native species such as Rhododendron ponticum, cherry laurel (Prunus laurocerasus) and beech (Fagus sylvatica) and overgrazing by deer.	A09, B09, I02, I04, M07	Intensive grazing or overgrazing by livestock, Clear-cutting, removal of all trees, Other invasive alien species (other than species of Union concern), Problematic native species, Storm, cyclone	Changes in management. Changes in nutrient or base status. Introduction of alien species.
[91D0]	Bog woodland	Pressures facing this habitat are related to drainage, invasive species and burning.	A11, B09, C05, I02, K01	Burning for agriculture, Clear-cutting, removal of all trees, Peat extraction, Other invasive alien species (other than species of Union concern), Abstraction from groundwater, surface water or mixed water	Changes in management. Changes in nutrient or base status. Introduction of alien species.
[3180]	turloughs	The main pressures associated with this habitat are related to drainage, groundwater pollution and ecologically unsuitable grazing	A09, A26, A31	Intensive grazing or overgrazing by livestock, Agricultural activities generating diffuse pollution to surface or ground waters, Drainage for use as agricultural land	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.



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APPENDIX 5

Further Information on the
Special Conservation Interests
of SPAs That Have Undergone
Assessment



Special Conservation Interests and Vulnerabilities of SPAs that have undergone assessment

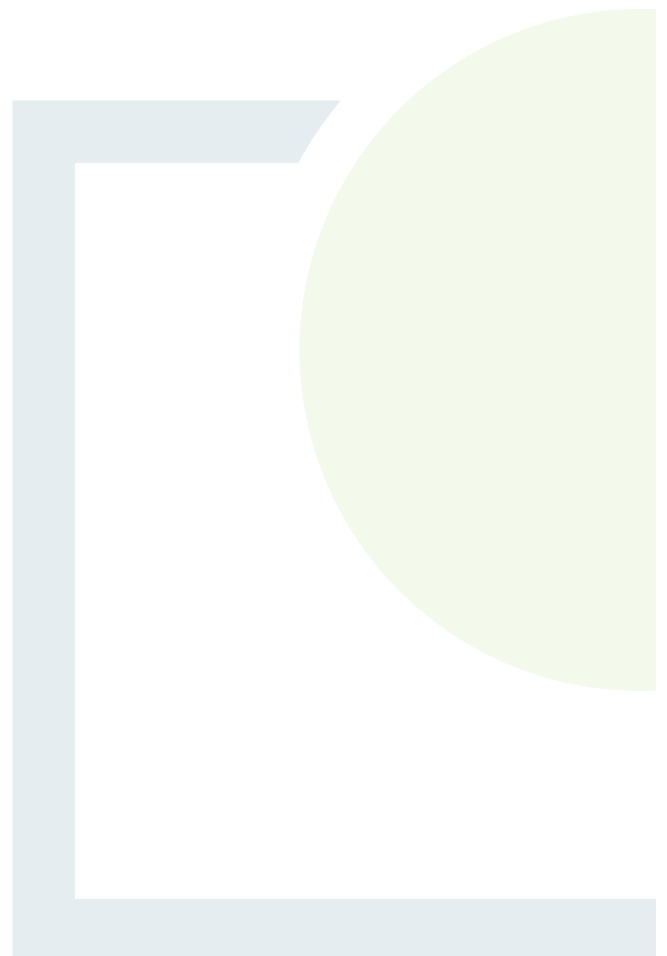
Species Code	Common Name	Scientific Name	Threats and Pressures Codes	Known Threats and Pressures
A050	Eurasian Wigeon	Anas penelope	C03, F01, F03, G01, H01, H03, H07, I01, J02, J03	Renewable abiotic energy use, Marine and Freshwater Aquaculture, Hunting and collection of wild animals (terrestrial), Outdoor sports and leisure activities, recreational activities, Pollution to surface waters (limnic & terrestrial, marine & brackish), Marine water pollution, Other forms of pollution, Invasive non-native species, Human induced changes in hydraulic conditions, Other Ecosystem Modifications
A140	European Golden Plover	Pluvialis apricaria	A02, A04, B01, C01, C03, F01, G01, H03, J01, K03, M02	Modification of cultivation practices, Grazing, Forest planting on open ground, Mining and quarrying, Renewable abiotic energy use, Marine and Freshwater Aquaculture, Outdoor sports and leisure activities, recreational activities, Marine water pollution, Fire and Fire suppression, Interspecific faunal relations, Changes in biotic conditions
A142	Northern Lapwing	Vanellus vanellus	A02, C03, F01, G01, H03	Modification of cultivation practices, Renewable abiotic energy use, Marine and Freshwater Aquaculture, Outdoor sports and leisure activities, recreational activities, Marine water pollution
A395	Greater White-Fronted Goose	Anser albifrons flavirostris	A02, A04, A06, A11, B01, C03, D02, D05, F01, F03, G01, H03, H07, K03, M01, M02	Modification of cultivation practices, Grazing, Annual and perennial non-timber crops, Agriculture activities not referred to above, Forest planting on open ground, Renewable abiotic energy use, Utility and service lines, Improved access to site, Marine and Freshwater Aquaculture, Hunting and collection of wild animals (terrestrial), Outdoor sports and leisure activities, recreational activities, Marine water pollution, Other forms of pollution, Interspecific faunal relations, Changes in abiotic conditions, Changes in biotic conditions



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APPENDIX 6

Conservation Objectives



Conservation objectives that have been considered by the assessment are included in the following NPWS/Department of Culture, Heritage and the Gaeltacht documents:

- NPWS (2017) Conservation Objectives: Lough Corrib SAC 000297. Version 1.
- NPWS (2018) Conservation Objectives: Glenloughaun Esker SAC 002213. Version 1.
- NPWS (2022) Conservation Objectives: River Suck Callows SPA 004097. Version 1.



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