

ECOLOGICAL IMPACT ASSESSMENT

OF THE **WILD ROOTS FESTIVAL**

for: **NOC Events**

Unit 2
Rathcormac Enterprise Park,
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Sligo,
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1. Introduction

This report assesses potential impacts that may arise from the proposed Wild Roots Festival at Hazelwood Sligo on biodiversity within the receiving environment, in preparation of this report, the author has had regard to the relevant standard guidelines and classifications, such as:

- *Draft Guidelines on Information to be contained in Environmental Impact Statement Reports.* (2017) Environmental Protection Agency.
- *Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine* (2018). Chartered Institute of Ecology and Environmental Management (CIEEM), Ver. 1.1 Updated September 2019.
- *Guidelines for Preliminary Ecological Appraisal.* (2017) Chartered Institute of Ecology and Environmental Management (CIEEM), Second Edition.
- *A Guide to Habitats in Ireland* (2000), Fossitt JA.
- *Best Practice Guidance for Habitat Survey and Mapping.* (2011) The Heritage Council.

It aims to discuss the existing ecological environment, the potential impacts of the project and avoidance and mitigation measures in relation to habitats, flora and fauna in the zone of influence (ZOI) of the proposed project. A separate stand-alone Natural Impact Statement is also included in the planning application documentation.

1.1. Legislative Context

Specific focus is placed on protected species/habitat features as well as those of local or national importance. Ireland's *National Biodiversity Action Plan 2017–2021*, in accordance with the Convention on Biological Diversity, is a framework for the conservation and protection of Ireland's biodiversity, with an overall objective to secure the conservation, including, where possible, the enhancement and sustainable use of biological diversity in Ireland and to contribute to collective efforts for conservation of biodiversity globally. The plan is implemented through legislation and statutory instruments concerned with nature conservation. The Planning and Development Acts, 2000 (revised September 2020) and the European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1989 to 1999 are particularly important in that regard and include a number of provisions directly concerned with the protection of natural heritage and biodiversity.

The Wildlife Acts, 1976–2012, are the principal mechanism for the legislative protection of wildlife in Ireland. They outline strict protection for species that have significant conservation value. In summary, the Wildlife Acts protect species from injury, disturbance and damage to breeding and resting sites. All species listed in the Wildlife Acts must, therefore, be a material consideration in the planning process. The Flora (Protection) Order, (2015) gives legal protection to certain species of wild flora, *i.e.* vascular plants, mosses, liverworts, lichens and stoneworts. Under the Order, it is an offence to uproot, damage, alter, or interfere with any species listed species listed within the Order, or to damage or alter their supporting habitats.

The European Communities (Birds and Natural Habitats) Regulations, 2011–2015 transpose into Irish law Directive 2009/147/EC (the Birds Directive) and the Habitats Directive, which list habitats and species of Community, *i.e.*, European Union (EU), importance for conservation and that require protection. This protection is afforded in part through the designation of areas that represent significant populations of listed species within Europe *i.e.*, Natura 2000 sites. An area designated for bird species is classed as a Special Protection Area (SPA), and an area designated for other protected species and habitats is classed as a Special Area of Conservation (SAC). Birds listed in Annex I of the Birds Directive in SPAs and habitats and species listed in Annexes I and II, respectively, of the Habitats Directive in SACs in which they are designated features have full European protection. Species listed on Annex IV of the Habitats Directive are strictly protected wherever they occur, whether inside or outside European sites. Annex I habitats outside of SACs are still considered to be of national and international importance and, under Article 27(4)(b) of the European Communities (Birds and Natural Habitats) Regulations, 2011, public authorities have a duty to strive to avoid the pollution or deterioration of Annex I habitats and habitats integral to the functioning of SPAs.

Sites of national importance for nature conservation are afforded protection under planning policy and the Wildlife Acts, 1976–2012. NHAs are sites that are designated under statute for the protection of flora, fauna, habitats and geological interest. Proposed NHAs (pNHAs) are published sites identified as of similar conservation interest but have not been statutorily proposed or designated.

The International Union for the Conservation of Nature and Natural Resources (IUCN) provides a global approach for evaluating the conservation status of species to inform and catalyse action for biodiversity conservation through the Red List of Threatened Species.

1.2. Approach to Ecological Evaluation and Impact Assessment

Assessing impact significance is a combined function of the value of the affected feature (its ecological importance), the type of impact and the magnitude of the impact. It is necessary to identify the value of ecological features within the study area in order to evaluate the significance and magnitude of possible impacts.

The following parameters are described when characterising impacts (adapted from CIEEM (2018), EPA (2017) and TII (2009, Rev. 2)):

Direct and Indirect Impacts - An impact can be caused either as a direct or as an indirect consequence of a proposed project.

Magnitude - Magnitude measures the size of an impact, which is described as high, medium, low, very low or negligible.

Extent - The area over which the impact occurs – this should be predicted in a quantified manner.

Duration - The time for which the effect is expected to last prior to recovery or replacement of the resource or feature.

- Temporary: Up to 1 Year;
- Short Term: The effects would take 1-7 years to be mitigated;
- Medium Term: The effects would take 7-15 years to be mitigated;
- Long Term: The effects would take 15-60 years to be mitigated;
- Permanent: The effects would take 60+ years to be mitigated.

Likelihood – The probability of the effect occurring taking into account all available information.

- Certain/Near Certain: >95% chance of occurring as predicted;
- Probable: 50-95% chance as occurring as predicted;
- Unlikely: 5-50% chance as occurring as predicted;
- Extremely Unlikely: <5% chance as occurring as predicted.

The CIEEM Guidelines define an ecologically significant impact as an impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographic area. The integrity of a site is the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified (CIEEM, 2018).

The results of the ecological survey were evaluated to determine the significance of identified features located in the study area on an importance scale ranging from international-national-county-local. The local scale is approximately equivalent to one 10km square but can be operationally defined to reflect the character of the area of interest. Because most sites will fall within the local scale, this is sub-divided into three categories: high local importance, local importance, and local value. The criteria used for assessing the importance of ecological features are shown in Table 1.1.

Table 1.1 Criteria used in Assessing the Importance of Ecological Features

Importance	Criteria
International	An internationally designated site or candidate site (SPA, cSPA, SAC, cSAC, Ramsar Site, Biogenetic Reserve). Also, sites which qualify for designation as SACs or SPAs – this includes sites on the NGO shadow list of SAC's.
National	A nationally designated site or candidate site (NHA, pNHA). Sites which hold Red Data Book (Curtis and McGough, 1988) plant species.
County	Sites which hold nationally scarce plant species (recorded from less than 65 of the national 10km grid squares); unless they are locally abundant. Sites which hold semi-natural habitats likely to be of rare occurrence within the county. Sites which hold the best examples of a semi-natural habitat type within the county.
High Local Importance	Sites which hold semi-natural habitats and/or species likely to be of rare occurrence within the local area. Sites which hold the best examples of a high quality semi-natural habitat type within the local area.
Local Importance	Sites which hold high quality semi-natural habitats.
Local Value	Any semi-natural habitat.

2. Methodology

2.1. Desk study

A desktop review was carried out to identify features of ecological importance within the proposed project site and the wider environment. Ecological impact assessment is conducted following a standard source-pathway-receptor model, where, in order for an impact 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 from proposed works.
- Pathway(s) – *e.g.*, groundwater connecting to nearby qualifying wetland habitats.
- Receptor(s) – *e.g.*, qualifying aquatic habitats and species of European sites.

Specific focus was put into the assessment of sensitive receptors of protected species/habitat features; as well as those of local or national importance. A source is any identifiable element of the project proposal which is known to have interactions with ecological processes. Pathways are any connections or links between the source and the receptor. This report determines if direct, indirect or cumulative adverse effects will arise from the proposed project.

2.2. Field survey

Data was collected during a series of surveys in 2021 and 2022; which were then verified in May 2023.

Table 2.1 Surveys Conducted in 2023

Survey type	Area covered	Methods	Dates
Habitat Assessment	Entire site and surrounding area within 200m (see map below)	Floral ID combined with vegetative ID when flower was not present.	3 rd May 2023
Aquatic habitat assessment	All areas of Lough Gill which interact with the festival activities. This included investigation of potential launch points which were deemed to be inappropriate from an ecological perspective.	Stream character assessment	3 rd May 2023
Otter holt survey	All areas of Lough Gill which interact with the festival activities.	Visual inspections looking for field signs and holts	3 rd May 2023
Other surveys undertaken not related to the AA process			
Mammal walkover survey	Entire site and surrounding area within 50m of the festival boundary Main focus was on the hedgerows and woodland as open grassland is not favoured mammal habitat.	Field sign ID	3 rd May 2023
Badger Survey	Entire site and surrounding area within 50m of the festival boundary Main focus was on the hedgerows and woodland as open grassland is not favoured mammal habitat.	Field sign ID ¹	3 rd May 2023
Preliminary bat roost assessment	All areas within the festival and within 5m of the boundary.	Visual inspections following the Collins guidelines ² .	3 rd May 2023

¹ Harris, S., Cresswell, P. & Jefferies, D.J., 1989. Surveying Badgers. London: Mammal Society

² Collins, J. (ed.) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust London. ISBN-13 978-1-872745-96-1

Table 2.2 Surveys Conducted in 2022

Survey type	Area covered	Methods	Dates
Habitat Assessment	Entire site and surrounding area within 200m (see map below)	Floral ID combined with vegetative ID when flower was not present.	9 th and 10 th of April 2022 8 th and 9 th of February 2022
Aquatic habitat assessment	All areas of Lough Gill which interact with the festival activities. This included investigation of potential launch points which were deemed to be inappropriate from an ecological perspective.	Stream character assessment	9 th and 10 th of April 2022 8 th and 9 th of February 2022
Otter holt survey	All areas of Lough Gill which interact with the festival activities.	Visual inspections looking for field signs and holts	9 th and 10 th of April 2022 1 st and 2 nd of June 2022 8 th and 9 th of February 2022
Mammal walkover survey	Entire site and surrounding area within 50m of the festival boundary Main focus was on the hedgerows and woodland as open grassland is not favoured mammal habitat.	Field sign ID	9 th and 10 th of April 2022 8 th and 9 th of February 2022
Badger Survey	Entire site and surrounding area within 50m of the festival boundary Main focus was on the hedgerows and woodland as open grassland is not favoured mammal habitat.	Field sign ID ³	9 th and 10 th of April 2022 1 st and 2 nd of June 2022 8 th and 9 th of February 2022
Badger Sett Monitoring	Sett adjacent to the site	Camera trap monitoring was undertaken continuously for summer 2021 and Visual spot check inspections were done bi-weekly over the winter period.	Continuously June, July August 2021 Visual spot check inspections bi-weekly September 2021- March 2021
Preliminary bat roost assessment	All areas within the festival and within 5m of the boundary.	Visual inspections following the Collins guidelines ⁴ .	9 th and 10 th of April 2022
Bat Activity Surveys	Walked transects around the site to identify activity levels.	Heterodyne detectors following the Collins guidelines.	9 th and 10 th of April 2022 30 th and 31 st of June 2022
Bird surveys	All linear features (see transect map below)	Transect method along all linear features. Following the BWI country breeding bird survey methods. These surveys were conducted at dawn.	9 th and 10 th of April 2022 1 st and 2 nd of June 2022

Habitat surveys of the site was conducted following standard guidelines set out in 'Best Practice Guidance for Habitat Survey and Mapping' developed by the Heritage Council of Irelandⁱⁱ. Habitats were classified using habitat descriptions and codes published by the Heritage Council in 'A Guide to Habitat Types in Ireland'ⁱⁱⁱ. Plant species nomenclature follows Rose's 'The Wild Flower Key: How to

³ Harris, S., Cresswell, P. & Jefferies, D.J., 1989. Surveying Badgers. London: Mammal Society

⁴ Collins, J. (ed.) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust London. ISBN-13 978-1-872745-96-1

identify wild flowers, trees and shrubs in Britain and Ireland^{iv}. A list of the dominant and notable plant species was taken for each habitat type. Particular emphasis was given to the possible occurrence of rare or legally protected plant species (as listed in Flora Protection Order 1999) or Red-listed plant species (Curtis & McGough 1985, Wyse Jackson *et al.* 2016).

Observations were made for fauna species present or likely to occur on site, or indications thereof. Emphasis was placed on mammals and birds, and especially for species listed in the respective Red lists, namely Colhoun and Cummins (2013), and Marnell *et al.* (2009). For mammals, the survey was focused on signs of their presence/activity, such as tracks and trails, feeding marks and droppings, as well as any direct observations.



Regarding bat species, the main focus was on evaluation of suitable habitats to support roosting bats; however, an ecological assessment of habitat suitability was undertaken throughout the site during the site visit. The assessment process undertaken for bats followed the BCT Guidelines^v. Chapter 4 of these guidelines identify the approach to assess 'preliminary ecological appraisal for bats. This chapter sets out methods for identifying habitat suitability which do not constitute assumptions. Based on the information from the assessment the survey effort requirements are identified.



Subsequent camera trap monitoring was undertaken following the TII guidelines, to assess if the suspected badger sett was active or inactive. Given its condition it was considered to be long abandoned; however, data was collected throughout the summer of 2021 and subsequent checks of activity from September 2021 – March 2022.



Bird species were recorded by sight and sound during the site visit, following the Birdwatch Ireland Country Breeding Bird survey methods. In addition, all linear hedgerows were walked and species were recorded. The same transect location was followed as the bat survey transect (above). Particular attention was focused on areas within the site of high ecological value that interact or overlap with parts of the proposal to increase biodiversity of the site and provide civil recreation.

During all surveys, particular attention was given to assessing the presence of rare or protected species. Each species identified was assessed in term of the EU Habitat Directive (92/43/EEC), Bird Directive (2009/147/EC), the Wildlife Act (1976), the Wildlife Amendment Act (2000) and the Red Data Lists for threatened and protected species, published on the NPWS website (www.npws.ie).

2.2.1. Limitations

The biodiversity assessment was carried out in spring, which is not the optimum time for botanical surveys as some species such as orchid only bloom in summer. However, the site is currently an agricultural field and the assessment process used vegetative ID that did not rely on flowering heads or seeding structures for ID. Therefore, overall, it is considered that there are no significant limitations to the present assessment of the ecological importance of the site.

3. Proposed Development

The EcIA should be read in conjunction with the full event management plan, below is a summary of the key sections relevant to the ecological features of receiving environment.

An application is being made by NOC Events Limited to hold Wild Roots in the environs of Hazelwood from Friday 2nd to Monday 5th June 2023 (inclusive). The event will be a three-day family-friendly (boutique) music and arts festival. The maximum expected attendance is not anticipated to exceed 12,500 at any one time.

This Event Management Plan has been prepared in accordance with the following codes of practice:

- Code of Practice for Safety at Outdoor Pop Concerts and other outdoor musical events which is a voluntary code issued by the Department of Education in January 1996.
- Code of Practice for Management of Fire Safety in Places of Assembly, Department of Environment.
- Code of Practice for Fire Safety of Furnishings and Fittings in Places of Assembly, Department of Environment.
- This plan includes / will include the following key elements:
 - Event Management Structure & Responsibilities
 - Event Safety Strategy
 - Medical Facilities
 - Site Security
 - Traffic Management Plan
 - Emergency Plans
- An environmental monitoring programme for before, during and after the proposed event

3.1.1. Main music activities:

- Friday 17.00 – 02.00
- Saturday 12.00 – 02.00
- Sunday 12.00 – 00.00

Ancillary entertainment is proposed each night (after main stages/ tents have ceased) both in the campsites and within the main arena. Pending satisfactory pre-opening checks of the arena, gates into the arena will open approximately one hour before the music begins in order to alleviate any queues forming, and to allow a safe and relaxed entry for those patrons attending the event. If substantial crowds congregate prior to opening times the gates may be opened earlier.

3.1.2. Infrastructure for the event:

Stages and marquees will be erected by specialist contract companies using a structurally validated system. All temporary structures will be inspected and certified by an Independent Structural Engineer.

See event management document for specific details.

3.1.3. Festival event:

The festival itself will be a live music and performance event that is 4 days long. The festival facilitates camping and will have associated services such as toilets, showers, food vendors, bar vendors etc.

3.1.4. Litter Management:

Wild Roots Festival have contracted a company to manage and implement Litter Management. They will have staff on patrol throughout the event to ensure there is no build-up of materials to cause a fire hazard. See the Appendix M for a copy of the litter management plan.

Refuse skips will be located at the event site in areas where the general public are not permitted.

3.1.5. Crowd control and temporary mesh fencing

Crowd control barriers and temporary mesh fencing will be used throughout the event site to secure site boundaries, protect structures and facilitate the safe distancing & movement of crowds. Additional barriers / fences are to be provided within the venue to prevent patrons entering potentially unsafe areas and to ensure an ordered egress at the end of the event.

In the case of the entrances, corral barriers are to be removed as soon as practicable after commencement of the festival. These barriers are to be immediately moved to one side of the exit in the event of an evacuation being initiated. In advance of commencement of the event a check is to be made on all exit gates on escape routes to ensure that padlocks, chains and any other fastenings are removed, so that gates can be readily and quickly opened in emergency by the security personnel manning the gate.

3.1.6. Site boundaries and barriers

Temporary barriers / fences are to be installed to provide a secure site boundary within the festival environs and the campsite area. Additional barriers will be provided where necessary to prevent patrons from access / entering potentially unsafe and historic areas. These are proposed to be located as shown on the draft site layout map.

For full details, please see the associated planning application which contains the full event management plan.

3.2. Receiving Environment

3.2.1. Overview

The main festival area is consistent with the findings of the 2022 surveys. This was recorded as an Agricultural Grassland area with patches of wetter areas. This year the habitat has graded to a habitat mosaic, with a wet areas more dominant. The site is bordered by a mixed broadleaved woodland to the south and a small woodland patch to the west. The area is dominated by agricultural land and residential properties. Within the woodland between the site and Lough Gill there is a complex woodland system which has extensive Rhododendron issues which are currently being managed by Coilte. Furthermore, there is a conifer woodland patch within this area. The Hazelwood woodlands (to the south west of the site) is a mixed conifer and broadleaved woodland with Hazel, yew trees and Norse pine etc. The understory is relatively open with ground cover of ivy. The surrounding area is dominated by agricultural land, woodland patches and Sligo City is to the West of the site. Overall, the site is consistent with the surrounding landscape character.

3.2.2. Zone of influence

The construction phase works may have some effects beyond the boundary due to compound site use, increased dust, potential for sediment run off, noise pollution, and imposing of artificial lighting conditions. The operational phase of the festival is not anticipated to have any impacts beyond the site boundary except in relation to noise disturbance effects (which are anticipated to be within 1km) and visitor movements in relation to offsite activities. Following the source-pathway-receptor model identifying the potential likely sources a Zone of Influence (ZOI) was established; 2km radius around the proposed site. Given the nature of the proposed works, in keeping with the current use and disturbance levels, impacts are not foreseen to be significant beyond this distance.

Three European sites, two of which are also proposed Natural Heritage Areas site occur within the 2km radius Zone of Influence (Figure 3.1); Lough Gill SAC/pNHA, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC/pNHA and Cummeen Strand SPA. There are no direct hydrological links between the proposed project area and the protected areas. However, there are indirect hydrological pathways – considering the proximity of the protected areas to the project area, there are indirect links between the project and the European and National sites. This is considered as source for potential effect within the defined Zone of Influence for this assessment during the construction phase of the project.

As the two sites are pNHAs and SACs there is limited data available for the pNHAs and therefore the SAC data was used as a proxy when considering potential effects.

3.2.3. Hydrology

The proposed site is in the Sligo Bay and Drownse (35) Catchment and specifically within the Bonet sub-catchment (SC_030). According to EPA maps of the WFD ground water bodies risk, the Carrowmore East catchment is at risk (IE_WE_G_0042); however, there are no elements of the proposed festival that will have groundwater effects. The proposed site has one open water source along the south eastern end of the site which runs east to west through what is proposed as the camping areas of the festival. This wet drainage ditch diverts southwards which then joins the Bellanode Stream (35G010200; EPA Code 35S23) which joins the Garvogue River (part of the SAC) over 2km downstream (Figure 3.1). The WFD status of the Bellanode stream (2013-2018) is "poor". The proposed site lies within the 2km ZOI of the hydrologically sensitive Cummeen Bay Estuary.

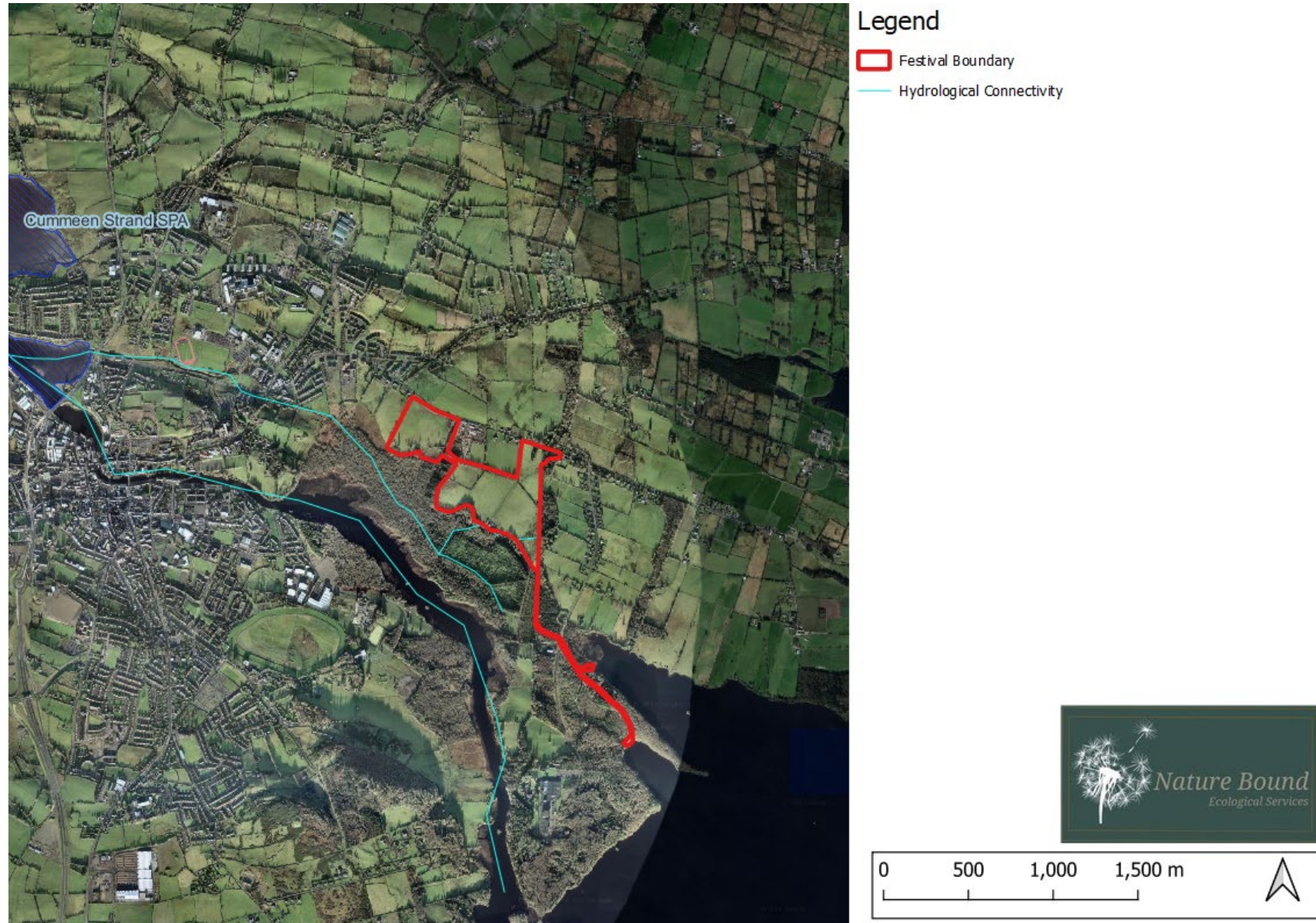


Figure 3.1 Hydrological pathways identified from the site to the surrounding landscape

3.2.4. Designated areas

In accordance with the European Commission Methodological Guidance (EC, 2001), a list of European Designated Sites that can be potentially affected by the works has been compiled. A dedicated Natura Impact Statement, reviewing all European sites within the zone of influence of the project, has been undertaken. A review of the conservation objectives and qualifying interests of these sites was undertaken in order to identify what habitats and/or species could be vulnerable to risk of impact from the proposed project. This was achieved by assessing whether any source receptor links identified for each European Site existed between the qualifying interests of the designated sites and the proposed project site, and presented in a NIS attached to this application.

When assessing ecological impacts, the CIEEM Guideline recommend a 15km zone of influence as an adequate buffer for effects. Due to the characteristics of the project, all other European sites and pNHA/NHA sites beyond threshold distances of 15km are considered to be of sufficient distance from the proposed site, that no significant effects could be caused either directly or indirectly or in combination with other plans or projects to their interest features. Any impacts caused by the proposed project have no valid impact pathway to transfer along to reach any of the receptor interest features. These sites are 'screened out' and not considered further.

In addition to examining European sites, NHAs and pNHA have been considered. Although NHAs and pNHAs do not form part of the Natura 2000 Network, they often can provide an important supporting role to the network, particularly when it comes to fauna species which often do not obey site boundaries. There are however, NHAs and pNHAs that are designated for features that are not important at an international level and thus may not interact with the Natura 2000 network. A stand-alone Natura Impact Statement, submitted separately to this assessment, expands on the potentially affected designated sites and their conservation objectives in more detail.

Appendix 4.1 provides a list of all of the designated sites considered within the assessment arranged by distance from the proposed project which are assessed as part of this report. Figure 3.2 displays the designated European sites within a 15km radius buffer of the proposed project and Figure 3.3 displays the proposed and designated National sites within a 15km radius buffer of the proposed project. With the exception of the Lough Gill SAC/pNHA, Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC/pNHA and Cummeen Strand SPA, which is addressed in detail in this ecological assessment, there are no other surface water hydrological pathways connecting the proposed site to any other European sites within the 15km buffer zone considered in the accompanying Appropriate Assessment.

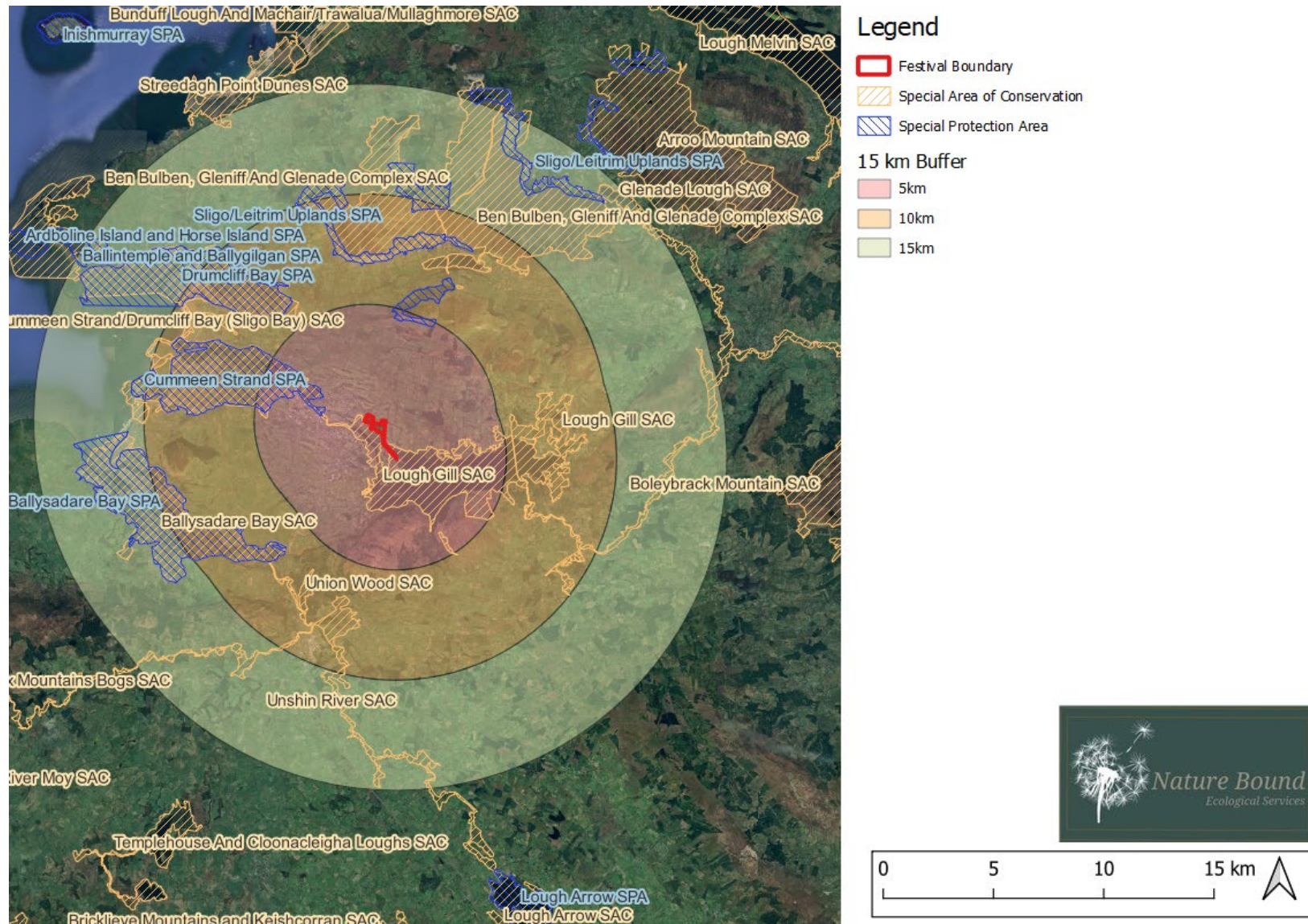


Figure 3.2 European sites within 15 km buffer of the proposed project

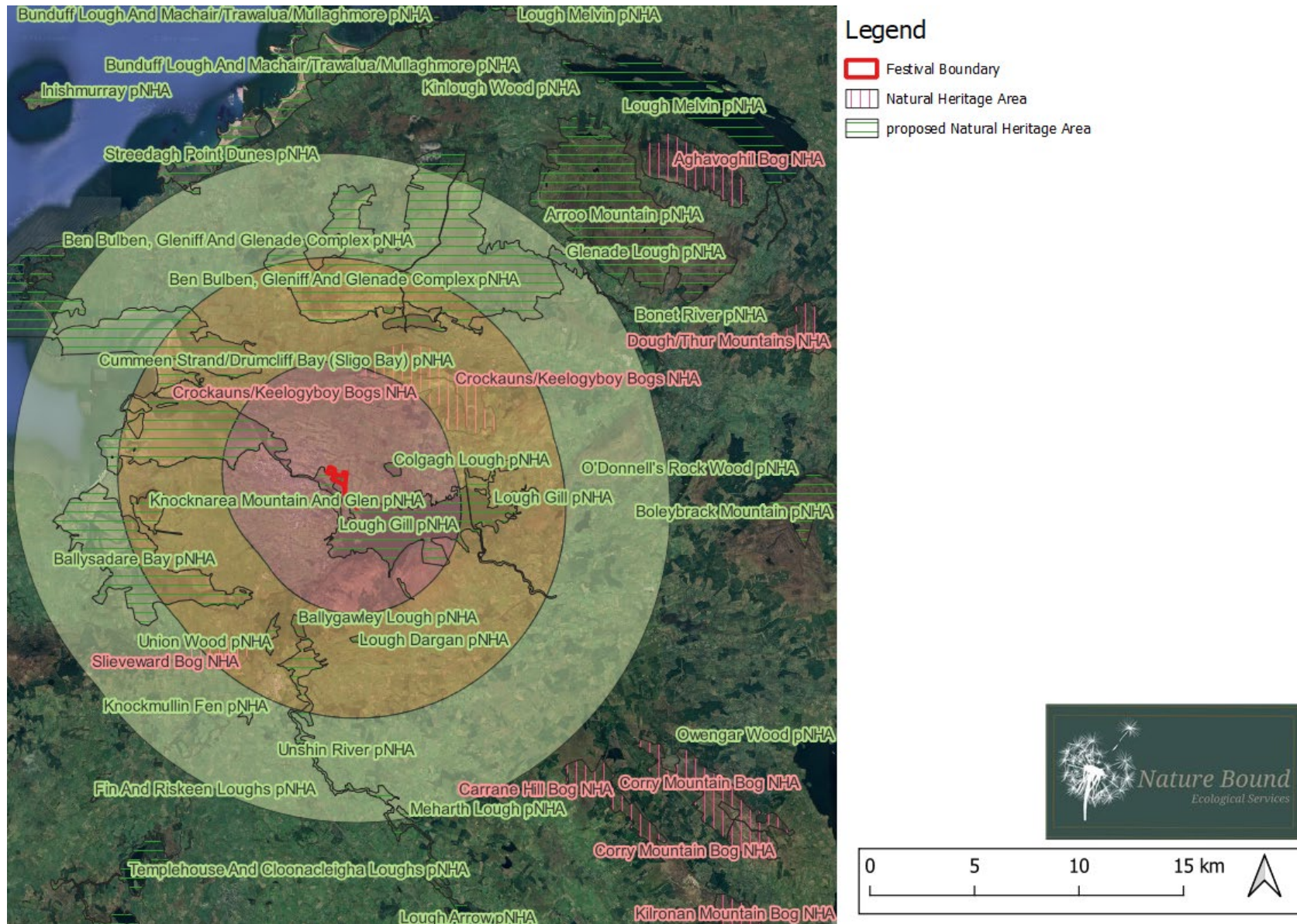


Figure 3.3 National Sites within 15km buffer of the proposed project



Figure 3.4 SAC Boundary in relation to the festival area

3.2.5. Records of protected, rare or other notable Flora and Fauna species

The digital database of the National Biodiversity Data Centre (NBDC) was consulted to assess known records of rare, protected and invasive species that occur in the surrounding landscape. The collation of this information, as well as examination of aerial photographs allowed areas of potential ecological importance to be highlighted prior to field survey work. A search was undertaken of records of Red Data Book and Protected species held by the National Biological Data Centre Database. A list of the rare and/or protected species from the 10km x 10km grid square occupied by the study area (G73) are listed in Appendix 4.2 (NBDC data, accessed: 3rd May 2023).

Invasive Flora species

Publicly available NBDC data was accessed to identify invasive species in the O14 hectad in which the proposed site is located, and is displayed in Appendix 4.2. Three of the invasive flora species and five of the invasive fauna species listed in Appendix 4.2 are subject to Third Schedule restrictions, under Regulation 49 of the European Communities (Birds and Natural Habitats) Regulations, 2011.

The current NBDC data for invasive species within the proposed project area yielded several records going back to 2017 (full list species, grid numbers and location descriptions are available in Appendix 4.2). The key species of note were Rhododendron, Indian Balsam and Japanese Knotweed similarly.

3.2.6. Field survey results

Habitats and Flora

No Annex I habitats were found within the project area during any of the site visits. The main festival area is consistent with the findings of the 2022 surveys. This was recorded as an Agricultural Grassland area with patches of wetter areas. This year the habitat has graded to a habitat mosaic, with a wet areas more dominant ⁵ (Figure 3.5). The site is bordered by a mixed broadleaved woodland to the south and a small woodland patch to the west. The area is dominated by agricultural land and residential properties. Within the woodland between the site and Lough Gill there is a complex woodland system which has extensive Rhododendron issues which are currently being managed by Coilte. Furthermore, there is a conifer woodland patch within this area. The Hazelwood woodlands (to the south west of the site) is a mixed conifer and broadleaved woodland with Hazel, Yew trees and Norse pine etc. The understory is relatively open with ground cover of ivy. Habitat maps of the proposed site are supplied in Appendix 4.3, alongside a description of each of the habitats identified on site along with a species list.

There is area of the festival boundary within the SAC which can be seen in Figure 3.4.

There is no habitat on site suitable to support otter. The small stream which runs through the site is no more than a few centimetres deep and 80cm wide in flood conditions in winter. The picture below is from May 2023– which shows this has no suitability as otter habitats. The only areas of the festival boundary which are likely to interact with Otter habitat are the recreational activities.



⁵ For an complete list of previous ecological surveys carried out for the Metrolink Corridor project please see Appendix 4.3

The lakeside area where water sports will take place have 2 launch points identified. One concrete slipway and the other is a beach area known as halfmoon bay. Along the concrete slipway the site is open with no bankside vegetation with 2 rock piers on either side. Therefore, this is seen to be an unsuitable location for the QI species of the SAC for predator avoidance reasons. The site has large levels of silt and therefore, silt disturbance needs to be considered.



At halfmoon bay the site is a cobble area with low slowing entry into the lake. This is also devoid of bankside vegetation; however, the large shallow expanse would make it suitable for adult crayfish to forage at dawn and dusk. Therefore, considerations are needed.



The callows and shallow root systems around the lake edge are identified to be the key features for the QIs of the SAC, none of which are present at the two selected launch locations.



Floral species recorded on site during the previous site visits in 2021 and 2022 are consistent with the 2023 survey results and are what is expected of an agricultural landholding. The sward has a more variable species composition in terms of the evenness and abundance of wet grassland species such as Yorkshire fog and reed species. This is thought to be due to soil compaction causing moisture retention in these areas. One notable addition within the site is the presence of coccoo flower (*Cardamine pratensis*).

The woodland to the south of the site is identified to be a key ecological feature of landscape scale importance and therefore the treelines connecting the broader landscape to the woodland are also of high landscape scale value. The habitats within the site are of low ecological value bar the woodland edge and treeline habitats.

No invasive species were recorded on site during the April site visit; however, there were large extensive stands of Rhododendron in the woodland to the south of the site along the water's edge which is currently being managed by Coilte. However, there will be no interaction between the festival and this area.

Fauna

Mammals (excluding bats)

Evidence of potential use of the site by fox and rabbit was present, in the way of commuting and foraging trails around the periphery of the agricultural lands on site. There was a badger sett identified on site (Figure 3.6); however, this shows signs of inactivity. The camera trap data showed that there are Badger movements in and around the sett, but no sett entry or exits were recorded. The camera trap monitoring identified that the sett was inactive during the summer of 2021 and 2022. Throughout the winter of 2021 the sett remained inactive – however, in February 2022 the sett was reactivated with 2 holes being freshly excavated the week of February the 8th; however, further monitoring showed no signs that the sett became used. The sett was investigated in May 2023 and appears to be inactive.



Figure 6 Badger Sett in 2022 (left) and 2023 (right)

Further investigations has identified this as being an outlier sett⁶. Therefore, the sett is determined to be inactive/disused. The badger movement patterns indicate the badgers travel around the sett without using it from the site deeper into the woodland away from the festival site. This is due to the existing hard wire fence that precludes access to the site.

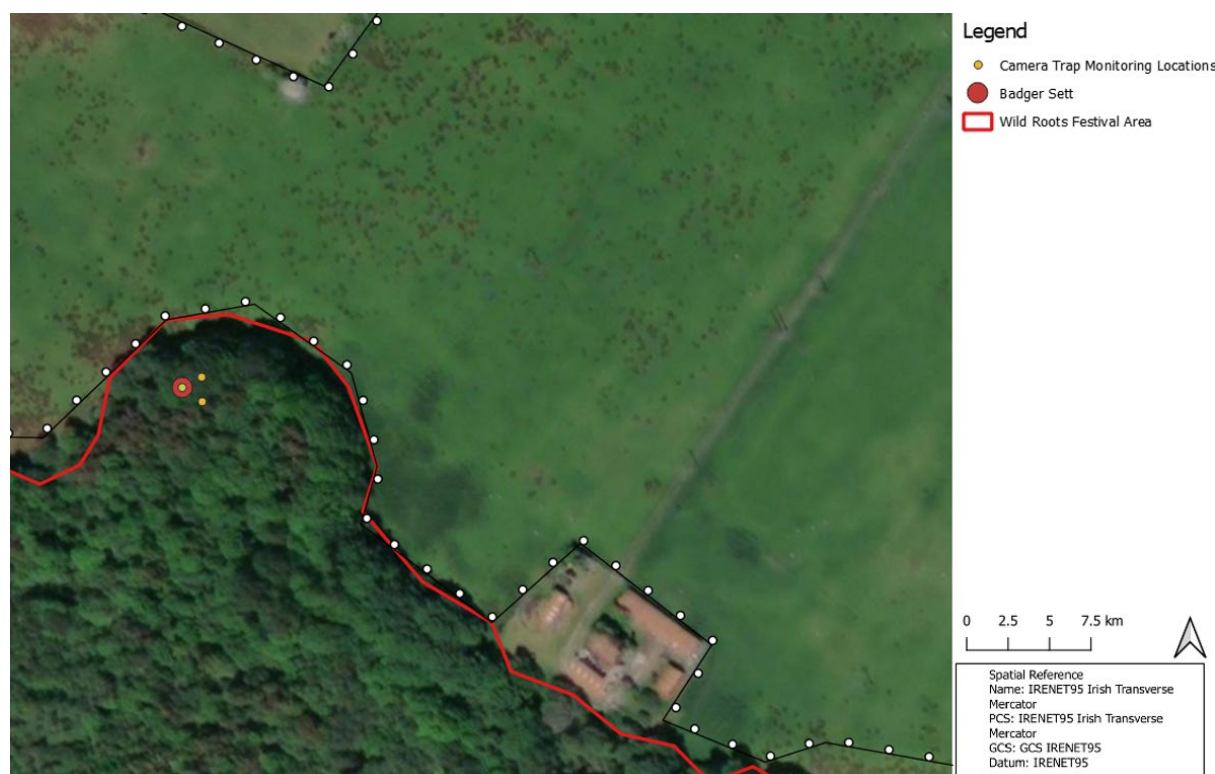


Figure 3.7 Badger Sett location

No other mammal activity was identified within the red line boundary. There was no suitable habitat for otters identified within the festival area – except in the areas for aquatic recreation on Lough Gill itself. The launch point for the activities are at halfmoon bay and concrete loading slip – which have no otter holts adjacent to them.

Bats

There were no bat roost features identified on site. The trees in the surrounding woodland are dominated by beech with minimal ivy present and there were no treed found with a suitable trunk diameter to house bats. The disused building along the southern boundary of the site had no bat roost potential as they were too exposed. Therefore, there will be no direct effects to bat roosts.

The site has moderate potential for bat activity based on the habitat available for three species of bat; common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and Leisler bat (*Nyctalus leisleri*). The survey results indicated low levels of bat activity however, following the precautionary principle it is assumed that all of the treelines present onsite support commuting, foraging and socialising of these three species.

Targeted bat surveys following the EUROBATS survey guidelines identified minimal bat activity, with two species identified, Leisler's bat and common pipistrelle. Bat activity was confined to the East of the site along the hedgerows in the vicinity of the camping area and to the north where the service entrance will be. Therefore, disturbance effects to foraging and commuting bats are likely – which includes indirect effects to roost features in the wider environment.

⁶ Outlying setts usually consist of a single or double hole but may occasionally have more. Generally, they have only a small accumulation of spoil at the hole entrance and are not clearly linked to other setts by worn trails. They are usually only used sporadically and may show little evidence of very recent use. Outliers may be occupied by foxes or rabbits when not in use.

Birds

The breeding bird surveys identified common farmland/garden bird passerine species to be present on site; such as blackcap (*Sylvia atricapilla*), wren (*Troglodytes troglodytes*), blue tit (*Cyanistes caeruleus*), chaffinch (*Fringilla coelebs*), coal tit (*Periparus ater*), common blackbird (*Turdus merula*), common bullfinch (*Pyrrhula pyrrhula*), common chiffchaff (*Phylloscopus collybita*), European goldfinch (*Carduelis carduelis*), European robin (*Erithacus rubecula*), dunnock (*Prunella modularis*), great tit (*Parus major*), song thrush (*Turdus philomelos*), mistle thrush (*Turdus viscivorus*), house sparrow (*Passer domesticus*), pied wagtail (*Motacilla alba subsp. yarrellii*), woodpigeon (*Columba palumbus*), collared dove (*Streptopelia decaocto*), starling (*Sturnus vulgaris*), rook (*Corvus frugilegus*), jackdaw (*Corvus monedula*), and magpie (*Pica pica*). Black-headed gull (*Larus ridibundus*) and buzzards (*Buteo buteo*) were also recorded in flight within the receiving environment.

Protected Fish, Amphibians & Reptiles

The current NBDC records shows the common frog (*Rana temporaria*) and smooth newt (*Lissotriton vulgaris*) at various locations across the G73 10km hectad. There is only one wet drainage ditch on site which does not have consistent flow; thus, will not be suitable for any protected fish or amphibian species. There were no standing waterbodies on site, but there were areas of wet grassland identified; however, these areas were dry during all field visits and there is no bankside vegetation, shade or refugia for amphibians or reptiles; therefore, the site has no potential for any protected fish, amphibians or reptiles.

3.2.7. Summary of Ecological evaluation & recommendations

Overall, the site of the project is of low local importance in terms of ecological value. However, the treelines and surrounding habitat are identified to have high landscape scale importance for commuting and foraging species such as birds and bats. The site is consistent with the surrounding environment and the key ecological receptor identified (off site) is an active badger sett. The Lough Gill area is a site of international importance (as identified in the NIS); therefore, a visitor management plan has been devised. Furthermore, considering the proximity of a hydrologically sensitive sites downstream several habitat types that are highly sensitive to changes in siltation deposition and pollution, and the presence of onsite drainage ditch which will have indirect hydrological links to the estuary, possibly significant impact on the estuary, it's associated European and National sites, and the protected species and habitats therein cannot be ruled out without sufficient mitigation measures put in place.

Maintaining habitat connectivity will be assured through the use of small-scale pruning of branches along existing pathways; only the minimum amount required for safety and this will be undertaken under the supervision of an Ecological Clerk of Works (see below for further details).

The proposed project potential for short term impacts to bird and bat populations but of very low magnitude. The disturbance effects will only last for 4 days and then the existing condition of the site and existing noise levels will recommence.

4. Potential Impacts

Based on the baseline ecological environment and the extent and characteristics of the proposed project the following potential impacts have been identified:

1. Augmentation of existing habitats;
2. Construction and earthworks;
3. Lighting during construction and operation;
4. Surface water interactions at the open water source;
5. Noise and vibration;
6. Badger Sett.

These 6 potential impacts are discussed below:

- **Augmentation of existing habitats;**

The only augmentation to existing habitats that are proposed are within the redline boundary which excludes the woodland to the south. The alterations to habitats will predominantly relate to the installation of temporary structures within the grassland systems. However, there will be small scale pruning of branches along existing walkways and entranceways for safety.

Measures are proposed to minimise these effects.

- **Construction and Earthworks;**

There will be no earth works beyond pegging down and anchoring of temporary structures. The construction phase will be less than 4 months; nonetheless best practice construction processes are identified as mitigation measures below.

- **Surface water interactions at the open water source;**

The key areas of potential hydrological interaction relate to the shower and toilet system and the wet drainage ditch on site.

Measures have been devised to ensure access to the drainage ditch is not permitted and the grey water is controlled through a greywater management system (see below).

- **Lighting during operation;**

Strong lighting in the area of the proposed project during the operational phase could impact species that use the site for foraging and commuting. Bats, other mammals, and birds would be sensitive to any significant changes in lighting which is particularly relevant for woodland edge area.

Given the 4-day period of the event this is not identified as a significant impact. However, measures to mitigate against any potential impacts to bat species via light pollution (during the operational phase in particular) have been proposed below.

- **Noise/vibration;**

The festival has obvious risks of noise pollution. This can cause disturbance effects to species such as badgers, bats and birds. The disturbance effects will last for 4 days and therefore they are not identified to be significant. Given the availability of alternative resources such as foraging and commuting routes – and the low levels of activities on site – the effects relating to a 4-day disturbance event is not low. Bats regularly move between roosting resources to avail of scattered resources across the landscape being highly vagile. A 4-day disturbance event will not meaningfully influence the normal ranging patterns of the species. Nonetheless mitigation measures related to noise reduction have been identified below.

- **Badger Sett;**

A badger sett was identified in the woodland patch adjacent to the festival area. Therefore, mitigation measures are suggested to minimise effects to badgers.

An assessment of the project detail outlined in Section 3 indicates the potential impacts to biodiversity are predominantly associated with the operational phase with respect to disturbance effects and surface water interactions (although small scale), in particular drainage and noise during the 4-day festival. These could impact species such as badger which have an active sett directly adjacent to the festival area. Furthermore, there is a need to preserve the local value of habitats identified for commuting bat species and breeding birds which can be achieved by ensuring no trees are removed for the onsite works. There will be removal of vegetation but only small branches where necessary for safety, i.e., to facilitate entranceways and walkways.

4.1.1. Potential Impacts on Designated Sites

The Natura Impact Statement sets out the likelihood and significance of any potential impacts on European designated sites. Potential has been identified for significant adverse effects to the ecological integrity of European sites within the proposed projects Zone of Influence. This is mainly via indirect hydrological pathways and visitor movement patterns with respect to the aquatic recreation activities being facilitated. The European sites potentially affected are:

- Lough Gill SAC
- Cummeen Strand SPA

Potential effects during the operational phase are considered to require mitigation measures to protect mainly greywater management, access to the wet ditch, visitor movement patterns and minimise noise pollution effects. The construction phase of the proposed project is not foreseen to have potential for significant adverse effects on the ecological integrity of the above European sites with the inclusion of appropriate mitigation measures, as outlined in the accompanying NIS report.

5. Mitigation Measures / Monitoring

The proposed site has been identified to have an overall low local ecological importance aside from the treelines and surrounding woodland areas. Significant treelines and hedgerows provide habitat of local importance for commuting bat species and local breeding bird communities.

Overall, it is assessed that the implementation of the proposed project will have no net gain or loss in terms of the ecological resources present and current levels of biodiversity. However, mitigation measures are still required to ensure that potential impacts to the ecological integrity of nearby hydrologically sensitive European sites, are minimised. The following mitigation measures relative to the potential impacts define above have been devised as part of the project proposal to mitigate against and/or avoid these impacts (further detail on all mitigation measures can be found in the Event Management Plan accompanying this application).

5.1. Previous Mitigation Measure Review

The mitigation measures proposed last year were monitoring during the event. The mitigation measures were viewed to be successful in that there was only 1 non-compliance event recorded. The recreational activity providers allowed some visitors to access the water from the existing concrete slip. This was only done in the shallows where there was concrete and therefore, minimal impacts to siltation, and deeper offloading's were undertaken using the pontoon. Therefore, this was deemed to be sufficient and no amendments were suggested.

Additional details to broaden the scope of biosecurity measures for activity providers have been introduced to the user agreement. Furthermore, a requirement for pre and post even surveys with an associated monitoring report due 1 month after the event has been introduced.

All lighting was effectively installed set back from the woodland edge facing away from the woodlands. All other measures were reviewed by the EcOW and were deemed to be effective.

The following mitigation measures relating to the protection of biodiversity will apply during the construction and operational phases of the proposed project:

Mitigation Measure	Detail
Site selection process	The selection of the launch points for the water sports activities were informed by ecological considerations to ensure the areas were free from habitat features which aligned with Annex I or supported Annex II species for which the SAC was designated.
Best Practice Construction Control Measures	<p>Routine practice and procedures to prevent pollution of the environment will apply. These include:</p> <ul style="list-style-type: none"> • During the construction stage, standard construction and site management practices will be implemented by the contractor; • All material including oils, solvents and paints will be stored within temporary bunded areas or dedicated bunded containers; • Refuelling will take place in a designated bunded area away from surface water gullies, drains and water bodies, in the event of refuelling outside of this area, fuel will be transported in a mobile double skinned tank; • All machinery and plant used will be regularly maintained and serviced and will comply with appropriate standards to ensure that leakage of diesel, oil and lubricants is prevented; • Spill kits and hydrocarbon absorbent packs will be available and drip trays will be used during refuelling; • Drainage wardens/silt socks will be placed around drainage gullies connected to the live network; • Ongoing monitoring of the water receptors throughout the works; • Excavated material will be segregated into inert, non-hazardous and/or hazardous fractions; • The excavation and handling of inert material will be carefully managed in such a way as to prevent any potential negative impact on the receiving environment.
Greywater management	Sources of greywater on site:

Mitigation Measure	Detail
	<p>- Traders - Showers - Sinks</p> <p>All greywater on site will be collected and held in 1000L waste water tanks. These will be monitored throughout the site by the site management team and emptied as required and emptied post event.</p> <p>Two Sligo contactors JJ Drains and Whimsey will be contracted to drain out the IBC tanks.</p>
Hydrological interactions	<p>A floating pontoon will be installed at the concrete launch point for the recreational activities. This will be secured on the landward side and the rock pier – not anchored in the lake itself.</p> <p>The floating pontoon will facilitate visitors walking from the hard infrastructure areas to their recreational activity without direct trampling of the substrate. This will reduce the siltation disturbance and avoid direct trampling effects.</p> <p>Pontoon 5.820m x 1.940m with walkway out to it measuring 14.550m x 1.940m – total projection is 16.49m.</p> <p>The proposed temporary floating pontoon shall be fully removed by Monday 4th June 2023.</p>
Visitor Management Plan	<p>Appendix G of the Event Management Plan</p> <p>Figure 2.0 shows the area where chaperone staff will meet festival goers to engage in water activities. These individuals will be brought along the walkway to points C and E where the activities will launch and return from.</p> <p>Key sections of the Visitor Management Plan include:</p> <p>Adventure activities on the water:</p> <p>The Wild Roots Festival 2023 is partnering with various outdoor adventure activity providers to bring festival attendees out on Lough Gill.</p> <p>Tour operators are:</p> <p>Lough Allen Adventures: providing Stand-up Paddle tours 35 people at a time. Lough Allen Adventures: providing kayak tours to 35 people at a time.</p> <p>The Rose of Innisfree tour boat: Lake tours for 50 people at one time.</p> <p>These activities will be staggered through the day to reduce traffic on the walkways and on the water. A sample timetable:</p> <ul style="list-style-type: none"> • 10.00am - SUP tour • 10.30am - Kayak tour • 10.45am - Boat Tour <p>This schedule will be repeated between 10am and 5pm each day.</p> <p>...</p> <p>The attendees will then be escorted by festival staff to the activity providers at point E shown on the map in figure 2.0. The purple line marked on the above maps is a public walkway. The access to this walkway from the festival arena will be staffed with security 24 hours a day. Only festival attendees who are accompanied by festival staff with an activity booked can proceed down this walkway and only at allocated times.</p> <p>The walkway will be lined with ropes to prevent people from leaving the allocated walkway. Festival staff and security will be situated along the paths to ensure attendees safety and the safety of the land.</p> <p>Festival attendees will leave the public walkway and proceed through privately owned land (at point D on the map) to access another public road and proceed to point E on the map where they will begin their outdoor activity. From here the festival attendees will be briefed by the adventure providers and will head out on the water.</p> <p>The water activity will end at Anna Bay slipway marked on the map point C.</p> <p>At point C on the map there will be a temporary floating pontoon erected to facilitate the entry and exit of the water-based activities.</p> <p>Festival attendees will walk back to the main festival arena from point C along the public walkway marked purple on the map. The same way they arrived.</p> <p>All outdoor adventure providers must adhere to our user's agreement.</p> <p>The user agreement specifically states:</p>

Mitigation Measure	Detail
	<p>All equipment - stand up paddle boards, kayaks, paddles etc. used at this area must be washed down before and after use in this area in a manner which prevents the spread of invasive species such as zebra mussels.</p> <p>All visitor activities will avoid the shallow lake edge areas, particularly soft vegetated areas such as reed beds.</p>
Biosecurity of aquatic habitats	<p>The aquatic recreational activities are being provided by local providers who already operate from Lough Gill. Therefore, there are no additional sources for effects in this regard. However, all outdoor adventure providers must adhere to our user's agreement.</p> <p>The user agreement specifically states: All equipment - stand up paddle boards, kayaks, paddles etc. used at this area must be washed down before and after use in this area in a manner which prevents the spread of invasive species such as zebra mussels. IFIs Biosecurity guidelines will be followed in all instances https://www.fisheriesireland.ie/sites/default/files/2021-06/research_biosecurity_invasive-species-biosecurity-guidelines-for-boaters-leaflet.pdf All visitor activities will avoid the shallow lake edge areas, particularly soft vegetated areas such as reed beds.</p>
Noise reduction protocols	<p>NOISE MONITORING</p> <p>The accepted sound levels will be in accordance with the Code of Practice on Environmental Noise Control at Concerts, or as otherwise agreed with the Local Authority. James Walsh (SED) has been contracted to assess the potential impact of noise and will advise both the organiser and the Festival's Technical team to ensure that the impact of noise is minimised. An acoustic monitoring system will be installed for the Wild Roots Festival 2023 and readings will be taken throughout the event in accordance with the code of practice in agreement with the Environmental Health Department.</p> <p>All of the equipment used for the event will be prefabricated for safety and speed of erection. No heavy drilling, debris or nuisance which can arise with normal building construction is due to arise in the context of the set up for this event.</p> <p>Should the organisers receive a call or complaint from a local resident adversely affected by noise every effort will be made immediately to rectify the situation.</p> <p>Ear Plugs will be made available to all staff throughout the event on request. In certain areas like stages etc. they will be provided by default rather than on request.</p> <p>Furthermore, a sound test will be undertaken in advance of the festival to ensure these metrics will be attained to in advance of the live event.</p>
Lighting	All edge lighting shall be placed 2m from the treeline and face inwards towards the event. This will facilitate the foraging or commuting of bats along the treeline as the event continues.
Vegetation Clearance	No trees will be removed, only light pruning will be undertaken on site for safety reasons and to manage existing pathways to be free from debris for access.
Badger Sett	The existing fence around the badger sett will be maintained and no access shall be granted to this area. No works will take place in and around the sett to ensure the sett will remain intact.
Ecological Clerk of Works	An ecological clerk of works will be appointed to monitoring the installation and removal of the pontoon. The EcOW will also undertake a pre and post ecological assessment and provide an outcome report to Sligo County Council 1 month post event.
Clear up Programme	<p>CLEAN UP PROGRAMME, REMOVAL OF STRUCTURES & REINSTATEMENT / REMEDIAL WORKS</p> <p>Staff and volunteers will be engaged to undertake a clean-up in all areas before, during and immediately after the event.</p> <p>It is noted the work on the removal of all temporary structures associated with the event (i.e. stages, delays etc) will commence immediately following the event and will be fully completed together with any reinstatement works required on the site, within a reasonable time scale.</p> <p>It is not anticipated that any damage to public property, facilities or amenities in the area of the Event will arise.</p>

The absence of the application of the above mitigation measures may render the project having the potential to have significant adverse effects on habitats of local importance within the site area, and Annex I habitats of international importance within the Zone of Influence of the site area. It is thus recommended to implement these measures as part of the proposed project to avoid potential impacts to the ecological integrity of the site.

5.2. Cumulative Impacts

An assessment of other plans or projects that might have the potential to have cumulative adverse effects on the ecological integrity of the proposed site and surrounding landscape, has been carried out in line with relevant guidance (CIEEM, 2018).

Each plan or project is considered within a radius of the site boundary of the proposed area as defined by the ecologist. The distance of this radius works from a standard 200m, but can be extended if the ecologist deems it necessary depending on whether certain characteristics are present, such as:

- Direct or indirect connectivity to areas of high local ecological value and/or European sites;
- In close proximity to areas of high ecological value and/or European sites;
- The proposal is of a substantial scale relative to the conditions and/or current works taking place in the surrounding landscape; and
- The characteristics of the project are likely to have effects beyond the local environment.

These factors are considered particular to each proposal for each particular location and specification. Considering the overall neutral change that this project will have on the surrounding area in terms of function and characters of the surrounding environment, the radius of 200m for examining other plans and projects is deemed sufficient for this case.

Plans of relevance to this proposal⁷:

Plans of relevance in the context of this proposal include:

- Sligo County Development Plan 2017-2023
- There is no specific Local Area Plan for the Hazelwood area.

There are no specific policies or objectives that conflict with the proposed project. The proposed project is aligned with the development goals set out in the abovementioned plan and therefore in-combination effects are not identified. Furthermore, all policies and objectives contained within the County Development Plan relating to noise pollution etc. must be complied with.

Projects of relevance to this development:

To identify projects for consideration for the in-combination effects section, the National Planning and Housing development database was used⁸. A review of all planning applications within the identified zone was conducted focusing on all application within the past 5 years⁹.

The planning applications in the surrounding area relate to alterations to existing structures such as a factory to a distillery, extensions to residential properties and commercial units. All of these are identified to be small scale and the temporary small-scale nature of the Festival, ensures that there will be no significant in combination effects.

⁷ For a full list of plans associated with the proposed R132 Connectivity Project see associated planning report.

⁸ <https://data-housinggovie.opendata.arcgis.com/datasets/planning-application-sites-2010-onwards>;

⁹ planning application have a standard lifespan of 5 years as per Section 40 (3)(b) of the Planning & Development Act 2000, as amended; therefore, these are viewed to be the 'live' applications, all other projects are considered as part of the site context

Table 5.1 Local planning applications within the receiving environment of the Festival area

Project Code	Status	Overview	Grant Date	Project Area (sq m)	Possible significant effects from plan or project	Is there a risk of in-combination effects	Possible Significant in-combination effects
16301	CONDITIONAL	development consisting of the following: (1) demolition of the existing redundant security hut, removal of existing pillars, gates and footpath at the existing MSLETB entrance and the removal of the existing boundary wall along the public footpath as req	30/04/2017	11317	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
16413	CONDITIONAL	development consisting of: (1) construction of a 285 sq.m single storey building containing; clinic rooms, individual and group offices, a group education room, adult and paediatric waiting areas, staff areas and ancillary spaces (2) construction of a 12	13/01/2017	8693	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
17295	CONDITIONAL	for development consisting of the erection of 2 no. enclosed bus shelters and the enlargement and realignment of existing laybys, together with associated site development works including new street lighting, retaining walls and earthen fill	19/10/2017	6115	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
17299	CONDITIONAL	for development consisting of (1) Construct new 2 storey extension approx. 103 sqm to eastern end of existing dwelling with all associated alterations including demolition of rear chimney & garage, blocking up of existing front door and alterations to ex	21/10/2017	5072	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the	No	No

					festival there are no likely in combination effects.		
17390	CONDITIONAL	for development consisting of the alterations and extension to the existing building Block K, including a new roof, major renovations and associated site development works	22/12/2017	16044	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
17406	CONDITIONAL	Development consisting 1) The demolition of an existing storage building 47 sqm in area, 2) The creation of a new access road to tie in with the future eastern garavogue bridge and approach roads scheme by Sligo County Council, associated open space and	15/01/2018	25818	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
17426	CONDITIONAL	for development consisting of the upgrade of an existing waste water treatment system to current EPA code of practice standards together with all associated ancillary works	12/03/2018	2964	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
17453	CONDITIONAL	Development consisting of 1)demolition of existing single storey dwelling, outbuildings and decommissioning of existing effluent treatment system; 2) construction of single storey dwelling house and domestic garage with provision of new on-site effluent	10/04/2018	5613	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
17487	CONDITIONAL	PP - for development consisting of the construction of a single storey extension, 27sqm, to the existing CSSD department, replacement of existing windows to powder coated aluminium	26/03/2018	5097	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any	No	No

		glazing on the south elevation, provision of a single story temporary CSS			European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.		
18174	CONDITIONAL	Development consisting of Permission to (a) demolish existing two storey house and garage (b) construct a new two storey house and domestic garage (c) install a new waste water treatment system and percolation area (d) all associated site works.	10/09/2018	4369	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
18412	CONDITIONAL	for development consisting of amendments to previously permitted development PL 15/296. The changes sought are for: 1) an onsite waste water treatment plant (pop equivalent of 104); 2) Change to the cooling water supply as previously permitted to incl	16/03/2020	977742	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
18477	CONDITIONAL	for development consisting of the change of use of the existing derelict building from residential to retail use to provide a Pharmacy with consequential changes to the roof and elevations and provision of new illuminated signage, new access gates and ca	06/03/2019	1925	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
18483	CONDITIONAL	for development consisting of the construction of a single storey side and rear extension with all associated site works	12/03/2019	2616	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No

18514	CONDITIONAL	for development consisting of alterations to elevations of Block K previously approved under Planning Ref. PL 17/390	19/03/2019	16059	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
196	CONDITIONAL	Development consisting of: 1. Demolition of existing semi-detached two-storey derelict dwellings, 2. Construction of two-storey dwelling house and domestic garage with provision of new on-site effluent treatment system, provision of new site entrance to	01/07/2019	6981	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
1947	CONDITIONAL	for development consisting of the demolition of existing domestic garage, to construct a single storey extension to the rear and side of an existing private dwelling and a two storey extension to Eastern side of domestic dwelling and front porch. To con	03/05/2019	4242	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
19111	CONDITIONAL	Development consisting of the construction and installation of 4 floating Angling Stands and associated site works. The proposed Angling stands, varying in lengths are to be located along the existing riverside walk. The Angling Stands comprises of a g	11/06/2019	87987	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
19142	CONDITIONAL	Development consisting of the construction of a new catering kitchen classroom extension with ancillary storage, sanitary accommodation along with all associated site works and services to the rear of the existing catering training building. Planning Pe	08/07/2019	1290	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of	No	No

					the projects combined with temporary nature of the festival there are no likely in combination effects.		
19203	CONDITIONAL	Development consisting of construction of a single storey extension of a living room and new entrance doorway to house.	13/08/2019	2981	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
19208	CONDITIONAL	for development consisting of the alterations to elevations, including the omission of a glazed canopy and relocation of PV panels on the roof of Block K, previously approved under Planning Ref: PL 17/390 & PL 18/514	16/08/2019	16061	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
19242	CONDITIONAL	development consisting of (a) retention of the change of use from retail showroom to gym on ground floor (b) retention of a mezzanine level utilised as a gym (c) new external escape stairway to serve mezzanine (d) external signage and all associated si	04/09/2019	1225	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
19320	CONDITIONAL	development consisting of the change of use of an existing storage building to a seated auditorium and construction of an extension to the existing building to facilitate a welcome lobby, ancillary storage and toilet/sanitary accommodation along with all	15/10/2019	449	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
19346	CONDITIONAL	development consisting of the demolition and removal of an existing chain link fence and gates to the north, south, east and	04/11/2019	306764	Both projects are small scale with temporary construction	No	No

		western boundaries and replacement with 2.4m high weld mesh fence and gates, installation of circa. 80 linear metres of 2.4m high			phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.		
19386	CONDITIONAL	for development consisting of alterations to existing elevations	27/11/2019	731	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
19392	CONDITIONAL	for development consisting of t2 extensions to the rear and side of the existing house	29/11/2019	691	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
19407	CONDITIONAL	for development to amend the terms of the current Planning Permission Ref: PD 02/103, by removing Condition No: 5, so that the numbers of children allowed to attend the crèche is not limited by the condition or Planning Permission	13/12/2019	787	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
19414	CONDITIONAL	for development consisting of a change of use from existing industrial unit to gymnasium and associated signage	20/12/2019	958	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the	No	No

					festival there are no likely in combination effects.		
203	N/A	for development consisting of (a) demolition of existing attached domestic garage to dwelling house (b) build a single storey extension to the side of existing dwelling house, 60 square metres together with all ancillary site works and services	NA	2954	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
20127	CONDITIONAL	Development consisting of the construction of a new flat roof, 2-storey, 4-bedroom, 430.55sqm house with open first floor balcony/deck to the south together with associated works, all located to the west of the existing main house on the footprint of an	18/05/2021	26812	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
20142	CONDITIONAL	development consisting of the removal of existing single-storey detached prefabricated classrooms and the construction of a new single-storey prefabricated building containing further educated classrooms and ancillary accomodation, together with a roof	13/01/2021	7011	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
20175	CONDITIONAL	development consisting of (a) demolish existing attached domestic garage to dwelling house, (b) build a single storey extension to the side of existing dwelling house, 60 square metres, which will create an independent living unit, together with all anci	09/09/2020	2957	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
20180	CONDITIONAL	development consisting of the construction of a 1.262m2 sprinkler water and spillage run off retention pond (volume 3,428m3), to the west of previously approved whiskey distillery	25/03/2021	955665	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any	No	No

		(reg. ref. 15/296), together with associated drainage, pump kiosk and anci			European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.		
20298	CONDITIONAL	development consisting of the construction of a 332.5m2 development at Level 8 & roof level of the multi-storey block over the existing Paediatric Department on level 7. The development shall comprise (1) New 258 m2 extension to the existing Intensive C	30/11/2020	817	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
20356	CONDITIONAL	development consisting of alterations and refurbishment to the existing Block L and three-story extension with roof plant area, 50 number car park spaces covering the overall campus requirement, signage, PV Panels and all associated site development work	18/03/2021	78460	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
20363	CONDITIONAL	Development consisting of a new four storey extension and plant room to the south and west of the existing Block B. The works include the demolition of the existing single storey structure, Block J and part of Block B, partial refurbishment of the remai	18/03/2021	14542	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
20369	CONDITIONAL	Development consisting of retention to alterations to development that consisted of 76 houses granted under PL04/1514 as follows: (1) extension of the internal roadway to include footpaths, retaining walls, fencing and services as constructed (2) omissio	NA	28770	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No

20373	CONDITIONAL	Development consisting of (1) removal of existing boat storage containers, (2) construction of new boat house consisting of boat storage to the ground floor with dressing rooms, gymnasium and meeting rooms to the first floor and associated siteworks and	23/09/2021	9338	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
217	CONDITIONAL	development consisting of the construction of a new single-family, two-storey dwelling house with a detached shed to the rear, new vehicular entrance onto Ardaghown Lane, together with all ancillary siteworks and services	NA	1611	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
2194	CONDITIONAL	development consisting of the following 1. Demolish existing single storey rear extension and shed 2. construct single storey extension to the rear of existing dwelling house 3. construct new vehicular entrance to dwelling house with all associated works	18/06/2021	907	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
21148	CONDITIONAL	Development consisting of the construction of a new single storey extension, with a gross floor area of 117sq.metres together with all associated site works and connections to all public utilities	13/09/2021	70890	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
21167	CONDITIONAL	Development consisting of the retention of a single storey extension to side and rear of dwelling house with all associated works	23/07/2021	1159	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of	No	No

					the projects combined with temporary nature of the festival there are no likely in combination effects.		
21225	N/A	Development consisting of carrying out the reinstatement of a stone breakwater and the removal of silt build up from a boat slipway. A Natura Impact Statement will accompany this application.	NA	3084	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
21272	CONDITIONAL	Development consisting of the use of a car park for a farmers market on Saturdays from 8.00 am until 2.00 pm Area 960 sq.m.	06/10/2021	2717	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
21305	CONDITIONAL	Development consisting of retention of single storey extension to rear of dwelling house with all associated works	05/11/2021	3347	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
21337	CONDITIONAL	Development consisting of the construction of a new single storey extension of 25m ² to the rear of the existing dwelling, the extension of the existing garage by 4.25m ² , the raising of the existing front gate pillars to 1.45m, the fitting of a new 1.45m	24/11/2021	3251	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No
21494	CONDITIONAL	Development consisting of alterations and change of use on Unit No 2 from retail warehouse to gym / group fitness centre. The	NA	4252	Both projects are small scale with temporary construction	No	No

		proposed development will include combining Unit No. 2 and Unit No 2A to extend the existing gym in Unit No 2A. Floor area sub			phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.		
2219	N/A	Development consisting of the following; (1) permission for change of use of Unit 10B from previously permitted office use under PD 05/70138, for use as Health Day Care Facility with associated offices and all associated works including internal alterati	NA	5925	Both projects are small scale with temporary construction phases. There are no direct pathways for effects to any European sites. Given the characteristics and scale of the projects combined with temporary nature of the festival there are no likely in combination effects.	No	No

6. Residual Impacts

As the site will be restored to existing condition and the vegetation pruning works are negligible in scale there are no residual impacts identified. The disturbance effects to the badgers are not expected to cause sett abandonment as badgers move between setts regularly and have been shown to reside alongside busy industrial sites. Given the 4-day timeline of the festival the sources for impacts are not likely to cause long term damage to any of the key ecological receptors identified. Similarly, there are residual impacts to birds and bats as there will be temporary disturbance effects. These are not likely to cause any significant effects to the populations. Temporary disturbance effects in the location of the festival are therefore the only impact which will remain that is of note, however this is not identified to be significant due to the 4-day timeline. Therefore, the overall status of the site is expected to remain the same /unaltered after the proposed works have been carried out, with negligible effects to local biodiversity using it.

End Notes

NPWS: <https://www.npws.ie/sites/default/files/publications/pdf/National%20Biodiversity%20Action%20Plan%20English.pdf>

ⁱⁱ Smith, George F., et al. "*Best practice guidance for habitat survey and mapping.*" The Heritage Council: Ireland (2011)

ⁱⁱⁱ Fossitt, J.A., 2000. *A guide to habitats in Ireland.* Heritage Council/ Chomhairle Oidhreachta

^{iv} Rose, F., O'Reilly, C., Smith, D.P. and Collings, M., 2006. *The wild flower key: how to identify wild flowers, trees and shrubs in Britain and Ireland.* Frederick Warne.

^v Collins, J. (ed.) 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London.