



Carrigaline TPREP Phase 1A: Bridgemount Link

Ecological Impact Assessment Report

Arup

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1.0 Introduction

APEM was commissioned by Arup in October 2021 to prepare an ecological impact assessment (EclA) report to support their work on a section of the Bridgemount Link element of the Carrigaline Transportation and Public Realm Enhancement Plan (TPREP) for Cork County Council. The section of this TPREP assessed in this report is located in Bridgemount, Carrigaline, Co Cork.

1.1. Description of the Proposed Development

The following background description has been taken from the Cork County Council project website for the TPREP¹.

‘The Carrigaline TPREP is an integrated transportation framework focused on addressing the transportation infrastructure and public realm enhancement required to support the sustainable development of the town.

Objectives:

- Connect people to places via a sustainable transport network and reduce the level of car dependency in the town;
- Create a vibrant town centre, a place where people can meet, shop, do business and have fun;
- Provide the built environment to assist rejuvenating business within the town centre;
- Encourage greater number of residents to walk and cycle in the town;
- Improve access to educational, social and employment opportunities.’

Phase 1A of the TPREP (hereafter referred to as the ‘Proposed Development’) includes the Main Street Public Realm Enhancement Plan and the Bridgemount Link. An Appropriate Assessment (AA) Screening Report (Arup, 2022a) and Environmental Impact Assessment (EIA) Screening Report (Arup, 2022b) have been produced for the Proposed Development and have been referred to in this report.

As a part of the Bridgemount Link, it is proposed that a new pedestrian and cycle link be developed to connect the Bridgemount and Herons Wood estates. This development will include the clearing of heavy vegetation, removal of some scrub and trees, construction of a suitable path and provision of public lighting. New, native deciduous hedgerows and trees will be planted to enhance the area and replace the existing vegetation to be removed.

1.2. Site Description

The section of the Bridgemount Link (“the Site”) relevant to this report is a disused section of the former Cork to Crosshaven rail line. This area is located at Irish Grid Reference W 73364 63347, is approximately 150m long and 12m wide and is enclosed to prevent unauthorised entry (Appendix 1, Figure 1). It is located in a residential area with the railway line cutting to the rear of existing homes in Bridgemount and Heatherfield Lawn. The site extends north in front of Mulberry Lane but is screened by an existing boundary wall. The alignment of the railway cutting is significantly lower

¹ <https://www.corkcoco.ie/en/traffic-transport/carrigaline-transportation-and-public-realm-enhancement-plan> (Last accessed 01/06/2022)

(approx. 4– 5m) than the rear of the neighbouring properties and is heavily vegetated. The area also has a large amount of excess soil located along the route associated with historic construction activity in the area.

1.3. Purpose of this Report

The purpose of this report is to provide supporting information to the competent authority, in this case Cork County Council, to carry out an assessment of the ecological effects of the proposed development.

The aim of this report is to:

- To describe the baseline data collection and assessment methods used.
- To summarise the baseline ecological conditions.
- To identify and describe all potentially significant ecological effects associated with the proposed development.
- To set out the design, mitigation and compensation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects.
- To identify how mitigation and compensation measures will/could be delivered.
- To provide an assessment of the significance of any residual effects in relation to the effects on biodiversity and the legal and policy implications.
- To identify appropriate enhancement measures and how these will/could be delivered.
- To set out the requirements for post-construction monitoring.

1.4. Relevant Legislation and Policy

The main pieces of relevant legislation are as follows:

- The Habitats Directive 92/43/EEC;
- European Communities (Birds and Natural Habitats) Regulations 2011 – 2021;
- Planning and Development Acts 2000 to 2020 - PART XAB;
- The EIA Directive Council Directive 85/337/EEC;
- Wildlife Acts 1976 to 2021.
- Flora (Protection) Order 2015

The relevant local planning policies have been extracted from the Cork County Development Plan 2022-2028 (Volume 1: Main Policy Material) and have been set out in Appendix 2 of this report. These policies are concerned with the protection and / or enhancement of the ecology and biodiversity of County Cork. In particular, Chapter 15.5 and 15.6 deal with the protection of biodiversity on local authority lands and developments and the need to implement biodiversity net gain where possible. In broad terms these objectives and policies aim to ensure correct measures are put in place to identify and protect natural heritage and important environmental features within County Cork.

Further details on legislation and policy relevant to this report is outlined in Appendix 2.

1.5. Evidence of Technical Competence and Experience

Elaine Dromey carried out the site survey for this project. Owen Twomey and Randal Counihan prepared this report and it was technically reviewed by Maeve Riley MCIEEM.

Owen has worked in ecological consultancy since 2016 and holds a BSc (Hons) Environmental Science with a major in Zoology and a Postgraduate Diploma (PgDip) in Ecological Assessment from University College Cork. For the last 6 years has worked on a wide range of projects and plans throughout Ireland and the UK, including pre- and post- planning ecological works in environmentally sensitive areas. Owen's specialist areas are mammal surveys (with a focus on bat, badger and otter); habitat survey, mapping and classification; ecological impact assessment; appropriate assessment; and geographical information systems.

Randal has 17 years of experience working in the field on research, conservation and industry projects and holds a BSc (Hons) Environmental Science with a major in Zoology and an MSc Bioinformatics and Computational Biology, both from University College Cork. Randal has broad experience in the construction industry, and is responsible for monitoring activities and advising clients on industry environmental best practice guidelines. He spent 3 years working on designing, building and using a variety of equipment for industrial monitoring use. Since joining APEM, Randal's focus has been on reporting requirements for planning and foreshore licence applications in Ireland such as Appropriate Assessment Mammal Risk Assessments, Invasive Species Monitoring Plans and other Ecological services.

Maeve Riley is a Senior Ecologist with APEM and holds a MSc in Environmental Consultancy from Newcastle University. She has ten years ecological consultancy experience and is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). She coordinates teams of multi-disciplinary experts for a range of projects and outputs including Appropriate Assessments, Ecological Impact Assessments (EclA) and ecology reporting in support of planning applications for large commercial and residential facilities.

2.0 Methods

The methods used to carry out the survey of the Site, to evaluate the importance of ecological features and to carry out the assessment are outlined in this section.

2.1. Scope

2.1.1. Study Area

The area of the survey was limited to the disused former rail line located North of Bridgemount estate, running behind the residences located in Heatherfield Lawn and The Pines and behind the boundary wall running along Mulberry Lane (Appendix 1, Figure 1). Access to the site is through the metal fencing across the southern end of the area.

2.1.2. Zone of Influence

The 'zone of influence' for a project is the area over which ecological features may be subject to significant effects because of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2018).

The zone of influence for this project was identified through a review of the nature, size and location of the project, the sensitivities of the ecological features, known impacts and effects likely to arise as a result of the type of Proposed Development and the potential for in combination effects.

The proposed development is not likely to result in effects beyond the extents of the Site due to the nature of works, the existing land use of the Site and the likely effects of the proposed development. While effects will be localised to the Site and the immediate surrounds a conservative approach to selecting the zone of influence has been adopted. Therefore a zone of influence of 1 km has been selected for the purpose of assessment of the potential effects of the proposed development on biodiversity.

2.2. Baseline Data Collection

2.2.1. Desk Study

A desk study was carried out to collate the available existing ecological information on the Site. Available literature on the Site was reviewed to inform the field work and impact assessment. The Site and the surrounding areas were viewed using satellite imagery².

² www.google.ie/maps (last accessed 08 June 2022)

The Cork County Council website³ was accessed for information on relevant planning policy and the Cork County Council planning portal⁴ was accessed for information on other proposed and permitted developments in the surrounding area.

The National Parks and Wildlife Service (NPWS)⁵ and NBDC⁶ websites were accessed for information on nearby sites designated for nature conservation and information on protected habitats and species known from the 1km grid square W7363 within which the Site is located. Only records for the past 10 years are included within this report as older records are unlikely to still be relevant given their age and changes in land management that may have occurred in the intervening period.

The absence of a rare or protected species from the NPWS and NBDC databases does not necessarily mean that it does not occur within the area, rather it has not formally been recorded as present. Similarly, the presence of a recent record within the study area does not imply it is present within the Site, rather it is known to be present within the study area chosen for desk study.

Environmental Protection Agency (EPA) maps⁷ were accessed for other environmental information, such as surface water features, relevant to the preparation of this report.

Birds of Conservation Concern in Ireland (BoCCI)⁸ published by BirdWatch Ireland and the RSPB NI, is a list of priority bird species for conservation action on the island of Ireland. The BoCCI lists birds which breed and / or winter in Ireland and classifies them into three separate lists; Red, Amber and Green; based on the conservation status of the bird and hence their conservation priority. Birds on the Red List are those of highest conservation concern, Amber List are of medium conservation concern and Green List are not considered threatened. The Birdwatch Ireland website⁹ was studied for information on birds of conservation concern.

All bird species are protected under the Wildlife Acts 1976 – 2021 but for the purposes of this report only records of species within the last 10 years that are Red or Amber-listed on BoCCI or listed on Annex 1 of the Birds Directive are included from records held by the NBDC.

The conservation status of mammals within Ireland and Europe is evaluated using one or more of the following documents; Wildlife Acts 1976 – 2021, the Red List of Terrestrial Mammals (Marnell et al., 2009) and the EU Habitats Directive 92/43/EEC.

The Appropriate Assessment (AA) Screening report (Arup, 2022a) and Preliminary Environmental Impact Assessment (EIA) Screening report (Arup 2022b) were both reviewed as a part of this desk study. Both of these reports cover the whole of the TPREP Phase 1A proposed development site, much of which is outside the scope of this report.

³ <https://www.corkcoco.ie/en/planning> (last accessed 08 June 2022)

⁴ <http://planning.corkcoco.ie/ePlan/SearchTypes> (last accessed 08 June 2022)

⁵ www.npws.ie/protected-sites (last accessed 01 June 2022)

⁶ <https://maps.biodiversityireland.ie/Map> (last accessed 03 June 2022)

⁷ <https://gis.epa.ie/EPAMaps/> (last accessed 01 June 2022)

⁸ <https://birdwatchireland.ie/app/uploads/2021/04/BOCCI4-leaflet-2-1.pdf> (last accessed 08 June 2022)

⁹ <https://birdwatchireland.ie/> (last accessed 08 June 2022)

2.2.2. Field Survey

The survey area was walked by Elaine Dromey on 25th November 2021 and examined for signs of animal usage of the area, types of vegetation cover and species, sign of rare and endangered plant species and signs of invasive plant species. Weather conditions were good with low wind and no rain.

The purpose of the Site visit was to classify the habitats present, note sightings or evidence of species and evaluate the importance of the ecological features.

The approach to the field surveys is based on accepted standard practice and methods. Habitats within the study area were classified after '*A Guide to Habitats in Ireland*' (Fossitt, 2000). The dominant plant species present in each habitat type were recorded during the field surveys and this is considered sufficient to allow accurate classification of the habitats present.

Incidental sightings or evidence of birds, mammals or amphibians were also noted during the habitat survey and the habitats within the study area were evaluated for their potential to support protected species. Evidence of use of the area by mammals, such as badger setts, otter holts, scat / latrines, feeding remains and hair, were noted where they occurred within the study area.

Trees or structures suitable for bat roosts and potential suitable bat foraging were noted where they occurred within the study area. Trees or structures within the study area were visually inspected from the ground level for Potential Roost Features (PRF) where it was considered likely that they may be suitable for use by roosting bats. Potential roosts / roost features and bat foraging habitat were evaluated using the criteria set out in the Bat Conservation Trust (BCT) guidelines (Collins 2016).

2.3. Limitations

2.3.1. Desk Study

Desk study data is unlikely to be exhaustive, especially in respect of species, and is intended mainly to set a context for the study. It is therefore possible that important habitats or protected species not identified during the data search do in fact occur within the vicinity of the site. However, this limitation was mitigated by carrying out a site survey.

2.3.2. Field Survey

The field survey was carried out in November 2021 which is typically sub-optimal for flowering plants. The optimum time of year for broad habitat surveys is between April and September (Smith *et al.* 2011). The habitats recorded on site are not considered to support rare / notable botanical species and many invasive flora species are readily identified outside of the typical flowering season, therefore, the time of year is not considered a constrain to the results of this assessment.

2.4. Assessment Approach

The ecological evaluation and impact assessment approach used in this report is based on Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland ("CIEEM guidelines") (CIEEM, 2018).

2.4.1. Important Ecological Features

Ecological features can be important for a variety of reasons and the rationale used to identify them is explained in the text. Importance may relate, for example, to the quality or extent of the site or habitats therein; habitat and / or species rarity; the extent to which such habitats and / or species are threatened throughout their range, or to their rate of decline.

Determining Importance

The importance of an ecological feature should be considered within a defined geographical context. The following frame of reference has been used in this case, relying on known / published accounts of distribution and rarity where available, and professional experience:

- International (European).
- National (Ireland).
- Regional (Munster).
- County (Cork).
- Townland (Carrigaline).
- Local (Intermediate between the Site and Townland).
- Site (“the Site”)

The above frame of reference is applied to the ecological features identified during the desk study and surveys to inform this report.

In assigning a level of value to a species, it is necessary to consider its distribution and status, including a consideration of trends based on available historical records. Examples of relevant lists and criteria include species of European conservation importance (as listed on Annexes II, IV and V of the Habitats Directive or Annex 1 of the Birds Directive), species protected under the Wildlife Acts 1976 - 2021 and red or amber listed on BoCCI.

The approach to impact assessment, as set out in CIEEM guidelines, only requires that ecological features (habitats, species, ecosystems and their functions/processes) that are considered to be important and potentially affected by the proposed development are carried forward to detailed assessment. It is not necessary to carry out detailed assessment of receptors that are sufficiently widespread, unthreatened and resilient to impacts from the proposed development and will remain viable and sustainable. Therefore, for the purposes of this report, only ecological features of Local importance or greater and/or subject to legal protection have been subject to detailed assessment.

2.4.2. Impact Assessment

The impact assessment process involves the following steps:

- Identifying and characterising potential impacts.
- Incorporating measures to avoid and mitigate (reduce) these impacts.

- Assessing the significance of any residual effects after mitigation.
- Identifying appropriate compensation measures to offset significant residual effects (if required).
- Identifying opportunities for ecological enhancement.

When describing impacts, reference has been made to the following characteristics, as appropriate:

- Positive or negative.
- Extent.
- Magnitude.
- Duration.
- Timing.
- Frequency.
- Reversibility.

The impact assessment process considers both direct and indirect impacts: direct ecological impacts are changes that are directly attributable to a defined action, e.g. the physical loss of habitat occupied by a species during the construction process. Indirect ecological impacts are attributable to an action, but which affect ecological resources through effects on an intermediary ecosystem, process or feature, e.g. the creation of roads which cause hydrological changes, which, in the absence of mitigation, could lead to the drying out of wet grassland.

Consideration of conservation status is important for evaluating the effects of impacts on individual habitats and species and assessing their significance:

- Habitats – conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area.
- Species – conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

2.4.3. Significant Effects

The concept of ecological significance is addressed in paragraphs 5.24 through to 5.28 of CIEEM guidelines. Significance is a concept related to the weight that should be attached to effects when decisions are made. For the purpose of EclA, a 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g., for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local and the scale

of significance of an effect may or may not be the same as the geographic context in which the feature is considered important.

The nature of the identified impacts on each assessed feature is characterised. This is considered, along with available research, professional judgement about the sensitivity of the feature affected, and professional judgement about how the impact is likely to affect the site, habitat, or population's structure and continued function. Where it is concluded that an effect would be likely to reduce the importance of an assessed feature, it is described as significant.

2.4.4. Cumulative Effects

Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

Other plans and projects that should be considered when establishing cumulative effects are:

- Proposals for which consent has been applied but which are awaiting determination.
- Projects which have been granted consent, but which have not yet been started or which have been started but are not yet completed (i.e. under construction).
- Proposals which have been refused permission, but which are subject to appeal, and the appeal is undetermined.
- Constructed developments whose full environmental effects are not yet felt and therefore cannot be accounted for in the baseline.
- Developments specifically referenced in a National Policy Statement, a National Plan or a Local Plan.

2.4.5. Avoidance, Mitigation, Compensation and Enhancement

When seeking mitigation or compensation solutions, efforts should be consistent with the geographical scale at which an effect is significant. For example, mitigation and compensation for effects on a species population significant at a county scale should ensure no net loss of the population at a county scale. The relative geographical scale at which the effect is significant will have a bearing on the required outcome which must be achieved.

Where potentially significant effects have been identified, the mitigation hierarchy has been applied, as recommended in the CIEEM Guidelines. The mitigation hierarchy sets out a sequential approach beginning with the avoidance of impacts where possible, the application of mitigation measures to minimise unavoidable impacts and then compensation for any remaining impacts. Once avoidance and mitigation measures have been applied residual effects are then identified along with any necessary compensation measures, and incorporation of opportunities for enhancement.

It is important for the EclA to clearly differentiate between avoidance, mitigation, compensation and enhancement and these terms are defined here as follows:

- Avoidance is used where an impact has been avoided, e.g. through changes in scheme design.

- Mitigation is used to refer to measures to reduce or remedy a specific negative impact *in situ*.
- Compensation describes measures taken to offset residual effects, i.e. where mitigation *in situ* is not possible.
- Enhancement is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

3.0 Baseline Ecological Conditions

This section sets out the baseline conditions for the ecological features within the Site using the findings of the desk study and field survey

3.1. Sites Designated for Nature Conservation

3.1.1. Natura 2000 Sites

The only Natura 2000 designated site within the potential zone of influence of the site is the Cork Harbour SPA (Site Code: 004030), a section of which sits on the Owenboy River, 0.77km south of the proposed development. The SPA is of major ornithological significance being of international importance for both the total number of wintering birds (> 20,000) and also for its populations of black-tailed godwit *Limosa limosa* and redshank *Tringa totanus*. It also supports nationally important wintering populations of 22 species as well as a nationally important breeding colony of common tern *Sterna hirundo*. Several of the species that occur regularly are listed on Annex I of the EU Birds Directive (NPWS 2015).

The proposed development does not include any of the habitats which would be of importance to the species which are designated features of the Cork Harbour SPA. There is also no ecological or hydrological connectivity between the proposed development and the SPA. Therefore Natura 2000 sites are scoped out and excluded from any further consideration in this report.

3.1.2. Proposed Natural Heritage Areas / Natural Heritage Areas

The only other nature conservation site within the zone of influence of the Site is the Proposed Natural Heritage Area (pNHA): Owenboy River (Site Code: 001990). There is no site synopsis available for this pNHA but, given that the boundaries of the pNHA match the boundaries of the section of the Cork Harbour SPA which sits on the Owenboy River, it is considered likely that the designations of both of these sites are the same or similar.

There is also no ecological or hydrological connectivity between the Site and the Owenboy River pNHA therefore pNHAs are scoped out and not considered further in this report.

3.2. Habitats

The habitats present within the Site, as recorded in the survey area during the field survey, are described in this section. Site photographs of these habitats are included in Appendix 3.

3.2.1. Scrub WS1

The habitat on site is dominated by scrub. This habitat is dominated by ivy *Hedera helix*, bramble *Rubus fruticosus* agg. and hawthorn *Crataegus monogyna* with scattered immature trees (< 5m high) including sycamore *Acer pseudoplatanus*, elder *Sambucus nigra* and ornamental non-native species. For the most part, scrub habitat is recorded on the ground; however, ivy is also present on the concrete bridge structure.

Scrub habitat is common and widespread in the immediate and wider area. This habitat is considered important as a nesting resource for birds which are considered separately in this report.

Scrub would be evaluated as important at the Site level and is scoped out and not considered further in this report.

3.2.2. Buildings and Artificial Surfaces BL3

A concrete bridge running east-west is recorded inside the southern end of the fenced area. This habitat is man-made and is not evaluated as important. The bridge is scoped out and not included further in this report.

3.2.3. Recolonising Bare Ground ED3

Spoil banks from previous historic works on the site are present under the concrete bridge and are dominated by vegetation with some exposed / bare ground at the top extent. This habitat, with rocky outcropping, is present along each side of the line reaching down, approx. 4-5 m in places below the surface level of the surrounding housing estates.

Ivy and bramble dominate this habitat with fern *Athyrium* sp. also recorded.

Recolonising bare ground is a heavily modified habitat with a species assemblage that is composed of widespread and commonly occurring species. Recolonising bare ground habitat would be evaluated as important at the Site level and is scoped out of further consideration within this report.

3.3. Species

A search of the National Biodiversity Data Centre (NBDC) database was used to identify any species which may occur on the proposed development. The rocky cutaway section of the former rail line sits entirely within in the national grid squares W733633 and W733632, each covering 100m². There were no species recorded in this dataset within the last 10 years.

A wider search of the NBDC database in the area around the proposed development (National grid square W7363) covering a 1km² area returned 30 species records within the last 10 years as shown in Table 1. Of these, two species (common frog *Rana temporaria* and red-billed chough *Pyrrhocorax pyrrhocorax*) are protected under European Law and one species (west European hedgehog *Erinaceus europaeus*) is protected under the Irish Wildlife Acts (1978-2021).

Table 1: Species results from NBDC search for National Grid Square W7363.

Species name	Record count	Date of last record
Common Frog (<i>Rana temporaria</i>)	2	21/07/2019
Red-billed Chough (<i>Pyrrhocorax pyrrhocorax</i>)	1	11/07/2016
Winter Heliotrope (<i>Petasites fragrans</i>)	1	25/12/2016
Common Blue (<i>Polyommatus icarus</i>)	3	05/06/2014
Green-veined White (<i>Pieris napi</i>)	2	05/06/2014
Large White (<i>Pieris brassicae</i>)	2	05/06/2014
Meadow Brown (<i>Maniola jurtina</i>)	1	18/08/2013
Painted Lady (<i>Vanessa cardui</i>)	1	18/08/2013

Species name	Record count	Date of last record
Peacock (<i>Inachis io</i>)	2	26/08/2013
Red Admiral (<i>Vanessa atalanta</i>)	3	14/10/2013
Small Copper (<i>Lycaena phlaeas</i>)	1	18/08/2013
Small Tortoiseshell (<i>Aglais urticae</i>)	3	22/07/2019
Small White (<i>Pieris rapae</i>)	2	05/06/2014
Speckled Wood (<i>Pararge aegeria</i>)	2	14/10/2013
Azure Damselfly (<i>Coenagrion puella</i>)	2	05/06/2014
Black Darter (<i>Sympetrum danae</i>)	2	26/08/2013
Blue-tailed Damselfly (<i>Ischnura elegans</i>)	5	05/06/2014
Common Blue Damselfly (<i>Enallagma cyathigerum</i>)	2	05/06/2014
Common Darter (<i>Sympetrum striolatum</i>)	4	14/10/2013
Common Hawker (<i>Aeshna juncea</i>)	1	26/08/2013
Emerald Damselfly (<i>Lestes sponsa</i>)	2	26/08/2013
Emperor Dragonfly (<i>Anax imperator</i>)	3	05/06/2014
Four-spotted Chaser (<i>Libellula quadrimaculata</i>)	4	05/06/2014
Migrant Hawker (<i>Aeshna mixta</i>)	1	14/10/2013
Ruddy Darter (<i>Sympetrum sanguineum</i>)	1	18/08/2013
Scarce Blue-tailed Damselfly (<i>Ischnura pumilio</i>)	1	18/08/2013
Vagrant Emperor (<i>Hemianax ephippiger</i>)	1	14/10/2013
Humming-bird Hawk-moth (<i>Macroglossum stellatarum</i>)	2	31/05/2017
Phyllonorycter trifasciella	1	26/12/2012
West European Hedgehog (<i>Erinaceus europaeus</i>)	4	19/06/2021

3.3.1. Amphibians

The desk study returned two records of common frog, the most recent from 2019. There were no records of any amphibian found within the site boundary and there is no suitable habitat on site or in the immediate area to support breeding amphibians. Therefore, amphibians are scoped out and not considered further in this report.

3.3.2. Birds

No bird species were recorded during the site survey and no records of birds were found on the site during the desk study.

One record of birds was returned from the desk study for the area surrounding the site, a red-billed chough in 2016. Chough are a coastal species which nest in caves and crevices along the coast. Their main foraging habitat is open grassland in the areas local to their breeding sites. There are no habitats suitable for chough on, or surrounding, the site and this feature is not carried forward for assessment.

Nesting birds of various common species are considered likely to use the trees and scrub during the breeding season.

The tree canopy habitat on Site would offer limited resource for breeding birds. The bird species within the Site would be evaluated as important at the local level and is carried forward for detailed assessment.

3.3.3. Terrestrial Mammals

Bats

There were no records of bats returned from the desk study. One record of a foraging bat was recorded by local resident. There are no trees or structures within the site that are suitable to support roosting bats. The trees and scrub along this area of the site may support foraging and / or commuting bats. Bat species in Ireland are protected under the Wildlife Act, with the lesser horseshoe bat also listed under Annex II of the EU Habitats Directive and all other bat species listed under Annex IV of the same directive.

Given the area and nature of the proposed works (i.e. the removal of only some of the trees and scrub) and the location of the site (i.e. urban residential with high human activity and existing artificial light) any effect on the local bat population is considered to be short term and not significant. Therefore, bats are not taken forward for further assessment.

Hedgehog

During the desk study, 2 records of west European hedgehog were found from the area surrounding the site. No evidence of hedgehog was recorded during the site visit. Scrub habitat on Site is considered suitable to support this species. Hedgehog is protected in Ireland under the Irish Wildlife Act

Hedgehog would be evaluated as important at the Site level and is scoped out and not considered further in this report.

Other mammals

There were several tracks recorded during the field survey considered likely to be mammal paths. However, there is no evidence to suggest that the signs noted are anything other than fox or dogs from the residential areas. Following reports of foxes in the area from local residents, it is possible that the paths seen may be fox. Foxes are a highly adaptable species which does well in urban areas and areas of high human activity. The fox has no legal protection in Ireland.

This feature will not be carried forward for further assessment.

3.4. Summary of Important Ecological Features

A summary of important ecological features that require detailed assessment are outlined in Table 2. The geographical scale of importance for the ecological features within the Site are summarised along with their legal status and a rationale, where appropriate, for carrying forward any features for detailed assessment.

Table 2 Summary of Important Ecological Features

Ecological Feature	Scale at which Feature is Important	Comments on Legal Status and/or Importance
Breeding Birds	Local	<p>Suitable nesting and foraging habitat present for green listed species.</p> <p>All bird species, their eggs and nests are protected under Wildlife Acts 1976 – 2021.</p>

4.0 Assessment of Effects and Mitigation Measures

The potential effects resulting from the proposed development and mitigation measures are discussed in the following sections.

The following design principles and “designed-in” mitigation have informed the assessment of impacts.

Within the design of the proposal good practice environmental and pollution control measures are employed with regard to current best practice guidance such as, but not limited to, CIRIA C741, ‘Environmental good practice on site guide’ (2015 4th Ed.).

Landscaping measures are embedded within the design of the development to minimise loss and create an enhancement of biodiversity on-site. Proposals indicate that while some trees and scrub will be removed there will be replacement and enhancement measures put in place, as described in section 4.2, to maintain and increase biodiversity..

Taking the above into account, the principal potential impact of the Proposed Development is limited to disturbance to breeding birds.

4.1. Birds

4.1.1. Potential Impacts

The proposed development will result in the loss of trees and scrub considered suitable to support breeding birds. Impacts on birds from the proposed development are likely to be restricted to breeding passerine birds which are commonly found in the local and wider area.

The effect of the Proposed Development on breeding birds would be significant at the local level.

4.1.2. Proposed Mitigation Measures

Vegetation clearance should take place outside of the nesting season which runs from 1 March to 31 August inclusive.

4.1.3. Significance of Residual Effects

The residual effect on birds will not be significant.

4.2. Proposed Biodiversity Enhancements

In line with the goals of the Cork Development Plan and the goal of biodiversity net gain, it is proposed to replace any existing non-native plant species and non-native ornamental trees with native species to replicate the existing habitat and create more dense habitat which will further support nesting birds and terrestrial mammals.

Specifically, the landscaping plan and concept design indicates that, while there will be some removal of individual trees and shrubs, these will be replaced and enhanced, including:

- Planting mixed deciduous trees to replace conifers.

- Planting of Native deciduous thorny hedgerows.
- Planting of Mixed native species thorn hedge.
- Planting native deciduous trees to infill & replace losses.
- Planting of a native bluebell verge.

4.3. Summary of Effects

Table 3: Summary of Potential Impacts, Proposed Mitigation and Residual Effects.

Ecological Feature	Potential Impacts	Proposed Mitigation	Means of Delivering Mitigation	Residual Effects
Breeding birds	Loss of nesting sites	<ul style="list-style-type: none"> • Working outside of breeding bird season. • Carry out pre-clearance checks 	<ul style="list-style-type: none"> • Construction contractor • Suitably experienced ecologist 	Not significant

5.0 Conclusions

The proposed development will result in localised effects on biodiversity of the Site. The proposed development will result in the loss of some tree habitat within the Site. Effects on species include the loss of nesting habitat for bird species.

Standard mitigation measures with proven effectiveness, based on recognised good practice, have been developed to reduce the effects of all identified impacts and effects.

The proposed landscaping for the Site outlines that native trees and other native vegetation will be planted in order to replace any habitat being removed and to enhance the habitat in order to incorporate ecological enhancements and biodiversity net gain for the Site during operation.

The proposed development will not result in significant residual effects.

6.0 References

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National Parks and Wildlife Services Protected Sites <https://www.npws.ie/protected-sites>

National Biodiversity Data Centre Mapping <http://maps.biodiversityireland.ie/#/Map>

BirdWatch Ireland <https://birdwatchireland.ie/>

Appendix 1 - Figures





Figure 1: Habitat map of the survey site.



Figure 2: Site location with designated sites within 1km.

Appendix 2 – Relevant Legislation and Policy

Habitats and Birds Directive

The Habitats Directive ensures the conservation of a wide range of rare, threatened or endemic animal and plant species. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora was adopted in 1992 and aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. It forms the cornerstone of Europe's nature conservation policy with the Birds Directive and establishes the EU wide Natura 2000 ecological network of protected areas, safeguarded against potentially damaging developments.

The Natura 2000 network of protected areas is known as Special Areas of Conservation (SAC) and Special Protection Areas (SPA). In general terms, they are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community. The requirements of the Habitats Directive have been transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations 2011 [S.I. No. 477/2011]. This legislation affords protection to both Special Protection Areas and Special Areas of Conservation.

Special Areas of Conservation (SAC) are designated under the Conservation of Natural Habitats and of Wild Fauna and Flora Directive 92/43/EEC (Habitats Directive) which is transposed into Irish law by the EC (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). Special Protection Areas (SPA) are classified under the Birds Directive (2009/147/EC on the Conservation of Wild Birds). Article 6(3) of the Habitats Directive requires an 'appropriate assessment' to be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An 'appropriate assessment' is an evaluation of the potential impacts of a plan or project on the integrity of a Natura 2000 site, and the incorporation, where necessary, of measures to mitigate or avoid negative effects.

The European Communities (Birds & Natural Habitats) Regulations 2011 – 2021 restrict the importation, distribution, sale or release of approximately 70 species of plants and animals considered to be the most harmful Invasive Alien Species. Japanese knotweed is one of the plant species listed in Part 2 of the Third Schedule of the 2011 regulations and it is also listed as a vector material in Part 3 of the Third Schedule.

Regulation 49 (2) states the following:

“Save in accordance with a licence granted under paragraph (7), any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place specified in relation to such plant in the third column of Part 1 of the Third Schedule, any plant which is included in Part 1 of the Third Schedule, shall be guilty of an offence.”

Regulation 50 (1) states the following:

“Save in accordance with a licence granted under paragraph (7), and subject to Regulation 74, a person shall be guilty of an offence if he or she has in his or her possession for sale, or for the purposes of breeding, reproduction or propagation, or offers or exposes for sale, transportation, distribution, introduction or release—

a) an animal or plant listed in Part 1 or Part 2 of the Third Schedule,

b) anything from which an animal or plant referred to in subparagraph (a) can be reproduced or propagated,

c) a vector material listed in Part 3 of the Third Schedule,

in any place in the State specified in the third column of the Third Schedule in relation to such an animal, plant or vector material.

Regulation 50 (2) states the following:

“(2) Save in accordance with a licence granted under paragraph (7), a person shall be guilty of an offence if he or she imports or transports—

a) an animal or plant listed in Part 1 or Part 2 of the Third Schedule,

b) anything from which an animal or plant referred to in Part 2 of the Third Schedule can be reproduced or propagated, or

c) a vector material listed in Part 3 of the Third Schedule,

into or in or to any place in the State specified in relation to such an animal or plant or vector material in relation to that animal or plant or vector material in the third column of the Third Schedule.

It is also an offence under the Wildlife Acts 1976 – 2018 to plant or otherwise cause to grow in a wild state in any place in the State any species of (exotic) flora, or the flowers, roots, seeds or spores of (exotic) flora

National Legislation

Flora and fauna in Ireland are protected at a national level by the Wildlife Acts 1976 to 2021 and the Floral (Protection) Order 2015. Natural Heritage Areas (NHA) are areas that are considered to be important for the habitats present or for the species of plants and animals supported by those habitats. Under the Wildlife Amendment Act 2000, NHAs are legally protected from damage from the date they were formally proposed for designation. Section 19(1) of the Act states that ‘Where there is a subsisting natural heritage area order in respect of any land, no person shall carry out, or cause or permit to be carried out, on that land any works specified in the order or any works which are liable to destroy or to significantly alter, damage or interfere with the features by reason of which the designation order was made’.

In addition, a list of proposed NHAs (pNHAs) was published in 1995 but to date these have not had their status confirmed. Prior to statutory designation, pNHAs are subject to limited protection under various agri-environment and forestry schemes and under local authority planning strategies such as County Development Plans.

Relevant Planning Policy

The planning policy and legislation that is relevant to the proposed development is set out in the following section.

County Planning Policies

The relevant local planning policies have been extracted from the Cork County Development Plan 2022 (Volume 1 - Chapter 15: Biodiversity and Environment).

15.5 Managing Local Authority Developments and Projects

15.5.1 Cork County Council is a significant developer within the county and is responsible for delivering new housing and infrastructure projects, sustainable transport networks and projects to improve the public realm of towns and villages. The Council also supports tourism, recreational and amenity projects including the development of new greenways and blueways, many of which are located within areas of high biodiversity value. As a developer, Cork County Council has a responsibility to ensure that new development it progresses is carried out in a manner which is sustainable and does not harm our natural resources.

County Development Plan Objective
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BE 15-4: Local Authority development and projects
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a) Ensure that biodiversity protection is considered at design stage for works and development planned and progressed by Cork County Council and that all such projects comply with nature conservation legislation and policy as required;

b) Fulfil Appropriate Assessment and Environmental Impact Assessment requirements and carry out Ecological Impact Assessment in relation to Local Authority plans and projects as appropriate.
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15.6 Protecting and Enhancing Biodiversity on Local Authority Land

15.6.1 Cork County Council is also an owner and manager of land. This includes land which is designated for the protection of biodiversity, public parks and other spaces which have biodiversity value or the potential to be managed to improve/ enhance their biodiversity value. The Council already actively manages some sites specifically for nature conservation (e.g. Harpers Island Wetlands), and is seeking to improve its approach to the management of other public spaces in towns and villages and elsewhere to enhance their biodiversity value where possible.

County Development Plan Objective
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BE 15-5: Biodiversity on Council owned and managed land and property

a) Protect biodiversity and support the principle of biodiversity net gain on land and property owned and managed by Cork County Council.

b) Support the implementation of positive conservation management on lands and property which are owned or managed by Cork County Council;
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c) Support and implement best practice in the management of roadside boundaries including tree lines and hedgerows managed by Council;
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d) Support national policy to create new woodlands on public land and participate in the Creation of Woodlands on Public Lands Scheme and any successor schemes;
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e) Where possible, develop and implement Pollinator Plans and/or Biodiversity Action Plans for lands managed by Cork County Council in accordance with the National Biodiversity Action Plan (and any future National Biodiversity Plan which may be adopted during the lifetime of this Plan) and the All-Ireland Pollinator Plan;

f) Support the use of natural approaches to flood management and control on lands owned or managed by or on behalf of Cork County Council.
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g) The Council will incorporate primarily native planting into new landscaping schemes within its own developments
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Appendix 3 – Site Photographs



Plate 1: (A) Recolonising bare ground under concrete bridge; (B) Ivy and bramble coverage over concrete bridge with entry onto train line



Plate 2: Scrub habitat with immature trees at the south end of the site.



Plate 3: Scrub habitat

