ECOLOGICAL IMPACT ASSESSMENT REPORT

FOR

PROPOSED WAREHOUSE DEVELOPMENT

AT

MAGNA AVENUE,
MAGNA BUSINESS PARK,
DUBLIN 24

ON BEHALF OF

Rockface Developments Ltd.

Prepared by
Enviroguide Consulting

Dublin
3D Core C, Block 71, The Plaza,
Park West, Dublin 12

Kerry
19 Henry Street
Kenmare, Co. Kerry

Wexford
M10 Wexford Enterprise
Centre, Strandfield Business
Park, Rosslare Road, Wexford

www.enviroguide.ie
info@enviroguide.ie
+353 1 565 4730

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1 INTRODUCTION

Enviroguide Consulting was commissioned by Rockface Developments Ltd. to prepare an Ecological Impact Assessment for a Proposed Development at Magna Avenue, Magna Business Park, Dublin 24.

This Ecological Impact Assessment (EcIA) assesses the potential effects of the Proposed Development on habitats and species; particularly those protected by National and International legislation or considered to be of particular nature conservation importance. This report will describe the ecology of the Proposed Development area, with emphasis on habitats, flora and fauna, and will assess the potential effects of the Construction and Operational Phases of the Proposed Development on these ecological receptors. The report follows Guidelines for Ecological Impact Assessment in the UK and Ireland, by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018).

1.1 Quality assurance and competence

Synergy Environmental Ltd., T/A Enviroguide Consulting, is wholly Irish Owned multi-disciplinary consultancy specialising in the areas of the Environment, Waste Management and Planning. All of our consultants carry scientific or engineering qualifications and have a wealth of experience working within the Environmental Consultancy sectors, having undergone extensive training and continued professional development.

Enviroguide Consulting as a company remains fully briefed in European and Irish environmental policy and legislation. Enviroguide staff members are highly qualified in their field. Professional memberships include the Chartered Institution of Wastes Management (CIWM), the Irish Environmental Law Association and Chartered Institute of Ecology and Environmental Management (CIEEM).

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants. Shannen O'Brien, Ecologist with Enviroguide undertook the habitat surveys and desktop research for this report.

Shannen O'Brien has a B.A. in Zoology from Trinity College Dublin and a M.Sc. Hons. in Wildlife Conservation and Management from University College Dublin, and has experience in desktop research, report writing, and literature scoping-review, as well as practical field and laboratory experience (Pollinator surveying, sampling and identification, habitat surveying, invasive species surveying, etc.). Shannen has prepared Stage I and Stage II Appropriate Assessment Reports, Invasive Species Surveys, Ecology Statements, and Ecological Impact Assessments (EcIA).

2 RELEVANT LEGISLATION

An Ecological Impact Assessment (EcIA) is a process of identifying, quantifying, and evaluating potential effects of development-related or other actions on habitats, species and ecosystems (CIEEM. 2016). The Proposed Development is a sub-threshold for an Environmental Impact Assessment (EIA) under the Planning and Development Regulations 2011-2018.

When an EcIA is undertaken as part of an EIA process it is subject to the EIA Regulations (under the EU Planning and Development [Environmental Impact Assessment] Regulations 2001-2018). An EcIA is not a statutory requirement, however it is a best practice evaluation process. This EcIA has been undertaken to support and assess the Proposed Development planning application and assesses the potential impacts that the Proposed Development may have on the ecology of the site and its environs. Where potential for a risk to the environment is identified, mitigation measures are proposed on the basis that by deploying these mitigation measures the risk is eliminated or reduced to an insignificant level. This EcIA is provided to assist the Competent Authority with its decision making in respect of the Proposed Development.

2.1 National Legislation

2.1.1 Wildlife Act 1976 and amendments

The Wildlife Act 1976 was enacted to provide protection to birds, animals, and plants in Ireland and to control activities which may have an adverse impact on the conservation of wildlife. With regard to the listed species, it is an offence to disturb, injure or damage their breeding or resting place wherever these occur without an appropriate licence from the National Parks and Wildlife Service (NPWS). This list includes all wild birds along with their nests and eggs. Intentional destruction of an active nest from the building stage up until the chicks have fledged is an offence. This includes the cutting of hedgerows from the 1st of March to the 31st of August. The act also provides a mechanism to give statutory protection to Natural Heritage Areas (NHAs). The Wildlife Amendment Act 2000 widened the scope of the Act to include most species, including the majority of fish and aquatic invertebrate species which were excluded from the 1976 Act.

2.1.2 EU Habitats Directive 1992 and EC (Birds and Natural Habitats) Regulations 2011

The EU Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive 1992) provides protection to particular species and habitats throughout Europe. The Habitats Directive has been transposed into Irish law through the EC (Birds and Natural Habitats) Regulations 2011.

Annex IV of the EU Habitats Directive provides protection to a number of listed species, wherever they occur. Under Regulation 23 of the Habitats Directive, any person who, in regards to the listed species, "Deliberately captures or kills any specimen of these species in the wild, deliberately disturbs these species particularly during the period of breeding, rearing, hibernation and migration, deliberately takes or destroys eggs from the wild or damages or destroys a breeding site or resting place of such an animal shall be guilty of an offence."

2.1.3 Flora (Protection) Order, 2015

The Flora (Protection) Order (S.I. No. 356/2015) affords protection to several species of plant in Ireland, including 68 vascular plants, 40 mosses, 25 liverworts, 1 stonewort and 1 lichen. This Act makes it illegal for anyone to uproot, cut or damage any of the listed plant species and it also forbids anyone from altering, interfering, or damaging their habitats. This protection is not confined to within designated conservation sites and applies wherever the plants are found.

2.2 International Legislation

2.2.1. EU Birds Directive

The Birds Directive constitutes a level of general protection for all wild birds throughout the European Union. Annex I of the Birds Directive includes a total of 194 bird species that are considered rare, vulnerable to habitat changes or in danger of extinction within the European Union. Article 4 establishes that there should be a sustainable management of hunting of listed species, and that any large scale non-selective killing of birds must be outlawed. The Directive requires the designation of Special Protection Areas (SPAs) for: listed and rare species, regularly occurring migratory species and for wetlands which attract large numbers of birds. There are 25 Annex I species that regularly occur in Ireland and a total of 153 Special Protection Areas have been designated.

2.2.2. EU Habitats Directive

The Habitats Directive aims to protect some 220 habitats and approximately 1000 species throughout Europe. The habitats and species are listed in the Directives annexes, where Annex I covers habitats and Annex II, IV and V cover species. There are 59 Annex I habitats in Ireland and 33 Annex IV species which require strict protection wherever they occur. The Directive requires the designation of Special Areas of Conservation for areas of habitat deemed to be of European interest. The SACs together with the SPAs from the Birds Directive form a network of protected sites called Natura 2000.

2.2.3. Water Framework Directive

The EU Water Framework Directive (WFD) 2000/60/EC is an important piece of environmental legislation which aims to protect and improve water quality. It applies to rivers, lakes, groundwater, estuaries, and coastal waters. The Water Framework Directive was agreed by all individual EU member states in 2000, and its first cycle ran from 2009 – 2015. The Directive runs in 6-year cycles, so the second (current) cycle runs from 2016 – 2021.The aim of the WFD is to prevent any deterioration in the existing status of water quality, including the protection of good and high water quality status where it exists. The WFD requires member states to manage their water resources on an integrated basis to achieve at least 'good' ecological status, through River Basin Management Plans (RBMP), by 2027.

2.2.4. Bern and Bonn Convention

The Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1982) was enacted to conserve all species and their habitats. The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention 1979. enacted 1983) was introduced to give protection to migratory species across borders in Europe.

2.2.5. Ramsar Convention

The Ramsar Convention on Wetlands is an intergovernmental treaty signed in Ramsar, Iran, in 1971. The treaty is a commitment for national action and international cooperation for the conservation of wetlands and their resources. In Ireland there are currently 45 Ramsar sites which cover a total area of 66,994 Ha.

3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

3.1 Location

The Site of the Proposed Development is 3.03Ha and located within Magna Business Park. The Site is currently comprised of a greenfield site which has been recently cleared, and is bounded on the north and west by Magna Drive, and along the south by Magna Avenue. The east of the Site is abutted by commercial units. The surrounding landscape is predominantly urban in nature.

3.2 Description

Rockface Developments Limited intend to apply for permission for development at this 3.03 Ha site at Magna Avenue and Magna Drive, Citywest, Dublin 24. The lands are bounded to the south by Magna Avenue, to the north and west by Magna Drive and to the east by development within Magna Business Park. The building will have a maximum height of 15.5 m with a gross floor area of 13,604 sq m including a warehouse area (12,568 sq m), staff facilities (498 sq m) and ancillary office area (538 sq m).

The development will also include: a vehicular and pedestrian entrance to the site from Magna Avenue, a separate HGV entrance from Magna Drive; 69 No. ancillary car parking spaces; covered bicycle parking; HGV parking and yards; level access goods doors; dock levellers; access gates; signage; hard and soft landscaping; lighting; boundary treatments; ESB substation; sprinkler tank and pump house; and all associated site development works above and below ground.

The incorporation of Sustainable Urban Drainage Systems (SUDS) into the design of the Proposed Development is mandatory for all new developments under the Greater Dublin Regional Code of Practice for Drainage Works. As such, the Proposed Development design entails a suite of SuDS measures. SUDS is a series of management practices and control structures that aim to mimic natural drainage. SUDS reduces flood risk, improves water quality and provides amenity through the use of permeable paving, swales, green roofs, rainwater harvesting, detention basins, ponds and wetlands[1].

[1] https://www.dublincity.ie/dublin-city-development-plan-2016-2022/9-sustainable-environmental-infrastructure/95-policies-and-objectives/954-surface-water-drainage-and

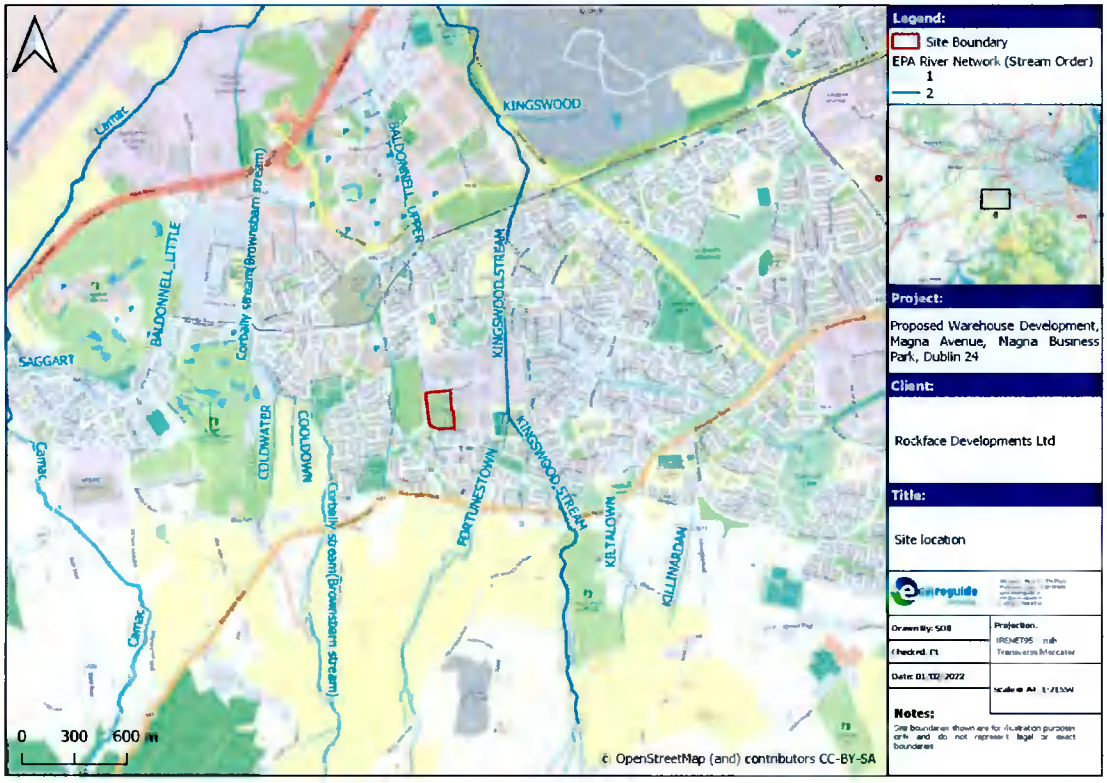

FIGURE 1. SITE LOCATION.

4 METHODOLOGY

This section details the steps and methodology employed to undertake an Ecological Impact Assessment of the Proposed Development.

4.1 Scope of Assessment

The specific objectives of the study were to:

- Undertake baseline ecological surveys and evaluate the nature conservation importance of the Site of the Proposed Development.
- Identify and assess the direct, indirect, and cumulative ecological implications or impacts of the Proposed Development during its lifetime; and
- Where possible, propose mitigation measures to remove or reduce those impacts at the appropriate stage of development.

4.2 Desk Study

A desktop study was carried out to collate and review available information, datasets and documentation sources pertaining to the site's natural environment. The desktop study relied on the following sources:

- Information on species records and distributions, obtained from the National Biodiversity Data Centre (NBDC) at www.maps.biodiversityireland.ie.
- Information on waterbodies, catchment areas and hydrological connections obtained from the Environmental Protection Agency (EPA) at www.gis.epa.ie.
- Information on bedrock, groundwater, aquifers and their statuses, obtained from Geological Survey Ireland (GSI) at www.gsi.ie ;
- Information on the network of designated conservation sites, boundaries, qualifying interests and conservation objectives, obtained from the National Parks and Wildlife Service (NPWS) at www.npws.ie ;
- Satellite imagery and mapping obtained from various sources and dates including Google, Digital Globe and Ordnance Survey Ireland.
- Information on the existence of permitted developments, or developments awaiting decision, in the vicinity of the Proposed Development from Dublin City Council available at: http://www.dublincity.ie/main-menu-services-planning/planning-search
- Information on the extent, nature and location of the Proposed Development, provided by the applicant and/or their design team.
- The current conservation status of birds in Ireland taken from Gilbert et al. (2021).
- The pollinator friendly planting code provided by The All-Ireland Pollinator Plan (2015-2020 and 2021-2025) available at www.pollinators.ie
- Connecting with Nature – Draft Biodiversity Action Plan for South Dublin County 2020-2026
- South Dublin County Council Development Plan 2016-2022

A comprehensive list of all the specific documents and information sources consulted in the completion of this document is provided in Section 11, References.

4.3 Field surveys

4.3.1 Habitat Surveys

A habitat survey was carried out at the Site on the 19th of January 2022. Habitats were categorised according to the Heritage Council's '*A Guide to Habitats in Ireland*' (Fossitt, 2000) to level 3. The habitat mapping exercise had regard to the 'Best Practice Guidance for Habitat Survey and Mapping' (Smith et al., 2010) published by the Heritage Council. Satellite imagery was used together with GPS to accurately enable field navigation. Habitat categories, characteristic plant species, invasive species and other ecological features were recorded.

4.3.2 Bat Surveys

A bat habitat assessment survey was carried out on Site of the Proposed Development on the 19th of January 2022 along with the overall habitat survey.

4.3.3 Bird Surveys

A bird survey was completed on the 19th of January 2022. All birds encountered on Site, through visual and/or audio means, were recorded during this survey.

4.3.4 Mammal Surveys

Mammal surveys of the Site were carried out in conjunction with the habitat survey. The Site was examined for tracks and signs of mammals. The habitat types recorded throughout the survey area were used to assist in identifying the fauna considered likely to utilise the area.

4.3.5 Invasive Species Surveys

The Site was assessed for the presence of invasive plant species during the habitat survey undertaken.

4.4 Consultation

No consultation was undertaken as part of this Ecological Impact Assessment.

4.5 Assessment

The value of the ecological resources, i.e., the habitats and species present or potentially present, was determined using the ecological evaluation guidance given in the National Roads Authority's Ecological Assessment Guidelines (NRA, 2009a), presented in Appendix I. This evaluation scheme, with values ranging from locally important to internationally important, seeks to provide value ratings for habitats and species present that are considered ecological receptors of impacts that may ensue from a proposal. As per the NRA guidelines, impact assessment is only undertaken of key ecological receptors (KERs).

The assessment of the potential effect or impact of the Proposed Development on the identified key ecological receptors was carried out with regard to the criteria outlined in the draft EPA Guideline (EPA, 2017), presented in Appendix II. These guidelines set out a number of parameters such as quality, magnitude, extent and duration that should be considered when determining which elements of the Proposed Development could constitute impact or sources of impacts.

4.6 Limitations

An extensive search of available datasets for records of rare and protected species within proximity of the Proposed Development has been undertaken as part of this assessment. However, the records from these datasets do not constitute a complete species list. The absence of species from these datasets does not necessarily confirm an absence of species in the area.

5 BASELINE ECOLOGICAL CONDITIONS

5.1 Site Overview

5.1.1 Geology, Hydrology and Hydrogeology

The Site of the Proposed Development is within the *Liffey and Dublin Bay* catchment and *Liffey_SC_090* sub catchment. The closest watercourse to the Site is the Boherboy Stream approximately 120m to the southwest, which flows into the River Camac 2.6km north of the Site. The EPA station located at the point where these watercourses intersect designated the River Camac as *Moderate* by the EPA in 2019 (station code: RS09C020250). The River Camac flows into the River Liffey, and ultimately into Dublin Bay.

The vast majority of the Site is situated on the Dublin groundwater body, which is *Not At Risk* of not meeting its WFD objectives, with the southern boundary lying on the Kilcullen groundwater body, which is At Risk of not meeting its WFD objectives. The predominant aquifer type within the Site boundary is a *Locally Important* (Ll) aquifer on bedrock which is *Moderately Productive in Local Zones Only*. A small area in the southwest of the Site is *Poor* Aquifer (Pl) on bedrock which is *Generally Unproductive except for Local Zones*. The primary groundwater rock units underlying the aquifer are classified as *Dinantian Upper Impure Limestones*, with *Ordovician Metasediments* along the southeast boundary and *Silurian Metasediments and Volcanics* along the southwest boundary of the Site (GSI, 2022). The level of vulnerability of the Site to groundwater contamination via human activities is *Low*. The main soil is classified as *Elton*, with an area of *Urban* in the southwest and the predominant subsoil is Sandstone and shale till (Lower Paleozoic) (*TLPSsS*), with a small area of made ground (*Made*) within the southwest of the Site (EPA, 2022).

5.2 Designated Sites

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of Special Areas of Conservation (SACs) and the Birds Directive (2009/147/EC) seeks to protect birds of special importance by the designation of Special Protection Areas (SPAs). It is the responsibility of each member state to designate SPAs and SACs, both of which will form part of Natura 2000, a network of protected sites throughout the European Community. SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the qualifying interests of the sites; from these the conservation objectives of the site are derived.

Natural Heritage Areas (NHAs) are designations under the Wildlife Acts to protect habitats, species, or geology of national importance. The boundaries of many of the NHAs in Ireland overlap with SAC and/or SPA sites. Although many NHA designations are not yet fully in force under this legislation (referred to as 'proposed NHAs' or pNHAs), they are offered protection in the meantime under planning policy which normally requires that planning authorities give recognition to their ecological value.

Table 1 below presents details of the designated sites within a 15km radius of the Proposed Development. In addition, the potential for connectivity with designated sites at distances of greater than 15km from the Development was also considered in this initial assessment. In this case, there is no potential connectivity between the Development site and designated sites located at a distance greater than 15km from the Proposed Development.

The result of this preliminary screening concluded that there is a total of 6 SACs, 4 SPAs and 16 pNHAs located within the Zone of Influence of the Proposed Development Site. The distances to each site listed are taken from the nearest possible point of the Proposed Development Site boundary to nearest possible point of each Natura 2000 site or pNHA. In addition, Dublin Bay is designated as a UNESCO Biosphere[2]. Dublin Bay Biosphere contains three different zones, which are managed in different ways:

- The core zone of Dublin Bay Biosphere comprises 50km² of areas of high natural value. Key areas include the Tolka and Baldoyle Estuaries, Booterstown Marsh, Howth Head, North Bull Island, Dalkey Island and Ireland's Eye.
- The buffer zone comprises 82km² of public and private green spaces such as parks, greenbelts and golf courses, which surround and adjoin the core zones.
- The transition zone comprises 173km² and forms the outer part of the Biosphere. It includes residential areas, harbours, ports and industrial and commercial areas.

TABLE 1. DESIGNATED SITES WITHIN THE ZONE OF INFLUENCE (15KM) OF THE PROPOSED DEVELOPMENT, POTENTIAL PATHWAYS BETWEEN THE PROPOSED DEVELOPMENT SITE AND THE DESIGNATED SITES. SITES THAT HAVE BEEN SCREENED INTO THIS ECIA FOR FURTHER ASSESSMENT ARE SHADED IN GREEN.

Site Name & Code (Receptor)	Distance to Proposed Development	Potential Pathway to receptor
Special Area of Conservation		
Glenasmole Valley SAC (001209)	3.7km	No – Refer to AA Screening Report accompanying this application.
Wicklow Mountains SAC (002122)	5.3km	
Rye Water Valley/Carton SAC (001398)	8.4km	
Red Bog, Kildare SAC (000397)	11.8km	
South Dublin Bay SAC (000210)	14.3km	
North Dublin Bay SAC (000206)	*>15km*	
Special Protection Area		
Wicklow Mountains SPA (004040)	8.5km	No – Refer to AA Screening Report accompanying this application.
Poulaphouca Reservoir SPA (004063)	11.8km	
South Dublin Bay and River Tolka Estuary SPA (004024)	14.3km	
North Bull Island SPA (004006)	*>15km*	

[2] A biosphere is a special designation awarded by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) but managed in partnership by communities, NGOs and local and national governments (https://www.dublinbaybiosphere.ie/).

Site Name & Code (Receptor)	Distance to Proposed Development	Potential Pathway to receptor
Proposed Natural Heritage Area		
Lugmore Glen (001212)	1.0km	No – there is no hydrological connection with these pNHAs and the intervening distances between the Site and the pNHAs are sufficient to exclude the possibility of significant effects on the pNHA arising from: emissions of noise, dust, pollutants and/or vibrations emitted from the Site during the Construction Phase; increased traffic volumes during the Construction and Operational Phase and associated emissions; potential increased lighting emitted from the Site during Construction and Operational Phase; and increased human presence at the Site during Construction and Operational Phase.
Slade Of Saggart And Crooksling Glen (000211)	2.4km	
Glenasmole Valley (001209)	3.7km	
Dodder Valley (000991)	4.0km	
Grand Canal (002104)	5.4km	
Kilteel Wood (001394)	8.7km	
Liffey Valley (000128)	8.7km	
Rye Water Valley/Carton (001398)	10.3km	
Royal Canal (002103)	10.4km	
Red Bog, Kildare (000397)	11.6km	
Poulaphouca Reservoir (000731)	11.7km	
Fitzsimon's Wood (001753)	12.0km	
Glencree Valley (001755)	13.6km	
South Dublin Bay (000210)	14.6km	No - There is an indirect hydrological connection to Dublin Bay via surface water discharges to the River Camac during the Construction and Operational Phases and discharges from Ringsend WwTP during the Operational Phase. However, the potential for surface water generated at the Site of the Proposed Development to reach Dublin Bay and cause significant effects, during the Construction and Operational Phases, is excluded due to: • The distance and consequent potential for dilution in the River Camac, River Liffey and Dublin Bay. Surface water discharges would have to travel over 22km along the River Camac and River Liffey before discharging into Dublin Bay. • The potential for dilution in the surface water network during heavy rainfall events. Also, the potential for foul water generated at the Site of the Proposed Development to reach Dublin Bay and cause significant effects, during Operational Phase, is excluded due to: • The fact that the surface water hydrological link will only exist during rainfall events. • The potential for dilution in the surface water network during these rainfall events. • Effects on marine biodiversity and protected sites within Dublin Bay from the current operation of Ringsend WwTP are unlikely (see section 8.1.3 for more details).
Booterstown Marsh (001205)	14.8km	No – see entry for Lugmore Glen
North Dublin Bay (000206)	14.9km	No – see entry for South Dublin Bay

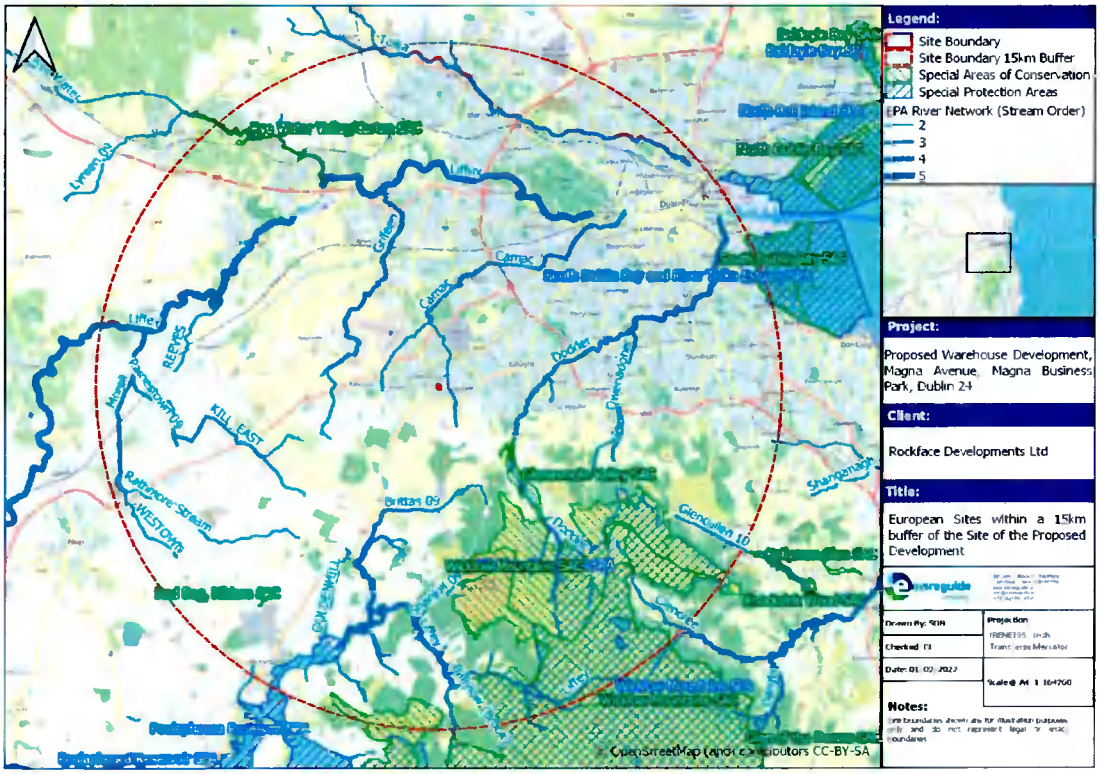

FIGURE 2. EUROPEAN SITES WITHIN 15KM OF THE PROPOSED DEVELOPMENT SITE.

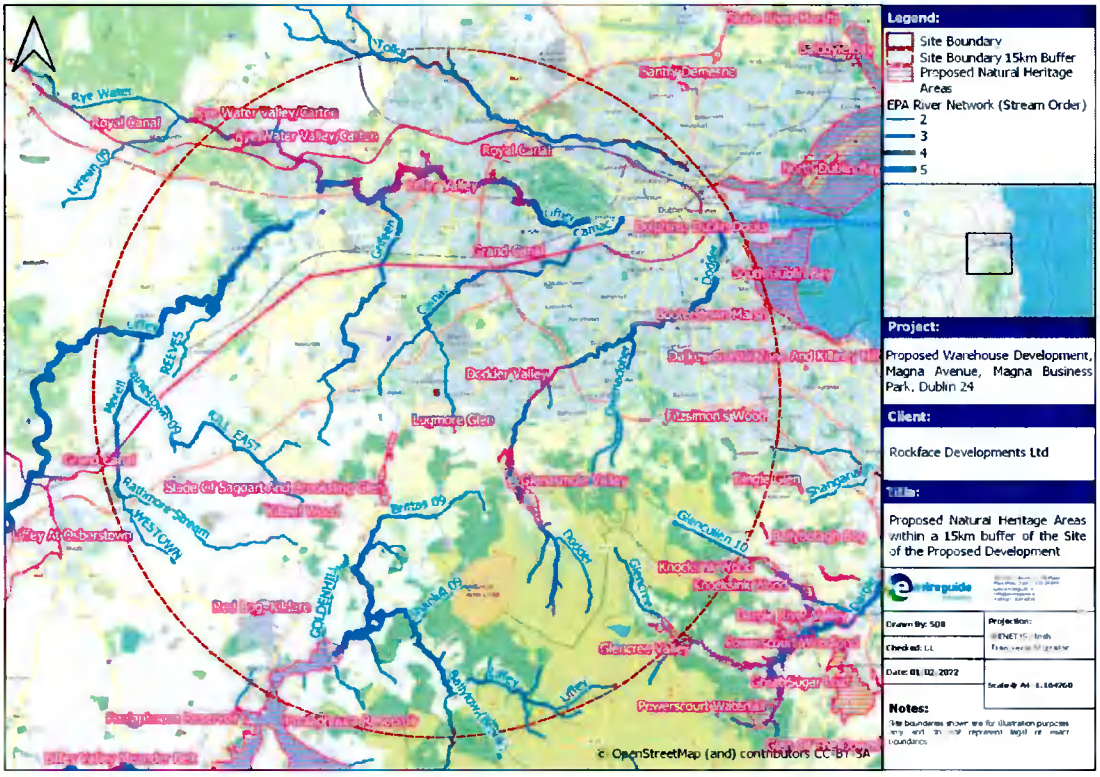

FIGURE 3. PROPOSED NATURAL HERITAGE AREAS WITHIN 15KM OF THE PROPOSED DEVELOPMENT SITE

5.3 Desk Study

5.3.1 Species and Species Groups

The Site of the Proposed Development is located within the Ordnance Survey Ireland National Grid 2km square O02N. Species records from the National Biodiversity Data Centre (NBDC) online database for this grid square was studied for the presence of rare or protected flora and fauna. The following records were excluded:

- Records greater than 20 years old.
- Species records with no designation or conservation status (excluding mammals and birds).

In addition, data from various sources (e.g., Inland Fisheries Ireland) were used to determine the presence of species in the vicinity of the Proposed Development. The following sections outline the results of this assessment.

5.3.1.1 Flora

Rare and Protected Flora

Species records from the NBDC online database were studied for the presence of rare of protected flora and no records were found. There are no records for protected bryophytes within the area[3].

Invasive Plant Species

The NBDC have records (dated within the last 20 years) of 2 *High Impact* invasive plant species within the 2km (O02N) grid square (Table 2).

TABLE 2. INVASIVE PLANT SPECIES WITHIN THE 2KM (O02N) GRID SQUARE. THE RECORDS ARE DATED WITHIN THE LAST 20 YEARS AND ARE PROVIDED BY THE NBDC.

Name	Date of last record	Database	Legal status / Designation
Fringed Water-lily *Nymphoides peltata*	15/06/2016	National Invasive Species Database	- High Impact Invasive - Regulation S.I. 477 (Ireland)
Japanese Knotweed *Reynoutria japonica*	11/09/2019	Vascular plants Online Atlas of Vascular Plants 2012 Onwards	- High Impact Invasive - Regulation S.I. 477 (Ireland)

5.3.1.2 Mammals (excl. bats)

Records for terrestrial mammals were retrieved from the NBDC online database. Table 3 lists these species, their last record date and summarises their legal status/designation. Three terrestrial mammals were recorded within the 2km grid square (O02N), two of which are native, namely Irish Hare and Red Fox, and the remaining species, Rabbit, is an invasive species.

[3] https://dahg.maps.arcgis.com/apps/webappviewer/index.html?id=71f8df33693f48edbb70369d7fb26b7e

TABLE 3. TERRESTRIAL MAMMAL SPECIES WITHIN THE 2KM (O02N) GRID SQUARE. THE RECORDS ARE DATED WITHIN THE LAST 20 YEARS AND ARE PROVIDED BY THE NBDC.

Name	Date of last record	Database	Legal Status / Designation
European Rabbit *Oryctolagus cuniculus*	28/05/2018	Mammals of Ireland 2016-2025	- Medium Impact Invasive
Irish Hare *Lepus timidus subsp hibernicus*	01/09/2017	Mammals of Ireland 2016-2025	- EU Habitats Directive Annex V - Wildlife (Amendment) Act, 2000
Red Fox *Vulpes vulpes*	09/05/2017	Mammals of Ireland 2016-2025	- n/a

5.3.1.3 Bats

There are 2 bat species recorded within the 2km grid square associated with the Site (O02N), namely Lesser Noctule (*Nyctalus leisleri*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*). The NBDC maps landscape suitability for bats based on Lundy et al. (2011). The index ranges from 0 to 100 with 0 being least favourable and 100 most favourable for bats. The overall habitat suitability index for bats in the area is 39.67. The species with the highest individual suitability scores for the area encompassing the Site are Lesser Noctule *Nyctalus leisleri* and Brown Long-eared Bat *Plecotus auritus*, both with 59.

5.3.1.4 Birds

A total of 23 bird species have been recorded within the 2km grid square by the NBDC. Of these, 1 is listed as *Red* and 5 are listed as *Amber* in *Birds of Conservation Concern in Ireland 2020-2026* (Gilbert et al., 2021).

Red listed species include:

Grey Wagtail *Motacilla cinerea*

Amber listed species include:

Black-headed Gull *Larus ridibundus*
Coot *Fulica atra*
Starling *Sturnus vulgaris*
Mallard *Anas platyrhynchos*
Tufted Duck *Aythya fuligula*

5.3.1.5 Fish

There were no fish species recorded within the 2km grid square by the NBDC.

Atlantic salmon (*Salmo salar*) & Brown trout (*Salmo trutta*)

There are three species of salmonid associated with freshwater habitats in Ireland, namely Atlantic Salmon (*Salmo salar*), Brown Trout (*Salmo trutta*) and Arctic Char (*Salvelinus alpinus*), the latter of which is only associated with lake waterbodies in Ireland. The Atlantic salmon is listed as an Annex II species under the Habitat Directive. The River Camac was surveyed in September of 2017 and three age classes of Brown Trout (0+, 1+ and 2+) were recorded at the survey site located closest to the Site of the Proposed Development, which was the Moneenalion Commons Bridge, 2.6km north of the Site (Matson et al., 2018).

Petromyzonidae (Lamprey sp.)

There are three lamprey species native to Ireland including Sea Lamprey (*Petromyzon marinus*), River Lamprey (*Lampetra fluviatilis*) and Brook Lamprey (*Lampetra planeri*). All three species are listed under Annex II of the Habitats Directive and are protected by the Fisheries Acts 1959 to 2006. Lamprey was not recorded were recorded at the Moneenalion Commons Bridge survey site in 2017 (Matson et al., 2018).

European eel (*Anguilla anguilla*)

European eel is a red listed species[4] and are currently considered to be one of the most threatened fish species in Ireland (King *et al.* 2011). Eels were not recorded at the Moneenalion Commons Bridge survey site in 2017 (Matson et al., 2018).

There are no waterbodies within the Site of the Proposed Development itself.

5.3.1.6 Amphibians

Common Frog *Rana temporaria* was recorded within the 2km (O02N) grid square (NBDC: *Amphibians and reptiles of Ireland*). There is potential suitable habitat at the Site, with a small area of pooling, and ditches across the Site.

5.3.1.7 Invertebrates

There are no records of protected invertebrates within the 2km (O02N) grid square. There are records of one *Near Threatened* invertebrate species.

Near Threatened

- Large Red-Tailed Bumblebee *Bombus lapidarius*

5.3.1.8 Other species and species groups

There are no records of Common Lizard *Zootoca vivipara* within the 2km grid square (O02N). In addition, this species is associated with coastal and heathland habitats, but also locally in rural gardens, stone walls and roadside verges (King et al., 2011). The habitat at the Site of the Proposed Development is not considered suitable for this species.

5.4 Field Surveys

5.4.1 Habitats & Flora

The habitats encountered and identified at the Site of the Proposed Development have been classified and coded as per Fossitt (2000). These are described below.

- Spoil and Bare Ground (ED2)
- Amenity Grassland (improved) (GA2)

The predominant habitat on the Site of the Proposed Development is *Spoil and Bare Ground (ED2)*, which was created by the recent clearance of the vegetation on Site, with the remains of Bramble (*Rubus fruticosus agg.*) and Gorse (*Ulex europaeus*) evident on Site. A small

[4] The status of a species is designated by the relevant authorities as Red. Amber or Green. Red list species range from vulnerable to extinct. Amber list species with unfavourable conservation status or declining population. and Green list species are those which are not currently of conservation concern.

border of *Amenity Grassland (improved) (GA2)* lies along the north, west and south boundaries of the Site.

FIGURE 4. SPOIL AND BARE GROUND (ED2) HABITAT AT THE SITE OF THE PROPOSED DEVELOPMENT

FIGURE 5 SPOIL AND BARE GROUND (ED2) HABITAT WITH AMENITY GRASSLAND (IMPROVED) (GA2) ALONG THE WEST BOUNDARY OF THE SITE

5.4.1.1 Invasive Plant Species

Non-native species in Ireland have been assessed and assigned an impact rating of either 'High', 'Medium' or 'Low' impact based on a number of factors that determine a species' potential to become established in this country and have significant impacts (Kelly et al., 2013). Invasive species can also be rated as an 'Amber-list species', which signifies a 'Medium' impact potential or established invasive species that may pose a threat to conservation goals (Invasive Species Ireland). No non-native/invasive species were observed on the Site of the Proposed Development.

No species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011) including Japanese Knotweed (*Reynoutria japonica*) were recorded at the Site.

FIGURE 6 HABITATS FOUND WITHIN SITE OF THE PROPOSED DEVELOPMENT

5.4.2 Bats

There are no buildings on the Site of the Proposed Development, nor is there vegetation that would provide suitable roosting, foraging or commuting habitat for local bats. Therefore, the Site has '*Negligible*' bat potential with regards to roosting, foraging, and commuting opportunities for bats in the vicinity.

5.4.3 Birds

The bird species recorded on site visit 19th of January 2022 are outlined in Table 4.

TABLE 4 BIRD SPECIES OBSERVED ON SITE - 19TH OF JANUARY 2022

Species	Conservation Concern	Observations/Notes
Snipe *Gallinago gallinago*	Red	One individual was flushed from the centre of the Site and flew north.
Mistle Thrush *Turdus viscivorus*	Green	One individual observed foraging within the centre of the Site
Rook *Corvus frugilegus*	Green	Several birds observed foraging within the southwest of the Site
Redpoll *Carduelis flammea cabaret*	Green	Several birds recorded flying along the east boundary of the Site
Goldfinch *Carduelis carduelis*	Green	Several birds recorded flying along the east boundary of the Site
Woodpigeon *Columba palumbus*	Green	Observed flying over the Site
Hooded Crow *Corvus cornix*	Green	Several birds observed foraging within the southwest of the Site
Jackdaw *Corvus monedula*	Green	Several birds observed foraging within the southwest of the Site

5.4.4 Mammals (excl. bats)

No mammals were recorded within the Site of the Proposed Development. As the majority of the Site is comprised of spoil and bare ground, with limited foraging habitat, it is unlikely that any mammal species would frequent or utilise the Site of the Proposed Development.

5.5 Designated sites, habitat and species evaluation

Fauna which have the potential to utilise habitat within the immediate area of the Proposed Development, or for which records exist in the wider area, have been evaluated below in Table 5 for their conservation importance. In addition, designated sites and habitats have been evaluated. This evaluation follows the Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009b). The rationale behind these evaluations is also provided. The term 'ecological receptors' is used when impacts upon them are likely.

TABLE 5. EVALUATION OF DESIGNATED SITES, HABITATS AND FAUNA RECORDED WITHIN THE SURROUNDING AREA.

Designated Sites/Species/Habitats	Evaluation	Key Ecological Receptor (KER)	Rationale
Designated Sites			
SACs & SPAs	International Importance	No	Significant effects on Natura 2000 sites ruled out in AA Screening.
pNHAs	National Importance	No	Refer to Table 1
Dublin Bay Biosphere	International Importance	No	No significant hydrological connection or otherwise to Dublin Bay Biosphere
Habitats			
Spoil and Bare Ground (ED2)	Local importance (lower value)	No	Anthropogenically disturbed habitat of negligible biodiversity value.
Amenity Grassland (improved) (GA2)	Local importance (lower value)	No	Low diversity habitat of low biodiversity value.
Fauna			
Irish Hare *Lepus timidus subsp. hibernicus*	Local importance (lower value)	No	No evidence of the species was recorded on Site and there is no suitable habitat for this species on Site.
Red Fox *Vulpes vulpes*	Local importance (lower value)	No	This species is not considered to be of conservation concern, and therefore is not assessed further in this report.
Bat Assemblage	Local importance (lower value)	No	**The bat potential of the Site was deemed to be** 'Negligible'.
Bird Assemblage	Local importance (lower value)	No	Whilst several bird species were recorded utilising the Site for foraging purposes on the 19th of January there is no available nesting potential at the site.
Amphibian Assemblage	Local importance (lower value)	No	Very limited potential suitable habitat recorded on Site with no obvious watercourses or connection to same.
Atlantic Salmon *Salmo salar*; Petromyzonidae *Lamprey sp.*; European Eel *Anguilla anguilla*	Local importance (lower value)	No	A weak hydrological connection to the River Camac will exist during the Operational Phase of the Proposed Development via surface water discharge. The contribution to overall surface waterflows from the Proposed Development to the existing surface water flow from the wider Citywest Development will be minimal. Operational Phase surface water flows will be managed via a series of SUDS measures.

6 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

As per the relevant guidelines, likely significant effects have been assessed for Key Ecological Receptors only, as listed in Table 5. An impact is considered to be significant if it is predicted to affect the integrity or conservation status of a KER at a given geographical scale. As no KER(s) were recorded for the Site of the Proposed Development, potential impacts to local wildlife that may infrequently utilise the Site are predicted below. All impacts are described in the absence of mitigation.

6.1 Construction Phase

6.1.1 Impacts on fauna

6.1.1.1 Bats

Noise generated during the Construction Phase has the potential to cause *negative, short-term, slight impacts* in the form of disturbance to mammals at a local level, potentially including bats should they roost in the surrounding landscape.

6.1.1.2 Birds

There will be some loss of foraging habitat for birds at the Site of the Proposed Development through the removal of bare ground habitat covered in organic debris, which provides insect habitat, and disturbance of species during the Construction Phase is possible. This could have a *negative, permanent, moderate impact* on birds in the locality.

The increased noise and dust levels associated with the Construction Phase of the Proposed Development may have the potential to cause *negative, short-term, slight impacts* to local bird populations.

6.1.1.3 Aquatic Fauna

Surface water discharges associated with the Construction Phase of the Proposed Development may have the potential to cause *negative*, *short-term*, *moderate* impacts to aquatic fauna within the River Camac in the absence of suitable mitigation.

6.2 Operational Phase

6.2.1 Impacts on Fauna

6.2.1.1 Bats

During the Operational Phase, there is potential for disturbance to bats utilising the Site in general through light pollution during the Operational Phase. Given the urban context of the Site, this could have a *negative, permanent, slight* impact on bats in the locality. In addition, there is potential for a *negative, permanent, slight* impact on bats in the locality through the loss of foraging resources.

6.2.1.2 Birds

No significant impacts on birds are anticipated during the Operational Phase.

6.2.1.3 Aquatic Fauna

No significant effects on fish species are anticipated during the Operational Phase. Mandatory SuDS measures have been incorporated into the design to treat and minimise surface water runoff from the site.

6.3 Do nothing impact

Under the do-nothing scenario, the Site would continue to evolve. The recolonisation of bare ground habitat by native flora is likely occur and potentially offer suitable habitat for species, such as pollinating insects, and it is likely the scrub habitat comprised of Bramble and Gorse would return, offering foraging and nesting habitat for local wildlife.

7 Mitigation and Enhancement Measures

7.1 Construction Phase

7.1.1 Planting of native flora and protecting pollinators

The planting of pollinator-friendly flora will improve local biodiversity and increase insect abundance. This will provide additional food for bats and birds at the Site.

The following measures have been incorporated into the landscape design:

- Trees and native hedgerow will be planted on Site, foraging, nesting, and commuting habitat for local wildlife.
- Perennial groundcover and the hedgerows on Site will contain pollinator-friendly species to provide foraging for local pollinators.
- Grass on Site will be cut at varying heights to promote biodiversity.

7.1.2 Aquatic Fauna & Surface Waters

The following measures set out below will protect surface waters throughout the Construction Phase:

General Surface water mitigation measures

- Storm drain inlets which could receive stormwater from the project will be protected throughout the Construction Phase. Inlet protection will be installed before soil-disturbing activities begin.
- Any imported materials will, as much as possible, be placed on site in their proposed location and double handling will be avoided. Where this is not possible designated temporary material storage areas will be used.
- Refuelling of plant during Construction Phase will only be carried out at designated refuelling station locations on site. Each station will be fully equipped for spill response and a specially trained and dedicated Environmental and Emergency Spill Response team will be appointed before the commencement of works on site.

- Only emergency breakdown maintenance will be carried out on site. Drip trays and spill kits will be available on site to ensure that any spills from vehicles are contained and removed off site.

- All personnel working on site will be trained in pollution incident control response.

- Any other diesel, fuel or hydraulic oils stored on site will be stored in bunded storage tanks- the bunded area will have a volume of at least 110% of the volume of the stored materials as per best practice guidelines (Enterprise Ireland, BPGCS005).

- Portaloos and/or containerised toilets and welfare units will be used to provide facilities for site personnel. All associated waste will be removed from site by a licenced waste management contractor.

- Runoff from machine service and concrete mixing areas will not enter the nearby drainage network.

All wastewater generated on-site during the Construction Phase will be stored and disposed of appropriately. Under no circumstances will any untreated wastewater generated onsite (from equipment washing, road sweeping etc.) be released into the foul/surface water drainage network.

Contaminated soils if encountered will be segregated. If dewatering is required groundwater will be treated as required prior to discharge as agreed with Local Authority.

7.1.3 Birds

7.1.3.1 Bird collision avoidance

Glass in buildings can pose a potentially lethal threat to bird species. This is a result of birds being unable to distinguish between reflections in glass and the natural environment (resulting in birds flying into windows that appear to be trees or sky), and their inability to perceive clear glass as a solid object (Toronto City Bird-Friendly Best Practices: Glass). Birds will strike clear glass while attempting to reach habitat and sky seen through corridors, windows positioned opposite each other in a room, ground floor lobbies, glass balconies or glass corners. The impact of striking a reflective or clear window in full flight often results in death.

The Proposed Development entails the construction of, at maximum, a 15.5m tall structure, and as such, the risk of migrating birds colliding with the structures due to their height is deemed to be negligible as migrating species tend to commute far above this level with Swans and Geese flying up to 2500ft (ca.750m) during migration along Irish Coasts (Irish Aviation Authority, 2020).

In general birds will fly at a height that is higher than the tallest obstruction in their flightpath. Birds flying over the Site from the north and east will cross commercial units of similar height to the Proposed Development. The height of the Proposed Development is in-keeping with the height of recent developments in the surrounding area. Birds on a daily commute to feed become very familiar with the topography of their flight paths and as a result few if any collisions occur. Birds which regularly fly over the Site will adapt to any changes to the nature of the Site including the topography. Therefore, it is considered that any bird species utilising

the landscape surrounding the planning application site will adapt to the changing nature of the site as the construction phase progresses and for this reason the risk of bird collisions is *negligible*.

In addition, the physical location of buildings and structures can also affect the likelihood of bird collisions. Structures placed on or near areas regularly used by large numbers of feeding, breeding, or roosting birds, or on local flight paths, such as those between foraging and roosting areas can present a higher risk of collision. The Site itself is not deemed to be located in a sensitive area in terms of bird flight paths i.e., it is not located along the coast, or near any Special Protected Areas (SPAs) designated for wetland bird populations and is in itself not deemed to represent suitable ex-situ feeding/roosting habitat for any such species, as the most dominant habitat on Site is disturbed bare ground.

7.1.4 Reduction of noise and dust related impacts

Reduction of noise impacts

Short-term increases in disturbance levels as a direct result of human activity and through increased generation of noise during the Construction Phase can have a range of impacts depending upon the sensitivity of the ecological receptor, the nature and duration of the disturbance and its timing.

Noise generated during the Construction Phase of the Proposed Development could cause temporary disturbance to a number of faunal species in the vicinity of the Site of the Proposed Development. To mitigate this disturbance, the following measures will be implemented:

- Selection of plant with low inherent potential for generating noise.
- Siting of plant as far away from sensitive receptors as permitted by site constraints.
- Avoidance of unnecessary revving of engines and switch off plant items when not required.
- Keep plant machinery and vehicles adequately maintained and serviced.
- Proper balancing of plant items with rotating parts.
- Keep internal routes well maintained and avoid steep gradients.
- Minimise drop heights for materials or ensure a resilient material underlies.
- Use of alternative reversing alarm systems on plant machinery.
- Where noise originates from resonating body panels and cover plates, additional stiffening ribs or materials should be safely applied where appropriate.
- Limiting the hours during which site activities likely to create high levels of noise are permitted.
- Appointing a site representative responsible for matters relating to noise.
- Monitoring typical levels of noise during critical periods and at sensitive locations.

These measures will ensure that any noise disturbance to nesting birds or any other fauna species in the vicinity of the Site of the Proposed Development will be reduced to a minimum.

Reduction of dust related impacts

The following general dust control measures will be followed for the duration of the Construction Phase of the Proposed Development and will ensure no significant dust related impacts occur to nearby sensitive receptors including local faunal species.

- In situations where the source of dust is within 25m of sensitive receptors screens (permeable or semi-permeable) will be erected.
- Haulage vehicles transporting gravel and other similar materials to site will be covered by a tarpaulin or similar.
- Access and exit of vehicles will be restricted to certain access/exit points.
- Vehicle speed restrictions of 20km/hr will be in place.
- Bowsers will be available during periods of dry weather throughout the construction period.
- During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil thereby reducing the amount of dust.
- Stockpiles will be stored in sheltered areas of the site, covered, and watered regularly or as needed if exposed during dry weather.
- Gravel should be used at site exit points to remove caked-on dirt from tyre tracks.
- Equipment should be washed at the end of each work day.
- Hard surfaced roads will be wet swept to remove any deposited materials.
- Unsurfaced roads will be restricted to essential traffic only.
- If practical, wheel-washing facilities should be located at all exits from the construction site.
- Dust production as a result of site activity will be minimised by regular cleaning of the site access roads using vacuum road sweepers and washers. Access roads should be cleaned at least 0.5km on either side of the approach roads to the access points.
- Public roads outside the site shall be regularly inspected for cleanliness, as a minimum daily, and cleaned as necessary. A road sweeper will be made available to ensure that public roads are kept free of debris.
- The frequency of cleaning will be determined by the site agent and is weather and activity dependent
- The height of stockpiles will be kept to a minimum and slopes should be gentle to avoid windblown soil dust.
- The following will be dampened during dry weather:
    - Unpaved areas subject to traffic and wind
    - Stockpiles
    - Areas where there will be loading and unloading of dust-generating materials

- Under no circumstances should wastewater from equipment, wheel or surface cleaning enter the surface water drainage network.

7.1.5 Invasive Species

While no invasive species were recorded on Site of the Proposed Development, it is recommended that any non-native/invasive flora species encountered at the Site should be controlled/removed as per the appropriate best-practice guidelines and in consultation with the relevant qualified invasive species professional. Removal and disposal should be carried out in accordance with appropriate guidelines such as TII (formerly NRA) Guidelines on The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (2010), with consideration given to the prevention of spread of these plants.

7.1.6 Biosecurity

The following will be adhered to, to avoid the introduction of invasive species to the Proposed Development site.

- Any material required on the site will be sourced from a stock that has been screened for the presence of any invasive species by a suitably qualified ecologist and where it is confirmed that none are present.
- All machinery will be thoroughly cleaned and disinfected prior to arrival on site to prevent the spread of invasive species.

7.2 Operational Phase

7.2.1 Bats

In order to minimise disturbance to bats within the general surrounding landscape, the lighting and layout of the Proposed Development should be designed to minimise light-spill onto habitats used by the local bat population foraging or commuting. This can be achieved by ensuring that the design of lighting accords with guidelines presented in the Bat Conservation Trust & Institute of Lighting Engineers *'Bats and Lighting in the UK - Bats and Built Environment Series'*, the Bat Conservation Trust *'Artificial Lighting and Wildlife Interim Guidance'* and the Bat Conservation Trust *'Statement on the impact and design of artificial light on bats'*. Therefore, where possible, the lighting scheme should include the following:

- Lighting will only be installed where necessary for public safety in known Bat Foraging and Roosting locations. These lights have been designed and selected with specific shutters and filters to minimise any potential for back spills into the sensitive locations while still providing the primary function of safely lighting the pedestrian routes.
- Reflectance's – Downward lighting can be reflected from bright surfaces. To minimize bat disturbance, the design avoids the use of bright surfaces and incorporates darker colour lamp heads and poles to reduce reflectance. Only luminaires with an upward light ratio of 0% and with good optical control to be used.
- Lighting controls and dimming shall be utilised for post-curfew times.
- Shielding of Luminaires & Light - To minimize bat disturbance, the design avoids the use of upward lighting by shielding or by downward directional focus. i.e., no upward tilt.

- Type of Light – To minimize bat disturbance, the design avoids the use of strong UV lighting. The lighting design is based on the use of LED lighting which has minimal or no UV output of significance. Warmer 2700°K LED lighting will be utilized for amenity areas, as the warmer colour temperatures with peak wavelengths greater than 550nm (~3000°K) cause less impacts on bats.

7.2.2 Birds

Tree and shrub species will be included as part of the Proposed Development, and will provide foraging and potential nesting habitat for birds within the vicinity of the Site. This vegetation will enhance the biodiversity of the Site, which is currently primarily comprised of disturbed bare ground, and offer habitat and resources to local faunal species.

It is recommended that Swift Boxes or Bricks are incorporated into the Proposed Development where possible. The incorporation of Swift Boxes or Bricks would help recover the declining swift population, which are now Red Listed in Ireland (Gilbert et al., 2021). The following recommendations are extracted from "Saving Swifts" by Birdwatch Ireland[5].

Swift bricks/boxes:

- should be constructed of long-lasting material and securely fixed in position.
- should be erected at least five metres above ground level
- should be erected in sheltered cool areas out of the sun, or under an overhang and /or under the eaves. Bricks can be placed at any aspect, however, as they tend not to overheat the way that externally fitted boxes can.
- should have a clear airspace in front for access
- should be grouped (side by side in rows) as swifts are colony nesters
- should avoid sites which can be accessed by predators- cats, squirrels, magpies, rats.
- should avoid sites near plate glass windows because they are a known collision hazard for birds.
- should not be placed directly above ledges or other obstructions. Swifts drop before taking flight and can collide with obstacles below the nest entrance.
- should not be one above the other.
- should not be near spotlights or later fit spotlights near them.

It is advised to install a Swift calling system to attract Swifts and encourage them to take up residence at a new site.

The potential negative impact of buildings collision risk will be resolved with the architect.

[5] https://birdwatchireland.ie/app/uploads/2019/10/Saving-Swifts-Guide_pdf.pdf

8 CUMULATIVE IMPACTS

If the Proposed Development and existing or proposed projects or plans impact on the same KERs, there is potential to lead to cumulative impacts which could be of a higher level of significance. This applies to potential impacts on bats due to the combined loss of suitable commuting and/or foraging habitat in the locality and potential impacts on birds due to the combined loss of nesting or foraging habitat in the locality.

8.1.1 Existing granted planning permissions

There are several existing planning permissions on record in the area ranging from small-scale extensions and alterations to existing residential properties to some larger-scale developments. The larger-scale developments within the area are outlined below:

Planning Application Reference: SD21A/0238.

Change of use of the existing warehouse/distribution facility (2,390sq.m) to a light industrial use facility for the production, assembly and distribution of plastic assemblies for healthcare and biopharmaceutical industries; provision of additional floor area at first floor mezzanine level (290sq.m) resulting in a total floor area of 2,680sq.m comprising 910sq.m of ancillary floorspace, including ancillary office areas (263sq.m), staff changing facilities, staff canteen, toilets and plant rooms; external works to the existing building including the installation of a secure gated enclosure to the rear of the building containing air handling equipment, a new escape doorway in the side (east) elevation of the building, a new access footpath; 10 new car parking spaces (including 2 disabled spaces and 4 EV spaces with charging points) (resulting in a total of 38 spaces); new bin store; new bicycle parking provision; removal of existing sign; erection of new illuminated sign (3.6sq.m); all associated soft and hard landscaping works; solar panels; all piped infrastructure; plant and any other works above and below ground associated with the proposed development. **(Decision: Grant Permission. Decision Date: 21/10/2021).**

Planning Application Reference: SHD3ABP-306602-20.

Construction of a residential development of 463 dwellings comprising 353 apartments, 89 houses and 21 duplex apartments, creche (c.587.8sq.m) and community building (c.141sq.m) as follows: (A) 353 apartments in 7 apartment buildings (with balconies or terraces [including communal terraces] as follows: Block 1 (6 storeys with a part 7 storey level) of 57 apartments; Block 2(6 storeys with a part 7 storey level) of 47 apartments; Block 3 (6 storeys over undercroft/semi-basement with a part 7 storey level) of 56 apartments with car parking and ancillary plant/storage at basement level; Block 4 (6 storeys over undercroft/semi-basement with a part 7 storey level) of 56 apartments with car parking and ancillary plant/storage at basement level; Block 5 (6 storeys with a part 7 storey level) of 47 apartments; Block 6 (6 storeys over undercroft/semi-basement with a part 7 storey level) of 58 apartments with car parking and ancillary plant/storage at basement level; Block 7 is 6 storeys of 32 apartments (creche at ground and first floor) with outdoor play area. (B) 89 houses; House types 1A, 2A, 4, 4A- 3 storey to front [2 storey to rear] remainder of house types 2 storey. (C) 21 duplex apartments in 2 3-storey buildings. (D) Single storey community building including management office, 3 single storey ESB substations, single storey bicycle and bin stores. (E) 401 car parking spaces (including 3 car sharing spaces) to serve overall development and 364 bicycle spaces ([for apartments] with apartment bicycle storage provided internally at ground

floor level for apartment blocks 1-7). (F) Provision of public open space areas within the development (including playground areas and communal open space areas); all ancillary landscape works, public lighting, planting and boundary treatments including regrading/re-profiling of site where required as well as provision of footpaths and cycle paths. (G) Vehicular access to the proposed development will be from the Citywest Road (N82) and will include pedestrian crossings and works to facilitate access (including vehicular and footpath/bridges over stream/ditch), secondary vehicular and pedestrian access to boundary to lands to north (currently under construction) and pedestrian to boundary to Magna Drive. (H) Provision of surface water and underground attenuation and all ancillary site development work. The application contains a statement setting out how the proposal will be consistent with the objectives of the relevant SDCC Development Plan. **(Decision: Grant Permission. Decision Date: 26/05/2020).**

Planning Application Reference: SHD3ABP-305556-19.

Mixed use residential scheme (total GFA 26,929sq.m) comprising 6 blocks with balconies/terraces to be provided on all elevations at all levels for each block, to provide 290 apartment units and associated residential amenity facilities, a childcare facility, 4 retail units and 2 café/restaurant units. A total of 153 car parking spaces (including 2 car club spaces) are proposed at surface level and existing basement level of the Citywest Shopping Centre to serve the development to include the reallocation of 37 existing surface level spaces; 67 new surface level spaces and the reallocation of 49 spaces from commercial to residential use at existing basement level of the Citywest Shopping Centre. **(Decision: Grant Permission. Decision Date: 21/01/2020).**

Planning Application Reference: SD20A/0232.

Demolition of existing Public House building and of existing incomplete buildings on the east side of the site; construction of a three storey hotel comprising of 129 bedrooms, reception and ancillary bar (136sq.m) at ground floor, restaurant (311sq.m) in single storey building; associated waste storage to the west of the site; 3 three storey Aparthotel buildings comprising 15 units each (45 units in total) comprising of studios, one bed, two bed and three bed units to the south and south east; 3 small balconies with small terraces under on the north façade of the Aparthotel Block A & B and the west façade of Block C; new vehicular and pedestrian entrance at Boherboy/Saggart Road (L2008); new footpath along the Boherboy/Saggart Road (L2008); parking area for 120 cars and 30 bicycles; extensive tree planting throughout; substation together with all associated site works, boundary treatments and landscaping; total floor area of buildings is 8,313sq.m; existing vehicular entrance to the site on the Blessington Road will remain for emergency use only; An Ecological Impact Assessment is submitted as part of this application. **(Decision: Grant Permission. Decision Date: 24/05/2021).**

Planning Application Reference: SD15A/0127/EP.

A residential/mixed use development on a site area of 12.45ha consisting of 400 dwellings comprised of 340 no. 2 storey detached, semi-detached and terraced houses, i.e. 3 no. 2 bed houses, 323 no. 3 bed houses & 14 no. 4 bed houses along with 60 no. 1 and 2 bed apartments in 4 no. 3 & 4/5 storey buildings. The development also provides for a creche (615sq.m), kiosk (56.6sq.m) and retail unit (237sq.m). The proposed development includes all associated site development and infrastructural works, car parking, open spaces and landscaping, ESB substation and 4 associated kiosks. Access to the development will by via two proposed new

vehicular entrances from Citywest Avenue and Fortunestown Lane respectively and will also provide for two new vehicular crossing points over the Luas line. The development also includes for the demolition of an existing dwelling in the southwest corner of the site at the junction of Citywest Road and Fortunestown Lane. The site is bounded to the north by Citywest Avenue, to the west by the N82 Citywest Road, to the south by Fortunestown Lane, to the east by Ard Mor residential estate and is adjacent to the Luas Red Line. **(Decision: Grant Extension of Duration of Permission. Decision Date: 06/07/2020)**.

At the time of writing, there are no proposed or permitted forestry operations (thinning, clear felling, road construction) in close proximity to the Site of the Proposed Development[6].

Given the lack of natural habitat within the proposed sites and distance and urban buffer between the Proposed Development site and the above-mentioned permitted developments, it is concluded that there is no potential for in-combination effects to arise as a result of the Proposed Development on local ecology.

8.1.2 Relevant policies and plans

The following policies and plans were reviewed and considered for possible in-combination effects with the Proposed Development.

- Connecting with Nature – Draft Biodiversity Action Plan for South Dublin County 2020-2026
- South Dublin County Council Development Plan 2016-2022

The Connecting with Nature – Draft Biodiversity Action Plan for South Dublin County 2020-2026 is set out to protect and improve biodiversity, and as such will not result in negative in-combination effects with the Proposed Development. The South Dublin County Council Development Plan 2016-2022 has directly addressed the protection of European Sites through specific policies (HCL12 Obj1-Obj2, HCL13 Obj1-Obj2). The relevant recommendations and mitigation measures have been integrated into the plan.

On examination of the above it is considered that there are no means for the Proposed Development to act in-combination with any plans or projects, which would cause any likely significant effects on any European sites.

In addition, sustainable development including SuDS measures for all new developments is inherent in the objectives of all development plans within the Greater Dublin Area.

8.1.3 Operation of Ringsend WwTP

In June 2018 Irish Water applied for (and subsequently received) planning permission for upgrade works to the Ringsend Wastewater Treatment (WwTP) facility. These are currently on-going and will increase the capacity of the facility from 1.6 million PE to 2.4 million PE. This plant upgrade will result in an overall reduction in the final effluent discharge of several parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP. An Environmental Impact Assessment Report (EIAR) was submitted by Irish Water as part of this application. The EIAR contains sections relating to Marine Biodiversity and Terrestrial Biodiversity, and each contains a section on the 'do-nothing scenario'. These review the

[6] https://forestry-maps.apps.rhos.agriculture.gov.ie/

effects of the WwTP on biodiversity in Dublin Bay in the absence of the upgrade works and so are relevant to this report.

The EIAR report acknowledges that under the do-nothing scenario "the areas in the Tolka Estuary and North Bull Island channel will continue to be affected by the cumulative nutrient loads from the river Liffey and Tolka and the effluent from the Ringsend WwTP", which could result in a decline in biodiversity (Irish Water, 2018). Nevertheless, the negative impacts of nutrient over-enrichment, which could result in the deterioration of the biological status of Dublin Bay are considered "unlikely" (Irish Water, 2018). This is because historical data suggests that pollution in Dublin Bay has had little or no effect on the composition and richness of the benthic macroinvertebrate fauna. The EIAR notes that "although a localised decline could occur, it is not envisaged to be to a scale that could pose a threat to the shellfish, fish, bird or marine mammal populations that occur in the area." Furthermore, the EIAR notes that significant impacts on waterbird populations foraging on invertebrates in Dublin Bay due to nutrient over-enrichment are "unlikely" to occur (Irish Water, 2018). What is important in the context of this EcIA is that the do-nothing scenario predicts that nutrient and suspended solid loads from the WwTP will "continue at the same levels and the impact of these loadings should maintain the same level of effects on marine biodiversity" and that "if the *status quo* is maintained there will be little or no change in the majority of the intertidal faunal assemblages found in Dublin Bay which would likely continue to be relatively diverse and rich across the bay."

Therefore, it can be concluded that significant effects on marine biodiversity and the Natura 2000 sites within Dublin Bay from the *current* operation of Ringsend WwTP are unlikely. Importantly, this conclusion is not dependent upon any future works to be undertaken at Ringsend. Thus, in the absence of any upgrading works, significant effects to habitats, fauna and Natura 2000 sites are not likely to arise.

On examination of the above it is considered that there are no means for the Proposed Development to act in-combination with any plans or projects.

9 Residual Impacts

Residual impacts are impacts that remain once mitigation has been implemented or impacts that cannot be mitigated. Table 6 provides a summary of the impact assessment for the identified Key Ecological Resources (KERs) and details the nature of the impacts identified, mitigation proposed and the classification of any residual impacts.

Provided all mitigation measures are implemented in full and remain effective throughout the lifetime of the Development, no significant negative residual impacts on the local ecology or on any designated nature conservation sites are expected from the Proposed Development.

TABLE 6 SUMMARY OF POTENTIAL BIODIVERSITY IMPACTS, MITIGATION PROPOSED AND RESIDUAL IMPACTS

Key Ecological Resource	Level of Significance	Potential Impact	Impact Without Mitigation				Proposed Mitigation	Residual Impact
			Quality	Scale	Duration	Significance		
Bat assemblage	Local Importance (lower value)	Disturbance due to noise generated during Construction Phase. Disturbance/removal of foraging routes/habitat due to increased lighting as a result of the Proposed Development	Negative	Local	Short-term Permanent	Slight	Planting of shrub and tree species to take place as part of project design. Bat sensitive lighting measures incorporated into the Construction Phase and public lighting design described in **section 7.2.1**	**Positive; Permanent** **Negligible**
Breeding-Bird assemblage	Local Importance (lower value)	Loss of potential foraging habitat. Disturbance due to noise generated during Construction Phase	Negative	Local	Permanent Short-term	Moderate Slight	Planting of shrub and tree species to take place as part of project design. Construction related noise control/minimisation measures to be implemented.	**Positive; Permanent** **Negligible**
Aquatic Fauna	Local Importance (lower value)	Deterioration in water quality due to surface water discharges associated with the Construction Phase.	Negative	Local	Short-term	Moderate	Mitigation measures to protect surface waters as outlined in **section 7.1.2**	**Negligible**

10 CONCLUSION

It is considered that provided the mitigation measures proposed are carried out in full, there will be no significant negative impact to any valued habitats, designated sites or individual or group of species as a result of the Proposed Development.

Based on the successful implementation of these measures and proposed works, to be carried out in accordance with the landscape plan, there will be no significant negative ecological impacts arising from Construction and Operational Phases of the Proposed Development.

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APPENDIX I – VALUE OF ECOLOGICAL RESOURCES

The criteria outlined in the table below, taken from the Guidelines for *Assessment of Ecological Impacts of National Road Schemes* published by the NRA, were used for assigning value to designated sites, habitats and species within the Site of the Proposed Development and surrounding area.

Importance	Criteria

International Importance	- 'European Site' including Special Area of Conservation (SAC), Site of Community Importance (SCI), Special Protection Area (SPA) or proposed Special Area of Conservation.
	- Proposed Special Protection Area (pSPA).
	- Site that fulfills the criteria for designation as a 'European Site' (see Annex III of the Habitats Directive, as amended).
	- Features essential to maintaining the coherence of the Natura 2000 Network.
	- Site containing 'best examples' of the habitat types listed in Annex I of the Habitats Directive.
	- Resident or regularly occurring populations (assessed to be important at the national level) of the following:
	  - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and/or
	  - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive.
	- Ramsar Site (Convention on Wetlands of International Importance Especially Waterfowl Habitat 1971).
	- World Heritage Site (Convention for the Protection of World Cultural & Natural Heritage, 1972).
	- Biosphere Reserve (UNESCO Man & The Biosphere Programme).
	- Site hosting significant species populations under the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals, 1979).
	- Site hosting significant populations under the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats, 1979).
	- Biogenetic Reserve under the Council of Europe.
	- European Diploma Site under the Council of Europe.
	- Salmonid water designated pursuant to the European Communities (Quality of Salmonid Waters) Regulations, 1988, (S.I. No. 293 of 1988).

National Importance	- Site designated or proposed as a Natural Heritage Area (NHA).
	- Statutory Nature Reserve.
	- Refuge for Fauna and Flora protected under the Wildlife Acts.
	- National Park.
	- Undesignated site fulfilling the criteria for designation as a Natural Heritage Area (NHA); Statutory Nature Reserve; Refuge for Fauna and Flora protected under the Wildlife Act; and/or a National Park.
	- Resident or regularly occurring populations (assessed to be important at the national level) of the following:
	  - Species protected under the Wildlife Acts; and/or
	  - Species listed on the relevant Red Data list.
	- Site containing 'viable areas' of the habitat types listed in Annex I of the Habitats Directive.

County Importance	- Area of Special Amenity. - Area subject to a Tree Preservation Order.

	- Area of High Amenity, or equivalent, designated under the County Development Plan.
	- Resident or regularly occurring populations (assessed to be important at the County level) of the following:
	  - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive.
	  - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive.
	  - Species protected under the Wildlife Acts; and/or
	  - Species listed on the relevant Red Data list.
	- Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfil the criteria for valuation as of International or National importance.
	- County important populations of species, or viable areas of semi-natural habitats or natural heritage features identified in the National or Local BAP (Biodiversity Action Plan), if this has been prepared.
	- Sites containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county.
	- Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.

Local Importance (Higher Value)	- Locally important populations of priority species or habitats or natural heritage features identified in the Local BAP, if this has been prepared.
	- Resident or regularly occurring populations (assessed to be important at the Local level) of the following:
	  - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive.
	  - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive.
	  - Species protected under the Wildlife Acts; and/or
	  - Species listed on the relevant Red Data list.
	- Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality.
	- Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.

Local Importance (Lower Value)	- Sites containing small areas of semi-natural habitat that are of some local importance for wildlife. - Sites or features containing non-native species that are of some importance in maintaining habitat links.

APPENDIX II – EPA IMPACT ASSESSMENT CRITERIA

Criteria used to define quality of effects.

In line with the draft EPA Guidelines (EPA, 2017), the following terms are defined when quantifying the quality of effects:

Quality	Definition
Positive Effects	A change which improves the quality of the environment (for example by increasing species diversity; or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
Neutral Effects	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Negative/adverse Effects	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property by causing nuisance).

Criteria used to define significance of effects.

In line with the draft EPA Guidelines (EPA, 2017), the following terms are defined when quantifying significance of impacts:

Significance of Effects	Definition
Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate	An effect which alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Very significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound	An effect which obliterates sensitive characteristics.

Criteria used to define duration of effects.

In line with the draft EPA Guidelines (EPA, 2017), the following terms are defined when quantifying duration and frequency of effects:

Quality of Effects	Definition
Momentary	Effects lasting from seconds to minutes
Brief	Effects lasting less than a day
Temporary	Effects lasting less than a year
Short-term	Effects lasting one to seven years
Medium term	Effects lasting seven to fifteen years

Long-term	Effects lasting fifteen to sixty years
Permanent	Effects lasting over sixty years
Reversible	Effects that can be undone, for example through remediation or restoration.