Jobstown Park Redevelopment

Ecological Impact Assessment

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South Dublin County Council.

JBA Project Manager

William Mulville
Block 660
Unit 8
The Plaza
Greenogue Business Park
Rathcoole, Dublin

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Prepared by .....Michael Coyle, BA (Hons), MSc

.....Assistant Ecologist

Reviewed by .....William Mulville, BSc (Hons), MSc, ACIEEM

.....Project Ecologist

Purpose

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Abbreviations

AA	Appropriate Assessment
BAP	Biodiversity Action Plan
BoCCI	Birds of Conservation Concern in Ireland
DoEHLG	Department of Environment, Heritage and Local Government
CIEEM	Chartered Institute of Ecology and Environmental Management
EC	European Communities
EcIA	Ecological Impact Assessment
EPA	Environmental Protection Agency
EU	European Union
GIS	Geographical Information Systems
GSI	Geological Survey Ireland
IFI	Inland Fisheries Ireland
NBDC	National Biodiversity Data Centre
NPWS	National Parks and Wildlife Service
pNHA	Proposed Natural Heritage Area
QI	Qualifying Interest
RBMP	River Basin Management Plan
SAC	Special Area of Conservation
SPA	Special Protection Area
SuDS	Sustainable Drainage System
SDCC	South Dubln County Council
WFD	Water Framework Directive
ZoI	Zone of Influence

1 Introduction

JBA Consulting Ireland Ltd. has been commissioned by South Dublin County Council to undertake an Ecological Impact Assessment (EcIA) in relation to the redevelopment of Jobstown Park.

1.1 Aims

The aims of this EcIA are to:

- Establish baseline ecological conditions to enable identification of potentially important ecological features within the zone of influence of the project
- Determine the ecological value of identified ecological features
- Assess the significance of impacts of the proposed project on ecological features of value
- Identify avoidance, mitigation or compensatory measures
- Identify residual impacts after mitigation and the significance of their effects
- Identify opportunities for ecological enhancement

1.2 Site location

The proposed project is located in south Dublin, approximately 2km west of Tallaght, and along the R136. The closest watercourse is the Jobstown Stream, also known as the Whitestown Stream (Dodder_40), which is located approximately 250m to the south. The site is surrounded predominantly by residential properties. This proposed site is shown in Figure 1-1.

Figure 1-1: Site location (ESRI: Satellite; OSM, 2023)

2 Project Description

2.1 Proposed project

South Dublin County Council intend to redevelop the park for the enhancement of its facilities for social interactions and biodiversity, the park is located in Jobstown of approximately 11.4Ha located at the Jobstown, which is adjacent to both the Tallaght Leisure Centre and the local road R136, Jobstown, Tallaght, Co. Dublin.

The proposed and preferred development of the project includes the redevelopment of the Jobstown Park. The current Masterplan comprises of:

- Formal entry plaza at Cookstown Road junction, linking with Butler McGee Park.
- Main spine route, shared pedestrian/cycle with formal signature trees and streetlights, linking Butler McGee Park to Whitestown Stream Park, via Dromcarra Estate.
- Existing sports pitches retained (northern pitch re-orientated) - refurbished where necessary with drainage and re-levelling.
- Provision for active recreation – e.g. Teenspace, natural play areas, pump track and play mound.
- Activity circuit (Park Run), 900m long - with exercise stations and seats/play equipment.
- Formal pedestrian/viewing/linear activity area linking to Leisure Centre.
- Possible on-street parking and associated planting on Fortunestown Way.
- Biodiversity improvements - existing hedgerows retained and supplemented with meadowland management, native bulbs, formal and informal tree groups.
- Attenuation basin and possible swales for enhanced biodiversity.

The Site Masterplan can be view in Appendix A.

2.1.1 Duration of the Works

The envisaged timeframe consists of approximately:

12 months construction, with 12 months Defects Liability Period and 36 months Planting Maintenance Period.

2.1.2 Depth of Excavations

There are different depths of excavations required for the project, relating to seven different functional zones of the development. These include:

- Tree pits – 1.50m deep
- Attenuation basin – 1.50m deep (subject to detailed design)
- Streetlight bases – 1.25m deep
- Play/recreation bases – 1.25m deep
- Wall foundations – 0.50m deep
- General hard surfaces – 0.45m deep
- SuDS hard surfaces – 0.50m deep

2.1.3 Site Drainage Plan

The drainage to be implemented during the project includes:

- Hard surfaces (Entrance Areas and Pedestrian Nodes) will be drained through permeable concrete sets (SuDS infiltration system), subject to sub-soil percolation tests.
- The new pitch drainage will take surplus surface water to a proposed attenuation basin.
- Play areas will have a porous surface (engineered wood fibre).
- Footpaths will be drained by surface cross-falls to adjacent soft landscape areas.

2.1.4 Site Lighting Plan

The lighting to be implemented during the project includes:

- Streetlights with LED luminaires along main footpath/cycle routes, as shown on Masterplan (indicative spacing).
- Lighting within the park will be designed to comply with I.S. EN 13201-2:2015 P4.
- The lighting will be controlled by a CMS (Central Management System).
- The design will utilise full cut off luminaires to ensure there is no direct upward light.
- Threshold increment will be included in the calculations so that luminaires are not a glare source.
- The lighting will dim by 25% from 00:00 to 06:00, in line with South Dublin County Council practice in other public parks. The luminaires will switch on from dusk at full output. After 20:00, the luminaires will dim down to 10% output through to dawn. When presence is detected, the lighting will ramp up to full output in appropriate sections.
- Luminaire type - Urbis Axia 2.1 5177 8LED at 600mA 1.66klm in warm white (3000K) with integral rear louvers.
- 6m mid hinged columns throughout the park. • No trees to be planted within 6m of the columns.

3 Methodology

3.1 The EcIA Team

This EcIA report was completed by Michael Coyle B.A (Hons), MSc, and the report has been reviewed by William Mulville, BSc (Hons), MSc, ACIEEM.

These staff members thus fulfil the Environmental Impact Assessment (EIA) Directive personnel requirements of 'competent persons'.

3.2 Policy and Legislation

Policy and legalisation for nature conservation; and protected and priority species relevant to the proposed project is provided in Appendix B.

3.3 Methods

This EcIA assesses the ecological features present within the site and its surrounding area (the Zone of Influence (ZoI)) in relation to the proposed works. This allows for identification of the potential impacts of the proposed works upon the ecological features of the site at an early stage, whilst identifying the potential ecological constraints upon the proposed works. The assessment is based on a desk-based assessment, which determines the baseline conditions at the site of the proposed works, and site surveys, which provided information on habitats and species present on the site and its surroundings.

This EcIA will outline the findings of the desk-based assessment and the surveys and identify any potential impacts of the proposed works on ecological features within the ZoI of the site; and propose mitigation measures to avoid or reduce impacts where necessary.

3.4 Guidance

This assessment was conducted in accordance with the following guidance documents:

- Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management (CIEEM, 2018).
- Guidelines on the information to be contained in Environmental Impact Assessment Reports Environmental Protection Agency (EPA, 2022).

3.5 Baseline

To determine the baseline conditions at the site a review of all available information was made. When determining the pre-work conditions on-site, including the presence or absence of protected habitats and/or species, the precautionary principle was used where limited information was available.

A desk-based assessment was carried out to collate information regarding protected/notable species and statutorily designated nature conservation sites in, or within close proximity to, the study area. This included a data search for protected and notable species using the National Biodiversity Data Centre (NBDC) Mapping System (NBDC, 2023). A customised 2km polygon was created to extract all the species data from the project site and its surrounding area, while an extended customised 5km polygon was created to extract all species data in the set Zone of Influence for this project.

Information for statutory designated sites including Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Ramsar Sites, Natural Heritage Areas (NHAs) and proposed NHAs (pNHA) was collected from the online resources provided by the National Parks and Wildlife Service (NPWS).

Other information on the local area was obtained, including:

- EPA, 2023a. EPA Catchments.ie [online]. Available online at: https://www.catchments.ie/maps/
- EPA, 2023b. EPA Maps [online], Next Generation EPA Maps. Available online at: https://gis.epa.ie/EPAMaps/

- NPWS, 2019. The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.
- NPWS, 2019a. The Status of EU Protected Habitats and Species in Ireland. Habitats Assessment Volume 2. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.
- NPWS, 2019b. The Status of EU Protected Habitats and Species in Ireland. Species Assessment Volume 3. Habitats Assessment Volume 2. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.
- Environmental Protection Agency online databases on water quality (Available online at https://gis.epa.ie/EPAMaps/).
- Aerial photography available from www.osi.ie and ESRI World Map Imagery
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie
- National Biodiversity Data Centre, 2023 – Species Distribution Maps; Available online at www.biodiversityireland.ie Accessed on various dates;
- Inland Fisheries Ireland - Open Data Portal, available online at: opendata-ifigis.hub.arcgis.com, accessed on various dates
- All Ireland Red Data lists for vascular flora, mammals, butterflies, non-marine molluscs, dragonflies & damselflies, amphibians and fish;
- Water Framework Directive water maps (available online at http://www.wfdireland.ie/maps.html and https://www.catchments.ie/); and
- International Union for Conservation of Nature and Natural Resources (IUCN) Red List of Threatened Species (available online at http://www.iucnredlist.org).

3.5.1 Zone of Influence

The zone of influence (ZoI) for the project is based on a judgement of the likely extent of the ecological impacts. This will vary for different ecological features, depending on their sensitivities to environmental change. For the majority of the project, impacts will be limited to within the site boundary. **The Zone of Influence for this project is noise disturbance (1km), air pollution (2km), surface water (5km) and groundwater (5km), with an additional hydrological buffer from connecting transitional waters to coastal areas (15km); and any supporting habitat for SAC/SPA species (5km).**

3.5.2 Field Surveys

A general ecological site walkover, including habitat mapping, mammal and preliminary bat roost surveys were conducted on the 17th of August 2022 by William Mulville and Michael Coyle of JBA Consulting to inform the initial ecological baseline of the site.

The ecological walkover survey recorded habitats and protected species, following guidance outlined in the documents below:

- Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009)
- Best Practice Guidance for habitat Survey and Mapping. The Heritage Council. (Smith et al., 2011)
- Collins, J. (Ed.), 2016. Bat Surveys for Professional Ecologists: Good Practise Guidelines (3rd Edition)

Aerial photographs and site maps assisted the habitat survey. Habitats have been named and described following A Guide to Habitats in Ireland by Fossitt (2000). Nomenclature for higher plants follows that given in *The New Flora of the British Isles* 4th Edition (Clive Stace 2019). Identification of Irish plants generally follows *Webb's An Irish Flora* (Parnell and Curtis, 2012).

3.5.3 Water Framework Directive

In response to the increasing threat of pollution and the increasing demand from the public for cleaner rivers, lakes and beaches, the EU developed the Water Framework Directive (WFD). This Directive is unique in that, for the first time, it establishes a framework for the protection of all waters including rivers, lakes, estuaries, coastal waters and groundwater, and their dependent wildlife/habitats under one piece of environmental legislation for all European member states.

The WFD (Directive 2000/60/EC) is a substantial piece of EU water legislation that came into force in 2000. The overarching objective of the WFD is for the water bodies in Europe to attain Good or High Ecological Status. The Environment Protection Agency (EPA) is the competent authority in Ireland responsible for delivering the WFD. River Basin Management Plans (RBMP) have been created which set out measures to ensure that water bodies in the country achieve 'Good Ecological Status'.

Good Ecological Quality will depend on the quality of the individual quality elements on which the Ecological status is scored; namely the biological, chemical and morphological condition in a particular water body. Any reduction in any of these elements will result in a reduction of the overall ecological status.

3.5.4 Water Framework Status and Objectives

It is understood that the Draft River Basin Management Plan for Ireland (2022-2027) (DoHLGH, 2022) has been adopted by all local authorities in order to achieve the aims of the WFD. The Plan sets out the new approach that Ireland will take to enhance protection, prevention, and monitoring of Irish waterbodies. The main actions include:

- Improve waste water treatment;
- Conservation and leakage reduction;
- Scientific assessment of water bodies and implementation of local measures;
- A new collaborative Sustainability and Advisory Support Programme;
- Dairy Sustainability Initiative;
- Development of water and planning guidance for local authorities;
- Extension of Domestic Waste Water Treatment Systems grant Schemes; and
- A new Community Water Development Fund

Regardless of their current quality, surface waters should be treated the same in terms of the level of protection and mitigation measures employed, i.e., there should be no negative change in status.

The third and current cycle aims to build particularly on the initiatives of the second cycle, particularly the governance and implementation structures, and to improve the establishment of Irish Water, An Fóram Uisce (The Water Forum), the Local Authority Waters Programme and the Agricultural Sustainability Support and Advisory Programme.

3.6 Screening of Ecological Features

The ecological features identified during the walkover surveys and from desk-based assessments were reviewed.

An informal screening process is presented at the start of the results section to ensure that the assessment focuses only on features where the impact could have important consequences for biodiversity (valued ecological features). Any features which are important beyond the site level were identified for further evaluation. Ecological features with little or no value beyond the site level were screened out and a short statement explaining this is given in the screening section.

An Appropriate Assessment (AA) Screening Report has been produced separate to this EcIA (JBA, 2023), to assess the potential for effects on Designated Natura 2000 sites. The AA Screening Report concluded there was **no potential for adverse significant effects on European sites** arising from the proposed project, either alone or in-combination with other plans or projects.

3.7 Assessment of the Effects on Features

Ecological features include nature conservation sites, habitats, species assemblages/ communities, populations or groups of species. The assessment of the significance of predicted impacts on ecological features is based on both the 'value' of a feature, and the nature and magnitude of the impact that the project will have on it. The impact is based on the project which includes a certain amount of designed-in mitigation, including construction best practice measures that will be implemented with a high degree of certainty.

3.8 Valuation of Receptors

The value of designated sites, habitats and species populations is assessed with reference to:

- Their importance in terms of 'biodiversity conservation' value (which relates to the need to conserve representative areas of different habitats and the genetic diversity of species populations).
- Any social benefits that habitats and species deliver (e.g., relating to enjoyment of flora and fauna by the public).
- Any economic benefits that they provide.

The valuation of designated sites considers different levels of statutory and non-statutory protection. Assessment of a habitat depends on several factors, including the size of the habitat, its conservation status and quality. The assessment also takes account of connected off-site habitat that may increase the value of the on-site habitat through association. Valuation of species depends on a number of factors including distribution, status, rarity, vulnerability, and the population size present.

Designated sites, habitats and species populations have been valued using the scale in Table 3-1.

Table 3-1: Examples of criteria used to define the value of ecological features (derived NRA rev. 2009)

Level of Value	Examples of Criteria
International	An internationally important site e.g. Special Protection Area (SPA), Special Area of Conservation (SAC), Ramsar (or a site considered worthy of such designation). A regularly occurring substantial population of an internationally important species (listed on Annex IV of the Habitats Directive). Designated shellfish waters. Major fisheries area.
National	A nationally designated site e.g. Natural Heritage Area (NHA), a proposed Natural Heritage Area (pNHA), statutory Nature Reserve, or a site considered worthy of such designation. A viable area of a habitat type listed in Annex I of the Habitats Directive or of smaller areas of such habitat which are essential to maintain the viability of a larger whole. A regularly occurring substantial population of a nationally important species, e.g. listed on The Wildlife Act 1976 or The Wildlife (Amendment) Act 2000. A species included in the Irish Red Data Lists/Books. Significant populations of breeding birds.
Regional/County (County Dublin)	Species and habitats of special conservation significance within County Dublin. An area subject to a project/initiative under the County's Biodiversity Action Plan. A regularly occurring substantial population of a nationally scarce species.
Local (works site and its vicinity)	Areas of internationally or nationally important habitats which are degraded and have little or no potential for restoration. A good example of a common or widespread habitat in the local area. Species of national or local importance, but which are only present very infrequently or in very low numbers within site area.
Less than local	Areas of heavily modified or managed vegetation of low species diversity or low value as habitat to species of nature conservation interest. Common and widespread species.

Guidance published by CIEEM (2018) recommends breaking down the importance of ecological features in a geographic context similar to the NRA guidance shown in Table 3-1 with the following frame of reference to be adapted to local circumstances.

- International and European
- National
- Regional
- Metropolitan, County, vice-county or other local authority-wide area

- River Basin District
- Estuarine system/Coastal cell
- Local

The NRA (2009) guidance is congruent with this CIEEM (2018) guidance and includes a 'Less than local' level. The NRA (2009) guidance on geographic criteria for ecological valuation, as described in Table 3-1 is followed in this report.

Ecological Valuation may also be considered of Local Importance (higher value) or Local Importance (lower value) (Table 3-2).

Table 3-2: Examples of criteria used to define the value of ecological features of local importance (NRA, 2009)

Level of Value	Examples of Criteria
Local Importance (higher value)	Locally important populations of priority species or habitats or natural heritage features identified in the Local Biodiversity Action Plan (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

3.8.1 Magnitude of Impacts

Ecological effects or impacts can be described and categorised in a number of ways. Examples of relevant terms are listed in the table below.

Table 3-3: Categories of Effects (derived EPA, 2022).

Description	Categories of Effects
Quality of Effects	**Positive Effects** A change which improves the quality of the environment (for example, by increasing species diversity; or the improving 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 or by causing nuisance).

Description	Categories of Effects
Describing the Significance of Effects	**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 Effects An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate Effects An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant Effects An effect which, by its character, magnitude, duration or intensity, alters 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 Effects An effect which obliterates sensitive characteristics.
Describing the Extent and Context of Effects	**Extent** Describe the size of the area, the number of sites and the proportion of a population affected by an effect.
	Context Describe whether the extent, duration or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?).
Describing the Probability of Effects	**Likely Effects** The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
	Unlikely Effects The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Describing the Duration and Frequency of Effects	**Momentary Effects** Effects lasting from seconds to minutes.
	Brief Effects Effects lasting less than a day.
	Temporary Effects Effects lasting less than a year.
	Short-term Effects Effects lasting one to seven years.
	Medium-term Effects Effects lasting seven to fifteen years.
	Long-term Effects Effects lasting fifteen to sixty years.
	Permanent Effects Effects lasting over sixty years.
	Reversible Effects Effects that can be undone, for example through remediation or restoration.
	Frequency of effects Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly - or hourly, daily, weekly, monthly, annually).

Description	Categories of Effects
Describing the Types of Effects	**Indirect Effects (a.k.a. Secondary or Off-site Effects)** Effects on the environment. Which are not a direct result of the project, often produced away from the project site of because of a complex pathway
	Cumulative Effects The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
	Do-nothing Effects The environment as it would be in the future should the subject project not be carried out.
	Worst Case Effects The effects arising from a project in the case where mitigation measures substantially fail.
	Indeterminable Effects The effects arising from a project in the case where mitigation measures substantially fail.
	Irreversible Effects When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
	Residual Effects The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
	Synergistic Effects Where the resultant effect is of greater significance than the sum of its constituents (e.g. combination of SOx and NOx to produce smog).

3.8.2 Significance of impacts

The overall significance of an impact can be derived from the total description of the effect compared against the sensitivity and significance (value) of the receptor as shown overleaf in Figure 3-1 which is taken from the EPAs EIAR Guidelines (EPA, 2022). The context and character of the receptor must also be assessed, such as its position in relation to the effect and its connectivity to the effect, however this should be determined before assessing the significance of the impact.

The total description of the effect includes the character, magnitude, probability and consequences of the effect as described in Table 3-4 which are combined to give a general description of the effect on an ordinal scale from Negligible to High. The sensitivity and significance of the receptor is also described on an ordinal scale from Negligible to High.

The placement of the general description of the effect, and the sensitivity/significance of the receptor on this scale is determined by a Competent Person (a qualified ecologist in this case) as they interpret the qualities of the effect from the categories listed in Table 3-3 and the receptors sensitivity and significance. Level of significance, also described as value of the receptor is previously set out in sub-section 3.8 above. Sensitivity of the receptor is assessed by the Competent Person based on the receptor's characteristics and how susceptible to impact they are from the type of effect.

The overall significance of an effect is then categorised into one of the following seven classifications:

- Imperceptible
- Not Significant
- Slight
- Moderate
- Significant
- Very Significant
- Profound

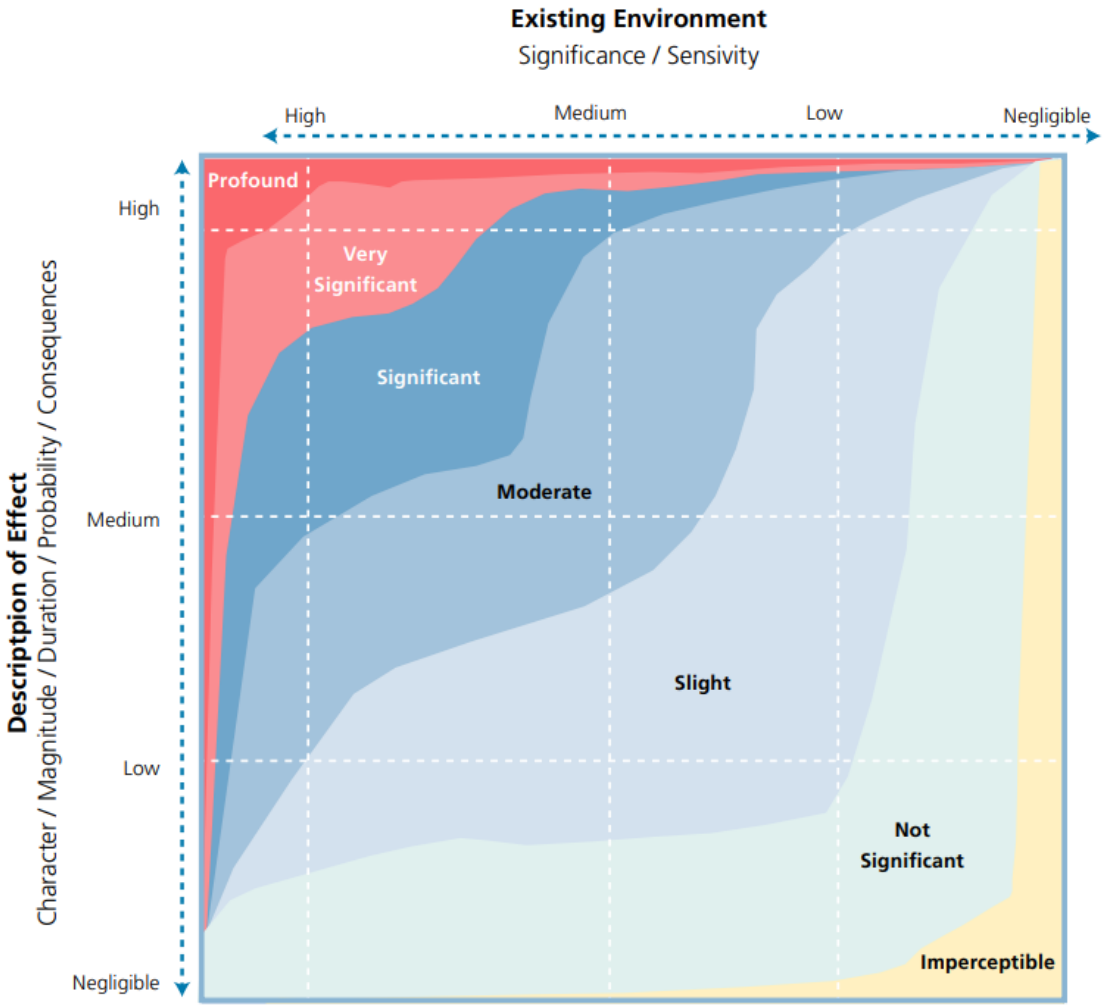

Figure 3-1: Chart showing the typical classifications of the significance of effects (EPA, 2022)

This chart has been interpreted in Table 3-4 as a significance of impacts matrix below, the scale has been ordered into an upper and lower bound for each qualitative category, so that degrees of significance within subcategories can be interpreted by the Competent Person.

Table 3-4: Significance of impacts matrix (derived from Figure 3-1, re EPA, 2022)

Magnitude of impact	Sensitivity/ Value of Receptor							
	High +	**High -**	**Medium +**	**Medium -**	**Low +**	**Low -**	**Negligible +**	**Negligible -**
High +	Profound	Very significant	Very significant	Significant	Moderate	Moderate	Not Significant	Imperceptible
High -	Very Significant	Very significant	Significant	Moderate	Moderate	Slight	Not Significant	Imperceptible
Medium +	Very Significant	Significant	Moderate	Moderate	Slight	Slight	Not Significant	Imperceptible
Medium -	Significant	Moderate	Moderate	Moderate	Slight	Slight	Not Significant	Imperceptible
Low +	Moderate	Slight	Slight	Slight	Slight	Slight	Not Significant	Imperceptible
Low -	Slight	Slight	Slight	Slight	Slight	Not Significant	Not Significant	Imperceptible
Negligible +	Not Significant	Not Significant	Not significant	Not Significant	Not Significant	Not Significant	Not Significant	Imperceptible
Negligible -	Not Significant	Not Significant	Not significant	Not Significant	Not Significant	Imperceptible	Imperceptible	Imperceptible

3.8.3 Residual Impacts

The project is assessed including some designed-in mitigation (e.g., appropriate drainage design). This is done where mitigation is proven to be effective and will be implemented effectively with a high certainty. Where significant residual impacts are still identified, further mitigation measures will be proposed as part of the Ecological Impact Assessment process to avoid, reduce or minimise them. Each impact assessment section assigns a final significance level to the impact described, which considers and includes the implementation of any stated mitigation measures; these are the residual impacts.

3.9 Cumulative Impacts

Potential sources of cumulative impacts were identified based on the ecology of valued ecological features. Potential sources of cumulative impacts were sought within an area where there is the potential for a significant impact on a site or species. The plans and projects identified as potential sources of cumulative impacts are described in Section 5.

3.10 Limitations and Constraints

This EcIA is based on ecological site surveys and existing data from the above-mentioned sources. The report necessarily relies on some assumptions and is inevitably subject to some limitations. These do not affect the conclusion, but the following points are recorded in order to ensure the basis of the assessment is clear:

- Information on the works and conditions on site are based on current knowledge at the time of writing. Changes to the site since surveys were undertaken cannot be accounted for. However, the site surveys have followed CIEEM (2019) *Advice note on the lifespan of ecological reports and surveys*. Any changes to the proposed works will require an assessment by a suitably qualified ecologist to determine if re-assessment is required.
- Adverse weather can cause delays to the schedule and alter the timing of works. This has been accounted for using a worst-case scenario where possible.
- The precautionary principle is used at all times when determining potential ecological sensitivity of the site.
- Ecological surveys were conducted outside of the optimal window for vegetation and invertebrates (mid-August 2022), as such, some vegetation species may not have been present at the time of survey efforts.

4 Baseline Conditions

These baseline conditions present information gathered from existing reports and desk-based sources as detailed in Section 3.6. To inform this EcIA the initial baseline ecological walkover survey was carried out by JBA Ecologists William Mulville and Michael Coyle of JBA Consulting on a site visit conducted on 17th August 2022.

4.1 Desk-based Assessment

4.1.1 Designated Sites

This section lists the designated sites of international and national importance. The ZoI for this project is a 5km general radius and any downstream hydrological connection (including transitional waters buffer) for statutory sites; and a general 5km radius for non-statutory sites. Table 4-1 below lists these designated sites with their respective importance and distance from the proposed site development. Figure 4-1 overleaf displays the locations of the statutory designated sites, with Figure 4-2 displaying the non-statutory (proposed and existing Natural Heritage Area) designated sites within the ZoI of the site. Table 4-2 and Table 4-3 displays site descriptions and their respective ecological features.

Table 4-1: Proximity and importance of designated sites within their respective ZoI buffers.

Name	Designation	Importance	Distance from site	Hydrological distance from site
South Dublin Bay	SAC	International	13.1km	n/a
South Dublin Bay and River Tolka	SPA	International	13.2km	n/a
North Bull Island	SPA	International	16km	n/a
North Dublin Bay	SAC	International	16km	n/a
Glenasmole Valley	SAC	International	3.1km	n/a
Dodder Valley	pNHA	National	2.8km	n/a
Glenasmole Valley	pNHA	National	3.1km	n/a
Grand Canal	pNHA	National	4.6km	n/a
Lugmore Glen	pNHA	National	1.4km	n/a
Slade of Saggart and Crooksling Glen	pNHA	National	3.7km	n/a
South Dublin Bay	pNHA	National	13.1km	n/a
Dolphins Dublin Bay	pNHA	National	15km	n/a
North Dublin Bay	pNHA	National	14km	n/a

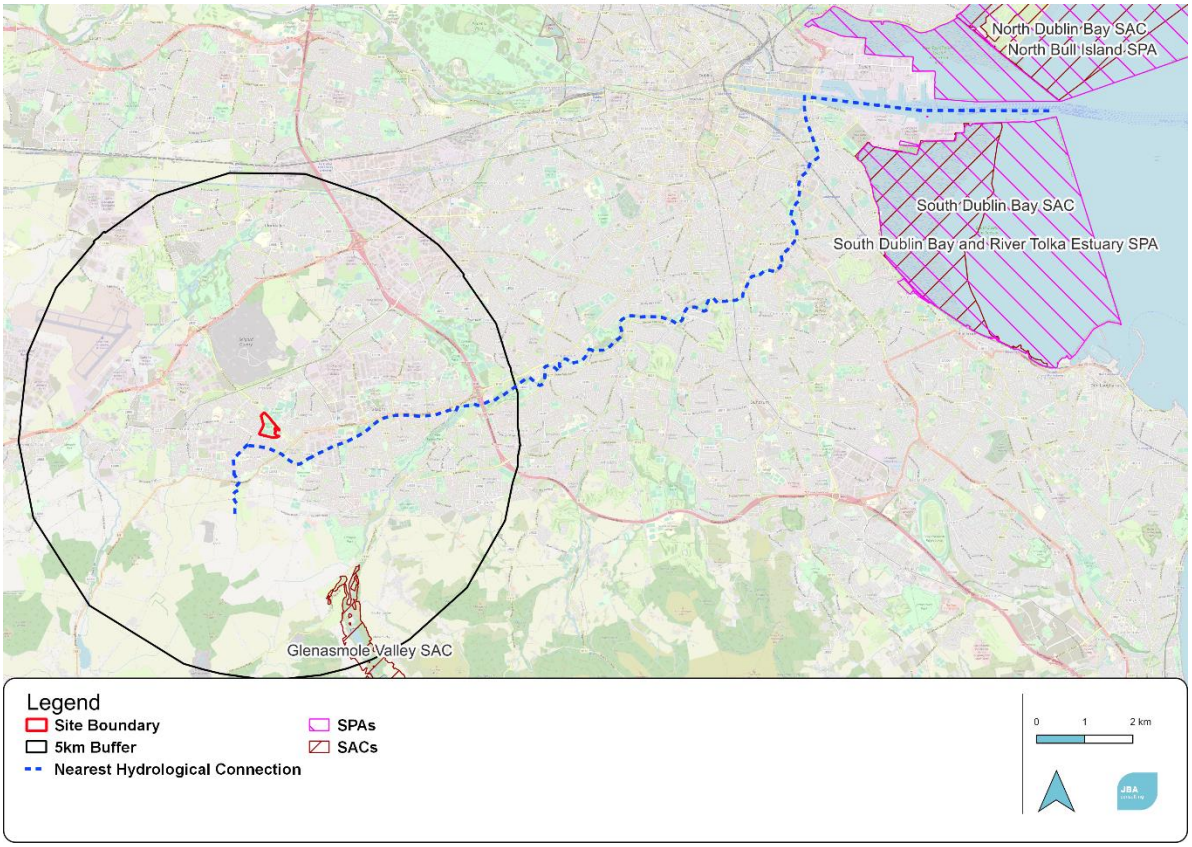

Figure 4-1: Statutory designated sites within the ZoI of the development (OSM, 2023)

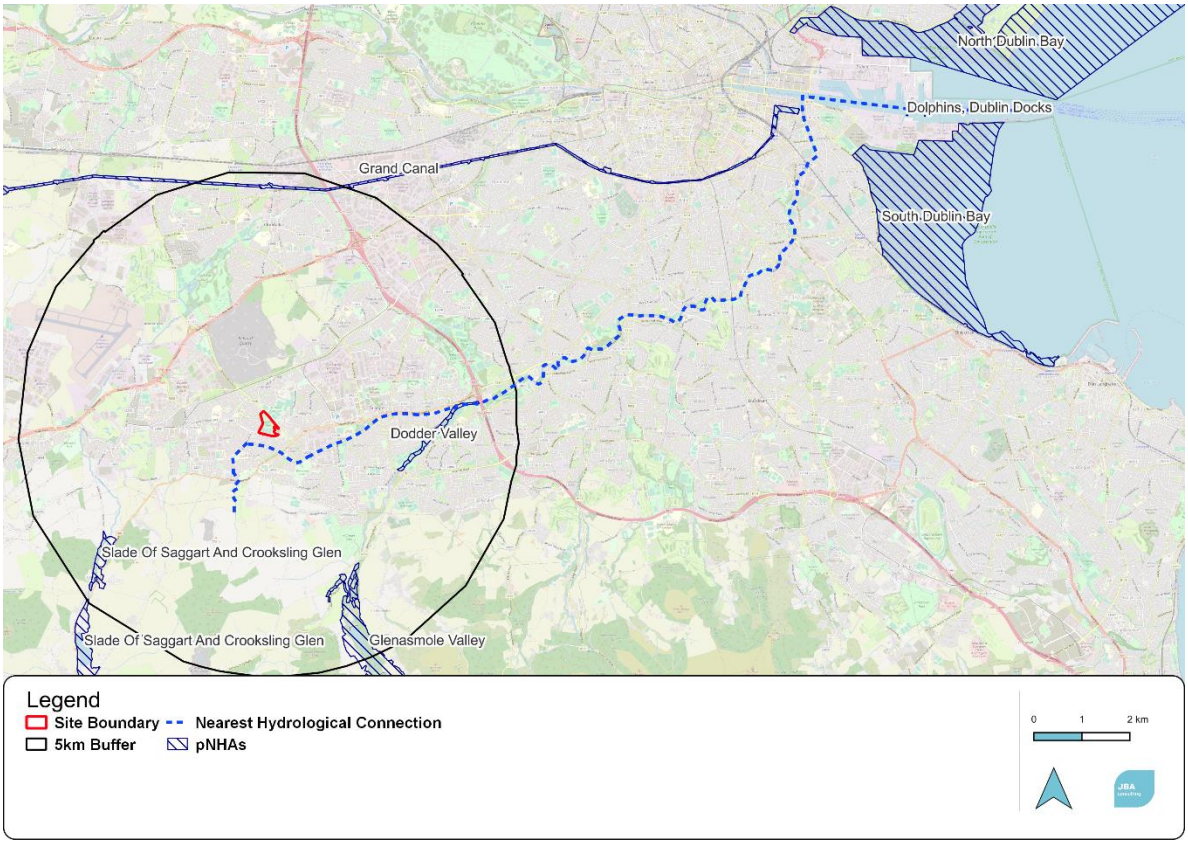

Figure 4-2: Non-statutory designated sites within their respective ZoI of the site works (OSM, 2023)

Table 4-2: Site briefs; Qualifying Interests; and project threats and their impacts and sources to the Natura 2000 sites within the ZoI.

Site Name	Brief	Qualifying Interests	Project-relevant Threats / Pressures: Impact (Source)
Glenasmole Valley SAC	Glenasmole valley is in south Co. Dublin approximately 5km from Tallaght. The River Dodder has been impounded within the valley to form two reservoirs for water provision to Dublin. The bedrock is non-calcarerous with an overlay of deep drift deposits that line the valley's sides. These areas are covered by scrub and woodland, with herb-rich grassland on the less precipitous parts. Seepage through the deposits brings to the surface water rich in bases and induces patches of calcareous fens and petrifying springs. Locations between the two reservoirs include examples of calcareous fens and flush. Woodland occurs in patches around the site. The east side of the valley forms a woodland on the unstable calcareous slopes. Wet, semi-natural woodland is around the reservoirs. The lake shore vegetation is not well developed (NPWS, 2013a).	- Semi-natural dry grasslands and scrubland facies on calcareous substrates Festuco-Brometalia) (* important orchid sites) [6210] - Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] - Petrifying springs with tufa formation (Cratoneurion) [7220]	No project-relevant threats or pressures (EEA, 2021)
North Dublin Bay SAC	This site covers the inner part of north Dublin Bay extending from the Bull Wal lighthouse as far as the martello Tower. The building of the South Wall and the Bull Wall in the 18th and 19th centuries contributed to the formation of the 5km sandy spit on location which can be 1km wide at parts, containing an assortment of dunes. The saltmarsh extends the length of the landward side of the island, which is marked by an eroding edge that varies between 20cm and 60cm high (NPWS, 2013b).	- Mudflats and sandflats not covered by seawater at low tide [1140] - Annual vegetation of drift lines [1210] - Salicornia and other annuals colonising mud and sand [1310] - Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] - Mediterranean salt meadows (Juncetalia maritimi) [1410] - Embryonic shifting dunes [2110] - Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] - Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] - Humid dune slacks [2190] - Petalwort *Petalophyllum ralfsii* [1395]	Urbanised areas, human habitation: High impact (outside) (EEA, 2020a)

Site Name	Brief	Qualifying Interests	Project-relevant Threats / Pressures: Impact (Source)
South Dublin Bay SAC	South Dublin Bay SAC lies south of the Liffey, extending from South Wall to the western pier of Dun Laoghaire. The site is intertidal, with extensive sand and mudflats. There are several small, sandy beaches with incipient dune formation in the north and western sectors of the site. Of interest is the area of Booterstown salt marsh, which is a relatively new formation. There is early-stage saltmarsh development occurring here, covering a small area for now, but with the possibility to extend further thanks to ample areas of substrate and shelter (NPWS 2015a).	- Mudflats and sandflats not covered by seawater at low tide [1140] - Annual vegetation of drift lines [1210] - Salicornia and other annuals colonising mud and sand [1310] - Embryonic shifting dunes [2110]	Roads, motorways: Low impact (outside) Urbanised areas, human habitation: High impact (outside) (EEA, 2020b)
North Bull Island SPA	This site covers all of the inner area of north Dublin Bay, including a seaward boundary that extends from the Bull Wall lighthouse across to Drumleck Point at Howth Head. It is almost 5km long, it is 1km wide and it runs parallel to the coast between Sutton and Clontarf. The length of the site is covered with Saltmarshes, there are two intertidal lagoons located in the area which provide roosts and feeding grounds for wintering birds. It is one of the tops sites for wintering waterfowl in Ireland, and is of international importance for its sustainability of birdlife (NPWS, 2014a).	- Light-bellied Brent Goose *Branta bernicla hrota* [A046] - Shelduck *Tadorna tadorna* [A048] - Teal *Anas crecca* [A052] - Pintail *Anas acuta* [A054] - Shoveler *Anas clypeata* [A056] - Oystercatcher *Haematopus ostralegus* [A130] - Golden Plover *Pluvialis apricaria* [A140] - Grey Plover *Pluvialis squatarola* [A141] - Knot *Calidris canutus* [A143] - Sanderling *Calidris alba* [A144] - Dunlin *Calidris alpina* [A149] - Black-tailed Godwit *Limosa limosa* [A156] - Bar-tailed Godwit *Limosa lapponica* [A157] - Curlew *Numenius arquata* [A160] - Redshank *Tringa totanus* [A162] - Turnstone *Arenaria interpres* [A169] - Black-headed Gull *Chroicocephalus ridibundus* [A179] - Wetland and Waterbirds [A999]	Continuous urbanisation: Medium impact (inside) Other patterns of habitation: Low impact (inside) (EEA, 2020c)

Site Name	Brief	Qualifying Interests	Project-relevant Threats / Pressures: Impact (Source)
South Dublin Bay and River Tolka Estuary SPA	This site covers a large part of the Dublin Bay, including the intertidal area of the River Liffey and Dun Laoghaire, along with the estuary of the River Tolka to the north of the River Liffey and Booterstown Marsh. The south of the bay has intertidal flats that at their widest extend for almost 3km. The site is important for wintering fowl, integral for the importance of the Dublin Bay complex (NPWS, 2015b).	- Light-bellied Brent Goose *Branta bernicla hrota* [A046] Oystercatcher *Haematopus ostralegus* [A130] - Ringed Plover *Charadrius hiaticula* [A137] - Grey Plover *Pluvialis squatarola* [A141] - Knot *Calidris canutus* [A143] - Sanderling *Calidris alba* [A144] - Dunlin *Calidris alpina* [A149] - Bar-tailed Godwit *Limosa lapponica* [A157] - Redshank *Tringa totanus* [A162] - Black-headed Gull *Chroicocephalus ridibundus* [A179] - Roseate Tern *Sterna dougallii* [A192] - Common Tern *Sterna hirundo* [A193] - Arctic Tern *Sterna paradisaea* [A194] - Wetland and Waterbirds [A999]	Roads, motorways Low impact (outside) Urbanised areas, human habitation High impact (outside) (EEA, 2021b)

Table 4-3: Site briefs and ecological features of conservation concern of proposed Natural Heritage Areas within the ZoI.

Site Name	Brief	Ecological Features of Conservation Concern
Dodder Valley pNHA	This stretch of the River Dodder extends for about 2 km between Firhouse Bridge and Oldbawn Bridge in the south-west of Dublin City. The vegetation consists of woodland scrub mainly comprising Willows spp., but up to thirteen species of tree have been recorded. The understorey vegetation contains a good variety of plant species, including Early-purple Orchid *Orchis mascula* and Bugle. Along the banks there are wildflower meadows with a good diversity of plant species. Forty-eight bird species have been recorded recently in the area, including Little Grebe *Tachybaptus ruficollis*, Kingfisher *Alcedo atthis*, White-throated Dipper *Cinclus cinclus* and Grey Wagtail *Motacilla cinerea*. Part of the riverbank supports a Sand Martin *Riparia riparia* colony of up to 100 pairs. The site also supports a population of Otter. The site represents the last remaining stretch of natural riverbank vegetation on the River Dodder in the built-up Greater Dublin Area (NPWS, 2009a).	- Kingfisher *Alcedo atthis* - Grey Wagtail *Motacilla cinerea* - Sand Martin *Riparia riparia* - Otter *Lutra lutra*
Glenasmole Valley pNHA	As per the Natura 2000 SAC description.	As per those outlined in Natura 2000 SAC description.

Site Name	Brief	Ecological Features of Conservation Concern
Grand Canal pNHA	The Grand Canal is a man-made waterway linking the River Liffey at Dublin with the Shannon at Shannon Harbour and the Barrow at Athy. The Grand Canal proposed Natural Heritage Area (pNHA) comprises the canal channel and the banks on either side of it. A number of different habitats are found within the canal boundaries - hedgerow, tall herbs, calcareous grassland, reed fringe, open water, scrub and woodland. The diversity of the water channel is particularly high in the eastern section of the Main Line - between the Summit level at Lowtown and Inchicore. Otter spraints are found along the towpath, particularly where the canal passes over a river or stream. The Smooth Newt *Lissotriton vulgaris* breeds in the ponds on the bank at Gollierstown in Co. Dublin. The rare and legally protected Opposite-leaved Pondweed *Groenlandia densa* (Flora Protection Order 1987) is present at a number of sites in the eastern section of the Main Line, between Lowtown and Ringsend Basin in Dublin (NPWS, 2009b).	- Otter *Lutra lutra* - Smooth Newt *Lissotriton vulgaris* - Opposite-leaved Pondweed *Groenlandia densa*
Lugmore Glen pNHA	This smal, wooded glen is located about 2km south-east of Saggart in Co Dublin. It is quite a narrow valley cut in glacial drift. A small stream winds through the valley. The wood is mainly comprised of dense Hazel *Corylus avellana* but also contains Ash, Elder *Sambucus nigra* and Blackthorn *Prunus spinosa*. The herb layer is quite rich, especially towards the stream, with species such as Wood-sorrel, Bugle *Ajuga reptans*, Primrose *Primula vulgaris*, Honeysuckle *Lonicera periclymenum*, Bluebell *Hyacinthoides non-scripta*, Ivy *Hedera hibernica*, Wood-sedge *Carex sylvatica,* Woodruff *Galium odoratum* and Wood Speedwell occurring. The importance of this site is that it is a fine example of a wooded glen with a good representation of woodland plants. The flora of the site is notable for the presence of the rare Red Data Book species, Yellow Archangel *Lamiastrum galeobdlori*. (NPWS, 2009c)	- Yellow Archangel *Lamiastrum galeobdolon*
Slade Of Saggart And Crookling Glen pNHA	This site is located in the south-west of Co. Dublin and stretches from Brittas northwards to approximately 2km south of Saggart. The northern half of the site comprises a river valley with steep tree-covered sides, while the southern side is flatter and contains two small lakes, the Brittas Ponds. The trees are mostly of planted origin with fine specimens of Beech *Fagus sylvatica*, Ash *Fraxinus excelsior*, Oak *Quercus* spp. and Birch *Betula* spp.; with some Whitebeam *Sorbus hibernica* also occurring. The flora of the site is notable for the presence of the rare Red Data Book species, Yellow Archangel *Lamiastrum galeobdolon*. South of Crooksling Glen are Brittas Ponds, a Wildfowl Sanctuary, that supports a variety of wildfowl, including Teal *Anas crecca*, Mallard *Anas platyrhynchos*, Pochard *Aythya ferina* and Tufted Duck *Aythya fuligula* (NPWS, 2009d).	- Whitebeam *Sorbus hibernica* - Yellow Archangel *Lamiastrum galeobdolon* - Teal *Anas crecca* - Mallard *Anas platyrhynchos* - Pochard *Aythya ferina* - Tufted Duck *Aythya fuligula*
North Dublin Bay pNHA	As per North Dublin Bay SAC description in Table 4-2.	As per those outlined in SAC description
South Dublin Bay pNHA	As per South Dublin Bay SAC description in Table 4-2.	As per those outlined in SAC description
Dolphins, Dublin Docks pNHA	As per South Dublin Bay and River Tolka Estuary SPA descriptions in Table 4-2.	As per those outlined in SAC description

4.1.2 Screening of designated sites

An AA Screening has been carried out for this project by JBA (2023). Following initial screening, and based upon best scientific judgement it is concluded that **adverse significant impacts are not anticipated** from the project on any of the Natura 2000 sites within the project's ZoI, and **adverse significant impacts are not anticipated** from the project on any of the four Natura 2000 sites that exist within an extended 15km hydrological connection radius within Dublin Bay,

- Glenasmole Valley SAC [001209]
- South Dublin Bay SAC [000210]
- South Dublin Bay and River Tolka Estuary SPA [004024]
- North Bull Island SPA [004006]
- North Dublin Bay SAC [000206]

The pNHA sites below are being **screened out** due one or more of the following: lack of hydrological connectivity (surface water and groundwater) and/or distance from the proposed site; and the development's scale (e.g., capacity for dust generation):

- Grand Canal pNHA [002104]
- Lugmore Glen pNHA [001212]
- Slade of Saggart and Crooksling Glen pNHA [000211]
- Glenasmole Valley pNHA [001209]
- South Dublin Bay pNHA [000210]
- North Dublin Bay pNHA [000206]
- Dolphins, Dublin Docks pNHA [000201]
- Dodder Valley pNHA [000991]

4.1.3 Protected Species

National Biodiversity Data Centre (NBDC)

Records of protected fauna including amphibians, bats, birds, invertebrates and mammals collated from the NBDC (2023) database, present within the surrounding 2km within the past 10 years are used to assess the potential species present in the vicinity of the site, meanwhile an extended list of species present within the surrounding 5km within the past 10 years is listed in Appendix C. This list includes their level of protection, if they are red or amber listed on the International Union for the Conservation of Nature and Natural Resources (IUCN) Red List and the date of the last record of this species at this location.

4.1.4 Invasive Non-native Species

The NBDC shows record of invasive non-native species being present within 2km of the-site (NBDC, 2023), species within 2km that are either High Impact species, or are on the Invasive species management Regulations SI. 477 are listed in Table 4-4. While there is a list of previously reported species within a 5km radius of the site is found in the Appendix C.

Table 4-4: High impact, invasive non-native species recorded within 2km of the site

Invasive Non-native Species	Approximate distance from site	Impact status
Fringed Water-lily *Nymphoides peltata*	1.8km	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Harlequin Ladybird *Harmonia axyridis*	1.1km	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Brown Rat *Rattus norvegicus*	On site	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Eastern Grey Squirrel	0.6km	High Impact Invasive Species

Invasive Non-native Species	Approximate distance from site	Impact status
Sciurus carolinensis		EU Regulation No. 1143/2014 Regulation S.I. 477 (Ireland)

4.1.5 Waterbodies within the Vicinity of the Proposed Site

There is one tributary of the Water Framework Directive (WFD) riverine water body Dodder_040, Jobstown Stream, which located within close proximity to the proposed site, located approximately 250m south of the site, however there is no direct connection between the site and this stream. Water from the stream then flows eastwards into Whitestown Stream, and into the main body of the River Dodder (Dodder_050), before flowing north and into the transitional waterbody Liffey and into Dublin Bay Liffey Estuary Lower (IE_EA_090_0300).

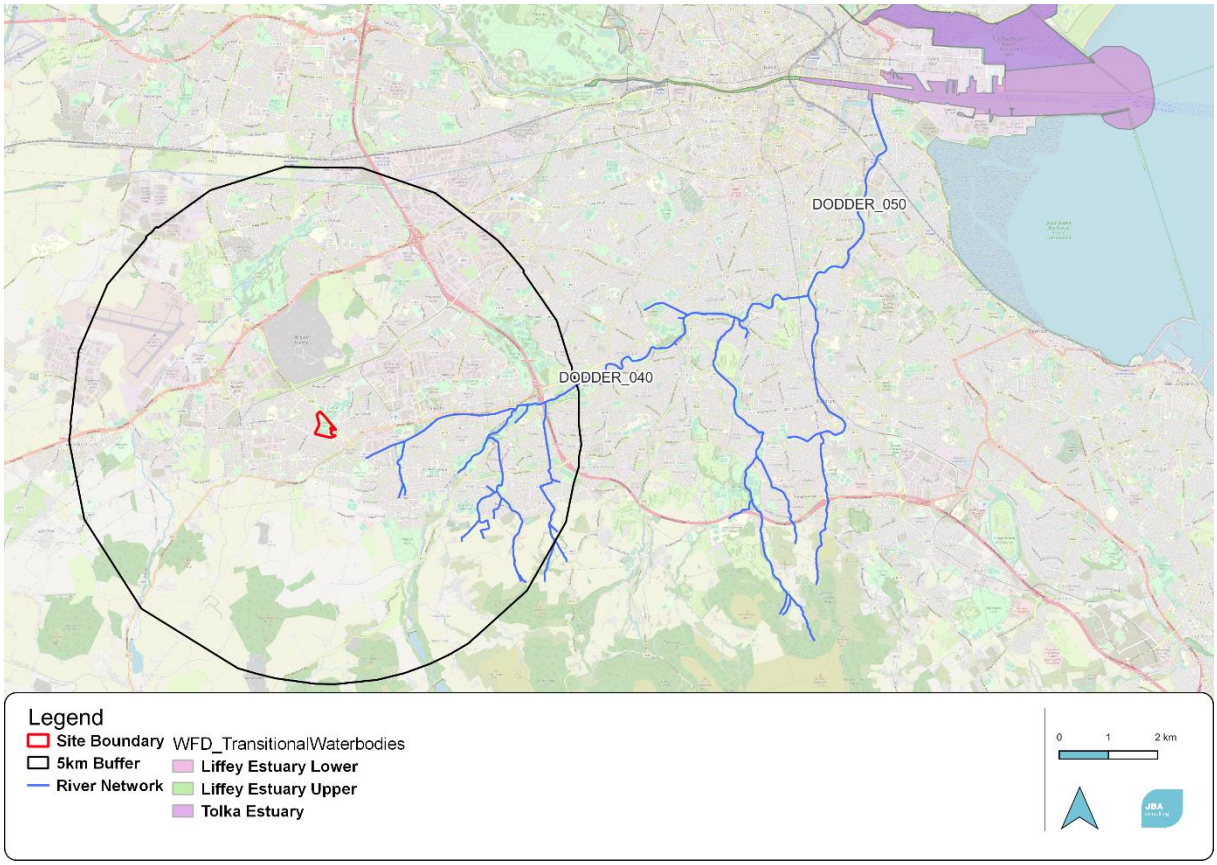

Figure 4-3: Local waterbodies and their downstream connections (OSM, 2023)

4.2 Water Framework Directive

4.2.1 Surface Water Status

The Jobstown Stream is a tributary of the Water Framework Directive (WFD) riverine waterbody Dodder_040 located approximately 250m south of the site. This stream flows into the River Dodder (Dodder_050), before flowing north into the transitional waterbody Liffey and into Dublin Bay Liffey Estuary Lower (IE_EA_090_0300), however, there is no direct hydrological link between the site and this river. The proposed site is located within the (WFD) sub-catchment Dodder_SC_010.

Table 4-5: The WFD watercourses within the ZoI of the development (EPA, 2023)

WFD Watercourse	WFD Status (2016-2021)	WDF Risk	Approximate distance from site
Whitestown Stream (Dodder_040)	Moderate	At Risk	0.2km
River Dodder	Moderate	At Risk	6.7km

The proposed development will need to ensure that the goal of 'Good Status' is achievable, and that the proposed works will not hinder this goal during the construction and operational phases.

4.2.2 Groundwater Status

The whole site is encompassed by the ground waterbody Dublin (IE_EA_G_008) (Figure 4-4). The WFD status for this groundwater body is currently "Good" water status, however its risk status is currently 'Under Review' in regard to risk (EPA, 2023).

The proposed development will need to ensure that the proposed construction works will have no negative effect on these water bodies and will support their maintaining 'Good' status into the future.

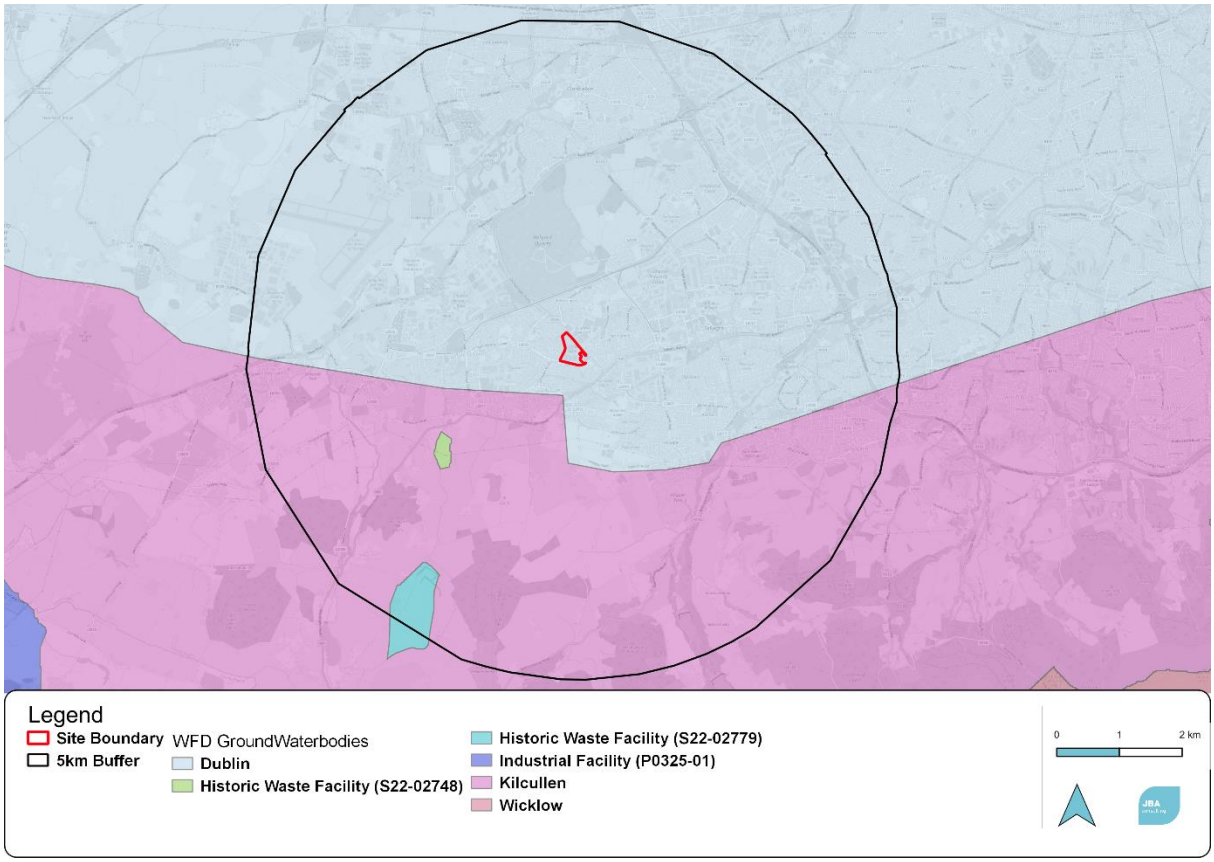

Figure 4-4: WFD Groundwater bodies in the vicinity of the site

4.3 Site Visits

A baseline ecological site walkover, including habitat mapping, and incidental mammal and bird survey was conducted by JBA Ecologist, William Mulville and Michael Coyle on the 17th of August 2022. Habitats and species recorded are presented in detail in the following sections.

4.4 Habitat Survey

The site currently exists as Jobstown Park, which is located west of Tallaght and along the R136 road. The site currently is primarily composed of amenity grassland with the occasional newly planted treeline

and hedgerow. Habitats recorded in and around the site boundary are listed in Table 4-6. The survey results are illustrated as a habitat map Figure 4-5.

Table 4-6: List of habitats recorded on site

Fossitt Habitat	Fossitt Code
Earth banks	BL2
Buildings and artificial surfaces / Amenity grassland (improved)	BL3 / GA2
Amenity grassland (Improved)	GA2
Dry meadows and grassy verges	GS2
Hedgerows	WL1
Treelines	WL2

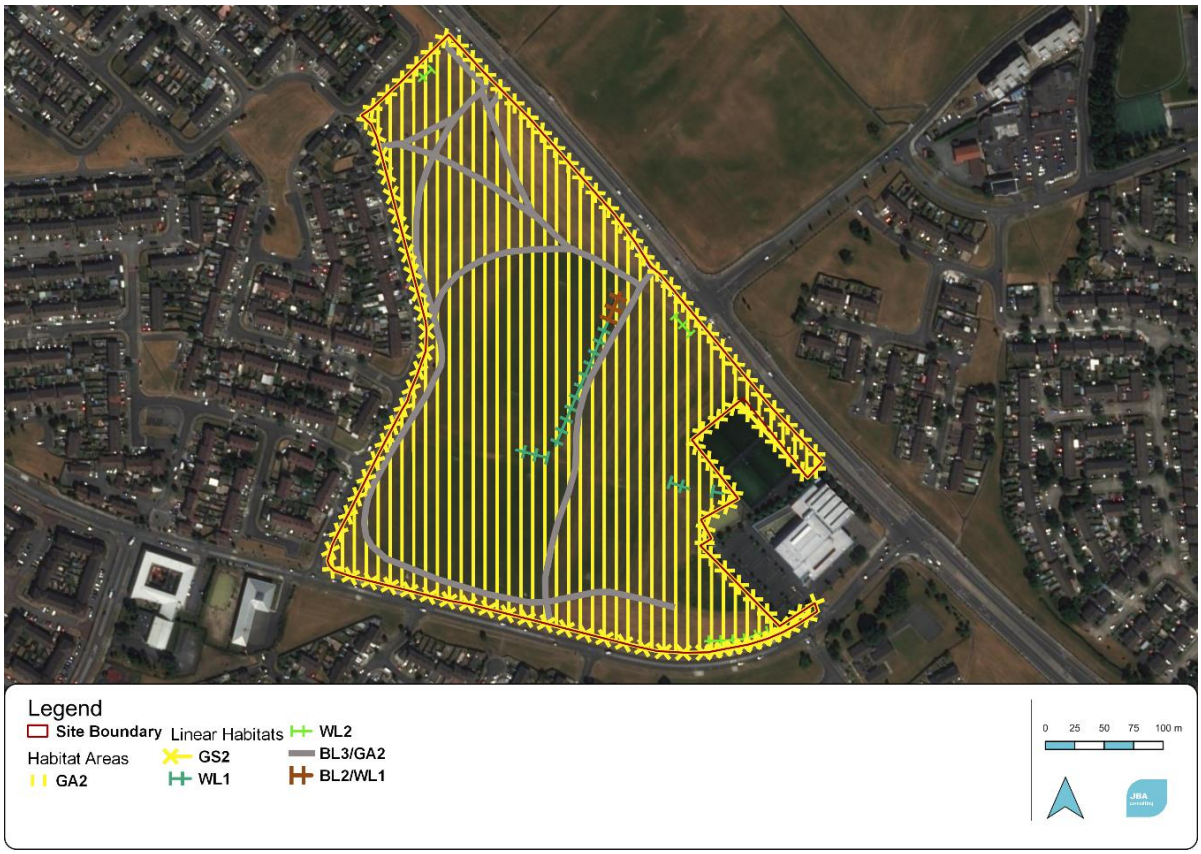

Figure 4-5: Habitat Map of the site (ESRI: Satellite, 2023)

4.4.1 Earth banks (BL2)

There was a notable earth bank located at the base of one of the hedges, no animal species were recorded, however there were small holes in the earth that could be potential nests of solitary mining bee species (Figure 4-6).

In the context of this site and the lands immediately adjacent, the earthy bank habitat is considered to be of **high local ecological importance**, given is capacity to host solitary mining bee species, as well as subterranean hive-forming bumblebee species.

Figure 4-6: Earth bank present on site, with visible small holes in the surface indicating presence of mining bees.

4.4.2 Buildings and artificial surfaces/ Amenity grassland (Improved) (BL3/GA2)

There is a footpath present throughout the park. The footpath is damaged in places, allowing for mosaics of weedy species from the amenity grassland to spread onto the area of the path, including Dandelion *Taraxacum* spp. and Perennial Rye-grass *Lolium perenne.*

In the context of this site, this largely artificial habitat is considered to be of **less than local ecological importance** given its lack of floral diversity, or apparent support of faunal species.

4.4.3 Amenity grassland (improved) (GA2)

The majority of the Jobstown site is amenity grassland, containing a low diversity of plants, Perennial Rye-grass, Red Clover *Trifolium pratense*, Dandelion spp., Ribwort Plantain *Pantego lanceolata*, Yorkshire Fog *Holcus lanatus* and Creeping Buttercup *Ranunculus repens*.

Surveyors observed Hooded Crow *Corvus corone*, Black-headed Gull *Chroicocephalus ridibundus*, Rook *Corvus frugilegus* and Starling *Sturnus vulgaris* utilising this grassland habitat. A number of invertebrate species were also recorded including Wasp *Vespula* spp. and White-tailed Bumblebee *Bombus lucorum* agg.

Therefore, in the context of the site, this grassland habitat is considered to be of **less than local ecological importance** given its low floral diversity and low level of utilisation by local fauna.

4.4.4 Dry meadows and grassy verges (GS2)

There were grassy verges developing in some areas of damaged hedgerow in the centre of the park. Within this verge was Hawk's-beard *Crepis* spp., Field Mustard *Brassica rapa*, Creeping Buttercup, Hogweed *Heracleum sphondylium*, False Oat-grass *Arrhenatherum elatius*, Lesser Knapweed *Centaurea nigra*, Ribwort Plantain, Sycamore (saplings) *Acer pseudoplatanus*, and an immature Ash *Fraxinus excelsior*. Additionally, there was a boundary grassy verge of about 50cm-1m present along the edges of the site which contained Perennial Rye-grass, Nettle *Urtica dioica*, Creeping Thistle

Cirsium arvense, Creeping Buttercup, Dandelion spp., Poppy *Papaver rhoes*, Yorkshire Fog, Shepherd's Purse *Capsella bursa-pastoris*, Common Plantain *Plantago major*, Dead Nettle *Lamium* sp., Agrimony *Agrimonia eupatoria*, Small-flowered Cranesbill *Geranium pusillum*, Sun Spurge *Euphorbia helioscopia*, Ragwort *Jacobaea vulgaris*, Field Mustard, Ribwort Plantain, Creeping Bent *Agrostis stolonifera*, Horsetail *Equisetum* spp. and Bush Vetch *Vicia sepium* (Figure 4-7).

There were also Garden Snail *Cryptomphalus aspersus* visible in this verge, as well as Wasp *Vespula* spp.

Therefore, in the context of the site, these grassy verges within the park are considered to be of **high local ecological importance**, given that this is the most diverse habitat within the site, as well as its capacity to provide foraging and refuge for local fauna.

Figure 4-7: The boundary of uncut plants on the inside of the park fence

4.4.5 Hedgerows (WL1)

There were four hedgerow sections on-site, three smaller ones spread east-west across the centre of the park, and a larger hedge located north-south along one of the football pitches (Figure 4-8). These hedges were fragmented and in relatively poor condition (low overall diversity) with flora species limited to Hawthorn *Crataegus monogyna*, Bramble *Rubus fruticosus*, Spear Thistle *Cirsium vulgare*, Perennial Rye-grass, Nettle, Ivy *Hedera helix*, Dock *Rumex* spp. and Brome *Bromus spp*.

Surveyors noted Robin *Erithacus rubecula* utilising these hedgerow habitats.

Therefore, in the context of the site, the hedgerows are considered to be of **high local ecological importance** given their capacity to provide for nesting, foraging and refuge for local fauna.

Figure 4-8: The segmented central hedgerow

4.4.6 Treeline (WL2)

There were recently planted and immature treelines in the north, south and north-west of the park. Trees included Wild Cherry *Prunus avium*, Poplar *Populus* spp., Silver Birch *Betula pendula*, Scot's Pine *Pinus sylvestris*, Elder *Sambucus nigra* and Pedunculate Oak *Quercus robur*. The trees contained invertebrates, which included greenfly and beetle species.

Therefore, in the context of the site and the lands immediately adjacent, **this habitat type is considered of high local ecological importance,** given the scarcity of trees within the locality, as well as their capacity to provide for nesting, foraging and refuge for local fauna.

4.5 Protected Flora

There were no floral species listed under the Flora (Protection) Order 2022 recorded by the JBA Ecologist during the ecological walkover survey. Furthermore, the NBDC shows no record of any protected flora species being present within site or its immediate vicinity (NBDC, 2023).

4.6 Protected Fauna

4.6.1 Mammals

JBA staff did not record any direct or indirect evidence of protected mammals was recorded on-site during the ecological walkover survey. The following mammals are recorded within 2km of the site within recent years, while there is a list of previously reported species within a 5km radius of the site is found in the Appendix C.

- Badger *Meles meles*
- Hedgehog *Erinaceus europaeus*

Species that are granted further legal status in addition to the Wildlife Act includes:

- Pine Marten *Martes martes* (EU Habitats Directive Annex V)

Hedgehog, Badger and Pine Marten and are species that are sometimes found within urban and suburban parklands, where they might use this site for commuting and foraging. Hedgehog is the most likely of the three species to utilise the park given the recent NBDC recordings of individuals within the local housing estates.

Therefore, considering the potential for foraging and commuting of mammal species within this site, this site is considered to be of **high local ecological importance for the selected mammals.**

4.6.2 Bats

Desk Study

There were no direct or indirect evidence of bat species listed under the Wildlife Act 1976 and its Amendments or the EU Habitats Directive recorded by the JBA Ecologists during the ecological

walkover survey. No bat species protected under the Wildlife Act and/or the EU Habitats Directive that have been recorded under the NBDC within 2km of the site in the previous 10 years. Additionally, NBDC records of bats within an extended 5km are found within Appendix C.

Preliminary Bat Roost Survey

During the ecological walkover of the proposed site, it was determined that there was no potential roost features present within the site.

Bat presence / activity on-site

In the absence of bat activity survey data, under the precautionary principal, we must assume that one or more bat species (e.g., Soprano Pipistrelle, *Pipistrellus pygmaeus*, Common Pipistrelle *Pipistrellus pipistrellus sensu lato*, and Lesser Noctule *Nyctalus leisleri* - common urban area bat species) are likely utilising this site for opportunistic foraging and commuting activities, given the presence of grassy verges, hedgerows and treelines on-site.

The proposed site has been valued as being **of high local ecological importance for local bat species**, given the site's role as a foraging grounds and commuting corridor.

4.6.3 Breeding and Wintering Birds

The JBA Ecologist recorded two bird species of note from Birds of Conservation Concern Ireland (BoCCI) 2020-2026 (Gilbert et al., 2021)., namely the Starling (Breeding) and the Black-headed Gull (Breeding and Wintering), both of which are listed on the BoCCI Amber list. The remaining bird species observed on-site during the survey are all currently Green-listed.

Additionally, recent local (2km radius) NBDC records (within the last 10 years) highlight the presence of a number of other Amber- and Red-listed bird species (BoCCI, 2020-2026). These records included the Amber-listed Swallow *Hirundo rustica* (Breeding), Goldcrest *Regulus regulus* (Breeding) Common Coot *Fulica atra* (Breeding and Wintering), Kingfisher *Alcedo atthis* (Breeding), Herring Gull *Larus argentatus* (Breeding and Wintering), House Martin *Delichon urbicum* (Breeding), House Sparrow *Passer domesticus* (Breeding), Lesser Black-Backed Gull *Larus fuscus* (Breeding and Wintering), Mute Swan *Cygnus olor* (Breeding and Wintering), Northern Wheatear *Oenanthe oenanthe* (Breeding), Sand Martin *Riparia riparia* (Breeding), and Tufted Duck *Aythya fuligula* (Breeding and Wintering); and the Red-listed Grey Wagtail *Motacilla cinerea* (Breeding) and Goldrest *Regulus regulus* (Breeding).

Many of these birds, such as the waterfowl and riparian species, are not likely to utilise the habitats on site for any means. The presence of the hedgerow and treeline habitats within the site providing minor nesting and foraging opportunities for breeding birds.

The proposed site has been valued as being of **high local ecological importance for the above bird species of conservation concern.**

4.6.4 Amphibians

The JBA surveyors did not documents the presence of any Amphibians during the ecological survey. Recent records show Common Frog *Rana temporaria* present within 2km of the site (NBDC, 2022), however, amphibians are unlikely to utilise the site given the lack of refuge and waterbodies.

The proposed site has been valued as being of **less than local ecological importance** amphibian species, given the lack of available resources.

4.6.5 Terrestrial Invertebrates

While on site, the JBA surveyors recorded Greenfly spp., Beetle spp., Wasps *Vespula* spp and White-tailed bumblebee *Bombus lucorum agg*. Also found on site within the earthy banks was the presence of potential mining bee burrows, however, there were no invertebrates observed within or around these burrows.

Therefore, even in the absence of species records within during the site visit, given the presence of burrowing sites and the presence of pollinators, this site is considered **high local ecological importance** within the context of the site.

4.7 Invasive Non-native Species

There was one invasive, non-native species present at the site at the time of the survey, namely Sycamore *Acer pseudoplatanus*. This species is stated to be a Medium impact species. However, it is not listed on the third schedule of the EC (Birds and Natural Habitats) Regulations 2011 S.I. No. 477/2011.

4.8 Screening of Designated Sites & Ecological Features

The screening of designated sites and ecological features identified during the desktop study and ecological survey are given in

Table 4-7 (overleaf). Sites and features screened out are not considered further in this assessment. Ecological features carried forward are assessed for potential impact during construction and operation in the following sections.

Table 4-7: Summary of ecological features and the screening assessment.

Designated site / Ecological feature	Value	Screening	Reasoning
Glenasmole Valley SAC	International	Screened out	JBA, 2023 - AA Screening Conclusion
South Dublin Bay SAC	International	Screened out	JBA, 2023 - AA Screening Conclusion
South Dublin Bay and River Tolka Estuary SPA	International	Screened out	JBA, 2023 - AA Screening Conclusion
North Dublin Bay SAC	International	Screened out	JBA, 2023 - AA Screening Conclusion
North Bull Island SPA	International	Screened out	JBA, 2023 - AA Screening Conclusion
Dodder Valley pNHA	National	**Screened out**	Lack of connectivity
Glenasmole Valley pNHA	National	Screened out	Lack of connectivity
Grand Canal pNHA	National	Screened out	Lack of connectivity
Lugmore Glen pNHA	National	Screened out	Lack of connectivity
Slade of Saggart and Crooksling Glen pNHA	National	Screened out	Lack of connectivity
South Dublin Bay pNHA	National	Screened out	Lack of connectivity
Earth bank	High Local	**Screened in**	Valued for capacity to host bee species
Buildings and artificial surfaces	Less than local	Screened out	Low value habitat
Amenity grassland (improved)	Less than local	Screened out	Low value habitat
Dry meadows and grassy verges	High Local	**Screened in**	High species diversity
Hedgerows	High Local	**Screened in**	High value habitat in poor quality
Treelines	High Local	**Screened in**	High value habitat in poor quality
Mammals	High Local	**Screened in**	Hedgerows, treelines and grassy verges offer foraging and refuge
Bats	High Local	**Screened in**	Hedgerows, treelines and grassy verges offer

Designated site / Ecological feature	Value	Screening	Reasoning
			foraging and commuting
Amphibians	Less than local	Screened out	Lack of suitable resources on-site
Breeding and Wintering Birds	High Local	**Screened in**	Hedgerows, treelines and grassy verges offer foraging, nesting and refuge
Terrestrial Invertebrates	High Local	**Screened in**	Pollinators present, with potential presence solitary mining bee species

5 Other Relevant Plans and Projects

5.1 Cumulative Impacts

Potential sources of cumulative impacts were identified based on the ecology of valued ecological features. Potential sources of cumulative impacts were sought within an area where there is the potential for a significant impact on identified ecological features.

The following projects or plans were identified as potential sources of cumulative impacts:

- South Dublin County Development Plan 2022 - 2028
- Greater Dublin Drainage Strategy
- River Basin Management Plan for Ireland 2022-2027
- Planning Applications (March 2023)

5.2 Plans

5.2.1 South Dublin County Development Plan 2022-2028

The proposed scheme's development is in line with the South Dublin County Development Plan 2022-2028. It is an objective of the Plan to ensure that all development within the County conforms to key design principles which includes the promotion of sustainable energy and environmental services. These goals include the requirement that the planning system will 'be responsive to our national environmental challenges and ensure that development occurs within environmental limits, having regard to the requirements of all relevant environmental legislation and the sustainable management of our natural capital.

The Plan also aims to protect and enhance surface water quality, to support, improve and protect Natura 2000 sites, and to develop an integrated Green Infrastructure network to enhance biodiversity, provide accessible parks, open spaces and recreational facilities (SDCC, 2022a). The plan also states that work will be in conjunction with Irish Water to protect existing water and drainage infrastructure, to promote investments aiming to support environmental protection and facilitate the sustainable growth of the county.

A Screening for Appropriate Assessment was carried out on the plan, which was concluded that an Appropriate Assessment was necessary for this project. The associated Natura Impact Report concluded that there are no likely significant direct, indirect or secondary impacts of the project on any Natura 2000 sites (SDCC, 2022b), **therefore the SDCC Development Plan is not anticipated to contribute to cumulative or in-combination impacts.**

5.2.2 Greater Dublin Drainage Strategy

The Greater Dublin Drainage Strategy sets out the strategic planning for the development of wastewater treatment in the Greater Dublin Area in relation to the Ringsend Waste Water Treatment Plant (WWTP) Upgrade, Greater Dublin Drainage Project and associated wastewater network drainage projects (Irish Water, 2018). The proposed developed connects with the Local Authority sewer system which is included in this strategy. The Ringsend WWTP Upgrade includes plans to expand the WWTP to its ultimate capacity, together with associated network upgrades required. The Greater Dublin Drainage Project is planned to relieve both the Ringsend WWTP and network loading by construction of a new WWTP at Clonshaugh, an orbital sewer and provision of an outfall pipe discharging 1km north east of Ireland's Eye. The Ringsend WWTP upgrade is in progress and carried out in stages, with an increased capacity of 400,000 PE by the first half of 2021 and the ultimate capacity of 2.4 million PE to be in operation by 2025 (Irish Water, 2018). The Greater Dublin Drainage Project is strategically important to the Dublin Region in that it will provide capacity for residential and commercial growth (Irish Water, 2018).

Overall, the Greater Dublin Drainage Strategy is not considered to adversely impact any Natura 2000 site, nor is it expected to contribute to any cumulative or in-combination effects.

5.2.3 Third Cycle River Basin Management Plan for Ireland 2022-2027 (DoHPLG, 2022)

The first cycle of River Basin Management Plans included the Eastern River Basin District - River Basin Management Plan (ERBDMP) 2009 – 2015 (WFD (2010). The plans summarised the waterbodies that may not meet the environmental objectives of the WFD by 2015 and identified which pressures are contributing to the environmental objectives not being achieved. The plans described the classification results and identified measures that can be introduced in order to safeguard waters and meet the environmental objectives of the WFD.

- Prevent deterioration of water body status.
- Restore good status to water bodies.
- Achieve protected areas objectives.
- Reduce chemical pollution of water bodies

The 2nd cycle River Basin Management Plan (RBMP) for Ireland 2018-2021 sets out the actions that Ireland will take to improve water quality and achieve 'good' ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2021 (DoHPLG, 2018a). Changes from previous River Basin Management Plans is that all River Basin Districts are merged as one national River Basin District. The Plan provides a more coordinated framework for improving the quality of our waters — to protect public health, the environment, water amenities and to sustain water-intensive industries, including agri-food and tourism, particularly in rural Ireland.

The 3rd and current cycle aims to build on the initiatives of the second cycle, particularly the governance and implementation structures, and to improve the establishment of Irish Water, An Forum Uisce, the Local Authority Waters Programme and the Agricultural Sustainability Support and Advisory Programme.

The third cycle draft Catchment Report for Liffey and Dublin Bay Catchment (EPA, 2021) identified that between Cycles 2 and 3 there has been an overall small improvement in the catchment's status. The overall change in quality between Cycles 2 and 3 include 2 waterbodies that have achieved High Status, which is an increase of one, 56 which achieve Good Status has been increased by four , 23 achieving a Moderate Status which is a decrease in four waterbodies, and 24 achieving a Poor Status an increase of 1 between cycles. There are no Bad Status waterbodies as of Cycle 3, which is a decrease of one from Cycle 2. The main significant pressures are aquaculture, anthropogenic, atmospheric, historically polluted sites and waste pressures followed by agriculture, urban run-off and forestry.

The Third Cycle River Basin Management Plan for Ireland 2022-2027 is not anticipated to contribute to cumulative or in-combination effects.

5.3 Other Projects

Other projects dating back three years are listed in Table 5-1 (overleaf), which are not retention applications, home extensions and/or internal alterations, and have been granted planning permission in the locality of the proposed site.

Table 5-1: Other recent projects, within approximately 2km which may have an accumulative impact on the development of the project

Planning Reference	Address	Application Status	Decision date	Summary of development
SHD3ABP-310570-21	Site at Cooldown Commons & Fortunestown, Citywest, Dublin 24	Permission Granted	18/06/21	Construction of a residential scheme comprising 421 units, offices, retail units x3 and residential amenity areas x2, within 9 blocks ranging in height from 1-13 storeys. The proposal will include 289 car parking spaces along with 650 cycle parking spaces. The development will provide public and communal open spaces throughout including a public plaza adjoining Fortunestown Luas stop. Provision of vehicular, pedestrian, and cyclist accesses to the site, including pedestrian bridge to the public park (under construction) to the east. The application includes for all landscaping, ESB substations, plant areas, bin storage, surface water attenuation and all other site development works, and site services required to facilitate the proposed development. The proposed development seeks to amend SHD permission ABP-302398 -18 (under construction to the west), replacing 32 permitted duplex apartments along with associated amendments to internal roads and open spaces. The current proposal also replaces permission SD16A/0078 previously granted on this site.
SD16A/0210/EP	Site at junction of Citywest Road and Garter Avenue, Citywest, Dublin 24	Grant extension of duration of permission	28/01/21	Residential development of 112 dwellings comprised of: 90 two storey houses consisting of 10 four bed detached houses, 2 three bed detached houses, 8 four bed semi-detached houses, 2 three bed detached houses, 8 four bed semi-detached houses, 42 three bed semi-detached houses and 28 three bed mid-terrace houses along with 22 one and two bed apartments in a four storey apartment building. The proposed development includes all associated site development and infrastructural works, car parking, bin storage, open spaces and landscaping. Access to the development will be via two vehicular entrances from Garter Avenue. All on a site of 3.74ha bounded to the east by the N82 Citywest Road, to the north-west by Garter Avenue and to the south by lands that will be developed as a Neighbourhood Park (permitted under Reg.Ref. SD15A/0127) in accordance with the Fortunestown Local Area Plan 2012.
SD15A/0127/EP	Citywest, Tallaght, Dublin 24	Grant extension of duration of permission	01/07/20	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.
SHD3ABP-305556-19	Citywest Shopping Centre, Fortunestown, Dublin 24	Permission granted	21/01/20	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.

Planning Reference	Address	Application Status	Decision date	Summary of development
SHD3ABP-306602-20	Citywest Road and Magna Drive, Citywest, Dublin 24	Permission granted	26/05/20	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.
SD21A/0207	St. Thomas' Junior National School, Jobstown, Tallaght, Co. Dublin	Permission granted	14/09/21	Demolition of the existing single-storey c. 2,605sq.m. Junior School building; demolition of the existing single-storey c. 211sq.m. Junior School ancillary structures; construction of a new part three/part two-storey c. 4,998sq.m - Junior School building, located to the west of the existing Senior School building. The new school will accommodate 27 classrooms, a 3-class base Special Education Needs facility and all ancillary accommodation (the Senior School does not form part of planning application); 2 single-storey temporary accommodation units, c. 400sq.m, located to the south of the site, to facilitate the construction of the new school building; renewable energy design measures, PV Panels and/or heat pumps located at roof level; new school signage comprising wall-mounted lettering on the front elevation of the new building; external hard play area and 2 Multi-Use Games Areas; all located to the south of the site; redevelopment of the existing staff car parking and set-down facilities within the school site comprising: provision of 40 Junior school staff car parking spaces and 6 car set-down spaces, resurfacing of 22 existing Senior school car parking spaces, 106 bicycle parking spaces, new access road, new footpaths, landscaping and all ancillary site works; boundary treatment comprising of repair works to the existing low-level blockwork wall and new metal railings to an overall height of 2.4m along Fortunestown Road; replacement of the existing palisade fencing with new 2.4m high railings along Kiltalown Park Rd to the south; replacement of the existing pedestrian and vehicular entrance gates; works in the public road outside the school site: including 5 set-down spaces along Fortunestown Road, and services connection required to facilitate the development.
SD208/0003	Kiltipper Park, Tallaght, Dublin 24	Part 8 Approved by	13/07/20	Development of a public park including: Construction of 30 additional parking spaces with adjacent access footway & lengthened access roadway; New shared surface entrance and access pathway; Provision of 1

Planning Reference	Address	Application Status	Decision date	Summary of development
		Council		GAA pitch with vertical ball-stop netting and associated features; Provision of 2 soccer pitches and associated features; Provision of children's playground area and linear natural play areas; Integrated landscape features including woodland areas; All associated swales, drainage, wetland areas and ancillary works; All incidental park furniture such as benches, signage, bins; All ancillary works.
SD218/0004	Whitestown and Killinarden, Tallaght, Dublin 24	Part 8 Approved by Council	12/7/21	Killinarden Park upgrade, total site area approx. 20ha and Greenway with landscaped pedestrian/cycle route within Killinarden Park and between Killlinarden Park and Sean Walsh Park, total site area approx. 4.50ha. The works will comprise: • Strategic walk/cycleway with bat sensitive lighting along Whitestown Stream; new and enhanced entrances, including new road crossings at Killinarden Heights , Whitestown Drive, Whitestown Way and Killinarden Way/Killinarden Estate (with a revised carriageway arrangement); feature areas at primary and secondary accesses; a Primary Oval footpath and walking/exercise circuit 1km in length; existing secondary footpath network retained and resurfaced where required; and a new footbridge crossing the Whitestown Stream within the park. Replacement and new park perimeter walls/railings where required and retention of existing private walls/railings. Linear play trails; seating; two natural play areas; outdoor fitness and calisthenics equipment; a Multi-use Games and Skate Area; upgrade of existing grass sports pitches to include re-levelling where required. Biodiversity and landscape improvements including a community orchard; wildflower meadows; surface water swale; willow; native woodland; informal tree groups; Signature Trees; and retention of existing tree groups and scrub where shown. Installation of CCTV Cameras for monitoring by An Garda Siochána and South Dublin County Council. All ancillary works.
SD208/0005	Tallaght Town Centre, Tallaght, Dublin 24	Part 8 Approved by council	12/10/20	Development of public realm works totalling approximately 1.2ha at Belgard Square North and on South Dublin County Council lands to the south and north of Belgard Square North, Tallaght including: Proposed new public space at Innovation Square; Proposed works to include a new advertising totem in Innovation Square extending to a maximum height of 2.4m x 1.5m; Proposed new Belgard Square North/Airton East West pedestrian link street; Pedestrian crossings at Belgard Square North and Belgard Cookstown Link Street; Redevelopment of County Hall Pedestrian Link; Redevelopment and reprofiling of levels within Chamber Square; Proposed works to include the reconfiguration of existing County Council carpark including widening of County Hall Pedestrian Link with additional planting, seating and relocation of wheelchair accessible parking spaces, a new pedestrian crossing and associated amendments to the carpark. All ancillary site development and landscaping works, including public lighting, play equipment, furniture and sports equipment, cycle parking, seating, pathways, planting, surface water drainage and boundaries.
SD21A/0012	Buckandhounds, Bedlesshill, Kingswood, Brownsbarn, Cheeverstown & Belgard, Fortunestown, Tallaght, Dublin 24	Permission granted	23/03/21	Deepening of part (c. 43ha.) of the existing and permitted quarry (An Bord Pleanala refs. 301177 & QD0026) to a quarry floor level of -10mOD using conventional blasting techniques; use of mobile processing plant; product stockpiles; final restoration scheme and all ancillary works within a planning application area of 49.4ha and within the overall landholding of 241.6ha
SD21A/0327	Gordon Park, Old Naas Road, Kingswood, Dublin	Permission granted	19/05/2022	A residential development of 77 dwellings comprised of 63 two storey houses and 14 apartments & duplex units accommodated in one 3 storey building. The proposed houses are comprised of 8 two bed houses & 55 three bed houses; the proposed apartments & duplex units are comprised of 7 one bed apartments

Planning Reference	Address	Application Status	Decision date	Summary of development
	22			at ground floor & 7 three bed duplex units overhead. The proposed development also provides for all associated site development & infrastructural works, car & bicycle parking, open spaces, hard & soft landscaping, boundary treatments and bin & bicycle storage; access to the development will be via a new vehicular entrance at the south-west corner of the site off the Old Naas Road. Permission is also sought to demolish the existing building on site approximately 455sq.m. all on a site area of 2.28Ha, at Gordon Park, Old Naas Road, Kingswood, Dublin 22 bounded to the west by the Old Nass Road, to the south by the Silken Park development and is located in the townland of Brownsbarn.
SHD3ABP-310570-21	Site at Cooldown Commons & Fortunestown, Citywest, Dublin 24	Permission Granted	18/06/21	Construction of a residential scheme comprising 421 units, offices, retail units x3 and residential amenity areas x2, within 9 blocks ranging in height from 1-13 storeys. The proposal will include 289 car parking spaces along with 650 cycle parking spaces. The development will provide public and communal open spaces throughout including a public plaza adjoining Fortunestown Luas stop. Provision of vehicular, pedestrian, and cyclist accesses to the site, including pedestrian bridge to the public park (under construction) to the east. The application includes for all landscaping, ESB substations, plant areas, bin storage, surface water attenuation and all other site development works, and site services required to facilitate the proposed development. The proposed development seeks to amend SHD permission ABP-302398 -18 (under construction to the west), replacing 32 permitted duplex apartments along with associated amendments to internal roads and open spaces. The current proposal also replaces permission SD16A/0078 previously granted on this site.

5.4 Summary

The developments permitted above have the potential to have overlapping construction and short-term residual impact phases with the proposed project and therefore, in the absence of mitigation measures, these developments may result in potential in-combination or cumulative impacts on ecological features listed in Table 4-6. The County Development Plan, RBMP and projects within the locality of the proposed project are considered in combination with the currently proposed enhancement project in the following Impact Assessment section.

6 Impact Assessment

6.1 Introduction

The impacts on the valued ecological features are assessed here. The initial assessment considers the potential impact pathways and whether these apply to the ecological features. The impact assessment considers the project and the anticipated effects in the absence of any mitigation.

The potential impacts from the enhancement works are assessed under the following:

- Disturbance to habitats and species
- Small-scale habitat loss
- Degradation of on-site habitats, and site adjacent habitats via surface water and groundwater pollution events

The following sections describe the nature of immediate / short-term impacts, as well as any medium- or long-term impacts, predicted for designated protected sites, habitats and species in the absence of implemented mitigation measures during the maintenance works.

6.2 Do Nothing Scenario

If the proposed works were not to go ahead and the present land management continues as is, the ecological value of the site would remain unchanged.

6.3 Construction Phase

6.3.1 Habitats & Species

Earth bank

There is no mentioning of the earth bank habitat within the project's concept report, either as an "Earth Bank", an "Earth Mound" or specified as an on-site habitat for Bees. As this habitat was located close to a section of the hedgerow that is to undergo large-scale works (detailed below), it would be vulnerable to any excavations or maintenance of the area and could face complete removal as the area is flattened and levelled to a uniform height.

Therefore, in the absence of mitigation, **permanent, negative impacts of slight-to-moderate significance** are anticipated for the earth bank habitat.

Dry meadows and grassy verges

The dry meadow habitat will be retained along the north-northeast boundary of the parkland, along the wall adjacent to the road. While the habitat is intended to be retained, it would still be vulnerable to any polluting events (e.g., leaking or spilled hydrocarbons) which may occur within the site. Minor impacts will have a knock-on effect on the protected faunal groups which frequent this habitat for commuting, foraging or refuge purposes.

Therefore, in the absence of mitigation during the construction phase, **temporary negative impacts of slight significance** are anticipated for the dry grassy verge habitats.

Hedgerows and Treelines

The hedgerows and treelines at the site are intended to be retained, and expanded during the construction phase of the project, however, these habitats would be vulnerable to any polluting events (e.g., leaking or spilled hydrocarbons) which may occur within the site. Additionally, physical root compaction from machinery during the construction phase of the development may degrade these habitats. Furthermore, minor impacts will have a knock-on effect on the protected faunal groups which frequent this habitat for commuting, foraging or refuge purposes.

Therefore, in the absence of mitigation during the construction phase, **temporary negative impacts of slight significance** are anticipated for the hedgerow and treeline habitats.

Ground-dwelling Mammals

While no signs of Badger, Pine Marten or Hedgehog habitation were present during the ecological walkover, this does not ensure that the local mammal species don't occasionally visit the site area for foraging. Bearing this in mind, impacts may arise in the form of disturbance to foraging and commuting activities, as well as potential loss of life to individuals in the case of the accidents within the construction site (e.g., accidental trappings), after failure to exclude entry.

Therefore, in the absence of appropriate mitigation during the construction phase, **there is likely to be temporary negative impacts of slight significance for these mammal species**.

Bats

While no signs of bat roosts were present during the ecological walkover, this does not ensure that the three local bat species found within the NBDC records (Common Pipistrelle, Soprano Pipistrelle and Leisler's Bat) do not use the site area for commuting and foraging.

Impacts during construction relate to the external lighting a which could reduce the quality of foraging and commuting within this habitat for bats. Potential minor impacts on individuals using the site could be posed by the construction-based external lighting.

Therefore, in the absence of appropriate mitigation for lighting during the construction phase, **there is likely to be a temporary negative impacts of slight significance for local bats.**

Breeding and Wintering Birds

Local breeding and seasonal wintering bird species will potentially be physically disturbed from their nesting (breeding only) and foraging activities during the construction works. While there are a number of bird species in the general area of conservation concern, the extent of the works on the site are small, contained and temporary, there are many alternate grass pitches in the vicinity of the site that will provide the birds ample opportunity for foraging.

Therefore, in the absence of mitigation during the construction phase, a t**emporary negative impact of slight significance** is anticipated for these bird species.

Operational impacts from the proposed development on these habitats are anticipated in the form of improvements and extension of the existing treelines, which will increase the nesting opportunities for local breeding birds. Therefore, the operational phase is anticipated to have a **long-term, positive impact of slight significance** on Breeding and Wintering Birds.

Terrestrial Invertebrates

Solitary mining bee species may potentially be notably impact should the earth bank be degraded or partially or fully removed during the construction phase. Additionally, the foraging and commuting activities of the local invertebrates, including pollinators; will be adversely impacted as result of the works that will take place during the developments construction phase.

Therefore, in the absence of mitigation, during the construction phase, a **temporary low impact of slight significance** is anticipated for terrestrial invertebrates.

6.4 Operational Phase

Earth banks

Specific operational impacts are not anticipated to positively or negatively impact this habitat type.

Dry meadows and grassy verges

The operational of this project includes the enhancement and maintenance of sections of dry meadow with seasonal maintenance of vegetation. This will overall increase the area of these habitat types within the site and these impacts are anticipated to be **long-term positive impacts of slight significance**.

Hedgerows and Treelines

Positive impacts on these habitat types during the operations phase are anticipated in the form of the restoration and supplementation of the existing low-quality hedgerows, along with the introduction of treelines along the pathways using native tree species. A list of the additional treeline and hedgerow species and their percentage of cover is located below in Table 6-1.

Table 6-1: Hedgerow and Treeline species to be added to the site

Treeline Species	Hedgerow Species
Maple *Acer campestre* 10%	Hawthorn *Crataegus monogyna* - 60%
Alder *Alnus glutinosa* 20%	Blackthorn *Prunus spinosa* - 10%
Silver Birch *Betula pendula* - 20%	Hazel *Corylus avellana* - 5%
Scot's Pine *Pius sylvestris* - 10%	Birch *Betula pendula* - 5%
Wild Cherry *Prunus avium* - 20%	Crab Apple *Malus sylvestris* - 5%
Pedunculate Oak *Quercus robur* - 10%r	Guelder Rose *Viburnum opulus* - 5%
Rowan *Sorbus aucuparia* - 10%	Wild Cherry *Prunus avium* - 5%
	Holly *Ilex aquifolium* - 5%

Therefore, the increase in the total area and the restoration of these habitat types is anticipated to have a **long-term, positive impact of slight significance** on these habitats of local importance.

Ground-dwelling Mammals

The diversification of habitat types and the enhancement of existing habitats, including increased floral diversity will have knock-on benefits, i.e., increased foraging opportunities and refuge, for local ground-dwelling mammals.

Therefore, diversification of habitat types and the enhancement of existing habitats is anticipated to have a **long-term, positive impact of slight significance** for local mammals.

Bats

During the operation of the park, there will be an increased number of lights within the site boundary. The specs of the lights have a bat-friendly design are intended to comply with I.S. EN 13201 - 2:2015 P4. The lighting plan for the park includes a design of full cut off luminaires to ensure no light being directed upwards, scheduled dimming of the lights by 25% between 00:00 and 06:00. The luminaires will switch on from dusk at full output. After 20:00, the luminaires will dim down to 10% output through to dawn. When presence is detected, the lighting will ramp up to full output in appropriate sections the Luminaire type to be used- Urbis Axia 2.1 5177 8LED at 600mA 1.66klm in warm white (3000K) with integral rear louvers, and these lighting columns are intended to be 6m high.

Common and Soprano Pipistrelles which are commonly known to frequent urban landscapes as they are generally more tolerant to anthropogenic impacts, including lighting impacts, than the other bat species in Ireland. Additionally, Leisler's Bat has also been recorded frequenting street lit and amenity grassland areas in the urban environment (Russ and Montgomery, 2002; Russ et al., 2003). This highlights the adaptability of three bat species present on-site to anthropogenic lighting sources. In addition to their adaptability to anthropogenic lighting, studies have shown that pipistrelle species and Leisler's Bat can congregate around urban street lighting feeding on the insects attracted to the lower impact lighting (Rydell et al., 1993, Blake et al., 1994; Stone et al., 2015; Spoelstra et al., 2015; 2017). Therefore, the local individual bats have likely already obtained the necessary behavioural adaptations to adjust their respective foraging strategies for when the site has operational, bat-friendly lighting.

Given the above, the lighting during the operational phase of the development will have a **neutral impact** on local bat populations, while the enhancement of the on-site habitats will increase foraging opportunities for bats and will therefore have a **long-term positive impact of slight significance** on local urban bat species.

Breeding and Wintering Birds

The diversification of habitat types and the enhancement of existing habitats, including increased floral diversity will have knock-on benefits, i.e., increased nesting (breeding only) and foraging opportunities, and refuge for local breeding and seasonal wintering bird species. Therefore, the operational phase is anticipated to have a **long-term, positive impact of slight significance** on breeding and wintering bird species.

Terrestrial Invertebrates

The diversification of habitat types and the enhancement of existing habitats, including increased floral diversity will have knock-on benefits, i.e., increased hive-creation and foraging opportunities, and refuge, for local invertebrate species.

Therefore, diversification of habitat types and the enhancement of existing habitats is anticipated to have a **long-term, positive impact of slight significance** for local terrestrial invertebrates.

6.5 Invasive Non-native Species

Given the low frequency presence of the invasive non-native species on-site (Sycamore) within the proposed site, adverse impacts from this species are not anticipated during the construction and operational phases of this enhancement project.

6.6 Summary

The following potential significant impacts have been identified below, with the necessary mitigation is discussed in the next chapter:

- Removal and/or degradation of the earth bank habitat.
- Degradation of dry meadow grassland, hedgerow, treeline habitats via pollution events; root compaction; and direct habitat loss, thus reducing the capacity of these habitats to support local wildlife.
- Disturbance and/or degradation commuting and foraging habitats for mammals, bats, birds and terrestrial invertebrates as well as potentially accidental fatal entrapment for these faunal groups during the construction phase.

The mitigation is based on existing guidance documentation and where necessary additional mitigation is proposed to reduce the impacts identified above.

7 Mitigation

The following mitigation is recommended to ensure that the proposed works do not adversely impact on the ecological receptors outlined in Section 6.

Mitigation measures for anticipated impacts on designated sites and ecological features are outlined below.

7.1 Mitigation for Project Construction Phase

The activities of the project for the construction phase shall remain within the boundary of the proposed site. Within this area, the mitigation measures outlined below shall be implemented.

- A Construction and Environment Management Plan (CEMP) will be submitted to South Dublin County Council for agreement prior to site works commencing. This CEMP will incorporate the mitigation measures listed here.
- The CEMP will also strictly adhere to best practice environmental guidance including but not limited to the following:

  - CIRIA Guidance C532 Control of water pollution from construction sites. Guidance for consultants and contractors. (CIRIA, 2019 - www.ciria.org);

  - CIRIA Guidance C741: *Environmental good practice on site guide* (Charles & Edwards, 2015; CIRIA, 2019 - www.ciria.org);

  - CIRIA Guidance C750D: *Groundwater control: design and practice* (Preene *et al.*, 2016; CIRIA, 2019 - www.ciria.org);
- Construction method statements will be submitted to South Dublin County Council for agreement prior to site works commencing.

7.1.1 Site Compound

- The works compound will be sited in the eastern section of the site away from the higher-valued hedgerows that are present in the centre of the site, the trees and high species rich boundary on the north of the site, and away from the pedestrianised footpath in the south.
- Only plant and materials necessary for the construction of the works will be permitted to be stored at the compound location.
- Site establishment by the Contractor will include the following:

  - Site offices;

  - Site facilities (canteen, toilets, drying rooms, etc.);

  - Office for construction management team;

  - Secure compound for the storage of all on-site machinery and materials;

  - Temporary car parking facilities;

  - Temporary fencing;
- Site Security to restrict unauthorized entry;
- Bunded storage of fuels and refuelling area. Bunds shall be 110% capacity of the largest vessel contained within the bunded area.
- A separate container will be located in the Contractors compound to store absorbents used to contain spillages of hazardous materials. The container will be clearly labelled, and the contents of the container will be disposed of by a licenced waste contractor at a licenced site. Records will be maintained of material taken off site for disposal.
- A maintenance programme for the bunded areas will be managed by the site environmental manager. The removal of rainwater from the bunded areas will be their responsibility. Records will be maintained of materials taken off site for disposal.
- The site environmental manger will be responsible for maintaining all training records.
- Drainage collection system for washing area to prevent run-off into surface water system.
- Wherever reasonably practical, refuelling of vehicles will be carried out off site to reduce risk of accidental hydrocarbon pollution events.

7.1.2 Water Quality

Relevant legislation and best practice guidance that have been considered includes but not limited to the following:

- Water Framework Directive (2000/60/EC);
- European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. No. 272 of 2009;
- Local Government (Water Pollution) Acts 1977-1990;
- CIRIA C532 *Control of water pollution from construction sites*. Guidance for consultants and contractors. (www.ciria.org);
- CIRIA Guidance C750D: *Groundwater control: design and practice* (Preene *et al.*, 2016) (www.ciria.org);
- CIRIA C515 Groundwater control – design and practice, 2nd ed. (CIRIA, 2021 - www.ciria.org);
- CIRIA Guidance C741: *Environmental good practice on site guide* (Charles & Edwards, 2015; CIRIA, 2020 - www.ciria.org)

To prevent watercourse pollution:

- Adoption of a surface water plan including appropriate barrier controls to prevent any polluted surface water from the site reaching the adjacent habitats of high local ecological value.
- Minimise area of exposed ground by maintaining existing vegetation in vicinity of site compound/pier infrastructure.
- Oil booms and oil soakage pads should be maintained on-site to enable a rapid and effective response to any accidental spillage or discharge. These shall be disposed of correctly and records will be maintained by the environmental manager of the used booms and pads taken off site for disposal.
- Fail-safe site drainage and bunding through drip trays on plant and machinery will be provided to prevent discharge of chemical spillage from the sites to surface water.
- Any accidental discharge will be controlled by use of oil booms in the water prior to construction starting.

7.1.3 Dust generation management

The following measures will be implemented to prevent the generation and spread of dust from the site to nearby areas:

- Limit the breaking of the topsoil or earth stripping from occurring during dry and windy weather.
- Wheel washing of vehicles leaving the site, covering of fine dry loads or spraying of loads prior to exiting the site, and if necessary regular cleaning of public roads in the vicinity of the entrance.
- Appropriate maintenance of vehicles and machinery.

7.1.4 Concrete Management Procedures

The following measures will be implemented to prevent liquid concrete/ cement-based dust entering the adjacent habitats of ecological value.

- Wherever reasonably possible, pre-cast concrete features should be utilised to minimise the risk of a concrete-based pollution event.
- Concrete delivery, concrete pours and related construction methodologies will be part of the procedure agreed with the contractor to mitigate any possibility of spillage or contamination of the local environment. Particular attention will be paid during the pouring process in order to avoid leakages or spills of concrete.
- Washout of concrete plant will occur off site at a designated impermeable area with waste control facilities.
- Raw, uncured, or waste concrete will be stored appropriately prior to disposal by licenced contractor.

- The contractor's construction methodology will require the use of precast elements where practical; the use of secondary protection shuttering for concrete pours; all pours to be carried out in dry weather conditions; and that all trucks be cleaned prior to leaving respective depots.
- The contractor will be required to use experienced operators for the work; provide an appropriate level of continuous monitoring during any concrete pours by experienced management; and have method statements approved by the client prior to commencing works. Works will be carried out using recommendations from current guidance and relevant codes of practise as outlined in **EA (2011) -** *Managing concrete wash waters on construction sites: good practice and temporary discharges to ground or to surface waters*.

7.1.5 Pollution Control and Spill Prevention

Spill kits containing absorbent pads, granules and booms will be stored in the site compound with easy access for delivery to site in the case of an emergency. A minimum stock of spill kits will be maintained at all times and site foremen's vehicles will carry large spill kits at all times. Absorbent material will be used with pumps and generators at all times and used material disposed of in accordance with the Waste Management Plan. All used spill materials e.g., Absorbent pads will be placed in a bunded container in the contractor's compound. The material will be disposed of by a licenced waste contractor at a licenced facility. Records will be maintained by the environmental site manager.

Regular inspections and maintenance of plant and machinery checking for leaks, damage or vandalism will be made on all plant and equipment.

In the event of a spill the Contractor will ensure that the following procedure are in place:

- Emergency response awareness training for all Project personnel on-site works.
- Appropriate and sufficient spill control materials will be installed at strategic locations within the site. Spills kits for immediate use will be kept in the cab of mobile equipment.
- Spill kits will be stored in the site compound with easy access for delivery to site in the case of an emergency. A minimum stock of spill kits will be maintained at all times and site vehicles will carry spill kits at all times. Spill kits must include suitable spill control materials to deal with the type of spillage that may occur and where it may occur. Typical contents of an on-site spill kit will include the following as a minimum:

  - Absorbent granules;

  - Absorbent mats/cushions;

  - Absorbent booms

  -Track-mats, geotextile material and drain covers.
- All potentially polluting substances such as oils and chemicals used during construction will be stored in containers clearly labelled and stored with suitable precautionary measures such as bunding within the site compound.
- All tank and drum storage areas on the site will, as a minimum, be bunded to a volume not less than the following;

  - 110% of the capacity of the largest tank or drum within the bunded area, or

  - 25% of the total volume of substances which could be stored within the bunded area.
- The site compound fuel storage areas and cleaning areas will be rendered impervious and will be constructed to ensure no discharges will cause pollution to surface or ground waters.
- Designated locations for refuelling are within Site Compound.
- Potentially contaminated run off from plant and machinery maintenance areas will be managed within the site compound surface water collection system.
- Damaged or leaking containers will be removed from use and replaced immediately

7.1.6 Noise and vibration

The construction of the development will largely be limited to daylight hours where possible, ensuring minimum disturbance to commuting and foraging activities of local wildlife. The works will also be temporary. With regard to construction activities, reference will be made to BS 5228-1, which offers detailed guidance on the control of noise from demolition and construction activities. A variety of practicable noise control measures will be employed. These include:

- Erection of barriers at construction works boundary as necessary and around items such as generators or high duty compressors.
- Limiting the hours during which site activities likely to create high levels of noise are permitted. Construction activities will take place Monday to Friday, between 07:00 and 18:00, and on Saturdays, between 08:00 and 13:00.
- A site representative responsible for matters relating to noise will be appointed to liaise with South Dublin County Council.

Additional guidance relevant to acceptable vibration and noise levels will be followed and is contained in the following documents:

- British Standard BS 7385: 1993: Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground borne vibration.
- British Standard BS 5228-2: 2009: Code of Practice for Noise and Vibration Control on Construction and Open Sites: Vibration.
- NRA: 2004: Guidelines for the Treatment of Noise and Vibration in National Road Schemes.

7.1.7 General Avoidance Measures

Although it has been identified that there will be no permanent impact through disturbance to wildlife during the work, it is advised that general avoidance measures be undertaken to protect wildlife while the works are being carried out.

General avoidance measures that should be incorporated by the contractors working on site include:

- Limit the hours of working to daylight hours, to limit disturbance to nocturnal and crepuscular animals;
- Due to the potential presence of Hedgehog and bat species, the use of lighting at night should be avoided. If the use of lighting is essential, then a directional cowl should be fitted to all lights to prevent light spill and to be directed away from all treelines / wooded areas.
- Contractors must ensure that no harm comes to wildlife by maintaining the site efficiently and clearing away materials which are not in use, such as wire or bags in which animals can become entangled; and
- Any pipes should be capped when not in use (especially at night) to prevent local fauna becoming trapped. Any excavations (including the dry cell area) should be covered overnight to prevent animals from falling and getting trapped. If that is not possible, a strategically placed plank should be placed to allow animals to escape.

7.1.8 Site Lighting Design

Hours of illumination during the construction phase:

The lighting will be controlled by photocells which go on/off at sunrise and sunset as per set lux levels. Additionally, 'Virtual Midnight' dimming will need to be incorporate on-site, which automatically dims the lights by 33% between midnight and 6am.

Light levels and type:

Construction site lighting that meets the lowest light levels permitted under health and safety would be preferable for bats in the vicinity. The specification and colour of light treatments, such as single bandwidth lights and no UV light are essential. LED luminaires are ideal and should be used where possible due to their sharp cut-off, lower intensity, and dimming capability. A warm white spectrum (3000K) should be used in the lighting located along the boundaries of the site to reduce the blue light component.

Column heights of lamp posts:

As bats most likely forage in the unlit areas surrounding the site, the introduction of new lighting as a result of the new development, with accompanying light spillage, is anticipated to result in the bats becoming averse to commuting and foraging within the proposed site and potentially the adjacent habitats also. In order to reduce the amount of light spillage where it is not needed, the height of lamp columns should be restricted. A height of 6m or less is necessary to avert lighting impacts. However, it

is understood that certain lamppost within the development will need to exceed this in order to safely illuminate the pedestrian footpath beyond the southern road.

7.1.9 Root compaction and limb damage avoidance

Machinery should avoid being parked in the areas near the immature treelines or near the hedgerows present on site, as to avoid damage to the rooting zones of these plants.

7.1.10 Sowing of Remedial Grassland

The areas outside of the zone of development that are damaged as a result of machinery accessing the site will have remedial sowing of grass. This sowing mix combined with the natural seedbank within the soil will help replace the functionality provided by the current grassland habitat.

7.1.11 Earth Bank Retention

The area of the earth bank is to be retained, and the vegetation that is located along the bank is to be maintained and pruned if necessary, however, it is not to be removed as the uprooting of the vegetation may cause damage to the structure and integrity of the earth bank.

7.2 Biodiversity Enhancement features for the Operational Phase

7.2.1 Bird boxes

It is recommended that bird nesting boxes be installed around the edges of the park on trees to enhance the site for nesting bird species, especially during the period when newer trees are too immature for nesting.

Bird nesting boxes come in a range of entrance sizes that are suitable for different species dependant on their size. A selection of the following is recommended:

- 25mm hole for Blue Tit and similar-sized (small) bird species
- 32mm hole for Great Tit and similar sixed bird species
- Open-fronted nest box for Robins
- 45mm hole for Starlings and similar-sized bird species

7.2.2 All Ireland Pollinator Plan

It is recommended that actions from the All-Ireland Pollinator Plan be implemented through the operation and management of the pitches. Measures outlining pollinator-friendly management of Public land are detailed in this guidance document: Pollinator Planting Code Guide All-Ireland Pollinator Plan 2021-2025 (pollinators.ie).

The mowing regime of the grasses on site to be kept to a minimum.

Inclusion of pollinator resources, including a collective of native and non-invasive ornamental bulbs, perennials and shrubs, along with the exclusion of invasive non-native species.

8 Residual Impact

Residual ecological impacts are those that remain once the development proposals have been implemented. The main aim of ecological mitigation, compensation and enhancement is to minimise or eliminate residual impacts.

8.1 Construction Phase

Preparatory and construction works will result in temporary, minor disturbance to the foraging and commuting habitat for protected species such as ground-dwelling mammals and birds.

Implementation of mitigation measures during the construction works phase, along with good site management and construction practices will help to minimise any significant and/or permanent impact on the environment. This will be included in a Construction Environmental Management Plan (CEMP). Included in this will be best practice measures for visual and audible disturbance, as well as control of surface and ground water pollution, which will minimise any impact on local habitats and the species reliant on them.

With the proposed mitigation implemented the residual impact during the construction phase is assessed to be overall long-term, positive impact on account of the enhancement and maintenance of high local ecological importance, which will have knock-on effects for local protected species.

8.2 Operational Phase

The intended operational of the project includes the maintenance and upkeep of the increased biodiversity resources/ The proposed remedial planting within the development, i.e., tree and hedge planting; and sowing of wildflower meadows will help maintain the overall floral and faunal biodiversity of the site. Overall, the works will have a positive residual impact on the biodiversity within and adjacent to the site.

9 Summary of Impact Assessment

9.1 EcIA Table

Table 9-1 presents a summary of the impacts envisaged when mitigation approaches are included. Residual impacts are also described.

All other ecological impacts can be avoided, mitigated or compensated so there is no anticipated significant impact for the remaining species considered in the assessment.

Table 9-1: Summary of negative Impacts; Mitigations; and Significance of Residual Impacts on ecological features

Ecological Features	Impacts	Importance of Feature	Significance of impact without Mitigation	Mitigation	Significance of Residual Impacts
Earth banks	Accidental introduction of pollutants into the habitat, degrading its condition and its ability to support the protected species associated with the habitat. Habitat loss.	High Local	Permanent, negative impacts of slight to moderate significance	Strict adherence to: -The mitigations outlined in Sub-sections 7.1.1, 7.1.2, 7.1.3, 7.1.4 and 7.1.5, ensuring the prevention of surface water pollution of the earth bank. - The mitigations outlined in Sub-section 7.1.3, ensuring the retention of the earth bank and of the vegetation that contributes to the bank's structure.	Neutral residual impact during the operational phase.
Dry meadows and grassy verges	Accidental introduction of pollutants into the habitat, degrading its condition and its ability to support the protected species associated with the habitat.	High Local	Temporary negative impact of slight significance	Strict adherence to: -The mitigations outlined in Sub-sections 7.1.1, 7.1.2, 7.1.3, 7.1.,4 and 7.1.5 ensuring the prevention of surface water and dust pollutants from contaminating the grassy verge on site.	Slight positive residual impact during the operational phase due to the large expansion of this habitat type.
Hedgerows	Accidental introduction of pollutants into the habitat, degrading its condition and its ability to support the protected species associated with the habitat. Degradation via root compaction or limb damage.	High Local	Temporary negative impact of slight significance	Strict adherence to: -The mitigations outlined in Sub-sections 7.1.1, 7.1.2, 7.1.3, 7.1.,4, 7.1.5, 7.1.9 and 7.1.10 ensuring the protection of local habitats which are used by local fauna. -The mitigations outlined in Sub-sections 7.1.1, 7.1.9 and 7.1.10 in relation to the location of the site compound and the prevention of damage to nearby limbs and roots of vegetation.	Slight positive residual impact during the operational phase due to the large expansion of this habitat
Treelines					Slight positive residual impact during the operational phase due to the large expansion of his habitat

Ecological Features	Impacts	Importance of Feature	Significance of impact without Mitigation	Mitigation	Significance of Residual Impacts
Mammals - Badger Pine Marten Hedgehog	Accidental introduction of pollutants into the habitats utilised by local mammal populations, reducing their ability to provide refuge, safe commuting routes and foraging opportunities. Physical, visual and audible disturbance from construction works. Accidental entrapment and/or injuries caused by on-site machinery or supplies.	High Local	Temporary negative impact of slight significance	Strict adherence to: -The mitigations outlined in Sub-sections 7.1.1, 7.1.2, 7.1.3, 7.1.,4, 7.1.5, 7.1.9 and 7.1.10 ensuring the protection of local habitats which are used by local fauna. -The mitigations outlined in Sub-sections 7.1.6, 7.1.7 and 7.1.8 in relation to the prevention of disturbance and/or accidental entrapment of local mammals.	Slight positive, residual impact during the operational phase due to the large expansion of areas for forage and refuge.
Bats	Accidental introduction of pollutants into the habitats utilised by local bats, reducing their ability to provide refuge, safe commuting routes and foraging opportunities. Physical, visual and audible disturbance from construction works.	High Local	Temporary negative impact of slight significance	Strict adherence to: The mitigations outlined in Sub-sections 7.1.1, 7.1.2, 7.1.3, 7.1.,4, 7.1.5, 7.1.9 and 7.1.10 ensuring the protection of local habitats which are used by local bat species. The mitigation listed in Sub-section The mitigations outlined in Sub-sections 7.1.6, 7.1.7 and 7.1.8 in relation to the prevention of disturbance of bats. The mitigation listed in Sub-section 7.1.11 in relation to the replacement of trees and shrubs lost from the park.	Slight positive, residual impact during the operational phase due to the large expansion of areas for forage.

Ecological Features	Impacts	Importance of Feature	Significance of impact without Mitigation	Mitigation	Significance of Residual Impacts
Breeding and Wintering Birds	Accidental introduction of pollutants into the habitats utilised by breeding birds and migrant wintering birds, reducing their ability to provide refuge, safe commuting routes and foraging opportunities. Physical, visual and audible disturbance from construction works. Accidental entrapment and/or injuries caused by on-site machinery or supplies.	High Local	Temporary negative impact of slight significance	Strict adherence to: The mitigations outlined in Sub-sections 7.1.1, 7.1.2, 7.1.3, 7.1.,4, 7.1.5, 7.1.9 and 7.1.10 ensuring the protection of local habitats which are used by local bat species. The mitigation listed in Sub-section The mitigations outlined in Sub-sections 7.1.6, and 7.1.7 in relation to the prevention of disturbance and/or accidental entrapment of local mammals.	Slight positive, residual impact during the operational phase due to the large expansion of areas for forage and refuge
Terrestrial Invertebrates	Accidental introduction of pollutants into the habitats utilised by breeding birds and migrant wintering birds, reducing their ability to provide refuge, safe commuting routes and foraging opportunities. Physical, visual and audible disturbance from construction works.	High Local	Temporary negative impact of slight significance	Strict adherence to: The mitigations outlined in Sub-sections 7.1.1, 7.1.2, 7.1.3, 7.1.,4, 7.1.5, 7.1.9 and 7.1.10 ensuring the protection of local habitats which are used by local bat species. The mitigation listed in Sub-section The mitigations outlined in Sub-sections 7.1.6, 7.1.7 and 7.1.8 in relation to the prevention of disturbance of bats.	Slight positive, residual impact during the operational phase due to the large expansion of areas for forage and refuge

9.2 Cumulative Impacts

As there are no significant residual impacts on ecological features (following mitigation measures) from this development, there is therefore no potential for other plans or projects identified in Section 5 to act in combination with it. Therefore, significant cumulative impacts are not expected to occur on the ecological features within the proposed site.

10 Conclusion

The proposed development project has been shown to potentially impact a number of different habitats with high local importance (dry meadows and grassy verges, hedgerow and treelines) and faunal groups (ground-dwelling mammals; bats; breeding and wintering birds; and terrestrial invertebrates), whose ecological importance is of high local level in the context of this proposed site.

Based upon the information supplied, regarding the site layout, drainage, landscape and lighting plans; and provided that the development is constructed in accordance with the mitigation measures outlined above, there will be no significant impacts alone or in-combination with other projects and plans, as result of the development and associated works on the ecology and local species of the area and on any designated conservation sites.

Given the scale of this development and its suitable landscape plan, the local ecology, including mammals, bats, birds and invertebrate species, will benefit from the maintained ecological function of the site (planting of trees and wildflower meadows and installation of bird boxes) associated with the operational phase of this project.

Appendices

A Site Layout Plan

A1

L-005

L-006

L-007

CHEEVERSTOWN ROAD

COOKSTOWN ROAD

COOKSTOWN ROAD

FORTUNESTOWN WAY

Rosefield Close

GLENSHANE DRIVE

Glenshane Crescent

GLENSHANE CRESCENT

GLENSHANE PARK

GLENSHANE GREEN

GLENSHANE CLOSE

Glenshane Court

Glenshane Place

Resource Centre

Leisure Centre

KILCLARE CRESCENT

DROMCARRA DRIVE

BAWNLEA GREEN

DROMCARRA GREEN

VENUE

N

KEY

- Project extents Approx. 11.80ha
- Contours at 0.50m interval
- Main entrance areas
- Low walls, 1.4m high stone-clad
- Spine route, pedestrian/cycle with streetlights
- Possible future pedestrian/cycle links
- Kissing gate (existing re-used where practicab
- Maintenance access gate, existin (re-furbished as required)
- Pedestrian access gate (lockable)
- Secondary footpaths, resurfaced as required
- New secondary footpaths
- Pedestrian nodes with seating
- Activity stations seating, jogging markers
- Streetlight
- Active recreation area
- Teenspace
- Children's play areas
- Exercise area/calisthenics
- Meadowland Grassland management
- Native bulb planting
- Attenuation basin Wetland
- Formal trees
- Native tree groups
- Refurbished playing pitches as required
- Amenity grassland

GRAPHIC SCALE (metres) 0 10 20 50 100

Issue	Date	By	Chkd	Appd
02	31/03/23	HAR	NDJ	NDJ
Issued for Part 8 Planning				
01	28/03/23	HAR	NDJ	NDJ
Issued for comments				

Client

Comhairle Contae Átha Cliath Theas
South Dublin County Council

Job Title

Jobstown Local Park Up-grade
Tallaght, Dublin 24

Scale 1:1000 at A1

Discipline

Nicholas de Jong Associates
URBAN DESIGN

Drawing Title

LAYOUT and KEY PLAN

Drawing Status

Part 8 Planning

Job No	Drawing No	Issue
2212	L-004	R2

Do not scale

B Relevant Policy and Legislation

The legislation discussed below is intended as a guide only and does not replace formal legal advice.

B.1 Biodiversity Policy Guidance

'Biodiversity: The National Biodiversity Action Plan 2017-2021 (DCHG, 2017) sets out actions through which a range of government, civil and private sectors will undertake to achieve Ireland's 'Vision for Biodiversity' and has been developed in response to The Earth Summit, held in Rio de Janeiro in 1992 (UN Convention on Biological Diversity) and subsequent EU and International Biodiversity strategies and policies.

As part of the Action Plan process Local Authorities (LA) must produce Biodiversity Action Plans (BAP). BAPs highlight local biodiversity issues and set out a series of objectives and action plans for the conservation of priority species and habitats where they occur in each district or county.

B.2 Designated Sites and Nature Conservation

B.2.1 Statutory Designated Nature Conservation Sites

Sites with statutory designations receive varying degrees of legal protection under Irish statute (i.e. Wildlife Act 1976 and Wildlife (Amendment) Act (2000) and European Directives (i.e. the EC Birds Directive (2009/147/EC) and EC Habitats Directive (92/43/EC). The EU directives were transposed into Irish national law and subsequent amendments were revised and consolidated in the European Communities (Birds and Natural Habitats) Regulations 2011 and Irish Statutory Instrument 477/2011

There are a number of statutory designations used for sites of high nature conservation value in Ireland, which are applied depending upon the importance of the site in a local, regional, national or international context. These include:

- National
- Natural Heritage Area (NHA)
- Wildfowl Sanctuary
- Statutory Nature Reserve
- Refuge for Fauna
- European
- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- International
- UNESCO Biosphere Reserve
- Ramsar Convention Site
- National Park (Category II) Sites

B.2.2 Non-Statutory Designations

Non-statutory sites are afforded no statutory legal protection, but are normally recognised by local planning authorities and statutory agencies as being of local nature conservation value

A proposed Natural Heritage Area (pNHA) is an area deemed to be of special interest containing important wildlife habitat and often containing rare or threatened species. They may also be selected on the basis of their geology or geomorphology.

B.2.3 Protected and Notable Species

A number of species are protected under Irish and international legislation. In Ireland, primary protection is provided under the 1976 Wildlife Act and Wildlife (Amendment) Acts (2000 & 2010) and revision 2018. Species of European importance receive additional protection in Ireland under the Birds and Natural habitats Regulations 2011. The Flora (Protection) Order (2015) makes it illegal to cut, uproot or damage a listed species in any way. It is illegal to alter, damage or interfere in any way with their habitats.

C National Biodiversity Data Centre (2023)

C.1 Recent records (within 10 years) of protected species within the 5km of the site

Species Name	Date of last record	Designation
Amphibian		
Common Frog *Rana temporaria*	12/07/2020	EU Habitats Directive >> Annex V Protected Species: Wildlife Acts
Bird		
Barn Owl *Tyto alba*	20/07/2021	Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Barn Swallow *Hirundo rustica*	07/05/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Black-headed Gull *Larus ridibundus*	26/12/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Red List
Common Coot *Fulica atra*	17/04/2020	Protected Species: Wildlife Acts | EU Birds Directive >> Annex II, Annex III Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Kingfisher *Alcedo atthis*	23/04/2020	Protected Species: Wildlife Acts EU Birds Directive >> Annex I Bird Species Birds of Conservation Concern - Amber List
Common Linnet *Carduelis cannabina*	16/01/2021	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Pheasant *Phasianus colchicus*	09/05/2020	Protected Species: Wildlife Acts EU Birds Directive >> Annex II, Annex III
Common Starling *Sturnus vulgaris*	16/05/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Swift *Apus apus*	04/05/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Wood Pigeon *Columba palumbus*	09/05/2020	Protected Species: Wildlife Acts EU Birds Directive >> Annex II, Annex III
Great Cormorant *Phalacrocorax carbo*	01/09/2017	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Hen Harrier *Circus cyaneus*	22/03/2019	Protected Species: Wildlife Acts EU Birds Directive >> Annex I Bird Species Birds of Conservation Concern - Amber List
Herring Gull *Larus argentatus*	26/12/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Red List
House Martin *Delichon urbicum*	07/05/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List

Species Name	Date of last record	Designation
House Sparrow *Passer domesticus*	16/05/2020	Protected Species: Wildlife Acts Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Lesser Black-backed Gull *Larus fuscus*	17/04/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Little Egret *Egretta garzetta*	03/01/2021	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex I Bird Species
Little Grebe *Tachybaptus ruficollis*	24/04/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Mallard *Anas platyrhynchos*	03/05/2020	Protected Species: Wildlife Acts EU Birds Directive >> Annex II, Annex III
Mew Gull *Larus canus*	26/12/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Mute Swan *Cygnus olor*	20/11/2017	Protected Species: Wildlife Birds of Conservation Concern - Amber List
Northern Wheatear *Oenanthe oenanthe*	11/08/2021	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Rock Pigeon *Columba livia*	11/04/2020	Protected Species: Wildlife Acts EU Birds Directive >> Annex II
Sand Martin *Riparia riparia*	03/04/2021	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Sky Lark *Alauda arvensis*	09/05/2020	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Tufted Duck *Aythya fuligula*	17/04/2020	Protected Species: Wildlife Acts EU Birds Directive >> Annex II, Annex III Birds of Conservation Concern - Amber List
Yellowhammer *Emberiza citrinella*	10/06/2021	Protected Species: Wildlife Acts Birds of Conservation Concern - Red List
Reptile		
Common Lizard *Zootoca vivipara*	15/06/2019	Protected Species: Wildlife Acts
Invertebrate		
Freshwater White-clawed Crayfish *Austropotamobius pallipes*	18/08/2013	Protected Species: EU Habitats Directive EU Habitats Directive >> Annex V
Mammals		
Daubenton's Bat *Myotis daubentonii*	27/08/2014	Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
Eurasian Badger *Meles meles*	28/07/2018	Protected Species: Wildlife Acts
Eurasian Pygmy Shrew *Sorex minutus*	12/07/2018	Protected Species: Wildlife Acts

Species Name	Date of last record	Designation
Eurasian Red Squirrel *Sciurus vulgaris*	02/06/2018	Protected Species: Wildlife Acts
European Otter *Lutra lutra*	25/06/2016	EU Habitats Directive >> Annex II, Annex IV Protected Species: Wildlife Acts
Lesser Noctule *Nyctalus leisleri*	24/08/2012	EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
Pine Marten *Martes martes*	14/10/2020	Protected Species: EU Habitats Directive >> Annex V Protected Species: Wildlife Acts
Common Pipistrelle *Pipistrellus pipistrellus sensu lato*	24/08/2012	EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
Red Deer *Cervus elaphus*	09/11/2015	Protected Species: Wildlife Acts

C.2 Recent records (within 10 years) of invasive species within the 5km of the site

Species Name	Date of last record	Designation
Flora		
American Skunk-cabbage *Lysichiton americanus*	05/04/2020	Medium Impact Invasive Species EU Regulation No. 1143/2014 Regulation S.I. 477 (Ireland)
Butterfly-bush *Buddleja davidii*	06/08/2022	Medium Impact Invasive Species
Cherry Laurel *Prunus laurocerasus*	18/04/2022	High Impact Invasive Species
Fringed Water-lily *Nymphoides peltata*	15/06/2016	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Giant Hogweed *Heracleum mantegazzianum*	22/06/2021	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Giant Knotweed *Fallopia sachalinensis*	06/06/2021	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Giant-rhubarb *Gunnera tinctoria*	12/07/2015	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Himalayan Honeysuckle *Leycesteria formosa*	04/08/2022	Medium Impact Invasive Species
Indian Balsam *Impatiens glandulifera*	16/08/2022	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Japanese Knotweed *Fallopia japonica*	16/08/2022	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Japanese Rose *Rosa rugosa*	27/04/2022	Medium Impact Invasive Species
Spanish Bluebell *Hyacinthoides hispanica*	18/04/2022	Regulation S.I. 477 (Ireland)
Sycamore *Acer pseudoplatanus*	18/04/2022	Medium Impact Invasive Species
Three-cornered Garlic *Allium triquetrum*	07/05/2022	Medium Impact Invasive Species Regulation S.I. 477 (Ireland)
Wild Parsnip *Pastinaca sativa*	11/07/2015	Medium Impact Invasive Species

Species Name	Date of last record	Designation
Invertebrate		
Harlequin Ladybird *Harmonia axyridis*	26/11/2022	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Jenkins' Spire Snail *Potamopyrgus antipodarum*	22/06/2016	Medium Impact Invasive Species
Reptile		
Red-eared Terrapin *Trachemys scripta*	07/05/2022	Medium Impact Invasive Species EU Regulation No. 1143/2014
Mammals		
American Mink *Mustela vison*	30/07/2018	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Brown Rat *Rattus norvegicus*	09/10/2015	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Eastern Grey Squirrel *Sciurus carolinensis*	07/09/2022	High Impact Invasive Species EU Regulation No. 1143/2014 Regulation S.I. 477 (Ireland)
European Rabbit *Oryctolagus cuniculus*	25/10/2018	Medium Impact Invasive Species
Greater White-toothed Shrew *Crocidura russula*	26/03/2020	Medium Impact Invasive Species

D Habitat Map

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Offices at
Dublin
Limerick

Registered Office
24 Grove Island
Corbally
Limerick
Ireland

t: +353 (0) 61 345463
e:info@jbaconsulting.ie

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