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ECOLOGICAL IMPACT ASSESSMENT OF A PROPOSED RESIDENTIAL DEVELOPMENT (PHASE 3) AT ST. EDMUND'S, PALMERSTOWN, DUBLIN 20

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22 Wicklow Street
Dublin 2

November 2021

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1. INTRODUCTION

1.1 THE AIM OF THE REPORT

This Ecological Impact Assessment (EcoIA) addresses the potential impacts of a proposed development that may occur in the future on the biodiversity of a site on St Loman's Road, Palmerstown, Dublin 20.

This EcIA has been undertaken in accordance with the guidelines issued by the Environmental Protection Agency (EPA) and the Chartered Institute of Ecology and Environmental Management (CIEEM).

It follows a standard approach based upon the description of the existing baseline conditions within the application site. An evaluation of the likely habitats and species currently present within the application site is also given, along with the identification of the potential ecological impacts arising from the construction and operation of the proposed development. An assessment of the likely significance of the identified impacts on valued ecological receptors (VERs), both within and close to the application site is also made. Where a significant negative impact has been identified, then suitable remedial mitigation measures are provided in order to prevent, reduce or offset the impact.

1.2 LEGISLATIVE AND POLICY CONTEXT

Legislative Context

The Irish Wildlife Act 1976 (and its amendment of 2000) provides protection to most wild birds and animals. Interference with such species can only occur under licence. Under the act it is an offence to "wilfully interfere with or destroy the breeding place or resting place of any protected wild animal". The basic designation for wildlife is the Natural Heritage Area (NHA). This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. Under the Wildlife Amendment Act (2000) NHAs are legally protected from damage. NHAs are not part of the Natura 2000 network and so the Appropriate Assessment process does not apply to them.

The Flora Protection Order 1999 provides statutory protection in Ireland to a number of rare plant species from being wilfully cut, picked, uprooted or damaged. It is also illegal under this order to alter, damage or interfere with their habitats.

The Birds Directive (Council Directive2009/147/EC) recognises that certain species of birds should be subject to special conservation measures concerning their habitats. The Directive

requires that Member States take measures to classify the most suitable areas as Special Protection Areas (SPAs) for the conversation of bird species listed in Annex 1 of the Directive. SPAs are selected for bird species (listed in Annex I of the Birds Directive), that are regularly occurring populations of migratory bird species and the SPA areas are of international importance for these migratory birds.

The EU Habitats Directive (92/43/EEC) requires that Member States designate and ensure that particular protection is given to sites (Special Areas of Conservation) which are made up of or support particular habitats and species listed in annexes to this Directive.

Articles 6(3) and 6(4) of this Directive also call for the undertaking of an Appropriate Assessment for plans and projects not directly connected with or necessary to the management of, but which are likely to have a significant effect on any European designated sites (i.e. SACs and SPAs).

The Water Framework Directive (WFD) (2000/60/EC), which came into force in December 2000, establishes a framework for community action in the field of water policy. The overall sim of the WFD is the eventual achievement of good status in all waterbodies. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003). The WFD rationalises and updates existing legislation and provides for water management on the basis of River Basin Districts (RBDs). RBDs are essentially administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD. Ireland is now within the 2nd cycle of the WFD (2015 – 2021), where previous RBDs were merged into one national RBD. This cycle will also facilitate a greater input of communities at the local catchment level.

Planning Policies

National

Nationally, the Government's commitment to sustainable development is set out in a number of documents including the National Planning Framework and the National Development Plan 2018 – 2027.

Regional

The Regional Spatial and Economic Strategy for the Eastern and Midlands Regional Assembly (2018) provides a planning framework covering Dublin and its surrounding counties for the period 2010-2022. These guidelines contain a number of policies relevant to ecology and nature conservation. These guidelines are summarised in Table 1.

Reference	Objective / Policy
RPO 7.16	Support the implementation of the Habitats Directives in achieving an improvement in the conservation status of protected species and habitats in the Region and to ensure alignment between the core objectives of the EU Birds and Habitats Directives and local authority development plans.
RPO 7.17	Facilitate cross boundary co-ordination between local authorities and the relevant agencies in the Region to provide clear governance arrangements and coordination mechanisms to support the development of ecological networks and enhanced connectivity between protected sites whilst also addressing the need for management of alien invasive species and the conservation of native species.
RPO 7.21	Local authorities shall promote an Ecosystem Services Approach49 in the preparation of statutory land use plans.
RPO 7.22	Local authority development plan and local area plans, shall identify, protect, enhance, provide and manage Green Infrastructure in an integrated and coherent manner and should also have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species.
RPO 7.23	Support the further development of Green Infrastructure policies and coordinate the mapping of strategic Green Infrastructure in the Region.

Table 1 – Regional Policies Relevant to Ecology and Nature Conservation

Local

Planning policy at the local level is provided by the South Dublin County Council Development Plan 2016 – 2022. This plan contains a number of objectives and policies relevant to ecology, biodiversity and nature conservation. Some of these relevant measures are outlined in Table 2.

Reference	Objective / Policy
G2 Objective 1	To reduce fragmentation of the Green Infrastructure network and strengthen ecological links between urban areas, Natura 2000 sites, proposed Natural Heritage Areas, parks and open spaces and the wider regional Green Infrastructure network.
G2 Objective 2	To protect and enhance the biodiversity value and ecological function of the Green Infrastructure network.
G6 Objective 1	To protect and enhance existing ecological features including tree stands, woodlands, hedgerows and watercourses in all new developments as an

	essential part of the design process.
G6 Objective 2	To require new developments to provide links into the wider Green Infrastructure network, in particular where similar features exist on adjoining sites.
G6 Objective 3	To require multifunctional open space provision within all new developments that includes provision for ecology and sustainable water management.
HCL12 Objective 1	To prevent development that would adversely affect the integrity of any Natura 2000 site located within and immediately adjacent to the County and promote favourable conservation status of habitats and protected species including those listed under the Birds Directive, the Wildlife Acts and the Habitats Directive.
HCL13 Objective 1	To ensure that any proposal for development within or adjacent to a proposed Natural Heritage Area (pNHA) is designed and sited to minimise its impact on the biodiversity, ecological, geological and landscape value of the pNHA particularly plant and animal species listed under the Wildlife Acts and the Habitats and Birds Directive including their habitats.

Table 2 – Local Policies Relevant to Ecology and Nature Conservation

Heritage and Biodiversity Plans

Ireland's National Biodiversity Plan identifies actions that need to be taken in order to understand and protect biodiversity in Ireland. It states that biodiversity and ecosystems in Ireland should be conserved and restored, to deliver benefits that are essential to all sectors of society and that Ireland should contribute to the efforts to halt the loss of biodiversity and the degradation of ecosystems in the EU and globally.

The latest South Dublin County Council Heritage Plan 2010-2015 identifies a number of objectives and policies in order to protect the natural heritage and biodiversity of the South County Dublin area.

2. METHODOLOGY

2.1 PERSONNEL

The site survey and report was carried out by Noreen McLoughlin. Noreen is the owner and main ecologist at Whitehill Environmental. Noreen holds a BA (Hons) in Natural Science (Mod) Zoology and an MSc in freshwater ecology (TCD, Dublin). She has been a full member of the CIEEM (Chartered Institute of Ecology and Environmental Management) for over 13 years. Noreen has over 15 years experience as a professional ecologist in Ireland.

2.2 STUDY AREA

The study area encompasses all the land within the area defined in the plan submitted for planning consent, i.e., the proposed application site. In addition, important ecological habitats and receptors within the zone of influence of the proposed development were also studied.

2.3 DESK BASED STUDIES

The desk study involved the examination of aerial photographs, current and historical maps and plans and drawings of the site. In addition, information was collated on designated nature sites within a 10-15 km radius of the proposed site and on protected and rare species within the 1km square of the site.

The following websites were used to access information and data:

- National Parks and Wildlife Service – www.npws.ie
- National Biodiversity Data Centre – www.biodiversitycentre.ie
- Ordinance Survey Ireland – www.osi.ie
- Google Maps & Street View – maps.google.ie
- Bing Maps – www.bingmaps.com
- My Plan – www.myplan.ie
- Environmental Protection Ireland – www.epa.ie
- South Dublin County Council – www.sdcc.ie

2.4 FIELD BASED STUDIES

Prior to any construction works on site, initial visits to the site of the proposed development at St Loman's Road was conducted on March 8th 2019, when relevant field notes, species lists and photographs were taken. A follow up site visit was undertaken in September 2019. The site was surveyed in accordance with the Heritage Council's *Habitat Survey Guidelines* (Smith et al., 2010) and the Institute of Environmental Assessment's *Guidelines for Baselines Ecological Assessment* (IEA, 1995). Habitats within the application site were classified in accordance to Level 3 of *A Guide to Habitats in Ireland* (Fossit, 2000). These habitats are denoted in the text along with their habitat code, e.g., the habitat code for improved agricultural grassland is GA1. Any bird and mammal and bird activity was also noted

The site was re-visited and re-surveyed on September 14th 2021. At this time, construction works on the initial parent application were ongoing.

2.5 SEASONAL CONSTRAINTS

Having regard to the habitats and existing conditions and activities on site, no constraints with the timing of the field were identified.

2.6 ASSESSMENT METHODOLOGY

Evaluation of Ecological Features

The methodologies used to determine the value of ecological resources, to characterise the impacts of the proposed scheme, and to assess the significance of impacts and any residual effects are described below. This approach is in accordance with the following guidelines and methodologies:

- *Guidelines for Ecological Impact Assessment in the UK and Ireland* by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018)
- *Guidelines On The Information To Be Contained In Environmental Impact* (EPA, 2002)
- *Draft Guidelines on Guidelines on the information to be contained in Environmental Impact Assessment Reports* (EPA 2017)
- *Guidelines for Assessment of Ecological Impacts of National Road Schemes.* (NRA, 2009).

CIEEM suggest that to ensure a consistency of approach, ecological features are valued in accordance with their geographical frame of reference, as defined below:

- International
- National (Ireland)
- Regional (East)
- County (Dublin)
- District (Palmerstown)
- Local/Townland (St Edmund's / St Loman's Road)

The above categories are then applied to the ecological features identified. Ecological features can be defined as:

- Designated sites (i.e., SACs, SPAs, NHAs, pNHAs, National Nature Reserves) or non-statutory locally designated sites and features.
- Non-designated sites and habitats and features of recognised biodiversity value, such as rivers and streams. The features being evaluated can be considered in the context of the site and locality and thus a more accurate assessment of the impacts in the locality can be made.

Assessment of Impacts

The assessment of potential ecological impacts has been carried out using guidelines published by the EPA and the CIEEM. They can be summarised as:

- The identification of the range of potential impacts which can reasonably be expected to occur should the proposed developments receive planning consent;
- The consideration of the systems and processes in place to avoid, reduce and mitigate the possible effects of these impacts;
- The identification of opportunities for ecological enhancement within the site.

Impacts are defined as being positive, negative or neutral. A significant impact is defined as an impact upon the integrity of a defined ecosystem and/or the conservation status of a habitat or species within a given area. Where a potential negative impact has been identified, mitigation

measures have been formulated using best practices techniques and guidance to prevent, reduce or offset the impact.

3. DEVELOPMENT DESCRIPTION

Moykerr Limited have indicated their intention to shortly apply to An Bord Pleanála for planning permission for a residential development on a site on St Loman's Road in Palmerstown (St Edmund's Phase 3). The development is an amendment to the development currently being undertaken on site, previously granted SHD proposal ABP 305857-19. It consists of the construction 4 no apartment blocks ranging in height from 2-9 storeys comprising 313 no. residential units, a creche and amenity space. This will provide an increase of 61 no. additional apartments. All the residential units will have associated private open space/ balconies/ terraces facing north/ south/ east/ west. The development will include 214 no. car parking spaces, 5 motorcycle parking spaces and 378 no. bike parking spaces. The site is accessed through the existing vehicular access to the west, off the unnamed road to the west. There will be a number of pedestrian entrances along St. Loman's Road, the Fonthill Road (R113) and the unnamed road to the west. The upgrading and re-landscaping of 4,400sq.m of land to the east of the site in the ownership of South Dublin County Council. In addition to all of the new facilities all other site services and works to enable the development of the site will also be provided including site, bin stores, ESB substations, associated roadworks and services connections, a large quantity of public and communal open space, boundary treatment works and landscaping. A full development description is included in the statutory notices.

An extract from the planning drawings can be seen in Figure 1.

Foul Water

Details of the management of foul water have been outlined in the engineering report prepared by Kavanagh Burke Consulting Engineers. A new foul sewer has been designed to collect discharge from the proposed development and then discharge it to the existing foul sewer network within the St Edmunds Estate. A connection to the existing St Edmunds Estate foul sewage drainage network is proposed west of the subject site boundary, where the existing pipe network currently begins.

The foul network for the proposed development has been modelled in Flow design software based on the fixture unit method that considers the probability of simultaneous discharge from different fixtures and translates it to the design flow as set out in EN752 "Drain and Sewer Systems Outside Buildings - Sewer System Management". Calculation of the discharge units per Blocks is enclosed within the drainage report prepared by Kavanagh Burke Consulting Engineers.

Surface Water

Details of the management of surface water have been outlined in the engineering report prepared by Kavanagh Burke Consulting Engineers. The surface water runoff generated from the proposed development will be routed through a series of Sustainable Urban Drainage System (SuDS) elements which will facilitate the detention and infiltration at source. These devices include green roofs, bio-retention, permeable paving, swales, and carriageway runoff infiltration via tree pits, etc. Only once the rainfall has passed through these devices will the excess runoff enter the drainage network and then reach the underground (StormTech or equivalent type) attenuation system. The flow control device will be installed on the outfall to limit the runoff from this proposed development (to greenfield runoff rate) into the existing surface water network / attenuation tank serving the existing St Edmunds Estate.

The proposed system is designed to attenuate a 1 in 30-year storm event of any duration (plus 20% CCF); therefore, no flooding will occur on site for any duration events up to a 30-year return period as per the GDSDS requirements. In addition to the attenuation volume, temporary flood storage is provided (as part of the attenuation system) for a 100-year return events of up to 6 hours duration (plus 10% CCF) within the sunken play space directly above the attenuation tank. This approach also provides for 1 in 100-year run-off detention and infiltration in this area prior to same draining back into the surface water drainage system. All flows for the storm water network design and the attenuation volume were calculated with the 10% climate change factor applied for all rainfall intensities as per Chapter 6.3.2.4 of GDSDS table 6.2 "Climate Change Factors".

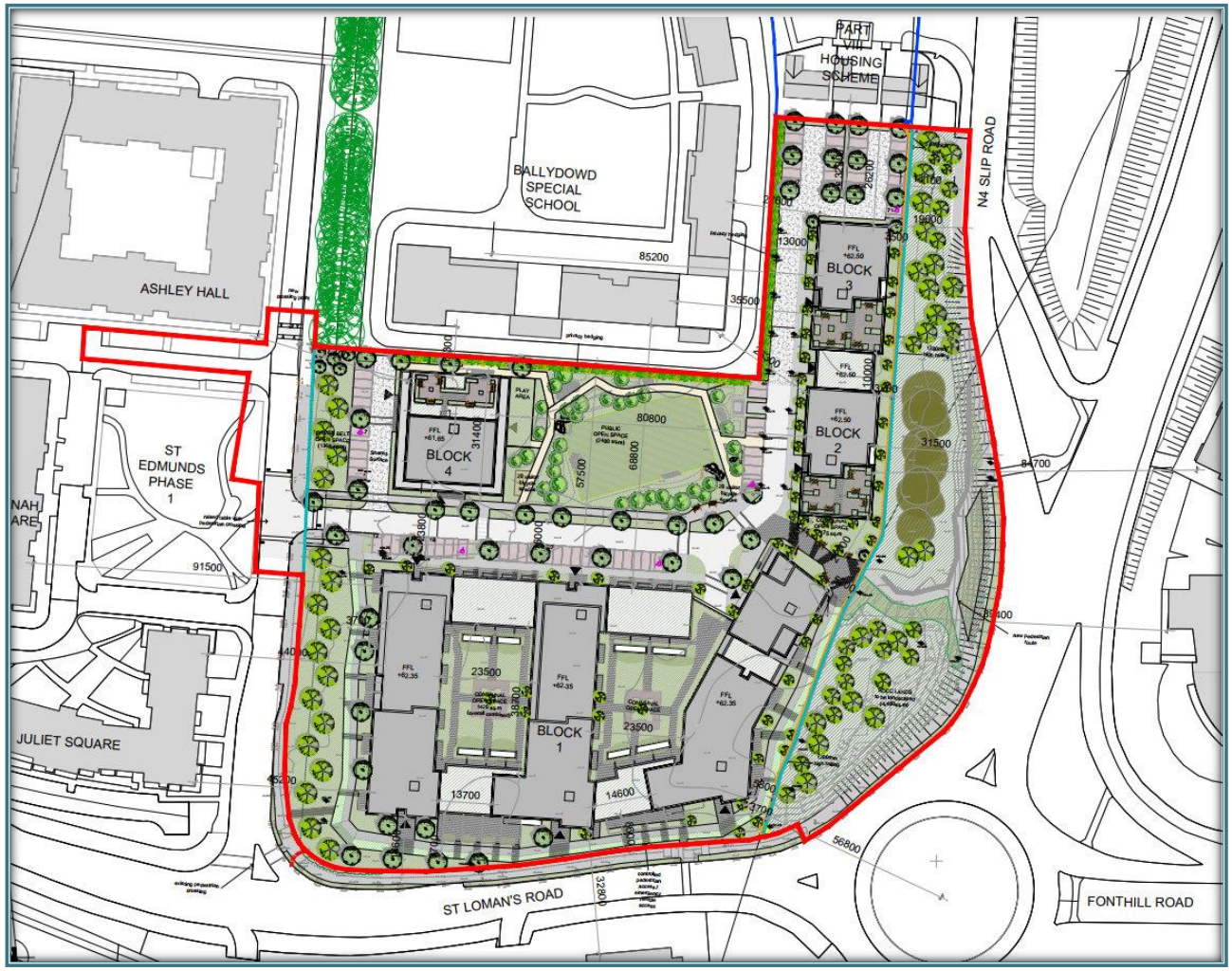


Figure 1 – Extract from Planning Drawing (as prepared by MCORM Architects)

4. RECEIVING ENVIRONMENT

This section provides an overview of the existing ecological conditions within the site and the surrounding environment.

4.1 SITE LOCATION & GENERAL DESCRIPTION

The site in question is approximately 2.5 hectares in area. It is located just off St Loman's Road, on land adjacent to St. Edmund's Park. It is close to the Liffey Valley retail area and the Fonthill Business Park. The site is approximately 9.6km west of Dublin City Centre. It is surrounded by the urban fabric of Lucan, Ballyowen and Fonthill and their associated residential, commercial and industrial areas. The site is zoned as an Existing Residential Area by South Dublin County Council. Site location maps can be seen in Figures 2 and 3.

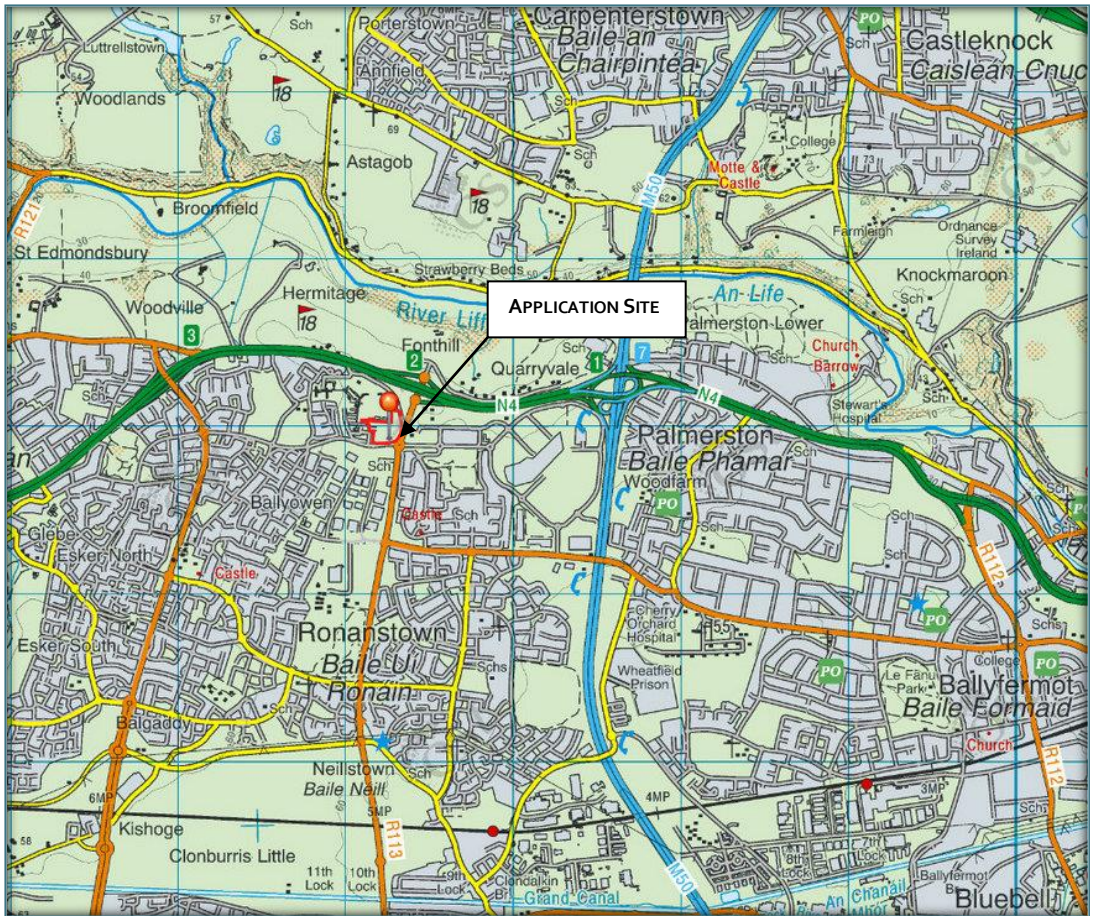


Figure 2 – Site Location Map

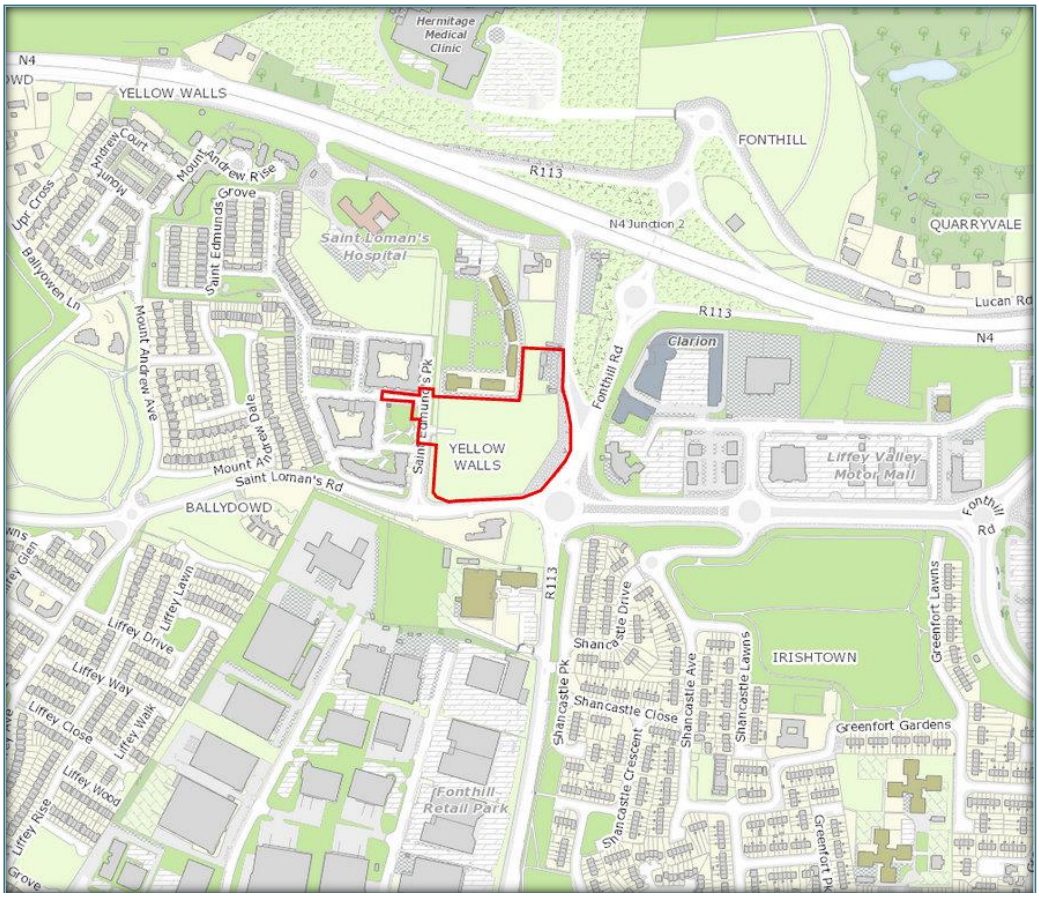


Figure 3 – Site Location Map. Application Site is Outlined in Red

Using up to date aerial photographs, an overview of the habitats surrounding the application site was assessed and noted as consisting of mostly buildings and artificial surfaces, amenity grasslands and gardens and scattered trees and parkland. To the north of the site, the River Liffey and its riparian features (woodlands, grassland) occurs. An overview of these habitats can be seen in the aerial photograph in Figure 4.

Figure 4 – Aerial Photograph Showing Habitats Surrounding the Application Site. The River Liffey and its Riparian Habitats are to the North of the Application Site.

4.2 DESIGNATED SITES

Natura 2000 Sites

The proposed application site is not within or immediately adjacent to any site that has been designated as a Special Area of Conservation (SAC) or a Special Protection Area (SPA) under the EU Habitats or EU Birds Directive.

There are eight Natura 2000 sites within 15km of this proposed development. These sites are summarised in Table 3. The location of the application site in relation to these designated areas is shown in Figure 5 and a full synopsis of these sites can be read online on the website of the National Parks and Wildlife Service (www.npws.ie).

Site Name & Code	Distance from Proposed Development	Qualifying Interests
Rye Water Valley/Carton SAC 001398	5.7km west	• Petrifying springs with tufa formation (Cratoneurion) • *Vertigo angustior* (Narrow-mouthed Whorl Snail) • *Vertigo moulinsiana* (Desmoulin's Whorl Snail)
South Dublin Bay / River Tolka Estuary SPA 004024	11.7km east	• Light-bellied Brent Goose (*Branta bernicla hrota)* • Oystercatcher (*Haematopus ostralegus*) • Ringed Plover (*Charadrius hiaticula*) • Grey Plover (*Pluvialis squatarola)* • Knot *(Calidris canutus)* • Sanderling *(Calidris alba)* • Dunlin *(Calidris alpina)* • Bar-tailed Godwit *(Limosa lapponica)* • Redshank *(Tringa totanus)* • Black-headed Gull *(Chroicocephalus ridibundus)* • Roseate Tern *(Sterna dougallii)* • Common Tern *(Sterna hirundo)* • Arctic Tern *(Sterna paradisaea)* • Wetland and Waterbirds
South Dublin Bay SAC 000201	12.3km east	• Mudflats and sandflats not covered by seawater at low tide • Annual vegetation of drift lines • Salicornia and other annuals colonising mud and sand • Embryonic shifting dunes
North Bull Island SPA 004006	14.8km east	• Light-bellied Brent Goose (*Branta bernicla hrota)* • Shelduck (*Tadorna tadorna*) • Teal (*Anas crecca*) • Pintail (*Anas acuta*) • Shoveler (*Anas clypeata*) • Oystercatcher (*Haematopus ostralegus)* • Golden Plover (*Pluvialis apricaria*)

		• Grey Plover (*Pluvialis squatarola*) • Knot (*Calidris canutus*) • Sanderling (*Calidris alba*) • Dunlin (*Calidris alpina*) • Black-tailed Godwit (*Limosa limosa)* • Bar-tailed Godwit (*Limosa lapponica)* • Curlew (*Numenius arquata*) • Redshank (*Tringa totanus*) • Turnstone (*Arenaria interpres*) • Black-headed Gull (*Chroicocephalus ridibundus*) • Wetland and Waterbirds
North Dublin Bay SAC 000206	14.8km east	• Mudflats and sandflats not covered by seawater at low tide • Annual vegetation of drift lines • Salicornia and other annuals colonising mud and sand • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) • Mediterranean salt meadows (*Juncetalia maritimi*) • Embryonic shifting dunes • Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) • Fixed coastal dunes with herbaceous vegetation (grey dunes) • Humid dune slacks • *Petalophyllum ralfsii* (Petalwort)
Glenasmole Valley SAC 001209	10.9km south	• Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) • Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) • Petrifying springs with tufa formation (Cratoneurion)
Wicklow Mountains SPA 004040	14.6km south	• Merlin (*Falco columbarius*) • Peregrine (*Falco peregrinus*)
Wicklow Mountains SAC 002122	13.1km south	• Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) • Natural dystrophic lakes and ponds • Northern Atlantic wet heaths with *Erica tetralix* • European dry heaths • Alpine and Boreal heaths • Calaminarian grasslands of the Violetalia calaminariae • Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) • Blanket bogs (* if active bog) • Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani

		• Calcareous rocky slopes with chasmophytic vegetation • Siliceous rocky slopes with chasmophytic vegetation • Old sessile oak woods with Ilex and Blechnum in the British Isles • *Lutra lutra* (Otter)

Table 3 – Natura 2000 Sites of Relevance to the Proposed Development

The generic conservation objectives of the SACs are:

To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.

The generic conservation objectives of the SPAs are:

To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

The favourable conservation status of a habitat is achieved when:

- Its natural range and area it covers within that range is stable or increasing and the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future;
- The conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- The population dynamics data on the species concerned indicate that it is maintaining itself on a long -term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future;
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

An Appropriate Assessment Screening Report as required under Article 6(3) of the EU Habitats Directive has been prepared in relation to this proposed application on St Loman's Road. This screening report concluded that the proposed development will have no impacts upon any of the Natura 2000 sites identified above.

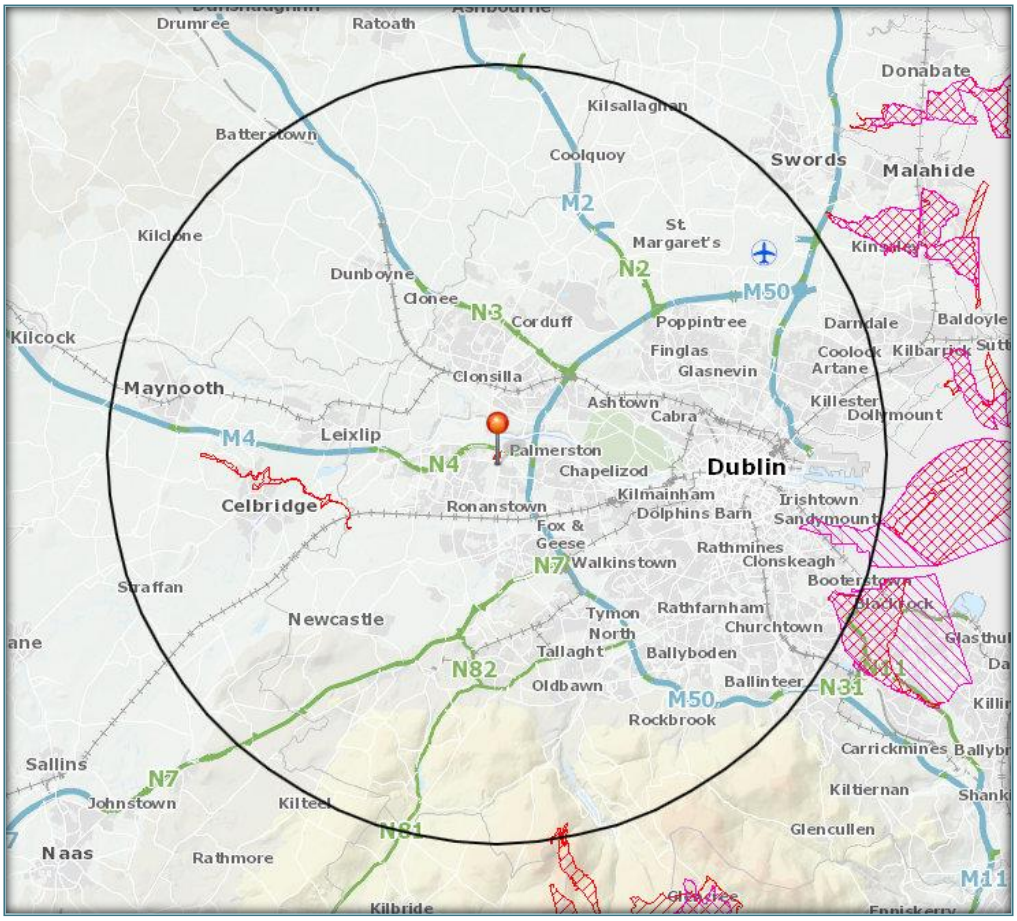


Figure 5 – Designated Sites within 15km of the Application Site (Pinned). SACs – Red Hatching, SPAs – Pink Hatching.

Nationally Important Sites

The application site is not within or immediately adjacent to any nationally designated site, such as a Natural Heritage Area or a proposed Natural Heritage Area. It is within 15km of ten sites that have been designated as proposed Natural Heritage Areas. These are summarised in Table 4 and a map showing their locations relative to the application site is shown in Figure 6.

Site Name	Distance from Proposed Development
Grand Canal pNHA 002104	2.7km south
Liffey Valley pNHA 000128	493m north-east
Dodder Valley pNHA 000991	8.6km south-east
Royal Canal pNHA 002103	2.5km north
North Dublin Bay pNHA 000206	11.8km east
Lugmore Glan pNHA 001212	9.2km south
South Dublin Bay pNHA 000210	12.8km east
Glenasmole Valley pNHA 001209	10.7km south
Slade Of Saggart And Crooksling Glen pNHA 000211	10.3km south
Santry Demesne pNHA 000178	11.2km north-east

Table 4 – Nationally Important Sites within 15km of the Proposed Development

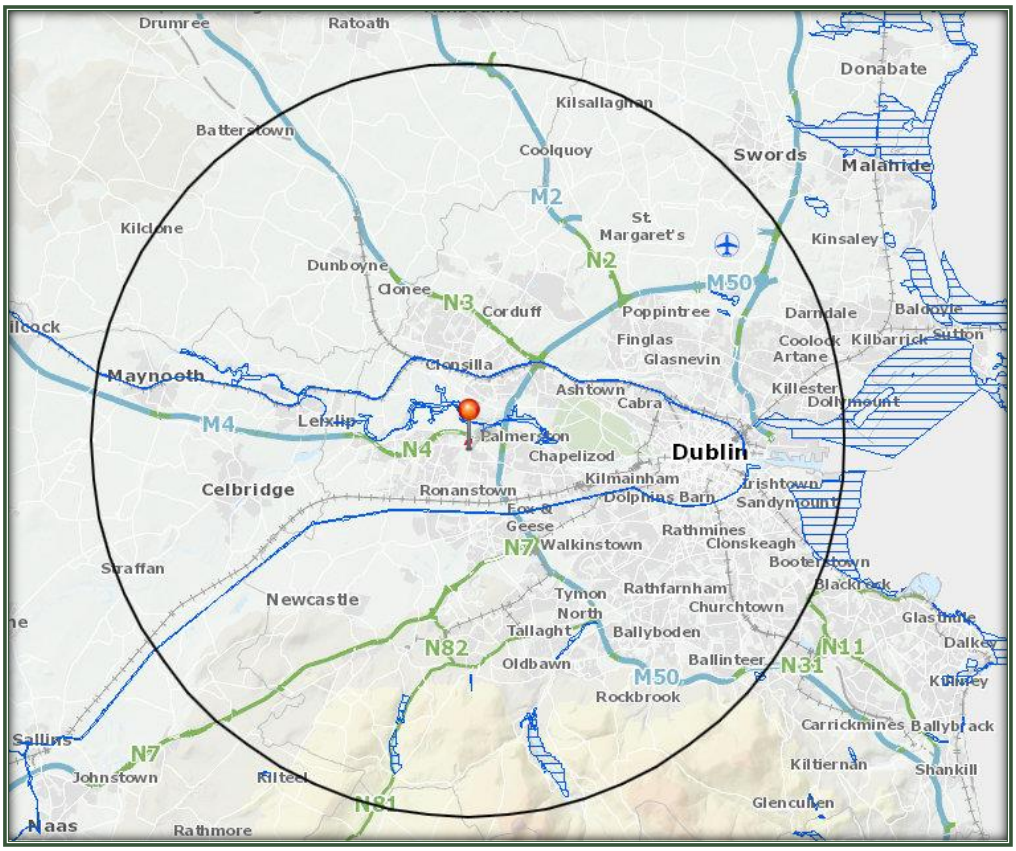


Figure 6 – The Proposed Application Site at St Loman's Road in Relation to proposed Natural Heritage Areas within 15km (Blue Cross Hatching)

4.3 FLORA

Habitats within the Study Area

No part of the site lies within any area that is designated for nature conservation purposes. All development works within the application site will take place on areas of low biodiversity value. In March 2019, the habitats within the site consisted of spoil and bare ground, with mud and muck exposed throughout the site. Vegetative cover in the majority of the site was nil. Following growth over the spring and summer of 2019, the habitats developed into those consistent with recolonising bare ground, where opportunistic and ruderal species were allowed to grow.

In the two years since the initial visits to the site, construction work has now commenced on the site for the previously permitted development. The entire site has been cleared and construction has started on many of the houses and associated infrastructure. The site is now dominated by buildings and artificial surfaces/spoil and bare ground, with some pockets of vegetation remaining around the perimeters.

The habitats within the site currently are described in greater detail below whilst a habitat map is illustrated in Figure 7. A species list is provided in Appendix I and current photos of the site can be seen in Appendix II.

Buildings and Artificial Surfaces BL3 / Spoil and Bare Ground ED2

Construction works have commenced throughout the site. All previous habitats that were on the site were of low ecological value and these have been cleared for facilitate the construction works. The dominant habitats within the application currently consist of buildings and artificial surfaces and spoil and bare ground.

Evaluation: These habitats are of no ecological value.

Dry Meadows and Grassy Verges GS2

This habitat has developed in a small area along the northern perimeter of the site, where construction works have yet to commence. Grasses including cocksfoot *Dactylis glomerata,* meadowgrasses *Poa* sp. and rye grasses *Lolium* sp are common here. Broadleaved herbs included coltsfoot *Tussilago farfara,* broadleaved dock *Rumex obtusifolius,* ragwort *Senecio jacobaea,* dandelion *Taraxacum officinale,* willowherbs *Ebilobium sp,* red clover *Trifolium pratense* and spear thistle *Cirsium vulgare.* Brambles *Rubus fructicosus* are also very common.

Evaluation: This habitat is of low ecological value, although the flowering plants within it are of some value to pollinating insects. This habitat is very common locally.

Site Boundaries

The boundaries now largely consist of fences and boarding, however a hedgerow of Griselinia remains along part of the northern perimeter, whilst there is also a row of beech *Fagus sylvatica* trees along part of the western perimeter. There is also a treeline remaining along the eastern site boundary and species contained within it include poplar *Populus* sp, maple *Acer*, ash *Fraxinus excelsior* and silver birch *Betula pendula*.

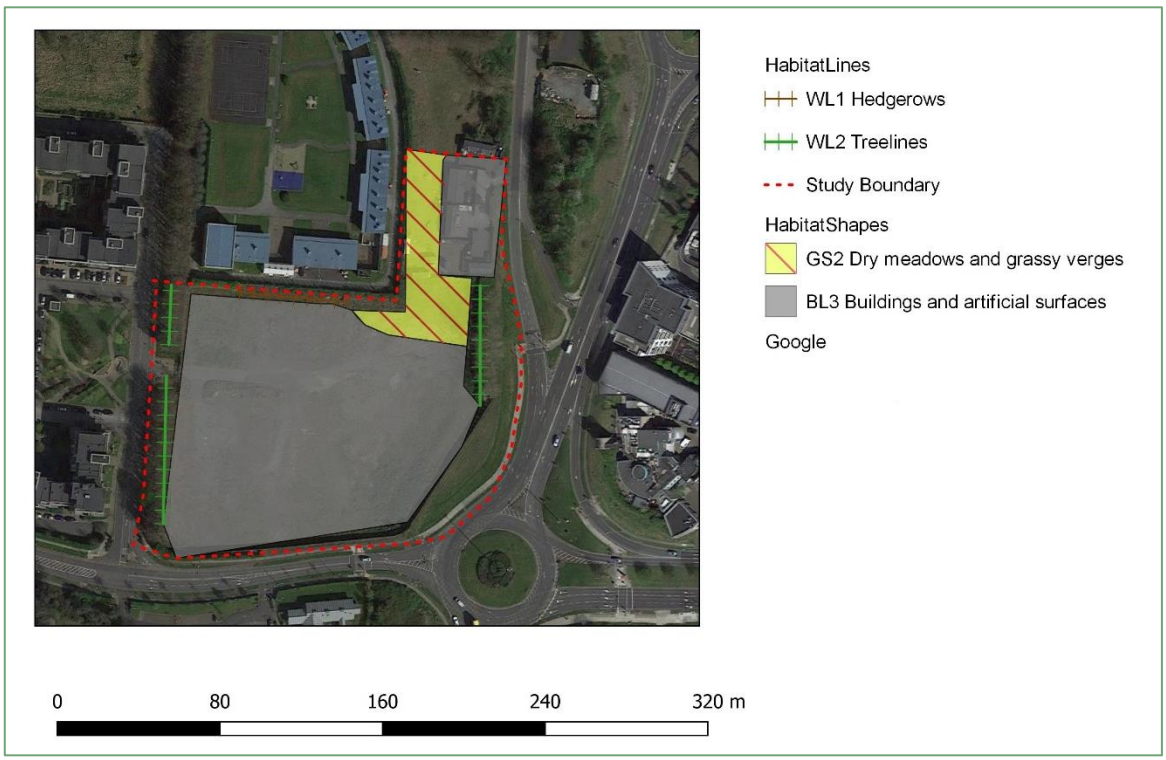


Figure 7 – Map Depicting the Main Habitats on Study Area

Rare and Protected Plant Species

An examination of the website of the National Parks and Wildlife Service, the National Biodiversity Data Centre and the Online Atlas of Vascular Plants for Ireland revealed that there are no modern records for any plant species protected under the Flora Protection Order from within the 1km square (O0635 and O0634) of the proposed application sites. No protected species were found within the application site.

Invasive Species

No non-native invasive species were recorded from within the study area. Particular attention was paid to the potential presence of Japanese knotweed *Fallopia japonica*, which is very common throughout Co. Dublin.

4.4 FAUNA

Protected Mammals

Records from the National Biodiversity Data Centre reveal the presence of the following protected mammals from within the 10km square (O13) of this proposed application site:

- Badger *Meles meles**
- European Hedgehog *Erinaceus europaeus*
- Otter *Lutra lutra*
- Irish Hare *Lepus timidus subsp. Hibernicus*
- Irish stoat *Mustela 25rmine subsp. 25uratus25n*
- Pine martin *Martes martes**
- Red squirrel *Sciurus vulgaris*
- Red deer *Cervus elaphus*
- Daubenton's bat *Myotis 25uratus25niid**
- Nathusius's Pipistrelle *Pipistrellus nathusii*
- Natterer's bat *Myotis nattereri*
- Whiskered Bat *Myotis mystacinus*
- Pygmy shrew *Sorex minutes*
- Pipistrelle *Pipistrellus pipistrellus sensu lato**
- Lesser Noctule *Nyctalus leisleri**
- Soprano *Pipistrelle Pipistrellus pygmaeus**
- Brown long-eared bat *Plecotus 25uratus*

** Relates to presence with the 1km square of this development, i.e., the northern section of this site is within O0635. These records pertain to those obtained from the River Liffey and green spaces to the north and south of the river. None of these records pertain to the application site.*

All these species are protected under the Irish Wildlife Acts. In addition, the otter *Lutra lutra* is protected under Annex II of the European Habitats Directive. There are no suitable habitats for the otter within or adjacent to the application site. There are currently no habitats suitable within the site for any protected mammal species.

Bats

Previous bat surveys were carried out for the site in September 2019 by Brian Keeley of Wildlife Surveys Ireland. Three bat species were recorded feeding and commuting within and through the site at this time. These species included:

- Common pipistrelle *Pipistrellus pipistrellus*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Leisler's bat *Nyctalus leisleri*

This survey determined that overall bat activity was very low within the site and was principally restricted to the southern and southwestern areas of the site, i.e., near the trees. There were no bat roosts recorded within the site and there were no clear roosting opportunities for bats within the trees on the site.

A follow up investigation of the trees on site was conducted in December 2021 by Brian Keeley when the trees within the site were examined for any evidence of roosting bats or bat roost potential. No bats were noted within any of the trees based on a basic evaluation of the trees (this did not involve climbing or a hoist). There are no signs of use from staining, droppings or actual bats. The trees are close to street lighting and traffic. The site was not an area of good foraging and the area is not highly prized bat habitat overall. Closer to the River Liffey, there is high quality habitat but the surrounding Liffey Vally shopping and N4 make this area low priority overall for bats. There are trees with minor suitable cavities but given the level of disturbance, they are very unlikely roost sites.

Birds

There is a limited bird flora remaining on site. Human activity and construction noise on site is high and ongoing and combined with the traffic noise generated from the nearby N4, this site is considered to be of no value for birds.

Amphibians, Reptiles and Invertebrates

There are no suitable ponds or drains within the site to provide habitats for the common frog *Rana temporaria*, the smooth newt *Lissotriton vulgaris* or the viviparous lizard *Lacerta vivipara*.

4.5 AQUATIC ENVIRONMENT

Water Features and Quality

The application site lies within the Liffey and Dublin Bay Hydrometric Area, Catchment and Sub-Catchment and Sub-Basin. There are no drains or streams within or adjacent to the application site. The closest mapped and relevant (same sub-basin) water feature to the site is the Quarryvale Stream and this is 490m north-east of the application site. This stream is a tributary of the Liffey River, which is 720m north of the application site.

The EPA have not classified the ecological status of the Quarryvale Stream or the River Liffey at points close to the application site. However, both are considered to be At Risk of not achieving good ecological status within the required time frame. Under the requirements of the Water Framework Directive, this is unsatisfactory and all waterbodies must achieve good status by 2021.

4.6 ECOLOGICAL EVALUATION

Summary of the Value of the Application Site

The site at St Loman's Road is within 15km of eight sites designated under the Natura 2000 network. A screening report was completed for this proposed development as required under Article 6 (3) of the Habitats Directive. This report concluded that the proposed development would not have any impacts upon any site designated under the Natura 2000 network.

The site is also within 15km of ten sites designated as Natural Heritage Areas (NHAs and pNHAs). There are no potential impacts upon these sites arising from the proposed development.

Within the application site itself, biodiversity is very low and the site is now dominated by the ongoing construction works. No habitats of biodiversity value remain.

The NRA guidelines on the Assessment of Ecological Impacts on National Road schemes (NRA, 2009) provides a rationale for the evaluation of ecological receptors within a site. Table 5 lists the habitats that have been described within the site and their corresponding associated ecological value, based on the NRA guidelines. It should be noted that this is the lowest rating provided in this evaluation, however habitats within this site would have no ecological value on any level.

Habitat	Rating	Criteria
Buildings and Artificial Surfaces / Spoil and Bare Ground / Recolonising Bare Ground	No Value	
Fragmented Hedgerow/treeline Dry Meadows and Grassy Verges	Local Importance (Lower Value)	Limited biodiversity value although may provide some small habitat opportunities for invertebrates and birds

Table 5 – Ecological Features and their Evaluation

5. IMPACT ASSESSMENT

5.1 INTRODUCTION

The information gathered as part of the desk study and field survey for this proposed application has been used to complete an Ecological Impact Assessment (EcIA). This EcIA has been undertaken following the latest guidelines set out by CIEEM (2018) and the EPA.

The identification of potential impacts and the assessment of their significance typically requires the identification of the type and magnitude of the impacts. For example, will the impacts be short term or long term, direct, indirect or cumulative and will they occur during construction or operation. This section will establish whether ecological impacts of the proposed development at St Loman's Road are likely to occur and whether or not they are significant. These potential impacts will be examined with respect to the ecological receptors identified in the previous section.

The emphasis in EcIA is on "significant" effects, rather than all ecological effects (CIEEM, 2018). For the purpose of EcIA, a "significant effect" is an effect that either supports or undermines biodiversity conservation objectives for important ecological features for biodiversity in general. Conservation objectives may be specific (e.g., for a designated site) or broad (e.g., national / local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local.

A significant effect is an effect that if sufficiently important to require assessment and reporting so that the decision maker (i.e., Local Authority) is adequately informed of the environmental consequences of permitting the project. In broad terms, significant effects encompass impacts on structures and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution). (CIEEM, 2018).

5.2 IMPACTS UPON DESIGNATED SITES

The Appropriate Assessment Screening report submitted concluded that the proposed development at St Loman's Road will have no direct, indirect or cumulative impacts upon any site designated as a Special Area of Conservation or Special Protection Area. It is also considered unlikely that the proposed development will have any impacts upon sites designated as a proposed Natural Heritage Areas. There will be no impacts upon these sites, their habitats or species arising from habitat loss or habitat fragmentation.

5.3 IMPACTS WITHIN THE APPLICATION SITE

Development Phase

The following impacts have been assessed and evaluated:

- **Habitat loss and fragmentation** – All previous greenfield habitats on the site have been removed as part of ongoing construction works. These habitats were of low ecological value and their loss did not results in any ecological impacts. The remaining vegetated habitats now on site will eventually be lost and replaced with buildings and artificial surfaces. The additional loss of these habitats will not have any serious negative impacts upon any valued ecological receptor.

  The treeline along the western boundary will be retained but some minor tree loss will occur as three beech trees in the north-western corner of the site will be removed.

- **Impacts on pollinators** – The flowering plants within the remaining verge habitats within the site offers a source of nectar for pollinating insects. These sources of nectar will be lost upon development of the site. These habitats are transient in nature however and they are very common locally.

- **Disturbance to local wildlife** – During continued construction, local populations of birds and mammals may be disturbed by the increase in noise, traffic and human activity. In addition, the removal of any mature trees on site will result in loss of bird perching and nesting habitats, and if this is done in nesting season, injury and mortality to birds and their eggs could arise. However, the plans now allow for the retention of the majority of trees within the site and therefore this impact will not be significant. In addition, the current level of construction activity on the site is likely to be a deterrent for any nesting birds.

  The bat survey originally prepared for the parent application (Brian Keeley, 2019) determined that the site has low suitability for bats. The trees on site do not provide suitable roosting sites for bats. However, three bat species were recorded feeding and commuting over the site. It was concluded as part of this report that the reduction in

vegetation cover in the site and the increase in the lighting level of the site will lead to a permanent slight negative impact upon the bat populations of the area.

- **Pollution** – There are no water bodies on site that are likely to be impacted upon from run-off from the site. However, best practice measures will be undertaken on site during all phases of construction, e.g., the proper storage of all hydrocarbons and the proper management of cement and other aggregates.

Operational Phase

The following impacts on local habitats / wildlife may occur during the operation of the development.

- **Disturbance to local wildlife –** Once operational, the development at St. Loman's Road will facilitate new buildings, all of which are associated with human activity. This will deter wildlife from the site. However, if suitable habitats are provided within the site for birds and pollinators, this will encourage a greater baseline level of biodiversity within the site.
- **Landscaping** – Inappropriate landscaping of the application site may inadvertently result in the introduction of non-native and invasive plant species. However, appropriate landscaping could also provide beneficial habitats for wildlife if it is done with suitable trees and shrubs that provide nesting and foraging opportunities for birds. The management of the verges for wildlife would also be beneficial for local pollinators.

Permitted versus Proposed Scheme

An Bord Pleanála had previously permitted a development on this site and works on this development are ongoing. This current application seeks permission to amend this development. This original application was also submitted with an Ecological Impact Assessment, which determined impacts upon biodiversity from the works to be neutral. It is considered that the ecological impacts arising from this current application on an undeveloped site are similar to those impacts predicted for the previously permitted application on the original undeveloped site.

Cumulative Impacts

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first; through persistent additions or losses of the same materials or resource, and second,-through the compounding effects as a result of the coming together of two or more effects (Bowers-Marriott, 1997).

There are a number of other proposed housing developments within the South Dublin County area and the LAP area (Liffey Valley). These developments combined will reduce the open spaces and habitat availability of the area, thereby cumulatively impacting on local bird and mammal populations. The loss of the habitats within the current application site is considered to be insignificant.

In the larger context of the Dublin City area, there are a number of other proposed developments, some of which are proposed for previously undeveloped, green field sites. These developments combined will reduce the open spaces and habitat availability of the Dublin City area as a whole, thereby cumulatively impacting on local bird and mammal populations. However, the creation of new areas of biodiversity within the application site, will provide local ecological corridors and networks that will reduce the overall cumulative impact of this development in the Dublin City area.

Impact Summary

Overall, the impacts of the proposed development are summarised in Table 6, whilst Table 7 attempts to quantify these impacts in terms of magnitude, extent and likelihood *in the absence of any mitigation.*

Impact Description	Duration	Reversible?	Positive / Negative / Significance
Habitat Loss and Fragmentation (all phases)	Permanent	No	Insignificant
Habitat Disturbance (all phase)	Permanent	No	Insignificant
Pollution to Watercourses	None	N/A	N/A
Disturbance to Wildlife	Temporary	No	Slight Negative / Insignificant
Landscaping	Permanent	No	Negative / Positive
Impacts on Designated Sites	None	N/A	Neutral

Table 6 – Predicted Impacts

Impact Description	Magnitude and Extent	Likelihood
Habitat Loss, Disturbance and Fragmentation	100% of bare / recolonised habitats	Certain
Pollution	None	Certain
Disturbance to Wildlife	Loss of bird nesting sites	Possible
Landscaping	Introduction of Invasive / Non Native Species Use of Plants that are Beneficial for Wildlife	Possible Possible
Impacts on Designated Sites	None	Certain

Table 7 – Quantification of Impacts

6. MITIGATION AND MONITORING

6.1 MITIGATION

In order to mitigate against the impacts listed above, then the following mitigation measures should be adhered to during all phases of the development.

- All works associated with the development should be confined to the proposed development site. All site development works should adhere to best practice.

- All vegetation removal on site should be done outside of the bird nesting season (March – September).

- Prior to felling, all mature trees should be checked by a bat specialist to ensure that no bats are killed or injured and that any disturbed bat roost is removed under licence from NPWS and with proper compensatory mitigation. A derogation shall be sought if a bat or evidence of bats is noted during or prior to the assessment of the trees by a bat specialist or by any construction operative. Conservation measures additional to those provided in this and the previous application would be required in such a circumstance. The techniques of SUDs (Sustainable urban Drainage Systems) should be applied to all hydrological engineering aspects of this proposed development.

- Three Woodstone Build-in bat boxes should be included into the new buildings on the site to provide bat roost opportunities. All bat boxes must be unlit and should be at least 2.5 metres above ground height and preferably 3 metres or higher. The bat boxes shall be installed within buildings facing south. away from lighting and scrub.

- Lighting should be controlled to avoid light pollution of green areas and should be targeted to areas of human activity and for priority security areas. The following measures are recommended:

  - Motion-activated sensor lighting is preferable to reduce light pollution.

  - All luminaires shall lack UV elements when manufactured and shall be LED

  - A warm white spectrum (ideally <2700 Kelvin but as low as the Council limitations allow) shall be adopted to reduce blue light component

  - Luminaires shall feature peak wavelengths higher than 550 nm

- Fuels, oils, greases and hydraulic fluids must be stored in bunded compounds. Refuelling of machinery, etc., should be carried out in bunded areas. Any bulk fuel storage tank should be properly bunded with a bund capacity of at least 110% of that of the fuel tank.

- All waste associated with the development should be disposed of in an environmentally friendly manner. Registered contractors should only be used.

- A Tree Protection Plan has been prepared by Tree Management Services. Any mitigation contained in this report for the protection of trees that are to be retained must be followed in full.

- The future landscaping of the site should adhere to the following recommendations:

    - Only native trees and shrubs should be used in the landscaping.

    - A proportion of the grass areas should be maintained through methods that mimic traditional grassland management (low level grazing and mowing regimes). This will benefit local pollinators. Locally sourced wildflower seed would also be beneficial;

    - When planting flowers, shrubs and trees native species should be used, ideally from a local source;

    - Allow some areas to go 'wild' where bramble and scrub, etc. can develop;

    - Garden plants that have the potential to become invasive must be avoided;

    - Water features, e.g., attenuation ponds, could be incorporated into the development as additional wildlife features.

6.2 MONITORING

Monitoring is generally required where there may be significant residual impacts despite the implementation of the mitigation measures. No significant residual impacts are envisioned for this site upon completion of the development to its operation stage. Therefore, monitoring of the site once operational will not be required.

7. RESIDUAL IMPACTS AND CONCLUSIONS

With the recommended mitigation measures, it can be concluded that the proposed development at St Loman's Road, Palmerstown, Dublin 20 will have a negative to neutral impact upon local ecological receptors. The creation of new habitats on the site will be a positive benefit to local ecology and with proper management of the site and its green areas, then local areas of biodiversity will be allowed to develop.

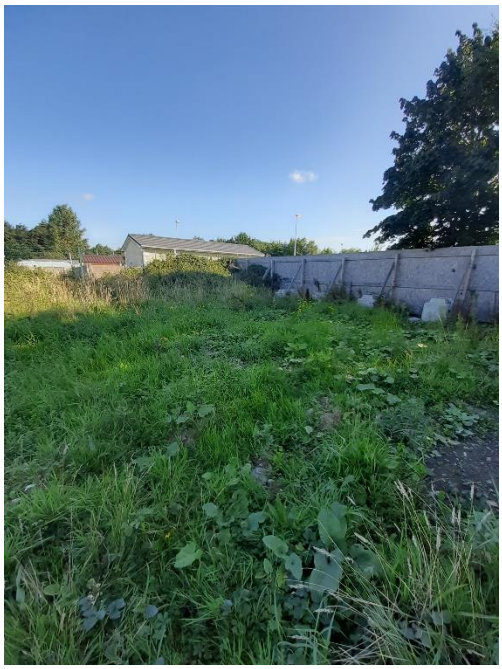
Appendix I: SPECIES LIST

Common Name	Scientific Name
Alder	*Alnus glutinosa*
Bramble	*Rubus fruticosus*
Broadleaved Dock	*Rumex obtusifolius*
Buddleia	*Buddleia davidii*
Cat's ear	*Hypochaeris radicata*
Cock's-foot	*Dactylis glomerata*
Coltsfoot	*Tussilago farfara*
Common ragwort	*Senecio jacobaea*
Creeping cinquefoil	*Potentilla reptans*
Dandelion	*Taraxacum officinale*
Griselinia	*Griselinia littoralis*
Meadow grasses	*Poa sp*
Nettle	*Urtica dioica*
Rape seed	*Brassica napus subsp. napus*
Red clover	*Trifolium pratense*
Red fescue	*Festuca rubra.*
Rye grasses	*Lolium sp.*
Ribwort plantain	*Pantago lanceolate*
Silver birch	*Betula pendula*
Silverweed	*Argentina anserina*
Sow thistle	*Sonchus oleraceus*
Spear thistle	*Cirsium vulgare*
Spurge	*Euphorbia hyberna*
Willowherb	*Ebilobium sp*
Wood avens	*Geum urbanum*
Vetches	*Vicia sp*
Yarrow	*Achillea millefolium*
Yorkshire fog	*Holcus lanatus*

APPENDIX II – PHOTOGRAPHS

Current Remaining Habitat / Activity on Site

Spoil and Bare Ground Habitats within the Site/ Recolonising Bare Ground Pockets



Grassy Verge Type Habitats

Grassy Verge Type Habitats

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