



# Swords Cultural Quarter

## Ecology Survey Report

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July 2022

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**Report Prepared For:**

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# Document Control

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## Field Investigations and Data

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work. Where any data supplied by the client or from other sources have been used it has been assumed that the information is correct. No responsibility can be accepted by EcoNorth Ltd. for inaccuracies in the data supplied by any other party.

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## Summary

EcoÉireann were commissioned by O'Donnell & Tuomey Limited to undertake an Ecology Survey of a site at Swords Cultural Quarter in Swords, Co.Dublin.

The survey included classification of habitats in accordance with Guidance by Fossit (2000). The survey also included an assessment of the sites potential to support protected species. The survey also however draws on survey work undertaken to examine the use of the site by bats undertaken by O'Donnell Environmental (2021).

The survey was undertaken to provide an ecological overview of the site and surrounding area and to inform a BREAMM (Building Research Establishment's Environmental Assessment Method) assessment for the site.

The survey was undertaken by Ecologist Darragh Furey Bsc, Msc, of EcoEireann Ltd on 4/11/2021 with a supplementary visit undertaken on the 25<sup>th</sup> November 2021 by Darragh Furey and Executive Director John Thompson BSc MSc MCIEEM.

The site is highly urban in nature and comprises a mixture of hardstanding areas, including road surfaces and car parking, street trees, and areas of amenity grassland. Some hedgerows were also present.

The site was comprised primarily of artificial or highly managed urban habitat types and as such afforded very limited potential to support protected or notable species and overall is considered to be of low ecological value.

A range of recommendations are included within the report to protect and enhance biodiversity within the site.



# 1. Introduction

## 1.1 Background

EcoÉireann were commissioned by O'Donnell & Tuomey Limited to undertake an ecology survey of land surrounding Swords Castle for the Cultural Quarter District Improvement Scheme.

The survey aimed to describe the habitats within the site, as well as identifying the presence or potential presence of protected and invasive species on site that could be impacted by the works or represent ecological constraints to proposed works.

In addition, species specific surveys have been commissioned in the area for part of the same project: a bat survey was undertaken by O'Donnell Environmental in August 2021 to determine the presence or absence of bats within the locality and the likelihood of encountering the species during works.

A desk study was undertaken by EcoEireann to collate existing ecological data on protected sites and of species within a 2km radius of the working area.

## 1.2 Site Context

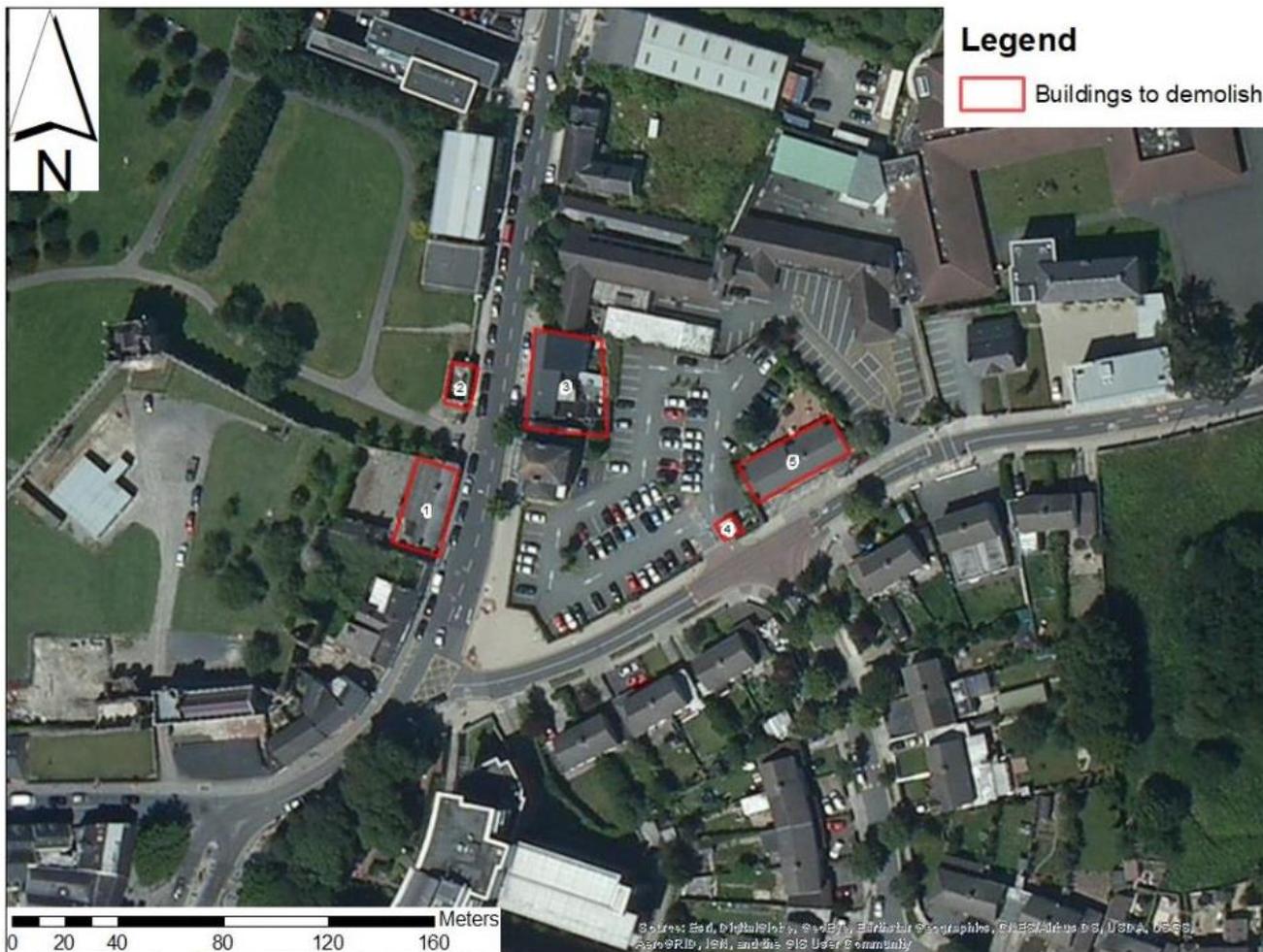
The site is located in the centre of Swords, Co. Dublin and is directly adjacent to Swords Castle. The site is located within a highly urban context that is dominated by hard standing surfaces with occasional street trees and areas of broadleaved plantation woodland adjacent to Fingal County Hall. Five buildings are outlined in the figure below and are all demarcated to be demolished.

There are 5 built structures being demolished as part of the works, outlined in Figure 2 below.





Figure 2: Site Boundary of Buildings to be demolished





## **2. Methodology**

### **2.1 Desk Study**

Contextual information was gathered as part of a desk study. Such information is important as it helps identify existing records on the site and in the surrounding area. Records within a 2km radius of the site boundary were obtained from the National Biodiversity Data Centre (NBDC).

Ordnance Survey maps and aerial photos were consulted to help assess the extent and distribution of the landscape in the scale of the overall development.

### **2.2 Field Survey**

#### **2.2.1 Habitat Assessment**

Habitats within the site boundary were assessed by experienced ecologists in accordance with classifications set out by Fossit (2000). Where possible species lists are compiled for each habitat type.

## **3. Baseline Conditions**

### **3.1 Desk study**

#### **Statutory Designated sites**

Table 1 shows those designated sites identified through the desk study as lying within 2km of the site boundary, and table 2 shows the conservation objectives and threats of the designated sites.

Given the absence of clear hydrological pathways from the site leading to off site locations and the lack of habitat suitable to support mobile species which may be associated with Natura sites further afield the scope of the search for designated sited site has been retained to a 2km search area for the purposes of this assessment.



**Table 1: Designated Sites within 2km**

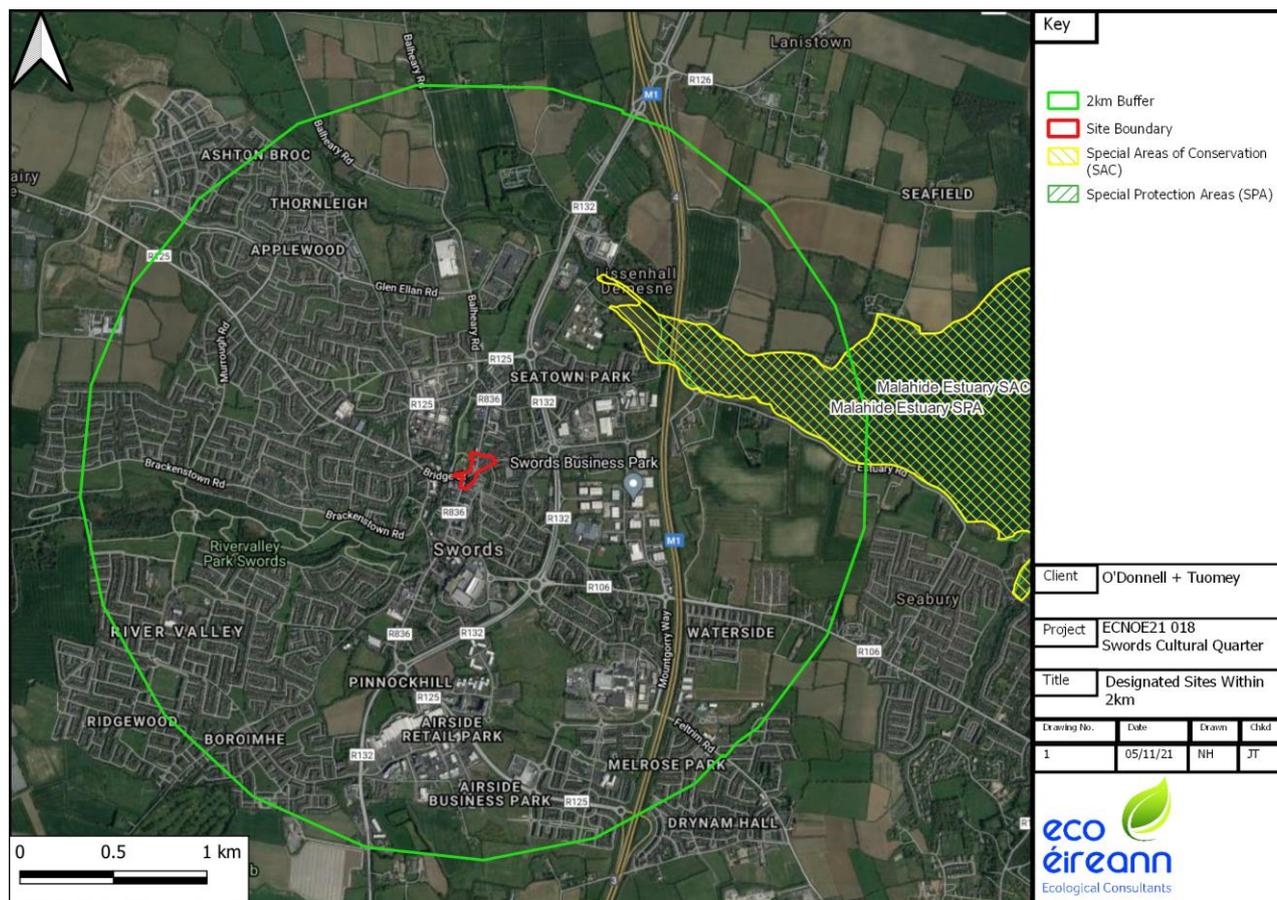
Site name	Qualifying Features of Interest
Malahide Estuary SPA	The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species Great Crested Grebe <i>Podiceps cristatus</i> , Light-bellied Brent Goose <i>Branta bernicla</i> , Shelduck <i>Tadorna tadorna</i> , Pintail <i>Anas acuta</i> , Goldeneye <i>Bucephala clangula</i> , Red-breasted Merganser <i>Mergus merganser</i> , Oystercatcher <i>Haematopus ostralegus</i> , Golden Plover <i>Pluvialis apricaria</i> , Grey Plover <i>Pluvialis squatarola</i> , Knot <i>Calidris canutus</i> , Dunlin <i>Calidris alpina</i> , Black-tailed Godwit <i>Limosa limosa</i> , Bar-tailed Godwit <i>Limosa lapponica</i> , and Redshank <i>Tringa totanus</i> . The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.
Malahide Estuary SAC	Designated for the following Annex I / II habitats found within: Tidal mudflats and sandflats, <i>Salicornia</i> mud, Atlantic salt meadows, Mediterranean salt meadows, Marram dunes, and fixed dunes.

**Table 2: Conservation Objectives and Threats of Designated Sites within 2km**

Site Name	Conservation Objectives	Identified Threats and Pressures*
Malahide Estuary SPA	To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests, and to maintain the favourable conservation condition of the wetland habitat.	Disturbance caused by sailing, walking (including with dogs), motorised vehicles, horse-riding, shooting, and bait-digging.
Malahide Estuary SAC	To maintain or restore the favourable conservation condition of the Annex I / II habitats for which the SAC has been selected.	The main threats affecting this site are recreational activities, water pollution and infilling. Owing to the proximity of two large towns, the area is very popular for water sports and other amenities. Parts of the estuary have been infilled in the past for various developments and this remains a threat.



**Figure 3: Map showing Designated Sites within 2km**



### Species Records

A broad range of species are reported from within 2km of the site. Given the location of the Malahide estuary within 2km there are a broad range of bird species including many estuarine species recorded within 2km of the site. A range of bird species typical of more urban habitats are also identified.

A small range of notable invertebrate species are highlighted within the desk study.

The desk study also highlighted a range of invasive species (including faunal species and invasive plant species) within 2km of the site.

The full results of the Desk Study are tabulated in Appendix B.

### 3.2 Field Survey

#### Hard standing - Buildings and artificial surfaces BL3

The majority of the land within the red line boundary is comprised of hardstanding / sealed surface features associated with roadways, car parking, and pedestrian areas. These areas in themselves hold no ecological value.



### Buildings - Buildings and artificial surfaces BL3

A range of buildings are present within the red line boundary. These are present in a range of conditions and images are included in Appendix C. The potential for these buildings to be used by bats is documented in the separate bat report O'Donnell Environmental (2021). Some buildings are at least partially derelict and are occupied by encroaching *Buddleja* spp scrub. No other vegetation excluding ivy *Hedera helix* on some retained buildings is present. Such features are considered to be of low ecological value when considering the results of the bat survey report. Opportunities for birds nesting are present but are considered to be limited within existing structures and likely restricted to cavities I soffit boxes.

### Amenity Grassland – GA2

Areas surrounding both the north and south of Swords Castle include areas of amenity grassland grasses include a limited range of grass species but are dominated by meadow grass *Poa* sp. Herbs present include daisy *Bellis perennis* and Dandelion *Taraxacum officinale* agg. Creeping buttercup *Ranunculus repens* is also present. Mosses are present within the amenity grassland where it is shaded by castle walls. On occasion other herbs such as ground elder *Aegopodium podagraria* and willowherb *Chamaenerion/Epilobium* sp. are also present but are scarce.

Images of the two areas of amenity grassland are presented below.

Photo 1: Amenity grassland to the south of Swords Castle	Photo 2: Amenity grassland with scattered parkland trees to the North of Swords Castle
	



### Scattered Trees and parkland WD 5

Areas within the red line boundary to the north of swords castle comprise of scattered trees located within amenity grassland (GA 2). Tree species present include ash *Fraxinus excelsior*, alder *Alnus glutinosa*, maple *Acer sp*, horse chestnut *Aesculus hippocastanum* and pear *Pyrus sp*. This habitat is illustrated on Photo 2 above. The parkland areas described are primarily outside the red line boundary of the development site extending to the west. This habitat type may be of up to local ecological value.

### Highly modified / non-native Broad leaved woodland - WD1

A significant stand of mature evergreen oak *Quercus ilex* is present in the grounds in front of Fingal County Hall. A single mature cedar tree *Cedrus sp* is also present as part of the same stand of trees. Despite this, the stand still qualifies as broadleaved woodland under the Fossit (2000) definition. The woodland is a plantation, as evidenced by the uniform ages of the trees present. The woodland is illustrated in Photos 3 and 4 below.

Evergreen oak are native to the Mediterranean but have been introduced to other parts of Europe. Unlike oak species which are native to Ireland, this species is evergreen and creates a dense shaded canopy which combined with a deep layer of leaf litter prevents any understorey growth under the canopy. Any ground layer growth is limited to the area beneath the cedar tree where introduced landscape shrubs and herbs are present.

Photo 3: Continuous stand of holm oak	Photo 4: Cedar tree.
	



## **Recolonising Bare Ground - ED2**

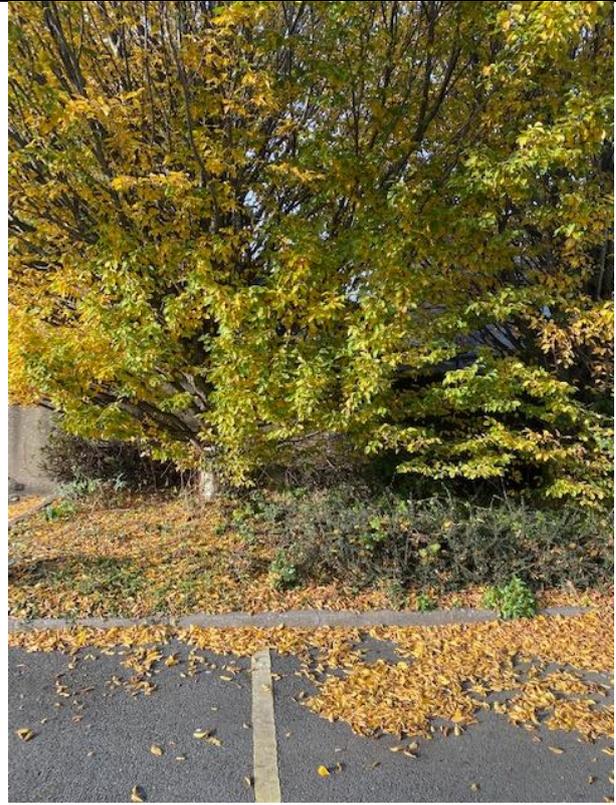
A large section of the overall site area comprises of a car park. A number of 'Islands' are present within the car park which host individual elm *Ulmus sp.* trees. The ground beneath the trees includes a range of grasses including meadow grass *Poa spp*, black medic *Medicago lupulina*, vetch *Vicia sp*, and dandelion. These areas also include *Acer sp* seedlings, which are likely natural regeneration. Single stems of common milkweed *Asclepias syriaca* (an invasive non-native species) were also present in these areas. *Cotoneaster sp* was also present in the landscaped areas of the car park and is an invasive non-native species. Images of these small areas are illustrated on Photos 5 and 6 below.



**Photo 5: Small scale landscape Island within car park area.**



**Photo 6: Small scale border supporting a single *Ulmus* sp tree, ED2 habitats and ornamental shrubs.**

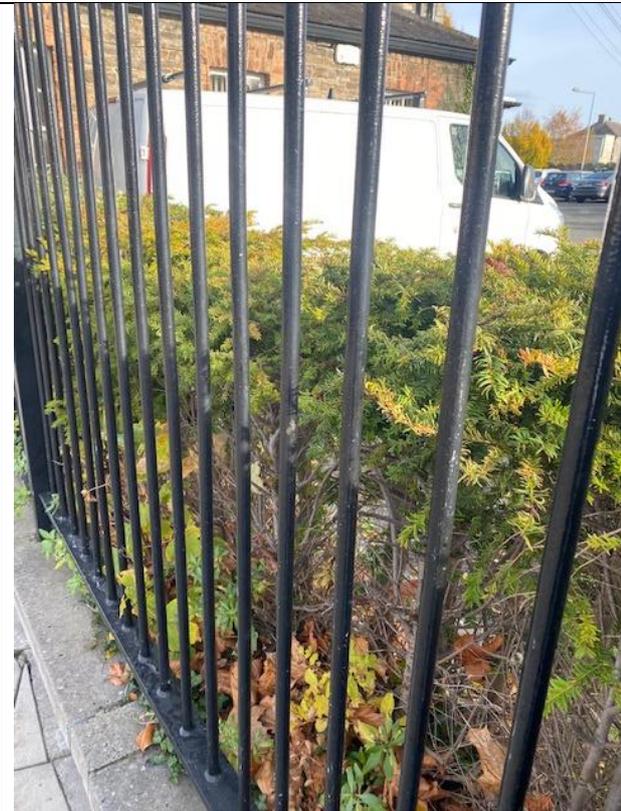


### **Hedgerow - WL1**

A recently planted hedgerow is present surrounding some of the boundaries of the existing car parking area, and is associated with the metal fence line. The dominant species within this is yew *Taxis baccata* however *buddleja* sp is also present. Other boundaries have dense cover of ivy forming a hedgerow feature.



**Photo 7: Newly established yew hedge**



**Photo 8: Dense Ivy cover**



**Ornamental / non-native shrub - WS3**

The car park area also contains areas of ornamental shrub planting, with species such as ornamental holly *Ilex* sp. varieties, laurel *Laurus* sp., and cotoneaster *Cotoneaster* sp.

Buddleia is colonising derelict buildings and the yard areas of associated buildings.



Photo 9: Buddleia occupying derelict buildings	Photo 10: Buddleia colonising derelict buildings
	

### Protected or Notable species

Bats are considered separately in a specific survey report prepared by O'Donnell Environmental (2021).

All buildings subject to removal were identified as having low suitability for roosting bats. Similarly, all trees within the red line boundary were considered to be low or negligible bat risk.

The nocturnal activity survey completed for these low suitability features identified low overall activity levels. Species recorded included common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and Leisler's bat *Nyctalus leisleri*. All observations related to foraging and commuting activity. Activity surveys did not identify any bat roost sites within affected buildings.

The dominance of built environment and hardstanding along with heavily managed landscapes within the study area restricts opportunities for protected or notable species. No evidence of potential for protected or notable species was recorded, excepting breeding birds which may nest in trees, hedgerows, and buildings.

Evidence of Jackdaw *Corvus monedula* was observed in the north face of the Castle walls in the form of relic nest structures. Cavities within soffits of other building structures or scrub occupying derelict buildings may provide further nesting opportunities for a range of species associated with urban/ garden / parkland environments, such as Starling *Sturnus vulgaris*, Feral Pigeon *Columba livia domestica*, Wood Pigeon *Columba palumbus*, or corvid species such as Jackdaw, or Carrion Crow *Corvus corone*.



## **4. Interpretation and Discussion**

### **4.1 Survey Constraints**

The survey effort was completed in November 2021. November is outside of the optimal survey period for botanical or habitat survey. However, given the nature of the habitats present, it is not considered that any additional botanical information would affect the categorisation or assessment of value for these habitats and as such, this is viewed as a minor constraint.

### **4.2 Site Evaluation**

In accordance with criteria set out in Appendix A the site is considered to be of low ecological value. The site is dominated by sealed surfaces such as roads and pavements / parking areas or buildings. Where non built areas are present these are heavily managed and comprise a high proportion of non-native species. The ecological value of the trees and hedgerows present on site is considered to be higher than other habitats, as such features may not be readily recreated due to a long lead-in period.

Various features on site, namely the buildings, are identified as supporting some potential for roosting bats. However, bat surveys completed in 2021 indicated that the buildings do not currently support roosting bats. These surveys did however indicate that the site is used by commuting and foraging bats.

Other features within the site including built structures offer a low risk of occupation by nesting birds. Suitable avoidance measures such as the careful timing of works to avoid commencement within the main nesting season, or the delivery of pre-works checks by a suitably qualified ecologist (SQE) would address this low residual risk.

### **4.3 Potential Impacts and mitigation measures**

Despite the relative proximity of the development area to the nearest Natura 2000 sites, the lack of functional supporting habitat on site, the current use of the site within an urban context, and lack of distinct pathways (hydrological or otherwise), no potential impacts to Natura 2000 sites are predicted. Therefore, no further appropriate assessment is recommended at this time.

The proposals will result in the loss of up to 5 buildings on site. Survey data reported by O'Donnell Environmental reports that these buildings are not used by roosting bats, and therefore no adverse impacts upon this species are predicted. Historic records of bats are confirmed within parts of Swords Castle however it is not expected that such features will be impacted or adversely affected by proposed works.



Though detailed designs are forthcoming, the nature of the development suggests some site lighting will be installed. Any site lighting has the potential to disturb bats that forage around the site (as indicated by O'Donnell Environmental). This impact may be mitigated by ensuring that any site lighting, either during construction or operation, adheres to Bat Conservation Trust guidance on lighting (Bat Conservation Trust 2018).

In order to reduce the ecological disturbance of light spillage during the operational phase, the light sources used for public lighting (including subsequent replacements) will be specified as follows:

- LEDs will be used, as these emit minimal ultra-violet light.
- White and blue component will be avoided by using luminaires with a wavelength of less than 2,700 kelvin.
- Wavelength of luminaires will peak higher than 550nm.
- Lighting shall be directed away from such ecologically sensitive features such as existing treelines, watercourses or other sensitive ecological features outlined herein.

The demolition of buildings and clearance of vegetation suitable for use by breeding birds has the potential to destroy active bird nests, resulting in the harm or killing of parents, dependent young, or eggs. This may be mitigated by timing demolition works to avoid the breeding bird season (March to August inclusive). If this is not feasible, then such works may be undertaken during the breeding period if the features have been declared free of active nests by an appropriately qualified ECoW (Ecological Clerk of Works). In the event that an active nest is found, works must cease immediately and the advice of an ECoW sought. The ECoW will advise on an appropriate buffer zone around the nest.

Some change to the nature of habitats present within the boundary are possible as a result of the proposed works. All habitat types are considered to be of low value and therefore no significant ecological impacts are predicted.

A range of non-native species are present on site and works could potentially result in the spread of these. While most species present are not controlled by law in Ireland through inclusion in the third schedule (part 1) of the European Communities (Birds and Natural Habitats) Regulations 2011, they pose a risk to other habitats and should be disposed of carefully either by removing them to an appropriate waste management facility or by chipping to waste prior to disposal.

The proposed development may result in potential increases in diversity of the site through the inclusion of green roof structures which are recommended for inclusion in this project. This will be considered and reported in the BREEAM report when it is prepared on finalisation of scheme designs.



Landscaping proposals which relate to both the the wider site area and green roof infrastructure should utilise primarily species which;

- Are native to Ireland and specifically to the Co Dublin area
- Provide a source of nectar for pollinating species of invertebrates

All proposed landscaping including any green roofs incorporated will be subject to a management plan for a minimum of 5 years during establishment.

Proposals will involve the installation of a range of new buildings. The installation of new buildings and structures provides the potential for a range of features to be incorporated or retrofitted which will benefit biodiversity in the area. The following features are recommended given the context of the site and recorded baseline.

- Integrated swift brick x 5 to be incorporated within proposed structures and positioned in line with manufacturer guidance.
- Integrated or alternatively retrofitted bat boxes x 5 suitable for use by common and soprano pipistrelle bats.
- House sparrow terrace nest boxes x 3 to be fitted to proposed structures and positioned in line with manufacturer guidance.
- Bee bricks will be incorporated into areas surrounding proposed green roof structures where suitable nectaring plants will be present nearby.

The site environs are very dry and where possible it is recommended that clean run off from roof / green roofs is collected to facilitate a drinking feature for urban bird species such as sparrow prior to draining off site.

## 5. References

- Bat Conservation Trust (2018). Guidance Note 8 Bats and Artificial Lighting
- CIEEM (2016). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Fosstitt A. (2000). A Guide to Habitats In Ireland. The Heritage Council.
- O'Donnell Environmental. (2021). Bat Survey Report . Swords Co Dublin.



## Appendix A – Value of Ecological Receptors

**Table A1: Examples of Ecological Receptors of Differing Value**

Value	Examples
International	<p>An internationally designated site or candidate site (SPA, pSPA, SAC, cSAC, pSAC, Ramsar site) or an area which meets the designation criteria for such sites.</p> <p>Internationally significant and viable areas of a habitat type listed in Annexe 1 of the Habitats Directive, or smaller areas of such habitat, which are essential to maintain the viability of a larger whole.</p> <p>Any regularly occurring, globally threatened species.</p> <p>A regularly occurring population of an internationally important species, which is threatened or rare in Ireland, of uncertain conservation status</p> <p>A regularly occurring, nationally significant population/number of any internationally important species.</p>
National	<p>A nationally designated site (e.g. Nature Reserve, National Heritage Area (NHA) or a discrete area which meets the published selection criteria for national designation (e.g. NHA selection guidelines) irrespective of whether or not it has yet been notified.</p> <p>A viable area of a Irish NBAP priority habitat, or smaller areas of such habitat which are essential to maintain the viability of a larger whole.</p> <p>A regularly occurring significant number/population of a nationally important species e.g. listed on the Wildlife Act, 1976 (as amended).</p> <p>A regularly occurring population of a nationally important species that is threatened or rare in the county or region.</p> <p>A feature identified as being of critical importance in the Irish NBAP.</p>
Regional/County	<p>Viable areas of key habitat identified in the Regional or County BAP or smaller areas of such a habitat, which are essential to maintain the viability of the larger whole.</p> <p>Regional/county significant and viable areas of key habitat identified as being of regional value in the appropriate Area.</p> <p>A regularly occurring significant population/number of any important species important at a regional/county level.</p>



Value	Examples
	<p>Any regularly occurring, locally significant population of a species which is listed in a Regional/County Red Data Book or BAP on account of its regional rarity or localisation.</p> <p>Sites of conservation importance that exceed the district selection criteria but that fall short of NHA selection guidelines.</p>
City/District/Borough	<p>Areas of habitat identified in a District/City/Borough BAP or in the relevant Natural Area profile.</p> <p>Sites that the designating authority has determined meet the published ecological selection criteria for designation, including Local Nature Reserves selected on District/City/Borough ecological criteria.</p> <p>Sites/features that are scarce within the District/City/Borough or which appreciably enrich the District/City/Borough habitat resource.</p> <p>A diverse and/or ecologically valuable hedgerow network.</p> <p>A population of a species that is listed in a District/City/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation.</p> <p>A regularly occurring, locally significant number of a District/City/Borough important species during key phases of its life cycle.</p>
Local/Parish	<p>Areas identified in a national BAP or the relevant natural area profile.</p> <p>Sites/features which are scarce in the locality or which are considered to appreciably enrich the habitat resource within the local context, e.g. species-rich hedgerows.</p> <p>Local Nature Reserves selected on Parish/Local ecological criteria.</p> <p>Significant numbers/population of a locally important species e.g. one which is listed on the Local BAP.</p> <p>Any species, populations or habitats of local importance.</p>
Low	<p>Habitats of moderate to low diversity which support a range of locally and nationally common species, the loss of which can be easily mitigated.</p>



## Appendix B – Desk Study Results (Species)

Species	Number of Records	Date of last record	Designation
Smooth Newt <i>Lissotriton vulgaris</i>	1	04/05/2018	Protected Species: Wildlife Acts
Common Frog <i>Rana temporaria</i>	2	18/03/1997	Protected Species: EU Habitats Directive Protected Species: Wildlife Acts
Barn Swallow <i>Hirundo rustica</i>	5	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Bar-tailed Godwit <i>Limosa lapponica</i>	2	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Annex I Birds of Conservation Concern - Amber List
Black-headed Gull <i>Larus ridibundus</i>	6	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Red List
Black-tailed Godwit <i>Limosa limosa</i>	4	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Brent Goose <i>Branta bernicla</i>	1	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Goldeneye <i>Bucephala clangula</i>	1	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Annex II Birds of Conservation Concern - Amber List
Common Greenshank <i>Tringa nebularia</i>	2	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Kestrel <i>Falco tinnunculus</i>	1	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Kingfisher <i>Alcedo atthis</i>	2	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex I Birds of Conservation Concern - Amber List
Common Linnet <i>Carduelis cannabina</i>	2	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Pheasant <i>Phasianus colchicus</i>	2	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex II
Common Pochard <i>Aythya ferina</i>	1	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex II Birds of Conservation Concern - Amber List
Common Redshank <i>Tringa totanus</i>	5	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Red List



Species	Number of Records	Date of last record	Designation
Common Sandpiper <i>Actitis hypoleucos</i>	3	15/08/2010	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Shelduck <i>Tadorna tadorna</i>	5	18/05/2012	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Snipe <i>Gallinago gallinago</i>	1	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex II Birds of Conservation Concern - Amber List
Common Starling <i>Sturnus vulgaris</i>	6	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Swift <i>Apus apus</i>	3	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Common Wood Pigeon <i>Columba palumbus</i>	9	11/01/2015	Protected Species: Wildlife Acts EU Birds Directive Annex II
Dunlin <i>Calidris alpina</i>	2	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex I Bird Species Birds of Conservation Concern - Amber List
Eurasian Curlew <i>Numenius arquata</i>	3	27/06/2018	Protected Species: Wildlife Acts EU Birds Directive Annex II Birds of Conservation Concern - Red List
Eurasian Oystercatcher <i>Haematopus ostralegus</i>	3	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Eurasian Teal <i>Anas crecca</i>	1	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex II Birds of Conservation Concern - Amber List
Eurasian Tree Sparrow <i>Passer montanus</i>	6	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Eurasian Wigeon <i>Anas penelope</i>	1	15/08/2010	Protected Species: Wildlife Acts EU Birds Directive Annex II Birds of Conservation Concern - Amber List
European Golden Plover <i>Pluvialis apricaria</i>	2	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex I Bird Species Birds of Conservation Concern - Red List
Great Black-backed Gull <i>Larus marinus</i>	2	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Great Cormorant <i>Phalacrocorax carbo</i>	3	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Great Crested Grebe <i>Podiceps cristatus</i>	1	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List



Species	Number of Records	Date of last record	Designation
Grey Plover <i>Pluvialis squatarola</i>	1	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Herring Gull <i>Larus argentatus</i>	5	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Red List
House Martin <i>Delichon urbicum</i>	6	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
House Sparrow <i>Passer domesticus</i>	5	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Lesser Black-backed Gull <i>Larus fuscus</i>	4	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Little Egret <i>Egretta garzetta</i>	3	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex I Bird Species
Little Grebe <i>Tachybaptus ruficollis</i>	3	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Little Gull <i>Larus minutus</i>	1	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex I
Mallard <i>Anas platyrhynchos</i>	6	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex II
Mew Gull <i>Larus canus</i>	3	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Mute Swan <i>Cygnus olor</i>	11	13/08/2017	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Northern Lapwing <i>Vanellus vanellus</i>	7	13/08/2017	Protected Species: Wildlife Acts EU Birds Directive Annex II Birds of Conservation Concern - Red List
Peregrine Falcon <i>Falco peregrinus</i>	2	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex I
Red Kite <i>Milvus milvus</i>	1	30/01/1973	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Red Knot <i>Calidris canutus</i>	2	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Red List
Red-breasted Merganser <i>Mergus serrator</i>	1	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex II
Rock Pigeon <i>Columba livia</i>	4	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex II
Ruddy Duck <i>Oxyura jamaicensis</i>	1	31/12/2014	EU Regulation No. 1143/2014    Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Ruff <i>Philomachus pugnax</i>	3	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex I Birds of Conservation Concern - Amber List



Species	Number of Records	Date of last record	Designation
Sky Lark <i>Alauda arvensis</i>	3	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Snowy Owl <i>Bubo scandiaca</i>	1	31/12/1862	Protected Species: Wildlife Acts EU Birds Directive Annex I Birds of Conservation Concern - Amber List
Stock Pigeon <i>Columba oenas</i>	6	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Amber List
Tufted Duck <i>Aythya fuligula</i>	2	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex II Birds of Conservation Concern - Amber List
Velvet Scoter <i>Melanitta fusca</i>	1	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex II
White-tailed Eagle <i>Haliaeetus albicilla</i>	1	04/05/2021	Protected Species: Wildlife Acts
Whooper Swan <i>Cygnus cygnus</i>	1	31/12/2011	Protected Species: Wildlife Acts EU Birds Directive Annex I Birds of Conservation Concern - Amber List
Wood Lark <i>Lullula arborea</i>	1	03/04/1960	Protected Species: Wildlife Acts
Yellowhammer <i>Emberiza citrinella</i>	3	31/12/2011	Protected Species: Wildlife Acts Birds of Conservation Concern - Red List
European Eel <i>Anguilla anguilla</i>	1	04/07/2008	Threatened Species: OSPAR Convention     Threatened Species: Critically Endangered
<i>Arthurdendyus triangulatus</i>	1	10/05/2018	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> High Impact Invasive Species
Butterfly-bush <i>Buddleja davidii</i>	8	11/12/2017	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> Medium Impact Invasive Species
Cherry Laurel <i>Prunus laurocerasus</i>	5	11/12/2017	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> High Impact Invasive Species
Common Cord-grass <i>Spartina anglica</i>	1	15/07/2014	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> High Impact Invasive Species     Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Evergreen Oak <i>Quercus ilex</i>	1	07/05/2020	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> Medium Impact Invasive Species
Giant Hogweed <i>Heracleum mantegazzianum</i>	3	31/12/2017	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> High Impact Invasive Species     Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)



Species	Number of Records	Date of last record	Designation
Himalayan Honeysuckle <i>Leycesteria formosa</i>	1	11/12/2017	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> Medium Impact Invasive Species
Japanese Knotweed <i>Fallopia japonica</i>	1	11/12/2017	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> High Impact Invasive Species     Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Meadow Barley <i>Hordeum secalinum</i>	1	31/12/1904	Threatened Species: Endangered
Sycamore <i>Acer pseudoplatanus</i>	2	15/07/2014	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> Medium Impact Invasive Species
Three-cornered Garlic <i>Allium triquetrum</i>	1	11/12/2017	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> Medium Impact Invasive Species     Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Wall <i>Lasiommata megera</i>	2	14/08/1982	Threatened Species: Endangered
Bombus <i>Bombus magnus</i>	1	17/04/1977	Threatened Species: Data deficient
Large Red Tailed Bumble Bee <i>Bombus lapidarius</i>	1	23/04/2016	Threatened Species: Near threatened
Red-tailed Carder Bee <i>Bombus ruderarius</i>	1	15/05/1977	Threatened Species: Vulnerable
American Mink <i>Mustela vison</i>	1	31/12/1964	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> High Impact Invasive Species     Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Eastern Grey Squirrel <i>Sciurus carolinensis</i>	2	31/12/2012	Invasive Species: Invasive Species     Invasive Species: Invasive Species >> High Impact Invasive Species     Invasive Species: Invasive Species >> EU Regulation No. 1143/2014     Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Eurasian Red Squirrel <i>Sciurus vulgaris</i>	1	10/05/2011	Protected Species: Wildlife Acts
European Otter <i>Lutra lutra</i>	7	02/05/2014	Protected Species: EU Habitats Directive     Protected Species: EU Habitats Directive >> Annex II     Protected Species: EU Habitats Directive >> Annex IV     Protected Species: Wildlife Acts



Species	Number of Records	Date of last record	Designation
Pine Marten <i>Martes martes</i>	1	31/12/2012	Protected Species: EU Habitats Directive     Protected Species: EU Habitats Directive >> Annex V     Protected Species: Wildlife Acts
West European Hedgehog <i>Erinaceus europaeus</i>	10	26/07/2020	Protected Species: Wildlife Acts



## Appendix C – Site Photographs

**Photo 1 – Building 3 several shops/apartments high quality exterior brickwork, one feature, building assessed as moderate**



**Photo 2 – Building 1, solicitors office, no obvious breaks in brickwork or roof slates**





**Photo 3 – slates and chimney on building 1 in good condition**



**Photo 4 – building 2 emergent vegetation from center of building, no roost features**





**Photo 5 – building 2 side on view of brickwork, negligible potential for bats.**



**Photo 6 – Steel structure/cabin, negligible for bat roost potential**





**Photo 7 – building Front view from street**

