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AAS Report

**Proposed Housing Development at *Lisdaran*,
*Co. Cavan***

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Authorities (DoEHLG, 2010).

1.1 Relevant Legislation and Overall Screening Methodology

The methodology for this screening statement is set out in a document prepared for the Environment DG of the European Commission entitled 'Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC' (*European Commission, 2019, amended 2021*). This report and any contributory fieldwork were carried out in accordance with guidelines given by the Department of Environment, Heritage and Local Government (*2009, amended 2010*).

The process is given in Articles 6(3) and 6(4) of the Habitats Directive and is commonly referred to as 'Appropriate Assessments' (*which in fact refers to Stage 2 in the sequence under the Habitats Directive Article 6 assessment*). Article 6 of the Habitats Directive sets out provisions which govern the conservation and management of Natura 2000 sites. Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (*Annex 1.1*). Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the (Natura 2000) site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

Article 6(4) of the same directive states:

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory

measures necessary to ensure that the overall coherence of the Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”

It is the responsibility of the proponent of the plan or project to provide the relevant information (*ecological surveys, research, analysis etc.*) for submission to the ‘competent national authority’. Having satisfied itself that the information is complete and objective, the competent authority will use this information to screen the project, i.e. to determine if an AA is required and to carry out the AA, if one is deemed necessary. The competent authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned. The appropriate assessment process has four stages. Each stage determines whether a further stage in the process is required. If, for example, the conclusions at the end of Stage One are that there will be no significant impacts on the Natura 2000 site, there is no requirement to proceed further. The four stages are:

1. Screening to determine if an appropriate assessment is required.
2. Appropriate assessment
3. Consideration of alternative solutions
4. Imperative Reasons of Overriding Public Interest/Derogation

Table 1: The stages of AA

Stage 1: Screening for AA
The aim of screening is to assess firstly if the plan or project is directly connected with or necessary to the management of Designated Site(s); or in view of best scientific knowledge, if the plan or project, individually or in combination with other plans or projects, is likely to have a significant effect on a Designated Site. This is done by examining the proposed plan or project and the conservation

objectives of any Designated Sites that might potentially be affected. If screening determines that there is potential for significant effects or there is uncertainty regarding the significance of effects then it will be recommended that the plan or project is brought forward to the next stage of the AA process.

Stage 2: Appropriate Assessment

The aim of stage 2 of the AA process is to identify any adverse impacts that the plan or project might have on the integrity of relevant Designated Sites. As part of the assessment, a key consideration is 'in combination' effects with other plans or projects. Where adverse impacts are identified, mitigation measures can be proposed that would avoid, reduce or remedy any such negative impacts and the plan or project should then be amended accordingly, thereby avoiding the need to progress to Stage 3.

Stage 3: Assessment of Alternative Solutions

If it is not possible during Stage 2 of the AA process to conclude that there will be no adverse effects on site integrity, Stage 3 of the process must be undertaken which is to objectively assess whether alternative solutions exist by which the objectives of the plan or project can be achieved. Explicitly, this means alternative solutions that do not have adverse impacts on the integrity of a Designated Site. It should also be noted that EU guidance on this stage of the process states that, 'other assessment criteria, such as economic criteria, cannot be seen as overruling ecological criteria' (*EC, 2002*). In other words, if alternative solutions exist that do not have adverse impacts on Designated Sites; they should be adopted regardless of economic considerations. This stage of the AA process should result in the identification of the least damaging options for the plan or project.

Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)/Derogation

This stage of the AA process is undertaken when it has been determined that a plan or project will have adverse effects on the integrity of a Designated Site, but that no alternatives exist. At this stage of the

AA process, it is the characteristics of the plan or project itself that will determine whether or not the competent authority can allow it to progress. This is the determination of 'overriding public interest'. It is important to note that in the case of Designated Sites that include in their qualifying features 'priority' habitats or species, as defined in Annex I and II of the Directive, the demonstration of 'overriding public interest' is not sufficient and it must be demonstrated that the plan or project is necessary for 'human health or safety considerations'. Where plans or projects meet these criteria, they can be allowed, provided adequate compensatory measures are proposed. Stage 4 of the process defines and describes these compensation measures.

1.2 Appropriate Assessment Screening Report

This report provides stage one: screening for appropriate assessment. It aims to establish whether a plan or project is likely to have any significant effects on any Natura 2000 sites. The study is based on a preliminary impact assessment using both publicly available data and data collected during site visits and ecological surveys. This is followed by a determination of whether there is a risk that the effects identified could significantly impact any Natura 2000 sites, and if so, an AA is required. The need to apply the precautionary principle in making any key decisions in relation to the tests of AA has been confirmed by the European Court of Justice case law. Therefore, where significant effects are likely, possible or uncertain at the screening stage, AA will be required.

1.3 Reference Documents

The following relevant documents were considered in preparation of this report.

Table 2: Reference Documents

Name / Number	Description
Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities	National guidance on Appropriate Assessment for planning authorities. Department of Environment, Heritage and Local Government, (2010 revision)
Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities	Circulars issued by the Department of Environment, Heritage and Local Government with guidance relating to Appropriate Assessment. Circular NPWS 1/10 & PSSP 2/10 (2010)
Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC	The guidance within this document provides a non-mandatory methodology for carrying out assessments required under Articles 6(3) and (4) of the Habitats Directive European Commission Environment Directorate-General, (2001 and updates April 2015 and September 2021).
Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC	Publication to the Member States with an interpretation of certain concepts in Article 6 of the Habitats Directive. EC Environment Directorate-General (2018)
Communication from the Commission on the precautionary principle.	Publication relating to the use of the precautionary principle. European Commission (2000)

1.4 Relevant Case Law

The European Court of Justice has a considerable body of case law relating to the application of Articles 6(3) and 6(4) of the Directive; **Table 3** below provides some of the rulings relevant to the current assessment.

Table 3: Relevant case-law from the European Court of Justice

Case	Ruling
People Over Wind and Sweetman v Coillte Teoranta (C-323/17)	The ruling of the CJEU in this case requires that any conclusion of 'no Likely Significant Effect' on a European site must be made prior to any consideration of measures to avoid or reduce harm to the European site. The determination of Likely Significant Effects should not, in the opinion of the CJEU, constitute an attempt at detailed technical analyses. This should be conducted as part of the AA.
Waddenzee (C-127/02)	The ruling in this case clarified that AA must be conducted using best scientific knowledge, and that there must be no reasonable scientific doubt in the conclusions drawn. The Waddenzee ruling also provided clarity on the definition of 'significant effect', which would be any effect from a plan or project which is likely to undermine the conservation objectives of any European site.
Holohan and Others v An Bord Pleanála (C-461/17)	The conclusions of the Court in this case were that consideration must be given during AA to: effects on qualifying habitats and/or species of a SAC or SPA, even when occurring outside of the boundary of a European site, if these are relevant to the site meeting its conservation objectives; and, effects on non-qualifying habitats and/or species on which the qualifying

	habitats and/or species depend, and which could result in adverse effects on the integrity of the European site.
T.C. Briels and Others v Minister van Infrastructuur en Milieu (C-521/12)	The ruling of the ECJ in this case determined that compensatory measures cannot be used to support a conclusion of no adverse effect on site integrity.
Eco Advocacy CLG v An Bord Pleanála (C-721/21)	The ruling (preliminary) of the ECJ in this case related to a number of questions, regarding the requirement of the state to transparently state its reasoning when screening a project out at Stage 1, and importantly also the ability to consider mitigation that was built-in to the design of a project, i.e., 'best practice' to be considered at Stage 1 screening of a project.

1.5 Statement of Authority

Flynn Furney Environmental Consultants have more than 20 years of experience in ecological surveying and management. The company has detailed knowledge on the principles and implementation of both Irish and European environmental legislation. FFEC has worked closely with statutory bodies including the National Parks and Wildlife Service and Waterways Ireland on habitat management and protection projects. Other expertise includes Ecological Impact Assessment, Habitat and Floral Surveys, Bird Surveying, Bat Surveying, Fish and Waterways surveys.

The surveying and reporting were carried out by Billy Flynn, Jennifer McAree and Lauren Woods.

2 Description of Proposed Development

2.1 Proposed Development

The development will consist of the provision of a total of 109no. residential units along with provision of a crèche. Particulars of the development comprise as follows:

- (a) Site excavation works to facilitate the proposed development to include excavation and general site preparation works.
- (b) The provision of a total of 65no. residential dwellings which will consist of 23no. 2 bed units, 26no. 3 bed units and 16no. 4 bed units.
- (c) The provision of a total of 44no. duplex apartment units consisting of 8no. 1 bed units, 18no. 2bed units and 18no. 3 bed units.
- (d) Provision of a two storey creche with associated parking, bicycle and bin storage.
- (e) Provision of associated car parking at surface level via a combination of in-curtilage parking for dwellings and via on-street parking for the creche and duplex apartment units.
- (f) Provision of electric vehicle charge points with associated site infrastructure ducting to provide charge points for residents throughout the site.
- (g) Provision of associated bicycle storage facilities at surface level throughout the site and bin storage facilities.
- (h) Utilising the existing access point from Loreto Road with associated works to provide for internal access roads, footpaths and associated site works.
- (i) Provision of internal access roads and footpaths and associated works to include for regrading of site levels as required.

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(j) Provision of residential communal open space and public open space areas to include formal play areas along with all hard and soft landscape works with public lighting, planting and boundary treatments to include boundary walls, railings & fencing.

(k) Internal site works and attenuation systems which will include for provision of a hydrocarbon and silt interceptor prior to discharge.

(l) All ancillary site development/construction works to facilitate foul, water and service networks for connection to the existing foul via a rising main and provision of a foul pumping station, water connections and ESB network connections.



Figure 2: Overall landscape plan

2.1.1 Wastewater & Stormwater Management

An foul sewer network exists to the north of the development and is connected to the existing pumping station to the north-east of the site. Another rising main, part of the existing foul network on site, runs along the treelines to the east of the site and will join a proposed foul network which will connect the proposed houses to the south-east of the site to the existing network. A pre-connection enquiry has been completed with Uisce Éireann and the joining to the foul network has been deemed feasible.

Stormwater on-site will be managed in a number of ways. To the north of the site there are stormwater twinwalls which will carry stormwater to a number of attenuation tanks. One attenuation tank will have a capacity of 143.7 m³ with a hydrobrake controlling flow at 2L/s. Surface water will discharge to the existing stream. Another 265.3 m³ capacity tank will have a hydrobrake to restrict flow to 14.5 l/s which will discharge to the stream. A third attenuation tank will have a capacity of 203.2 m³. A fourth attenuation tank will have a capacity of 47.4 m³ with a hydrobrake to restrict flow to 2 l/s. This tank will discharge to an existing storm sewer. To the south of the site, there will be a fifth attenuation tank with a capacity of 583.4 m³ with a hydrobrake to restrict flow to 14.5 l/s. This will discharge into an existing open drain. To the south-east of the site. In addition to this, there will be road gullies, manholes, French drains and swales throughout the site. Internal site works and attenuation systems which will include for provision of a hydrocarbon and silt interceptor prior to discharge.

3 Methodology

3.1 Desk Study

A desktop study was carried out as part of this screening process. This included a review of available literature on the site and its immediate environs. Sources of information included the National Parks and Wildlife Service databases on protected sites and species data, and from the Environmental Protection Agency on watercourses.

3.2 Data Used to Carry Out the Assessment

The following sources of data were employed:

- Environmental Protection Agency (EPA) Appropriate Assessment Tool
- EPA Maps (to identify watercourses, hydrology and Natura 2000 site boundaries)
- NPWS protected species database and online mapping
- National Biodiversity Data Centre
- Inland Fisheries Ireland
- An Bord Pleanála's online database

3.3 SPR Model

This assessment was carried out with regard to the source-pathway-receptor (SPR) approach, a standard tool in environmental assessment. The SPR concept in ecological impact assessment relates to the idea that for the risk of an impact to occur, a source is needed (a development site); an environmental receptor is present (a lake); and finally, there must be a pathway between the source and the receptor (a watercourse linking the development site to the lake). Even though there might be a risk of an impact occurring, that does not necessarily mean that it will occur, and even if it does occur, it may not be significant. Identification of a risk means that there is a possibility of ecological or environmental damage occurring, with the level and significance of the impact depending upon the nature and exposure to the risk and the characteristics of the receptor.

In this instance, the most relevant receptors are any relevant Natura 2000 sites with connectivity to the proposed works. These were considered during the desktop study stage of this screening assessment in order to assess the potential for significant effects upon their Qualifying Interests (*QIs*), Sites of Community Importance (*SCIs*) and Conservation Objectives (*COs*). This stage of the process is used to determine whether any of the Natura sites may be 'screened out'. That is, that they can be regarded as not being relevant to the process, having no potential to be significantly affected or impacted upon.

3.4 Field Survey

The field survey was carried out on the 28th of August 2024. Baseline ecological conditions were assessed. Habitats were classified according to Fossitt (2000). Where applicable, the habitat types and species usage were recorded (Smith et al. 2011; Scannell and Synnott, 1987; Wyse Jackson et al. 2016). Habitats were classified and dominant plant species were noted according to the guidelines given by the JNCC (2010) with reference to Smith et al. (2011) & Scannell and Synnott (1987).

4 Results

4.1 Desk Study

4.1.1 Surface Water

The closest WFD river waterbody to the site is the Cavan_010 WFD waterbody (European code: IE_NW_36C020300), locally known as the Cavan 36 river (95 m to the east of the site). This WFD river waterbody achieved an overall 'Poor' status based on the 'Surface Waterbody WFD Status 2016-2021'. The drainage ditch to the north of the site is hydrologically connected to this river. The closest WFD lake waterbody is the Coalpit lake waterbody (European code: IE_NW_36_633) which the Cavan 36 river flows into (2 km to the north of the site). This WFD lake waterbody achieved an overall 'Poor' status based on the 'Surface Waterbody WFD Status 2016-2021'.



The site of the proposed development falls within the Killashandra ground waterbody (European code: IE_NW_G_062) which achieved an overall status of 'Good' based on the 'Ground Waterbody WFD Status 2016-2021'.

Records from the National Biodiversity Data Centre (NBDC) for the sites of proposed works and surrounding area are presented below in Error! Reference source not found..

Several First Schedule and non-First Schedule invasive species were recorded within 1 km of the proposed housing development at Lisdaran on the NBDC database. However, none were recorded within the footprints of the proposed works and none of the species below were recorded during the

field survey.

Table 4: Records of invasive species within 1km of the proposed development (NBDC, 2024)

Invasive Species	Invasiveness	First Schedule	Recorded on Site
Canadian Goose (<i>Branta canadensis</i>)	High	Yes	Within 10 km, exact location not given
Canadian Waterweed (<i>Elodea canadensis</i>)	High	Yes	Within 10k m, exact location not given
Japanese Knotweed (<i>Fallopia japonica</i>)	High	Yes	No
Winter Heliotrope (<i>Petasites fragrans</i>)	Low-Medium	No	No
Common Garden Snail (<i>Cornu aspersum</i>)	Medium	No	Within 10 km, exact location not given
Jenkins' Spire Snail (<i>Potamopyrgus antipodarum</i>)	Medium	No	No
Fallow Deer (<i>Dama dama</i>)		Yes	No

4.2 Field Study Results

The following section describes the habitats found within the proposed project site. Photos of the habitats present are available in **Error! Reference source not found..**

4.2.1 Habitats Description

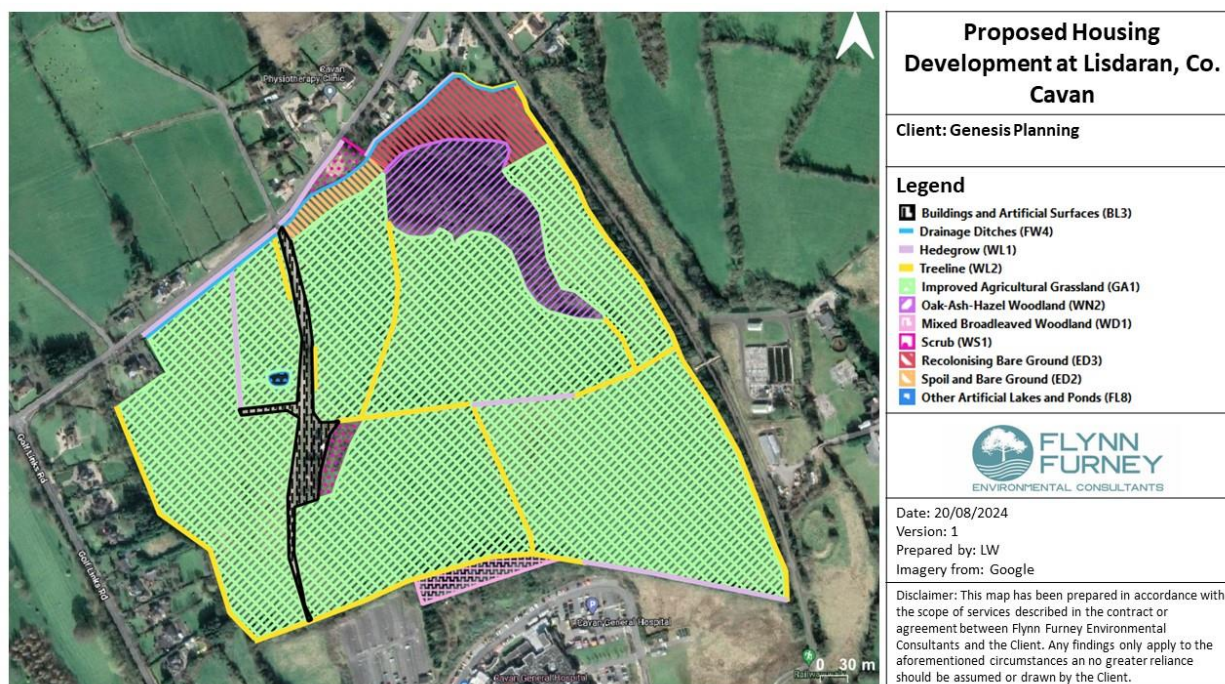


Figure 4: Habitat map of the site and surrounding area

The majority of the proposed development site falls within Improved **Agricultural Grassland (GA1)**, which is dominated by grass species such as Yorkshire Fog (*Holcus lanatus*), Perennial Rye (*Lolium perenne*), and Annual Meadow Grass (*Poa annua*). Other species present include Lesser Stitchwort (*Stellaria graminea*), Meadow Vetchling (*Lathyrus pratensis*), Creeping Buttercup (*Ranunculus repens*), Ribwort Plantain (*Plantago lanceolata*), Dandelion (*Taraxacum officinale*), Docks (*Rumex spp.*), Meadow Buttercup (*Ranunculus acris*), Meadowsweet (*Filipendula ulmaria*), Common Rush (*Juncus effusus*), Flowering Rush (*Butomus umbellatus*), Selfheal (*Prunella vulgaris*), Thistles (*Cirsium spp.*), and Nettles (*Urtica dioica*). Species composition varied across different fields on-site, with some fields cut at the time of the survey and uncut sections of grassland to the north.

Hedgerows (WL1) and **Treelines (WL2)** were present throughout the site. The treeline along the southern boundary was dominated by Ash (*Fraxinus excelsior*), with a mix of Sycamore (*Acer*

pseudoplatanus), Grey Willow (*Salix cinerea*), Wych Elm (*Ulmus glabra*), Blackthorn (*Prunus spinosa*), Holly (*Ilex aquifolium*), Hawthorn (*Crataegus monogyna*), Crab Apple (*Malus sylvestris*), Ivy (*Hedera helix*), Bramble (*Rubus fruticosus*), Dog Rose (*Rosa canina*), Hogweed (*Heracleum sphondylium*), Nettles, Field Thistle (*Cirsium arvense*), Creeping Buttercup, Bush Vetch (*Vicia sepium*), Herb Robert (*Geranium robertianum*), Hart's Tongue Fern (*Asplenium scolopendrium*), Ribwort Plantain, Hoary Willowherb (*Epilobium parviflorum*), Docks, Hawkbit (*Leontodon spp.*), Selfheal, and mosses. The treelines between fields were dominated by Ash, with a mixture of Hawthorn, Blackthorn, Holly, Willow, and Bird Cherry (*Prunus padus*) in one area. Two mature lines of Oak (*Quercus robur*) and Sycamore were present along the existing road for site access. The hedgerows contained similar species but were not dominated by mature Ash like the treeline habitats. A hedgerow of Leylandii (*x Cuprocyparis leylandii*), Privet (*Ligustrum spp.*), and Red Flowering Currant (*Ribes sanguineum*) was located between the drainage ditch to the north of the site and existing houses nearby.

A significant area of mature **Oak-Ash-Hazel Woodland (WN2)** is located on the Lisdaran site, outside the proposed development area. Holly, Hawthorn, and Beech (*Fagus sylvatica*) are scattered throughout, with patches of Scrub (WS1) mainly at the woodland edges. Noteworthy examples of mature oaks are found in the northern and southwestern corners of the woodland. A (Mixed) Broadleaved Woodland (WD1) to the south of the site contains a mixture of Ash (suffering from Ash Dieback), Hawthorn, Holly, Scots Pine (*Pinus sylvestris*), and Sycamore. This woodland had a dense carpet of Ivy and Bramble, with occasional Honeysuckle (*Lonicera periclymenum*). Scrub occurred in various sections of the site, including a small area dominated by Gorse (*Ulex europaeus*) and Bramble in the northwest corner of one field. Another small scrub section contained Willow, Bramble, Great Willowherb (*Epilobium hirsutum*), Meadowsweet, and Bindweed (*Convolvulus arvensis*).

A **small pond (FL8)** is located in the field northwest of the existing house and barn, though it is not within the development area. The access road will pass close to it. Aquatic vegetation in the pond is dominated by Bulrush (*Typha latifolia*) and Unbranched Bur-reed (*Sparganium emersum*). A **Drainage Ditch (FW4)** was found to the north of the site, where the instream vegetation is dominated by Duckweed (*Lemna minor*). The banks of the ditch supported species such as Meadowsweet, Marsh

Thistle (*Cirsium palustre*), Hairy Willowherb (*Epilobium hirsutum*), Watermint (*Mentha aquatica*), and Rosebay Willowherb (*Chamerion angustifolium*). Tutsan (*Hypericum androsaemum*) and Montbretia (*Crocsmia x crocosmiiflora*) were also recorded at various locations along the ditch.

South of the drainage ditch, an area of **Spoil and Bare Ground (ED2)** and **Recolonising Bare Ground (ED3)** was observed. These habitats included a mixture of grasses, Marsh Thistle, Docks, Reed Canary Grass (*Phalaris arundinacea*), Marsh Woundwort (*Stachys palustris*), and Nettles near the ditch. This area appeared to have been reseeded following disturbance, with some parts successfully recolonised while others remained mostly bare ground.

The **Buildings and Artificial Surfaces (BL3)** habitat in the area consisted of existing tarmacked roads and houses located outside the proposed development zone.

4.2.2 Annex I Habitats

Annex I habitats, identified as of utmost conservation importance under the Habitats Directive, receive legal protection within the Irish framework through the transposition of the Directive into national law, primarily under the European Communities (Natural Habitats) Regulations (S.I. 94 of 1997), which mandates the designation and conservation of Special Areas of Conservation to safeguard these critical habitats. **Table 5** assesses whether any habitat found during ground surveys has links with any of these habitat types.

Table 5: Summary of the habitats recorded within the proposed project site

Habitat Recorded	Fossitt Code	Links with Annex I Habitats
Recolonising Bare Ground	ED3	No
Spoil and Bare Ground	ED2	No
Improved Agricultural Grassland	GA1	No

Treelines	WL2	No
Hedgerows	WL1	No

4.2.3 Significance of Habitats

The majority of the habitat types found surrounding the site are those associated semi-urban. There are no habitats listed on Annex I of Directive 92/43/EEC (Habitats Directive) within the survey area. No species of rare, threatened or protected species of plants as per the Red Data List (Wyse Jackson et al., 2016) and no species listed on the Flora (Protection) Order 2022 were present.

4.2.4 Avifauna

A dedicated bird survey was not carried out, however, during the survey the majority of birds seen and heard were typical of species within a semi-urban setting. One bird (Cormorant) protected under the EU Birds Directive (2009/147/EC) was observed flying above the site however, no birds protected under the EU Birds Directive (2009/147/EC), or the Habitats Directive (Council Directive 92/43/EEC) were recorded within the footprint of the proposed development. Other species recorded are outlined below.

Table 6: Birds recorded during the field surveys.

Bird Species	Approximate Location	Activity	Conservation Status
Goldfinch (<i>Carduelis carduelis</i>)	640949.57,806325.68	Flock flying south	Green
House Martin (<i>Delichon urbicum</i>)	640962.23,806327.03	Feeding over fields	Amber
Long-tailed Tit (<i>Aegithalos caudatus</i>)	641117.26,806156.63	Song heard nearby	Green
Wren (<i>Troglodytes troglodytes</i>)	641162.91,806166.13	Call heard in nearby vegetation	Green
Robin (<i>Erithacus rubecula</i>)	641168.56,806336.98	Song heard nearby	Green
	641039.52,806461.39		

Mistle Thrush (<i>Turdus viscivorus</i>)	641201.10,806386.25	Flying across field	Green
Raven (<i>Corvus corax</i>)	641035.45,806483.65	Flying north	Green
Cormorant (<i>Phalacrocorax carbo</i>)	641011.27,806586.03	Flying south-east	Amber
Buzzard (<i>Buteo buteo</i>)	641094.264,806667.612	Heard in distance	Green
Grey Heron (<i>Ardea cinerea</i>)	640904.43,806323.02	Flying north-east	Green
Swallow (<i>Hirundo rustica</i>)	640921.04,806508.91	Several observed flying above	Amber
Starling (<i>Sturnus vulgaris</i>)	640924.31,806504.84	Flying west	Amber

4.2.5 Mammals

Most terrestrial mammals enjoy some level of legal protection in Ireland, with 13 listed on the EU Habitats Directive, 22 on national legislation in the Republic of Ireland, and 18 on national legislation in Northern Ireland. It is an offence to intentionally kill or injure a protected species or to wilfully interfere with or destroy the breeding site or resting place of a protected wild animal. Evidence of several mammals was observed at the site. Evidence of foxes (*Vulpes vulpes*) was recorded at 641160.57,806170.57 ITM (fox prints on ground) and at 641160.57,806170.57 ITM (fox scat). Evidence of badgers (*Meles meles*) were observed at several locations as outlined in the table below.

Table 7: Evidence of badgers on-site

Evidence of Badger	Location (ITM)
Active sett (4 entrances)	641111.59,806510.65
Scrapes	641132.48,806281.01
	641125.42,806298.28

	641119.53,806313.59
	641103.05,806315.16
	641085.39,806310.05
	641068.12,806310.45
	641046.93,806306.52
Scat	641186.24,806334.78
Print	641197.12,806174.94

Other evidence of mammals on-site included trails at 641151.02,806261.38 ITM, 641029.91,806504.27 ITM and 640996.35,806512.58 ITM. However, there was no evidence of Otter (*Lutra lutra*) recorded during field surveys.

4.2.6 Chiroptera

In Ireland, nine species of bat are currently known to be resident. These are classified into two Families: the *Rhinolophidae* (Horseshoe bats) and the *Vespertilionidae* (Common bats). The Lesser Horseshoe Bat (*Rhinolophus hipposideros*) is the only representative of the former Family in Ireland. All the other Irish bat species are of the latter Family and these include three pipistrelle species: Common (*Pipistrellus pipistrellus*), Soprano (*P. pygmaeus*) and Nathusius' (*P. nathusii*), four Myotids: Natterer's (*Myotis nattereri*), Daubenton's (*M. daubentoniid*), Whiskered (*M. mystacinus*), Brandt's (*M. brandtii*), the Brown Long-eared (*Plecotus auratus*) and Leisler's (*Nyctalus leisleri*) bats. The proposed works are largely planned for grassland with hedgerows bordering some sections of the site. Bat surveys included a visual inspection during daylight hours of trees within the area and an assessment for roosting bats. The

hedgerows on site have low to moderate suitability bat habitat as it does not provide enough space, shelter, protection to be used by a large number of bats on a regular basis. Most trees did not contain obvious holes, cracks or cavities and many trees were not large dead trees covered with mature ivy (*Hedera helix*). However, there was one tree at approx. 641046.06,806455.34 ITM which was recorded as having high bat roosting potential. An assessment of the sites suitable for bat roosting and foraging was carried out based on Colins (2023). The site was noted as having overall low to moderate roosting habitat and moderate to high commuting and foraging habitat.

4.2.7 Lepidoptera

The Marsh Fritillary (*Euphydryas aurinia*) is listed in Annex II of the Habitats Directive (Council Directive 92/43/EEC), which includes species of community interest whose conservation requires the designation of Special Areas of Conservation (SACs). A record occurred within 10 km of the proposed development. No suitable habitat was observed on site.

4.2.8 Invasive Species

Ireland is a signatory of a number of international treaties and conventions, including the Convention on Biological Diversity and most notably Regulation (EU) 1143/2014 on the prevention and management of the introduction and spread of invasive alien species (The IAS Regulation). Such legal instruments require the Irish Government to address issues of invasive alien species. This has been implemented through national legislation via the Wildlife Acts 1976 and 2000 (as amended) and further regulated through the European Union (Invasive Alien Species) Regulations 2024. These regulations outline the legal implications associated with alien invasive species and the steps required for early eradication, management and containment. Article 17 in particular sets out restrictions on particular species of national concern, which are listed in the First Schedule of the regulations.

Under Article 17 of the Regulations, it is an offence to:

- Plant, disperse, allow dispersal or cause the spread of invasive species.
- Keep the plants in possession for the purpose of sale, breeding, reproduction,

- propagation, distribution, introduction or release.
- Keep anything from which the plant can be reproduced, or propagated from, without a granted licence.

Invasive species can have significant and detrimental impacts on Natura 2000 sites, which are designated to protect habitats and species of European importance. The introduction and spread of invasive species can disrupt ecosystems, threaten native biodiversity, and compromise the achievement of conservation objectives. No First Schedule invasive species were recorded on-site. However, several non-First Schedule species were observed. The exact location of these invasive species can be seen below.

Table 8: Location of invasive species on-site

Invasive Species Recorded On-Site	Invasiveness	Location (ITM)
Montbretia (<i>Crocsmia X crocosmiflora</i>)	Low risk of impact (NBDC, 2024)	641090.406,806665.429
Hollyberry Cotoneaster (<i>Cotoneaster Bullatus</i>)	Not assessed by NBDC (2024)	641256.59,806152.73
		641135.527,806162.602
Franchet's Cotoneaster (<i>Cotoneaster franchetii</i>)	Not assessed by NBDC (2024)	641116.757,806156.715

5 Identification of the European Sites within the Likely Zone of Influence

The following methodology was used to establish which European Sites are within the Likely Zone of Influence of the proposed development:

- The most recent Geographic Information System (GIS) spatial datasets for designated European sites and water catchments were acquired from the National Parks and Wildlife Service (NPWS) website (www.npws.ie) and the Environmental Protection Agency (EPA) website (www.epa.ie). These datasets were employed to discern European Sites susceptible to potential impacts from the Proposed Development.
- An investigation into the work site characteristics and the risks to the environment with consideration for the potential zone of influence was carried out to determine all probable pathways and risks to site conservation.
- A source-pathway-receptor model was utilised to identify European Sites within a 15 km radius of the development site, providing contextual information on these sites based on site-specific conservation objectives. The assessment also considered European Sites beyond the 15 km radius, employing a source-pathway-receptor approach to identify potential impacts. Hydrological catchment mapping facilitated the evaluation of potential hydrological connectivity between the Proposed Development site and European Sites.
- For Special Protection Areas (SPAs), lacking specific European or Irish guidance, the 'Assessing Connectivity with Special Protection Areas (SPA)' guidance from Scottish Natural Heritage (SNH) (2016) was consulted.

All pertinent European Sites are considered, identifying those within the likely zone of influence. This screening assessment evaluates direct and indirect impacts of the Proposed Development, considering size and scale, land-take, distance, resource requirements, emissions, excavation, transportation, and construction/operation duration. Site synopses and conservation objectives from the NPWS website were reviewed as of the report's preparation.

5.1 Works, Site Characteristics and Risks to the Environment

The principal risks posed from the project relate to surface water discharge from the site during the proposed works that may impact the water quality of the receiving environment, leading to likely significant effects (LSE) on any QIs or Site(s) of Community Importance (SCI) species.

Table 9: Potential Impacts, Effects and their zone of influence

Potential Impact and Effect	Description	Zone of Influence
Construction/Installation of Infrastructure and potential QI habitat loss.	The permanent loss of the habitats is present in the footprint of the proposed works.	Lands within the proposed footprint of works and access routes.
Changes in water quality and quantity/distribution resulting in habitat loss or degradation.	Reduction in the quality of retained habitat or loss of habitat from surrounding areas as a result of surface water or groundwater pollution.	Changes in surface water quality within the local water courses or surface water bodies including the rivers in close proximity associated with the proposed development.
Noise, dust, vibration and or human presence resulting in disturbance.	Direct impact on species reducing their ability to forage or breed.	Within or adjacent to the works area for birds.
Invasive Species	The spread of invasive species within designated sites as a result of this project.	Assessed based on the presence of invasive species stands within or surrounding the works area.

5.2 Designated Sites within the Zone of Influence (Zoi)

Designated Sites within the zone of influence are outlined below. Two SACs and two SPAs were identified to occur within the Zoi.

Table 10: Designated Sites within the Zoi

Site Name and Code	Qualifying Interests	Distance from Site	Conservation Objectives	Likely Impact Determination
Lough Oughter and Associated Loughs SAC [000007]	- Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation [3150] - Bog woodland [91D0] <i>Lutra lutra</i> (Otter) [1355]	The direct distance between the site and this SAC is 1.3 km and the hydrological distance via the Cavan 36 river (Cavan_010 WFD	Detailed conservation objectives for this site were reviewed as part of the assessment and are available at www.npws.ie	There is no direct overlap between Lough Oughter and Associated Loughs SAC and this site. No QI habitats or species were recorded on-site during field surveys. However, there is indirect connectivity to this SAC via the drainage ditch which runs along the northern boundary of the development site. This drainage ditch flows east towards the Cavan 36 river which later joins Lough Oughter and Associated Loughs SAC. This site will be considered further.

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		waterbody) is 2.2 km		
Lough Oughter Complex SPA [004049]	- Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] - Whooper Swan (<i>Cygnus cygnus</i>) [A038] - Wigeon (<i>Anas penelope</i>) [A050] - Wetland and Waterbirds [A999]	The direct distance between this site and this SPA is 1.6 km and the distance via the Cavan 36 river (Cavan_010 WFD waterbody) is 4.2 km	Detailed conservation objectives for this site were reviewed as part of the assessment and are available at www.npws.ie	There is no direct overlap between Lough Oughter Complex SPA and the site. While no SCI bird species were recorded on-site, a Cormorant (<i>Phalacrocorax carbo</i>) was observed flying east over the site. However, there is indirect connectivity to this SPA via the drainage ditch which runs along the northern boundary of the development site. This drainage ditch flows east towards the Cavan 36 river which later joins Lough Oughter complex SPA. This site will be considered further.
Upper Lough Erne SAC	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion,	The direct distance between this	Detailed conservation objectives for this	There is no direct overlap between Upper Lough Erne SAC and the site. No QI habitats or species were recorded during field

[UK9020071]	<i>Alnion incanae</i>, <i>Salicion alvae</i>) • <i>Lutra lutra</i> (Otter) • Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>-type vegetation • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	site and this SAC is 12.5 km and the distance via the Cavan 36 river (Cavan_010 WFD waterbody) is 25.4 km	site were reviewed as part of the assessment and are available at www.daera-ni.gov.uk	surveys. However, there is indirect connectivity to this SAC via the drainage ditch which runs along the northern boundary of the development site. This drainage ditch flows east towards the Cavan 36 river which eventually flows into Upper Lough Erne SAC. The substantial buffer distance between the development site and this SAC is too great for significant impacts to occur. This site will not be considered further.
Upper Lough Erne SPA [UK0016614]	• Whooper Swan (<i>Cygnus cygnus</i>)	The direct distance between this site and this SPA is 12.6 km and the distance via	Detailed conservation objectives for this site were reviewed as part of the assessment and are available at	There is no direct overlap between Upper Lough Erne SPA and the site. No SCI bird species were recorded during field surveys. However, there is indirect connectivity to this SAC via the drainage ditch which runs along the northern boundary of the development site. This drainage ditch flows

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		the Cavan 36 river (Cavan_010 WFD waterbody) is 25.4 km	www.daera-ni.gov.uk	east towards the Cavan 36 river which eventually flows into Upper Lough Erne SPA. The substantial buffer distance between the development site and this SPA is too great for significant impacts to occur. This site will not be considered further.
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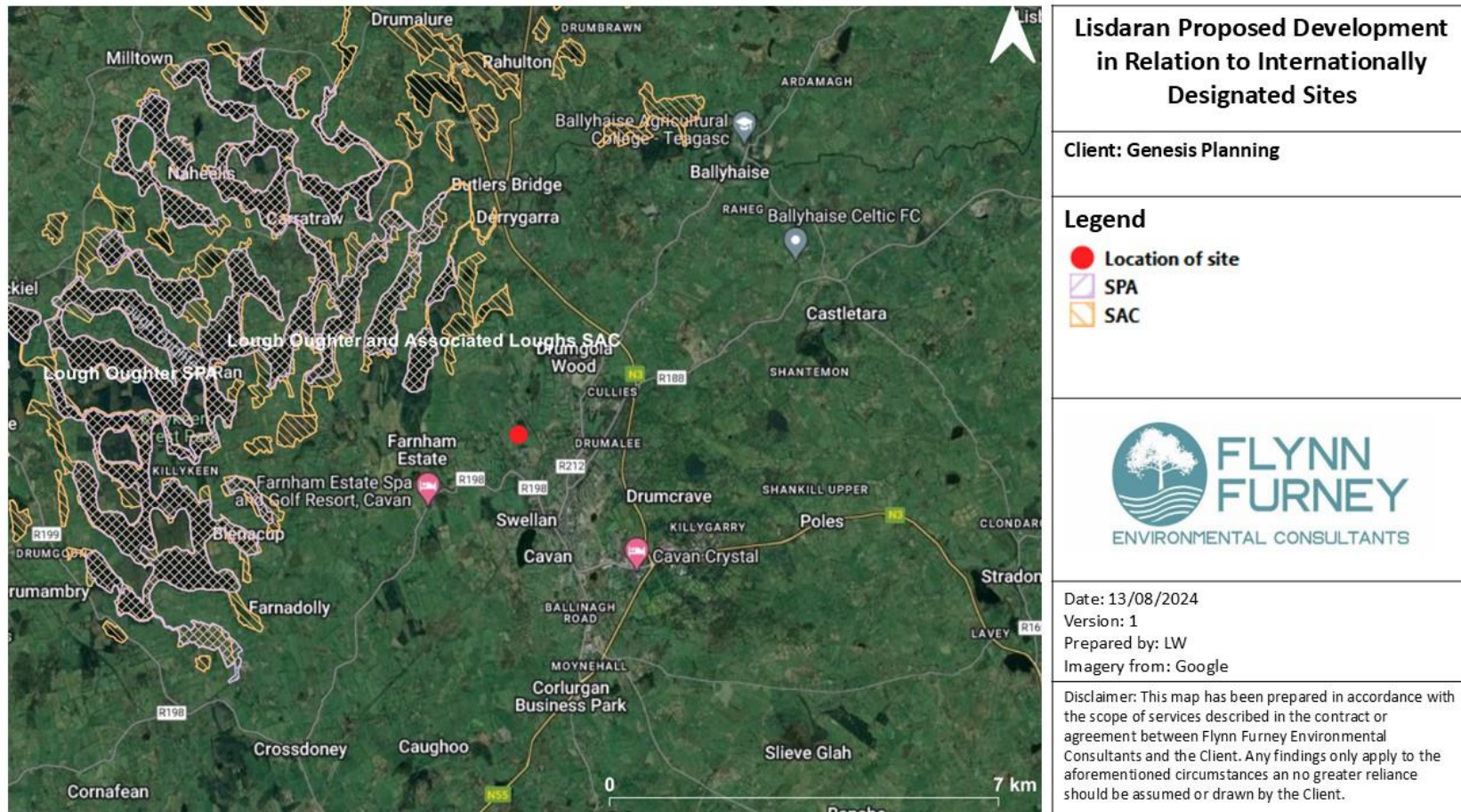


Figure 5: Designated sites in close proximity to the proposed development.

5.3 European Sites with the Potential to be Significantly Affected by the Proposed Development

Initial screening has identified two European sites requiring further consideration in this assessment. All remaining Natura 2000 sites are at a great remove and have no identifiable connectivity with the proposed development. Given the nature and scale of the development, there is no known vector, pathway, or conduit for impacts between the proposed development and the remaining Natura 2000 sites. Therefore, the proposed development is considered extremely unlikely (NRA, 2009) to have any significant direct or indirect impacts on the remaining Natura 2000 sites and they are not considered further in this screening assessment.

5.3.1 Lough Oughter and Associated Loughs SAC

Lough Oughter and Associated Loughs SAC, located in County Cavan, is a protected area featuring a network of interconnected lakes, rivers and wetlands. The site is renowned for its natural eutrophic lakes, which support a rich variety of species but are at risk of nutrient over-enrichment. The SAC also includes areas of bog woodland, a rare and valuable habitat in Ireland. Conservation objectives are aimed at preserving water quality, protecting the health of aquatic ecosystems, and ensuring the long-term survival of species like the Otter, which rely on these diverse and sensitive habitats.

The potential impacts to Lough Oughter and Associated Loughs SAC are assessed below.

Table 11: Assessment of potential impacts to Lough Oughter and Associated Loughs SAC

Assessment of Potential for Impacts on qualifying interests of Lough Oughter and Associated Loughs SAC			
Qualifying Interest/ Conservation Objective	Relevant to Proposed Works	Potential for Impacts	Rationale
- Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation [3150] - Bog woodland [91D0] <i>Lutra lutra</i> (Otter) [1355]	Yes	Yes	The natural eutrophic lakes within the SAC, which support <i>Magnopotamion</i> and <i>Hydrocharition</i> type vegetation, are sensitive to nutrient levels. Increased runoff from the development could lead to nutrient over-enrichment, resulting in hypertrophic conditions. This could cause excessive algal growth, reduced oxygen levels, and a decrease in species richness, thus compromising the health of the lakes and affecting species dependent on these habitats. The anticipated increase in traffic and road use associated with the development could lead to higher levels of diffuse source pollution, as surface water drainage outfalls directly to the

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			adjacent watercourse. Pollutants such as oils, heavy metals, and other contaminants may be carried into nearby watercourses and eventually into the SAC. This increase in pollution could negatively impact the Otter and other species that rely on the quality of their aquatic environment. No impacts are predicted to the bog woodland habitat as the distance between the bog woodland and the site is too great for significant impacts to occur. Due to the large scale and long duration of the proposed development, impacts cannot be ruled out.
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5.3.2 Lough Oughter Complex SPA

The Lough Oughter Complex SPA, located in County Cavan, is a designated Special Protection Area known for its extensive wetlands, lakes, and islands. This site is vital for supporting populations of important bird species, particularly during the breeding and wintering seasons. The SPA provides critical habitat for species such as the Whooper Swan, which depend on the area's rich feeding grounds and safe roosting sites. Conservation objectives focus on maintaining the ecological integrity of these wetlands, safeguarding bird populations, and ensuring that human activities do not disturb the sensitive avian habitats.

Table 12: Assessment of potential impacts to Lough Oughter Complex SPA

Assessment of Potential for Impacts on qualifying interests of Lough Oughter Complex SPA			
Qualifying Interest/ Conservation Objective	Relevant to Proposed Works	Potential for Impacts	Rationale
- Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] - Whooper Swan (<i>Cygnus cygnus</i>) [A038] - Wigeon (<i>Anas penelope</i>)	Yes	Yes	The wetlands surrounding the Lough Oughter Complex SPA consist of reed beds, riparian woodlands, and wet grassland habitats. These environments play a crucial role in supporting protected species and helping to control pollution. However, they face potential threats from issues such as:

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[A050] Wetland and Waterbirds [A999]			- Eutrophication - Habitat loss Any temporary decrease in water quality locally may result in this species avoiding the site. Significant decreases in water quality would affect aquatic prey and in turn effect these protected species. Either through prey reduction or contamination. Due to the large scale and long duration of the proposed development and for the reasons outlined above, impacts cannot be ruled out.
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6 Article (6)(3) Screening Assessment

This Screening assessment questionnaire (EC, 2001) is used to assess whether this project has the potential to impact upon Natura 2000 sites. The consideration criteria of potential for impacts on Natura 2000 sites are detailed below.

This report excluded any direct impacts or pathways for impacts on all but two Natura 2000 sites. Therefore, it was considered that no further assessment was necessary for any other sites. Due to the potential for impacts on the Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA required further assessment.

6.1 Article 6(3) Assessment Criteria

6.1.1 Identification of Potential Impacts

The proposed development at Lisdaran will occur on a site that is hydrologically connected to the Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA. Therefore, impacts upon the SAC and SPA arising from the construction and operation of this proposed development cannot be ruled out. Only those features of the development that have the potential to affect the integrity and conservation objectives of the identified Natura 2000 sites and protected species have been considered. Several factors were examined at this stage and dismissed or carried forward for Appropriate Assessment as relevant. The following areas were examined about potential impacts from the proposed development on the Natura 2000 sites identified:

- Degradation of water quality in designated areas caused by pollution from surface water runoff during site preparation and construction activities.
- Post-construction decline in water quality due to increased impermeable surfaces, leading to higher surface runoff. This is accompanied by elevated surface pollution from traffic and other human activities during the operational phase.
- Cumulative impacts from other existing or proposed plans and developments.

6.2 Description of Likely Changes to the Natura 2000 Sites

6.2.1 Deterioration in Water Quality in Designated Areas During Construction

The proposed works at Lisdaran will involve the excavation of soil and the pouring of concrete for foundations and other hard surfaces. If suitable mitigation measures are not implemented during both the construction and operational phases, there is a risk that water quality in nearby drains and adjacent roadworks, as well as in designated downstream receptors, could be negatively affected. Potential direct impacts include pollution of the water with silt, oil, cement, fuel, and hydraulic fluid during construction, which would degrade the habitat of protected species by reducing water quality. These pollutants would also have a toxic effect on the aquatic ecosystem, directly impacting certain species and their food supplies. Increased siltation could lead to the smothering of fish eggs, higher mortality rates among fish of all ages, a reduction in available food, and obstacles to fish movement. Pollution from hydrocarbons, cement, and concrete during construction could also have a significant negative impact on fish and aquatic invertebrate populations. An increase in vehicles on the road network due to traffic entering and leaving the site during the construction phase could result in higher levels of siltation and pollutants entering watercourses if proper access routes are not provided.

6.2.2 Changes During the Operational Phase

Increased vehicular traffic is anticipated as a consequence of the proposed development during its operational phase. The rise in impermeable surface area will reduce local groundwater recharge and increase surface water runoff, which could allow vehicle by-products to enter waterways unless suitable SuDS measures are put in place. This issue is particularly concerning during periods of heavy rainfall, which are expected to become more frequent in the coming years. Increased runoff on-site, due to the increase in the total area of impermeable surfaces, will also contribute to higher levels of pollutants entering waterways. Impervious surfaces like roads, car parks, and rooftops prevent rain and snowmelt from soaking into the ground, causing rapid runoff in abnormally large volumes, often with increased erosive potential and higher

temperatures. Additionally, other approved developments on the site will exacerbate the cumulative impacts of these factors. Urbanisation of this area increases both the variety and quantity of pollutants carried into streams, rivers, and lakes. These pollutants include:

- Sediment
- Oil, grease, and toxic chemicals from vehicles (lubricants, fuels, exhaust particulates)
- Pesticides and nutrients from lawns and gardens
- Viruses, bacteria, and nutrients from pet waste and faulty septic systems
- Road salts
- Heavy metals from roof shingles, motor vehicles, and other sources
- Thermal pollution from dark impervious surfaces such as roads and rooftops.

These pollutants can damage fish and wildlife populations, harm native vegetation, contaminate drinking water supplies, and make recreational areas unsafe and unappealing.

The Sustainable Drainage Systems (SuDS) for the development are designed to manage stormwater effectively and reduce potential environmental impacts during the operational phase. The drainage strategy includes attenuation tanks, hydrobrakes, road gullies, manholes, French drains, and swales to regulate water flow and control runoff.

Attenuation tanks are positioned across the site to store excess stormwater and release it at a controlled rate. Hydrobrakes installed within these tanks will regulate discharge to prevent excessive flow into the existing stream, storm sewer, and open drain. The largest attenuation tank, located to the south of the site, has a capacity of 583.4m³ and will restrict flow to 14.5L/s before discharging into an open drain. Other tanks across the site will similarly control discharge rates to prevent overloading local watercourses and drainage infrastructure.

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Additional features such as road gullies, manholes, French drains, and swales will help direct and manage surface water. Hydrocarbon and silt interceptors will be included within the system to filter out pollutants before discharge, ensuring water quality is maintained. Silt interceptors prevent excess nutrient buildup in watercourses by capturing sediment and the nutrients attached to it, particularly phosphorus, before they enter watercourses. As runoff flows through the interceptor, the system slows the water down, allowing heavier particles to settle out while cleaner water continues downstream. Since phosphorus often binds to soil and organic matter, trapping sediment helps reduce the amount of nutrients reaching the water, lowering the risk of eutrophication. By preventing excess nutrients from accumulating, silt interceptors help maintain water quality, protect aquatic ecosystems, and reduce harmful algal blooms.

Overall, these SuDS components will help control runoff, manage water quality, and prevent flooding or erosion during the operational phase of the project.

Given the potential risk of direct and indirect impacts resulting from the site preparation and construction of the proposed development, as well as stormwater overflows during the operational stage that might cause impacts to water quality, appropriate mitigation measures will be necessary to preserve the conservation status of the Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA and their protected habitats and species.

Any anticipated changes to the Natura 2000 site are outlined in the table below, addressing the following criteria: reduction in habitat area, disturbance to key species, habitat or species fragmentation, decline in species density, changes in key conservation value indicators, and the effects of climate change.

Table 13: Likely changes to the Designated Sites

Likely Changes to the Natura 2000 Site	
Reduction of the habitat area	Natural Eutrophic Lakes: Water quality in the Cavan 36 River and downstream designated habitats may deteriorate due to

	contamination of local watercourses by silt, nutrients and hydrocarbons from aggregate runoff.
Disturbance to key species	The decline in water quality, as outlined above, during site preparation and construction could adversely impact ecosystems and key species within the Natura site.
Habitat or species fragmentation	Degraded water quality may result in habitat fragmentation for certain species. Wetlands surrounding the SPA and SAC could be affected by: • Eutrophication • Habitat loss due to reduced water quality
Reduction in species density	Otter: A decline in water quality could negatively impact the diet of Otters or lead to additional stresses on this species, potentially affecting their overall health and reproductive success. Whooper Swan: While the potential for direct impacts on this species is low, any temporary decrease in local water quality may result in the Whooper Swan avoiding the site, thereby affecting their habitats. Great Crested Grebe: Although the likelihood of direct impacts on this species is low, a temporary reduction in local water quality may lead to avoidance of the area, which could disrupt their breeding and feeding behaviours. Wigeon: The potential for direct impacts on Wigeon is low; however, any temporary decrease in local water quality may cause this species to avoid the site, potentially affecting their habitat use and population density.

	Waterbirds: There may be possible impacts due to eutrophication and habitat loss, which can degrade feeding and nesting habitats for these birds, leading to further declines in their populations.
Changes in key indicators of conservation value (water quality etc.);	Water quality is the most significant key indicator of conservation value concerning the proposed works, as watercourses are highly effective pathways for the transmission of pollution. The proposed activities may lead to both short-term and long-term impacts on water quality.
Climate change	Increased occurrences of heavy rainfall under future predicted climate scenarios are expected to result in heightened polluted runoff into surrounding drains, owing to the rise in impermeable surfaces.

6.3 Likelihood of Interference with the key relationships that define the structure and function of the Natura 2000 Site as a whole:

Deterioration in Water Quality in Designated Areas During Construction

If suitable mitigation measures are not implemented during the construction and operation of the proposed development, there is a risk of water quality impacts on the agricultural drains near the development site, which could subsequently affect designated downstream receptors.

Given the potential for both direct and indirect impacts arising from the site preparation and construction of the proposed development, effective mitigation measures will be necessary to preserve the conservation status of the Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA and their protected habitats and species.

6.4 Indicators of Significance as a Result of the Identification of Effects

Indicators of significance as a result of the identification of effects as set out below in terms of loss, fragmentation, disruption, disturbance, and changes to the key elements of the site.

Table 14: Indicators of significance

Indicators of Significance	
Loss	Habitat loss is a possibility, with deterioration in water quality in the Cavan River and designated lake habitats resulting from the contamination of local watercourses by silt, hydrocarbons, or aggregate runoff. Additionally, there is potential for an increase in polluted surface runoff during the operational phase. The proposed works may lead to the loss of species of conservation interest due to injury or mortality if appropriate control and prevention measures are not implemented.
Fragmentation	Habitat fragmentation to the SAC is not foreseen as a direct impact but may be an indirect impact due to habitat loss as described above.
Disruption	There is a risk of disturbance to Lough Oughter during the construction phase of this project. Loss of sediments and plant matter to the river is a possibility, and pollution may also arise from hydrocarbons and other contaminants during both the construction and operational phases.
Disturbance	No disturbance impact is predicted.
Changes to key elements of the site (e.g. water quality etc.)	There is potential for impacts on the Lough Oughter Complex SPA and Lough Oughter and Associated Loughs SAC. Implementing best practice construction and silt management techniques during the works and implementing nutrient reduction measures

	for the stormwater overflow could help mitigate the anticipated impacts on key elements of the site.
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6.5 Description of any Likely Significant Impacts or Indeterminate Impacts of the Project on the Natura Sites

Based on an assessment of the likely impacts from the proposed works and a review of their significance concerning the conservation interests of the Lough Oughter Complex SPA and Lough Oughter SAC, significant impacts on the Natura 2000 site have been identified as a result of the proposed development if appropriate measures are not implemented.

Cumulative Impacts

This section evaluates the potential cumulative impacts arising from other significant existing or permitted infrastructure. Cumulative impacts refer to the combined effects of multiple developments or activities on various receptors. It is important to consider the potential cumulative impacts associated with existing and permitted infrastructure within the same water catchments as the proposed development. As part of the Appropriate Assessment, other relevant projects and plans in the region must also be taken into account in addition to the proposed works. This step aims to identify any possible significant in-combination or cumulative effects of the proposed works on the Natura 2000 sites alongside other plans and projects.

Cumulative Plans and Impacts

Future Plans / Other Projects

Cavan County Council's online planning portal (<https://www.eplanning.ie/CavanCC/searchtypes>) was searched for planning applications within this area. Planning permission has been granted in the area for numerous other developments, mostly residential developments and road projects. Some of these include:

1. **Planning no. 01599:** Proposal to build 11 fully serviced two-storey houses, including site development works such as access roads, drainage systems, effluent treatment, water mains, and public lighting.
2. **Planning no. 21601:** Plan to construct a three-storey Medical Centre with extended access roads, parking spaces, drop-off areas, bicycle spaces, and connections to public foul drainage and water systems. A Natura Impact Statement (NIS) was submitted as part of this application.
3. **Planning no. 08618:** A large residential development, comprising 197 units (a mix of apartments, duplexes, terraced, semi-detached, and detached houses), 381 parking spaces, a creche, and 16 serviced sites. The project includes new vehicular access points, footpaths, cycleways, landscaping, and infrastructure works, such as water supply, drainage, and a pumping station. Demolition of an existing two-storey house is also part of the plan.
4. **Planning no. 19236:** A two-phase plan to build a fully serviced, 160-bed, two-storey nursing home, with upgrades to the site entrance, access roads, parking, and the installation of a pumping station connected to public drainage and water services. An NIS was submitted for this project.
5. **Planning no. 23138:** Revised plans for the nursing home development, reducing the number of beds from 160 to 112, with corresponding adjustments to the building layout and associated works.

The cumulative effects of these developments (all within 1 km of the proposed development) must be considered. Multiple sites in the area can affect the SAC and SPA during construction and contribute to increased anthropogenic pollutants and traffic during the operational phase. Given the number of developments on-site, the overall effect is the urbanisation of agricultural land. This urbanisation is linked to a rise in pollutant generation. Increased runoff from the reduction of permeable surfaces facilitates the transport of these pollutants directly into waterways, resulting in non-point source pollution.

6.6 Findings Of Article 6(3) Screening Assessment

Name of project or plan: Proposed Residential Development at Lisdaran, Co. Cavan

Name and location of Natura 2000 Site: Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA, County Cavan.

Description of project or plan:

The development will consist of the provision of a total of 109no. residential units along with provision of a crèche.

Is the project or plan directly connected with or necessary to the management of the site? The project is not directly connected with or necessary to the management of any Natura 2000 sites.

Are there other projects or plans that together with the project or plan being assessed could affect the site (provide details?)

Several other projects were assessed, and those on-site could lead to cumulative effects on protected sites. Multiple developments in this area have the potential to impact the SAC and SPA during construction, as well as contribute to an increase in man-made pollutants and surface runoff afterward if appropriate mitigation measures are not implemented.

Assessment of Significance of Effects

Describe how the project or plan (alone or in combination is likely to affect the Natura 2000 site:

The proposed works at Lisdaran will include soil excavation and the pouring of concrete for foundations and other hard surfaces. Increased vehicular traffic during the construction phase may lead to greater erosion of surfaces, resulting in added siltation in nearby watercourses. The

removal of vegetation and exposure of soil surfaces further heightens this risk. Additionally, there is a concern that rainwater pumped from excavations may contain elevated silt levels. The discharge of other pollutants, such as wash water from concrete trucks, also presents additional risks.

During the operational phase, there will be a general increase in traffic and other anthropogenic pollutants, coupled with a decrease in permeable surfaces, which will elevate the level of polluted surface runoff entering waterways. If suitable mitigation measures are not implemented during the construction and operation of the proposed development, there is a risk that water quality in the drains near the application site, and subsequently in designated downstream receptors, could be negatively affected.

Possible direct impacts include water pollution during construction from silt, oil, cement, hydraulic fluid, and other contaminants, as well as pollution during operation from polycyclic aromatic hydrocarbons (PAHs), heavy metals, volatile organic compounds (VOCs), sediment, and methyl tert-butyl ether (MTBE). Pollution from hydrocarbons, cement, and concrete during construction, along with increased runoff during operation, could significantly harm fish and aquatic invertebrate populations. The increased runoff will transport pollutants directly into waterways, contributing to nonpoint source pollution from multiple new developments.

This pollution would adversely affect the habitats of protected species by degrading water quality, and these substances could have toxic effects on the aquatic ecosystem, impacting specific species and their food sources. Furthermore, increased siltation during both construction and operation may smother fish eggs, raise mortality rates among fish of all ages, reduce the availability of food for fish, and create barriers to fish movement.

Additionally, the construction and operation of a nursing home and housing development on-site will lead to a decrease in permeable ground surfaces and an increase in pollution. It is essential to consider the cumulative impacts of multiple developments, as the area surrounding these

drainage ditches is expected to undergo significant changes in land use in the coming years due to the current number of proposed and approved developments.

6.6.1 Direct impacts upon the Natura 2000 Sites:

If waterways are not sufficiently protected, future impacts may arise due to a high concentration of developments along the watercourse. Both short-term and long-term consequences from polluting materials such as fuels, oils, lubricants, and hydraulic fluids can lead to significant fish kills. These substances can also have toxic effects on the aquatic ecosystem, directly impacting specific species and their food sources. Accidental spills or leaks of oil and other pollutants can significantly affect fisheries, and their persistence in aquatic environments can diminish water quality and ecological value within the river system for several years.

Excavations and exposed soils can result in substantial sediment entering waterways, leading to increased siltation, which may smother eggs, raise fish mortality rates, reduce available food for fish, and obstruct fish movement.

Natural Eutrophic Lakes are a QI of the Lough Oughter SAC. These lakes have nutrient levels that are naturally higher than those of other lakes, resulting in enhanced natural productivity. However, over-enrichment with nutrients—often caused by the use of fertilisers for green spaces within the development or inadequate waste disposal systems—can lead to hypertrophic conditions and a decline in species richness.

6.6.2 Indirect impacts upon the Natura 2000 Site:

Indirect impacts on water quality are predicted as a possibility. Similarly, potential indirect effects on mammals, fish, and birds at these designated sites may occur, particularly if some prey species are negatively impacted by poor water quality.

In conclusion, the impacts on the Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA resulting from the proposed development cannot be completely ruled out. There is

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a risk of losing silt and organic matter and the introduction of pollutants to the SAC and SPA via the Cavan 36 River during the construction phase of the proposed development. Additionally, there is a heightened risk of increased anthropogenic pollution post-construction due to the concentration of developments in the area and the overall reduction in permeable surfaces. Therefore, it is concluded that an Appropriate Assessment (Stage 2) is necessary.

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Appendix 1 NBDC records within 1km of the site

Species name	Record count	Date of last record	Title of dataset	Designation
<i>Erpobdella</i>	4	09/09/2014	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
<i>Glossiphonia</i>	2	30/06/2010	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
<i>Helobdella</i>	2	30/06/2010	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
<i>Hirudinea</i>	1	09/09/2014	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
<i>Tubificidae</i>	5	21/07/2017	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
Barn Swallow (<i>Hirundo rustica</i>)	5	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Black-billed Magpie (<i>Pica pica</i>)	7	31/12/2011	Bird Atlas 2007 - 2011	

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Blackcap (<i>Sylvia atricapilla</i>)	5	31/12/2011	Bird Atlas 2007 - 2011	
Black-headed Gull (<i>Larus ridibundus</i>)	5	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Blue Tit (<i>Cyanistes caeruleus</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	
Bohemian Waxwing (<i>Bombycilla garrulus</i>)	1	31/12/2011	Bird Atlas 2007 - 2011	
Canada Goose (<i>Branta canadensis</i>)	1	31/12/2011	Bird Atlas 2007 - 2011	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland) Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
Chaffinch (<i>Fringilla coelebs</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	
Coal Tit (<i>Periparus ater</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	
Common Blackbird (<i>Turdus merula</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	
Common Bullfinch (<i>Pyrrhula pyrrhula</i>)	5	31/12/2011	Bird Atlas 2007 - 2011	
Common Buzzard (<i>Buteo buteo</i>)	2	31/12/2011	Bird Atlas 2007 - 2011	
Common Chiffchaff (<i>Phylloscopus collybita</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	
Common Coot (<i>Fulica atra</i>)	4	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive

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				>> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Cuckoo (<i>Cuculus canorus</i>)	1	31/07/1972	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.	
Common Grasshopper Warbler (<i>Locustella naevia</i>)	1	31/07/1972	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Kestrel (<i>Falco tinnunculus</i>)	4	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Kingfisher (<i>Alcedo atthis</i>)	2	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Linnet (<i>Carduelis cannabina</i>)	4	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List

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Common Moorhen (<i>Gallinula chloropus</i>)	5	31/12/2011	Bird Atlas 2007 - 2011	
Common Pheasant (<i>Phasianus colchicus</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
Common Pochard (<i>Aythya ferina</i>)	2	29/02/1984	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Raven (<i>Corvus corax</i>)	1	31/12/2011	Bird Atlas 2007 - 2011	
Common Snipe (<i>Gallinago gallinago</i>)	3	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section III Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Starling (<i>Sturnus vulgaris</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation

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				Concern >> Birds of Conservation Concern - Amber List
Common Swift (<i>Apus apus</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Common Whitethroat (<i>Sylvia communis</i>)	2	31/12/2011	Bird Atlas 2007 - 2011	
Common Wood Pigeon (<i>Columba palumbus</i>)	7	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
Corn Crake (<i>Crex crex</i>)	1	31/07/1972	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Eurasian Collared Dove (<i>Streptopelia decaocto</i>)	4	31/12/2011	Bird Atlas 2007 - 2011	
Eurasian Curlew (<i>Numenius arquata</i>)	2	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List

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Eurasian Jackdaw (<i>Corvus monedula</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	
Eurasian Jay (<i>Garrulus glandarius</i>)	1	31/07/1972	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.	
Eurasian Siskin (<i>Carduelis spinus</i>)	2	31/12/2011	Bird Atlas 2007 - 2011	
Eurasian Sparrowhawk (<i>Accipiter nisus</i>)	4	31/12/2011	Bird Atlas 2007 - 2011	
Eurasian Teal (<i>Anas crecca</i>)	2	29/02/1984	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Eurasian Treecreeper (<i>Certhia familiaris</i>)	5	31/12/2011	Bird Atlas 2007 - 2011	
Eurasian Wigeon (<i>Anas penelope</i>)	1	29/02/1984	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Eurasian Woodcock (<i>Scolopax rusticola</i>)	3	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species:

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				EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section III Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
European Goldfinch (<i>Carduelis carduelis</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	
European Greenfinch (<i>Carduelis chloris</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	
European Robin (<i>Erithacus rubecula</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	
Fieldfare (<i>Turdus pilaris</i>)	2	31/12/2011	Bird Atlas 2007 - 2011	
Goldcrest (<i>Regulus regulus</i>)	7	31/12/2011	Bird Atlas 2007 - 2011	
Great Black-backed Gull (<i>Larus marinus</i>)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Great Cormorant (<i>Phalacrocorax carbo</i>)	4	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Great Crested Grebe (<i>Podiceps cristatus</i>)	7	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List

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Great Tit (<i>Parus major</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	
Grey Heron (<i>Ardea cinerea</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	
Grey Wagtail (<i>Motacilla cinerea</i>)	5	31/12/2011	Bird Atlas 2007 - 2011	
Hedge Accentor (<i>Prunella modularis</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	
Hen Harrier (<i>Circus cyaneus</i>)	1	17/09/2021	Birds of Ireland	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Herring Gull (<i>Larus argentatus</i>)	2	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Hooded Crow (<i>Corvus cornix</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	
House Martin (<i>Delichon urbicum</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
House Sparrow (<i>Passer domesticus</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List

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Jack Snipe (<i>Lymnocyptes minimus</i>)	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section III Bird Species
Lesser Black-backed Gull (<i>Larus fuscus</i>)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Lesser Redpoll (<i>Carduelis cabaret</i>)	7	31/12/2011	Bird Atlas 2007 - 2011	
Little Grebe (<i>Tachybaptus ruficollis</i>)	2	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Long-tailed Tit (<i>Aegithalos caudatus</i>)	7	31/12/2011	Bird Atlas 2007 - 2011	
Mallard (<i>Anas platyrhynchos</i>)	5	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
Meadow Pipit (<i>Anthus pratensis</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	
Merlin (<i>Falco columbarius</i>)	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation

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				Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Mew Gull (<i>Larus canus</i>)	2	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Mistle Thrush (<i>Turdus viscivorus</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	
Mute Swan (<i>Cygnus olor</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Northern Lapwing (<i>Vanellus vanellus</i>)	3	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Peregrine Falcon (<i>Falco peregrinus</i>)	1	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species
Redwing (<i>Turdus iliacus</i>)	2	31/12/2011	Bird Atlas 2007 - 2011	
Reed Bunting (<i>Emberiza schoeniclus</i>)	7	31/12/2011	Bird Atlas 2007 - 2011	
Rock Pigeon (<i>Columba livia</i>)	2	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species:

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				EU Birds Directive >> Annex II, Section I Bird Species
Rook (<i>Corvus frugilegus</i>)	7	31/12/2011	Bird Atlas 2007 - 2011	
Sand Martin (<i>Riparia riparia</i>)	5	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Sedge Warbler (<i>Acrocephalus schoenobaenus</i>)	4	31/12/2011	Bird Atlas 2007 - 2011	
Sky Lark (<i>Alauda arvensis</i>)	2	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Song Thrush (<i>Turdus philomelos</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	
Spotted Flycatcher (<i>Muscicapa striata</i>)	3	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Tufted Duck (<i>Aythya fuligula</i>)	2	29/02/1984	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of

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				Conservation Concern >> Birds of Conservation Concern - Amber List
Water Rail (<i>Rallus aquaticus</i>)	1	29/02/1984	The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84.	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
White Wagtail (<i>Motacilla alba</i>)	7	31/12/2011	Bird Atlas 2007 - 2011	
White-throated Dipper (<i>Cinclus cinclus</i>)	3	31/12/2011	Bird Atlas 2007 - 2011	
Whooper Swan (<i>Cygnus cygnus</i>)	2	31/12/2011	Bird Atlas 2007 - 2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Willow Warbler (<i>Phylloscopus trochilus</i>)	6	31/12/2011	Bird Atlas 2007 - 2011	
Winter Wren (<i>Troglodytes troglodytes</i>)	8	31/12/2011	Bird Atlas 2007 - 2011	
Yellowhammer (<i>Emberiza citrinella</i>)	1	31/07/1972	The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972.	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List
Asellus	5	21/07/2017	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	

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Freshwater White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	2	31/12/2020	General Biodiversity Records from Ireland	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex II Protected Species: EU Habitats Directive >> Annex V Protected Species: Wildlife Acts
<i>Gammarus</i>	4	21/07/2017	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
<i>Gammarus duebeni</i>	2	30/06/2010	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
Hart's-tongue (<i>Phyllitis scolopendrium</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Male-fern (<i>Dryopteris filix-mas</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Soft Shield-fern (<i>Polystichum setiferum</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
<i>Planaria</i>	1	21/07/2017	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
Amphibious Bistort (<i>Persicaria amphibia</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Annual Pearlwort (<i>Sagina apetala</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Barren Brome (<i>Anisantha sterilis</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	

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Beech (<i>Fagus sylvatica</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Bittersweet (<i>Solanum dulcamara</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Branched Bur-reed (<i>Sparganium erectum</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Brooklime (<i>Veronica beccabunga</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Butterbur (<i>Petasites hybridus</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Canadian Waterweed (<i>Elodea canadensis</i>)	1	31/12/1999	BSBI tetrad data for Ireland	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Clustered Dock (<i>Rumex conglomeratus</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Common Club-rush (<i>Schoenoplectus lacustris</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Common Duckweed (<i>Lemna minor</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Common Reed (<i>Phragmites australis</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Common Sedge (<i>Carex nigra</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Common Spike-rush (<i>Eleocharis palustris</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Common Spotted-orchid (<i>Dactylorhiza fuchsii</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Creeping Cinquefoil (<i>Potentilla reptans</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	

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Creeping-Jenny (<i>Lysimachia nummularia</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Enchanter's-nightshade (<i>Circaea lutetiana</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
False Fox-sedge (<i>Carex otrubae</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
False-brome (<i>Brachypodium sylvaticum</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Fennel Pondweed (<i>Potamogeton pectinatus</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Fool's-water-cress (<i>Apium nodiflorum</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Goat Willow (<i>Salix caprea</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Ground-elder (<i>Aegopodium podagraria</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Hairy Sedge (<i>Carex hirta</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Hard Rush (<i>Juncus inflexus</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Horned Pondweed (<i>Zannichellia palustris</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Ivy-leaved Duckweed (<i>Lemna trisulca</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Ivy-leaved Toadflax (<i>Cymbalaria muralis</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Japanese Knotweed (<i>Fallopia japonica</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Lesser Pondweed (<i>Potamogeton pusillus</i>)	1	31/12/1999	BSBI tetrad data for Ireland	

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Lesser Spearwort (<i>Ranunculus flammula</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Marsh Foxtail (<i>Alopecurus geniculatus</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Marsh Yellow-cress (<i>Rorippa palustris</i>)	2	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Marsh-bedstraw (<i>Galium palustre</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Marsh-marigold (<i>Caltha palustris</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Meadow Buttercup (<i>Ranunculus acris</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Meadowsweet (<i>Filipendula ulmaria</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Petty Spurge (<i>Euphorbia peplus</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Pink Water-speedwell (<i>Veronica catenata</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Procumbent Pearlwort (<i>Sagina procumbens</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Ramsons (<i>Allium ursinum</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Reed Canary-grass (<i>Phalaris arundinacea</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
<i>Rorippa nasturtium-aquaticum</i> agg.	1	31/12/1999	BSBI tetrad data for Ireland	
Rosebay Willowherb (<i>Chamerion angustifolium</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Silverweed (<i>Potentilla anserina</i>)	1	31/12/1999	BSBI tetrad data for Ireland	

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Small Toadflax (<i>Chaenorhinum minus</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Snowberry (<i>Symphoricarpos albus</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Soft-rush (<i>Juncus effusus</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Spiked Water-milfoil (<i>Myriophyllum spicatum</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Thale Cress (<i>Arabidopsis thaliana</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Thyme-leaved Speedwell (<i>Veronica serpyllifolia</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Water Forget-me-not (<i>Myosotis scorpioides</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Water Mint (<i>Mentha aquatica</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Water-plantain (<i>Alisma plantago-aquatica</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Wilson's Honeysuckle (<i>Lonicera nitida</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Winter Heliotrope (<i>Petasites fragrans</i>)	2	21/12/2017	National Invasive Species Database	
Winter-cress (<i>Barbarea vulgaris</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Wood Avens (<i>Geum urbanum</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Wych Elm (<i>Ulmus glabra</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	
Yellow Water-lily (<i>Nuphar lutea</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Yorkshire-fog (<i>Holcus lanatus</i>)	1	27/06/2015	Irish Vascular Plant Data - Robert Northridge	

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Water Horsetail (<i>Equisetum fluviatile</i>)	1	31/12/1999	BSBI tetrad data for Ireland	
Brimstone (<i>Gonepteryx rhamni</i>)	1	27/05/1977	Distribution Atlas of Butterflies in Ireland 1979 (An Foras Forbartha)	
Silver-washed Fritillary (<i>Argynnis paphia</i>)	1	10/08/2019	Butterflies of Ireland pre-2022	
Small Copper (<i>Lycaena phlaeas</i>)	1	10/08/2019	Butterflies of Ireland pre-2022	
Small Tortoiseshell (<i>Aglais urticae</i>)	1	18/08/2012	Butterflies of Ireland pre-2022	
<i>Glossosomatidae</i>	1	21/07/2017	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
<i>Limnephilidae</i>	1	09/09/2014	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
<i>Rhyacophila</i>	1	21/07/2017	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
Common Darter (<i>Sympetrum striolatum</i>)	1	31/12/1926	Dragonfly Ireland	
Common Earwig (<i>Forficula auricularia</i>)	1	28/08/2005	Grasshoppers, Crickets and Allied Insects (Orthoptera) of Ireland	
Hedgehog Flea (<i>Archaeopsylla erinacei subsp. erinacei</i>)	1	31/01/1900	Fleas (Siphonaptera) of Ireland	
Human Flea (<i>Pulex (Pulex) irritans</i>)	2	31/12/1996	Fleas (Siphonaptera) of Ireland	
<i>Ancistrocerus gazella</i>	1	24/08/1937	Wasps of Ireland	

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Common Carder Bee (<i>Bombus (Thoracomus) pascuorum</i>)	1	10/08/1975	Bee Records for Ireland (BWARS)	
<i>Baetis</i>	5	21/07/2017	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
Firethorn Leaf Miner (<i>Phyllonorycter leucographella</i>)	1	07/09/2014	Moths Ireland	
Bracken Bug (<i>Monalocoris (Monalocoris) filicis</i>)	1	31/10/1893	True Bugs (Heteroptera) of Ireland	
<i>Chironomidae</i>	3	05/09/2013	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
<i>Dicranota</i>	1	21/07/2017	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
<i>Simuliidae</i>	3	09/09/2014	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
Bearded Pawwort (<i>Barbilophozia barbata</i>)	1	31/12/1893	Bryophytes of Ireland	Threatened Species: Critically Endangered
Hill Notchwort (<i>Lophozia sudetica</i>)	1	31/12/1893	Bryophytes of Ireland	Threatened Species: Least concern
Sea Scalewort (<i>Frullania teneriffae</i>)	1	31/12/1893	Bryophytes of Ireland	Threatened Species: Least concern
Two-horned Pincerwort (<i>Cephalozia bicuspidata</i>)	1	31/10/1893	Bryophytes of Ireland	Threatened Species: Least concern

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<i>Ancylus fluviatilis</i>	1	21/07/2017	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
<i>Arion (Carinarion)</i>	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
<i>Arion (Kobeltia)</i>	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Brown Lipped Snail (<i>Cepaea (Cepaea) nemoralis</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
<i>Carychium</i>	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Cellar Snail (<i>Oxychilus (Oxychilus) cellarius</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Clear Glass Snail (<i>Aegopinella pura</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
<i>Cochlicopa</i>	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Common Bithynia (<i>Bithynia (Bithynia) tentaculata</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Common Bladder Snail (<i>Physa fontinalis</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Common Chrysalis Snail (<i>Lauria (Lauria) cylindracea</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Common Garden Snail (<i>Cornu aspersum</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species
Dusky Slug (<i>Arion (Mesarion) subfuscus</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	

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Dwarf Pond Snail (<i>Galba truncatula</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
<i>Euconulus</i>	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Field Slug (<i>Deroceras agreste</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	Threatened Species: Data deficient
Flat Ramshorn (<i>Hippeutis complanatus</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Flat Valve Snail (<i>Valvata cristata</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Great Pond Snail (<i>Lymnaea stagnalis</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Hairy Snail (<i>Trochulus hispidus</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Hedgehog Slug (<i>Arion (Kobeltia) intermedius</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Horny Orb Mussel (<i>Sphaerium corneum</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Jenkins' Spire Snail (<i>Potamopyrgus antipodarum</i>)	1	21/07/2017	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species
Keeled Ramshorn (<i>Planorbis carinatus</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Lake Limpet (<i>Acroloxus lacustris</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
<i>Lymnaea (Stagnicola)</i>	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Marsh Slug (<i>Deroceras laeve</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	

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Marsh Whorl Snail (<i>Vertigo (Vertigo) antivertigo</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	Threatened Species: Vulnerable
Moss Bladder Snail (<i>Aplexa hypnorum</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	Threatened Species: Vulnerable
Nautilus Ramshorn (<i>Gyraulus (Armiger) crista</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Pellucid Glass Snail (<i>Vitrina pellucida</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Pfeiffer's Amber Snail (<i>Oxyloma (Oxyloma) elegans</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
<i>Pisidium</i>	4	05/09/2013	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
Rosy Pea Shell (<i>Pisidium milium</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Rounded Snail (<i>Discus (Gonyodiscus) rotundatus</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Short-ended Pea Mussel (<i>Pisidium subtruncatum</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Smooth Glass Snail (<i>Aegopinella nitidula</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Smooth Jet Slug (<i>Milax gagates</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
<i>Sphaerium</i>	1	15/08/2007	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
Strawberry Snail (<i>Trochulus (Trochulus) striolatus</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	

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Twisted Ramshorn (<i>Bathyomphalus contortus</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Valve Snail (<i>Valvata (Cincinna) piscinalis</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
<i>Vitrea</i>	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Wandering Snail (<i>Radix balthica</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Whirlpool Ramshorn (<i>Anisus (Disculifer) vortex</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	Threatened Species: Vulnerable
White Ramshorn (<i>Gyraulus (Gyraulus) albus</i>)	1	31/12/1911	All Ireland Non-Marine Molluscan Database	
Common Bladder-moss (<i>Physcomitrium pyriforme</i>)	1	31/08/1941	Bryophytes of Ireland	Threatened Species: Least concern
Hair-pointed Grimmia (<i>Grimmia trichophylla</i>)	1	31/12/1908	Bryophytes of Ireland	Threatened Species: Data deficient Threatened Species: Least concern
Slender Haircap (<i>Polytrichum longisetum</i>)	1	31/12/1908	Bryophytes of Ireland	
Variable Crisp-moss (<i>Trichostomum brachydontium</i>)	1	31/12/1908	Bryophytes of Ireland	Threatened Species: Least concern
<i>Porifera</i>	1	09/09/2014	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	
Common Pipistrelle (<i>Pipistrellus pipistrellus sensu stricto</i>)	1	19/06/2016	National Bat Database of Ireland	
Eurasian Badger (<i>Meles meles</i>)	1	31/12/2008	Badger Setts of Ireland Database	Protected Species: Wildlife Acts
Eurasian Red Squirrel (<i>Sciurus vulgaris</i>)	4	12/06/2014	Atlas of Mammals in Ireland 2010-2015	Protected Species: Wildlife Acts

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Fallow Deer (<i>Dama dama</i>)	1	31/12/2008	Deer of Ireland Database	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland) Protected Species: Wildlife Acts
Pine Marten (<i>Martes martes</i>)	4	27/06/2021	Mammals of Ireland 2016-2025	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex V Protected Species: Wildlife Acts
Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	1	19/06/2016	National Bat Database of Ireland	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts

Appendix 2 Pictures of the site

Fig no.	Description	Image
1	Grassland, treelines and hedgerows on-site	

2	Existing buildings outside of the development footprint	
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3	Treeline to the south of the site	
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4	Treeline/ hedgerow to the south of the site		
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5	Grassland to the north-west of the site		
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6	Tree with high bat potential at 641046.06,806455.34 ITM		
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7	Recolonising bare ground habitat	
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8	Drainage ditch to the north of the site with scrub in the background	
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