

**OPW Modular Homes Backweston
Ecological Impact Assessment**



Prepared By:

**Moore Group -
Environmental Services**

**On behalf of:
Office of Public Works**

**Job Number 22161
24 July 2023**



Project Proponent	Office of Public Works
Project	OPW Backweston Modular Homes
Title	OPW Backweston Modular Homes Ecological Impact Assessment


Project Number	22161	Document Reference	22161 OPW Backweston EcIA Rev0	
Revision	Description	Author	Date	
Rev0	Client Review	G. O'Donohoe 	24 July 2023	
Moore Archaeological and Environmental Services Limited				

TABLE OF CONTENTS	PAGE
<u>1. INTRODUCTION</u>	<u>3</u>
<u>2. ASSESSMENT METHODOLOGY</u>	<u>5</u>
2.1. POLICY & LEGISLATION	5
2.1.1. EU HABITATS DIRECTIVE	5
2.1.2. EU BIRDS DIRECTIVE	5
2.1.3. WILDLIFE ACTS 1976 - 2021	6
2.2. SURVEY METHODOLOGY	6
2.2.1. DESK STUDY	6
2.2.2. FIELD STUDY	7
2.2.3. SITE EVALUATION AND IMPACT ASSESSMENT	7
<u>3. PROJECT DESCRIPTION</u>	<u>8</u>
<u>4. EXISTING ENVIRONMENT</u>	<u>12</u>
4.1. DESIGNATED CONSERVATION AREAS	12
4.2. HABITAT DESCRIPTIONS	15
4.1. FAUNA	16
4.1.1. MAMMALS	16
4.1.2. BIRDS	16
<u>5. ASSESSMENT OF IMPACTS</u>	<u>16</u>
5.1. SITE EVALUATION	16
5.2. IMPACT ASSESSMENT	17
5.2.1. DIRECT IMPACTS	17
5.2.2. INDIRECT IMPACTS	17
5.2.3. CUMULATIVE IMPACTS	18
<u>6. CONCLUSIONS</u>	<u>19</u>
<u>7. REFERENCES</u>	<u>19</u>

Appendix 1 TII Evaluation of Habitats

Appendix 2 Site Photos

1. INTRODUCTION

Moore Group was commissioned on behalf of the Office of Public Works to undertake a Habitat Survey and EclA of the site of a proposed new residential development of modular homes at a site at Backweston, Co. Dublin, referred to as the 'Proposed Development'.

This report provides information on ecological features if present within the potential Zone of Influence of the Proposed Development, of particular significance, primarily designated habitats and species, including habitats/species listed in Annex I, II and IV of the EU Habitats Directive, rare flora listed in the Flora Protection Order along with other semi-natural habitats of conservational value.

This report was compiled by Ger O'Donohoe M.Sc. of Moore Group providing information on habitats in the study area. Ger is the principal ecologist with Moore Group and has 30 years' experience in ecological impact assessment. He graduated from ATU Galway in 1993 with a B.Sc. in Applied Freshwater & Marine Biology and subsequently worked in environmental consultancy while completing an M.Sc. in Environmental Sciences, graduating from Trinity College, Dublin in 1999. (He also has over 15 years' experience of carrying out bat surveys and has completed the Bat Conservation Ireland, Bat Detector Workshop which is the standard training for the carrying out of bat surveys in Ireland and follows the Bat Conservation Ireland 'Bat Survey Guidelines' - *Aughney et al., 2008*). In addition, Ger is an active member of the Galway Bat Group and Bat Conservation Ireland, which monitors bat populations in Ireland, and facilitates the education of bat communities to the public.

The following important ecological receptors were considered in planning and designing the project, and in assessing its likely ecological effects:

- Sites with nature conservation designations, including proposed NHAs, the reasons for their designation, and their conservation objectives, where available;
- Annex IV (Habitats Directive) species of fauna and flora, and their breeding sites and resting places, which are strictly protected under the European Communities (Birds and Natural Habitats) Regulations, 2011;
- Other species of fauna and flora which are protected under the Wildlife Acts, 1976-2012;
- '*Protected species and natural habitats*', as defined in the Environmental Liability Directive (2004/35/EC) and European Communities (Environmental Liability) Regulations, 2008, including:
 - Birds Directive – Annex I species and other regularly occurring migratory species, and their habitats (wherever they occur);
 - Habitats Directive – Annex I habitats, Annex II species and their habitats, and Annex IV species and their breeding sites and resting places (wherever they occur);
- Other habitats of ecological value in a national to local context, including rocky habitats in the general area;

- Stepping stones and ecological corridors encapsulated by Article 10 of the Habitats Directive.

The report has been compiled in compliance with the European Communities Legal requirements and follows EPA Draft Guidelines on Information to be contained in an EIAR (EPA, 2022) and on Transport Infrastructure Ireland TII policy and guidance outlined in Section 2.

The European Habitats Directive 92/43/EEC (Article 6) indicates the need for plans and projects to be subject to Habitats Directive Assessment (also known as Appropriate Assessment) if the plan or project not directly connected with or necessary to the management of a Natura 2000 site (which includes SACs and SPAs) but which has the potential to have implications on a site's conservation objectives. These implications can be significant effects either individually or in combination with other plans or projects.

As such, a report for the purposes of Appropriate Assessment Screening was undertaken by Moore Group for the proposed development. This stand-alone report is presented separately as part of the design package for the Project.

The site location is presented in Figure 1 below.

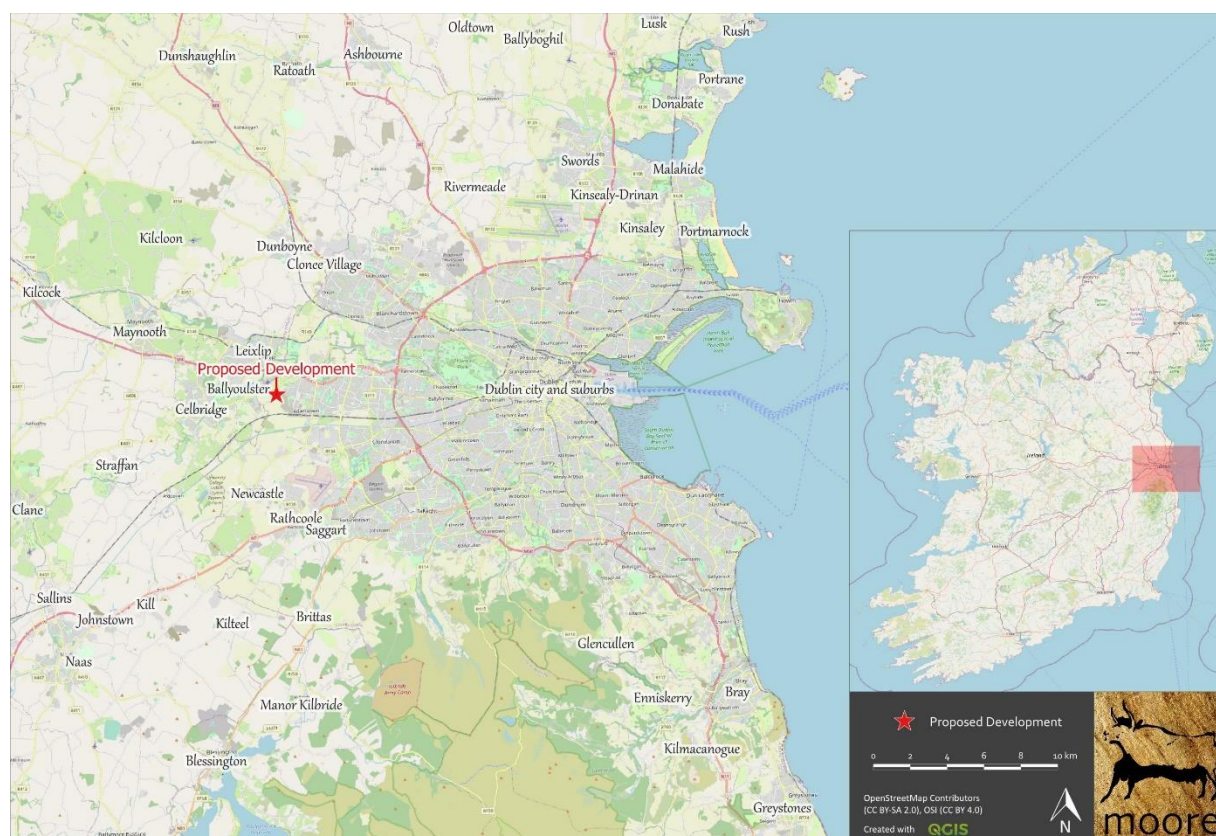


Figure 1. Showing the site location at Backweston, Co. Dublin.

2. ASSESSMENT METHODOLOGY

2.1. POLICY & LEGISLATION

2.1.1. EU Habitats Directive

The “*Habitats Directive*” (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Flora and Fauna) is the main legislative instrument for the protection and conservation of biodiversity within the European Union. The Habitats Directive provides for the designation, conservation and protection of sites comprising Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), collectively forming the Natura 2000 network of ‘European sites’. Article 3 of the Habitats Directive obliges Member States to designate as SACs sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II of the Habitats Directive. Article 10 of the Habitats Directive requires that Member States endeavour to improve the ecological coherence of the Natura 2000 network to manage and conserve features of the landscape which are of major importance for wild fauna and flora, for example ecological corridors or stepping-stones which are important for the migration, dispersal and genetic exchange of species.

Article 6(2) obliges Member States to take the necessary measures to avoid the deterioration of an SAC, or disturbance of a species for which the site is designated. Article 6(3) sets out the requirement for an “Appropriate Assessment”, to ensure that a proposed plan or project will not have an adverse effect on the integrity of a SAC. Article 7 applies the requirements of Article 6(2) and 6(3) of the Habitats Directive to SPAs designated under the Birds Directive.

In addition and separate to the Appropriate Assessment requirements, Article 12 of the Habitats Directive obliges Member States to establish a regime of strict protection for certain species listed in Annex IV of the Directive, wherever they occur within their natural range. The protection for species under Article 12 of the Habitats Directive is not confined to the boundary of SACs. Species listed in Annex IV include the otter and certain species of bat.

2.1.2. EU Birds Directive

The “*Birds Directive*” (European Council (2009) Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds) confers legal protection to all naturally occurring wild birds within the EU territory. Member States are obliged to adopt the necessary measures to maintain the population of bird species, and that includes, in accordance with Article 3, an obligation to create, maintain and manage habitats for birds, and specifically for the species of Bird listed in Annex I of the Directive, Article 4 requires Member States to create SPAs which, by virtue of Article 7 of the Habitats Directive, form part of the Natura 2000 network of European sites and are subject to the Appropriate Assessment requirements under Article 6(3) of the Habitats Directive.

Additionally, Article 5 of the Birds Directive requires that Member States establish a general system of protection for all naturally occurring wild birds within the EU territory, similar to the system of strict protection required for Annex IV species under the Habitats Directive.

2.1.3. Wildlife Acts 1976 - 2021¹

The primary domestic legislation providing for the protection of wildlife in general, and wild birds in particular, and the control of some activities adversely impacting upon wildlife is the Wildlife Act of 1976, as amended. The aims of the Wildlife Act, according to the National Parks and Wildlife Service (NPWS) are “... to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims.” All wild bird species are protected under the Act. The European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) made significant amendments to the Wildlife Acts to ensure consistency with the Habitats and Birds Directives.

2.2. SURVEY METHODOLOGY

2.2.1. Desk Study

The assessment was carried out in three stages, firstly through desktop assessment to determine existing records in relation to habitats and species present in the potential Zone of Influence of the Proposed Development. This included research on the NPWS metadata website, the National Biodiversity Data Centre (NBDC) database and a literature review of published information on flora and fauna occurring in the development area.

Sources of information that were used to collate data on biodiversity in the potential Zone of Influence are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
 - National Parks & Wildlife (NPWS) protected site boundary data;
 - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
 - OSI/ Environmental Protection Agency (EPA) rivers and streams, and catchments;
 - Open Street Maps;
 - Digital Elevation Model over Europe (EU-DEM);
 - Google Earth and Bing aerial photography 1995-2022;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including:
 - Natura 2000 - Standard Data Form;

¹ Wildlife Act 1976, as amended. Administrative consolidation of the Wildlife Act 1976, Law Reform Commission (2021)

- Conservation Objectives;
 - Site Synopses;
- National Biodiversity Data Centre records;
 - Online database of rare, threatened and protected species;
 - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2019); and
- Relevant Development Plans in neighbouring areas:
 - South Dublin County Development Plan 2022-2028

2.2.2. Field Study

The second phase of the assessment involved a site visit to establish the existing environment in the footprint of the proposed development area. Areas which were highlighted during desktop assessment were investigated in closer detail according to the Heritage Council Best Practice Guidance for Habitat Survey and Mapping (Smith *et al.*, 2011). Habitats in the proposed development area were classified according to the Heritage Council publication “*A Guide to Habitats in Ireland*” (Fossitt, 2000). This publication sets out a standard scheme for identifying, describing and classifying wildlife habitats in Ireland. This form of classification uses codes to classify different habitats based on the plant species present. Species recorded in this report are given in both their Latin and English names. Latin names for plant species follow the nomenclature of “*An Irish Flora*” (Parnell & Curtis, 2012).

Habitats were surveyed on the 26 April 2023 by conducting a study area walkover covering the main ecological areas identified in the desktop assessment. The survey date is at the beginning of the optimal botanical survey period. A photographic record was made of features of interest.

Signs of mammals such as badgers and otters were searched for while surveying the study area noting any sights, signs or any activity in the vicinity especially along adjacent boundaries.

Birds were surveyed using standard transect methodology and signs were recorded where encountered during the field walkover surveys.

2.2.3. Site Evaluation and Impact Assessment

The final part of the assessment involves an evaluation of the study area and determination of the potential impacts on the habitats of the study area. This part of the assessment forms the basis for Impact Assessment and is based on the following guidelines and publications:

- Guidelines for Ecological Impact Assessment in the UK And Ireland Terrestrial, Freshwater, Coastal and Marine September 2018 Version 1.1 - Updated September 2019 (CIEEM, 2019);

- EPA Draft Guidelines on Information to be contained in an EIAR (EPA, 2022);
- Best Practice Guidance for Habitat Survey and Mapping (Heritage Council, 2011);
- Ecological Surveying Techniques for Protected Flora & Fauna (NRA, 2008);
- Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009);
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG, December 2009, Rev 2010);
- Assessment of plans and projects significantly affecting Natura 2000 sites (EC, 2002);
- Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC (EC, 2007).

While prepared for linear projects the TII Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009) are still relevant and outlines the methodology for evaluating ecological impacts of the project in the present report. According to the TII Guidelines, the Ecological Study should address:

- Designated conservation areas and sites proposed for designation within the zone(s) of influence of any of the Project options,
- All the main inland surface waters (e.g. rivers, streams, canals, lakes and tanks) that are intersected by any of the route corridor options, including their fisheries value and any relevant designations,
- Aquifers and dependent systems and turloughs and their subterranean water systems,
- Any known or potentially important sites for rare or protected flora or fauna that occur along or within the zone(s) of influence of any of the route options,
- Any other sites of ecological value, that are not designated, along or in close proximity to any of the route corridor options,
- Any other relevant conservation designations or programmes (e.g. catchment management schemes, habitat restoration or creation projects, community conservation projects, etc.),
- Any other features of particular ecological or conservation significance along any of the route options.

The TII Guidelines set out a method of evaluating the importance of sites identified and in turn the evaluation of the significance of impacts. The Evaluation Scheme is presented in Appendix 1 for reference.

Impact Assessment is then based on CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland, 2019.

3. PROJECT DESCRIPTION

The Proposed Development consists of the construction and operation of a residential development of modular homes at a site at Backweston, Co. Dublin.

The development will be connected to the public sewer for the treatment of wastewater.

Figure 2 shows a detailed view of the existing site on high resolution aerial photography. Figure 3 shows the layout of the proposed development.



Figure 2. Location of proposed development on recent aerial photography.



Figure 3. Plan showing layout of proposed development.

4. EXISTING ENVIRONMENT

4.1. DESIGNATED CONSERVATION AREAS

A Zone of Influence (Zoi) of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. In accordance with the OPR Practice Note (2021), PN01, the Zoi should be established on a case-by-case basis using the Source- Pathway-Receptor framework.

The European Commission's "Assessment of plans and projects in relation to Natura 2000 sites guidance on Article 6(3) and (4) of the Methodological Habitats Directive 92/43/EEC" published 28 September 2021 states at section 3.1.3, that:

"Identifying the Natura 2000 sites that may be affected should be done by taking into consideration all aspects of the plan or project that could have potential effects on any Natura 2000 sites located within the zone of influence of the plan or project. This should take into account all of the designating features (species, habitat types) that are significantly present on the sites and their conservation objectives. In particular, it should identify:

- *any Natura 2000 sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;*
- *any Natura 2000 sites within the likely zone of influence of the plan or project Natura 2000 sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g. water) and various types of waste, discharge or emissions of substances or energy;*
- *Natura 2000 sites in the surroundings of the plan or project (or at some distance) which host fauna that can move to the project area and then suffer mortality or other impacts (e.g. loss of feeding areas, reduction of home range);*
- *Natura 2000 sites whose connectivity or ecological continuity can be affected by the plan or project".*

The range of Natura 2000 sites to be assessed, i.e. the zone in which impacts from the plan or project may arise, will depend on the nature of the plan or project and the distance at which effects may occur. For Natura 2000 sites located downstream along rivers or wetlands fed by aquifers, it may be that a plan or project can affect water flows, fish migration and so forth, even at a great distance. Emissions of pollutants may also have effects over a long distance. Some projects or plans that do not directly affect Natura 2000 sites may still have a significant impact on them if they cause a barrier effect or prevent ecological linkages. This may happen, for example, when plans affect features of the landscape that connect Natura 2000 sites or that may obstruct the movements of species or disrupt the continuity of a fluvial or woodland ecosystem. To determine the possible

effects of the plan or project on Natura 2000 sites, it is necessary to identify not only the relevant sites but also the habitats and species that are significantly present within them, as well as the site objectives.

The Zone of Influence may be determined by considering the Proposed Development's potential connectivity with European sites, in terms of:

- Nature, scale, timing and duration of all aspects of the proposed works and possible impacts, including the nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of potential pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Location of ecological features and their sensitivity to the possible impacts.

The potential for source pathway receptor connectivity is firstly identified through GIS interrogation and detailed information is then provided on sites with connectivity. European sites that are located within a potential Zone of Influence of the Proposed Development are presented in Figure 4 below. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website (www.npws.ie) on 24 July 2023. This data was interrogated using GIS analysis to provide mapping, distances, locations and pathways to all sites of conservation concern including pNHAs, NHA and European sites.

The Proposed Development is located within the hydrological catchment of the River Liffey. A review of aerial photography, Ordnance Survey Ireland (OSI) mapping and OSI Geographical Information System (GIS) data for rivers and streams indicates that there are no notable surface water features onsite and no direct hydrological pathways to offsite surface water bodies. This was confirmed during fieldwork on habitat assessment on 26 April 2023.

The nearest European site is the Rye Water Valley/Carton SAC (Site code 001398) located 1.8km to the north and upstream on the River Liffey. However, there is no connectivity with this site or any European sites with in the zone of influence to the Proposed Development.

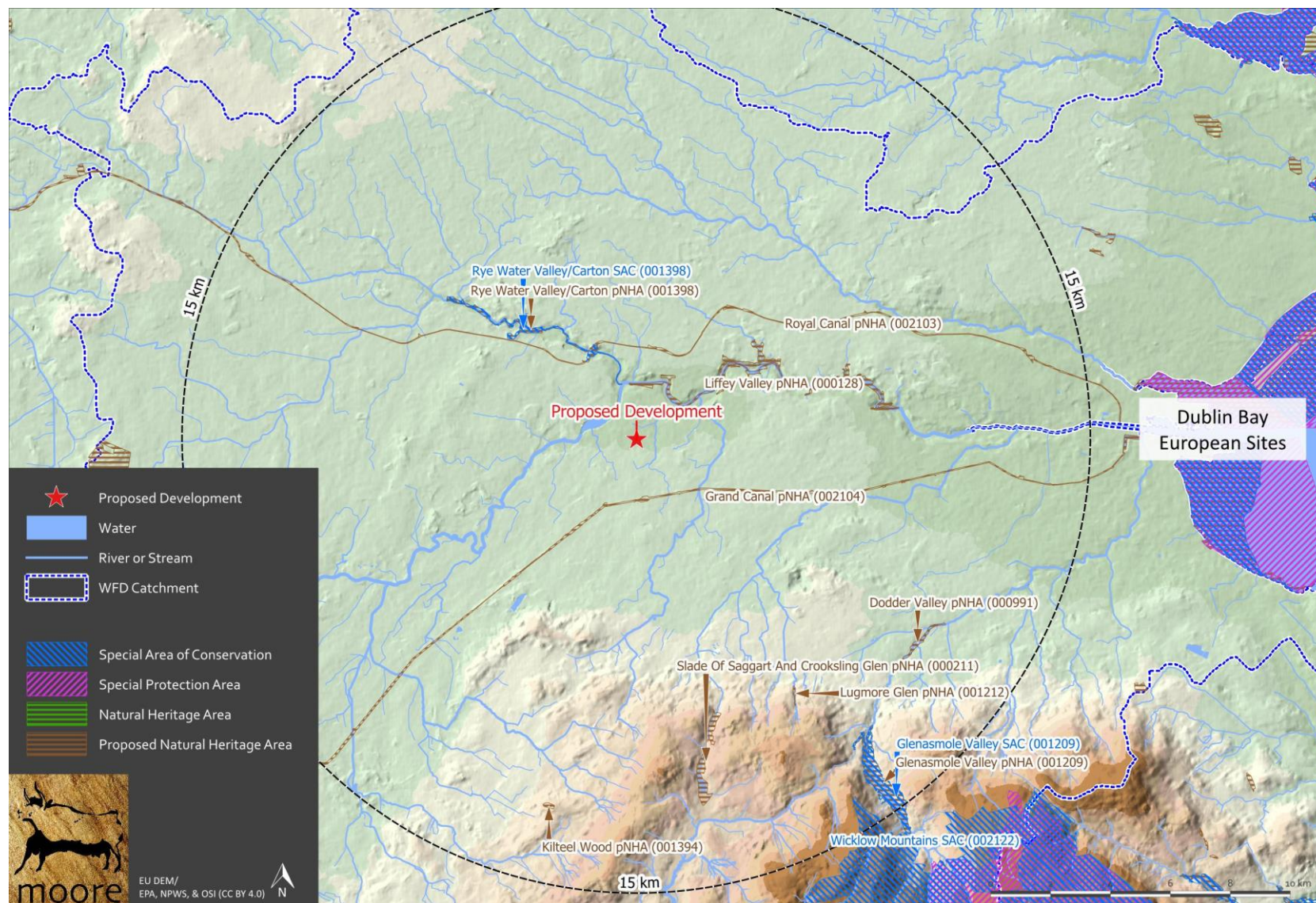


Figure 4. Showing European sites and NHAs/pNHAs within the wider Potential Zone of Influence of the Proposed Development.

4.2. HABITAT DESCRIPTIONS

There are no records of rare plants in the 1km squares in which the Proposed development site is located (O0133; O0034).

The proposed development site consists of a field of Arable crops (BC1). No flora or terrestrial fauna species or habitats of national or international conservation importance were noted on site during the survey.

There were no invasive species recorded at the proposed development site.

The Proposed Development is located within the hydrological catchment of the River Liffey. The northern boundary of the site comprises a truncated section of the original arable field in which the Cellbridge Link Road was developed in 2022. This involved rearrangement of the field drainage ditches toward the road drainage and settlement ponds. There is interrupted connectivity thereafter to Leixlip Reservoir. The pathway to the River Liffey is interrupted by these aquatic sinks and the European sites located in Dublin Bay are considered to be outside the zone of influence of the Proposed Development.



Figure 5. Habitat map based on recent aerial photography.

4.1. FAUNA

4.1.1. Mammals

Otters

There are no otter habitats in the study area and no potential for otters on the site. There are no records from the NBDC database for otters for a specific polygon covering the site and surrounding areas.

Badgers

There are no badger setts in the study area and no potential for badgers on the site. The field boundaries were surveyed and no setts were recorded.

Bats

There is low potential for bat habitats or bat commuting on site. Areas of fringing linear scrub are low and patchy and of relatively low value to foraging bats. There are no trees that will be removed that have bat roosting potential.

4.1.2. Birds

All birds are protected under the Wildlife Acts. A list of breeding bird species recorded during fieldwork in 2022 is presented in Table 2 below.

Table 1 Birds recorded during fieldwork in April 2023.

Birds	Scientific name	BWI Status	Habitat Type
Magpie	<i>Pica pica</i>	Green	Anywhere in lowland areas
Woodpigeon	<i>Columba palumbus</i>	Green	Gardens, woods, hedges

5. ASSESSMENT OF IMPACTS

5.1. SITE EVALUATION

Due cognisance of features of the landscape which are of major importance for wild flora and fauna, such as those with a “stepping stone” and ecological corridors function, as referenced in Article 10 of the Habitats Directive were considered in this assessment.

Following a detailed literature review, desktop assessment and field survey the footprint of the proposed development site can be categorised into the following habitat types:

- Scrub (WS1)
- Arable crops (BC1)

The ecological value of the site was assessed following the guidelines set out in the Institute of Ecology and Environmental Management's Guidelines for Ecological Impact Assessment (2019) and according to the Natura Scheme for evaluating ecological sites (after Nairn & Fossitt, 2004). Judgements on the evaluation were made using geographic frames of reference, *e.g.* European, National, Regional or Local.

The habitats under the footprint of the proposed development are of low local ecological value.

5.2. IMPACT ASSESSMENT

5.2.1. Direct Impacts

Habitats

There is no direct connectivity to any European sites within or outside the potential Zone of Influence. The Proposed Development site is not located adjacent or within a European site, therefore there is no risk of habitat loss or fragmentation or any effects on QI habitats or species directly or ex-situ.

The proposed development will take place in an area of Arable crops. As a result there will be some local loss of relatively species poor agricultural land. The effect on biodiversity will be imperceptible.

Fauna

Otters

There will be no direct or indirect effects on otters.

Badgers

There will be no direct or indirect effects on badgers.

Bats

There will be no effects on commuting bats.

Birds

There are no predicted impacts on birds.

5.2.2. Indirect Impacts

There will be no indirect impacts on biodiversity or on any European sites.

5.2.3. Cumulative Impacts

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

A review of the National Planning Application Database was undertaken. The database was then queried for developments granted planning permission within 1km of the Proposed Development within the last three years, these are presented in the Table below.

Table 2 Planning applications granted permission in the vicinity of the Proposed Development.

Planning Ref.	Description of development	Comments
SD19B/0471	Retention of single storey living room extension to rear of house and all associated site and drainage works.	No potential for cumulative effects given the scale and location of the project.
SD20B/0133	Construction of a single storey front and side extension with lean to roof; altered front entrance and altered front windows along with the construction of a single storey rear extension with open roof.	No potential for cumulative effects given the scale and location of the project.
SD20B/0155	6sq.m front porch and living room extension to the front of the dwelling; 34sq.m ground floor living/kitchen extension and a 10sq.m first floor bedroom extension the rear of the dwelling and associated demolition/construction work.	No potential for cumulative effects given the scale and location of the project.
SD21B/0061	Retention of a single storey extension to the rear of existing dwelling with a total floor area to be retained of 17.9sq.m.	No potential for cumulative effects given the scale and location of the project.
SD21B/0072	Construct ground floor extension to west (side) elevation (12sq.m) and south (rear) elevation (23.7sq.m) of existing dwelling comprising of one bedroom, living and dining areas and all associated site works.	No potential for cumulative effects given the scale and location of the project.
SD21B/0582	Construction of attic conversion with dormer to rear with flat roof; raising of existing gable wall; associated alterations to the profile of the existing roof along with 'Dutch' hip to side.	No potential for cumulative effects given the scale and location of the project.
SD21B/0528	Single storey rear garden home entertainment room and home gym.	No potential for cumulative effects given the scale and location of the project.
SD22B/0299	A pitched roof single storey extension to rear of existing house with associated site works	No potential for cumulative effects given the scale and location of the project.
SD23A/0049	Construction of a gate to facilitate emergency access to lands and to ensure the safe operations of the airport.	No potential for cumulative effects given the scale and location of the project.

The South Dublin County Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans that could affect the Natura 2000 sites in the same potential Zone of Influence of the Proposed Development site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination

impacts with Plans or Projects for the proposed development area and surrounding townlands in which the proposed development site is located, would be avoided.

The listed developments have been granted permission in most cases with conditions relating to sustainable development by the consenting authority in compliance with the relevant Local Authority Development Plan and in compliance with the Local Authority requirement with regard to the Habitats Directive. The development cannot have received planning permission without having met the consenting authority requirement in this regard.

There are no predicted in-combination effects given that it is predicted that the Proposed Development will have no significant effects on biodiversity.

6. CONCLUSIONS

The Proposed Development site is not located adjacent or within a European site, therefore there is no risk of habitat loss or fragmentation or any effects on QI habitats or species directly or ex-situ.

There are no significant effects predicted from the proposed development on habitats, flora, fauna or biodiversity.

7. REFERENCES

CIEEM (2019) Guidelines for Ecological Impact Assessment in the UK And Ireland Terrestrial, Freshwater, Coastal and Marine September 2018 Version 1.1 - Updated September 2019.

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

EPA (2022) EPA Guidelines on Information to be contained in an EIAR; EPA, May 2022.

Fossitt, J. (2000) A Guide to Habitats in Ireland. The Heritage Council.

Nairn, R. and J. Fossitt (2004) The Ecological Impacts of Roads, and an Approach to their Assessment for National Road Schemes. In: J. Davenport and J.L Davenport (eds) The Effects of Human Transport on Ecosystems: Cars and Planes, Boats and Trains, 98-114. Dublin. Royal Irish Academy.

NPWS (2019) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.

NPWS (2023) National Parks and Wildlife Service Metadata available online at <https://www.npws.ie/maps-and-data>

NRA (2008) Ecological Surveying Techniques for Protected Flora & Fauna. Available at: <http://www.nra.ie/Environment/>

NRA (2009) Guidelines for Assessment of Ecological Impacts of National Road Schemes. Dublin: National Roads Authority. Available at: <http://www.nra.ie/Environment/>

Parnell, J. and T. Curtis (2012) Webb's An Irish Flora. Cork University Press.

Smith, G.F., O'Donoghue, P., O'Hara, K. and E. Delaney (2011) Best Practice Guidance for Habitat Survey and Mapping. The Heritage Council.

Appendix 1

TII Evaluation of Habitats

Ecological valuation: Examples

International Importance:

- ☐ 'European Site' including Special Area of Conservation (SAC), Site of Community Importance (SCI), Special Protection Area (SPA) or proposed Special Area of Conservation.
- ☐ Proposed Special Protection Area (pSPA).
- ☐ Site that fulfills the criteria for designation as a 'European Site' (see Annex III of the Habitats Directive, as amended).
- ☐ Features essential to maintaining the coherence of the Natura 2000 Network.⁴
- ☐ Site containing 'best examples' of the habitat types listed in Annex I of the Habitats Directive.
- ☐ Resident or regularly occurring populations (assessed to be important at the national level)⁵ of the following:
 - ☐ Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and/or
 - ☐ Species of animal and plants listed in Annex II and/or IV of the Habitats Directive.
- ☐ Ramsar Site (Convention on Wetlands of International Importance Especially Waterfowl Habitat 1971).
- ☐ World Heritage Site (Convention for the Protection of World Cultural & Natural Heritage, 1972).
- ☐ Biosphere Reserve (UNESCO Man & The Biosphere Programme).
- ☐ Site hosting significant species populations under the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals, 1979).
- ☐ Site hosting significant populations under the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats, 1979).
- ☐ Biogenetic Reserve under the Council of Europe.
- ☐ European Diploma Site under the Council of Europe.
- ☐ Salmonid water designated pursuant to the European Communities (Quality of Salmonid Waters) Regulations, 1988, (S.I. No. 293 of 1988).⁶

National Importance:

- ☐ Site designated or proposed as a Natural Heritage Area (NHA).
- ☐ Statutory Nature Reserve.
- ☐ Refuge for Fauna and Flora protected under the Wildlife Acts.
- ☐ National Park.
- ☐ Undesignated site fulfilling the criteria for designation as a Natural Heritage Area (NHA); Statutory Nature Reserve; Refuge for Fauna and Flora protected under the Wildlife Act; and/or a National Park.
- ☐ Resident or regularly occurring populations (assessed to be important at the national level)⁷ of the following:
 - ☐ Species protected under the Wildlife Acts; and/or
 - ☐ Species listed on the relevant Red Data list.
- ☐ Site containing 'viable areas'⁸ of the habitat types listed in Annex I of the Habitats Directive.

County Importance:

- ☐ Area of Special Amenity.⁹
- ☐ Area subject to a Tree Preservation Order.
- ☐ Area of High Amenity, or equivalent, designated under the County Development Plan.
- ☐ Resident or regularly occurring populations (assessed to be important at the County level)¹⁰ of the following:
 - ☐ Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
 - ☐ Species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
 - ☐ Species protected under the Wildlife Acts; and/or
 - ☐ Species listed on the relevant Red Data list.
- ☐ Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfil the criteria for valuation as of International or National importance.
- ☐ County important populations of species, or viable areas of semi-natural habitats or natural heritage features identified in the National or Local BAP,¹¹ if this has been prepared.
- ☐ Sites containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county.
- ☐ Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.

Local Importance (higher value):

- ☐ Locally important populations of priority species or habitats or natural heritage features identified in the Local BAP, if this has been prepared;
- ☐ Resident or regularly occurring populations (assessed to be important at the Local level)¹² of the following:
 - ☐ Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
 - ☐ Species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
 - ☐ Species protected under the Wildlife Acts; and/or
 - ☐ Species listed on the relevant Red Data list.
- ☐ Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality;
- ☐ Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.

Local Importance (lower value):

- ☐ Sites containing small areas of semi-natural habitat that are of some local importance for wildlife;
- ☐ Sites or features containing non-native species that are of some importance in maintaining habitat links.

Appendix 2

Site Photos



Photo 1. Showing the typical arable habitat on site.



Photo 2. Showing the typical arable habitat on site.