

Grange Cottage

Ecological Impact Assessment

South Dublin County Council

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Table of contents

1.	Introduction.....	1
1.1	Background.....	1
1.2	Project description.....	1
1.3	Purpose of this Report.....	1
1.4	Quality assurance and statement of authority	2
2.	Legislative and planning context.....	3
2.1	Wildlife legislation.....	3
2.2	Relevant planning policy and plans	3
2.3	Relevant guidance.....	6
3.	Methodology.....	7
3.1	Important ecological features	7
3.2	Zone of influence.....	7
3.3	Consultation.....	8
3.4	Determination of baseline environment	8
3.5	Assessment methodology.....	10
3.6	Limitations and assumptions.....	13
4.	Baseline environment.....	14
4.1	Nature conservation designations	14
4.2	NBDC desk study results.....	16
4.3	Habitats	17
4.4	Invasive non-native species.....	18
4.5	Protected and important species.....	18
4.6	Future baseline	23
4.7	Baseline in the absence of the Proposed Development.....	23
4.8	Features excluded from further assessment	23
5.	Potential impacts.....	24
5.1	Embedded mitigation.....	24
5.2	Importance of ecological features.....	25
5.3	Assessment of impacts and effects	27
6.	Specific mitigation measures	36
6.1	Grand Canal pNHA	36
6.2	Planting for mitigation and enhancement.....	36
6.3	Protected and important species.....	37
7.	Cumulative effects.....	39
8.	Residual effects and conclusion.....	40
9.	References	41
10.	Figures	43
	Appendix A Indictive Site Photographs.....	44
	Appendix B Planning application search	48

Figures

Figure 1. Site location

Figure 2. Ecological designations

Figure 3. Habitat survey

Figure 4. Other ecological designations and limitations

Tables

Table 3.1. Desk study data sources	8
Table 3.2. Geographical scale of importance.....	11
Table 4.1. International nature conservation designations.....	14
Table 4.2. National nature conservation designations	16
Table 4.3. Important species records returned by NBDC within 2 km of the Site since 2000.....	16
Table 4.4. Information on structures with Low bat roost suitability	19
Table 5.1. Importance of ecological features	25
Table 5.2. Assessment of impacts and effects on ecological features	28

1. Introduction

1.1 Background

AECOM Ireland Limited (AECOM) was commissioned by South Dublin County Council (SDCC) to conduct an Ecological Impact Assessment (EclA) in relation to the Part 8 planning application for the proposed 12th Lock Grange Cottage, which involves the redevelopment of Grange Cottage and associated farm outbuildings (herein referred to as the 'Proposed Development'). The area of the Proposed Development is included in the overall 12th Lock Masterplan at the 12th Lock on the Grand Canal, Lucan, Co. Dublin.

The location of the Proposed Development is referred to as the 'Site' and is shown on Figure 1. The Site is located on the northern edge of Grange Castle Business Park, facing onto the south bank of the Grand Canal and it is situated to the east of the R120. The Proposed Development consists of Grange Cottage and the associated farm outbuildings which enclose two courtyards to the north and the east of the cottage. The Site is currently derelict with the structures in various levels of deterioration. Dry meadow grasslands, treelines, mixed broadleaved woodland and scrub form borders around the courtyards and outbuildings.

A Preliminary Ecological Appraisal (PEA) Report was produced for the overall 12th Lock Masterplan (AECOM, 2023a). An Appropriate Assessment (AA) Screening was also produced for the Proposed Development, which concluded that likely significant effects from the Proposed Development on any European site (which comprise Special Areas of Conservation (SAC) and Special Protection Areas (SPA)), whether individually or in-combination with other plans or projects, beyond reasonable scientific doubt, can be excluded (AECOM, 2024a).

1.2 Project description

The Proposed Development proposes to reuse and repair the existing buildings to introduce a mixed development of compatible uses and facilities based on local need. The following buildings are proposed: childcare facility; two restaurants/café's; multipurpose event space; shop; boat house; and artists' studio. There will also be some works to drainage to upgrade the existing system where required and make new connections to the existing foul sewer network.

The Proposed Development will be carried out in two phases with Phase One involving the redevelopment of Grange Cottage into a childcare facility and artists' studios. Phase Two will involve the redevelopment of the rest of the outbuildings.

The Proposed Development will involve the removal of a small amount of scrub vegetation to enable the construction of a clear-span pedestrian bridge over the River Griffeen in the western section of the Site. There will be no other areas of vegetation removal, but the Proposed Development will involve the trimming of vegetation to facilitate the redevelopment and extension of the buildings. The proposed bridge will connect the Proposed Development to the existing car park in Grange Castle Business Park.

The Proposed Development will involve the provision of four no. parking spaces and the redevelopment of the external ground areas, courtyard space and all associated site work. The Proposed Development will also include Sustainable Drainage System (SuDS) features. The existing footprint will be maintained, and the Proposed Development will be developed in line with the zoning provisions of the 12th Lock Masterplan.

1.3 Purpose of this Report

This EclA Report details the results of the desk study and field survey completed to establish the current baseline conditions at the Site. The predicted effects arising from the Proposed Development on identified ecological features – which include all designated nature conservation sites, habitats, flora and fauna species – are described and, where necessary, appropriate and proportionate mitigation measures are prescribed. Species are given their common and scientific names when first referred to and their common names only thereafter. All distances are cited as the shortest distance 'as the crow flies', unless otherwise stated.

This Report has been prepared as part of a Part 8 application for planning permission for the Proposed Development. Other documents submitted with the planning application support this EclA Report and should be read in conjunction with it, in particular the AA Screening Report (AECOM, 2024a) and EIA Screening Report (AECOM, 2024b).

1.4 Quality assurance and statement of authority

This Report and the desk study and field surveys described within it, has been completed in accordance with the AECOM Integrated Management System (IMS). Our IMS places emphasis on professionalism, technical excellence, quality, as well as covering health, safety, environment and sustainability management. All AECOM staff members are committed to maintaining our accreditation to those parts of BS EN ISO 9001:2015 and 14001:2015, as well as BS OHSAS 18001:2007 that are relevant to consultancy service.

The EclA has been carried out by AECOM ecologists with experience in conducting such appraisals. The ecology lead, Tony Marshall, is a Chartered Ecologist and full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). He holds a 1st Class BSc (Hons) degree in Biological Sciences (Ecology) from the University of Edinburgh. Tony is a Technical Director who leads the AECOM Ecology Team in Ireland and Scotland. He has worked for fourteen years as a professional ecologist on projects for private and public sector clients. These have ranged from large-scale infrastructure developments to conservation projects. He has extensive experience in AA and EIA, at all stages of the processes, including scoping, baseline data collection and reporting. Recent examples of large-scale infrastructure developments on which Tony has acted as ecology lead (at the planning stage) include Shanganagh Residential (Dun Laoghaire-Rathdown), Tarbert Temporary Emergency Generation project (County Kerry), and Kent Station Through Platform (Cork).

Aoife Whyte assisted with the field work for the Proposed Development and authored this Report. She is a Graduate Ecologist with one year of professional experience preparing ecological reports and surveying for a variety of species throughout Ireland. She holds a 1st Class BSc (Hons) degree in Biomedical Sciences with a specialisation in Zoology from Trinity College Dublin and is a Qualifying Member of CIEEM. She has prepared several reports including EclA, Preliminary Ecological Appraisal (PEA), and AA reports to accompany planning applications for a range of development projects. Recent examples of developments Aoife has worked on include greenway schemes in Linear Park and Greensbridge (Kilkenny), and bus infrastructure projects for the National Transport Authority as part of the TAS Framework (Dun Laoghaire-Rathdown and Dublin City).

Laura Cappelli is a Senior Ecologist with five years' of professional experience preparing ecological reports and surveying for a variety of species throughout Ireland. She has prepared several reports including EclA, PEA, and AA reports to support planning applications for a range of commercial development projects including solar farms, national road schemes, underground cable connections, residential developments, transport developments, waste to energy projects and waste remediation projects. Laura is also experienced in surveying for a range of habitats and species including bats, mammals and amphibians. She has experience applying for derogation licences and working as an ecological clerk of works. Laura led the fieldwork carried out to inform this EclA.

The Report was reviewed by Jenny Hunter (née Jones). Jenny is a Principal Ecologist with over eight years' professional experience of ecological consultancy. She holds a BSc (Hons) and MSc and is an Associated Member of the Royal Society of Biology (AMRSB). She has worked as part of multidisciplinary and dedicated ecological teams contributing to projects in power and energy, infrastructure, industrial and commercial, and property and development across the UK and Ireland. Jenny has extensive field experience of a variety of species and habitat survey techniques. Jenny is an excellent communicator and has extensive reporting experience including PEAR, EclA, BREEAM, and management plan.

2. Legislative and planning context

2.1 Wildlife legislation

The following (non-exhaustive list of) wildlife legislation is potentially relevant to the Proposed Development and was considered as part of this ecological assessment:

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive');
- Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive');
- Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (as amended) (the 'Water Framework Directive');
- Regulation 1143/2014 on the prevention and management of the introduction and spread of invasive alien species (the 'Invasive Alien Species Regulations');
- Convention on Wetlands of International Importance ('Ramsar Convention');
- The Planning and Development Acts 2000 to 2020 (collectively referred to as the 'PDA');
- The Wildlife Acts 1976 to 2018 and the Wildlife (Amendment) Act 2000 (collectively referred to as the 'Wildlife Acts');
- The European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011) (as amended) (the 'Habitats Regulations');
- Fisheries Consolidation Act 1959 (No. 14 of 1959) (as amended) (the 'Fisheries Consolidation Act');
- The Inland Fisheries Act 2010 (No. 10 of 2010) (as amended) (the 'Inland Fisheries Act');
- The Flora (Protection) Order 2015 S.I 356/2015 (the 'Flora Protection Order' (FPO));
- EC Environmental Objectives (Surface Waters) Regulations 2009 (SI 272 of 2009); and,
- Local Government (Water Pollution) Acts 1977-1990, as amended (the 'Water Pollution Acts')

Compliance with legislation may require the obtainment of relevant protected species derogation licences prior to implementing works.

2.2 Relevant planning policy and plans

The planning policies in this Section, including national planning policy, regional planning policy, local planning policy, development plans, and local and national Biodiversity Actions Plans (BAP), were considered when assessing potential effects on ecological features and when identifying requirements for ecological mitigation.

2.2.1 Project Ireland 2040 National Planning Framework

The Project Ireland 2040 National Planning Framework¹ (NPF) sets out the Government's planning policies for Ireland and how these should be applied. NPF sets out that to achieve sustainable development, the planning system must incorporate an environmental objective, which should include:

- integrated planning for green infrastructure and ecosystem services;
- enhancing the conservation status and improve the management of protected areas and protected species;
- using natural resources prudently;
- minimising waste and pollution; and,
- mitigating and adapting to climate change, including moving to a low carbon economy.

There is a presumption in favour of sustainable development in NPF.

¹ <https://www.npf.ie/project-ireland-2040-national-planning-framework/>

2.2.2 Ireland's 4th National Biodiversity Action Plan 2023-2030

The National Biodiversity Action Plan 2023-2030² for Ireland outlines five main objectives to meet commitments under the Convention on Biological Diversity (CBD) and EU Biodiversity Strategy. These objectives comprise:

- to adopt a whole of Government, whole of society approach to biodiversity;
- to meet urgent conservation and restoration needs;
- to secure nature's contribution to people;
- to enhance the evidence base for action on biodiversity; and,
- to strengthen Ireland's contribution to international biodiversity initiatives.

2.2.3 South Dublin County Council Development Plan 2022-2028

2.2.4 Clonburris Strategic Development Zone Planning Scheme

The Clonburris Sustainable Development Zone (SDZ) Planning Scheme site is located directly east of the Proposed Development along the Adamstown Road. Maintaining and improving an ecological connection between the Proposed Development and the Clonburris SDZ will be crucial for biodiversity conservation in the wider area. As such, the strategic environmental objectives of the *Clonburris SDZ Planning Scheme* (Minogue and Associates Ltd., 2018) are also relevant to the Proposed Development, which include the following:

- to safeguard and improve the quality, character, and continuity of the Grand Canal pNHA and facilitate the protected species, biodiversity, and its contribution to a fully functioning green infrastructure network; and,
- a method statement for the construction, planting regime and species selection of both 'dry' and 'wet' hedgerows shall be provided with all planning applications for developments within 10 m of existing hedgerows along the barony boundary, the Grand Canal, the Griffeen River, and the Kilmahuddrick Stream.

2.2.5 Clonburris SDZ Biodiversity Management Plan

The *Biodiversity Management Plan to Inform the Parks and Landscape Strategy of Clonburris SDZ* (Scott Cawley, 2020a) sets out biodiversity actions for the Clonburris SDZ. As mentioned above, due to the proximity of the Clonburris SDZ scheme to the Proposed Development, a number of biodiversity actions set out for the Clonburris SDZ are also potentially relevant to the Proposed Development, which include the following:

- HR01 – retain habitats of ecological value where feasible with particular consideration to ecological features which provide connectivity between habitats (e.g., hedgerows and treelines). Retention of townland boundary hedgerows within open space should be given priority;
- HR04 – a biodiversity protection zone within a minimum distance of 10 m from watercourse banks will be maintained;
- HR05 – development must be set back from the Grand Canal to protect aquatic habitats and species. All buildings must be set back 50 m from the Grand Canal pNHA boundary. Other developments (such as attenuation ponds) must be set back 30 m from the Grand Canal pNHA boundary.
- HR06 – no storage/stockpiling of materials or machinery or construction works activities (except for those required to construct footpaths or bridges) will be undertaken within 50 m of the Grand Canal and Griffeen River. Where construction works will take place within 50 m of a watercourse, a risk assessment must be carried out to determine if a Construction Environmental Management Plan (CEMP) will be required;
- HR07 – where other works (e.g. footpath maintenance) must take place within 10 m of the edge of a watercourse a risk assessment should be carried out to determine if a CEMP will be required. If a risk is identified the CEMP must be developed in consultation with Inland Fisheries Ireland at application stage where feasible;
- HR08 – where meadows are to be retained within the areas of open space, particular consideration should be given to retain this habitat around other features of ecological importance such as hedgerow, water features, and scrub;

² https://www.npws.ie/sites/default/files/files/4th_National_Biodiversity_Action_Plan.pdf

- HR10 – where woodland or individual trees are being retained, the root protection zone/area must be calculated by a qualified arborist and protective barriers for root protection should be installed;
- HR11 – particular consideration must be given to retaining woodland which provides ecological connectivity to other habitats of ecological importance and strengthens the green and blue infrastructure network;
- HR16 – where hedgerows are proposed for retention, management measures should be set out appropriate to their location and function and in accordance with the Heritage Council guidance for conserving hedgerows. Management must also include the removal of non-native invasive species and filling in sparse patches with native species planting;
- HC01 – planting schedules for all areas within the lands should include predominately native species, and non-native species should be limited to specific areas;
- HC02 and HC03 – no invasive species will be planted on the lands;
- HC04 – where native species planting is not feasible, planting schedules should provide biodiversity value to pollinators and other fauna species;
- HC06 – proposed wildflower meadows should reflect the native existing biodiversity in the area;
- HC11 – green roofs are recommended to improve biodiversity value and as SuDS measure;
- HC15 – hedgerows within park areas should be planted for key habitat creation. Species must be composed of a range of native species that are also present locally;
- HC17 – retain and plant hedgerows to connect features such as the Griffeen River, the Grand Canal, the railway line and existing hedgerows, treelines and woodland;
- HC20 – for every tree felled within the Clonburris SDZ, a replacement tree must be planted;
- HC30 – new wetlands should be created with biodiversity in mind. Retention and attenuation ponds should have shallow, gently sloping areas to create suitable habitat for amphibians and other fauna;
- HC32 – a buffer zone of native habitat including trees such as willow *Salix* sp., ash *Fraxinus excelsior* and birch *Betula* sp., should be planted around new wetlands. Plant species found in marsh and wet grassland habitat can be planted to mimic a natural habitat around new wetlands;
- HC36 – planting schedules along the railway line should have regard to habitat creation recommendations provided in the All-Ireland Pollinator Plan;
- Bi02 – existing grassland habitats should be retained or created where possible and left uncut during the winter months to provide a continuous food source for seed-eating birds;
- Bi04 and Bi05 – all proposed developments within Clonburris SDZ must consider including nest boxes or bricks for swallows, house martins and swifts. Nest boxes should be installed within the parks to accommodate a range of different species (e.g. for raptors, large birds, small birds, etc.);
- BiM01, BiM02 and BiM03 – breeding birds, barn owl and kingfisher should be monitored annually to assess the impacts of the development;
- Ba01 – where buildings are to be demolished or refurbished or trees with suitability for bats are to be removed within the lands, bat surveys must be carried out at the appropriate time of year by a suitability qualified ecologist to assess whether roosting bats are present and to provide advice on any further surveys, mitigation and licencing requirements;
- Ba02 – all proposals for development near bat roosts or ecological corridors must address the potential adverse impacts of lighting on bats;
- Ba03 – lighting on the northern Grand Canal towpath should be avoided and all lighting around the canal should be minimised. It is recommended that artificial lighting on the southern tow path is turned off during the peak season of bat activity (May to August inclusive). Where this is not possible, lighting proposals for the canal must be created in consultation with a suitably qualified ecologist and follow guidance by the Bat Conservation Trust (BCT);
- Ba04 and Ba05 – any developments located close to a known bat roost or ecological corridor should consider incorporating enhancement measures, such as installing bat boxes, planting hedgerows and creating ponds. All proposed developments within Clonburris SDZ must consider installing bat bricks into the building's design;

- M01 – mammal surveys must be carried out within the proposed development site and up to 150 m around the boundary to ensure no protected mammals are negatively impacted;
- I02 – installation of ‘insect hotels’ should be considered throughout the site; and,
- IM01 – long-term annual monitoring of aquatic habitats (the Grand Canal, feeder streams, and the Griffeen River) for white-clawed crayfish within the Clonburris SDZ should be undertaken.

2.3 Relevant guidance

Relevant guidance considered during the ecological walkover survey and for this Report includes, but is not limited to, the following:

- *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (Version 1.2, April 2022)* published by CIEEM (CIEEM, 2022);
- *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes* published by National Roads Authority (NRA), now Transport Infrastructure Ireland (TII) (NRA, 2009a); and,
- *Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes* published by NRA, now TII (NRA, 2008a).

3. Methodology

3.1 Important ecological features

For the purposes of this EclA, important ecological features (following guidance by CIEEM, 2022) comprise:

- nature conservation sites including SPAs, SACs, Wetlands of International Importance (Ramsar sites), Natural Heritage Areas (NHAs), and proposed NHAs (pNHAs);
- habitats and species listed on Annexes I and II, respectively, of the Habitats Directive, which listing indicates importance in a European context and affords protection if designated as Qualifying Interests (QI) of an SAC;
- species listed on Annex IV of the Habitats Directive, which are known as European Protected Species (EPS) and are subject to strict protection anywhere they occur;
- bird species listed on Annex I of the Birds Directive, which listing indicates importance in a European context and affords protection were designated as Special Conservation Interest (SCI) of an SPA;
- species listed on the Wildlife Acts;
- fish species and habitats protected under the Fisheries Consolidation Act, the Inland Fisheries Act, and the Water Pollution Acts;
- plant species listed on the Flora Protection Order;
- species and habitats listed on the National Biodiversity Action Plan 2023-2030;
- species that are Nationally Rare, Nationally Scarce or listed in Red Data Lists, which are published by the National Parks and Wildlife Service (NPWS) in collaboration with relevant Northern Irish agencies (e.g. Marnell *et al.*, 2009; Regan *et al.*, 2010, King *et al.*, 2011, Lockhart *et al.*, 2012, Nelson *et al.*, 2011; Nelson *et al.*, 2019; Wyse-Jackson *et al.*, 2016);
- Birds of Conservation Concern in Ireland (BoCCI) red-listed birds (Gilbert *et al.*, 2021); and,
- invasive non-native species of plants and animals listed on the Third Schedule of the Habitats Regulations (herein 'Scheduled INNS'), those of EU concern under the EU Invasive Alien Species Regulation, and those listed by the National Biodiversity Data Centre (NBDC) as high-impact and medium-impact in Ireland.

Other species or habitats, that may be rare, scarce or otherwise notable, are included where deemed appropriate through available information and/or professional judgement.

3.2 Zone of influence

The 'zone of influence' (Zol) of the Proposed Development is the area over which ecological features may be subject to impacts as a result of its construction, operation, and/or associated activities. The Zol can extend beyond the boundary of the Proposed Development, for example where there are hydrological links extending beyond the Site boundary.

The Zol will vary for different ecological features depending on their sensitivity to any identified impact. The features affected could include designated sites, habitats, species, and the processes on which they depend.

As recommended by CIEEM guidance (2022), professionally accredited or published studies, where available, were used to determine the likely Zol, as well as professional judgement. However, CIEEM guidance also highlights that establishing the Zol should be an iterative process and can be informed by further desk study and field survey. Where limited information was available, the Precautionary Principle was applied and a Zol estimated on that basis.

The adopted Zol of the Proposed Development on relevant ecological features involved consideration of the following:

- review of professionally accredited and/or published literature;
- professional judgement; and,
- the results of baseline desk study and field survey carried out for the Proposed Development.

3.3 Consultation

Consultation for the 12th Lock Masterplan is also relevant to the Proposed Development. This included discussions with the SDCC Ecologist regarding baseline information and mitigation measures to be incorporated. The SDCC Ecologist advised during an online meeting that the connection the Grand Canal provides for important species such as bats and otter *Lutra lutra* should remain intact. These measures have been included in the EclA.

3.4 Determination of baseline environment

3.4.1 Desk study

A desk study was carried out to identify relevant nature conservation designations, and records of protected and important habitats and species potentially relevant to the Proposed Development. A stratified approach was taken during the desk study, based on the likely Zol of the Proposed Development on different ecological features. The desk study involved a review of the data sources described in Table 3.1. The area covered by the desk study is herein referred to as the 'Study Area'.

These sources were used to identify:

- international nature conservation designations (i.e., SACs, SPAs and Ramsar Sites) within 20 km, or further if connectivity were searched for;
- national nature conservation designations (i.e., NHA and pNHA) within 2 km or beyond where a link exists;
- locally designated nature conservation sites within 2 km of the Site; and,
- recent records of protected and important habitats and species within 2 km of the Proposed Development since 2000.

Table 3.1. Desk study data sources

Data source	Date accessed	Data obtained
Environmental Protection Agency (EPA) maps website (https://gis.epa.ie/EPAMaps/)	02 February 2024	<ul style="list-style-type: none"> • International nature conservation designations within 20 km, or further if connectivity were searched for. • National designations within at least 2 km of the Proposed Development. • Information on watercourses, water quality, soils, and geology.
National Parks and Wildlife Service (NPWS) Protected Sites in Ireland website (https://www.npws.ie/protected-sites)	02 February 2024	<ul style="list-style-type: none"> • Details on relevant designations.
NBDC Biodiversity Maps (https://maps.biodiversityireland.ie/)	02 February 2024	<ul style="list-style-type: none"> • Records of protected and important species within 2 km of the Proposed Development.
<i>The Status of EU Protected Habitats and Species in Ireland</i> (Article 17 Report) (https://www.npws.ie/publications/article-17-reports/article-17-reports-2019)	02 February 2024	<ul style="list-style-type: none"> • Information on the conservation status of European Union (EU) protected habitats and species in Ireland.
Irish Red Lists (https://www.npws.ie/publications/red-lists)	02 February 2024	<ul style="list-style-type: none"> • Conservation status of plants, amphibians, reptiles, freshwater fish, invertebrates, birds, and terrestrial mammals (including bats).
Ordnance Survey Ireland maps and aerial photography (https://www.osi.ie/)	02 February 2024	<ul style="list-style-type: none"> • Connectivity relevant to use of the site of the Proposed Development.
Google Maps (https://www.google.ie/maps) and Google Earth (https://earth.google.com)	02 February 2024	<ul style="list-style-type: none"> • Currently and historic aerial imagery.
Ramsar sites (https://www.irishwetlands.ie/irish-sites/)	02 February 2024	<ul style="list-style-type: none"> • Ramsar sites within 20 km, or further if connectivity were searched for.
Inland Fisheries Ireland (IFI) publications (https://www.fisheriesireland.ie/publications)	02 February 2024	<ul style="list-style-type: none"> • Fish records and publications throughout Ireland.

Furthermore, the Site is located directly adjacent to the Clonburris SDZ lands and to the south of the Grand Canal. Therefore, the results of surveys carried out for the Clonburris SDZ and along the Grand Canal were also considered in this desk study. The following reports were reviewed:

- *Clonburris SDZ Ecological Survey Report* (Forest, Environmental Research and Services Ltd. (FERS), 2015);
- *Assessment of Bat Usage of the Grand Canal between Hazelhatch Bridge and the 12th Lock Bridge (Adamstown)* (FERS, 2016a);
- *Survey for the Occurrence of Otter along the Grand Canal between the 12th Lock Bridge and Hazelhatch Bridge* (FERS, 2016b);
- *Ecological Survey of Clonburris Strategic Development Zone, Clondalkin, Co. Dublin* (FERS, 2018);
- *Bat Report Grand Canal Greenway 12th Lock to Hazelhatch* (Doherty Environmental, 2018a);
- *Ecological Impact Assessment Grand Canal Greenway 12th Lock to Hazelhatch* (Doherty Environmental, 2018b).
- *Clonburris SDZ Planning Scheme: Strategic Environmental Assessment. Final Environmental Report. South Dublin County Council* (Minogue and Associates Ltd., 2018);
- *Winter Bird Survey of Clonburris SDZ. South Dublin County Council* (Roughan and O'Donovan, 2020);
- *Environmental Impact Assessment Report. Roads and drainage infrastructure works as approved under the Clonburris SDZ Planning Scheme (2019)* (Stephen Little and Associates, 2020);
- *Biodiversity Management Plan to Inform the Parks and Landscape Strategy of Clonburris SDZ, Clonburris, Co. Dublin* (Scott Cawley, 2020a);
- *Outline Invasive Species Management. Clonburris SDZ, Clonburris, Co. Dublin* (Scott Cawley, 2020b); and,
- *Ecological Impact Assessment, Clonburris Phase One* (AECOM, 2022).

3.4.2 Field survey

The scope of field survey was informed by the guidance contained within published documents referenced in Section 2.3, on the results of the desk study and on the emerging results of the ecological field surveys.

An ecological walkover survey was carried out within the Site and extended to 50 m of the Site boundary on 07 and 08 July 2022 by an experienced AECOM ecologist. Additional walkover surveys were carried out on 28 April 2023 and 07 February 2024 to update and/or confirm the validity of surveys carried out in July 2022.

A description of the methods employed for field survey of ecological features scoped in to the EclA is described under the following sub-headings. All survey data were recorded using Esri Field Maps application on a handheld mobile mapping device. Use of GPS and aerial imagery allowed for relatively accurate locational data to be recorded on-Site.

3.4.2.1 Habitat survey

The walkover involved a specific habitat survey in accordance with *A Guide to Habitats in Ireland* (Fossitt, 2000) and *Best Practice Guidance for Habitat Survey and Mapping* (Smith *et al.*, 2011). The survey involved categorising habitat types and habitat features within the survey area (Site plus a 50 m buffer).

Typical and notable plant species were recorded for each key habitat type and reflected the conditions at the time of survey. Nomenclature was according to Stace (2019).

3.4.2.2 Invasive non-native plant species

During the walkover survey, a search was made for Scheduled INNS and species listed as being of high-impact and medium-impact in Ireland by the NBDC. Locations of such species were mapped, and notes were made including species, extent, maturity, and evidence of treatment.

3.4.2.3 Roosting bats

During daylight hours, public structures and trees within the survey area were subject to a visual ground-based Preliminary Roost Assessment (PRA), using methods described in Bat Conservation Trust (BCT) guidance (Collins, 2023, 2016)³.

The PRA was carried out to assess the potential for public structures and trees to support roosting bats and to determine the presence of potential roost features (PRF) in trees that may be used by bats, such as knotholes, cavities, or tear-outs, or access points in structures which may lead to roosting locations. External signs that bats are using a tree or structure as a roost were searched for, these include:

- entry points such as suitably sized gaps e.g. cracks and crevices;
- bat droppings: black droppings, 5-10 mm long that crumble to a fine dust when crushed and may be located on the ground or stuck to tree trunks, branches, or walls;
- staining: secretions from bat fur, which can cause oily brown stains in the vicinity of roost entrances. Urine stains which may be present below the entrance to the roost;
- audible squeaking from within the roost site;
- odour, which may be indicative of a large roost; and,
- flies around the entrance of a roost, attracted by the smell of bat droppings.

Bats can also roost in less obvious places such as under ivy *Hedera helix* and loose tree bark. Public structures and trees were categorised within the survey area as having Negligible, Low, Moderate, or High suitability for roosting bats in general accordance with BCT guidelines (Collins, 2016).

3.4.2.4 Otter

Detailed survey for the presence of otter *Lutra lutra*, including any resting sites, was carried out on 07 and 08 July 2022 within 200 m of the Site during the previous otter survey for the 12th Lock Masterplan (AECOM, 2023a).

An updated otter survey within at least 50 m of the Site and as far as access permitted, was carried out on 07 February 2024 in suitable habitats and along water features such as the Grand Canal and the River Griffeen including the section of the River Griffeen within the Site which was previously inaccessible in the 2022 survey.

Survey for otter followed guidance published in NRA (2006a) and evidence searched for included holts, lay-up areas, spraints, footprints, trails, and foraging evidence.

3.4.2.5 Other terrestrial mammals

Direct sightings and indirect signs of protected mammals were recorded if present. The suitability of habitats for protected mammal species including otter, badger *Meles meles*, hedgehog *Erinaceus europaeus*, Irish hare *Lepus timidus hibernicus*, Irish stoat *Mustela erminea hibernica*, pine marten *Martes martes*, pygmy shrew *Sorex minutus* and red squirrel *Sciurus vulgaris* were also assessed during the surveys, where suitable habitats were accessible.

3.5 Assessment methodology

3.5.1 Ecological Impact Assessment

The assessment of potential impacts and effects on biodiversity follows Irish National Road Authority (NRA) (now Transport Infrastructure Ireland (TII)) guidance (NRA, 2009b) and CIEEM guidance on EclA (CIEEM, 2022). Guidance in CIEEM (2022) broadly agrees with guidance in NRA (2009b). The latter is commonly used in Ireland and provides detail on the use of a geographical scale of importance, which broadly concurs with CIEEM guidance.

The principal steps in the EclA are therefore:

- determining baseline conditions by obtaining data on potentially affected ecological features through targeted desk study and field survey (both at expected project commencement and, for comparison, at a future point in the absence of the project);

³ The PRA was carried out in April 2023, following methods described in an earlier version of BCT guidance (Collins, 2016). BCT guidelines have since been updated and so the most recent PRA that occurred in February 2024 was carried out using the current BCT guidance methods (Collins, 2023).

- identifying the importance of ecological features in the baseline and evaluation of features in a geographic context, determining those that require more detailed assessment;
- identifying and describing the potential impacts of the project that could affect ecological features, and considering embedded mitigation and accounting for best practice and legislative requirements;
- assessing the likely effects on ecological features as far as possible quantified;
- developing measures to mitigate (by avoidance or reduction), or if necessary, compensate, for likely significant adverse effects, in conjunction with other design elements;
- identifying and assessing the significance of residual effects (beneficial or adverse); and,
- considering the scope for ecological enhancement.

The assessment employs the professional judgement of experienced ecologists, as necessary.

An ecological feature is a site, habitat, or species of nature conservation value. Only those that are ‘important’ and could be significantly affected by the project require detailed assessment: *“it is not necessary to carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable”* (CIEEM, 2022). This is consistent with the EIA Directive which requires investigation of likely significant effects, as accordingly emphasised by EPA (2022). NRA (2009) prescribes a similar approach, stating that ecological features of less importance than Local (Higher) should not be subject to detailed assessment.

Existing data and criteria (e.g., Irish Red List status) are considered when determining the importance of ecological features. Where these are lacking, it is necessary to apply professional judgement. Factors considered include:

- abundance/rarity, endemism, mobility and distribution (particularly if this is changing);
- size/extent, viability, rate of decline and vulnerability;
- typicalness, species-richness, structure and connectivity/fragmentation;
- function/value to other features (e.g., habitats of notable species or buffers against impacts); and,
- restoration potential.

The importance of ecological features is described within a geographic scale. Examples of types of ecological features which might fall into the importance categories are given in Table 3.2 which is adapted from CIEEM (2022).

Table 3.2. Geographical scale of importance

Importance	Example features (subject to professional judgement)
International	<ul style="list-style-type: none"> • Internationally designated nature conservation site (or candidate/proposed international site), or site satisfying criteria for such designation, or feature essential to maintaining such sites. • Sustainable area (or part of a larger sustainable area) of best examples of Annex I habitat. • A regularly occurring internationally significant population (e.g., 1% of the international population, or potentially less for critical parts of wider populations or those at a critical life-cycle stage) of internationally important species listed on Annex I of the Birds Directive or Annex II of the Habitats Directive.
National	<ul style="list-style-type: none"> • Nationally designated nature conservation site (or proposed such site), or site satisfying criteria for such designation. • Sustainable area of good quality Annex I habitat not deemed to be of international importance, or of national priority habitat, which is a significant proportion of the resource. • Regularly occurring nationally significant population (e.g., 1% of the national population, or potentially less for critical parts of wider populations or those at a critical life-cycle stage) of species listed or protected under the Wildlife Acts or Red Data Lists, or site supporting one.
County	<ul style="list-style-type: none"> • County designated nature conservation site (or proposed such site). • Sustainable area of Annex I habitat or national priority habitat not deemed to be of higher importance (e.g., lower quality, highly fragmented, small and / or low restoration potential), or priority habitat under a Local Biodiversity Action Plan if this exists and applies at county level. • Regularly occurring County significant population (e.g., 1% of county resource, or potentially less for critical parts of wider populations or those at a critical life-cycle stage) of species listed or protected under the Habitats / Birds Directives, Wildlife Acts, Red Data Lists or Local Biodiversity Action Plan (if this exists and applies at county level), or site supporting one.

Importance	Example features (subject to professional judgement)
Local (5 km radius)	<ul style="list-style-type: none"> • Priority habitat of insufficient size or quality for higher importance or degraded with low restoration potential. • Habitat providing significant biodiversity or important ecological corridors in a local context. • Small sustainable population of notable species not qualifying for higher importance or uncommon locally. • Common, heavily managed and/or modified habitat, and common, widespread and/or managed species.

Under CIEEM (2022) guidance there is a distinction between impact and effect. An impact is an action on an ecological feature (e.g., hedgerow removal; loss of a bat roost). An effect is the outcome of that impact on an ecological feature (e.g., loss of nesting habitat; effect of bat roost loss on the conservation status of the bat species).

Impacts may occur during the construction and operational phases of a development. They may be direct or indirect (also termed 'secondary'). Direct impacts are attributable to an action associated with a development. Indirect impacts are often produced away from a development or as a result of other initial impacts.

Following CIEEM (2022), likely impacts and effects are characterised using the following parameters:

- direction/quality: whether the impact/effect be beneficial, neutral, or adverse;
- magnitude: the 'size', 'amount' or 'intensity' of an impact/effect, quantified as far possible;
- extent: the spatial or geographical area or distance over which the impact/effect occurs;
- duration: the time over which an impact/effect is expected to last before recovery or replacement (if possible) of the feature. Where appropriate, ecological aspects such as lifecycles are considered. The duration of an effect may be longer than the duration of an activity or impact;
- timing/frequency: timing is important since an impact/effect might not occur if it avoids critical seasons or life stages. Frequency considers activity repetition, which may have greater impact; and,
- reversibility: whether the impact/effect is temporary or permanent. A temporary impact/effect is one from which recovery is possible or for which effective mitigation is possible and enforceable. A permanent impact/effect is one from which recovery is either not possible or cannot be achieved within a reasonable timescale (in the context of the feature being assessed).

Consideration is given to conservation objectives, whether processes within sites will be altered, effects on habitats and species population size/viability and whether these will have an effect on conservation status. Conservation status is a function of the abundance and distribution of species and the extent, structure and function and typical supported species of habitats.

Consideration is given to cumulative effects, since impacts acting in-combination may have a cumulative effect exceeding that of the separate impacts. Cumulative effects may arise from a combination of impacts from the development itself (e.g., impacts at the construction and operation stages), or the combined impacts from different developments.

An effect (positive or negative) is significant at a specified geographical level if it affects the ecological integrity of a site or ecosystem or the conservation status of a species or habitat at that geographical level. If not significant at the level it was considered important, an effect could be significant at a lower geographic level (for example, an effect on a nationally important species may not be significant to the national population). These assessments are based on quantitative evidence where possible and as necessary through the professional judgement of experienced ecologists.

Initially, the effect significance does not consider mitigation (avoidance or reduction) or compensation measures unless these are explicitly embedded into the design of the development. The residual effect significance takes account of additional agreed and enforceable mitigation or compensation measures that are considered necessary, with the aim that, wherever possible, residual effects are not significant or are significant at a lower geographic level than the unmitigated effects.

The CIEEM guidelines (2022) advise that where there is reasonable doubt and a conclusion of no significant effect cannot be robustly reached, this uncertainty should be acknowledged and a significant effect assumed, in line with the Precautionary Principle.

3.5.2 Approach to mitigation

The Proposed Development has considered and engaged the following mitigation hierarchy where there is potential for impacts on relevant ecological features:

1. Avoid features where possible.
2. Reduce impact by design, method of working or other measures (mitigation) (e.g., by enhancing existing features).
3. Compensate for significant residual effects (e.g., by providing suitable habitats elsewhere on the client-owned parts of the wider site).

This hierarchy requires the highest level to be applied where possible. Only where this cannot reasonably be adopted should lower levels be considered. The rationale for the proposed mitigation and/or compensation is provided, including sufficient detail to show that these measures are feasible and will be provided.

3.6 Limitations and assumptions

Desk study information is dependent on records having been submitted for the area of interest. As such, a lack of records for particular habitats or species does not necessarily mean they are absent from the area of interest. Similarly, the presence of records for particular habitats and species does not automatically mean they still occur within the area of interest or are relevant in the context of the Proposed Development.

Where habitat boundaries coincide with discernible boundaries on recent aerial photography (where available) the resolution is as determined by the accuracy and clarity of the aerial photography. Otherwise, habitat mapping is as estimated in the field. Where areas of habitat are given, they are approximate and should be verified by measurement on the Proposed Development site where required for design or construction.

During the initial ecological walkover survey on 07 and 08 July 2022, some structures within the Site, sections of the River Griffeen, and drainage ditches in the south-eastern section of the survey area within the private Takeda Ireland Ltd. pharmaceutical site were not accessible due to security fencing and dense scrub vegetation. However, the structures within the Site were accessible and surveyed on 28 April 2023. Some sections of the River Griffeen, as well as woodland/scrub areas, in the south-eastern section of the survey area nearby the private Takeda Ireland Ltd. pharmaceutical site were also not physically accessible due to security fencing and dense scrub vegetation. The majority of the River Griffeen and surrounding scrub habitat within the Site was accessible and surveyed on 07 February 2024. Any inaccessible areas were viewed from the nearest publicly accessible location/accessible area within in the Site or were viewed with binoculars from public roads and paths or accessible areas within the Site.

There were no other significant limitations to constrain the findings of this EclA.

4. Baseline environment

4.1 Nature conservation designations

4.1.1 International nature conservation designations

There are four internationally designated sites within 15 km of the Site that are not downstream of the Site, which are Rye Water Valley/Cartron SAC, Glenasmole Valley SAC, Wicklow Mountains SAC, and Wicklow Mountains SPA.

There are four internationally designated sites that are located approximately 20 km downstream⁴ of the Site in Dublin Bay, which are South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC, North Dublin Bay SAC, and North Bull Island SPA. There are also two Ramsar sites: Sandymount Strand/Tolka Estuary Ramsar site and North Bull Island Ramsar site located downstream of the Site in Dublin Bay.

These designated sites are shown in Figure 2 and set out in Table 4.1 listed in order of increasing distance from the Site.

Table 4.1. International nature conservation designations

Site name [site code]	Summary of QI/SCI	Approximate distance and direction from the Site
Rye Water Valley/Cartron SAC [001398]	<ul style="list-style-type: none"> • Petrifying springs with tufa formation [7220] • Narrow-mouthed whorl snail <i>Vertigo angustior</i> [1014] • Desmoulin's whorl snail <i>Vertigo moulinsiana</i> [1016] 	4.4 km north-west
Glenasmole Valley SAC [001209]	<ul style="list-style-type: none"> • Semi-natural dry grasslands and scrubland facies on calcareous substrates [6210] • <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils [6410] • Petrifying springs with tufa formation [7220] 	9.6 km south-east
Wicklow Mountains SAC [002122]	<ul style="list-style-type: none"> • Oligotrophic waters containing very few minerals of sandy plains <i>Littorelletalia uniflorae</i> [3110] • Natural dystrophic lakes and ponds [3160] • Northern Atlantic wet heaths with cross-leaved heath <i>Erica tetralix</i> [4010] • European dry heaths [4030] • Alpine and boreal heaths [4060] • <i>Calaminarian</i> grasslands of the <i>Violetalia calaminariae</i> [6130] • Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas [6230] • Blanket bogs (*if active bog) [7130] • Siliceous scree of the montane to snow levels <i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i> [8110] • Calcareous rocky slopes with chasmophytic vegetation [8210] • Siliceous rocky slopes with chasmophytic vegetation [8220] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] • Otter [1355] 	11.4 km south-east
Wicklow Mountains SPA [004040]	<ul style="list-style-type: none"> • Merlin <i>Falco columbarius</i> [A098] • Peregrine <i>Falco peregrinus</i> [A103] 	14.3 km south-east
South Dublin Bay and River Tolka Estuary SPA [004024]	<ul style="list-style-type: none"> • Light-bellied brent goose <i>Branta bernicla hrota</i> [A046] • Oystercatcher <i>Haematopus ostralegus</i> [A130] • Ringed plover <i>Charadrius hiaticula</i> [A137] • Grey plover <i>Pluvialis squatarola</i> [A141] • Knot <i>Calidris canutus</i> [A143] • Sanderling <i>Calidris alba</i> [A144] • Dunlin <i>Calidris alpina</i> [A149] 	15 km east, 24.9 km downstream

⁴ These European sites are located between 15 km and 18.3 km from the Site as the crow flies but the hydrological connection between the Site and these European sites is greater than 20 km downstream of the Site. Along the course of the River Griffeen and the River Liffey, these European Sites are hydrologically located between 24.9 km and 26.3 km downstream of the Site.

Site name [site code]	Summary of QI/SCI	Approximate distance and direction from the Site
	<ul style="list-style-type: none"> • Bar-tailed godwit <i>Limosa lapponica</i> [A157] • Redshank <i>Tringa totanus</i> [A162] • Black-headed gull <i>Chroicocephalus ridibundus</i> [A179] • Roseate tern <i>Sterna dougallii</i> [A192] • Common tern <i>Sterna hirundo</i> [A193] • Arctic tern <i>Sterna paradisaea</i> [A194] • Wetland and waterbirds [A999] 	
Sandymount Strand/Tolka Estuary Ramsar site [832]	<ul style="list-style-type: none"> • As per South Dublin Bay and River Tolka Estuary SPA SCI species above. 	15 km east, 24.4 km downstream
South Dublin Bay SAC [000210]	<ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • <i>Salicornia</i> and other annuals colonising mud and sand [1310] • Embryonic shifting dunes [2110] 	15.7 km east, 24.9 km downstream
North Dublin Bay SAC [000206]	<ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • <i>Salicornia</i> and other annuals colonising mud and sand [1310] • Atlantic salt meadows [1330] • Mediterranean salt meadows [1410] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Humid dune slacks [2190] • Petalwort <i>Petalophyllum ralfsii</i> [1395] 	18.1 km east, 26.3 km downstream
North Bull Island SPA [004006]	<ul style="list-style-type: none"> • Light-bellied brent goose [A046] • Shelduck <i>Tadorna tadorna</i> [A048] • Teal <i>Anas crecca</i> [A052] • Pintail <i>Anas acuta</i> [A054] • Shoveler <i>Anas clypeata</i> [A056] • Oystercatcher [A130] • Golden plover <i>Pluvialis apricaria</i> [A140] • Grey plover [A141] • Knot [A143] • Sanderling [A144] • Dunlin [A149] • Black-tailed godwit <i>Limosa limosa</i> [A156] • Bar-tailed godwit [A157] • Curlew <i>Numenius arquata</i> [A160] • Redshank <i>Tringa totanus</i> [A162] • Turnstone <i>Arenaria interpres</i> [A169] • Black-headed gull [A179] • Wetland and waterbirds [A999] 	18.3 km east, 26.3 km downstream
North Bull Island Ramsar site [406]	<ul style="list-style-type: none"> • As per North Bull Island SPA SCI species above. 	18.3 km east, 26.3 km downstream

*Distance is given as the crow flies and hydrological distance is given if relevant.

4.1.2 National nature conservation designations

There is one nationally designated site (the Grand Canal pNHA) located within the Site and a second nationally designated site (the Liffey Valley pNHA) located approximately 2.6 km downstream of the Site. There are also two nationally designated sites that are located approximately 24.7 km downstream of the Site in the Dublin Bay.

These designated sites are shown in Figure 2 and set out in Table 4.2 listed in order of increasing distance from the Site.

Table 4.2. National nature conservation designations

Site name [site code]	Reason(s) for designation	Distance and direction from the Site
Grand Canal pNHA [002104]	Habitats found within the canal boundaries include hedgerow, tall herbs, calcareous grassland, reed fringe, open water, scrub, and woodland. Otter use the canal. Opposite-leaved pondweed <i>Groenlandia densa</i> , which is listed on the Flora Protection Order is also present at the canal.	Part of the Grand Canal pNHA is located within the Site. There is no hydrological connection between the pNHA and the Site. The Grand Canal is located approximately 11 m north of the Site.
Liffey Valley pNHA [000128]	The site is important because of the diversity of the habitats within the site, ranging from aquatic to terrestrial. A number of rare and threatened plant species have been recorded from the site including green figwort <i>Scrophularia umbrosa</i> .	3.1 km north, direct hydrological connection 3.9 km downstream
South Dublin Bay pNHA [000210]	This site is a good example of a coastal system, with extensive sand and mudflats, and incipient dune formations. South Dublin Bay is also an internationally important SPA and SAC and this pNHA lies within both South Dublin Bay SAC and South Dublin Bay and River Tolka Estuary SPA.	15.7 km east, 24.9 km downstream
North Dublin Bay pNHA [000206]	The site is important as it is also an SAC. See North Dublin Bay SAC in table above for more.	18.1 km east, 26.3 km downstream

*Distance is given as the crow flies and hydrological distance is given if relevant.

4.2 NBDC desk study results

Following a data search conducted in February 2024, NBDC provided records of species within 2 km of the Site made since 2000. Records of important species are provided below in Table 4.3.

Table 4.3. Important species records returned by NBDC within 2 km of the Site since 2000.

Taxa	Common name	Scientific name	Number of record(s)	Conservation designation(s)
Birds	Barn owl	<i>Tyto alba</i>	4	BoCCI Red List, WA
	Golden plover	<i>Pluvialis apricaria</i>	3	BirdsDir A1, BoCCI Red List, WA
	Grey wagtail	<i>Motacilla cinerea</i>	8	BoCCI Red List, WA
	Kestrel	<i>Falco tinnunculus</i>	5	BoCCI Red List, WA
	Kingfisher	<i>Alcedo atthis</i>	6	BirdsDir A1, WA
	Little egret	<i>Egretta garzetta</i>	2	BirdsDir A1, WA
	Meadow pipit	<i>Anthus pratensis</i>	4	BoCCI Red List, WA
	Peregrine	<i>Falco peregrinus</i>	2	BirdsDir A1, WA
	Pochard	<i>Aythya ferina</i>	4	BoCCI Red List, WA
	Red grouse	<i>Lagopus lagopus</i>	1	BoCCI Red List, WA
	Swift	<i>Apus apus</i>	5	BoCCI Red List, WA
	Yellowhammer	<i>Emberiza citrinella</i>	8	BirdsDir A1, BoCCI Red List, WA
Invertebrates	Globular pea mussel	<i>Pisidium hibernicum</i>	1	NT
	Iridescent pea mussel	<i>Pisidium pulchellum</i>	1	EN
	Large red-tailed bumblebee	<i>Bombus lapidarius</i>	1	NT
Mammals	Brown long-eared bat	<i>Plecotus auritus</i>	6	HabDir, WA
	Common pipistrelle	<i>Pipistrellus pipistrellus</i>	9	HabDir, WA
	Daubenton's bat	<i>Myotis daubentonii</i>	31	HabDir, WA
	Hedgehog	<i>Erinaceus europaeus</i>	11	WA
	Leisler's bat	<i>Nyctalus leisleri</i>	9	HabDir, WA

Taxa	Common name	Scientific name	Number of record(s)	Conservation designation(s)
	Pine marten	<i>Martes martes</i>	1	WA
	Pygmy shrew	<i>Sorex minutus</i>	1	WA
	Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	11	HabDir, WA
Invasive non-native species	Blackcurrant	<i>Ribes nigrum</i>	1	Medium-impact
	Brown rat	<i>Rattus norvegicus</i>	1	High-impact
	Grey squirrel	<i>Sciurus carolinensis</i>	1	Sch Inv, High-impact
	Jenkins' spire snail	<i>Potamopyrgus antipodarum</i>	1	Medium-impact
	Rabbit	<i>Oryctolagus cuniculus</i>	3	Medium-impact

HabDir – Habitats Directive.

BirdsDir A1 – Annex I of Birds Directive.

WA – Wildlife Acts.

BoCCI Red List – Birds of Conservation Concern in Ireland on the Red List.

Irish Red List status (EN - Endangered, VU - Vulnerable, NT - Near Threatened, RE – Regionally Extinct)

Sch Inv - Third Schedule of Habitats Regulations.

High-impact – high-impact invasive species in Ireland; medium-impact – medium-impact invasive species in Ireland

4.3 Habitats

The Site consists primarily of buildings and artificial surfaces that are enclosed by surrounding dry meadows and grassy verges, treelines, mixed broadleaved woodlands and scrub. Habitats present within the Site and survey area are described in more detail in the following paragraphs. Habitats are shown in Figure 3. Indicative photographs of broad habitats are presented in Appendix A.

BL3 Buildings and artificial surfaces

The centre of the Site is hard-standing consisting of a large derelict residential premise (Grange Cottage) and a number of farm outbuildings within two gravel courtyards. In the southern and eastern areas of survey area, the landscape is largely dominated by hard-standing surfaces with Takeda Ireland Ltd. pharmaceutical site to the south and construction work for Grange Castle substation to the east of the Site. Buildings can provide habitat for species such as roosting bats and nesting birds, however sealed or other such hard-standing surfaces have negligible ecological value.

FW3 Canals

The Grand Canal is located north of the Site. It is a man-made watercourse that is approximately 12 m wide containing turbid, relatively stagnant water with a muddy substrate. There is a relatively low floral diversity within the canal as it is dominated by arrowhead *Sagittaria sagittifolia* with occasional yellow water-lily *Nuphar lutea*. The canal edges are typically gently sloped and range between 0.5 to 2.5 m wide. They are dominated by common reed *Phragmites australis* with yellow iris *Iris pseudacorus*, bulrush *Typha latifolia*, and reed canary grass *Phalaris arundinacea*. This reed-dominated habitat typically grades into grassy verges with species mainly comprising false oat-grass *Arrhenatherum elatius*, rosebay willowherb *Chamaenerion angustifolium*, meadowsweet *Filipendula ulmaria*, butterbur *Petasites hybridus*, common valerian *Valeriana officinalis*, horsetail *Equisetum* spp., and hedge bindweed *Calystegia sepium*. The Grand Canal outflows into Dublin Bay approximately 20 km from the Site.

FW2 Depositing/lowland river

A section of the River Griffeen transverses through the western and south-western section of the Site and had a northerly flow. The River Griffeen crosses beneath the Grand Canal just north of the Site and approximately 200 m east of the 12th Lock Bridge and flows downstream towards the River Liffey.

The majority of the banks of the River Griffeen are modified with only small sections of natural banks. The River is approximately 2 m wide and 0.5 m deep and had a fast flow at the time of the second otter survey. The water had a murky blue colour and, as such, the stream bed substrate is unknown. This section of the River Griffeen is considered to have relatively low ecological value as it is modified and used for drainage.

Along the banks of the river, scrub vegetation is present and overhangs into the watercourse. Both sides of the river are grass-dominated (GS2) with tall sward heights and a number of immature trees such as dogwood

Cornus sanguinea, self-seeded willow *Salix* sp., and elder *Sambucus nigra* are present along the banks. Further from the riverbank, bramble *Rubus fruticosus* agg. scrub (WS1) dominates.

GS2 Dry meadows and grassy verges

There is one parcel of unmanaged dry meadow and grassy verge within the Site that is dominated by grasses with tall swards heights noted during the surveys and frequent ruderal species such as common nettle *Urtica dioica*, rosebay willowherb, and thistle *Cirsium vulgare*. The Scheduled low-impact invasive species Spanish bluebell *Hyacinthoides hispanica* is located in the south of the Site in a section of dry meadow and in flowerpots adjacent to Grange Cottage.

WD1 (Mixed) broadleaved woodland

There are two parcels of mixed broadleaved woodland within the Site, to the south of the Grand Canal. The western woodland parcel has a canopy height of approximately 10-12 m, and is dominated by ash *Fraxinus excelsior* and willow, with silver birch *Betula pendula*, common alder *Alnus glutinosa*, and has a dense understorey comprising elder and bramble. The eastern woodland is similar and ranges from 10-15 m canopy height, but it has a sparser understorey than the western woodland. The canopy is dominated by common alder, elder, and willow. This woodland parcel is associated with a dry ditch and has mainly bare soil and ivy dominating the ground floor.

WL2 Treelines

There is one treeline within the Site composed of semi-mature trees. The treeline composition is similar to that of the mixed broadleaved woodlands with the additional presence of Japanese alder *Alnus japonica*. Treelines in the survey area are also composed of similar species.

WS1 Scrub

There is a relatively large area of scattered scrub within the Site that forms a mosaic of dry meadows and grassy verges with mainly ruderal species. Species observed typically include elder, bramble, common nettle, thistle, common hogweed, hawthorn *Crataegus monogyna*, and occasional willow and cleavers *Galium aparine*.

4.4 Invasive non-native species

4.4.1 Fauna

No invasive faunal species were observed within the survey area during the field survey. The NBDC database search returned records of brown rat, grey squirrel, rabbit, and Jenkin's spire snail within 2 km of the Proposed Development.

4.4.2 Flora

One Scheduled INNS, Spanish bluebell (low-impact), was identified within the Site and two non-Scheduled invasive species were identified within the Site: cherry laurel *Prunus laurocerasus* (high-impact), and butterfly-bush *Buddleia davidii* (medium-impact). The general locations of these species are shown on Figure 4.

Spanish bluebell is located within the Site in a section of dry meadow grassland and also in two flowerpots adjacent to the derelict residential property (Grange Cottage). The area of Spanish bluebell in the dry meadow grassland was approximately 3 x 6 m. There are two stands of butterfly-bush within the Site. One is located along the gravel path growing amongst other scrub vegetation and the other is located in the eastern section of the Site. Cherry laurel is found growing within a 5 x 2 m bush with other scrub vegetation in the north section of the Site along the gravel path, as in shown on Figure 4.

4.5 Protected and important species

The baseline conditions with respect of protected and important flora and fauna species are described under the following sub-headings. Where relevant, desk study data are also referred to in the sub-headings below.

4.5.1 Protected and important plant species

No protected or important plant species were identified within the Site boundary and are considered likely absent from the Site given the habitats present. In addition, the desk study returned no records of protected or important plant species within the Study Area. Therefore, protected and important plant species are not considered further in this EclA.

4.5.2 Bats

The PRA of structures within the Site carried out on 28 April 2023 identified two structures as having Low suitability for roosting bats (S04 and S05), given they were open and had a few internal crevices within the structures. The second, updated PRA was carried out on 07 February 2024 during which bat droppings were found within S04. Species were not confirmed, however the size and shape of the droppings potentially indicate pipistrelle *Pipistrellus* spp. bats. There were no feeding remains (e.g., moth wing cases) found within either structure. Both of these structures comprise large open sheds, and it is possible that bats only enter the structures for foraging, exploiting insects that may shelter in these covered areas, rather than roosting within the buildings themselves. However, there is potential that brown long-eared bats could utilise these as feeding roosts and there are features present that may be used by small numbers of roosting bats. Details of these structures are presented in Table 4.4 below and in Plates 1 and 2. The locations of the structures are shown in Figure 4.

Table 4.4. Information on structures with Low bat roost suitability

Structure reference	Structure description	Roost type	Access / roost features	Location (ITM coordinate)
S04 (see Plate 1)	A L-shaped open derelict structure with vegetation growing out of the roof in parts. The walls are made of stones and the roof is slated with internal wooden beams.	Low suitability. Potential feeding roost/night roost.	The building has wooden beams as well as tiles and stone walls that may support one or small numbers of bats opportunistically. Bat droppings were observed internally during the survey on 07 February 2024.	703213, 732286
S05 (see Plate 2)	An open derelict structure with metal sheet roofing. The walls are made of concrete with some wooden beams.	Low suitability. Potential feeding roost/night roost.	The wooden beams within the building may support one or small numbers of roosting bats. No bat evidence was observed internally during the survey on 28 April 2023 or on 7 February 2024.	703240, 732249

Plate 1. S04 external view and PRF



Plate 2. S05 external view and PRF

The other four structures within the Site assessed during the PRA had Negligible suitability based on a lack of suitable roost features. These structures were well-sealed and comprised a recently abandoned house that had no suitable openings for bats and sheds that were composed of corrugated roofing materials.

The PRA of trees carried out on 28 April 2023 identified no trees within the Site as having PRFs, and thus all trees were assessed as Negligible. Therefore, in line with current BCT guidance (Collins, 2023) no Ground Level Tree Assessment (GLTA) was required.

The watercourses (i.e., Grand Canal, and River Griffeen), hedgerows, treelines, and woodland parcels in the wider area provide foraging and commuting habitat for bats. Habitats within the Site such as the watercourse, treelines and mixed broadleaved woodland parcels offer limited opportunities for foraging and commuting bats as they are small in extent and illuminated by external street lighting.

The following seven bat species have been previously recorded in the Clonburriss SDZ lands to the east of the Site and along the Grand Canal: brown long-eared bat, common pipistrelle, Daubenton's bat, Leisler's bat, Nathusius' pipistrelle *Pipistrellus nathusii*, Natterer's bat *Myotis nattereri*, soprano pipistrelle, and whiskered bat *Myotis mystacinus* (Stephen Little and Associates, 2020; Doherty Environmental (2018a); FERS, 2018; FERS, 2016a; FERS, 2015). However, to the south of the Site near 12th Lock Bridge, low levels of bat activity were generally recorded, with just two soprano pipistrelle individuals passing near the bridge during a survey in August 2016. Bats more frequently were found to use the mid-section between the 12th Lock Bridge and Hazelhatch Bridge. The low levels of bat activity at each bridge were considered to be due to light pollution from the streetlights (17 lux recorded at Hazelhatch Bridge and 13 lux recorded at 12th Lock Bridge) (FERS, 2016a).

To the west of the Site, structures identified as potential bat roosts in the area from 12th Lock to Hazelhatch Bridge did not identify any bat roosts (Doherty Environmental, 2018a). There still may be a potential bat roost approximately 3.1 km to the east of the Site, as four to six individual soprano pipistrelles were observed emerging from trees in September 2015 along the laneway of Cappaghmore House (FERS, 2015).

4.5.3 Otter

No evidence of otter was identified during the field surveys. The section of the River Griffeen within the Site was considered to have very limited suitability for otter holts due to the modification of the banks. There is also limited suitability for otter holts within the survey area as the habitats adjacent to the watercourses are typically hard-standing.

The section of the River Griffeen within the Site offers limited foraging and commuting opportunities for otter and there is some existing suitable habitat for otter present within the watercourses in the survey area. Within the Site, habitats such as the areas of dry meadow grassland, scrub and woodland parcels offer potential resting sites for otter, but no resting sites were identified and it is considered highly unlikely that otter use areas in the Site for foraging and/or commuting as the landscape predominately consists of pavement with no foraging opportunities to attract otter from the Grand Canal and/or the main channel of the River Griffeen.

Otter are known to use the Grand Canal, the River Griffeen, and the overflow stream, to the north-west of the Site, for commuting and foraging, with evidence of otter spraint previously identified to the west of and nearby the 12th Lock Bridge (FERS, 2016b). However, no evidence of otter has been recorded in the Grand Canal or River Griffeen in recent surveys carried out in 2018 and 2020, which was potentially due to the works at the R120, 12th Lock Bridge, and adjacent overflow stream in 2018 (Stephen Little and Associates, 2020; FERS, 2018). Furthermore, connectivity at the Grand Canal is degraded as the 12th Lock limits the ability for otter to move along the Grand Canal due to the steep water level differences and the River Griffeen passes underneath the Grand Canal making it difficult for otter to commute between these watercourses.

4.5.4 Other terrestrial mammals

No evidence of other mammals was identified during the field survey. There were no records of pine marten or red squirrel within the Clonburris SDZ (Stephen Little and Associates, 2020; FERS, 2018) or records returned in the desk study. Furthermore, the Site is composed of sub-optimal habitat with no significant suitable woodland habitat or connectivity for these species. Therefore, pine marten and red squirrel are considered likely absent from the Site and are not considered further in this EclA.

However, other mammals that have been previously identified in the wider Clonburris SDZ lands such as badger, hedgehog, Irish stoat, and pygmy shrew could be present within the Site and survey area, particularly foraging and/or sheltering within woodland parcels, hedgerow, treeline, and scrub habitat. While the habitats within the Site are small in extent and have limited habitat connectivity, they offer refugia for other mammals in a surrounding busy urban area.

4.5.5 Amphibians and reptiles

No evidence of amphibians or reptiles were identified during the field survey. However, suitable habitat for common frog includes watercourses and an attenuation pond approximately 178 m to the west of the Site, which was previously identified in the PEA survey (AECOM, 2023a). The section of the River Griffeen within the Site had a fast flow at the time of survey and is unsuitable for common frog and smooth newt *Lissotriton vulgaris*. It is also considered unsuitable for breeding smooth newt given the lack of broadleaved vegetation for laying their eggs. Therefore, amphibians are considered likely absent from the Site and not considered further in this EclA.

Suitable habitat for common lizard *Zootoca vivipara* is present within woodlands, recolonising bare ground, and scrub in the surrounding area, albeit these habitats are small in extent and sub-optimal. There is limited suitability for reptiles within the Site itself.

4.5.6 Birds

No important birds were incidentally noted during the field survey. However, the following BoCCI Red-listed bird species were recorded during breeding bird surveys in the Clonburris SDZ to the east of the Site: grey wagtail *Motacilla cinerea*, meadow pipit *Anthus pratensis*, and swift *Apus apus*. Barn owl *Tyto alba* and kestrel *Falco tinnunculus* were the only BoCCI Red-listed raptor species recorded in the Clonburris SDZ. The BoCCI Red-listed bird species recorded during the non-breeding surveys were lapwing *Vanellus vanellus*, meadow pipit, redwing *Turdus iliacus*, and snipe *Gallinago gallinago*.

The habitats within the wider survey area, particularly along the Grand Canal, are suitable for a range of breeding and non-breeding bird species. Habitats such as woodlands, scrub, hedgerows, and treelines may provide nesting, shelter, and foraging opportunities for a variety of bird species. Waterbirds, such as kingfisher and grey

wagtail, may also use the watercourses within the survey area as commuting and foraging habitat. However, the banks are modified and gently sloped, and hence not suitable for kingfisher nesting.

Abandoned fields within the surrounding area could also provide roosting habitat for non-breeding birds. As detailed in Section 4.1.1, there are a number of SPAs designated for a range of wetland and waterbirds within the potential Zol of the Proposed Development. However, there is no habitat within the Site that could support non-breeding waterbirds. In relation to SCI species, the AA Screening Report concluded that likely significant effects from the Proposed Development on European sites will not arise, both individually or in-combination with other plans or projects (AECOM, 2024a). Therefore, SCI bird species are not considered to pose a constraint and are not considered further in this EclA.

Within the Site there is some suitable habitat such as within treelines, areas of scrub, and woodland parcels that provide nesting, sheltering, and foraging opportunities for a variety of common bird species.

4.5.7 Fish

No important fish were incidentally observed during the field survey. Within the Site, the section of the River Griffeen is unlikely to support any fish species given its poor connectivity to the main course of the River Griffeen as it connected via a siphon system, making movement between the watercourses impossible. However, the River Griffeen downstream of the Site and the Grand Canal support fish as indicated from the desk study below.

FERS (2018) noted that the diversity and abundance of fish in the Grand Canal has declined considerably from 2015 to 2018. There were high numbers of roach *Rutilus rutilus* and perch *Perca fluviatilis* in 2015 and few of these individuals recorded in 2018 (FERS, 2018). The River Griffeen has not been specifically surveyed for fish during surveys of the Clonburris SDZ, however FERS (2015) noted that the River Griffeen contains trout *Salmo* sp.

The *Water Framework Directive Fish Stock Survey of Rivers in the Eastern River Basin District* (Kelly *et al.*, 2011) has records of brown trout *Salmo trutta*, European eel *Anquilla anquilla*, roach, and three-spined stickleback *Gasterosteus aculeatus* within the River Griffeen from 2011 surveys. The River Griffeen also has populations of Atlantic salmon *Salmo salar* and sea trout *Salmo trutta trutta* according to Inland Fisheries Ireland (Stephen Little and Associates, 2020). Atlantic salmon (vulnerable, listed in Annex II and V of the Habitats Directive) and European eel (critically endangered) are of conservation concern in Ireland (King *et al.*, 2011; Nelson *et al.*, 2019).

4.5.8 Invertebrates

No important invertebrates were incidentally observed during the field survey.

Based on the habitats present within the Site, in particular dry meadows and grassy verges, scrub, and mixed broadleaved woodlands, there is suitability for terrestrial invertebrates such as various butterflies, bees, beetles and snails. The River Griffeen within the Site offers limited suitability for aquatic invertebrate species but there is suitable habitat for aquatic invertebrates in the Grand Canal and River Griffeen to the north of the Site in the survey area. Therefore, only common terrestrial invertebrates are presumed to be present within the Site.

In the Clonburris SDZ lands to the east of the Site, important terrestrial invertebrates previously recorded included red-tailed bumblebee *Bombus lapidarius* (near threatened) and moss carder bee *Bombus muscorum* (near threatened). Several relatively common butterflies, bees and bumblebees were also recorded within the Clonburris SDZ during previous invertebrate surveys (FERS, 2018).

White-clawed crayfish *Austropotamobius pallipes*, which is protected by the Wildlife Acts, were recorded by FERS (2015) in the historical overflow stream and River Griffeen near 12th Lock. They were also recorded in relatively high numbers in the Grand Canal and feeder stream in Cappagh in 2015. However, aquatic invertebrate diversity was relatively low in the Grand Canal, the River Griffeen, and streams adjacent to the Grand Canal in 2018 during surveys carried out by FERS. White-clawed crayfish was absent from all sampling locations in 2018 by FERS except for one feeder stream in Cappagh adjacent to the Grand Canal where white-clawed crayfish was present in low numbers. However, the data recorded in 2018 is unlikely to represent the baseline environment due to unusual weather conditions of high temperatures and drought that summer. Furthermore, the overflow stream near the 12th Lock Bridge could not be surveyed by FERS due to the engineering works. Surveys carried out between 12th Lock and Hazelhatch in 2018 by Doherty Environmental (2018b) identified white-clawed crayfish in abundance along the canal bed during visual surveys. Both adult and juveniles were identified and indicated a stable population within the Grand Canal. Crayfish remains were also abundant within otter spraints (Doherty Environmental, 2018b).

Records of two mollusc species within 2 km of the Site were returned from the NBDC database search. Globular pea mussel *Pisidium hibernicum* (near threatened) and iridescent pea mussel *Pisidium pulchellum* (endangered) were both identified in the Grand Canal in 2003. Pea mussel (only identified to the genus level) was recorded within the Grand Canal to the north of the Site, but not recorded in the River Griffeen (FERS, 2015).

4.6 Future baseline

The construction phase of the Proposed Development will extend to a period of approximately twelve months for Phase One and twelve months for Phase Two. Phase One is proposed to commence January 2025 and the commencement of Phase Two is funding-dependent meaning a start date is currently unknown. The operation of Phase One will not occur while Phase Two is under construction or if construction is paused while awaiting funds. Therefore, given the short intervening period, the baseline for the Site at the time of the proposed works is not expected to change from that described above.

There are no other known or likely land use changes, or changes to the terrestrial, coastal or marine environment within the Zol of the Proposed Development, that have the potential to significantly change the baseline ecological conditions at the time of construction of the Proposed Development.

Very minor changes in the distribution of some species may occur due to small-scale changes in habitat structure as a result of vegetation loss, ecological succession or other natural processes, or human interventions. Any such changes are very likely to be within the range of normal inter-annual variation in the distribution and abundance of local species populations.

It is therefore expected that the current baseline conditions will remain largely unchanged by the time of construction of the Proposed Development.

4.7 Baseline in the absence of the Proposed Development

The future baseline in the absence of the Proposed Development (the 'do nothing scenario'), taken for these purposes to be the situation 30 years from the time of writing, would likely involve redevelopment with other infrastructure given the deterioration of structures, and the urban location of the Site. Furthermore, the Site is zoned for development within the SDCC Development Plan (SDCC, 2022) and the Site is adjacent to the boundary of the Clonburris SDZ. Thus, the lands will likely be developed at some stage in the future.

4.8 Features excluded from further assessment

Relevant ecological features are those that are considered to be 'important' and have the potential to be affected by the Proposed Development (CIEEM, 2022). In view of the baseline data obtained through the desk study, and field survey, the following were excluded from further assessment because there is considered to be no possible effect on them, through absence of the feature or clear absence of an impact pathway;

- non-native invasive faunal species – there is no mechanism by which the Proposed Development could cause a significant increase in these species and more importantly no realistic means by which the Proposed Development could spread them elsewhere. Therefore, non-native invasive faunal species are not considered further in this EclA;
- protected/important native plant species;
- hard-standing surfaces (excluding buildings);
- red squirrel and pine marten; and,
- amphibians.

5. Potential impacts

5.1 Embedded mitigation

Embedded mitigation measures are incorporated into the design of a development and aim to avoid or reduce adverse effects, including those on ecological features. Embedded mitigation is considered at the initial impact assessment stage, whereas mitigation that is not part of the design and is developed after the initial impact assessment is considered at the residual effects stage.

A range of measures that are standard best practice for development of this type, including those required to comply with environmental protection and nature conservation legislation will also be implemented. These are well-developed and have been successfully implemented on infrastructure projects across the country and there is a high degree of confidence in their success. They can therefore be treated as embedded mitigation. These include:

- all personnel involved in the construction of the Proposed Development will be made aware of the ecological features within the Zol of the Proposed Development and the mitigation measures and working procedures that must be adopted. This will be achieved as part of the induction process and through the delivery of Toolbox Talks, daily briefings, an environmental noticeboard (with ecological information, spill / emergency response and refuelling area / procedure) and signage (including ecological exclusion areas);
- a Construction Environmental Management Plan (CEMP) will be prepared by the appointed Contractor prior to commencement of construction. The CEMP will set out all environmental management measures and the roles and responsibilities of construction personnel;
- an Ecological/Environmental Clerk of Works (ECoW) will be employed for the duration of the construction of the Proposed Development. The ECoW will advise on and monitor implementation of ecological mitigation measures, ensuring that those employed are functioning properly and that there is compliance with legislative requirements in relation to ecological features. The ECoW will also carry out pre-construction surveys for protected and/or notable species and provide other ecological advice as necessary;
- during all phases of the Proposed Development (construction and operation), pollution prevention measures will be adopted and included within the CEMP. Measures will include the following:
 - controls and contingency measures will be provided to manage run-off from construction areas and to manage sediment;
 - all oils, lubricants or other chemicals will be stored in an appropriate secure container in a suitable storage area, with spill kits provided at the storage location and at places across the Site;
 - in order to avoid pollution impacts to soils and vegetation during construction, all refuelling and servicing of vehicles and plant will be carried out in a designated area which is bunded and has an impermeable base;
 - standard guidelines will be adhered to including *The Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes* (NRA, 2008a) and the *Planning for Watercourses in the Urban Environment* (IFI, 2020);
- the permanent drainage system for the Proposed Development forms a part of its design and can be considered as embedded mitigation. It incorporates SuDS features including permeable paving, landscaping adjacent to paths, tree pits, filter strips, planter, and stormwater swales. The details of the SuDS design will be determined at the detailed design stage;
- biosecurity measures (i.e., prevention of spread) will be implemented to reduce the risk of spread of INNS. This will include isolating (e.g., fencing) and signing the infested areas. In addition, all contractors and Site operatives will receive a Toolbox Talk when works commence in the vicinity of the infested areas, for all recorded INNS. A Method Statement will be prepared prior to commencement of construction. The Method Statement will set out the general approach to the avoidance and/or management of INNS to ensure that they are not spread during the construction of the Proposed Development;
- habitat losses will be minimised as far as possible, by only removing habitat from the landing area required to facilitate the construction of the pedestrian bridge. Retained habitat within the survey area, particularly where the Site overlaps with the Grand Canal pNHA, will be safeguarded during the construction of the Proposed Development;

- as far as possible, works that will directly impact upon areas of vegetation that could be used by nesting birds will be undertaken outside of the breeding season, which is taken to be between March and August, inclusive. Should vegetation clearance works be required during the breeding season, a pre-construction survey for active nests will be carried out by an ECoW or suitably experienced ecologist/ornithologist. Such checks will be completed no more than 48 hours in advance of clearance works taking place (and ideally immediately before) as nests can be quickly established. Where any active nests are identified, suitable species-specific exclusion zones will be implemented and maintained until the breeding attempt has concluded;
- sightings of protected or important species within the Site during the construction phase will be recorded. If any evidence or sightings of protected species is found within 30 m of works, then works in that area will stop immediately and an ECoW should be consulted for further advice;
- any excavations will be left with a method of escape for any animals that may enter overnight, and will be checked at the start of each working day to ensure no animals are trapped within them;
- any pipes will be capped or otherwise blocked at the end of each working day, or if left for extended periods of time, to ensure no animals become trapped; and,
- minor works such construction and/or upgrades to amenity footpaths, and gardens must be set back at least 10 m from all watercourse edges (i.e. top of the riverbank) and will require a risk assessment by a suitability qualified ecologist if they are within 50 m of a watercourse edge. Where minor works such as footpath maintenance must take place within 10 m of the edge of a watercourse a risk assessment should also be carried out and if a substantial risk is identified the CEMP must be developed in consultation with Inland Fisheries Ireland at the application stage where feasible.

As per the Clonburris SDZ BMP (Scott Cawley, 2020a), the following two objectives are linked to the final embedded mitigation measure above and are considered as appropriate mitigation measures for the Proposed Development, and will be implemented;

- no storage/stockpiling of materials or machinery or construction works activities (except for those required to construct footpaths or bridges) will be undertaken within 50 m of the Grand Canal and River Griffeen. Where construction works will take place within 50 m of a watercourse, a risk assessment must be carried out; and,
- where other works (e.g., footpath maintenance) must take place within 10 m of the edge of a watercourse a risk assessment should be carried out. If a risk is identified a method statement must be developed in consultation with Inland Fisheries Ireland at application stage, where feasible.

5.2 Importance of ecological features

The importance of ecological features identified in the baseline and scoped into the EclA is assigned in Table 5.1, together with the rationale. Ecological importance has been assessed on a geographic scale following CIEEM (2022). For the purposes of defining geographical scale in this assessment, 'County' is defined as Co. Dublin and 'Local' as the area within 5 km of the Proposed Development.

Table 5.1. Importance of ecological features

Ecological feature	Importance	Rationale
Rye Water Valley/Carton SAC [001398]	International	International nature conservation designation.
Glenasmole Valley SAC [001209]	International	International nature conservation designation.
Wicklow Mountains SAC [002122]	International	International nature conservation designation.
Wicklow Mountains SPA [004040]	International	International nature conservation designation.
South Dublin Bay and River Tolka Estuary SPA [0040240]	International	International nature conservation designation.
South Dublin Bay SAC and pNHA [000210]	International	International nature conservation designation.
North Dublin Bay SAC and pNHA [000206]	International	International nature conservation designation.
North Bul Island SPA [004006]	International	International nature conservation designation.
Sandymount Strand/Tolka Estuary Ramsar site [832]	International	International nature conservation designation.

Ecological feature	Importance	Rationale
North Bul Island Ramsar site [406]	International	International nature conservation designation.
Grand Canal pNHA [002104]	National	National nature conservation designation.
Liffey Valley pNHA [000128]	National	National nature conservation designation.
Habitats (section of River Griffeen)	Local	The section of the River Griffeen within the Site is connected to downstream watercourses (River Griffeen and River Liffey) that provide habitat for otter, fish species and aquatic invertebrates, therefore Local importance has been assigned.
Habitats (including buildings, scrub, dry meadows and grassy verges grassland, treelines, and mixed broadleaved woodlands)	Local	While habitats within the Site are composed of common and widespread species, they do provide some suitable foraging, sheltering, nesting, and commuting habitat for local species such as bat, otter, badger, other mammals, and common terrestrial birds, and invertebrates. Therefore, Local importance has been assigned.
Invasive non-native species: Spanish bluebell, butterfly-bush and cherry laurel	Local	These species are not important through ecological value but for their potentially negative effects on biodiversity and other important ecological features. Therefore, Local importance has been assigned.
Roosting bats	Local	As two structures (S04, S05) within the Site are suitable for roosting bats, Local importance has been assigned.
Commuting and foraging bats	Local	The habitats within the Site are considered to be of less than Local importance as they provide limited foraging and commuting resource to bats in the local area and are not sufficiently good quality or extensive to be valuable in a Local context. However, habitats present in the survey area offer opportunities for foraging bats such as hedgerows, woodland parcels and treelines, albeit their value is limited by their small extent, isolated nature and illumination by street lighting. For the above reasons bat usage of the Site and immediate surroundings is assumed to be low and Local importance only has been assigned.
Otter	Local	Within the Site, areas of scrub, dry meadows grassland, and woodland parcels offer limited sheltering and resting sites for otter. The Grand Canal and the River Griffeen also provide foraging and commuting opportunities for otter in the local area and offer an important commuting corridor to high value habitats in the wider area such as the River Liffey. For these reasons, these nearby watercourses are assumed to be important for local otter populations, and so Local importance has been assigned.
Other mammals	Local	Evidence of other mammals were noted in the wider Clonburris SDZ lands and there are habitats within the Site such as dry meadows and grassy verges grassland, woodland parcels and scrub that provide limited suitable habitat for badger, hedgehog, Irish hare, Irish stoat, and pygmy shrew.
Common lizard	Local	Within the Site, there is suitable habitat for common lizard in woodland parcels, and scrub.
Common birds	Local	Within the Site, areas of scrub, treelines and woodland parcels offer suitable nesting habitat for various common bird species. As the Site is located in a built-up urban area, these small, isolated pockets offer refuge to birds albeit limited nesting opportunities.
Fish	Local	The River Griffeen and the Grand Canal in the survey area offer suitable habitat for a variety of fish species and provide a link to high value habitats in the wider area such as the River Liffey. For these reasons, these watercourses are considered important for local fish populations, and so Local importance has been assigned.
Aquatic invertebrates	Local	The River Griffeen and the Grand Canal in the survey area offer suitable habitat for a variety of aquatic invertebrate species and provide a link to high value habitats in the wider area such as the River Liffey. For these reasons, the watercourses are considered important for local aquatic invertebrate populations, and so Local importance has been assigned.
Terrestrial invertebrates	Local	There are habitats present, in particular dry meadow grasslands and scrub, which have suitability for common invertebrates such as various butterflies, bees, beetles, and snails.

5.3 Assessment of impacts and effects

The predicted impacts and effects of the construction/operational phases of the Proposed Development are set out in Table 5.2 with further, more detailed mitigation (beyond the embedded mitigation in Section 5.1) proposed where necessary. The scale of residual effects, accounting for any such further mitigation, is provided in the final column. There is no expectation of a decommissioning phase.

Table 5.2. Assessment of impacts and effects on ecological features

Ecological feature (importance)	Impacts and effects	Scale of initial effect	Specific mitigation required	Scale of residual effect
European sites: Rye Water Valley/Carton SAC, Glenasmole Valley SAC, Wicklow Mountains SAC, Wicklow Mountains SPA, South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC and pNHA, North Dublin Bay SAC and pNHA, and North Bull Island SPA (International)	None identified. The AA Screening Report (AECOM, 2024a) concluded no likely significant effects on any European sites.	None	None needed.	None
Other international nature conservation designations: Sandymount Strand/Tolka Estuary Ramsar site and North Bull Island Ramsar site (International)	None identified. Sandymount Strand/Tolka Estuary Ramsar site and North Bull Island Ramsar site, both lie within the SPAs which were assessed during the AA Screening Assessment, thus there is no potential for impacts to these Ramsar sites as the AA Screening Report concluded no likely significant effects on any European sites (AECOM, 2024a).	None	None needed.	None
National nature conservation designations: Grand Canal pNHA and Liffey Valley pNHA (National)	<p>Grand Canal pNHA is designated for habitats such as hedgerows, tall herbs, calcareous grassland, reef fringe, open water, scrub, and woodland. It is also designated for otter and smooth newt and an array of floral species such as opposite-leaved pondweed <i>Groenlandia densa</i>. A small section of the Grand Canal pNHA (1000 m²) is located within the Site and the only works to occur in this area are the repurposing of an existing structure and upgrades to an existing access track. There will be no new construction within this area, no works within the Grand Canal itself, and the vegetation that overlaps with the pNHA will be retained. There will only be vegetation trimming within the Grand Canal pNHA in order to facilitate access. Furthermore, no resting sites for otter were observed with the Site or survey area and no smooth newt or breeding habitat for smooth newt were identified within the Site.</p> <p>Although a small section of the Grand Canal pNHA is located within the Site boundary, the Grand Canal itself is located 11 m to the north of the Site. Furthermore, there will be a river crossing of the River Griffeen for a pedestrian bridge. However, this will be a clear-span bridge and there will be no instream works. Given the nature of the works there is a very low risk of construction pollution reaching these watercourses via surface water run-off. However, on the very unlikely</p>	Negligible	<p>Embedded measures including pollution prevention, SuDS, habitat retention and set back distances.</p> <p>Specific mitigation measures include consultation with NPWS, and compensatory and enhancement planting measures. See Section 6.1 and Section 6.2 for further details.</p>	Negligible

Ecological feature (importance)	Impacts and effects	Scale of initial effect	Specific mitigation required	Scale of residual effect
	basis that pollution should enter any watercourses, there is no potential for an adverse effect, significant or otherwise, given a) the minor nature of any such pollution (considering the minor nature of the works) b) the implementation of the standard pollution prevention guidelines as detailed in Section 5.1 and c) the implementation of the proposed SuDS features.			
Habitat - River Griffeen (Local)	The River Griffeen will be retained and the proposed pedestrian bridge over the River within the Site will be clear-span with no instream works proposed. Given a) the nature of the works, b) the implementation of standard pollution prevention measures outlined in Section 5.1 and c) the implementation of the proposed SuDS features, there is a very low risk of construction pollution reaching the River Griffeen, located approximately 88 m downstream of the Site, via surface run-off and consequently indirectly impacting local species through waterborne pollution.	Negligible	Embedded pollution prevention measures, set back distances and SuDS.	None
Invasive plant species: Spanish bluebell, cherry laurel and butterfly bush (Local)	The Site contains three invasive species including Spanish bluebell (Scheduled, low-impact), cherry laurel (non-Scheduled, high-impact) and butterfly bush (non-Scheduled, medium-impact). The main risk is the potential for the spread of INNS during construction. As construction works are required at or adjacent to the locations of these species, there would be potential for seeds/propagules of these species to be disturbed and transferred to new sites because of construction activities. For example, seeds/propagules could be moved with soils or carried on vehicles and machinery to new locations where the plant species concerned could then grow and establish and out-complete other plants. As detailed in Section 5.1, biosecurity measures will be implemented to prevent the further spread of INNS. These measures will be clearly set out in a Method Statement for the works. Thus, there is no potential for an adverse effect on biodiversity and other important ecological features.	None	Embedded biosecurity measures will contain measures to ensure no spread.	None
Roosting bats (Local)	Loss of roosting habitat Six structures will be redeveloped as part of the Proposed Development including two structures (S04 and S05) that are suitable for roosting bats. Therefore, the loss of any of these structures could result in a	Permanent Adverse effect of Local importance	Specific mitigation measures include emergence surveys, specific redevelopment timing requirements and provision of bat boxes. See Section 6.3.1 for further details.	Negligible

Ecological feature (importance)	Impacts and effects	Scale of initial effect	Specific mitigation required	Scale of residual effect
	Permanent Adverse effect of Local significance on roosting bats.			
Foraging and commuting bats (Local)	<p>General disturbance of bats</p> <p>An increase in the use of the Site at night is not anticipated. Thus, noise disturbance levels will be similar to current levels.</p> <p>The possible extent of construction lighting would be very limited. During operation, there will be additional LED lighting as part of the Proposed Development but there will be no night-time lighting along the pedestrian bridge. The Grand Canal and Grange Castle Business park are already illuminated areas and lighting will be similar to current levels present in the area to which bats are habituated. Therefore, no significant disturbance impacts on general bat activity are anticipated.</p>	Negligible	Specific mitigation measures include following guidance published by the Institute of Lighting Professionals (ILP) and BCT (ILP and BCT, 2023) for any lighting during construction and operation. See Section 6.3.2 for further details.	Negligible
	<p>Loss of foraging habitat</p> <p>The Proposed Development will retain the vegetation in the northern and southern section of the Site which includes linear features (treelines and woodland parcels) that foraging and commuting bats potentially use. The River Griffeen within the Site and the minor losses of scrub vegetation around the River Griffeen are not particularly important for local bat populations. Where habitats are present in the wider area which offer opportunities for foraging bats such as hedgerows, woodland parcels and treelines, their value is limited by their small extent, isolated nature and illumination by street lighting. The Grand Canal and River Griffeen to the north of the Site are important commuting corridors for foraging and commuting bats as they provide a connection to high value habitats in the wider area such as Griffeen Valley Park and they will not be impacted by Proposed Development. Thus, there is no potential for an adverse effect to foraging and commuting bats.</p>	Negligible	Embedded habitat retention mitigation. Specific mitigation measures include compensatory and enhancement planting to improve habitats within the Site from current baseline. See Section 6.2 Section 6.3.2 for more.	Slight beneficial, assessed as being Negligible overall given relatively small-scale of habitat enhancement
Otter (Local)	<p>Indirect impact to otter via potential effect to water quality</p> <p>As discussed above, the River Griffeen within the Site is unlikely to be used by otter given its modified banks, drainage function and its poor access to other watercourses.</p>	Negligible	Embedded pollution prevention measures, set back distances and SuDS.	Negligible

Ecological feature (importance)	Impacts and effects	Scale of initial effect	Specific mitigation required	Scale of residual effect
	<p>Otter are known to use the Grand Canal, the River Griffeen and the overflow stream in the wider area as they offer suitable commuting and foraging for otter. The Grand Canal is located 11 m to the north of the Site, and a section of the River Griffeen is within the Site and so otter have the potential to be indirectly impacted via waterborne pollution of these waterbodies. However, there is a very low risk of construction pollution reaching these watercourses via surface run-off given a) the nature of the works, b) the implementation of standard pollution prevention measures outlined in Section 5.1, c) the implementation of the proposed SuDS features, and d) the distance of travel for surface run-off. Thus, the potential for an adverse effect is considered Negligible.</p>			
	<p>General disturbance of otter</p> <p>Otters are generally more active at night. Construction works will take place during daylight hours with no night-time construction proposed. Construction will also take place in an area already subject to a degree of disturbance caused by existing activities which generate noise and light. Thus, otter in the area are likely already habituated to a degree of human activity and are unlikely to be disturbed as no construction works will occur during the hours of darkness when they are most active.</p> <p>The operation of the Proposed Development will lead to an increase in human disturbance compared to pre-construction levels. The Proposed Development is situated in an urban area, and so, otter within proximity to the Site would likely be habituated to a degree of human disturbance in the area. Thus, it is unlikely that these species, if present, will be significantly impacted by the Proposed Development.</p>	Negligible	Specific mitigation measures include a pre-construction otter survey. See 6.3.3 for further details.	Negligible
	<p>Loss of habitat</p> <p>The Site consists of hard-standing with some suitable sheltering and resting sites for otter within scrub and woodland parcels, however, no resting sites were observed with the Site or survey area.</p> <p>There will be some minor losses of vegetation to facilitate the Proposed Development but the vegetation in the northern section of the Site, which contains the majority of suitable habitat for otter, will be retained.</p>	Negligible	Embedded habitat retention mitigation. Specific mitigation measures include compensatory and enhancement planting to improve habitats within the Site from current baseline. See Section 6.2 for more.	Negligible

Ecological feature (importance)	Impacts and effects	Scale of initial effect	Specific mitigation required	Scale of residual effect
	Thus, there will be minimal losses of otter habitat as a result of the Proposed Development.			
Other terrestrial mammals (Local)	<p>Loss of foraging, commuting and sheltering habitat The Site consists of hard-standing with suitable foraging, commuting and sheltering habitat (scrub, dry meadow grassland and woodland parcels) present. The areas of habitat loss within the Site are of negligible importance to terrestrial mammals as the vegetation in the northern section of the Site, which contains the majority of suitable habitat for terrestrial mammals will be retained. Thus, there will be minimal losses of suitable habitat for terrestrial mammals as a result of the Proposed Development.</p> <p>General disturbance of terrestrial mammals Construction works will take place during daylight hours with no plans for construction to take place at night. Construction will also take place in an area already subject to a degree of disturbance caused by existing activities which generate noise and light. Thus, other mammals potentially foraging and commuting in the area are likely already habituated to a degree of human activity and are unlikely to be significantly disturbed. The operation of the Proposed Development will lead to an increase in human disturbance compared to pre-construction levels. The Proposed Development is situated in an urban area, and so, any mammals within proximity to the Site would likely be habituated to a degree of human disturbance in the area. Thus, it is unlikely that these species, if present, will be significantly impacted by the Proposed Development.</p>	Negligible	Embedded habitat retention mitigation. Specific measures include compensatory and enhancement planting to improve habitats within the Site from current baseline. See Section 6.2 for more.	Negligible
		Negligible	Specific mitigation measures include a pre-construction badger survey. See Section 6.3.4 for more.	Negligible
Common lizard (Local)	<p>Loss of habitat The Site consists of hard-standing with suitable habitat (scrub, dry meadow grassland and woodland parcels) present for common lizard. The areas of habitat loss within the Site are of negligible importance to common lizard as the vegetation in the northern section of the Site, which contains the majority of suitable habitat for common lizard will be retained. Thus, there will be minimal losses of suitable habitat for common lizard as a result of the Proposed Development.</p>	Negligible	Embedded habitat retention mitigation. Specific mitigation measures include compensatory and enhancement planting to improve habitats within the Site from current baseline. See Section 6.2 for more.	Slight beneficial, assessed as being Negligible overall given relatively small-scale of habitat enhancement
Common birds (Local)	General disturbance of birds	Negligible	None needed.	Negligible

Ecological feature (importance)	Impacts and effects	Scale of initial effect	Specific mitigation required	Scale of residual effect
	<p>Increasing visitor pressure as a result of the Proposed Development has the potential to disturb common terrestrial birds occurring in and within the vicinity of the Site. However, similar to the findings the AA Screening Report (AECOM, 2024a), the potential for disturbance of common birds species is considered to be very low as common terrestrial bird species will already be habituated to the high levels of disturbance from people due to the urban nature of the Site. Thus, it is deemed unlikely that any disturbance effects would occur to terrestrial bird species as a result of the Proposed Development.</p>			
	<p>Loss of foraging/nesting habitat There will be some removal of foraging and potential nesting habitat for common terrestrial birds with minimal losses of scrub vegetation to facilitate the redevelopment. However, the majority of suitable habitat within the Site will be retained.</p>	Negligible	<p>Embedded mitigation (particularly the clearance of habitat outside breeding season, nesting bird checks and habitat retention). Specific mitigation measures include compensatory and enhancement planting to improve habitats within the Site from current baseline. See Section 6.2 for more.</p>	Negligible
Fish (Local)	<p>Loss of instream habitat The Proposed Development will involve the construction of a pedestrian bridge over the River Griffeen in the western section of the Site. The proposed pedestrian bridge will be clear-span and there will be no instream works thus, no possibility for a loss of instream habitat. Furthermore, fish species are extremely unlikely to be presented in this section of the River Griffeen. Thus, there is no potential for an adverse effect.</p>	None	None needed.	None
	<p>Indirect impact to fish via potential effect to water quality The River Griffeen and Grand Canal have suitable habitat to support a variety of fish species. Any fish species currently using the Grand Canal and/or the River Griffeen will be largely unaffected by the works of the Proposed Developed. Like otter, fish have the potential to be indirectly impacted via waterborne pollution of these waterbodies, via surface run-off. However, there is a very low risk of construction pollution reaching these watercourses via surface run-off given a) the nature of the works, b) the implementation of standard pollution prevention</p>	Negligible	Embedded pollution prevention measures and SuDS.	Negligible

Ecological feature (importance)	Impacts and effects	Scale of initial effect	Specific mitigation required	Scale of residual effect
	measures as outlined in Section 5.1, c) the implementation of the proposed SuDS features, and d) the distance of travel for surface run-off. Thus, the potential for an adverse effect to fish species is considered Negligible.			
Aquatic invertebrates (Local)	<p>Loss of in stream habitat</p> <p>The Proposed Development will involve the construction of a pedestrian bridge over the River Griffeen in the western section of the Site. The proposed bridge will be clear-span and there will be no instream works thus, no possibility for a loss of instream habitat. Furthermore, aquatic invertebrate species are extremely unlikely to be presented in this section of the River Griffeen. Thus, there is no potential for an adverse effect.</p>	None	None needed.	None
	<p>Indirect impact to aquatic invertebrates via potential effect to water quality</p> <p>The River Griffeen and Grand Canal have suitable habitat to support a variety of aquatic invertebrate species. Any aquatic invertebrates currently using the Grand Canal and/or the River Griffeen will be largely unaffected by the works of the Proposed Development. However, similar to fish and otter, aquatic invertebrates have the potential to be indirectly impacted via waterborne pollution of these waterbodies. There is a very low risk of construction pollution reaching these watercourses via surface run-off given a) the nature of the works, b) the implementation of standard pollution prevention measures as outlined in Section 5.1, c) the implementation of the proposed SuDS features, and d) the distance of travel for surface run-off. Thus, the potential for an adverse effect to aquatic invertebrates is considered Negligible.</p>	Negligible	Embedded pollution prevention measures and SuDS.	Negligible
Terrestrial invertebrates (Local)	<p>Loss of suitable habitat</p> <p>The Site consists of hard-standing with suitable habitat (scrub, dry meadow grassland and woodland parcels) present for terrestrial invertebrates. The areas of habitat loss within the Site are of negligible importance to terrestrial invertebrates as the vegetation in the northern section of the Site, which contains the majority of suitable habitat for terrestrial invertebrates will be retained. Thus, there will be minimal losses of suitable</p>	Negligible	Specific mitigation measures include compensatory and enhancement planting to improve habitats within the Site from current baseline and installation of insect refugia features. See Section 6.2 and Section 6.3.5 for more.	Slight beneficial, assessed as being Negligible overall given relatively small-scale of habitat enhancement

Ecological feature (importance)	Impacts and effects	Scale of initial effect	Specific mitigation required	Scale of residual effect
	habitat for terrestrial invertebrates as a result of the Proposed Development.			

6. Specific mitigation measures

Specific mitigation measures (further to the embedded mitigation as described in Section 5.1) will be implemented to minimise adverse effects on ecological features identified above. The implementation of mitigation does not replace or negate the requirement for legislative compliance. Specific mitigation measures as well as the embedded mitigation measures follow those outlined in the 12th Lock Masterplan PEAR which are relevant to this Site (AECOM, 2023a).

Although mitigation is not required where effects are not considered to be significant (i.e., they have been assessed as being either Local, or Negligible), in some cases measures will be implemented where these can be readily achieved, will minimise effects and/or could deliver enhancements for biodiversity.

6.1 Grand Canal pNHA

The Grand Canal pNHA and important habitats of ecological significance within the Proposed Development must be protected and enhanced where applicable. The habitats within the Site that coincide with the boundary of the Grand Canal pNHA must be retained. If any maintenance to existing paths are required within the Grand Canal pNHA boundary that involve trimming of vegetation, NPWS will be consulted where relevant and this will be compensated appropriately by planting of similar habitat comprising native species. Species to be planted, for example, could include native tree species such as wild cherry *Prunus avium*, silver birch *Betula pendula*, hazel *Corylus avellana* and rowan *Sorbus aucuparia*, and native scrub species such as elder *Sambucus nigra*, hawthorn *Crataegus monogyna*, and guelder-rose *Viburnum opulus* are recommended.

The set back distances, and pollution prevention measures set out in Section 5.1 must be adhered to.

6.2 Planting for mitigation and enhancement

Notable habitats within the Site include the River Griffeen, woodland parcels, treelines, scrub, dry meadows and grassy verges. The majority of these habitats will be retained on Site. The Proposed Development will involve the removal of a small amount of scrub vegetation to facilitate access and enable the construction of a pedestrian bridge over the River Griffeen in the western section of the Site. As retention of these habitats is not possible, then their loss will be compensated appropriately by planting of similar habitat comprising native species such as those outlined in Section 6.1. Planting will comprise native species appropriate to the area and found locally as these are beneficial for biodiversity. By doing so, the Proposed Development follows mitigation measures outlined in the 12th Lock Masterplan PEAR (AECOM, 2023a) which are relevant to the Site and provides the opportunity to meet the following objectives: HC01, HC02, HC03, HC04, and HC17 of the Clonburris SDZ Development Plan.

As detailed in the 12th Lock Area Plan (AECOM 2023b), soft landscaping is proposed within the Site to include buffer planting along the southern and western Site boundary, adjacent to the River Griffeen. The vegetation, which fronts onto the River Griffeen along the southern and south-western section of the Site will be retained and enhanced where appropriate with native species plantings. This includes the area of scrub and trees to the south-west of Grange Cottage. Following the embedded mitigation and in line with objective, HR04 of the Clonburris SDZ management plan, a biodiversity protection zone within a minimum distance of 10 m from watercourse banks will be maintained.

The existing courtyard hardscape within the Site will be opened up to provide tree pits and native tree species will be planted within the pits.

The following planting measures will also be adopted to compliment the 12th Lock Area Plan:

- invasive species will not be included in any planting schemes;
- native hedges and scrub will be planted where appropriate for enhancement to provide dense shelter for species and produce flowers and fruit for species;
- where appropriate, native tree and scrub planting along the boundaries of the Site will be implemented to enhance pre-existing natural buffer zones and where practical the creation of additional natural screen zones. Woodland parcels within the Site will be retained as albeit their small extent they provide ecological connectivity to other habitats of ecological importance;

- the riparian zone of the River Griffeen must be protected and enhanced where feasible with emergent plants such as native reeds and riparian trees such as alder and willow, which can protect watercourses from erosion and provide valuable wildlife habitat;
- any proposed gardens and landscaped amenity areas will include a diversity of plant families with consideration of varying flowering times to support invertebrate species such as pollinators. A mix of perennial flower species available for as much of the year as possible without gaps will be included. Species that provide shelter and edible seeds and fruits will also be included planting regimes. Plants may require future levels of management such as watering and pruning. Therefore, a Landscape Maintenance Plan (LMP) will be prepared prior to construction; and,
- the proposed 'cottage garden' will be a wildflower meadow and will comprise a variety of native, locally found grasses and wildflowers on unimproved soil. Areas of long grass that are allowed to die back can be useful for nesting and shelter. Meadows typically require regular maintenance and monitoring and need to be cut regularly and often twice a year. The monitoring and maintenance of any meadows will be detailed in the LMP.

SuDS features are also proposed for the Proposed Development including permeable paving, landscaping adjacent to paths, tree pits, filter strips, planter, and stormwater swales. Proposed swales will include wet meadow mixes.

At the design stage, liaison with SDCC Public Realm Department will be carried out to determine the final landscape design and detailed aspects of landscape that will be incorporated.

6.3 Protected and important species

6.3.1 Roosting bats

In line with the bat mitigation measures of the 12th Lock Masterplan (AECOM, 2023a) and objective Ba01 of the Clonburris SDZ management plan, before any redevelopment works commence, an ECoW that is a suitability experienced ecologist must carry out bat emergence surveys on the structures following BCT guidance (Collins, 2023). If any of the structures have confirmed roosts, an appropriate licence will be applied for from the NPWS.

Mitigation measures regarding the redevelopment of these structures will include specific timing requirements (i.e., any confirmed roosts to be demolished between November and March inclusive (outside of the active bat season)) and in line with bat mitigation measures of the 12th Lock Masterplan (AECOM, 2023a) and objective Ba04 of the Clonburris SDZ management plan, the provision of bat boxes to mitigate for the loss of roosting bat habitat will be required. The number and types of bat boxes should be determined by the suitability qualified ecologist and implemented before the redevelopment of structures. Based on the findings of the emergence surveys, the ECoW will advise on the requirement of any further mitigation measures that must be implemented prior to construction. The ECoW will oversee any mitigation implementation in advance of the redevelopment.

6.3.2 Foraging and commuting bats

As outlined in the external lighting plan (Drawing no. A-140: Proposed Exterior Lighting Plan, SFA42 Architects), only LED lighting will be implemented. Lighting will consist of LED bollards (IP64, IK10, 4000K), inground LED lighting (IP65, IK08 5J xx5, 4000K), wall surface mounted LED luminaires (IP67, IK10 20J xx9, 3000K) and recessed mounted LED downlight (IP65, IK08 5J xx5, 4000K).

Access to the pedestrian bridge will be closed at night-time to avoid disturbance of bats and as such, lighting in this area will not be necessary. In addition, construction works are restricted to daylight hours. The proposed operating hours for the construction of the Proposed Development are as follows:

- 07:00hrs – 18:00hrs Monday to Friday
- 07:00hrs – 14:00hrs Saturdays
- Site closed on Sundays / Public Holiday

Where illumination during construction is absolutely necessary to meet the minimum requirements for Health and Safety, or where permanent lighting cannot be avoided, guidance published by the ILP and BCT (ILP and BCT, 2023) must be followed:

- there will be no illumination of any habitats and features used by large numbers of bats, by rare species or by highly light-adverse species;

- existing light levels will be maintained or reduced on site where possible;
- lighting will be minimised wherever possible in terms of number of lights and the power of the lights (lux level). LED lighting will be used on Site and lighting units do not have ultraviolet (UV) elements. Blue content of light will be reduced and where possible lights in the warm white spectrum will be used;
- a thorough assessment of new lighting will be carried out. This assessment will consider the lighting specification including light power emitted (lumen) and illuminance of the surrounding environment (lux); and,
- light spill will be minimised on linear features (e.g. treelines, watercourses and woodland edges), and should ideally not be subject to light spill greater than the existing baseline lux levels. These linear features will not be subject to light spill greater than 1 lux.

There will also be planting of foraging and commuting features (hedgerows and treelines) in suitable locations for bats (e.g., not illuminated) where practicable.

6.3.3 Otter

As a mobile species, otter may establish new resting sites within or in the immediate surroundings of the Site (150 m) prior to construction. Therefore, a pre-construction otter survey will be undertaken no later than one month prior to construction works commencing, to determine if any resting places have become newly established since baseline surveys. These surveys will be carried out by an appropriately qualified ecologist, who will provide advice on additional constraints, should they be identified.

6.3.4 Other terrestrial mammals

As a mobile species, badger may establish new setts prior to construction. Therefore, a pre-construction badger survey will be carried no sooner than one month prior to construction works commencing, to determine if any setts have become newly established since baseline surveys. These surveys will be carried out by an appropriately qualified ecologist, who will provide advice on additional constraints, should they be identified.

6.3.5 Invertebrates

The measures set out in the planting for enhancement and compensatory above section, such as wildflower planting, will also be applicable to terrestrial invertebrates. Pollution prevention measures for watercourses will also be applicable to aquatic invertebrates.

Insect refugia features will be installed along linear features (e.g., treelines), ideally near the cottage garden and scrub habitat with locations to be confirmed during the final landscape design stage. The installation of 'insect hotels' within the Site follow the mitigation measures outlined in the PEAR for the 12th Lock Masterplan (AECOM, 2023a) and also provides an opportunity to meet objective I02.

7. Cumulative effects

Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location (CIEEM, 2022). Effects which arise in-combination with other projects or plans must be considered as part of the AA Screening process. In accordance with OPR (2021), the assessment of in-combination effects must examine:

- completed projects;
- projects which are approved but not completed;
- proposed projects (i.e. for which an application for approval or consent has been made, including refusals subject to appeal and not yet determined);
- proposals in adopted plans; and,
- proposals in finalised draft plans formally published or submitted for consultation or adoption.

A review of the National Planning Application Database (NPAD) was carried out to identify any planning applications from the last five years within 1 km of the Proposed Development. Planning applications that have been identified as having the potential to act in-combination with the Proposed Development are detailed in Appendix B with their planning status.

No possible effects were identified for any impacts which may arise from the Proposed Development. No plans have been identified which could give rise to in-combination effects with the possible impacts from the Proposed Development.

Waterborne pollution must be managed as a requirement of other relevant legislation by these projects. In addition, a range of measures will be adopted by the Proposed Development at all phases to ensure no pollution of the water environment. It can therefore be reliably concluded that this possible impact will not give rise to significant adverse effects on European sites in-combination with the Proposed Development.

It is thus concluded that there will be no adverse effects on the integrity of any ecological features from the Proposed Development acting in-combination with any plans or projects.

8. Residual effects and conclusion

For the purposes of this EclA, only effects which are judged to be of Local significance or higher are considered to be significant. On this basis, even in the absence of mitigation, there are not expected to be any significant effects on important ecological features from the construction and operation of the Proposed Development.

With the inclusion of embedded and specific mitigation measures, there are no residual adverse ecological effects on designated sites, habitats or protected or important species predicted. In all cases there is no effect or a Negligible effect.

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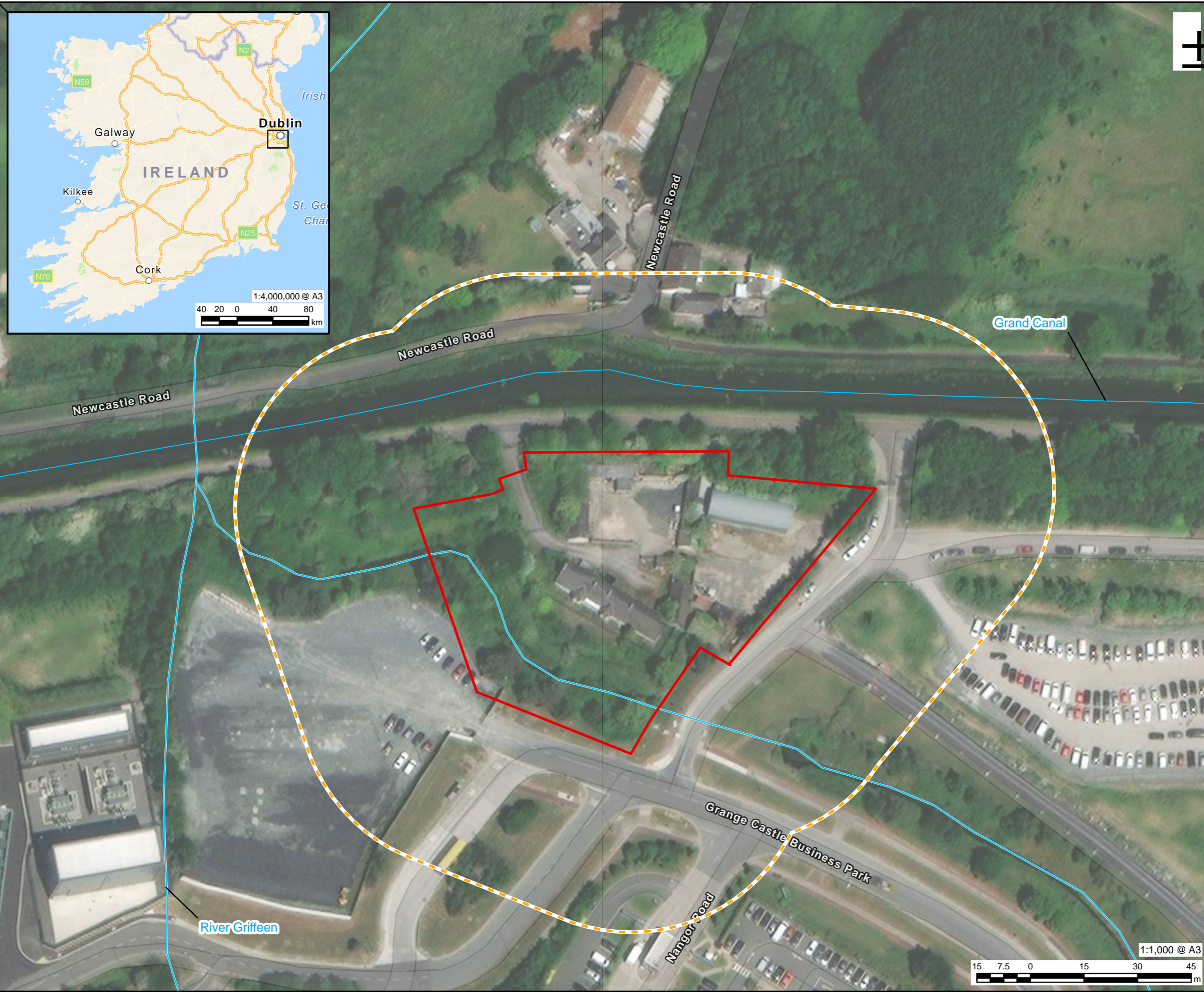
10. Figures

Figure 1. Site location

Figure 2. Ecological designations

Figure 3. Habitat survey

Figure 4. Other ecological designations and limitations



AECOM

PROJECT
Grange Cottage

CLIENT
South Dublin County Council

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LEGEND

- Site
- Survey Area
- Watercourses

NOTES

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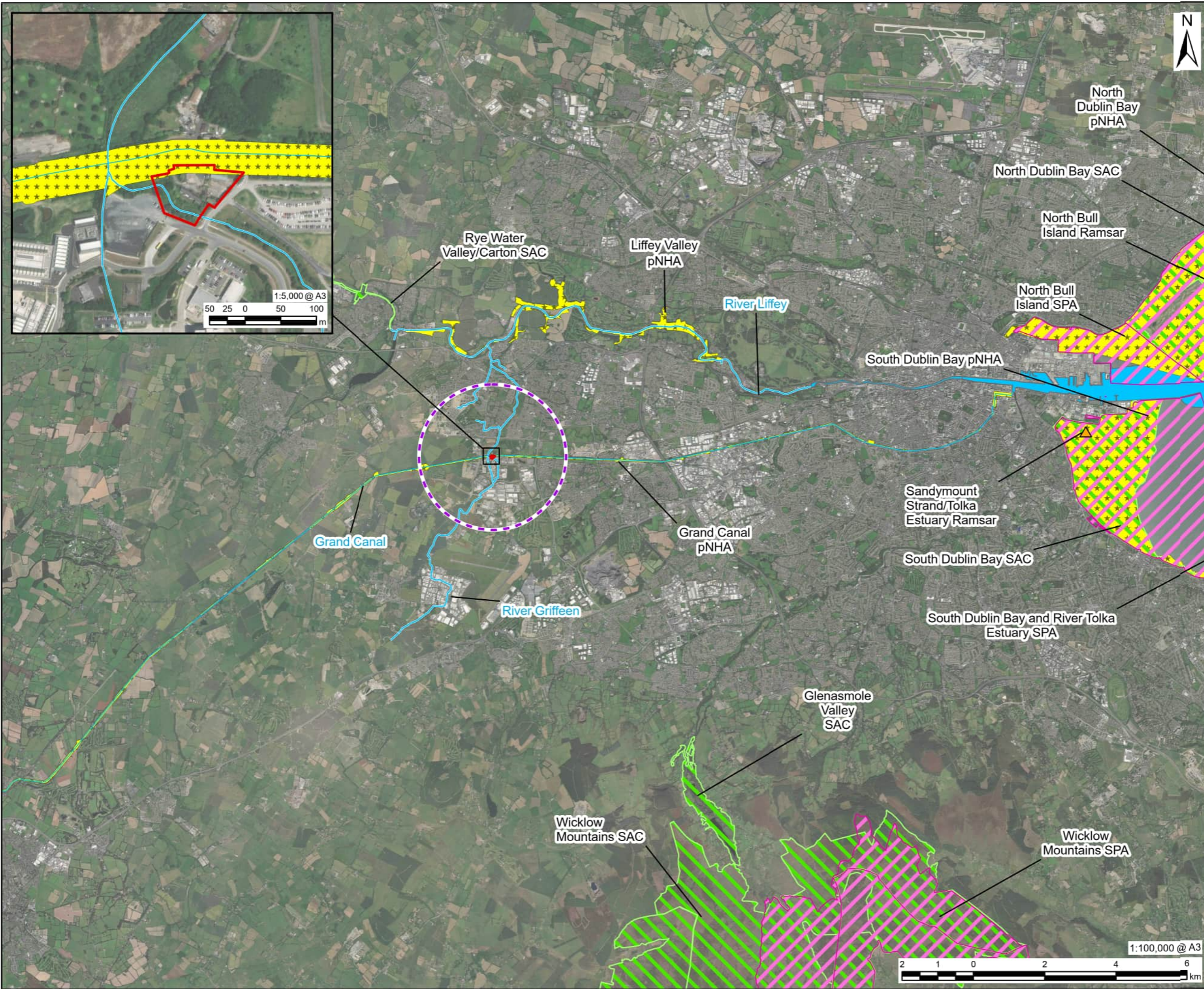
ISSUE PURPOSE
FINAL

PROJECT NUMBER
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FIGURE TITLE
Site Location

FIGURE NUMBER
Figure 1

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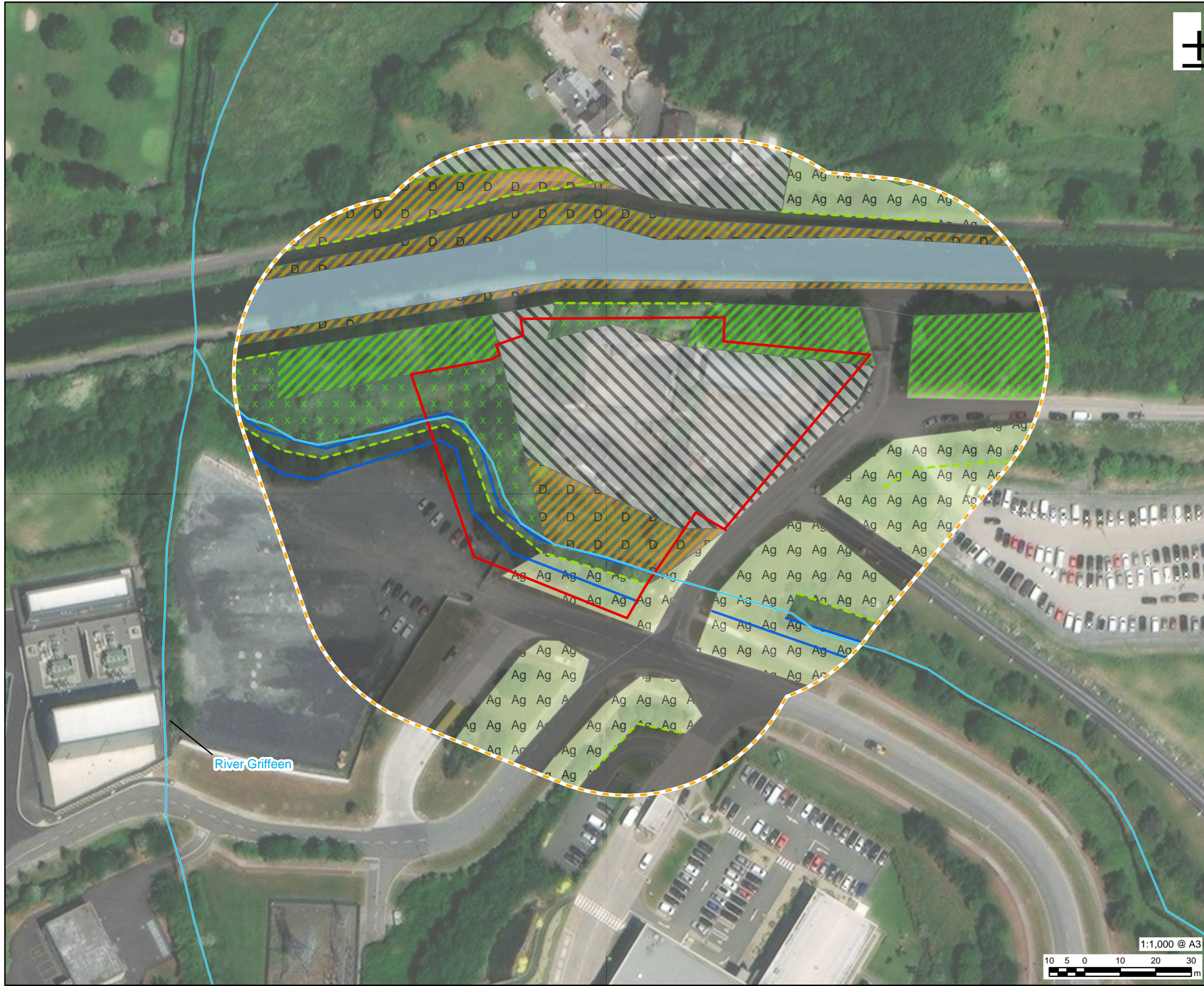


- LEGEND**
- Site
 - 2km around Site
 - Watercourses
 - Special Protection Area (SPA)
 - Special Area of Conservation (SAC)
 - Proposed Natural Heritage Area (pNHA)
 - ▲ Ramsar site

NOTES
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ISSUE PURPOSE
FINAL
PROJECT NUMBER
60693986
FIGURE TITLE
Ecological Designations

FIGURE NUMBER
Figure 2



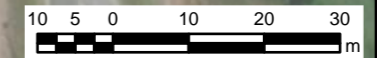
- LEGEND**
- Site
 - Survey Area
 - Fossil Habitats**
 - FW2 Depositing/lowland rivers
 - WL2 Treelines
 - BL3 Buildings and artificial surfaces
 - BL3 / GA2 / WS1 (hardstanding private properties)
 - FW3 Canals
 - GA2 Amenity grassland (improved)
 - GS2 Dry meadows and grassy verges
 - WD1 (Mixed) broadleaved woodland
 - WS1 Scrub

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ISSUE PURPOSE
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PROJECT NUMBER
60693986
FIGURE TITLE
Habitat Survey

FIGURE NUMBER
Figure 3

1:1,000 @ A3



LEGEND

- Site
- Survey Area
- Invasive non-native species

Bat roost suitability

Structures with bat roost suitability

- Potential feeding roost/night roost
- Potential feeding roost/night roost
(Evidence of bat found 07 February 2024)

NOTES

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ISSUE PURPOSE

FINAL

PROJECT NUMBER

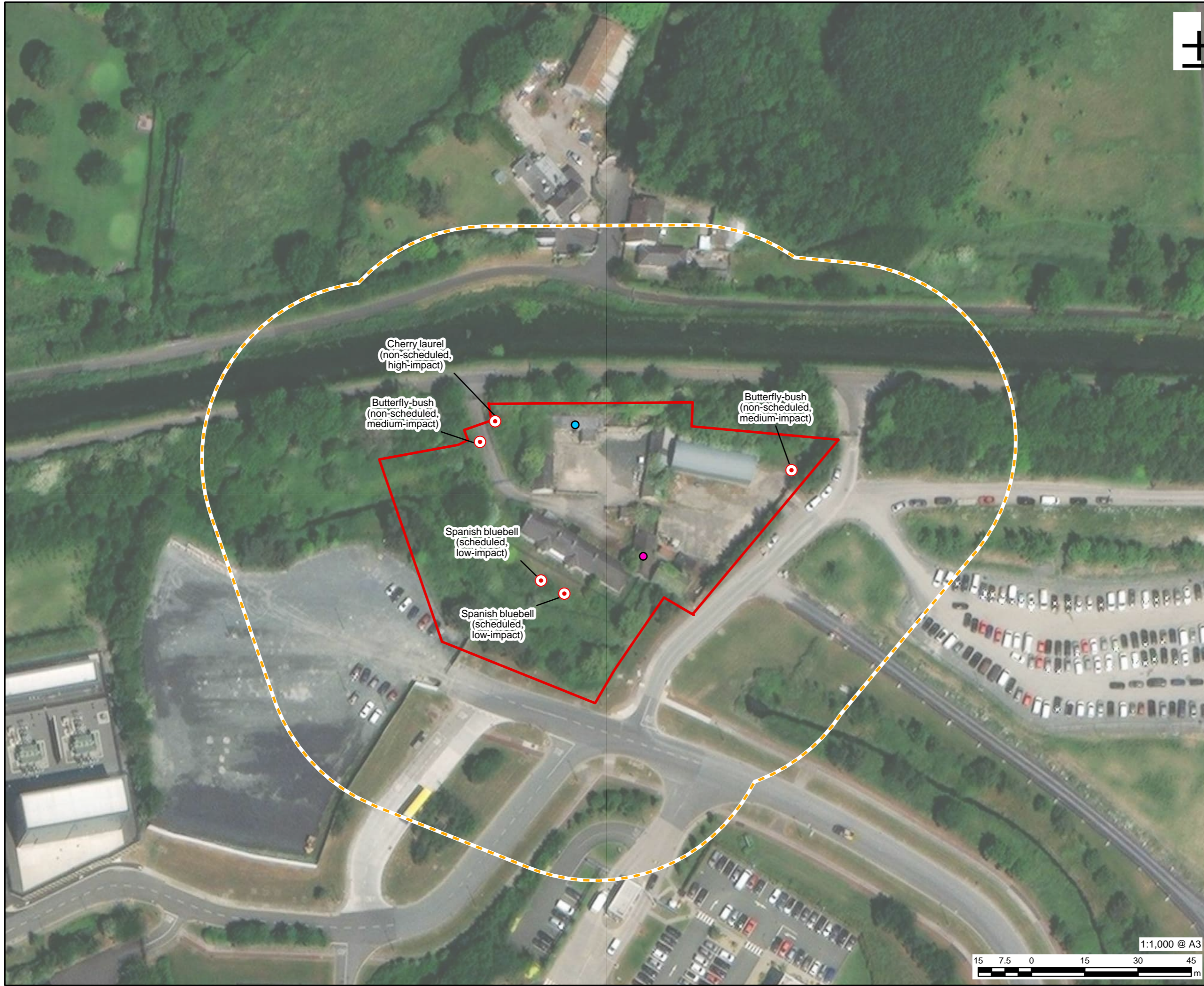
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FIGURE TITLE

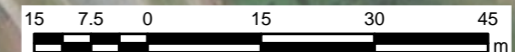
Other Ecological Constraints and Limitations

FIGURE NUMBER

Figure 4



1:1,000 @ A3



Appendix A Indicative Site Photographs

Photograph 1. Dry meadows and grassy verges adjacent to Grange Cottage.



Photograph 2. Mixed broadleaved woodland along northern border of Site.



Photograph 3. Scrub encroaching the courtyard in the western section of the Site.



Photograph 4. Depositing/lowland river (River Griffeen) flowing through the western section of the Site.



Photograph 5. Treeline along northern border of the Site.



Photograph 6. Grand canal in the survey area, located to the north of the Site.



Photograph 7. Example of buildings and hard-standing surfaces within the Site.



Appendix B Planning application search

Table 1B. Planning search for relevant developments within 1 km of the Site

Planning Authority	Ref. no.	Address	Summary of Proposed Development	Grant date	Distance from Site (approx.) (m)
SDCC	SD22A/0022	Takeda Ireland Limited, Grange Castle Business Park, Clondalkin, Dublin 22	The construction of a 2-storey extension and any associated site works to the south elevation of the existing engineering stores in the administration offices building which comprises of construction of circa 34m ² area with a maximum height of 9.4m to accommodate two storey units at Grange Castle Business Park, Grange Castle, Dublin 22. The application relates to development which comprises of an activity, which requires an Industrial Emissions (IE) Licence in accordance with the First Schedule of the EPA Act 1922 as amended.	05/05/2022	98
SDCC	SD22A/0025	Takeda Ireland Limited, Grange Castle Business Park, Clondalkin, Dublin 22	Retention and continuance of the use for a further two years of the temporary gas powered generation plant, that is located to the rear of the Takeda Ireland complex, that is sited within a walled year of 2,836m ² containing 12 generator units with associated flues (each 15m high), which was permitted initially for a period of three years under Reg Ref. SD16A/0345 and was subsequently extended for an additional period of 2 years from the 4th February 2020 under Condition no. 2 of permission granted under SD19A/0342 Vehicular access to the generation plan will remain from the permitted service road into Edgeconnex site and Grange Castle Business Park as originally permitted.	28/03/2022	241
SDCC	SD22A/0303	Grange Castle Business Park, Grange Castle, Dublin 22	Construction of a Volatile Organic Compound (VOC) Abatement system comprising of a thermal oxidiser (TO), associated plant equipment and scrubbers positioned on a bunded concrete plinth with a maximum single stack height of 12m along with two access platforms at 2.5 high and 5.0m high used for maintenance only; The system is set within a 489m ² (including a bunded area of 213 m ²) concrete compound enclosed by a 2.4m high paladin weldmesh black fence to match the existing utilities perimeter fence; 135m ² single storey utilities workshop will sit adjacent to the Volatile Organic Compound (VOC) abatement system compound with associated hardstanding area and soakpit; 55m (L) x 3.2m (W) x 5.6m (H) pipe rack extension with the addition of a second tier extension 118.6m (L) X 3.2M (W) 1.2m (H) to the existing pipe rack is required to service the new VOC abatement system compound; a contractor's compound 3,420m ² comprising single stacked portacabins, workshops, parking for 30 contractors, materials delivery and set down area; the compound will be enclosed by a 2.4m tall paladin weldmesh black fence; modifications to the existing internal access road will include the addition of a new access road and footpath around the VOC abatement system compound and utilities workshop; a permanent pedestrian crossing including associated signage at the existing access road giving access between the contractor's compound and the voe abatement system compound; modifications to the existing site lighting, signage, surface water, foul and process wastewater drainage, hard and soft landscaping including a 3m high planted berm to the north of the contractor's compound; An EIAR (Environmental Impact Assessment Report) will be submitted with the application; this application relates to development which comprises an activity requiring an IE Licence in accordance with the First Schedule of the EPA Act 1922 as amended.	07/09/2022	273
SDCC	SD15A/0061	Grange Castle Business Park, Clondalkin, Dublin 22	10-year permission for the construction of a 115MW Peaker Power Plant in a single storey building with a mezzanine level office and electrical control area. This building has a platform height of 17.52m, 7 shafts with a height of 20.74m and 2 stacks with a height of 25m. The development also includes water and fuel tanks with associated pump houses; 1 building consisting of a compact workshop and warehouse and a security area, with	22/06/2015	311

Planning Authority	Ref. no.	Address	Summary of Proposed Development	Grant date	Distance from Site (approx.) (m)
			a height of 6.5m; site access and entrance gates; internal roadways and footpaths; security fencing; 6 car parking spaces (1 of these is accessible) and appropriate landscaping all on a site of 1.23ha site in the north of Grange Castle Business Park. The total gross floor area of the facility is approx. 3,583m ² . This application relates to development which comprises of an activity which requires an IE Licence in accordance with the First Schedule of the EPA Act 1992 as amended.		
SDCC	SD23A/0079	Grange Castle Business Park, Nangor Road, Clondalkin, Dublin 22	Alterations to a previously approved development (Reg. Ref. SD15A/0061 and Reg. Ref. SD16A/0398) which relates to a 10-year permission for the construction of a Peaker Power Plant in a single storey building with a mezzanine level, together with associated plant equipment including water & fuel tanks. The alterations to the previously approved development (Reg. Ref. SD15A/0061 & SD16A/0398) include the following: (i) alterations to the previously approved building within the eastern portion of the site as follows: (a) an increase in the overall footprint of the building to the north-west to include office space, and staff facilities at ground floor level; and to the north-east to include a boiler room at ground floor level; (b) revised roof footprint to the rear of the building, with the roof being lowered to the rear; (c) relocation of stair cores and updates to building elevations, including the introduction of additional glazing; (d) amendments to the external open service yard to the north of the building including the removal of the previously approved transformer rooms, addition of containerised plant and minor alterations to the location of shaft towers; (e) a minor increase in the height (by 600mm) of the screen to the service yard. Alterations to the western portion of the site include; (ii) minor amendments to the positioning of the internal roadway; (iii) amendments to the tank bund area and tank arrangement to the west of the site, and the addition of contained plant and a pump house building; (iv) minor amendment to the location of the approved tanker unloading area; (v) relocation of car parking spaces from the south of the site to the north of the main bund areas, with the exception of the approved accessible parking space; (vi) provision of a gas skid & support structure to the south-west of the site; (vii) provision of an enlarged plant compound to the west of the bund area and relocation of transformers to this compound; (viii) revisions to the positioning and an increase in size of the approved pipe bridge to align with services; (ix) provision of a new bicycle parking shelter comprising 8 no. parking spaces; (x) amendments to soft landscaping to accommodate the revised layout and; (xi) drainage, boundary treatments, site lighting, EV car charging ports; and all associated site development and ancillary works necessary to facilitate the development. The capacity of the plant will be 115MW as approved under Reg. Ref. SD15A/ 0061. This application relates to development which comprises of an activity which requires an IE Licence in accordance with the First Schedule of the EPA Act 1992 as amended.	14/06/2023	311
SDCC	SDZ23A/0004	Adamstown, Lucan, Co. Dublin	385 dwelling units (139 houses, 70 Build-to-Rent duplex / apartments, 72 duplex / apartments and 104 apartments), ranging between two to six storeys in height comprising the following: - Total of 139 houses consisting of 102 three bedroom two storey terraced houses (House Type: 0, E & F); 11 four bedroom two storey terraced houses (House Type: C); 26 four bedroom three storey terraced houses (House Type: A & B); Total of 70 Build-to-Rent duplex / apartments units consisting of 35 two bedroom units (House Type: J, L & O); 35 three bedroom units (House Type: K, M & P); Total of 72 duplex / apartment units consisting of: - 36 two bedroom units (House Type: J, L & O); 36 three bedroom units (House Type: K, M & P); Total of 104 apartment units accommodated in 2 blocks ranging from four to six storeys consisting of 48 one bedroom units (House Type: A1 & A2); 56 two bedroom units (House Type: B1 & B2); Private rear gardens are provided for all houses. Private patios / terraces and balconies are provided for all duplexes and apartments; Vehicular access to serve the development is provided off the Clonburris Southern Link Street permitted under SDCC Reg. Ref. SDZ20A/0021 and currently under construction. Pedestrian and cycle access is also provided to the Newcastle Road (R120) and to the Clonburris Southern Link Street; All associated and ancillary site development, infrastructural, hard and soft landscaping and boundary treatment works, including: - A single storey tenant amenity building (c. 170m ²); Areas of public open space (1.45ha); 538 car parking spaces and 878 bicycle	15/12/2023	318

Planning Authority	Ref. no.	Address	Summary of Proposed Development	Grant date	Distance from Site (approx.) (m)
			parking spaces (660 long-term spaces and 218 visitor spaces); Bin and bicycle stores; Plant provided at undercroft level and additional plant provided at roof level (including solar panels) of the proposed apartment blocks; 3 ESB substations; Demolition of remaining walls and hardstanding associated with a former agricultural building; The development proposed includes minor revisions to an attenuation pond, connections to water services (wastewater, surface water and water supply) and connections to permitted cycle/ pedestrian paths permitted under SDCC Reg. Ref. SDZ20A/0021 on a site (c. 8.94 Ha) in the townland of Adamstown, within the Clonburris Strategic Development Zone (Adamstown Extension). On lands generally bound by the Dublin-Cork Rail Line to the north; Hayden's Lane, the Griffeen River and the undeveloped lands of Clonburris Strategic Development Zone to the east; Lucan Pitch and Putt to the south; and Newcastle Road (R120) to the west. This site consists of Development Areas AE-S1 and AE-S2 within the Clonburris Strategic Development Zone, as prescribed by the Clonburris Strategic Development Zone Planning Scheme 2019; This application is being made in accordance with the Clonburris Strategic Development Zone Planning Scheme 2019 and related to a proposed development within the Clonburris Strategic Development Planning Scheme Area, as defined by Statutory Instrument No. 604 of 2015.		
SDCC	SD19A/0322	The Grange, Ballymakailly, Newcastle Road, Lucan, Co. Dublin.	Construction of 1 & 2 storey office building, c.9.43m in height providing a total GFA of 459m ² ; provision of 11 total car parking spaces; 8 covered cycle parking spaces; the removal of the existing temporary structures, landscaping, tree planting and all associated site and infrastructural works.	05/12/2019	384
SDCC	SD22A/0148	Grange Castle Business Park, Clondalkin, Dublin 22	1 screened bin compound to be relocated to the south-east corner of the site; 2 transformers within individual compounds and adjoining switch room (35.2m ²) to be located to the east of the permitted data centre to replace screened transformer compound permitted to the south-east of the site; 1 new plantroom (19.8m ²) and 1 water storage tank to be located to the west of the permitted data centre to replace previously approved fire suppression enclosure and new double gates to replace sliding gates at entrance into the permitted data centre site.	30/08/2022	468
SDCC	SD20A/0147	Grange Castle Business Park, Nangor Road, Clondalkin, Dublin 22	Construction of P3 Phase II expansion of the existing P3 biopharma production facility which includes the construction of a circa 2,155m ² , two storey biopharma production facility to a maximum height of circa 14.9m to be located to the south of the existing P3 building; single storey administration extension of circa 210m ² to a maximum height of 4m to the north of the existing P3 building and internal modifications to the existing P3 building in addition to all associated site works including delivery area; courier pick up/drop off area with 5 parking spaces (including 1 accessible parking space and 1 E-car space); extension to existing external utilities yard (circa 485m ²) for 3 heat pumps and other ancillary equipment; new internal site circulation road and re-alignment of existing circulation road; 48 additional car parking spaces (including 3 accessible parking spaces and 5 E-car spaces); 24 covered bicycle stands, hard and soft landscaping and external lighting; there will be temporary site entrance and associated temporary access road located to the south east of the site during the construction phase all on 3.68ha application site located within the Takeda Ireland facility at Grange Castle Business Park; an EIAR (Environmental Impact Assessment Report) is submitted with the application and relates to development comprising of an activity which requires and IE Licence in accordance with the First Schedule of the EPA Act 1992 as amended.	08/10/2020	470
ABP	PL06S.317802	Ballymakailly, West of Newcastle Road (R120), Lucan, Co. Dublin	Construction of 2 adjoined single storey data centres with associated office and service areas with an overall gross floor area of 15,274m ² comprising of the construction of 2 adjoined single storey data centres with a gross floor area of 12,859m ² that will include a single storey goods receiving area / store and single storey office area (2,415m ²) with PV panels above, located to the east of the data centres as well as associated water tower,	Pending decision	502

Planning Authority	Ref. no.	Address	Summary of Proposed Development	Grant date	Distance from Site (approx.) (m)
			sprinkler tank, pump house and other services; The data centres will also include plant at roof level; with 24 standby diesel generators with associated flues (each 25m high) that will be located within a generator yard to the west of the data centres; New internal access road and security gates to serve the proposed development that will provide access to 36 new car parking spaces (including 4 electric and 2 disabled spaces) and sheltered bicycle parking to serve the new data centres; New attenuation ponds to the north of the proposed data centres; Green walls are proposed to the south and east that will enclose the water tower and pump house compound; The development will also include ancillary site works, connections to existing infrastructural services as well as fencing and signage; The development will include minor modifications to the permitted landscaping to the west of the site as granted under SDCC Planning Ref. SD19A/0042 / ABP Ref. PL06S.305948 and Ref. SD21A/0042; The site will remain enclosed by landscaping to all boundaries; The development will be accessed off the R120 via the permitted access granted under SDCC Planning Ref. SD19A/0042 / ABP Ref. PL06S.305948 and SD21A/0042; An Environmental Impact Assessment Report (EIAR) has been submitted with this application.	Decision due date: 21/03/2024	
SDCC	SD22A/0105	Ballymakailly, West of Newcastle Road (R120), Lucan, Co. Dublin	Amendments to the electrical substation compound and structures permitted under Reg. Ref. SD19A/0042 and ABP Ref. 305948-19 comprising of amendment to the layout and extent of the permitted substation compound, to include an extension of the compound area to c. 0.77ha; reorientation of the Gas Insulated Switchgear (GIS) substation building to a north south orientation, and associated amendments to the building footprint, layout, and elevations, providing for a two storey building with a gross floor area (GFA) of c. 1,456m ² ; alterations to the permitted single storey Client Control Building to provide for the substitution of this structure with 5 single storey modular client control units, with a combined total GFA of c. 231m ² (GFA of c. 46.2m ² per module); associated amendments to the permitted substation access arrangements (3 gated access points provided), transformers, security fencing (to be 2.6 metres high in place of the 2.4 metre high fencing permitted), lighting, services, MV substation, parking, utility cabling, amendments to permitted landscaping and berms adjoining the substation compound and associated and ancillary works.	08/06/2022	634
SDCC	SD19A/0042	Newcastle Road, Lucan, Co Dublin	Phased development that will include 4 single storey data halls all with associated plant at roof level; 32 standby generators with associated flues (each 15m high); associated office and service areas; service road infrastructure and car parking; ESB sub-station/transformer yard with an overall gross floor area of 17,685m ² ; temporary gas powered generation plant within a walled yard containing 19 generator units with associated flues (each 17m high) to be located to the west of the proposed data halls on a site within the townland of Ballymakailly; Phase 1, 2 single storey data halls (6,950m ²) with roof plant and 16 stand-by generators with associated flues (each 15m high) as well as associated water tower and pump room and other services; single storey goods receiving area/store and single storey office area (1,522m ²) located attached and to the north-east of the data halls; temporary gas powered generation plant with 15 generators with associated flues (each 17m high) to be located within a compound to the west of the proposed data halls; attenuation pond; two storey ESB sub-station (494m ²) with associated transformer yard and single storey transformer building (247m ²) within compound; Phase 2, 2 single storey data halls (6,950m ²) with roof plant and 16 stand-by generators with associated flues (each 15m high) as well as associated water tower and pump room and other services; single storey goods receiving area/store and single storey office area (1,522m ²) located attached and to the east of the data halls under this Phase and attached and to the north of the offices proposed under Phase 1; 4 additional generators with associated flues (each 17m high) to be constructed within the temporary gas powered generation plant; also ancillary site works; connections to existing infrastructural services as well as fencing; signage; vehicular access off the realigned R120 to provide a new vehicular access into the site as well as internal service roads and entrance gates; car park for 39 car parking spaces (including 4 disabled car parking spaces); sheltered bicycle parking to serve the development. The development will be enclosed with landscaping to all boundaries of the overall site of 22.1ha. Application for enabling works to facilitate this	05/10/2020	647

Planning Authority	Ref. no.	Address	Summary of Proposed Development	Grant date	Distance from Site (approx.) (m)
			development has been made under Reg. Ref. SD19A/0004. An Environmental Impact Assessment Report (EIAR) has been submitted with this application. An EPA IE Licence will be applied for to facilitate the operation of Phase 2 of the permission.		
SDCC	SD21A/0042	Ballymakailly, West of Newcastle Road (R120), Lucan, Co. Dublin	<p>Construction of two single storey data centres with associated office and service areas; and three gas powered generation plant buildings with an overall gross floor area of 24,624m² that will comprise of the following: Demolition of abandoned single storey dwelling, remaining agricultural shed and derelict former farm building; Construction of 2 single storey data centres (12,797m²), both with associated plant at roof level, with 24 standby diesel generators with associated flues (each 25m high) that will be attached to a single storey goods receiving area/store and a single storey office area (2,404m²) located to the west of the data centres as well as associated water tower and sprinkler tank and other services; Amendments to the internal access road and omission of access to loading bay permitted under SDCC planning Ref. SD19A/0042/ABP Ref. PL06S.305948 that include the relocation of permitted, and new, internal security gates; and new internal access roads to serve the proposed development that will provide access to 39 new car parking spaces (including 4 electric and 2 disabled spaces) and sheltered bicycle parking to serve the new data centres; The development will also include the phased development of 3 two storey gas powered generation plants (9,286m²) within three individual buildings and ancillary development to provide power to facilitate the development of the overall site to be located within the south-west part of the overall site. Gas plant 1 (3,045m²) will contain 20 generator units (18+2) with associated flues (each 25m high) will facilitate, once operational the decommissioning of the temporary Gas-Powered Generation Plant within its open compound as granted under SDCC Planning Ref. SD19A/0042/ABP Ref. PL06S.305948. Gas plant 2 (3,045m²) will contain 20 generator units (18+2) with associated flues (each 25m high). and Gas plant 3 (3,196m²) will contain 21 generator units (19+2) with associated flues (each 25m high). These plants will be built to provide power to each data centre, if and, when required. The gas plants will be required as back-up power generation once the permitted power connection via the permitted substation is achieved; New attenuation pond to the north of the site; Green walls are proposed on the southern elevation of each power plant, as well as to the northern elevation of the generator compound of the data centres, and enclosing the water tower/pump room compound, and a new hedgerow is proposed linking east and west of the site; Proposed above ground gas installation compound to contain single storey kiosk (93m²) and boiler room (44m²). The development will also include ancillary site works, connections to existing infrastructural services as well as fencing and signage. The development will include minor modifications to the permitted landscaping to the west of the site as granted under SDCC planning Ref. SD19A/0042/ABP Ref. PL06S.305948. The site will remain enclosed by landscaping to all boundaries. The development will be accessed off the R120 via the permitted access granted under SDCC planning Ref. SD19A/0042/ABP Ref. PL06S.305948. An EPA IE Licence will be applied for to facilitate the operation of the gas-powered generation plant. An Environment Impact Assessment Report (EIAR) has been submitted with this application. All on a site of 22.1ha.</p>	09/03/2022	647
SDCC	SD22A/0289	Ballymakailly, West of Newcastle Road (R120), Lucan, Co. Dublin	<p>The development will consist of the amendment of Condition no. 3 (ii) and 3 (iii) of the permission granted under Reg. Ref. SO21A/0042 that related to the Gas Plant of the overall permitted development only, so that these aspects of the new condition shall read as follows:</p> <ul style="list-style-type: none"> Condition no. 3(ii): Within four (4) years from the date the first Gas Plant commences operation, the applicant or operator shall undertake a review with GNI of the ability to serve the Gas Plant with green gas and / or hydrogen (or similar fuels) shall be Investigated and reported to the Planning Authority. Any ability for the Gas Plant to be operated with green gas and/ or hydrogen (or similar fuels) shall be implemented within an agreed timeline agreed with GNI. 	02/12/2022	647

Planning Authority	Ref. no.	Address	Summary of Proposed Development	Grant date	Distance from Site (approx.) (m)
			<ul style="list-style-type: none"> Condition no. 3(iii): If the applicant receives a firm offer from Eirgrid under which the Gas Plant is not required, and the connection has been realized with capacity onsite from Eirgrid, then the Gas Plants shall be removed from the entire site within a year of the ceasing of operation. The nature and extent of the permitted Gas Plants, or any other element of the parent permission granted under Reg. Ref. SD21A/0042 will otherwise not be amended by this application. An EPA IE licence will be applied for to facilitate the operation of the Gas Plant that is subject of this amendment application. 		
SDCC	SD23A/0301	Gollierstown and Milltown (west of Grange Castle Business Park & The Adamstown Road (R120)), Newcastle, Dublin	The proposed development will consist of the construction of five logistics / warehousing units (Units 1 - 5) with associated office accommodation, service yards, ancillary structures/areas, and substations. The overall floor area of the proposed logistics / warehousing units is c. 56,932 sq.m (Gross Internal Area (GIA)) with a total of c. 4,336 sq.m of office space. See following breakdown of each unit: Unit 1 will comprise GIA c. 10,432 sq.m (including c. 579 sq.m of associated office space) and measures c. 17.9m from finished floor level (FFL) to roof ridge; Unit 2 will comprise GIA c. 18,065 sq.m (including c. 1,005 sq.m of associated office space) and measures c. 18.4m from FFL to roof ridge; Unit 3 will comprise GIA c. 6,325 sq.m (including c. 579 sq.m of associated office space) and measure c. 17.4m from FFL to roof ridge; Unit 4 will comprise GIA c. 8,762 sq.m (including c. 484 sq.m of associated office space) and measures c. 17.6m from FFL to roof ridge; Unit 5 will comprise GIA c. 13,348 sq.m (including c. 1,689 sqm of associated office space) and measures c. 17.8m from FFL to roof ridge; Access to the site will be from the existing roundabout to the south of the site; Provision of no. 419 car parking spaces and 172 bicycle spaces to serve the proposed development; Associated works for the diversion of the existing foul sewer within the site; The provision of attenuation basins / wetlands across the site; Associated works for re-routing of the existing ESB overhead wires which traverse the site to underground cables within the site; The formation of plateaus on the site with surplus excavated material to allow for the future Phase 2 development and; All ancillary landscaping, boundary treatments, internal roads and roundabout, cycle / pedestrian paths, associated infrastructure, and site development works to support the development.	15/01/2024	736
ABP	PL06S.314272	Hayden's Lane, Adamstown, Lucan, Co. Dublin	Construction of a residential development comprising 3 three to five storey blocks of 74 apartments (20 one bed, 48 two bed and 6 three bed) all with associated private balconies/terraces to the north/south/east/west elevations; vehicular and pedestrian access from Hayden's Lane to the north west of the site and closure of the second existing vehicular entrance at south west of site; pedestrian access from Griffeen Park to the south east of the site; provision of car and cycle parking, public and communal spaces, bin stores and all associated site development and clearance works, landscaping, boundary treatments and other servicing works.	Pending decision Decision date overdue	753
SDCC	SD23A/0151	Ballymakailly, West of Newcastle Road (R120), Lucan, Co. Dublin	Permission for development at this site within the townland of Ballymakailly to the west of the Newcastle Road, Lucan, Co. Dublin. The development will consist of amendments to the permitted development as granted under SDCC Planning Ref. SD19A/0042 that will include: <ul style="list-style-type: none"> Reduction in the number of back-up generators, flues and other related plant from 32 to 24 within the permitted generator compound located to the west of the data centre granted under SDCC Planning Ref. SD19A/0042; and Repositioning of the 24 no. back-up generators, flues and other plant within the permitted generator compound. 	25/08/2023	768
SDCC	SD19A/0004	Ballymakailly, Lucan, Co. Dublin	Enabling works to facilitate the future development of the site; topsoil strip and a cut and fill operation across the site; temporary construction access will be created off the R120 to facilitate the works within the townland of Ballymakailly to the west of the Newcastle Road (R120).	16/04/2019	778

Planning Authority	Ref. no.	Address	Summary of Proposed Development	Grant date	Distance from Site (approx.) (m)
SDCC	SD20A/0283	Grange Castle Business Park, Nangor Road, Clondalkin, Dublin 22	Demolition of existing single storey vacant house, garage and outhouse (total gross floor area (GFA) c.291.2m ²) and removal of existing temporary construction car park; Construction of a single 1-4 storey Central Administration Building and 2 2-storey (with mezzanine) data centres (DUB14 & DUB15) all to be located west of data centres DUB9, DUB10, DUB12 & DUB13 within the MS campus; The Central Administration Building (c.6.03m to c.19.85m high) will comprise central office administration, with staff cafeteria, staff gym and reception (GFA c.3,520m ²), with provision of PV panels on the roof; each data centre (c.15.6m high to parapet height and c.18.65m to top of roof plant) will include data halls, admin blocks (comprising offices, canteen, loading dock, storage and ancillary areas) and a variety of mechanical and electrical plant areas/structures including Modular Electrical Rooms (MERs), battery rooms and transformer areas. GFA of DUB14 is c.28,072m ² and GFA of DUB15 is c.28,173m ² (c.56,246m ² in total); DUB14 will also include 21 diesel generators and associated sub-stations (E-houses) and 11 mechanical flues (each c.30.75m high); Provision of a gas generator compound (to serve DUB15) containing 20 generators, 5 E-houses and 5 flues (c.25m max height); Provision of a Gas Networks Ireland gas skid including 3 kiosk buildings; Expansion of existing electrical sub-station compound (originally granted under SD07A/0632) to provide 3 additional transformer bays. 3 E-houses and 1 control room, 2 auxiliary transformers; 2 sprinkler tank and pump house areas, 1 additional rainwater harvesting plant; Provision of 168 permanent car parking spaces and 40 cycle parking spaces; Provision of additional western access to the MS campus (to serve the Central Administration Building) from the Business Park estate road (including bridge over the Griffeen River) with existing temporary access to be extinguished; Physical integration with the remainder of the existing MS campus (including internal access roads and landscaping) with associated modifications to the western boundary of the DUB09/DUB10/DUB12/DUB13 data centre development as permitted under SD16A/0088; Provision of a new temporary construction car park (with 802 car spaces, shuttle bus stop and shelter) on site north of the main entrance to the business park; Total gross floor area of the development will be c.59,766m ² ; All associated site development works, drainage and services provision, landscaping, boundary treatments (including security fencing) and associated works; An Environmental Impact Assessment Report (EIAR) has been submitted with this application; The application relates to a development which comprises an activity requiring an integrated pollution prevention and control IE Licence.	29/03/2021	790
SDCC	SD23A/0257	Pfizer Ireland Pharmaceuticals, Grange Castle Business Park, Clondalkin, Dublin 22	Construction of a part one /part three storey extension on the western and (part) southern elevation of the existing QAQC Building to provide and expanding staff cafeteria at ground floor (including the remodelling of the canteen within the existing building)and office accommodation on the 1 st and 2 nd floors: construction of plant room and plant area enclosure on the roof of existing QAQC building and all associated site works required to facilitate the proposed development including hard and soft landscaping to the north, western and southern boundaries of the proposed extension, a subterranean surface water attenuation tank and foul eater grease trap to the north end of proposed extension, and 2 no, surface level external plant enclosures to the south of the proposed extension.	03/01/2024	857
SDCC	SD15A/0084/EP	'The Bungalow', Hayden's Lane, Lucan, Co. Dublin.	Demolition of an existing single storey house and garage (145.30m ²) and the erection of 6no. 2 storey houses with converted attics (140m ² each) in 2 terraced blocks of 3 houses, with dormer windows to the front, 'Velux' windows to the rear and associated site development and drainage works including a new vehicular access for each house fronting onto the public roadway and new front boundary wall and brick piers.	07/12/2020	913

