Site R, Jordanstown Road, Aerodrome Business Park, Rathcoole, Co. Dublin

Screening for Appropriate Assessment

May 2021

Project number: 2021s0067

Exeter Ireland Property IV C Limited

JBA Project Manager

Bernadette O'Connell
Block 660 Unit 8
The Plaza
Greenogue Business Park
Rathcoole, Dublin

Revision History

Revision Ref /Date Issued	Amendments	Issued to
S3-P01 / 26 May 2021	Draft report	Kavanagh Burke
A3-C01 / 26 May 2021	Final Report	Kavanagh Burke

Contract

This report describes work commissioned by Kavanagh Burke, on behalf of Exeter Ireland Property IV C Limited, by an email dated 12/01/2021. Patricia Byrne, Malin Lundberg and Mark Desmond of JBA Consulting carried out this work.

Prepared by ..... Mark Desmond, BSc (Hons) MSc
Assistant Ecologist

Reviewed by ..... Patricia Byrne BSc (Hons) PhD MCIEEM
..... Senior Ecologist

Purpose

This document has been prepared as a Final Report for Exeter Ireland Property IV C Limited. JBA Consulting accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared.

JBA Consulting has no liability regarding the use of this report except to Exeter Ireland Property IV C Limited.

Copyright

Carbon Footprint

A printed copy of the main text in this document will result in a carbon footprint of 198g if 100% post-consumer recycled paper is used and if 252g primary-source paper is used. These figures assume the report is printed in black and white on A4 paper and in duplex.

JBA is aiming to reduce its per capita carbon emissions.

Contents

1 Introduction 1

1.1 Background 1
1.2 Legislative Context 1
1.3 Appropriate Assessment Process 1
1.3.1 Stage 1 - Screening for AA 2
1.3.2 Stage 2 - AA 2
1.3.3 Stage 3 - Alternative Solutions 2
1.3.4 Stage 4 - IROPI 2
1.4 Methodology 2
1.4.1 Desktop study 3
1.4.2 Field Surveys 3
1.4.3 Limitations and Constraints 3

2 Project Description 4

2.1 The 'Project' 4
2.2 Site location 4
2.3 Proposed project 5

3 Existing Environment 6

3.1 Baseline conditions 6
3.2 Habitats 6
3.2.1 Hedgerows/Scrub (WL1/WS1) 8
3.2.2 Drainage Ditches (FW4) 8
3.2.3 Treelines (WL2) 8
3.2.4 Hedgerows (WL1) 9
3.2.5 Arable crops (BC1) 9
3.2.6 Recolonising bare ground (ED3) 9
3.2.7 Dry meadows and grassy verges (GS2) 10
3.2.8 Buildings and artificial surfaces (BL3) 10
3.2.9 Spoil and bare ground (ED2) 10
3.2.10 Earth bank (BL1) 10
3.3 Protected Flora and Fauna 10
3.3.1 Flora 10
3.3.2 Fauna 11
3.4 Invasive Non-native species: 11
3.5 Waterbodies within the Vicinity of the Proposed Site 12

4 Natura 2000 Sites 13

4.1 Project Zone of Influence 13

5 Other Relevant Plans and Projects 21

5.1 Cumulative Effects 21
5.2 Plans 21
5.2.1 South Dublin County Council Development Plan 2016 - 2022 21
5.2.2 Greater Dublin Drainage Plan 21
5.2.3 River Basin Management Plan for Ireland 2018-2021 21
5.3 Other Projects 22
5.4 Summary 27

6 Screening Assessment 28

6.1 Introduction 28
6.2 Assessment Criteria 28
6.2.1 Description of the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites 28
6.2.2 Surface Water Pathways 28
6.2.3 Groundwater 31
6.2.4 Land and Air 33
6.2.5 Cumulative Impact 35
6.3 Summary 35
6.3.1 Description of likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 sites 35

6.3.2 Description of likely changes to the Natura 2000 sites 36
6.3.3 Description of likely impacts on the Natura 2000 sites as a whole 37
6.3.4 Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is unknown 37
6.4 Concluding Statement 38

List of Figures

Figure 1-1: The Appropriate Assessment Process (from: Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities, DEHLG, 2009).... 2
Figure 2-1: Site location (Esri Satellite, 2021) 4
Figure 3-1: Habitats within the site area. (Esri Satellite, 2021) 7
Figure 3-2: Elder forming a hedgerow on the banks of the drainage ditch running along the eastern boundary of the proposed site..... 8
Figure 3-3: Lords-and-ladies growing in the hedgerow (WL1). 9
Figure 3-4: Arable crop cut down to winter stubble dominates the proposed site area 9
Figure 3-5: Multiple habitats of WL2 Maple treeline, GS2 Dry meadow, ED2 bare ground, WL1 Hedgerow and FW4 Ditch along the south western access corridor of the proposed site..... 10
Figure 3-6: Evidence of Rabbit burrowing, no burrows were active, and most were incomplete. 11
Figure 3-7: Waterbodies within the vicinity of the proposed site (EPA, 2021;OSM, 2021). 12
Figure 4-1: Natura 2000 sites and site location (NPWS, 2021; OSM, 2021). 14
Figure 6-1: Site location and Natura 2000 sites, with surface water sub-catchment. (EPA 2021, OSM, 2021) 30
Figure 6-2: Aquifer vulnerability of proposed site and nearby watercourses (GSI, 2021; OSM 2021). 32
Figure 6-3: Site location, Natura 2000 sites, and groundwater bodies (GSI, 2021; OSM 2021). 33

List of Tables

Table 3-1: List of habitats recorded on site 6
Table 4-1: Natura 2000 sites located within the 15km (plus hydrological connectivity extension) Zone of Influence (ZoI) of the proposed development. 13
Table 4-2: Site briefs; Qualifying Interests; and project-relevant threats /pressures and their impacts and sources in relation to the Natura 2000 sites within the 15km ZoI (plus hydrological connectivity extension)..... 15
Table 5-1: Projects granted planning permission since March 2017 in vicinity of proposed site. 23
Table 6-1: Surface water pathway screening summary for Natura 2000 sites..... 30
Table 6-2: Ground water pathway screening summary for Natura 2000 sites 32
Table 6-3: Land and air pathway screening summary for Natura 2000 sites..... 34

Abbreviations

AA	Appropriate Assessment
AEP	Annual Exceedance Probability
CIEEM	Chartered Institute of Ecology and Environmental Management
DoEHLG	Department of Environment, Heritage and Local Government
EC	European Communities
EPA	Environmental Protection Agency
EU	European Union
GIS	Geographical Information Systems
GSI	Geological Survey Ireland
IROPI	Imperative Reasons of Over-riding Public Interest
NBDC	National Biodiversity Data Centre
NPWS	National Parks and Wildlife Service
PM	Particulate matter
QI	Qualifying Interest
RBMP	River Basin Management Plan
SAC	Special Area of Conservation
SPA	Special Protection Area
WFD	Water Framework Directive
WWTP	Waste Water Treatment Plant
ZOI	Zone of influence

1 Introduction

1.1 Background

JBA Consulting Ireland Ltd. has been commissioned by Exeter Ireland Property IV C Limited to undertake a Screening for Appropriate Assessment in relation to a proposed development east of Aerodrome Business Park, Rathcoole, Co Dublin. The development will include the construction of building with ancillary parking.

1.2 Legislative Context

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora, known as the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000 sites. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79 / 409 / EEC).

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:

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

Article 6(4) deals with the steps that should be taken when it is determined, as a result of Appropriate Assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

"*If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

Where the site concerned hosts a priority natural habitat type and / or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

The requirements of Articles 6(3) and 6(4) of the Habitats Directive have been transposed into Irish legislation by means of the Habitats Regulations, 1997 (S.I. No. 94 of 1997) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 / 2011).

1.3 Appropriate Assessment Process

Guidance on the Appropriate Assessment (AA) process was produced by the European Commission in 2002, which was subsequently developed into guidance specifically for Ireland by the Department of Environment, Heritage and Local Government (DEHLG) (2009). These guidance documents identify a staged approach to conducting an AA, as shown Figure 1-1.

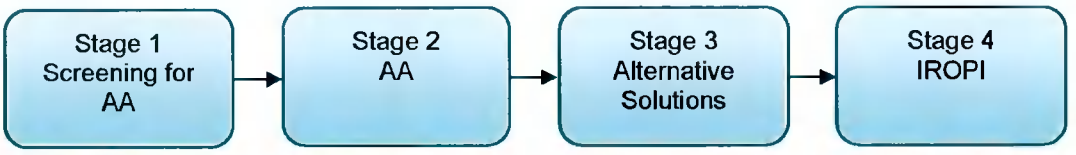


Figure 1-1: The Appropriate Assessment Process (from: Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities, DEHLG, 2009).

1.3.1 Stage 1 - Screening for AA

The initial, screening stage of the Appropriate Assessment is to determine:

whether the proposed plan or project is directly connected with or necessary for the management of the European designated site for nature conservation

if it is likely to have a significant adverse effect on the European designated site, either individually or in combination with other plans or projects

For those sites where, potential adverse impacts are identified, either alone or in combination with other plans or projects, further assessment is necessary to determine if the proposals will have an adverse impact on the integrity of a European designated site, in view of the site's conservation objectives (i.e. the process proceeds to Stage 2).

1.3.2 Stage 2 - AA

This stage requires a more in-depth evaluation of the plan or project, and the potential direct and indirect impacts of them on the integrity and interest features of the European designated site(s), alone and in-combination with other plans and projects, taking into account the site's structure, function and conservation objectives. Where required, mitigation or avoidance measures will be suggested.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where mitigation cannot be achieved, then alternative solutions will need to be considered (i.e. the process proceeds to Stage 3).

1.3.3 Stage 3 - Alternative Solutions

Where adverse impacts on the integrity of Natura 2000 sites are identified, and mitigation cannot be satisfactorily implemented, alternative ways of achieving the objectives of the plan or project that avoid adverse impacts need to be considered. If none can be found, the process proceeds to Stage 4.

1.3.4 Stage 4 - IROPI

Where adverse impacts of a plan or project on the integrity of Natura 2000 sites are identified and no alternative solutions exist, the plan will only be allowed to progress if imperative reasons of overriding public interest can be demonstrated. In this case compensatory measures will be required.

The process only proceeds through each of the four stages for certain plans or projects. For example, for a plan or project, not connected with management of a site, but where no likely significant impacts are identified, the process stops at stage 1. Throughout the process, the precautionary principle must be applied, so that any uncertainties do not result in adverse impacts on a site.

This report is in support of a Stage 1 Screening for Appropriate Assessment.

1.4 Methodology

The Screening for Appropriate Assessment has been carried out with reference to the following documents:

- DoEHLG (2009 rev 2010) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government (DoEHLG 2009).
- European Communities (EC) (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission (European Commission 2000).
- EC (2002) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission (European Commission et al. 2002).
- EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. European Commission (European Commission 2007).

1.4.1 Desktop study

A desktop study was conducted of available published and unpublished information, along with a review of data available on the NPWS and National Biodiversity Data Centre (NBDC) web-based databases, in order to identify key habitats and species (including legally protected and species of conservation concern) that may be present within ecologically relevant distances from the project as explained below. The data sources below were consulted for the desktop study:

- NPWS website (www.npws.ie), (https://www.npws.ie/), where site synopses, Natura 2000 data forms and conservation objectives were obtained along with Annex 1 habitat distribution data and status reports. (DoEHLG 2009b)
- National Biodiversity Data Centre (NBDC) Maps (http://maps.biodiversityireland.ie/#/Map)
- Environmental Protection Agency (EPA) maps website (https://gis.epa.ie/EPAMaps/)
- River Basin Management Plans (RBMP) (www.wfdireland.ie);
- NBDC Biodiversity Maps (http://maps.biodiversityireland.ie/#/Map);
- Catchments (www.catchments.ie)
- Planning Applications (myplan.ie)
- Geological data (gsi.ie/data-and-maps)

1.4.2 Field Surveys

To inform this AA Screening an ecological survey was carried out at the site by JBA ecologists Mark Desmond and Patricia Byrne on 03 March 2021.

The ecological walkover survey was carried out in general accordance with the methods outlined in the following documents:

- Heritage Council (2011). Best Practice Guidance for Habitat Survey and Mapping (Smith et al. 2011).
- Fossitt, J. (2000). A Guide to Habitats in Ireland. The Heritage Council, Kilkenny (Fossitt 2000).

1.4.3 Limitations and Constraints

The screening assessment necessarily relies on some assumptions and it was inevitably subject to some limitations. These would not affect the conclusion, but the following points are recorded in order to ensure the basis of the assessment is clear:

- This assessment is based on the methodology for proposed works as described in this report. Where changes to methodology occur, an ecologist will need to be consulted to determine if the project needs reassessment.
- Adverse weather can cause delays to the schedule and alter the timing of works. This has been accounted for using a worst-case scenario where necessary.

2 Project Description

2 1 The 'Project'

The proposed development is not directly connected with or necessary to the management of any Natura 2000 site and may have potential adverse impacts upon Natura 2000 sites in its vicinity. Therefore, the proposed project is subject to the requirements of the AA process.

2 2 Site location

The proposed development will be located east of the Aerodrome Business Park in a plot currently used as arable land for crop growth (Figure 2-1). The site is accessed from the R120 via a corridor between the Aerodrome Business Park and further farmland. The Casement Aerodrome is located 750m north east of the site. The site is located approximately 1 km north of Rathcoole, Co. Dublin. The land immediately surrounding the site to the north, east and south is zoned as 'P1 - Agriculture'. A strip of land 400m wide and 1km long, bordering the N7 is zoned as 'C2.1 - Industrial, enterprise, employment' and is a continuation of the land zoning of the Baldonnel Business Park. Land on the south western side of the R120 opposite the Aerodrome Business Park is zoned as 'C2.1 - Industrial, enterprise, employment' and is yet to be developed. Land zoning details are in relation to the South Dublin County Council Development Plan 2016 -2022.

Figure 2-1: Site location (Esri Satellite, 2021)

2.3 Proposed project

Exeter Ireland Property IV C Limited intend to apply for permission for development at this 5.67 ha site at known as Block R, Jordanstown Road, Aerodrome Business Park, Rathcoole, Co. Dublin. Block R, Jordanstown Road, Aerodrome Business Park, Rathcoole, Co. Dublin. The lands are bounded to the east by Blocks A - D Jordanstown Road, Aerodrome Business Park, Rathcoole, Co. Dublin and to the north, south and west by greenfield lands. The R120 Newcastle Village to Rathcoole Road also bounds the site to the south.

The development will comprise the construction of 1 No. warehouse with ancillary office and staff facilities and associated development. The warehouse will have a maximum height of 16 metres with a gross floor area of 22,966 sq m including a warehouse area (21,113 sq m), ancillary office areas (1,163 sq m) and staff facilities (690 sq m).

The development will also include: the provision of a new vehicular access to the site from Jordanstown Road including 2 No. additional access gates from this new road to the existing Site E to the north; pedestrian access; 210 No. ancillary car parking spaces; bicycle parking; HGV yards; level access goods doors; dock levellers; access gates; hard and soft landscaping; lighting; boundary treatments; ESB substation; plant; pedestrian access gate at the southern portion of the site from the R120; and all associated site development works above and below ground.

Water Supply and Drainage

The water supply to the proposed development will be provided through a new 150mm watermain connection to the existing local authority watermain pipe located on Jordanstown Road, located to the west of the site. Fire hydrants and a bulk water meter will be installed on site and connected to this supply. A connection application will be made to Irish Water in the normal way.

Construction phase

Surface water will be locally attenuated on site with predefined areas of attenuation placed at the beginning of the project. Construction of the development's Sustainable Urban Drainage System (SUDS), including attenuation system will follow best practice guidance.

These measures will be in line with the Greater Dublin Regional Code of Practice for Drainage Works (Dublin City Council, 2021), which includes South Dublin County Council and the South Dublin County. The first objective of the Code of Practice is Compliance with best environmental practices and relevant environmental legislation such as the Water Framework Directive.

Operation Phase

Sustainable Urban Drainage System (SUDS)

The SUDS on site will consist of a series of drainage traps and filters leading to a Stormtech (MC3500 or equivalent) underground attenuation system which is intended to be placed north of the proposed sites industrial unit. A Klargester Class I Bypass Petrol Interceptor (NSBE075 or equivalent) will remove hydrocarbons entering the surface water drainage system. Organic matter and settleable solids will be collected by a SurfSep SWI012 interceptor. A flow regulator will also be installed. **Foul water Drainage**

The proposed foul sewer, fully separated from the proposed storm water drainage, is designed for sewage and wastewater collection from the office toilets and staff facilities part of the proposed building. A single pipe collecting foul water connects to the existing foul water sewer on the Jordanstown Road, which is eventually processed at the Ringsend Wastewater Treatment Plant (WWTP). The total number of discharge units at the development is 104 during peak flow, as described in the projects drainage report.

A complete water drainage layout plan is shown in Appendix B.

3 Existing Environment

3.1 Baseline conditions

An ecological walkover survey was conducted on the 3rd of March 2021 by JBA Senior Ecologist Patricia Byrne and JBA Assistant Ecologist Mark Desmond. A habitat map is provided (Figure 3-1 and Appendix C). The site consists of predominately arable land used for crop growing. The eastern boundary/south eastern access corridor has increased variability in linear habitats. The proposed entry to the development via Jordanstown Road lies on vacant industrial land used as open storage for construction equipment and prefabricated buildings.

3.2 Habitats

The habitats recorded on site are listed in Table 3-1 and shown in Figure 3-1. The following sections provides descriptions of each habitat.

Table 3-1: List of habitats recorded on site

Habitat	Fossitt Code
Hedgerows/Scrub	WL1/WS1
Drainage ditches	FW4
Treelines	WL2
Hedgerows	WL1
Arable crops	BC1
Recolonising bare ground	ED3
Dry meadows and grassy verges	GS2
Buildings and artificial surfaces	BL3
Spoil and bare ground	ED2
Earth bank	BL2

Figure 3-1: Habitats within the site area. (Esri Satellite, 2021)

3.2.1 Hedgerows/Scrub (WL1/WS1)

A mixture of short scrub and a hedgerow runs along the edge of the drainage ditch which delineates the south eastern boundary of the arable crop habitat (Figure 3-2). Botanical species found include Bramble *Rubus fructicosus* agg and Hawthorn *Crataegus monogyna* with a Male Fern *Dryopteris filix-mas* and Ivy *Hedera hibernica* as understory. There was irregular occurrence of Elder *Sambucas nigra*. The density of scrub and tree species is lower than in the hedgerow (WL1) habitat described below.

Figure 3-2: Elder forming a hedgerow on the banks of the drainage ditch running along the eastern boundary of the proposed site.

3.2.2 Drainage Ditches (FW4)

A drainage ditch runs the length of the southern boundary of the site. At the time of the survey the ditch was dry for the first 300m along the access corridor until an adjoining culvert running under the next field provided a flow of water along the boundary of the arable crop habitat. Botanical species found were *Apium* spp. in the wetted section and Goat Willow *Salix caprea* along the length of the ditch. Nettle *Urtica dioica* and Bramble cover the drainage ditch to the south-west while Male Fern was present on the bank side to the north east.

3.2.3 Treelines (WL2)

A treeline of Maple *Acer campestre* runs behind metal fencing on the northern boundary of the sites access corridor, with a small staggered cluster of Cherry Laurel *Prunus laurocerasus* hedgerows recorded. The invasive Butterfly-bush *Buddleja davidii* was recorded among the trees near the entrance to the access corridor, outside of the subject lands. Further treelines of Hawthorn were found on the western boundary of the arable crop habitat, with a dense, hedge like understory of Bramble and Willowherb *Epilobium* spp.

3.2.4 Hedgerows (WL1)

A hedgerow on a raised bank runs along the ditch of the south eastern access corridor, switching from the north bank to the south bank halfway along the ditch if walking in a north-easterly direction. The hedgerow consists of Blackthorn *Prunus spinosa*, Bramble, Elder and the occasional Ash *Fraxinus excelsior*. There is an undergrowth of Ivy and of Lords-and-ladies *Arum maculatum* was recorded (Figure 3-3). Lesser celandine *Ficaria verna* and Cleaver *Galium aparine* were identified adjacent to the hedgerow.

Figure 3-3: Lords-and-ladies growing in the hedgerow (WL1).

3.2.5 Arable crops (BC1)

The proposed site area is largely dominated by cultivated land used for arable crop production. At the time of the survey the crops had been cut down to winter stubble (Figure 3-4). There was some presence of *Veronica spp.* most likely Common Field Speedwell *Veronica persica*.

Figure 3-4: Arable crop cut down to winter stubble dominates the proposed site area

3.2.6 Recolonising bare ground (ED3)

Recolonising bare ground was present at the entrance to the south eastern corridor, where gravel hardcore was recolonised by unidentifiable (due to the season) grass species. Pioneer species such as Nettle, Dandelion *Taraxacum* spp. and Thistle *Cirsium* spp were recorded.

3.2.7 Dry meadows and grassy verges (GS2)

A dry meadow makes up the majority of the access corridor to the south west of the site (Figure 3-5). There is also a grassy verge along a section of the drainage ditch. Grasses were recorded but were cut short and out of season for identification. The was a recorded botanical assemblage of Dock *Rumex* spp, Creeping Buttercup *Ranunculus repens*, Daisy *Bellis perennis*, Creeping Thistle *Cirsium arvense,* Bramble, and Cleaver. A single Maple was observed at the entrance to the site.

Figure 3-5: Multiple habitats of WL2 Maple treeline, GS2 Dry meadow, ED2 bare ground, WL1 Hedgerow and FW4 Ditch along the south western access corridor of the proposed site.

3.2.8 Buildings and artificial surfaces (BL3)

This habitat is present at the proposed vehicular access to the development via Jordanstown Road. The area is a mixture of exposed ground, gravel, prefabricated buildings, and construction machinery. Willowherb, grass assemblages and Bramble were present at its border.

3.2.9 Spoil and bare ground (ED2)

A hardcore gravel road ran the length of the south east corridor between GS2 and FW4 (Figure 3-5), and ran around to the north, bordering the arable crops (BC1).

3.2 10 Earth bank (BL1)

A vegetated earth bank runs between the ditch and the adjacent field. Grass species, Bramble and Daisy were recorded.

3.3 Protected Flora and Fauna

3.3.1 Flora

No protected floral species were recorded by JBA ecologists during the ecological walkover survey of the proposed site. The NBDC records were referenced and no occurrence of protected floral species has been recorded within the site's boundary to date.

3.3.2 Fauna

The WL1 Hedgerow habitat was utilised by Wren *Troglodytes troglodytes*, Blackbird *Turdus merula*, and Blue Tit *Cyanistes caeruleus*. These species are not listed or qualifying interests of any Natura 2000 site.

The GS2, Dry Meadows and Grassy Verges habitat was utilised by White Wagtail *Motacilla alba* and Great Tit *Parus major*. These species are not listed or qualifying interests of any Natura 2000 site.

Many Skylark *Alauda arvensis* were present in the arable crop BC1 habitat. Evidence of Rabbit *Oryctolagus cuniculus* burrow digging was found across the arable crop BC1 habitat, but none were actively used and were often found incomplete. Rabbit droppings were also recorded. None of these species are qualifying interests of any Natura 2000 site.

Eurasian Curlew *Numenius arquata* rested 200m north of the site boundary within arable crop BC1 habitat for approximately 1 hour during the assessment. Curlew are an Annex II species listed in the Birds Directive and are a Red listed species on the 'Birds of conservation concern' list. Curlew are also a Qualifying Interest in the North Bull Island SPA, which lies within the proposed sites Zone of Influence (ZOI).

3 4 Invasive Non-native species

Evidence of rabbit presence and activity was recorded but no specimens were observed during the walk over of the site (Figure 3-6). Rabbits are designated as Medium Impact Invasive Species (NBDC 2021) but are not listed as a third schedule non-native invasive species, subject to restrictions under Regulations 49 and 50 of S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011.

A small sized Butterfly bush approximately 1m tall was observed in the adjacent site near the site boundary. This is also a Medium Impact Invasive species but not listed as a third schedule species subject to restrictions of S.I. No. 477/2011.

Figure 3-6: Evidence of Rabbit burrowing, no burrows were active, and most were incomplete.

3.5 Waterbodies within the Vicinity of the Proposed Site

The proposed site lies within the Water Framework Directive (WFD) Liffey and Dublin Catchment, and specifically the Liffey_170 sub catchment (EPA, 2021a). The proposed site is approximately 400m east of the Baldonnel Stream(Liffey_170) and 800m west of the River Camac situated in the Camac_020 sub catchment. See Figure 3-7 overleaf for further locations. The River Grifeen feeds into the main River Liffey near the centre of Lucan, approximately 8km from the proposed site. The River Camac feeds into the main River Liffey at Heuston Station, Dublin City, approximately 12km from the proposed site.

The Camac_020 sub catchment has a moderate WFD status and is described as at risk of missing its 2027 WFD targets. The Liffey_170 sub catchment has a good WFD status and but is also considered at risk (EPA, 2021a).

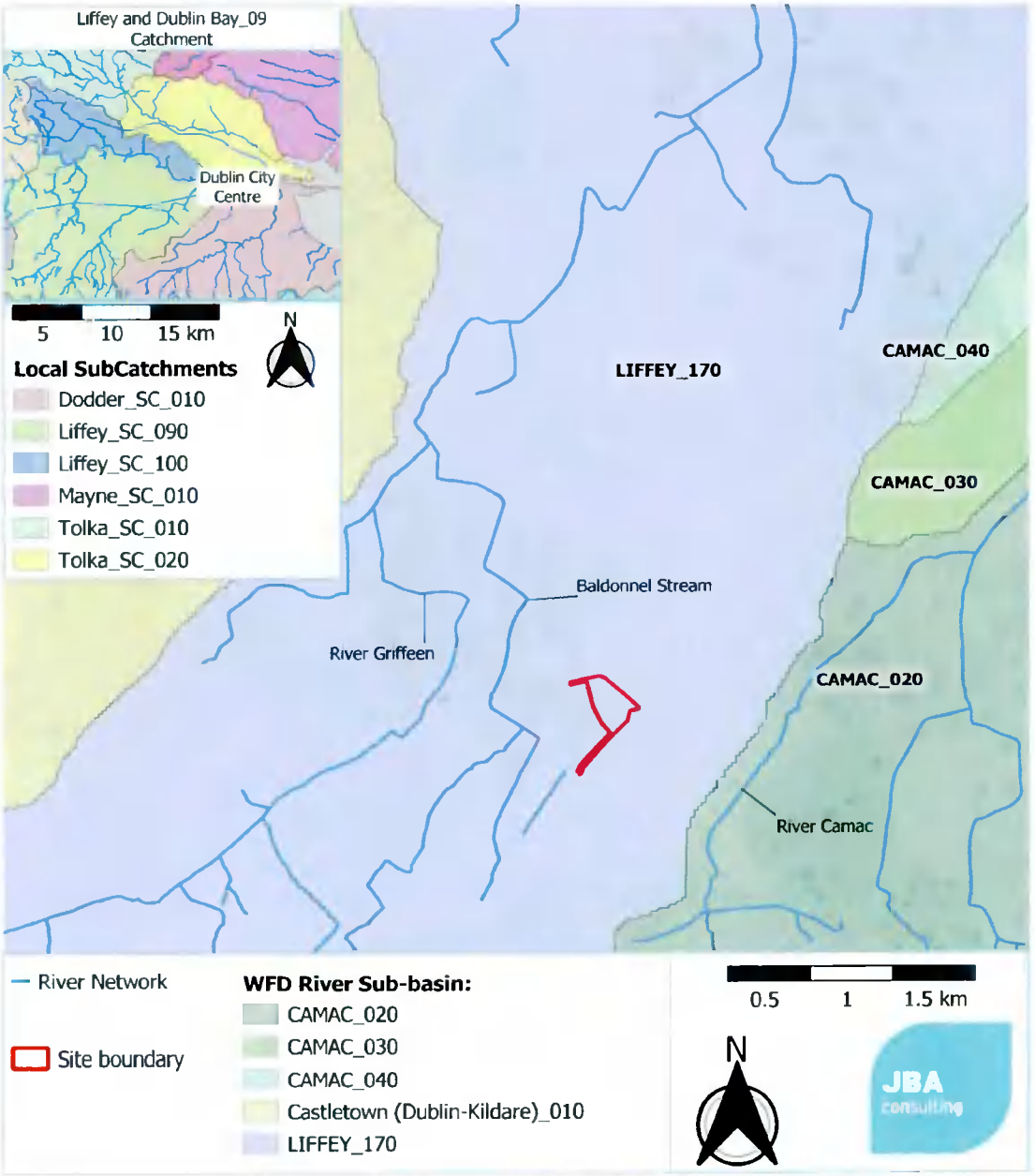


Figure 3-7: Waterbodies within the vicinity of the proposed site (EPA, 2021;OSM, 2021).

4 Natura 2000 Sites

The DEHLG (2009) guidance identifies that Screening for Appropriate Assessment of a plan or project should consider the following Natura 2000 sites:

- Any Natura 2000 sites within or adjacent to the plan or project area.
- Any Natura 2000 sites within the likely zone of impact of the plan or project. This is dependent on the nature and scale of the plan, with 15km generally recommended for plans, but potentially much less for projects.
- Any Natura 2000 sites that are more than 15km from the plan or project area, but may potentially be impacted upon, for example, through a hydrological connection.

As the scale of proposed works are considered of 'Project' status, only Natura 2000 sites within a 15km range of the proposed development were examined. The Natura 2000 sites within the range are listed in Table 4-1 below and their location are shown in Figure 4-1 overleaf.

4.1 Project Zone of Influence

The project will primarily affect the site only, but a wider area of influence is used for impacts relating to noise disturbance (1km), air pollution (10km), surface water (15km), with an additional 2km from connecting transitional waters to coastal areas; and any supporting habitat for SAC/SPA species (15km).

Table 4-1: Natura 2000 sites located within the 15km (plus hydrological connectivity extension) Zone of Influence (ZoI) of the proposed development.

Natura 2000 site	Site Code	Approximate direct distance from site
Glenasmole Valley SAC	001209	7.1 km
Rye Water Valley/Carton SAC	001398	8.0 km
Wicklow Mountains SAC	002122	8.4 km
Red Bog, Kildare SAC	000397	11.6 km
Wicklow Mountains SPA	004040	11.8 km
Poulaphouca Reservoir SPA	004063	12.5 km
North Dublin Bay SAC	000206	20.2 km
South Dublin Bay SAC	000210	17.2 km
North Bull Island SPA	004006	20.1 km
South Dublin Bay and River Tolka Estuary SPA	004024	17.2 km

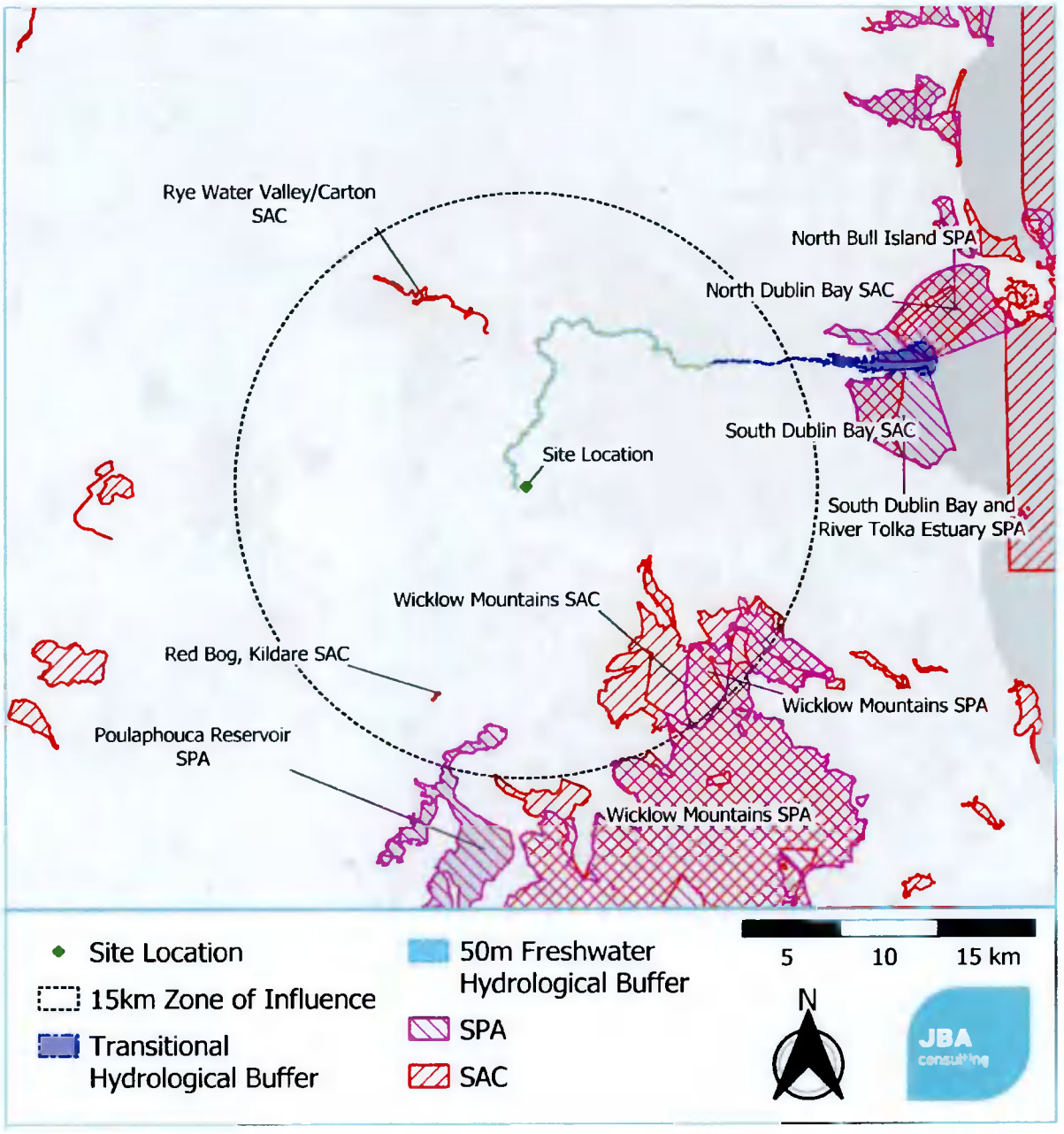


Figure 4-1: Natura 2000 sites and site location (NPWS, 2021; OSM, 2021).

Table 4-2: Site briefs; Qualifying Interests; and project-relevant threats /pressures and their impacts and sources in relation to the Natura 2000 sites within the 15km ZoI (plus hydrological connectivity extension).

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
Rye Water Valley / Carton SAC	The Rye Water Valley / Carton SAC is a river valley site, which includes at its western end a large area of estate woodland and an artificial lake. The eastern section of the site includes a section of railway, canal and aqueduct; it continues as far as Leixlip town. The importance of the site lies in the presence of a number of rare plant and animal species and a rare habitat, i.e. thermal, mineral, petrifying spring. The spring gives rise to a calcareous marsh, the habitat for *Vertigo angustior* and *Vertigo moulinsiana*. This marsh is species-rich and holds a number of plant and insect species which are rare or locally uncommon in Ireland. Four Red Data Book plant species have been recorded from the site, two of which, *Hypericum hirsutum* and *Viola hirta* are legally protected. The woods at the eastern end of the site are also of some ornithological interest (NPWS, 2017a).	- Petrifying Springs* [1130] - Narrow-mouthed Whorl Snail (*Vertigo angustior*) [1014] - Desmoulin's Whorl Snail (*Vertigo moulinsiana*) [1016] (NPWS, 2018a)	Continuous urbanisation: Moderate Impact (outside) Dispersed habitation: Low Impact (outside)# Roads, motorways: Low impact (outside)# (Full list of threats / pressures - NPWS, 2017a)
Glenasmole Valley SAC	Glenasmole Valley lies at the northern foothills of the Dublin and Wicklow Mountains. Dry calcareous pasture grassland, improved to varying degrees, is a main habitat of the valley sides and occurs in association with wet grassland and, in places of seepage, fen or marsh type vegetation. The site has important examples of petrifying springs. The physical and chemical properties of the springs have been studied. Good examples of orchid rich calcareous grassland, including Pseudorchis albida (legally protected) and Orchis morio (Red Data Book species) are found here. Molinia meadows are also represented (NPWS, 2017b).	- Semi-natural dry grassland and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites) [6210] - Molinia meadows on calcareous, peaty or clayey-silt laden soils (Molinion caeruleae) [6410] - Petrifying springs with tufa formation (Cratoneurion)* [7220] (NPWS, 2018b)	Discontinuous urbanisation: Moderate impact (outside)# (Full list of threats / pressures - NPWS, 2017b)
Red Bog, Kildare SAC	The site comprises a relatively small wetland which lies between moranic ridges. Open water is a principal habitat though there are no obvious inflowing or outflowing streams. Open water is fringed by various wetland habitats, with bog (raised type), fens and freshwater marsh. The surrounding land is improved grassland. An extensive quarrying operation occurs to the east and south of site. The site displays a succession from open water (eutrophic in status) to ombrotrophic bog. Transition mire vegetation is considered to be well represented at this site.(NPWS, 2017c)	- Transition mires and quaking bogs [7140] (NPWS, 2018c)	Dispersed habitation: Moderate impact (outside)# (Full list of threats / pressures - NPWS, 2017c)

Poulaphouca Reservoir SPA	Poulaphouca Reservoir is located in the western foothills of the Wicklow Mountains. The site is of national importance for its population of Greylag goose (*Anser anser*), which is one of the largest in the country. The site provides the main roost for the birds, with feeding mostly on improved grassland outside of the site. A range of other waterfowl species occur in relatively low numbers, including Whooper Swan (*Cygnus cygnus*), Eurasian Wigeon (*Anas penelope*) and Common Goldeneye (*Bucephala clangula*). The reservoir attracts roosting gulls during winter, most notably a large population of Lesser Black-backed gull (*Larus fuscus*), which in Ireland is rare (NPWS, 2017d)	- Greylag Goose (Anser anser) [A043] - Lesser Black-backed Gull (Larus fuscus) [A183] (NPWS, 2018d)	Hunting: Low impact (inside)# Leisure fishing: Low impact (inside)# Nautical sports: Moderate impact (inside)# (Full list of threats / pressures - NPWS, 2017d)
Wicklow Mountains SPA	This is an extensive upland site, comprising a substantial part of the Wicklow Mountains. The site supports good examples of both upland and woodland bird communities. It has breeding Merlin (*Falco columbarius*) and Peregrine Falcon (*Falco peregrinus*), as well as Ring Ouzel (*Turdus torquatus*) and Red Grouse (*Lagopus lagopus*), both of the latter being Red listed in Ireland. It is the only site in Ireland where Common Merganser (*Mergus merganser*) breeds regularly (NPWS, 2017e).	- Merlin (Falco columbarius) [A098] - Peregrine Falcon (Falco peregrinus) [A103] (NPWS, 2018e)	Walking, horse-riding and non-motorised vehicles: High impact (inside)# Paths, tracks, cycling tracks: Moderate impact (inside)# (Full list of threats / pressures - NPWS, 2017e)
Wicklow Mountains SAC	An extensive upland site comprising much of the Wicklow Mountains and extending into Co. Dublin. The solid geology is mainly Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area has been glaciated and features fine examples of high corrie lakes, deep valleys and moraines. The site includes the headwaters of several major rivers, including the Liffey, the Dargle and the Slaney. The substrate over much of the site is peat, with poor mineral soil on the slopes and lower ground. Exposed rock and scree are included in the features found in the SAC. The dominant habitats on the site are blanket bog, heaths and upland grassland. The site comprises the largest complex of upland habitats in eastern Ireland, with important examples of blanket bog, wet heath and dry heath, extensive in area and mostly of good quality. Alpine heath occurs at high levels, along with calcareous and siliceous rocky habitats harbouring an arctic-alpine flora. A fine series of oligotrophic lakes occur, with some recorded to contain Arctic char (*Salvelinus alpinus*).	-Otter (Lutra lutra) [1355] - Oligotrophic water containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] - Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletalia uniflorae and/or Isoeto-Nanojuncetea [3130] - Natural dystrophic lakes and ponds [3160] - Northern Atlantic wet heaths with Erica tetralix [4010] - European dry heaths [4030] - Alpine and Boreal heaths [4060] - Calaminarian grasslands of the Violetalia calaminariae [6130] - Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) * [6230]	Wildlife watching: Low impact (inside)# Trampling, overuse: Moderate impact (both)# Urbanised areas, human habitation: Moderate impact (both)# Collection (fungi, lichen, berries etc): Low impact (inside)# Outdoor sports and leisure activities, recreational activities: Moderate impact (both)# Paths, tracks, cycling tracks: Moderate impact

	Several oakwoods of moderate quality, typical of the dry acidic woods of eastern Ireland, are found. Eurasian Otter (*Lutra lutra*) occurs on several of the riverine systems (NPWS, 2017f).	- Blanket bogs (* if active bog) [7130] - Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) [8110] - Calcareous rocky slopes with chasmophytic vegetation [8210] - Siliceous rocky slopes with chasmophytic vegetation [8220] - Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] (NPWS, 2018f)	(both)# (Full list of threats / pressures - NPWS, 2017f)
North Dublin Bay SAC	The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th centuries. The seaward side of the island has a fine sandy beach. A substantial area of shallow marine water is included in the site. The interior of the island is excluded from the site as it has been converted to golf courses. Nature conservation is a main land use within the site. The North Bull Island dune system is one of the most important systems on the east coast and is one of the few in Ireland that is actively accreting. It possesses extensive and mostly good quality examples of embryonic, shifting marram and fixed dunes, as well as excellent examples of humid dune slacks. Both Atlantic and Mediterranean salt marshes are well represented, and a particularly good marsh zonation is shown. The salt marshes grade into mudflats and sandflats, some of which are dominated by annual Salicornia species. Petalwort (*Petalophyllum ralfsii*) occurs at its only known station away from the western seaboard (NPWS, 2017g).	- Mudflats and sandflats not covered by seawater at low tide [1140] - Annual vegetation of drift lines [1210] - *Salicornia* and other annuals colonising mud and sand [1310] - Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] - Mediterranean salt meadows (*Juncetalia maritimi*) [1410] - Embryonic shifting dunes [2110] - Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] - Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] - Humid dune slacks [2190] - Petalwort (*Petalophyllum ralfsii*) [1395] (NPWS, 2013a)	Urbanised areas, human habitation: High impact (outside) Industrial or commercial areas: High impact (outside) Nautical sports: Moderate impact (inside)# Bait digging collection: Moderate impact (inside)# Walking, horse-riding and non-motorised vehicles: High impact (inside)# Leisure fishing: Low impact (inside)# Antagonism with domestic animals: High impact (inside)# (Full list of threats / pressures - NPWS, 2017g)

South Dublin Bay SAC	This intertidal site extends from the South Wall at Dublin Port to the West Pier at Dun Laoghaire, a distance of c. 5 km. Several permanent channels exist, the largest being Cockle Lake. A small sandy beach occurs at Merrion Gates, while some bedrock shore occurs near Dun Laoghaire. A number of small streams and drains flow into the site. The designated site possesses a fine and fairly extensive example of intertidal flats. Sediment type is predominantly sand, with muddy sands in the more sheltered areas. A typical macro-invertebrate faunal assemblage exists within the SAC. The SAC has the largest stand of Dwarf Eelgrass (*Zostera nolti*) on the east coast (NPWS, 2017h).	- Mudflats and sandflats not covered by seawater at low tide [1140] - Annual vegetation of drift lines [1210] - *Salicornia* and other annuals colonising mud and sand [1310] - Embryonic shifting dunes [2110] (NPWS, 2013b)	Urbanised areas, human habitation: High impact (outside) Industrial or commercial areas: High impact (outside) Bait digging collection: Moderate impact (inside)# Paths, tracks, cycling tracks: Moderate impact (inside)# Walking, horse-riding and non-motorised vehicles: High impact (inside)# Discharges: Moderate impact (both) (Full list of threats / pressures - NPWS, 2017h)
North Bull Island SPA	The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port. The site is among the top ten sites for wintering waterfowl in the country. It supports internationally important populations of Brent Goose and Bar-tailed Godwit and is the top site in the country for both of these species. A further 14 species have populations of national importance, with particular notable numbers of Shelduck, Pintail, Grey Plover, and Red Knot. The SPA is a regular site for passage waders such as Ruff, Curlew Sandpiper and Spotted Redshank. The site supports Short-eared Owl in winter. (NPWS, 2017i)	- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] - Shelduck (*Tadorna tadorna*) [A048] - Teal (*Anas crecca*) [A052] - Pintail (*Anas acuta*) [A054] - Shoveler (*Anas clypeata*) [A056] - Oystercatcher (*Haematopus ostralegus*) [A130] - Golden Plover (*Pluvialis apricaria*) [A140] - Grey Plover (*Pluvialis squatarola*) [A141] - Red Knot (*Calidris canutus*) [A143] - Sanderling (*Calidris alba*) [A144] - Dunlin (*Calidris alpina*) [A149] - Black-tailed Godwit (*Limosa limosa*) [A156] - Bar-tailed Godwit (*Limosa lapponica*) [A157] - Curlew (*Numenius arquata*) [A160] - Redshank (*Tringa totanus*) [A162]	Leisure fishing: Moderate impact (inside)# Industrial or commercial areas: High impact (outside) Urbanised areas, human habitation: High impact (outside) Nautical sports: Moderate impact (inside)# Bait digging collection: Moderate impact (inside)# Walking, horse-riding and non-motorised vehicles:

		- Turnstone (*Arenaria interpres*) [A169] - Black-headed Gull (*Chroicocephalus ridibundus*) [A179] - Wetland and Waterbirds [A999] (NPWS, 2015a)	High impact (inside)# (Full list of threats / pressures - NPWS, 2017i)
South Dublin Bay and River Tolka Estuary SPA	This designated site comprises a substantial part of Dublin Bay. It includes virtually all of the intertidal area in the south bay, as well as much of the Tolka Estuary to the north of the River Liffey. A portion of the shallow bay waters is also included. The sediments are predominantly well-aerated sands. The sands support the largest stand of Dwarf Eelgrass on the east coast of Ireland. Sediments in the Tolka Estuary vary from soft thixotropic muds with a high organic content in the inner estuary to exposed, well aerated sands off the Bull Wall. The site possesses extensive intertidal flats which support wintering waterfowl which are part of the overall Dublin Bay population. It regularly has an internationally important population of Brent Geese, which feeds on Dwarf Eelgrass in the autumn. It has nationally important numbers of a further 6 species including: Oystercatcher, Ringed Plover, Red Knot, Sanderling, Dunlin and Bar-tailed Godwit. It is an important site for wintering gulls, especially Black-headed Gull and Common Gull (*Larus canus*). South Dublin Bay is the premier site in Ireland for Mediterranean Gull (*Larus melanocephalus*), with up to 20 birds present at times. Is a regular autumn roosting ground for significant numbers of terns, including Roseate Terns, Common Tern and Artic Tern (NPWS, 2017j).	- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] - Oystercatcher (*Haematopus ostralegus*) [A130] - Ringed Plover (*Charadrius hiaticula*) [A137] - Grey Plover (*Pluvialis squatarola*) [A141] - Red Knot (*Calidris canutus*) [A143] - Sanderling (*Calidris alba*) [A144] - Dunlin (*Calidris alpina*) [A149] - Bar-tailed Godwit (*Limosa lapponica*) [A157] - Redshank (*Tringa totanus*) [A162] - Black-headed Gull (*Chroicocephalus ridibundus*) [A179] - Roseate Tern (*Sterna dougallii*) [A192] - Common Tern (*Sterna hirundo*) [A193] - Arctic Tern (*Sterna paradisaea*) [A194] - Wetland and Waterbirds [A999] (NPWS, 2015b)	Leisure fishing: Moderate impact (inside)# Industrial or commercial areas: High impact (outside) Urbanised areas, human habitation: High impact (outside) Nautical sports: Moderate impact (inside)# Bait digging collection: Moderate impact (inside)# Walking, horse-riding and non-motorised vehicles: High impact (inside)# (Full list of threats / pressures - NPWS, 2017j)

* = priority Annex I habitat

= indirect threat via the increase in the local populace and recreational activities as a result of the development.

Not all the sites described in Table 4-2 have the potential to be impacted due to their distance from the site, the existence of pathways to the receptors (qualifying interests), and the nature and sensitivities of these.

Hydrological Pathways

There is no hydrological connection to Ryewater Valley SAC, Glenasmole Valley SAC and Poulaphouca Reservoir SPA, thus there is no potential impact on the water dependent habitats and species that are qualifying interest of these three SACs. Likewise there is no hydrological connection with Wicklow Mountains SAC and thus no impact on the water dependent Annex 1 habitats Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] and Natural dystrophic lakes and ponds [3160] or the water dependent Annex II species Otter *Lutra lutra*. Due to the urban location and distance from Wicklow Mountains SPA it is assessed that there will be no significant impact on the QIs Merlin and Peregrine.

Given the distance between the proposed site and Red Bog, Kildare SAC, it is not anticipated that the proposed development will have a significant impact on the qualifying interest Transition mires and quaking bogs [7140] for which the SAC is designated.

The four Natura 2000 sites that could potentially be impacted by the proposed project, due to the presence of surface water pathway, are:

- South Dublin Bay and River Tolka Estuary SPA (004024)
- South Dublin Bay SAC (000210)
- North Bull Island SPA (004006)
- North Dublin Bay SAC (000206)

Land and Air Pathways

Rye Water Valley/Carton SAC is within 10km of the proposed site and could be potentially impacted by air pollution. It is designated for Petrifying springs with tufa formation and two species of Whorl snail, which are sensitive to habitat change due to Nitrogen and Phosphorus input and acidification.

Therefore the one site that could potentially be impacted by the proposed project due to land and air pathways is:

- Rye Water Valley/Carton SAC

5 Other Relevant Plans and Projects

5.1 Cumulative Effects

As part of the Screening for an Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region that may induce cumulative impacts must also be considered at this stage.

The following projects or plans were identified as potential sources of cumulative impacts:

- South Dublin County Council Development Plan 2016 - 2022
- Greater Dublin Drainage Plan
- River Basin Management Plan for Ireland 2018-2021
- Planning Applications

5.2 Plans

5.2.1 South Dublin County Council Development Plan 2016 - 2022

The South Dublin County Council (SDCC) Development Plan sets out an overall strategy for the proper planning and sustainable development of the County. The objectives include a target of increased population and continuing the consolidation of established urban areas, to support and facilitate economic activity and to promote the ease of movement by sustainable modes (walking, cycling and public transport). The Plan also aims to protect and enhance surface water quality, to support, improve and protect Natura 2000 sites, and to develop an integrated Green Infrastructure network to enhance biodiversity, provide accessible parks, open spaces and recreational facilities (SDCC, 2016a). The plan also states that work will be in conjunction with Irish Water to protect existing water and drainage infrastructure, to promote investments aiming to support environmental protection and facilitate the sustainable growth of the county (SDCC, 2016a).

A Screening for Appropriate Assessment was carried out on the plan. This concluded that there are no likely significant direct, indirect or secondary impacts of the project on any Natura 2000 sites (SDCC, 2016b), therefore the South Dublin County Council (SDCC) Development Plan is not anticipated to contribute to cumulative or in-combination effects.

5.2.2 Greater Dublin Drainage Plan

The Greater Dublin Drainage Strategy sets out the strategic planning for the development of waste water treatment in the Greater Dublin area in relation to the Ringsend Waste Water Treatment Plant (WWTP) Upgrade, Greater Dublin Drainage Project and associated wastewater network drainage projects (Irish Water, 2018). The Ringsend WWTP Upgrade includes plans to expand the WWTP to its ultimate capacity, together with associated network upgrades required. The Greater Dublin Drainage Project is planned to relieve both the Ringsend WWTP and network loading by construction of a new WWTP at Clonshaugh, an orbital sewer and provision of an outfall pipe discharging 1km north east of Ireland's Eye.

The Ringsend WWTP upgrade is in progress and carried out in stages, with an increased capacity of 400,000 PE by first half of 2021 and the ultimate capacity of 2.4 million PE to be in operation by 2025 (Irish Water, 2021).

The Greater Dublin Drainage Project is strategically important to the Dublin Region in that it will provide capacity for residential and commercial growth (Irish Water, 2018).

The Greater Dublin Drainage Strategy is not anticipated to contribute to cumulative or in-combination effects.

5.2.3 River Basin Management Plan for Ireland 2018-2021

The River Basin Management Plan (RBMP) for Ireland 2018-2021 sets out the actions that Ireland will take to improve water quality and achieve 'good' ecological status in water bodies (rivers, lakes, estuaries and coastal waters) by 2021 (DoHPLG, 2018a). Changes from previous River Basin Management Plans is that all River Basin Districts are merged as one national River Basin District. The Plan provides a more coordinated framework for improving the quality of our waters — to protect public

health, the environment, water amenities and to sustain water-intensive industries, including agri-food and tourism, particularly in rural Ireland.

The first cycle of River Basin Management Plans included the Eastern River Basin District - River Basin Management Plan (ERBDMP) 2009 – 2015 (WFD (2010). The plans summarised the waterbodies that may not meet the environmental objectives of the WFD by 2015 and identified which pressures are contributing to the environmental objectives not being achieved. The plans described the classification results and identified measures that can be introduced in order to safeguard waters and meet the environmental objectives of the WFD;

- Prevent deterioration of water body status.
- Restore good status to water bodies.
- Achieve protected areas objectives.
- Reduce chemical pollution of water bodies

The ERBD Management Plan (2009-2015) and the River Basin Management Plan for Ireland (2018-2021) aim to improve the management and water quality of the Eastern RBD.

Notably the nearby Griffeen River (LIFFEY_170), of which the Baldonnel Stream is a tributary, has been recently awarded a 'Good' WFD Status (2013-2018), an improvement on its previous 'Moderate' status; however it is currently considered to be 'At Risk' (EPA 2020b). It is also important to note that sub-category, Ecological Status or Potential, has improved from 'Moderate' to 'Good', as well as the downward trends in Ammonia-Total (N) and Total Oxidised Nitrogen (TON).

The River Basin Management Plan for Ireland 2018-2021 is not anticipated to contribute to cumulative or in-combination effects.

5.3 Other Projects

Since March 2018, the projects listed below (Table 5-1), which are not retention applications, home extensions and/or internal alterations, have been granted planning permission in the locality of the proposed site

Table 5-1: Projects granted planning permission since March 2017 in vicinity of proposed site.

Planning Reference	Address	Application Status	Decision date	Summary of development
SD18A/0420	Fortunestown Lane, Saggart, Co. Dublin	Grant Permission	30/01/19	Amendments to the permitted residential development (Reg. Ref. ABP-300555-18) arising from Condition 2 and will consist of: (a) development of a crèche and community facility (271sq.m) with associated external play area and car parking in lieu of duplex units A-01 and A-02 within Block A and all associated amendments to the permitted site layout plan, hard and soft landscaping and adjoining street; (b) revised boundary treatments to the permitted dwelling units to comprise Type 1, 2m high brick walls to the side of the dwelling units; Type 2, 1.8m high vertical timber fencing to the rear and side boundaries of the rear gardens and Type 3, 1.8m high brick gossip wall to the front of the dwelling units; the proposed amendments will result in a reduction in the total number of units on the site from 526 to 524 dwellings; all associated site and development works on c.23.9ha site at Fortunestown Lane and Garter Lane (lands generally bounded by the Luas Red Line, Saggart Luas stop and Fortunestown Lane to the south, Garter Lane to the west, Bianconi Avenue to the north and Citywest Business Park, Citywest TLC Nursing Home and the Cuil Duin residential development to the east).
SD18A/0214	Unit B1, Aerodrome Business Park, Collegeland, Rathcoole, Co. Dublin	Grant Permission	02/08/18	Extend the integrated ancillary offices on 2 floors within the existing warehousing Unit B1 (original Reg. Ref. SD07A/0223). The office extension comprises 48sq.m additional ancillary office on ground floor (provided from a change of use of existing warehouse area) and 48sq.m additional ancillary office area at first floor. There are no external alterations to the building as a result of the provision of this additional internal office accommodation and existing car parking provided on site remains sufficient in facilitating the extended building.
SD18A/0265	College Lane, Greenogue, Rathcoole, Co. Dublin	Grant Permission	04/04/19	Provision of 2 warehouses with ancillary three storey office and staff facilities and associated development. Building A will have a maximum height of 18.3m with a gross floor area of 15,286sq.m including a warehouse area (14,267sq.m), ancillary office area (413sq.m) and staff facilities (606sq.m). Building B will have a maximum height of 17.4m with a gross floor area of 26,384sq.m including a warehouse area (23,421sq.m), ancillary office areas (1,870sq.m) and staff facilities (1,093sq.m). The development will also include the provision of a new vehicular access to the site via the Greenogue Roundabout; internal roadways; pedestrian access; 422 ancillary car parking spaces; bicycle parking; HGV yards; level access goods doors; dock levellers; hard and soft landscaping; 2 ESB substations (18sq.m); lighting; boundary treatments; and associated site development works above and below ground
SD19A/0065	Tay Lane, Greenogue, Rathcoole, Co. Dublin	Grant Permission	23/04/19	Waste metal facility including waste electrical and electronic equipment (WEEE) and will include the provision of 1 light industrial unit with ancillary office and staff facilities (3,802sq.m with a maximum height of 12.4 metres); screened outdoor storage area (970sq.m) incorporating walls 4.2 metres in height; vehicular access to the site via the Greenogue Roundabout; pedestrian access; 29 ancillary car parking spaces; HGV yard; 10 HGV parking spaces; HGV weight bridge; brush wash and steam wash; hard and soft landscaping; access gate; ESB substation; lighting; cycle parking; boundary treatments; associated site development works above and below ground incorporating an access road on lands at College Lane;; Electrical Waste Management Limited currently have a waste permit (WFP-DS-11-0014-05) with a permitted volume of 82,833 tonnes per annum; an Environmental

				Impact Assessment Report has been prepared in respect of the proposed development.
SHD3ABP-300555-18	Site bounded by Fortunestown Lane, Garters Lane and Bianconi Avenue, Saggart, Co. Dublin	Grant Permission	26/03/18	A residential development comprising: 526 residential units and all associated site and development works as follows: - 274 3-bed 2 storey terraced units, 185 4-bed 2 and 3 storey terraced and end of terrace units, 67 2-bed apartment/duplex units (37 2-storey, 2 bed terraced duplexes, 18 1-storey 2 bed terraced apartments and 12 1 storey 2 bed end of terrace apartments). The development also provides for a district park (4.58 ha) and a neighbourhood park (0.71 ha) in accordance with the Fortunestown Local Area Plan 2012. Permission is also sought for 789 car parking spaces, bin storage areas, ESB substations and all associated site development and infrastructural works. Vehicular access to serve the proposed development will be provided via two new access points off Garter Lane and via a new signalised junction at the southeastern corner of the site to replace the existing roundabout off Fortunestown Lane. Provision is made for a future access to Bianconi Avenue. In addition, an interim local square is proposed within the subject site providing a direct pedestrian link from the proposed development to the Saggart Luas stop. Two direct pedestrian links are proposed between the subject site and the adjoining school sites permitted under Reg Ref No SD16A/0255 providing a direct link between the school and the proposed district park and a direct link from the west of the school site to the proposed residential development. Lands identified for future development are located along the southern boundary of the current application site adjacent to Fortunestown Lane/Saggart Luas Stop. These areas will be subject of a future planning application (Phase 2) and will include the final design and layout of the local square.
SD19A/0263	Aerodrome Business Park, Lands at Site G, Jordanstown Road & Jordanstown Way, College Land, Rathcoole, Co. Dublin	Grant Permission	10/10/19	Warehouse with ancillary three storey office and staff facilities and associated development. The warehouse will have a parapet height of 17 metres with a gross floor area of 11,012sq.m including a warehouse area (10,079sq.m), ancillary office areas (877sq.m) and staff facilities (56sq.m); provision of a new vehicular access/egress onto the Jordanstown Road, and the relocation of the entrance/exit on Jordanstown Way slightly to the west for HGV access; internal roadways; pedestrian access; 108 ancillary car parking spaces; bicycle parking; HGV yard including 13 HGV parking stands and 14 loading docks; hard and soft landscaping including green walls; lighting; photo-voltaic panels; ESB substation and switch room; plant; boundary treatments and associated development works above and below ground.
SD19A/0171	Greenogue Business Park, Site 601 & 605, Jordanstown Road & Jordanstown Ave, Rathcoole, Co. Dublin	Grant Permission	22/07/19	2 warehouses with ancillary three storey office and staff facilities and associated development. Unit 601 will have a maximum height of 16.1 metres with a gross floor area of 4,922sq.m including a warehouse area (4,224sq.m); ancillary office areas (322sq.m) and staff facilities (376sq.m). Unit 605 will have a maximum height of 15.7 metres with a gross floor area of 8,036sq.m including a warehouse area (7,032sq.m); ancillary office areas (568sq.m) and staff facilities (437sq.m); provision of new vehicular accesses/egresses to the sites with HGV access and egress to both units proposed via Jordanstown Avenue and car access and egress to both units proposed via Jordanstown Road; internal roadways; pedestrian access; 105 ancillary car parking spaces; bicycle parking; HGV yards; level access goods doors; dock levellers; hard and soft landscaping; boundary treatments; associated site development works above and below ground.

SD18A/0266	Moneenalion Commons Upper, Baldonnel Business Park, Dublin 22	Grant Permission	17/09/18	Amendments to the permitted logistics/warehousing scheme under SDCC Ref: SD15A/0309 (An Bord Pleanála Ref. PL06S.246392), as subsequently amended by SDCC Ref. SD17A/0362. The proposed amendments relate primarily to permitted Unit B and Unit C and consist of: (1) Omission of Unit C and provision of enlarged Unit B (increasing from 10,967sq.m GFA to 18,617sq.m GFA) with a height of c. 17.65m including mezzanine level. The previously permitted Units A, B and C resulted in a total of 32,771sq.m. The proposed units A and B result in a total of 29,454sq.m. which results in an overall reduction of 3.317sq.m. GFA. (2) The proposed Unit B incorporates 690sq.m GFA of ancillary office space (a reduction of 386sq.m compared to the combined permitted ancillary office space within permitted Unit B and C). (3) Omission of one vehicular entrance and associated bridge between permitted Unit B and C and replacement with two vehicular entrances and associated bridges to either side of proposed Unit B. (4) Relocation substation. (5) Reduction in car parking spaces from 329 to 235; 54 bicycle parking spaces are proposed to service Unit B. (6) Resultant amendments to site layout, yards, elevations, signage, internal road layout, landscaping, ground works, drainage, gates, fencing, services and utilities and all associated and ancillary site development works.
SHD3ABP-305563-19	Fortunestown Lane, Saggart, Co Dublin	Grant Permission	03/02/20	488 apartment units comprising 118 1-bed units, 327 2-bed units and 43 3-bed units arranged in 5 blocks (Blocks A to E) and all associated public open spaces comprising landscaped courtyards and communal amenity spaces and private amenity spaces comprising terraces/balconies. The proposed Blocks A and B and Blocks C, D and E are arranged over separate single levels basements and comprise 5 storey blocks with a 9 storey element in Block B. Non-residential floorspace is proposed in the form of a creche of 431sq.m gross floor area, community space of 186sq.m and 472sq.m of retail/commercial floorspace divided across 3 units at ground floor level within Block B and 708sq.m of retail/commercial floorspace divided across 3 units and 1 café/bar/restaurant of 188sq.m within Block C all fronting onto a proposed landscaped local square located to the north of Saggart Luas stop. Vehicular access to serve the proposed development will be provided from a signalised junction at the south-eastern corner of the site replacing the existing roundabout off Fortunestown Lane and west of Cuil Duin and an east/west distributor road all as permitted under the neighbouring development (ABP Ref. 300555-18). Permission is also sought for 418 car parking spaces including 405 basement level spaces and 13 surface level spaces and a total of 706 cycle parking spaces including 620 basement level spaces and 86 surface level spaces, bin storage areas, ESB substations, public lighting, boundary treatments, surface water drainage infrastructure including modifications to the previously permitted flood conveyancing channel (ABP Ref: 300555-18) and all associated site development and infrastructure works.
SD19A/0196	Tay Lane, Greenogue, Rathcoole, Co. Dublin	Grant Permission	14/10/19	Modifications to the previously permitted Ref. SD16A/0406 consisting of the change of use of the dry bailing facility to a green waste recycling facility (excluding food and household general waste collection) including renovation and upgrade works to the fire damaged buildings and the addition of new green waste storage area and attenuation tanks (this application will also require a Waste Licence).
SD19A/0048	Moneenalion Commons Upper, Baldonnel Business Park, Dublin 22	Grant Permission	08/04/19	Amendments in the vicinity of a permitted bridge as part of a logistics/warehousing scheme permitted under Reg. Ref. SD15A/0309 (An Bord Pleanala Ref. PL06S.246392) as subsequently amended by Reg. Ref. SD17A/0362 and SD18A/0266 as follows: (1) minor relocation of the permitted bridge south and associated permanent diversion of watercourse

				(Camac); (2) provision of roundabout with interface to existing Business Park Road; (3) resultant amendments internal road layout, landscaping, ground works, drainage, services and utilities and all associated and ancillary site development works. A Natura Impact Statement has been prepared in respect of the proposed development and will be submitted with the planning application. (Clonlara Road is located to the south of the site and Casement Aerodrome is located to the north).
SD19A/0264	Aerodrome Business Park, Site Q2, Jordanstown Road, Collegeland, Rathcoole, Co. Dublin	Grant Permission	10/10/19	Warehouse with ancillary three storey office and staff facilities and associated development. The warehouse will have a parapet height of 17 metres with a gross floor area of 14,649sq.m including a warehouse area (13,494sq.m), ancillary office areas (1099sq.m) and staff facilities (56sq.m); provision of a new vehicular access/egress onto the Jordanstown Road; internal roadways; pedestrian access; 152 ancillary car parking spaces; bicycle parking; HGV yard including 26 HGV parking stands and 18 loading docks; hard and soft landscaping including green walls; lighting; photo-voltaic panels; ESB substation and switch room; plant; boundary treatments and associated development works above and below ground.
SD18A/0044	Tay Lane, Greenogue, Rathcoole, Co. Dublin	Grant Permission	05/04/18	(a) A standalone single storey office building and staffing facilities comprising of an area of 156sq.m; (b) The addition of staff car parking facilities comprising of 14 car parking spaces; (c) The addition of a new onsite bio cycle treatment plant treatment facility to service new office and staffing accommodation; (d) New ESB substation; (e) Landscaping boundary screening and new security fencing along with all ancillary site works.
SD20A/0061	Unit K2, Jordanstown Way, Aerodrome Business Park, Rathcoole, Co. Dublin	Grant Permission	22/06/20	Extensions to front of existing warehouse to include single storey infill enclosure over existing loading bay ramp (floor area to be 44.12sq.m with height to top of parapet of 6.2m above ground level); new single storey goods-in inspection store (floor area to be 55.98sq.m with a height to top of parapet of 4.8m above ground level); both structures complete with roller shutter access door & personnel door within the front/south elevation, together with site works.
SD19A/0370	Moneenalion Commons Upper, Brownsbarn and Collegeland, Baldonnell Business Park, Dublin 22	Grant Permission	29/01/20	Construction of two logistics/warehouse units (Unit C & D) southwest of Mountpark Baldonnell Phase 1 and west of the older original Business Park. Unit C will comprise of a GIA 11,492sq.m (including 592sq.m of associated office space); Unit D will comprise of a GIA 7,856sq.m (including 400sq.m of associated office space); provide for 193 car parking spaces and 56 bicycle spaces to serve the proposed development; flood mitigation works to store and attenuate flood flows from the River Camac; formation of plateaus on the site with surplus excavated material to allow for future development; access to the site will be from the existing Phase 1 development located on Clonlara Road; all ancillary landscaping, internal roads, associated infrastructure and site development works to support the development; the site is primarily greenfield and located between Casement Aerodrome and the N7 national route; the proposal will form a second phase of Development to that permitted under SD15A/0309 (ABP Ref. PL06S.246392) as amended by permissions SD17A/0362, SD18A/0266 and SD19A/0048; An Environmental Impact Assessment Report (EIAR) is submitted with the planning application.
SD20A/0204	Baldonnell Business Park, Baldonnell, Dublin 22	Grant Permission	05/10/20	Provision of a warehouse unit with ancillary office and staff facilities and associated development. The building will have a maximum height of 15.8m with a gross floor area of 2,222sq.m including a warehouse area (1,530sq.m), staff facilities (302sq.m) and ancillary office area (390sq.m) and will also include the provision of 1 new vehicular access/egress point along the north-west boundary of the subject site onto Clonlara Road; pedestrian

				access; 22 ancillary car parking spaces; bicycle parking; HGV marshalling yard with 2 loading bays; level access goods doors; dock levellers; access gate; signage; hard and soft landscaping; lighting; boundary treatments and associated site development works above and below ground.
SD20A/0215	Moneenalion Commons Upper, Brownsbarn and Collegeland, Baldonnell Business Park, Dublin 22	Grant Permission	15/10/20	The construction a logistics/warehouse unit (Unit E) southwest of Mountpark Baldonnell Phase 1 and west of the older original Business Park, Unit E will comprise of a GIA 60,747sq.m (including 2,020sq.m of ancillary office space and 4,802sq.m of other ancillary areas); Provide for 340 car parking spaces, 22 motorcycle parking spaces and 160 bicycle spaces to serves the proposed development; Flood mitigation works to store and attenuate flood flows from the River Camac; Formations of plateaux on the site with surplus excavated material to allow for future development of Unit F; Access to the site will be from the existing Phase 1 development (referenced above) located on Clonlara Road; amendments to the yard and entrance arrangement for permitted Unit D are proposed (SD19A/0048); All ancillary landscaping, internal roads, associated infrastructure and buildings and site development works to support the development which is primarily greenfield and located between Casement Aerodrome and the N7 national route. The proposal will form part of the second phase of development to that permitted under SD19A/0370 and Phase 1 under SD15A/0309 (ABP Ref. PL06S.246392), as amended by permissions SD17A/0362, SD18A/0266 and SD19A/0048. An Environmental Impact Assessment Report (EIAR) will be submitted to the Planning Authority with the planning application.
SHD3ABP-308088-20	Garters Lane, Saggart, Co Dublin	Grant Permission	21/12/20	224 apartment units arranged in 4 blocks and all associated public open spaces, communal amenity spaces and private amenity spaces comprising terraces/balconies. The proposed blocks are arranged over 2 single level basements (accessed via 2 vehicular ramps to east of the site) and comprise 5 to 6 storey blocks with an 8 storey element as part of Block A. Vehicular access to serve the proposed development will be provided via a new access at Garters Lane and will also provide access to lands to the east (development permitted under ABP ref PL06S.305563). Permission is also sought for 191 car parking spaces (180 at basement level and 11 at surface level); 470 bicycle parking spaces (290 at basement level at 180 at surface level); 1 ESB substation; 1 cycle store, hard and soft landscaping, pedestrian and cycle links, boundary treatments, public lighting, bin storage areas at basement, surface water drainage infrastructure and attenuation tanks, and all associated site development and infrastructure works.

5.4 Summary

The County Development Plan, RBMP and projects near the proposed project are considered in combination with the currently proposed project in the Screening Assessment section below.

6 Screening Assessment

6.1 Introduction

This screening exercise will focus on assessing the likely adverse effects of the project on the Natura 2000 sites identified in Section 4 above. The five Natura 2000 sites to be assessed, with distances from the proposed project, are:

- Rye Water Valley/Carton SAC (001398) - 8.0 km
- South Dublin Bay and River Tolka Estuary SPA (004024) - 17.2 km
- South Dublin Bay SAC (000210) - 17.2 km
- North Bull Island SPA (004006) - 20.1 km
- North Dublin Bay SAC (000206) - 20.2 km

This section identifies the potential impacts which may arise as result of the proposed project. It then goes on to identify how these impacts could potentially impact on the Natura 2000 sites. The significance of potential impacts is also assessed, with any potential in-combination effects also identified.

6.2 Assessment Criteria

6.2.1 Description of the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites

Potential adverse impacts that could cause a significant effect on the qualifying interests of the Natura 2000 sites, during the construction and operational phases of the project, will impact on the sites via surface water pathways, groundwater pathways and land and air pathways. Surface water pathways can impact on surface water quality and surface water dependent habitats and species. Groundwater pathways can impact on groundwater quality and groundwater dependent habitats and species. Land pathways are related to physical disturbance of habitat or species and generally only occur over short physical distance. Air pathways relate to the transport of material, generally dust and atmospheric pollution, via air movements and are subsequent deposited on habitats and species in or connected to the Natura 2000 sites.

The proposed project is not anticipated to impact on the qualifying interests of any of the identified SACs or SPAs due to the absence of pathways between any potential source of impact and receiving environment in the case of the Natura 2000 sites. The rationale for excluding impacts via the main pathways is given in more detail in the following section.

6.2.2 Surface Water Pathways

The site is located within the Liffey_SC_090 sub catchment and the nearest waterbody is the Baldonnel stream, a tributary of the River Griffen and subsequently the River Liffey, which is approximately 400m from the site. This tributary is a surface water pathway to the Natura 2000 sites in Dublin Bay. A ditch runs along the sites eastern boundary and may be connected with the River Griffeen but is more likely to enter the local aquifer via a groundwater pathway.

Ryewater Valley/Carton SAC does not share the same subcatchment as the proposed site and is upstream of any hydrological connection the proposed site shares with the River Liffey. Therefore, the QIs of this Ryewater Valley/Carton SAC will not be impacted via a surface water pathway.

During construction:

Works will entail excavation of topsoil and subsoil within the construction site boundary. Any runoff from the site will be contained within the site boundary.

Construction management measures will comply with the Greater Dublin Regional Code of Practice for Drainage Works (Dublin City Council, 2021), which includes South Dublin County Council. The first objective of the Code of Practice is Compliance with best environmental practices and relevant environmental legislation such as the Water Framework Directive.

In the event of a pollutant entering the nearest watercourse it would be subsequently diluted over approximately 20km of watercourse between the proposed site and the Natura 2000 sites within Dublin Bay.

Therefore, given that surface water will be retained during construction, the temporary nature of the construction phase of the project, combined with the proposed sites' distance via watercourse to any Natura 2000 site, a significant impact on any of the QIs of the Dublin Bay Natura 2000 sites are not expected during construction.

During operation:

Surface water on site will be directed via SUDS to a Stormtech (MC3500 or equivalent) attenuation system before connecting to the local authority surface water system within Aerodrome Business Park. The outflow for this surface water system enters the River Griffeen, approximately 500m northwest of the site. The Stormtech attenuation system will ensure that sediment or pollution will not enter the Griffeen River. Given the 20km of diluting watercourse between the proposed site and the Dublin Bay, as well as the appropriate drainage systems in place, the proposed project is not anticipated to have any impact on the QIs of the Dublin Bay Natura 2000 sites.

Foul water produced on site will be connected to the nearest local authority foul water sewer , located on Jordanstown Road, which leads to the Ringsend Waste Water Treatment Plant (WWTP). The total number of discharge units at the development is calculated to 104, as described in the projects drainage report.

In June 2018 Irish Water applied for (and subsequently received) planning permission for upgrade works to the Ringsend WWTP facility. These are currently on-going and will increase the capacity of the facility from 1.6 million PE to 2.4 million PE. This plant upgrade will result in an overall reduction in the final effluent discharge of several parameters from the facility including BOD, suspended soils, ammonia, DIN and MRP. An Environmental Impact Assessment Report (EIAR) (Irish Water 2018b) was submitted by Irish Water as part of this application. The EIAR contains sections relating to Marine Biodiversity and Terrestrial Biodiversity, and each contains a section on the 'do-nothing scenario'. These review the effects of the WWTP on biodiversity in Dublin Bay in the absence of the upgrade works and so are relevant to this report.

The EIAR report acknowledges that under the do-nothing scenario "the areas in the Tolka Estuary and North Bull Island channel will continue to be affected by the cumulative nutrient loads from the river Liffey and Tolka and the effluent from the Ringsend WWTP", which could result in a decline in biodiversity and the deterioration of the biological status of Dublin Bay (Irish Water, 2018b). Nevertheless, these negative impacts of nutrient over-enrichment are considered "unlikely" (Irish Water, 2018b). This is because historical data suggests that pollution in Dublin Bay has had little or no effect on the composition and richness of the benthic macroinvertebrate fauna. The EIAR notes that "although a localised decline could occur, it is not envisaged to be to a scale that could pose a threat to the shellfish, fish, bird or marine mammal populations that occur in the area." Furthermore, the EIAR notes that significant impacts on waterbird populations foraging on invertebrates in Dublin Bay due to nutrient over-enrichment are "unlikely" to occur (Irish Water, 2018b). What is important in the context of this AA screening report is that the do-nothing scenario predicts that nutrient and suspended solid loads from the WWTP will continue at the same levels and the impact of these loadings should maintain the same level of effects on marine biodiversity and that if the status quo is maintained there will be little or no change in the majority of the intertidal faunal assemblages found in Dublin Bay which would likely continue to be relatively diverse and rich across the bay.

Therefore, it can be concluded that effects on marine biodiversity and the Natura 2000 sites within Dublin Bay from the current operation of Ringsend WWTP are unlikely. Importantly, this conclusion is not dependent upon any future works to be undertaken at Ringsend. Thus, even in the absence of any upgrading works of the WWTP, significant effects to Natura 2000 sites in Dublin Bay are not likely to arise during operation of the proposed development.

Table 6-1 overleaf provides a summary of the screening rationale for the surface water pathway.

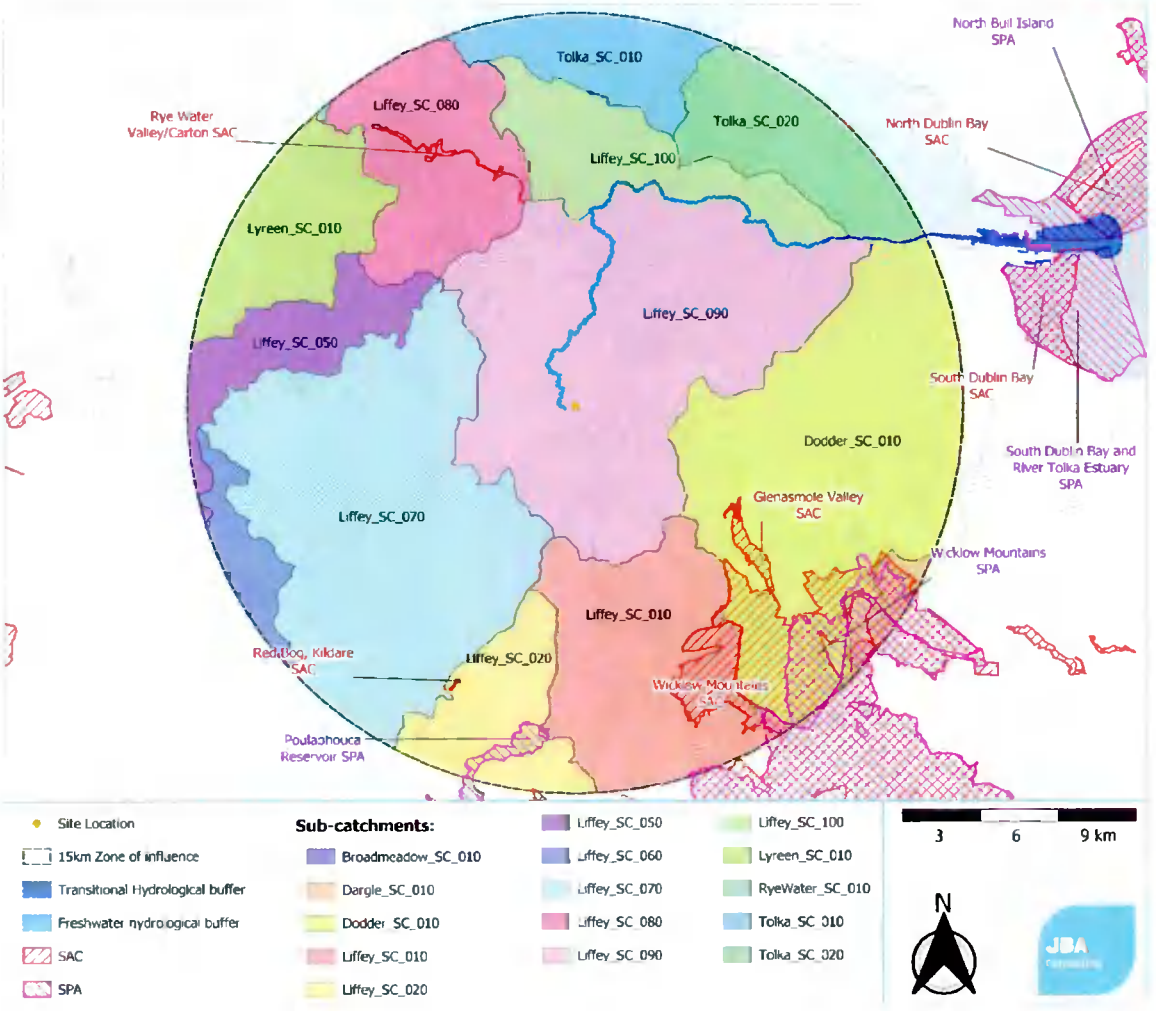


Figure 6-1: Site location and Natura 2000 sites, with surface water sub-catchment. (EPA 2021, OSM, 2021)

Table 6-1: Surface water pathway screening summary for Natura 2000 sites

Natura 2000 sites	Screening outcome for Surface Water Pathway	Rationale
- North Dublin Bay SAC - South Dublin Bay SAC - North Bull Island SPA - South Dublin Bay and River Tolka Estuary SPA	No significant effect **(Screened out)**	Distance / high level of dilution by larger freshwater system and transitional / coastal waters Appropriate operational surface and foul water drainage systems
- Rye Water Valley / Carton SAC	No significant effect **(Screened out)**	Lack of direct hydrological connectivity

6.2.3 Groundwater

The site is located within the Dublin Urban - IE_EA_G_008 groundwater body, which underlies most of the greater Dublin area. The site shares this groundwater body with five of the Natura 2000 sites, namely the Rye Water Valley/Carton SAC; South Dublin Bay SAC; North Dublin Bay SAC; North Bull Island SPA; and South Dublin Bay and River Tolka Estuary SPA.

The bedrock underlying the proposed site location is included within the Lucan formation of dark limestone and shale. The formation comprises dark-grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. There are rare dark coarser grained calcarenitic limestones, sometimes graded, and interbedded dark-grey calcar. Outcrops of bedrock are found within the south western section of the site area. A thin subsoil of limestone till overlayed with poorly drained gley soil is present throughout the rest of the proposed site area (GSI, 2021).

The aquifer underlying the proposed site area is considered extremely vulnerable as the depth to bedrock throughout the site is less than 3 metres resulting in low water retention within the soil and increased connectivity to potential pollutants (Figure 6-2). The southern end of the site, which connects the site to road R120 is within an area classified as 'Rock at or near surface/Karst' (GSI, 2021). GIS data is indicative only and is superseded by the site walkover which did not record the presence of such features within the site. The drainage ditch located along the eastern boundary is most likely connected to this aquifer. The aquifer is considered of local importance with a moderately productive bedrock only in local zones, Therefore, the aquifer has a limited and relatively poorly connected network of fractures, fissures and joints, giving a low fissure permeability which tends to decrease further with depth. Generally, the lack of connection between the limited fissures results in relatively poor aquifer storage and flow paths that may only extend a few hundred metres (GSI, 2021). Therefore, impacts via a groundwater pathway are not anticipated given the distance to the Natura 2000 sites that are present in the same groundwater system.

A groundwater to surface water pathway may be present at this site given the vulnerable nature and general characteristics of the short flow patterns within the underlying aquifer allows for a potential rapid discharge of pollutants to a nearby watercourse, i.e. the Baldonnel Stream. As discussed in section 6.2.2, this pathway identifies the Natura 2000 sites of Dublin Bay as potentially impacted sites. However, any pollution event is unlikely to reach the Natura 2000 sites at toxic levels given the natural filtering effect within the aquifer, as well as the high levels of dilution over the 20km of watercourse between the site and the Dublin Bay Natura 2000 sites (Figure 6-3 overleaf). Table 6-2 provides a summary of the screening rational for the groundwater pathway

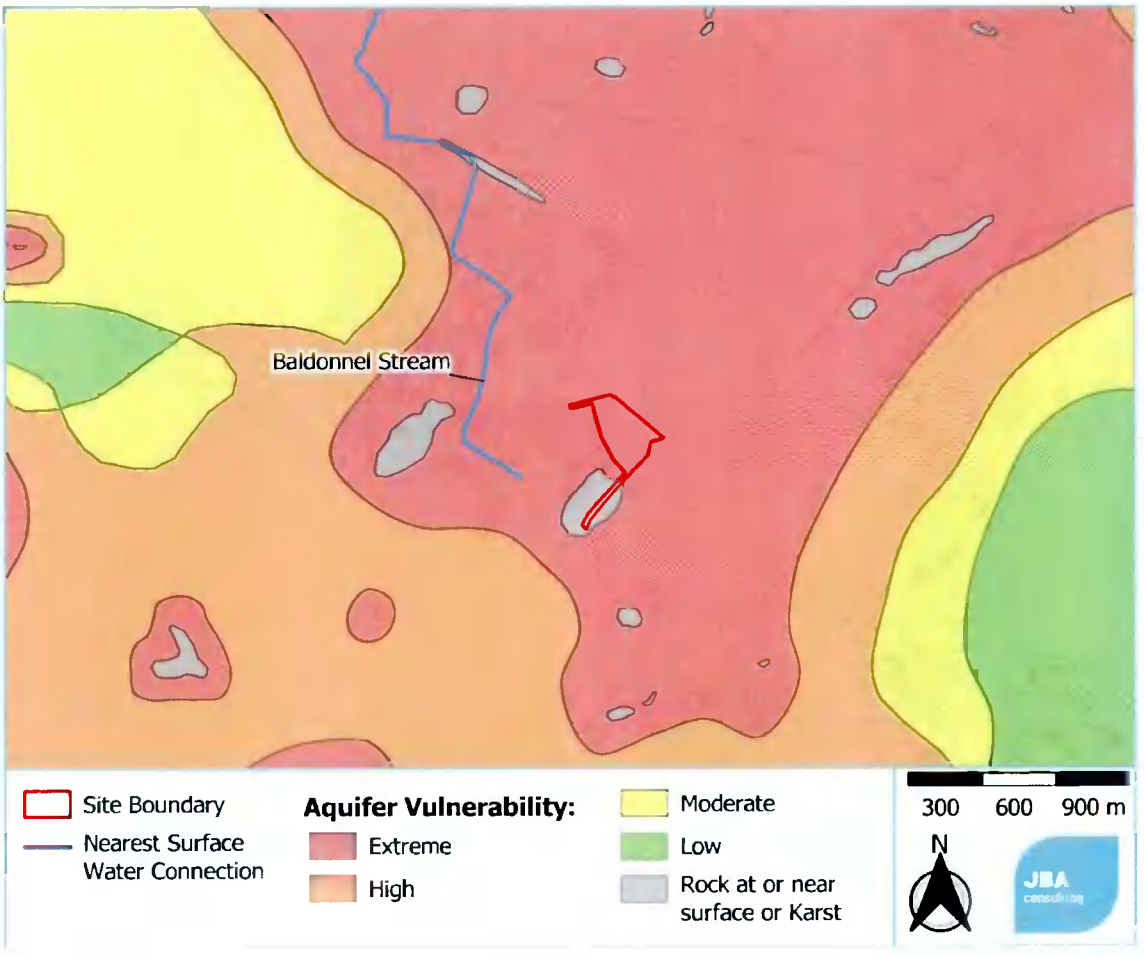


Figure 6-2: Aquifer vulnerability of proposed site and nearby watercourses (GSI, 2021; OSM 2021).

Table 6-2: Ground water pathway screening summary for Natura 2000 sites

Natura 2000 sites	Screening outcome for Surface Water Pathway	Rationale
- North Dublin Bay SAC - South Dublin Bay SAC - North Bull Island SPA - South Dublin Bay and River Tolka Estuary SPA -Rye Water Valley / Carton SAC	No significant effect **(Screened out)**	Sediment and aquifer contamination retention Distance / high level of dilution by larger freshwater system and transitional / coastal waters

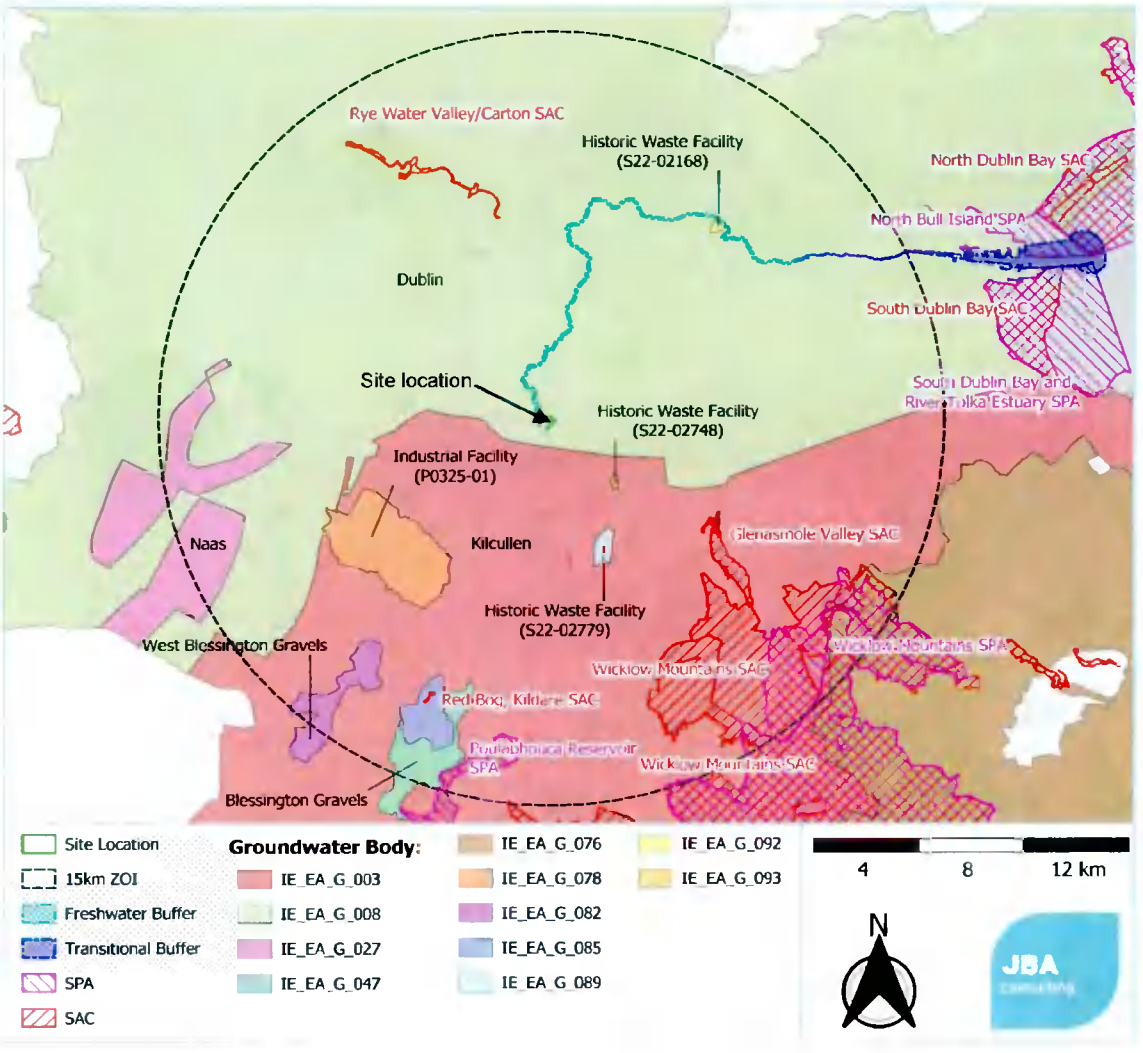


Figure 6-3: Site location, Natura 2000 sites, and groundwater bodies (GSI, 2021; OSM 2021).

6.2.4 Land and Air

The loss or degradation of supporting habitats outside the identified Natura 2000 sites via land- and air-based impacts could have potential adverse impacts on a number of the QIs associated with these Natura 2000 sites.

Land (physical on-site and noise disturbance)

Direct physical impacts and indirect impacts, such as visual and noise impacts, have the potential to physically disturb habitats as well as the floral and faunal species within them. During the site visit, a single Curlew was observed in the arable field outside the site boundary. Curlew is a qualifying interest to North Bull Island SPA, which is 20.1 km from the proposed site. Curlews move inland around early March each year to breed. However, breeding sites are rough pastures and moorland, which provides a mix of both open patches to feed and dense vegetation to hide their nests in (NPWS, 2017k). The proposed site is an arable field which is currently cut down to stubble. Therefore, this habitat type is not a preferred breeding habitat for the species. The arable land within the site makes up 4.29% (4.50 ha) of the total area (104.86ha) of arable land east and north of the business park (excluding land within Baldonnell Casement Aerodrome). Therefore, the proposed development is not anticipated to significantly impact on the conservation objectives of Curlew for North Bull Island SPA. No significant impacts via land pathways are anticipated on any of the Natura 2000 sites. This development will not result in any physical land-take or disturbance from the Natura 2000 sites within the ZoI, nor will it result

in any visual or noise disturbance to the QIs due to the distances between the site and the Natura 2000 sites.

Air Pollution

Regarding adverse air-based impacts, the releasing of dust and vehicle emissions can travel up to 10km and could potentially affect vulnerable Annex I habitats and their QIs. The riparian habitat of the two Whorl snails in the Rye Water Valley/Carton SAC could be potentially affected by enrichment. Typically dust emissions are divided into settleable dust, respirable dust and PM10's and PM2.5 (10 um and 2.5 um respectively). Settleable dust will, depending on its size and weather conditions, settle out close to the source. The respirable fraction can travel a little further but typically settles out close to production. The lighter smaller PM10 and PM 2.5 fraction can travel further distances. The distance and direction of travel is dependent upon wind speed and direction. The proposed site has a south-west prevailing wind year-round (Windfinder- Casement Aerodrome, 2021), therefore, any dust generated on-site will most likely be transported in the direction of the Dublin Bay Natura 2000 sites. and not towards the, Rye Water Valley/Carton SAC.

Natural barriers to PM 10 dispersion are treelines and hedgerows. There is 8.0km of largely agricultural land with hedgerows between the site and the Rye Water Valley/Carton SAC, as well as woodlands bordering the watercourse of the Rye Water, any further dispersion of particles will be ameliorated.

Regarding the Dublin Bay Natura 2000 sites, given that these sites are beyond the 10km dust settlement zone impacts via the air pathway in regard to dust, adverse impacts are not anticipated from the proposed works. Additionally, the QIs of the Dublin Bay Natura 2000 sites are not sensitive to dust-based pollution. Table 6-3 provides a summary of the screening rational for the land and air pathway.

Table 6-3: Land and air pathway screening summary for Natura 2000 sites

Natura 2000 sites	Screening outcome for Land and Air Pathway	Rationale
- North Dublin Bay SAC - South Dublin Bay SAC - North Bull Island SPA - South Dublin Bay and River Tolka Estuary SPA	No significant effect **(Screened out)**	A small loss of supporting habitat for Curlew, which is a QI of North Bull Island SPA. The habitat (arable crop) has a low suitability as habitat for Curlew and it is not anticipated the reduction of this habitat will significantly impact on the conservation objectives of Curlew. No physical, visual or noise disturbance due to the distances between the site and the Natura 2000 sites Located beyond the 10km dust settlement zone Respective QIs are no sensitive to dust-based pollution
- Rye Water Valley / Carton SAC	No significant effect **(Screened out)**	There is 7.1km of natural dust barriers (hedgerows, treelines, and woodland) between the sites and the SAC Not located within the path of the site's prevailing wind

6.2.5 Cumulative Impact

All projects listed in Table 5-1 have been subject to Stage 1 Appropriate Assessment Screening and some of them have been subject to Stage 2 Appropriate Assessment. The conclusion from these assessments are that the projects will have a negligible impact on the QIs/Species of Conservation Interests (SCI) of any Natura 2000 site with the implementation of proposed mitigation measures.

As the proposed development is unlikely to affect the QIs/SCIs or conservation objectives of any European site, there is no potential for other plans or projects to act in combination with it to result in likely significant effects on European sites

6.3 Summary

Due to the location of the proposed site, its appropriate operational drainage system and its proximity to the Natura 2000 sites within the ZoI, impacts via surface water, groundwater (to surface water) and land and air pathways to the SACs or SPAs are not anticipated.

6.3.1 Description of likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 sites

Project Elements	Comment	
Size and scale	Exeter Ireland Property IV C Limited intend to apply for permission for development at this 5.67 ha site at known as Block R, Jordanstown Road, Aerodrome Business Park, Rathcoole, Co. Dublin. Block R, Jordanstown Road, Aerodrome Business Park, Rathcoole, Co. Dublin. The lands are bounded to the east by Blocks A - D Jordanstown Road, Aerodrome Business Park, Rathcoole, Co. Dublin and to the north, south and west by greenfield lands. The R120 Newcastle Village to Rathcoole Road also bounds the site to the south. The development will comprise the construction of 1 No. warehouse with ancillary office and staff facilities and associated development. The warehouse will have a maximum height of 16 metres with a gross floor area of 22,966 sq m including a warehouse area (21,113 sq m), ancillary office areas (1,163 sq m) and staff facilities (690 sq m). The development will also include: the provision of a new vehicular access to the site from Jordanstown Road including 2 No. additional access gates from this new road to the existing Site E to the north; pedestrian access; 210 No. ancillary car parking spaces; bicycle parking; HGV yards; level access goods doors; dock levellers; access gates; hard and soft landscaping; lighting; boundary treatments; ESB substation; plant; pedestrian access gate at the southern portion of the site from the R120; and all associated site development works above and below ground.	
Land-take	There will be no direct land take from any of Natura 2000 sites.	
Distance from Natura 2000 site or key features of the site	Rye Water Valley/Carton SAC North Dublin Bay SAC South Dublin Bay SAC North Bull Island SPA = 20.1 km South Dublin Bay and River Tolka Estuary SPA:	= 8.0 km = 20.2 km = 17.2 km = 20.1 km = 17.2 km
Resource requirements (water abstraction etc.)	There will be no water abstraction requirements.	

Emissions (disposal to land, water or air)	**Construction Emissions:** Surface water-based construction emissions are not anticipated to enter the local watercourse given construction following best practice, the distance to the nearest watercourse and natural filtering qualities of the aquifer below. Air-based construction emissions from the proposed development are not anticipated to impact the QIs of the Natura 2000 sites within the ZoI due to prevailing wind and the 10km dust settlement zone. **Operational Emissions:** There will be an increase in vehicular use in the site area with both HGVs and general vehicles, resulting in the potential for oil contamination. site has surface water connectivity with the Dublin Bay based Natura 2000 sites, but sufficient infrastructure (such as the intended Stormtech attenuation system, and appropriate interceptors) will negate any potential impacts before water leaves the site, thus preventing any adverse impacts on these Natura 2000 sites. Foul water will be appropriately treated at the Ringsend WWTP. Air-based operational emissions from the proposed development are not anticipated to impact the QIs of the Natura 2000 sites within the ZoI.
Excavation requirements	Construction phase excavation depths will be approximately 2m to accommodate the attenuation system.
Transportation requirements	Levels of traffic to the site during the construction and operational phase will increase traffic to the Aerodrome Business Park area due to construction-based vehicles, followed later by vehicles involved in the development's operations. Given the distance to the Natura 2000 sites and the size and scale of the proposed project, transportation requirements are not anticipated to affect the SACs or SPAs within the ZoI.
Duration of construction, operation, decommissioning etc.	Construction will last between 12 to 14 months. Operation will be permanent, and no decommissioning is anticipated.
Other	None

6.3.2 Description of likely changes to the Natura 2000 sites

Potential Impact	Comments
Reduction of habitat area	There will be no temporary or permanent reduction in habitat area for any of the Natura 2000 sites. There will be a small reduction in supporting habitat of low suitability to breeding Curlew within the proposed development site (4.50ha of arable crop field), however it is not anticipated to have a significant impact on the conservation objectives for Curlew, which is a QI of North Dublin Bay SPA.
Disturbance to key species	There will be no disturbance to key species within any of the Natura 2000 sites. The removal of 4.50 ha of arable crop habitat BC1 has the potential to cause negligible disturbance to Eurasian Curlew which might be using the site, as it is a small area within a larger 104 ha site. The proposed site, on the edge of the city and adjacent to a business park, is surrounded by similar agriculture fields that could be used by

	passing Curlew. These fields are zoned as agricultural land in the South Dublin County Council Development Plan 2016 -2022, and are therefore intended to be retained, reducing the likelihood of this project adding to a cumulative disturbance in the future.
Habitat or species fragmentation	There will be no temporary or permanent habitat or species fragmentation within any of the Natura 2000 sites. See 'disturbance to key species' for protected species.
Reduction in species density	There will be no temporary or permanent reduction in species density within any of the Natura 2000 sites, although development may impact visiting Eurasian Curlew population to North Bull Island SPA. See 'disturbance to key species' for protected species.
Changes in key indicators of conservation value (water quality etc.)	There will be no temporary or permanent changes in key indicators of conservation value (surface water, groundwater and air quality).
Climate change	N/A

6.3.3 Description of likely impacts on the Natura 2000 sites as a whole

Potential Impact	Comments
Interference with the key relationships that define the structure of the site	Interference with the key relationships that define the structure of the sites are not anticipated.
Interference with key relationships that define the function of the site	Interference with key relationships that define the function of the sites are not anticipated.

Provide indicators of significance as a result of the identification of effects set out above in terms of:

Potential Impact	Indicators
Loss (Estimated percentage of lost area of habitat)	No Natura 2000 sites will experience a direct loss in habitat area.
Fragmentation	Fragmentation of habitat and/or species is not anticipated.
Disruption & disturbance	Disruption and/ or disturbance is not anticipated.
Change to key elements of the site (e.g. water quality etc.)	Potential temporary changes to key elements (i.e. water quality) of the site are not anticipated.

6.3.4 Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is unknown

Based upon best scientific judgement, no significant impacts are expected from the elements mentioned above; and that no significant gaps in knowledge of the scale or magnitude of potential impacts from the proposed site exist.

6.4 Concluding Statement

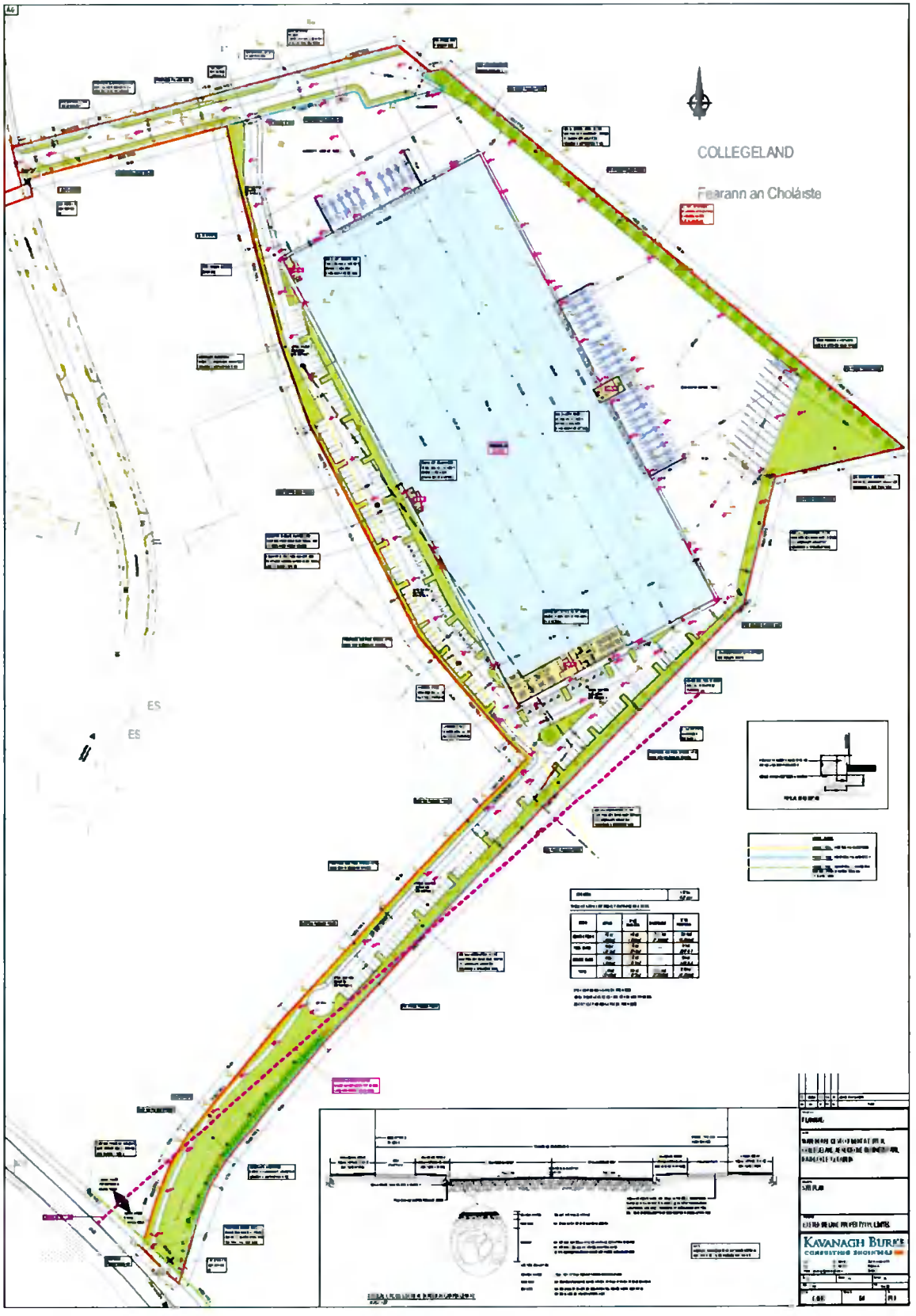
Following this initial screening of the proposed development at Site R, Jordanstown Road, Aerodrome Business Park, Rathcoole, Co. Dublin, it can be concluded that significant impacts are not anticipated via surface water, groundwater, or land/air pathways on the following Natura 2000 sites:

- Rye Water Valley/Carton SAC (001398)
- North Dublin Bay SAC (000206)
- South Dublin Bay SAC (000210)
- North Bull Island SPA (004006)
- South Dublin Bay and River Tolka Estuary SPA (004024)

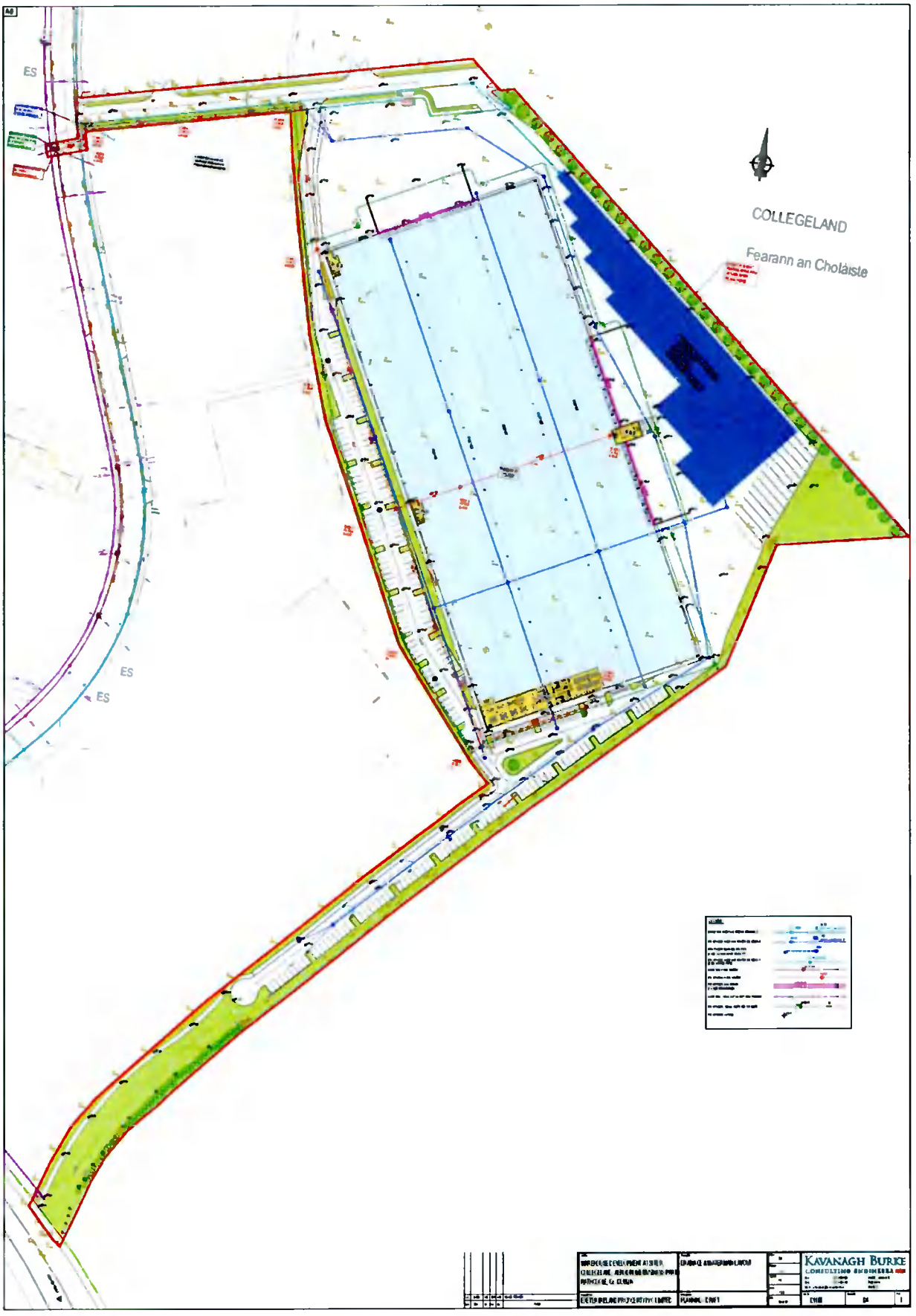
If any changes occur in the design of these works, a new Screening for Appropriate Assessment is required.

Appendices

A Site Layout Plan:



B Drainage Layout:



C Habitat Map

D Recent records (within 10 years) of protected species within the 10km of the site (National Biodiversity Data Centre, 2021)

Common Name	Latin Name	Date last	Designation
		Mammals	
Eurasian Badger	*Meles meles*	14/05/2018	Protected Species: Wildlife Acts
West European Hedgehog	*Erinaceus europaeus*	14/07/2018	Protected Species: Wildlife Acts
Eurasian Red Squirrel	*Sciurus vulgaris*	26/12/2018	Protected Species: Wildlife Acts
Pine Marten	*Martes martes*	01/05/2017	Protected Species: EU Habitats Directive >> Annex V Protected Species: Wildlife Acts
Red Deer	*Cervus elaphus*	09/11/2015	Protected Species: Wildlife Acts
Daubenton's Bat	*Myotis daubentonii*	21/08/2014	Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
European Otter	*Lutra lutra*	24/08/2014	Protected Species: EU Habitats Directive >> Annex II Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
Brown Long-eared Bat	*Plecotus auritus*	05/07/2012	Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
Soprano Pipistrelle	*Pipistrellus pygmaeus*	05/08/2012	Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
Pipistrelle	*Pipistrellus pipistrellus sensu lato*	15/10/2012	Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
Lesser Noctule	*Nyctalus leisleri*	18/09/2012	Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
Natterer's Bat	*Myotis nattereri*	14/09/2011	Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts
		Reptiles	
Common Lizard	*Zootoca vivipara*	21/08/2018	Protected Species: Wildlife Acts
		Amphibians	
Common Frog	*Rana temporaria*	12/07/2020	Protected Species: EU Habitats Directive >> Annex V Protected Species: Wildlife Acts
Smooth Newt	*Lissotriton vulgaris*	29/06/2020	Protected Species: Wildlife Acts
		Birds	
Common Starling	*Sturnus vulgaris*	08/06/2017	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Barn Swallow	*Hirundo rustica*	15/09/2017	Protected Species: Wildlife Acts Threatened Species of Conservation Concern - Amber List
House Martin	*Delichon urbicum*	15/09/2017	Protected Species: Wildlife Acts Threatened Species of Conservation Concern - Amber List
Little Egret	*Egretta garzetta*	20/11/2017	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex I Bird Species
Mallard	*Anas platyrhynchos*	20/11/2017	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
Common Coot	*Fulica atra*	20/11/2017	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern - Amber List

Tufted Duck	*Aythya fuligula*	20/11/2017	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern - Amber List
Mute Swan	*Cygnus olor*	20/11/2017	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Black-headed Gull	*Larus ridibundus*	20/11/2017	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Red List
Herring Gull	*Larus argentatus*	20/11/2017	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Red List
Common Wood Pigeon	*Columba palumbus*	02/08/2016	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
Common Swift	*Apus apus*	07/05/2016	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Sand Martin	*Riparia riparia*	07/05/2016	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Little Grebe	*Tachybaptus ruficollis*	20/09/2016	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Common Pheasant	*Phasianus colchicus*	23/03/2016	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
Eurasian Curlew	*Numenius arquata*	26/12/2016	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section II Bird Species Threatened Species: Birds of Conservation Concern - Red List
House Sparrow	*Passer domesticus*	28/04/2016	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Greylag Goose	*Anser anser*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Threatened Species: Birds of Conservation Concern - Amber List
Peregrine Falcon	*Falco peregrinus*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex I Bird Species
Common Kingfisher	*Alcedo atthis*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern - Amber List
Merlin	*Falco columbarius*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern - Amber List
Whooper Swan	*Cygnus cygnus*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern - Amber List
Rock Pigeon	*Columba livia*	31/12/2011	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
Red Grouse	*Lagopus lagopus*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species Threatened Species: Birds of Conservation Concern - Red List
Eurasian Teal	*Anas crecca*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern - Amber List

Common Snipe	*Gallinago gallinago*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section III Bird Species Threatened Species: Birds of Conservation - Amber List
Eurasian Woodcock	*Scolopax rusticola*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section III Bird Species Threatened Species: Birds of Conservation Concern - Amber List
Common Goldeneye	*Bucephala clangula*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section II Bird Species Threatened Species: Birds of Conservation Concern - Amber List
Northern Lapwing	*Vanellus vanellus*	31/12/2011	Protected Species: Wildlife Acts Protected Species: EU Birds Directive >> Annex II, Section II Bird Species Threatened Species: Birds of Conservation Concern - Red List
Common Kestrel	*Falco tinnunculus*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Common Linnet	*Carduelis cannabina*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Common Sandpiper	*Actitis hypoleucos*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Eurasian Tree Sparrow	*Passer montanus*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Great Cormorant	*Phalacrocorax carbo*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Great Crested Grebe	*Podiceps cristatus*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Lesser Black-backed Gull	*Larus fuscus*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Mew Gull	*Larus canus*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Amber List
Northern Wheatear	*Oenanthe oenanthe*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Sky Lark	*Alauda arvensis*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation - Amber List
Spotted Flycatcher	*Muscicapa striata*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Amber List
Yellowhammer	*Emberiza citrinella*	31/12/2011	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern - Red List
Invertebrates			
Freshwater White-clawed Crayfish	*Austropotamobius pallipes*	19/08/2013	Protected Species: EU Habitats Directive >> Annex II Protected Species: EU Habitats Directive >> Annex V Protected Species: Wildlife Acts
Small Heath	*Coenonympha pamphilus*	30/05/2020	Threatened Species: Near threatened
Large Red Tailed Bumble Bee	*Bombus Melanobombus lapidarius*	24/07/2020	Threatened Species: Near threatened
Megachile	*Delomegachile willughbiella*	01/08/2019	Threatened Species: Near threatened
Moss Carder-bee	*Bombus Thoracombus muscorum*	28/07/2019	Threatened Species: Near threatened
Lasioglossum	*Dialictus smeathmanellum*	07/08/2018	Threatened Species: Data deficient
Plants			

Lamiastrum galeobdolon subsp. montanum	Lamiastrum galeobdolon subsp. montanum	20/04/2020	Threatened Species: Vulnerable
Blue Fleabane	*Erigeron acer*	26/07/2017	Threatened Species: Endangered
Bifid Crestwort	*Lophocolea bidentata*	07/02/2012	Threatened Species: Least concern
Endive Pellia	*Pellia endiviifolia*	21/04/2012	Threatened Species: Least concern
Great Scented Liverwort	*Conocephalum conicum*	21/04/2012	Threatened Species: Least concern
Big Shaggy-moss	*Rhytidiadelphus triquetrus*	07/02/2012	Threatened Species: Least concern
Fallacious Beard-moss	*Didymodon fallax*	07/02/2012	Threatened Species: Least concern
Springy Turf-moss	*Rhytidiadelphus squarrosus*	07/02/2012	Threatened Species: Least concern
Wall Screw-moss	*Tortula muralis*	07/02/2012	Threatened Species: Least concern
Bristly Fringe-moss	*Racomitrium heterostichum*	11/11/2012	Threatened Species: Least concern
Starry Hoar-moss	*Hedwigia stellata*	11/11/2012	Threatened Species: Least concern
Fern-leaved Hook-moss	*Cratoneuron filicinum*	21/04/2012	Threatened Species: Least concern
Neat Feather-moss	*Scleropodium purum*	21/04/2012	Threatened Species: Least concern
Olive Beard-moss	*Didymodon tophaceus*	21/04/2012	Threatened Species: Least concern
Pink-fruited Thread-moss	*Pohlia melanodon*	21/04/2012	Threatened Species: Least concern
Pointed Spear-moss	*Calliergonella cuspidata*	21/04/2012	Threatened Species: Least concern
River Feather-moss	*Brachythecium rivulare*	21/04/2012	Threatened Species: Least concern
Thick-nerved Apple-moss	*Philonotis calcarea*	21/04/2012	Threatened Species: Least concern
Variable Forklet-moss	*Dicranella varia*	21/04/2012	Threatened Species: Least concern
Whorled Tufa-moss	*Eucladium verticillatum*	21/04/2012	Threatened Species: Least concern
Bird's-claw Beard-moss	*Barbula unguiculata*	05/04/2011	Threatened Species: Least concern
Schreber's Forklet-moss	*Dicranella schreberiana*	05/04/2011	Threatened Species: Least concern
Common Cord-moss	*Funaria hygrometrica*	14/03/2011	Threatened Species: Least concern
Hart's-tongue Thyme-moss	*Plagiomnium undulatum*	26/04/2011	Threatened Species: Least concern
Tall Thyme-moss	*Plagiomnium elatum*	26/04/2011	Threatened Species: Least concern

References

Brussaard, C.P., Peperzak, L., Beggah, S., Wick, L.Y., Wuerz, B., Weber, J., Arey, J.S., Van Der Burg, B., Jonas, A., Huisman, J. and Van Der Meer, J.R., 2016. Immediate ecotoxicological effects of short-lived oil spills on marine biota. Nature communications, 7(1), pp.1-11.

DoEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities., Department of the Environment, Heritage and Local Government, available: http://www.wicklow.ie/sites/default/files/Manager's%20report%20on%20submissions%20to%20the%20Proposed%20Amendments.pdf [accessed 12 Jan 2017].

DoHPLG, 2018a. 'River Basin Management Plan for Ireland 2018-2021'. Available online at: https://www.housing.gov.ie/sites/default/files/publications/files/rbmp_report_english_web_version_final_0.pdf

EPA, 2020a. EPA Catchments.ie [online], Catchments.ie, Available online at: https://www.catchments.ie/maps/

EPA. 2020b. EPA Maps [online], Next Generation EPA Maps, Available online at: https://gis.epa.ie/EPAMaps/

European Commission (Ed.) (2000) Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities: Luxembourg.

European Commission (2007) 'Guidance document on Article 6 (4) of the "Habitats Directive" 92/43/EEC - Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission.'

European Commission, Directorate-General for the Environment, Oxford Brookes University, Impacts Assessment Unit (Eds.) (2002) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, EUR-OP: Luxembourg.

Fossitt, J.A., 2000. A Guide to Habitats in Ireland, Heritage Council of Ireland series, Heritage Council/Chomhairle Oidhreachta: Kilkenny.

Irish Water, 2018. Greater Dublin Drainage Project, Planning Report, AOC, on behalf of Irish Water Available online at: https://www.gddapplication.ie/planning-sites/greater-dublin-drainage/docs/planning-documents/planning-reports/SID-Planning-Report.pdf

Irish Water, 2018b. Ringsend Wastewater Treatment Plant Upgrade Project - Environmental Impact Assessment Report, Volume 1: Non-technical summary. Available online at: https://www.water.ie/planning-sites/ringsend-planning/docs/environmental-documents/volume-1/180601_RGD-Planning-App-EIAR-Vol-1.pdf

NBDC, 2020. National Biodiversity Data Centre. Available online at: https://maps.biodiversityireland.ie

NPWS, 2013a. Conservation Objectives: North Dublin Bay SAC [000206]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000206.pdf

NPWS, 2013b. Conservation Objectives: South Dublin Bay SAC [000210]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000210.pdf

NPWS, 2015a. Conservation Objectives: North Bull Island SPA [004006]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004006.pdf

NPWS, 2015b. Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA [004024]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004024.pdf

NPWS, 2017a. Natura 2000 - Standard Data Form for Rye Water Valley / Carton SAC [001398]. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF001398.pdf

NPWS, 2017b. Natura 2000 - Standard Data Form for Glenasmole Valley SAC [001209]. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF001209.pdf

NPWS, 2017c. Natura 2000 - Standard Data Form for Red Bog, Kildare SAC [000397]. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF000397.pdf

NPWS, 2017d. Natura 2000 - Standard Data Form for Poulaphouca Reservoir SPA [004063]. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF004063.pdf

NPWS, 2017e. Natura 2000 - Standard Data Form for Wicklow Mountains SPA [004040]. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF004040.pdf

NPWS, 2017f. Conservation Objectives: Wicklow Mountains SAC 002122. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002122.pdf

NPWS, 2017g. Natura 2000 - Standard Data Form for North Dublin Bay SAC [000206]. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF000206.pdf

NPWS, 2017h. Natura 2000 - Standard Data Form for South Dublin Bay SAC [000210]. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF000210.pdf

NPWS, 2017i. Natura 2000 - Standard Data Form for North Bull Island SPA [004006]. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF004006.pdf

NPWS, 2017j. Natura 2000 - Standard Data Form for South Dublin Bay and River Tolka SPA [004024]. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF004024.pdf

NPWS, 2017k. Together we can make a difference for curlew! Online feature article, NPWS, The Department of Housing, Local Government and Heritage. Available online at: https://www.npws.ie/news/together-we-can-make-difference-curlew

NPWS, 2018a. Conservation objectives for Rye Water Valley / Carton SAC [001398]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001398.pdf

NPWS, 2018b. Conservation objectives for Glenasmole Valley SAC [001209]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001209.pdf

NPWS, 2018c. Conservation objectives for Red Bog, Kildare SAC [000397]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000397.pdf

NPWS, 2018d. Conservation objectives for Poulaphouca Reservoir SPA [004063]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004063.pdf

NPWS, 2018e. Conservation objectives for Wicklow Mountains SPA [004040]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004040.pdf

NPWS, 2018f. Conservation objectives for Wicklow Mountains SAC [002122] Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht. Available online at: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002122.pdf

SDCC, 2016a South Dublin County Council Development Plan 206 - 2022 Written Statement, SDCC Available online at: https://www.southdublindevplan.ie/sites/default/files/documents/CDP%202016-2022%20%28lower%20res%29_0.pdf

SDCC 2016b South Dublin County Council Development Plan 206 - 2022 Screening for Appropriate Assessment, SDCC. Available online at: https://www.southdublindevplan.ie/sites/default/files/documents/AA%20Screening%20Report%20for%20SDCC%20Development%20Plan%202016-2022%20June%202016.pdf

Offices at
Dublin
Limerick

Registered Office
24 Grove Island
Corbally
Limerick
Ireland

t: +353 (0) 61 345463
e:info@jbaconsulting.ie

JBA Consulting Engineers and Scientists Limited
Registration number 444752

JBA Group Ltd is certified to:
ISO 9001:2015
ISO 14001:2015
OHSAS 18001:2007

Visit our website
www.jbaconsulting.ie