Screening Report for Appropriate Assessment

Grange Castle Business Park

Upgrade Works Scheme

Doherty Environmental

March 2026

Screening Statement for Appropriate Assessment

Grange Castle Business Park

Upgrade Works Scheme

Document Stage	Document Version	Prepared by
Final	1	Pat Doherty MSc, MCIEEM

This report has been prepared by Doherty Environmental Consultants Ltd. with all reasonable skill, care and diligence. Information report herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is prepared for South Dublin County Council and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

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1.0 INTRODUCTION

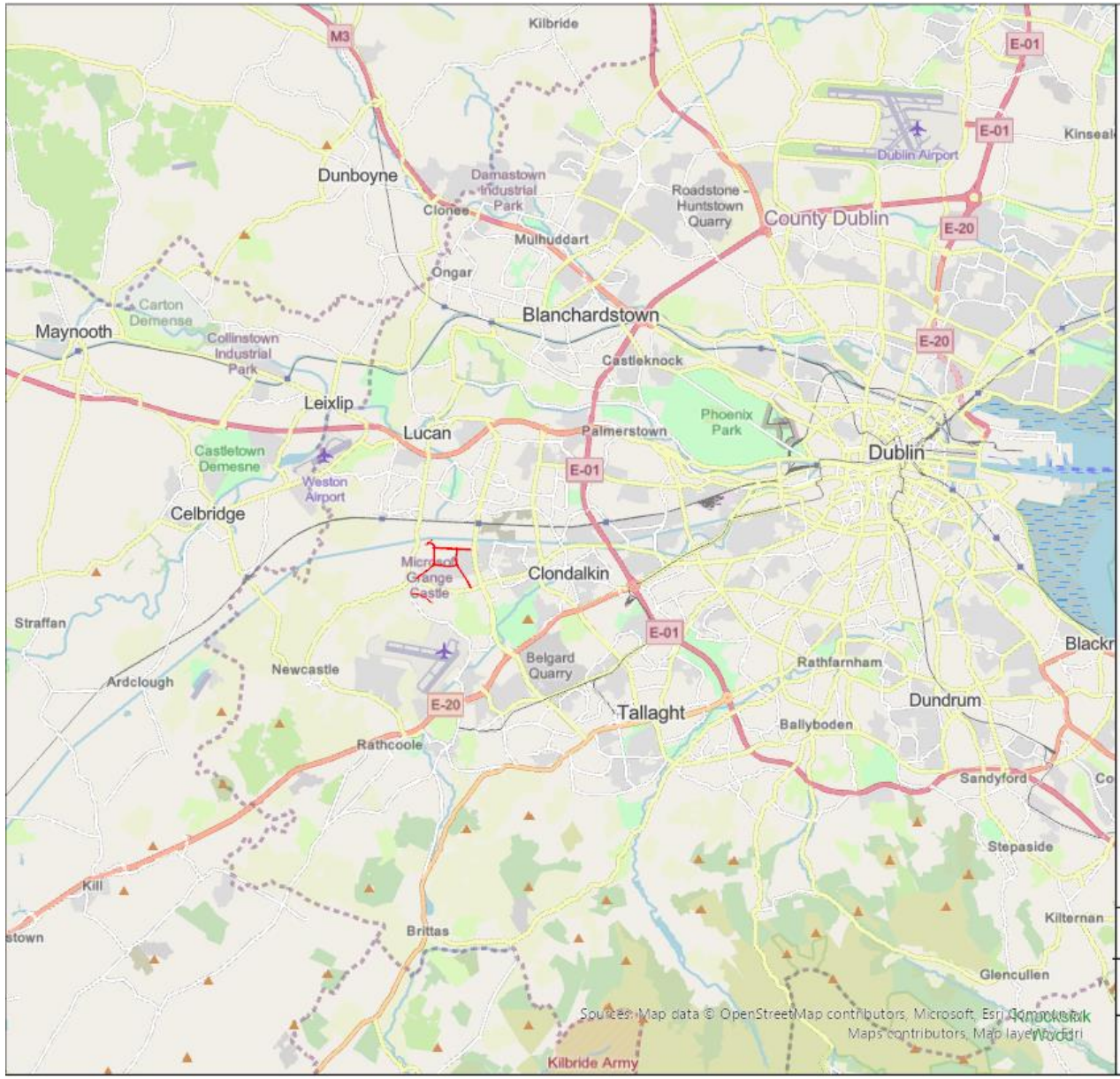
South Dublin County Council have commission Doherty Environmental Consultants (DEC) Ltd. to complete a Stage 1 Screening for Appropriate Assessment for proposed upgrade works to the Grange Castle Business Park, Co. Dublin. The location of the upgrade works area is shown on Figure 1.1 below while an aerial image of the locations is shown on Figure 1.2.

This Screening Report for Appropriate Assessment forms Stage 1 of the Habitats Directive Assessment process and is being undertaken in order to comply with the requirements of the Habitats Directive Article 6(3). The function of this Screening Report is to identify the potential for the project to result in likely significant effects to European Sites and to provide information so that the competent authority can determine whether a Stage 2 Appropriate Assessment is required for the project.

1.1 STATEMENT OF AUTHORITY

This Appropriate Assessment Screening Report has been prepared by Mr. Pat Doherty BSc., MSc, MCIEEM, of DEC Ltd. Mr. Doherty is a consultant ecologist with over 20 years' experience in completing ecological impact assessments and environmental impact assessments. Pat has been involved in the completion of assessment reports for proposed developments and land use activities under the EIA Directive and Article 6 of the Habitats Directive since 2003 and 2006 respectively. He has extensive experience completing such reporting for projects located in a variety of environments and has a thorough understanding of the biodiversity issues that may arise from proposed land use activities. Pat was responsible for completing one of the first Appropriate Assessment reports for large scale infrastructure developments in Ireland when he prepared the Appropriate Assessment for the N25 New Ross Bypass in 2006/07. Since then, Pat has completed multiple examinations of both plans and projects in Ireland. He has completed Natura Impact Statements for national scale plans such as Ireland's CAP Strategic Plan and National Seafood Development Plan and regional and county scale plans including County Development Plans, Local Area Plans, Tourism Strategies and Climate Action Plans. Pat has completed multiple Natura Impact Statements for a range of development types that include large scale infrastructure developments in sectors such as transport and energy as well as industrial, commercial and residential developments. Pat has completed focused certified professional development training in Appropriate Assessment as well as in a range of ecological survey techniques and assessment processes. Training has been

completed for National Vegetation Classification (NVC) and Irish Vegetation Classification (IVC) surveying, bryophyte survey for habitat assessment and identification, professional bat survey and assessment training, mammal surveying and specific training for bird and bat survey techniques. Ongoing training has been completed by approved training providers such as CIEEM, British Trust for Ornithology, the Botanic Gardens and the Field Studies Council.



Grange Castle Business Park Upgrade Works

Figure 1.1

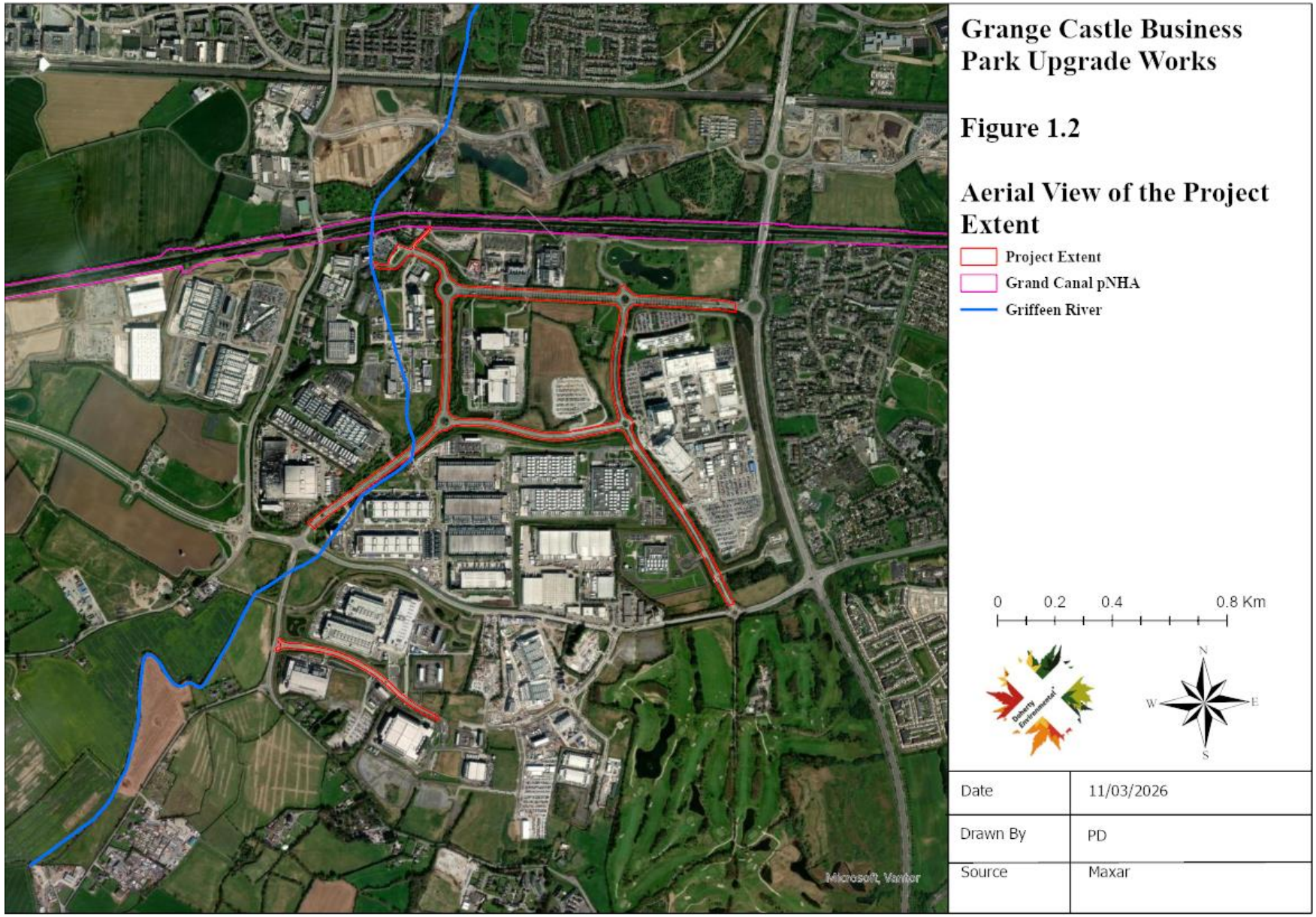
Project Location

Project Extent

0 2 4 8 Km

N W E S

Date	11/03/2026
Drawn By	PD
Source	Maxar


Grange Castle Business Park Upgrade Works
Figure 1.2
Aerial View of the Project Extent
Project Extent
Grand Canal pNHA
Griffeen River
0 0.2 0.4 0.8 Km
N
W
E
S
Date 11/03/2026
Drawn By PD
Source Maxar
Microsoft, Vantor

1.2 LEGISLATIVE CONTEXT

Legislative protection for habitats and species is provided within the European Union by the Habitats Directive. The Habitats Directive has been implemented in Ireland and throughout Europe through the establishment of a network of designated conservation areas known as the Natura 2000 (N2K) network. The N2K network includes sites designated as Special Areas of Conservation (SACs), under the EU Habitats Directive and Special Protection Areas (SPAs) designated under the EU Birds Directive 2009/147/EC (as amended). SACs are designated in areas that support habitats listed on Annex I and/or species listed on Annex II of the Habitats Directive. SPAs are designated in areas that support: 1% or more of the all-Ireland population of bird species listed on Annex I of the EU Birds Directive; 1% or more of the population of a migratory species; and more than 20,000 waterfowl.

This Screening Report for Appropriate Assessment is being prepared in order to enable the competent authority to comply with Article 6(3) of Council Directive 92/43/EEC (The Habitats Directive). It is prepared to assess whether or not the project alone or in combination with other plans and projects is likely to have a significant effect on any European Site in view of best scientific knowledge and in view of the conservation objectives of the European Sites and specifically on the habitats and species for which the sites have been designated. Measures ***intended*** to avoid or reduce the harmful effects of the proposed project on European sites (i.e. "mitigation measures") have not been taken into account in this screening stage appraisal of the project. It is noted that, as per the EC (2021) Guidelines, design and generic measures can be taken into account at the screening stage. Furthermore it is noted that European legal precedent[1] has established that account may be taken of features of a project which involve the removal of contaminants and which therefore may have the effect of reducing the harmful effects of the project on a European Site, where those features have been incorporated into that project as standard features, inherent in such a project, irrespective of any effect on the site.

[1] ECJ Judgement C-721/21 of the 15th June 2023

1.2.1 Requirement for an Assessment under Article 6 of the Habitats Directive

According to section 177U(1) of the Planning and Development Act 2000 (as amended) the competent authority has a duty to:

- Determine whether the proposed Project is directly connected to or necessary for the management of one of more European Sites; and, if not,

- Determine if the Project, either individually or in combination with other plans or projects, would be likely to have a significant effect on the European Site(s) in view of best scientific knowledge and the Conservation Objectives of the site(s).

This report contains information to support a Screening for Appropriate Assessment and is intended to provide information that assists the competent authority when assessing and addressing all issues regarding the construction, operation and decommissioning of the Project and to allow the competent authority to comply with the Habitats Directive. Article 6(3) of the Habitats Directive defines the requirements for assessment of projects and plans for which likely significant effects on European Sites may arise. The Birds Directive and the Habitats Directive together list habitats and species that are of international importance for conservation and require protection. The Habitats Directive requires competent authorities, to carry out a Screening for Appropriate Assessment of plans and projects that are not directly connected to or necessary for the management of a European Site, to assess whether the plan or project alone or in combination with other plans or projects, would be likely to have significant effects on European Sites in view of best scientific knowledge and the Site's conservation objectives. This requirement is transposed into Irish Law by, inter alia, Part XAB of the Planning and Development Act, 2000 (as amended). Section 177U(4) of Part XAB of the Planning and Development Act states:

"The competent authority shall determine that an appropriate assessment of a draft Land use plan or a proposed development, as the case may be, is required if it cannot be excluded, on the basis of objective information, that the draft Land use plan or proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site. "

1.3 SCREENING METHODOLOGY

This Screening Report has been prepared in order to comply with the legislative requirements outlined in Section 1.1 above and aims to establish whether or not the proposed project, alone or in combination with other plans or projects, would be likely to have significant effects on European Sites in view of best scientific knowledge and the Site's conservation objectives. In this context "likely" means a risk or possibility of effects occurring that **cannot** be ruled out based on objective information and "significant" means an effect that would undermine the conservation objectives of the European sites, either alone or in-combination with other plans and projects (Office of the Planning Regulator (OPR), 2021).

The nature of the likely interactions between the proposed upgrade works and the Conservation Objectives of European Sites will depend upon the:

- the ecological characteristics of the species or habitat, including their structure, function, conservation status and sensitivity to change; *and/or*
- the character, magnitude, duration, consequences and probability of the impacts arising from land use activities associated with the plan, in combination with other plans and projects.

This Screening Report for Appropriate Assessment has been undertaken in accordance with respective National and European guidance documents: Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (DEHLG 2010); *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC;* and *Office of the Planning Regulator – OPR Practice Note PN01: Appropriate Assessment Screening for Development Management* (2021), and recent European and National case law. The guidance document *Managing Natura 2000 Sites – The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission (2018)* was also of relevance during the preparation of this Screening Report.

The EC (2021) guidelines outline the stages involved in undertaking a Screening Report for Appropriate Assessment for projects. The methodology adopted during the preparation of this Screening Report is informed by these guidelines and was undertaken in the following stages:

1. Describe the project and determine whether it is necessary for the conservation management of European Sites;

2. Identify European Sites that could be influenced by the project;

3. Where European Sites are identified as occurring within the zone of influence of the project identify potential effects arising from the project and screen the potential for such effects to negatively affect European Sites identified under Point 2 above; and

4. Identify other plans or projects that, in combination with the project, have the potential to affect European Sites.

2.0 PROJECT DESCRIPTION

The Proposed Upgrade Works Scheme for Grange Castle Business Parks involves the upgrade of existing infrastructure for cyclists, pedestrians, motorists and park residents in Grange Castle and Grange Castle South Business Parks.

The proposed upgrade works consist of the following.

- Site clearance of existing 1.5m footway and 1.5m bituminous cycle tracks to be replaced with proposed 3m wide shared bituminous surfacing with concrete kerb edging.

- Introduction of tree root protection system (Geocell membrane with stone backfill) where works may interact with existing tree root systems in-situ across both Grange Castle Business Parks

- Upgrading and introduction of new controlled and uncontrolled raised pedestrians and cyclist crossings.

- Introduction of Traffic Calming measures through the utilisation of the proposed controlled and uncontrolled raised pedestrian and cyclist crossings and installation of solar powered traffic calming signage.

- Introduction of power ducting and kiosks to facilitate power to all proposed controlled pedestrian and cyclist crossing infrastructure.

- Potential minor Alteration to existing public lighting infrastructure (if deemed necessary)

- Omission of existing and construction of new carriageway kerbing and the extension of existing and construction of new pedestrian refuge islands.

- Minor Carriageway repairs and shave and pave reinstatement work to existing carriageway surfacing which includes cold milling activities and introduction of new 45mm to 50mm bituminous surface course.

- Introduction of new traffic signage across both Grange Castle Business Parks

- Introduction of new road markings

- Minor landscape works

- The scheme's proposed site extents are shown on drawing 24_158-CSE-GEN-XX-DR-C-1510 which accompanies this project description.

2.1 LANDSCAPE DESIGN

2.1.1 Construction Stage

Landscape design will be drawn up by the main contractor using the NTA's 'Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan' during the construction stage, if required, and will be implemented on the basis of an Environmental Operating Plan (EOP).

2.1.2 Operational Stage

Operation stage measures are focused on re-instatement and future maintenance of features and landscapes. Maintenance shall ensure that landscape measures, including seeding and planting

establish successfully and that any failures or defects observed within two years of implementation are made good.

2.2 CONSTRUCTION PHASE

It is expected that the proposed upgrade works for the project will be carried out in a phased manner over a nine-month construction period commencing at the end of Q4 2026. The total construction time accounts for site clearance activities, installation of raised controlled and uncontrolled crossings, kerbing, refuge island buildouts, upgrades to existing bus stop layouts, introduction traffic calming infrastructure, minor surface water drainage works, and minor carriageway reinstatement works (shave and pave) and repairs at appropriate intervals. Prior to commencement of works, the temporary construction compound will be set up and traffic management measures will be put in place. The location of temporary construction compound will be finalised upon appointment of a contractor. As per Section 2.2.1 below the temporary construction compound will be situated within the Grange Castle Business Park at a location buffered from the Griffeen River, Grand Canal and all other surface waterbodies by a minimum distance of 50m.

The main phases applicable to the main construction phase of this project will include:

- Establishment of site office and compound;
- Mobilisation of construction plant;
- Implementation of bio security measures;
- Site clearance and preparation;
- Establishment of appropriate traffic control measures to provide adequate separation and protection of work areas from live traffic;
- Minor Surface Water adjustments
- Excavation to formation level for footpath, cyclepath and road upgrades;

- Resurfacing of footpaths, cyclepath and roads; and

- Landscaping works.

2.2.1 Temporary Construction Compound

The temporary construction compound for the Project will be situated within Grange Castle Business Park at a location buffered from the Griffeen River, Grand Canal and all other surface waterbodies by a minimum distance of 50m. Materials and plant required for the works are anticipated to be stored in the compound. All storage areas will be appropriately bunded where required. Fuelling of plant is anticipated to be in a designated fuelling area within the compound. The compound will provide for the following:

- Welfare/office facilities for site staff;

- Plant/machinery parking/storage area;: All vehicles to be used for the project will be inspected prior to use and will be required to be free of leaks and weeps.

- Fuel storage/refuelling area: all fuel will be stored in bunded containers to be situated on impervious ground.

- Segregated waste area; and

- Construction staff parking.

2.2.2 Surface Water Management

South Dublin County Council requires that projects do not give rise to pollution during either the works phase or operation phase[2]. In addition the Greater Dublin Regional Code of Practice

[2] **See: https://www.sdcc.ie/en/services/planning-building-control/planning-applications/water-and-drainage-considerations/**

(v. 6.0) requires all necessary precautions to be taken to avoid the discharge of debris, silt, mud, grease, concrete, concrete wash, oil etc to the sewer network.

During upgrade works, where surface water drainage arises, it will be contained and managed to ensure no run-off from works drains directly to any existing watercourse or existing sealed surface water drainage network. Standard best practice methods for the control and management of surface water will be implemented during the works phase of the Project. These measures will be in accordance with established guidance documents:

Control of Water Pollution from Construction Sites. Guidance for Consultants and Contractors (C532) (Construction Industry Research and Information Association) (CIRIA)2001);

Best Practice Guide BPGCS005 – Oil Storage Guidelines (Enterprise Ireland 2003);

PUB C650 Environmental Good Practice on Site, 2nd Edition (CIRIA 2005);

Control of Water Pollution from Linear Construction Projects. Technical Guide (C648) (CIRIA 2006a);

Control of Water Pollution from Linear Construction Projects. Site Guide (C649) (CIRIA 2006b);

Guidelines for the Crossing of Watercourses During the Construction of National Road Schemes (NRA 2006a);

Road Drainage and the Water Environment DN-DNG-03065 (TII 2015b);

The landscaping will be designed to accommodate some of the surface water flow using best practice in nature-based drainage.

Any surface water generated during the construction phase will be allowed to drain to ground. No surface water will be pumped from the construction phase footprints to adjacent sewers or watercourses.

2.2.3 Construction – Access to Properties

Access to existing Grange Castle Business Park propertieswill be maintained throughout the construction phase. Any disruption to utilities during certain periods will be minimised to avoid significant impacts and communicated to affected parties in advance.

2.2.4 Completion of Works

Once works are completed traffic management measures shall then be removed and the facilities will be opened. The site compound will be removed. The lands within the site boundaries will be reinstated through top soiling and planting as required. Materials arising from excavation/demolition will be segregated on site/ stored temporarily/ removed from site and disposed in an approved licenced facility. The area will be snagged, tidied up and handed over to SDCC. Temporary land take will be returned to its original use.

Fuels, lubricants and hydraulic fluids for equipment used on the construction site, as well as any solvents and oils, are to be carefully stored and handled within the temporary construction compound to avoid spillage. They will be properly secured in bunded containers situated within lock-up cabins to secure against unauthorised access or vandalism. As per standard construction practices spill containment equipment will be provided at the temporary construction compound.

2.2.5 Preliminary TTMP

During the construction phase of the proposed development, an appropriate Temporary Traffic Management Plan (TTMP) shall be put in-place in accordance with the Department of Transport's Traffic Signs Manual to ensure the safety of road users.

It is also important during the construction phase to maintain access to residential properties and businesses. It is anticipated that there will be little disruption to accesses but this shall not be significant. Road closures shall be avoided under all circumstances.

Consideration shall be given to the public utility diversions / protection during the construction phase of the project should it be required. This is to be confirmed at the detailed design phase. It is anticipated that some of the utilities' diversions, if required, may need to be carried out in advance of the main works.

2.3 BEST PRACTICE CONSTRUCTION METHODS

The following best practice construction methods will be implemented throughout the duration of all works associated with the project:

All works will be completed in accordance with health and safety regulations and best practice guidelines;

The works phase will implement all relevant measures outlined in the TII best practice guideline documents *Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes* and *Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes*.

The works phase will implement all relevant measures outlined in the CIRIA best practice construction guidelines: *CIRIA Environment Good Practice on Site* and *CIRIA Control of Water Pollution from Construction Sites: Technical Guidance C648.*

In addition to the above the following general guidelines as recommended by South Dublin County Council Environment Unit will be implemented for all construction works to be completed as part of the project:

Measures to be taken to prevent nuisance from noise at construction sites.

1. The hours of operation on all construction sites shall be restricted to 8.00a.m. to5:00pm., Monday to Friday.

2. No activities shall take place in site on Saturdays, Sundays or Bank Holidays without express consent from SDCC.

3. No activity, which would reasonably be expected to cause annoyance to residents in the vicinity, shall take place on site between the hours of5pm. and 8.00a.m.

4. No deliveries of materials, plant or machinery shall take place before 8.00a.m. in the morning or after 5:00pm. in the evening.

5. If there is any occasion when work must be carried on outside daytime hours, this department, local residents and businesses in areas which are likely to be affected by noise from the proposed works should be notified in advance e.g. in letter or leaflet or advertisement form, of:

· Name, address and telephone number of company carrying out works

· Nature of and reason for works

· Likely duration and times of work

Measures to be taken to prevent nuisance from air pollution at construction sites

1. No outdoor burning shall occur on site. Site must be secured to prevent access by vandals who may cause air pollution nuisance due to carelessness.

2. During any demolition works and during the construction phase, all necessary steps shall be taken to contain dust and airborne pollutants arising from the site and to prevent nuisance to persons in the locality. This shall include i) covering skips, ii) covering slack heaps, iii) netting of scaffolding, iv) regular road and pavement damping and sweeping, v) use of water spray to suppress dust, vi) proper paved or hard stand access for trucks and vehicles to and from the site to prevent dirt and dust from the site being carried from the site on to public roads etc.

The works phase will implement all relevant measures outlined in the CIRIA best practice guideline Archaeology and Construction: Good Practice Guidance (C799).

Standard measures regarding the scheduling of vegetation clearance, wherever possible outside the breeding bird season will be implemented as part of the works phase of the Project. In the event that trees are to be removed during the breeding bird season, SDCC will do so only upon confirmation that the trees do not support any nests that are in use by birds. These measures will be applicable for the clearance of trees identified as category U-trees.

3.0 BASELINE DESCRIPTION

The Project is located within the urban land cover area of the Grange Castle Business Park. The dominant land cover at and surrounding the Project is representative of the habitat buildings

and artificial surfaces (BL3). The buildings and artificial surfaces occurring along the scheme comprise the road and footpath/cyclepath surface. Greenfield surface occurring along and adjacent to the Project comprise amenity grassland (GA2) in the form of parkland and amenity grassland verges. Scattered trees that form part of the landscaping for the business park also occur.

The Griffeen Lower (IE_EA_09_242) flows through the business park. The Water Framework Directive status of the Griffeen Lower is currently classified at Bad status with an overall risk status of 'At Risk'. The Grand Canal is located to the north of the Project.

No European Sites or Natural Heritage Areas (NHAs) occur at or in the vicinity of the project. The nearest European Site to the project is the Rye Water Valley SAC, located in a separate surface water sub-catchment to the project site and approximately 6km to the northwest of the nearest point of the project. No NHAs occur in the wider surrounding area, with the nearest being Hodgestown Bog NHA, located over c. 25km to the south, southwest.

A footpath section forming part of the Project upgrade area that ties in with the existing Grand Canal path is located within the Grand Canal pNHA boundary, which runs east to west at the northern end of the Project. The extent of the existing footpath to be upgraded within the pNHA boundary is c. 20m^2.

4.0 IS THE PROJECT NECESSARY FOR THE CONSERVATION MANAGEMENT OF EUROPEAN SITES

The project has been described in Section 2 of this Screening Report and it is clear from the description provided that the project is not directly connected with or necessary for the future conservation management of any European Sites.

5.0 EUROPEAN SITES OCCURRING WITHIN THE ZONE OF INFLUENCE OF THE PROJECT

5.1 WITHIN/ADJOINING EUROPEAN SITES

Current guidance (OPR, 2021) informing the approach to screening for Appropriate Assessment defines the zone of influence of a project as the geographical area over which it

could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. It is recommended that this is established on a case-by-case basis. In order to identify European Sites that could potentially be located within the zone of influence of the project, the current digital mapping (shapefile) of European Sites in Ireland, as published by the NPWS[3], was reviewed to identify the European Sites that could conceivably be connected to the project site via pathways. The OPR guidelines recommend that for projects that are located within or immediately adjacent to European Sites, the relevant European Site should be automatically selected for consideration in the screening exercise. No European Sites occur within or bound the project with the nearest European Site, the Rye Water Valley SAC, located approximately 6km to the northwest of the project. As such no European Sites are automatically triggered for inclusion within the zone of influence of the project.

5.2 SOURCE-PATHWAY-RECEPTOR MODEL

Current guidance (OPR, 2021) informing the approach to screening for Appropriate Assessment defines the zone of influence of a project as the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European Site. It is recommended that this is established on a case-by-case basis using the Source-Pathway-Receptor (SPR) framework. In order to identify the European Sites that could be located within the zone of influence, the current digital mapping (shapefile) of European Sites in Ireland[4], as published by the NPWS, was reviewed to identify the European Sites that could conceivably be connected to the project site via pathways.

As a first step in identifying the European Sites that could be connected to the project via SPR pathways all European Sites occurring in the wider surrounding area were identified. Figure 5.1 shows the European Sites occurring in the wider area surrounding the project site. As can be seen in Figures 5.1 and Figure 5.2 no European Sites occur in close vicinity to the project site, with the nearest site being the Rye Water Valley SAC located approximately 6km to the

[3] Current SAC shapefile layer dated May 2024; current SPA shapefile layer dated January 2024

northwest of the project site. The Griffeen River flowing through the project site and the River Liffey downstream, link the project location to Dublin Bay, where four European Sites are located. These are the North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay & Tolka Estuary SPA. These European Sites at Dublin Bay are located approximately 30km downstream from the project.

All other European Sites are located at a remote distance from the project site and are not connected to it via any SPR pathways. As such the remainder of this screening exercise focuses on the four European Sites at Dublin Bay (hereafter jointly referred to as the Dublin Bay European Sites) and the Rye Water Valley SAC.

Using the SPR framework the project, as described in Section 2 of this Screening Report, represents the source of potential impacts to European Sites.

Potential pathways are restricted to any potential emission pathways connecting the project site to European Sites.

During the works associated within new projects, such as those associated with the public realm works, the potential can exist for the following emissions to occur:

- Emissions to surface water
- Emissions to groundwater
- Noise and vibration emissions
- Emissions to air
- Light emissions; and
- Visual emissions

Projects that are located outside of European Sites can also result in impacts to mobile qualifying species of European Sites in the event that such species rely on habitats occurring

within the project site. For the purposes of this screening report this impact is referred to as a "mobile species impact".

Given that all surface water generated at the project site will eventually drain to the River Liffey there is a potential hydrological pathway connecting the project site to Dublin Bay where European Sites are located while the Rye Water Valley SAC is located upstream along the River Liffey and its tributary the Rye Water River.

The project site is located within a separate groundwater body to these European Sites and as such no groundwater pathways are considered to connect the project site to any of the four European Sites and Dublin Bay or the Rye Water Valley SAC upstream.

The project is located at a significant distance from the nearest European Sites and so will not have the potential to result in noise, air, light, or visual emissions that could function as a pathway connecting the project site to these European Sites.

With respect to the five European Sites occurring along the River Liffey pathway, only the North Bull Island SPA and the South Dublin Bay & Tolka Estuary SPA support mobile species in the form of bird species. The project site is located approximately 15km from the nearest point of these two SPAs. Guidance on assessing the connectivity of projects to SPAs and their special conservation interests has been published by Nature Scotland (see SNH, 2016). This guidance is used to facilitate the identification or otherwise of SPAs within the zone of influence of projects by establishing the foraging range of a variety of special conservation interest bird species from SPAs during the winter and breeding season. For the majority of the species listed as special conservation interest bird species of the North Bull Island SPA and the South Dublin Bay & Tolka Estuary SPA the project is considered to lie outside their foraging range. Brent geese which is listed as a special conservation interest for both SPAs are known to range up to 20km from their core SPA grounds. Handby (2022) and Trapp (2023) have completed studies for brent geese and waterbirds populations of Dublin Bay and have identified the key terrestrial sites relied upon by these species. The Grange Castle Business Park lands have not been identified as lands relied upon by SPA populations at Dublin Bay. As such no mobile species pathway is identified connecting the Project to the SPAs at Dublin Bay.

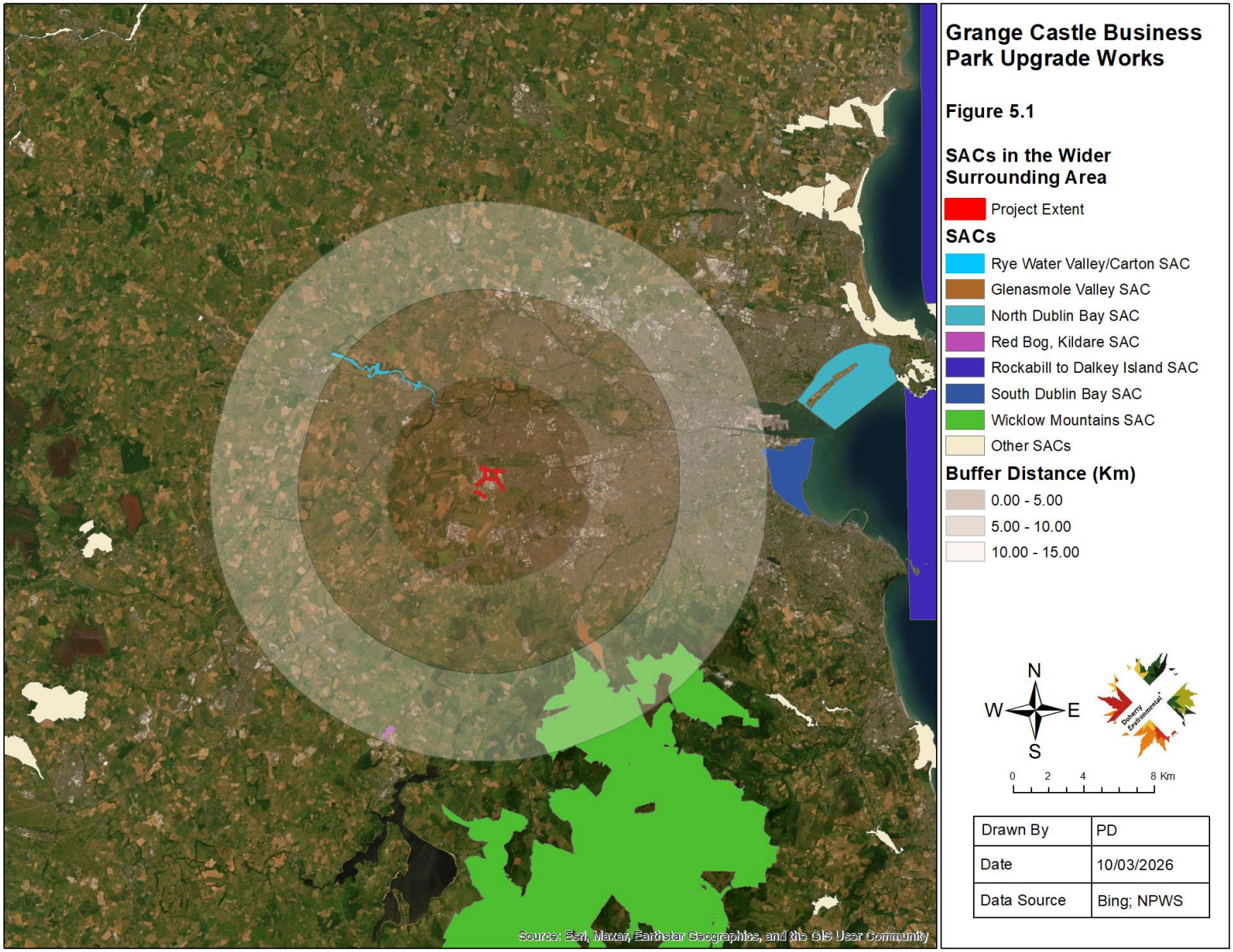
The receptors represent European Sites and their associated qualifying features of interest.

European Sites and their associated qualifying features are likely to occur in the zone of influence of the project only where hydrological pathways establish a link between the project and the European Site.

Table 5.1 provides an evaluation as to whether the Rye Water Valley SAC and the Dublin Bay European Sites occur within the project's zone of influence. This evaluation has been undertaken in line with the following questions:

Is there a Hydrological Pathway and does it have the potential to function as an Impact Pathway?

Is there a mobile species pathway and does it have the potential to function as an impact pathway?


Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Grange Castle Business Park Upgrade Works
Figure 5.1
SACs in the Wider Surrounding Area
Project Extent
SACs
Rye Water Valley/Carton SAC
Glenasmole Valley SAC
North Dublin Bay SAC
Red Bog, Kildare SAC
Rockabill to Dalkey Island SAC
South Dublin Bay SAC
Wicklow Mountains SAC
Other SACs
Buffer Distance (Km)
0.00 - 5.00
5.00 - 10.00
10.00 - 15.00
N
W
E
S
0 2 4 8 Km
Drawn By PD
Date 10/03/2026
Data Source Bing; NPWS

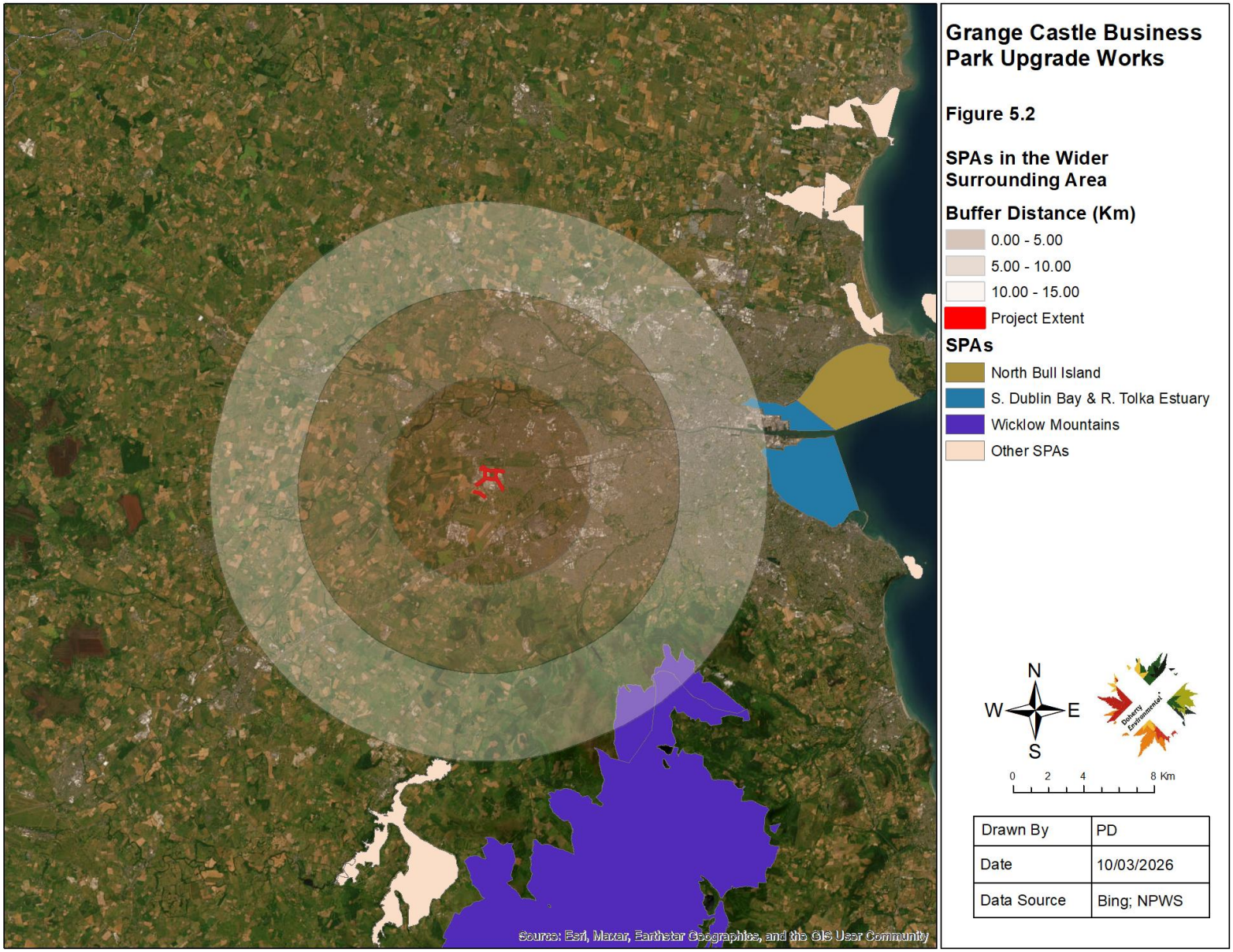

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Grange Castle Business Park Upgrade Works
Figure 5.2
SPAs in the Wider Surrounding Area
Buffer Distance (Km)
0.00 - 5.00
5.00 - 10.00
10.00 - 15.00
Project Extent
SPAs
North Bull Island
S. Dublin Bay & R. Tolka Estuary
Wicklow Mountains
Other SPAs
N
W
E
S
0 2 4 8 Km
Drawn By PD
Date 10/03/2026
Data Source Bing; NPWS

Table 5.1: European Sites in the Zone of Influence of the Project

European Sites	**Distance from Project Site**	**Is there a Hydrological Pathway and does it have the potential to function as an Impact Pathway**	**Do the Project have the potential to interact with Mobile Species**	**Do European Sites occur within the Projects Zone of Influence?**
Rye Water Valley SAC	5km to the north	No. This SAC is located within a separate surface water sub-catchment to the project .	No. No mobile species are listed as qualifying features of interest for this SAC.	No. This SAC is located at a remote distance upstream from the project site and there are no pathways connecting the project to this SAC and its qualifying features of interest.
South Dublin Bay SAC	>30km downstream to the east	This SAC is located at Dublin Bay to the south of the South Wall. This SAC is designated for the presence of coastal Annex 1 habitats. Surface water from the project site will eventually discharge to the River Liffey catchment and as shown on Figure 5.1, the River Liffey forms a hydrological pathway between the project site Dublin Bay where this SAC is located. However the River Liffey does not function as a hydrological pathway between the project site and this SAC. Modelling of the Liffey Estuary and Dublin Bay has shown that the waters from the Liffey draining into Dublin Bay are deflected east and north	No. No Annex 2 species are listed as qualifying features of interest for this SAC.	No. This SAC is located at a remote distance upstream from the project site and there are no pathways connecting the project to this SAC and its qualifying features of interest.

		towards Dollymount and Howth. The presence of the South Great Wall in Dublin Bay provides a barrier to the movement of waters towards the south (Dowly & Bedri, 2007; Bedri et al., 2012; Camp, Dresser & McKee, 2012). As such there is no surface water pathway between the project site and this SAC.		
North Dublin Bay SAC	c. 30km downstream to the east	Yes, surface waters will drain from the project site to the River Liffey, via the Griffeen River, which in turn drains to Dublin Bay and are dispersed over this SAC. As such there is a hydrological connection between the project site and this SAC.	No. This SAC supports a population of the liverwort *Petalophyllum ralfsii*. This is a sedentary species, reliant on terrestrial dune slack habitats occurring on Bull Island and there is no potential for the project to interact with this species.	Yes. The potential for the hydrological pathway, linking the project site to this SAC, to function as an impact pathway requires further examination to establish whether or not the project could result in downstream effects to this SAC.
North Bull Island SPA	c. 30km downstream to the east	Yes, surface waters will drain from the project site to the River Liffey, via the Griffeen River, which in turn drains to Dublin Bay and are dispersed over this SPA. As such there is a hydrological connection between the project site and this SAC.	This SPA is designated for its role in supporting a number of wetland bird species. As per Handby (2022) and Trapp (2023) the Project lands are not relied upon by special conservation interest species of this SPA.	Yes. The potential for the hydrological pathway, linking the project site to this SPA, to function as an impact pathway requires further examination to establish whether or not the project could result in downstream effects to this SPA.
South Dublin Bay & Tolka Estuary SPA	c.30km downstream to the east	Yes, surface waters will drain from the project site to the River Liffey, via the Griffeen River, which in turn drains to Dublin Bay and are dispersed over this SPA.	This SPA is designated for its role in supporting a number of wetland bird species. As per Handby (2022) and Trapp (2023) the Project lands are not relied upon	Yes. The potential for the hydrological pathway, linking the project site to this SPA, to function as an impact pathway requires further examination to establish

		As such there is a hydrological connection between the project site and this SAC.	by special conservation interest species of this SPA.	whether or not the project could result in downstream effects to this SPA.

Table 5.1 above outlines the relationship between the project site and the European Sites occurring within the zone of influence. Of the five European Sites occurring within this zone, three have been identified as requiring further examination to ascertain whether there is potential for impact pathways connecting the project site to these European Sites.

The remainder of this Screening aims to identify whether the project will have the potential to result in likely significant effects to these three European Sites, namely:

1. South Dublin Bay River Tolka Estuary SPA;

2. North Dublin Bay SAC; and

3. North Bull Island SPA.

5.3 EUROPEAN SITES OCCURRING WITHIN THE ZONE OF INFLUENCE

The following sub-sections provide an overview of the three European Sites occurring within the zone of influence of the project.

5.3.1 South Dublin Bay River Tolka Estuary SPA

The South Dublin Bay and River Tolka Estuary SPA comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dun Laoghaire, and the estuary of the River Tolka to the north of the River Liffey, as well as Booterstown Marsh. A portion of the shallow marine waters of the bay is also included.

The site is a Special Protection Area (SPA) designated under the EU Birds Directive, of special conservation interest for the following species over-wintering species: Light-bellied Brent Goose, Oystercatcher, Ringed Plover, Grey Plover, Knot, Sanderling, Dunlin, Bar-tailed Godwit, Curlew, Redshank, and Black-headed Gull.

This SPA is also designated for its role in supporting breeding colonies of the following species: Roseate Tern, Common Tern and Artic Tern. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The qualifying features for which this site has been designated as a SPA are listed in Table 5.2 below. The threats and pressures to this SAC have been documented in the Standard Natura 2000 Data Form for the site (NPWS, 2017b). The documented threats and pressures to this SPA are as follows:

- Walking, horseriding and non-motorised vehicles
- Reclamation of land from sea, estuary or marsh
- Discharges
- Roads, motorways
- Industrial or commercial areas

Table 5.2 lists each of the qualifying features of interest for this SAC and their conservation status.

Table 5.2: South Dublin Bay River Tolka Estuary SPA qualifying features of interest, and conservation status

Special conservation interests	Conservation Status
Light-bellied Brent Goose (*Branta bernicla hrota*)	Amber listed species- Species of medium conservation concern
Oystercatcher (*Haematopus ostralegus*)	Amber listed species- Species of medium conservation concern
Ringed Plover (*Charadrius hiaticula*)	Amber listed species- Species of medium conservation concern
Grey Plover (*Pluvialis squatarola*)	Amber listed species- Species of medium conservation concern

Special conservation interests	Conservation Status
Knot (*Calidris canutus*)	Red listed species – Species of high conservation concern†
Sanderling (*Calidris alba*)	Green listed species – Species not threatened
Dunlin (*Calidris alpina*)	Amber listed species- Species of medium conservation concern
Bar-tailed Godwit (*Limosa lapponica*)	Amber listed species- Species of medium conservation concern
Redshank (*Tringa totanus*)	Red listed species – Species of high conservation concern
Black-headed Gull (*Croicocephalus ridibundus*)	Red listed species – Species of high conservation concern
Roseate Tern (*Sterna dougallii*)	Green listed species – Species not threatened
Common Tern (*Sterna hirundo*)	Amber listed species- Species of medium conservation concern
Arctic Tern (*Sterna paradisaea*)	Amber listed species- Species of medium conservation concern
Wetlands & Waterbirds	

5.3.2 North Dublin Bay SAC

This site covers the inner part of north Dublin Bay, the seaward boundary extending from the Bull Wall lighthouse across to the Martello Tower at Howth Head. The North Bull Island is the focal point of this site. Qualifying features for which this site has been designated as a SAC are

listed in Table 5.3 below. The distribution of the habitats associated with this SAC are outlined in the Conservation Objectives for this SAC (see NPWS, 2013).

The threats and pressures to this SAC have been documented in the Standard Natura 2000 Data Form for the site (NPWS, 2017). The documented threats and pressures to this SAC are as follows:

- Urbanised areas, human habitation
- Walking, horseriding and non-motorised vehicles
- Golf course
- Industrial or commercial areas
- Discharges

Table 5.3 lists each of the qualifying features of interest for this SAC and their conservation status.

Table 5.3: North Dublin Bay SAC qualifying features of interest and conservation status

Qualifying Annex Feature	Conservation Status (Site-Level)	Conservation Status (National-Level)
Mudflats and sandflats not covered by seawater at low tide	Favourable	Inadequate
Annual vegetation of drift lines	Not established	Inadequate
Salicornia and other annuals colonizing mud and sand	Unfavourable	Favourable

Qualifying Annex Feature	Conservation Status (Site-Level)	Conservation Status (National-Level)
Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	Favourable	Inadequate
Petalwort (Petalophyllum ralfsii)	Not established	Inadequate
Mediterranean salt meadows (Juncetalia maritimi)	Favourable	Inadequate
Embryonic shifting dunes Shifting dunes along the shoreline with Ammophila arenaria (white dunes)	Unfavourable-inadequate	Inadequate
Fixed coastal dunes with herbaceous vegetation (grey dunes)	Unfavourable-Bad	Bad
Humid dune slacks	Unfavourable-inadeqaute	Inadequate

5.3.3 North Bull Island SPA

This site covers all of the inner part of north Dublin Bay, with the seaward boundary extending from the Bull Wall lighthouse across to Drumleck Point at Howth Head. The site is a Special Protection Area (SPA) under the EU Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Shelduck, Teal, Pintail, Shoveler, Oystercatcher, Ringed Plover, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Turnstone and Black-headed Gull. The site is also of

special conservation interest for holding an assemblage of over 20,000 wintering waterbirds. The EU Birds Directive provides for attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The qualifying features for which this site has been designated as a SPA are listed in Table 5.4 below. The threats and pressures to this SPA have been documented in the Standard Natura 2000 Data Form for the site (NPWS, 2017a). The documented threats and pressures to this SPA are as follows:

- Disposal of household / recreational facility waste
- Golf Course
- Industrial or commercial areas
- Walking, horseriding and non-motorised vehicles
- Bridge, viaduct
- Roads, motorways
- Discharges

Table 5.4 lists each of the qualifying features of interest for this SAC and their conservation status.

Table 5.4: North Bull Island SPA special conservation interests

Special Conservation Interests	Conservation Status
Light-bellied Brent Goose (*Branta bernicla hrota*)	Amber listed species- Species of medium conservation concern
Shelduck (*Tadorna tadorna*)	Amber listed species- Species of medium conservation concern
Teal (*Anas crecca*)	Amber listed species- Species of medium conservation concern
Pintail (*Anas acuta*)	Red listed species – Species of high conservation concern†
Shoveler (*Anas clypeata*)	Red listed species – Species of high conservation concern†
Oystercatcher (*Haematopus ostralegus*)	Amber listed species- Species of medium conservation concern
Golden Plover (*Pluvialis apricaria*)	Red listed species – Species of high conservation concern
Grey Plover (*Pluvialis squatarola*)	Amber listed species- Species of medium conservation concern
Knot (*Calidris canutus*)	Red listed species – Species of high conservation concern†
Sanderling (*Calidris alba)*	Green listed species – Species not threatened

Dunlin (*Calidris alpina*)	Amber listed species- Species of medium conservation concern
Black-tailed Godwit (*Limosa limosa*)	Amber listed species- Species of medium conservation concern
Bar-tailed Godwit (*Limosa lapponica*)	Amber listed species- Species of medium conservation concern
Curlew (*Numenius arquata*)	Red listed species – Species of high conservation concern
Redshank (*Tringa totanus*)	Red listed species – Species of high conservation concern
Turnstone (*Arenaria interpres*)	Green listed species – Species not threatened
Black-headed Gull (*Larus ridibundus*)	Red listed species – Species of high conservation concern
Wetlands & Waterbirds	

5.4 QUALIFYING FEATURES OF INTEREST/SPECIAL CONSERVATION INTERESTS CONNECTED TO THE PROJECT VIA HYDROLOGICAL PATHWAY

Table 5.5 below lists the qualifying features of interest/special conservation interests of the four European Sites that are hydrologically connected to the project site and identifies the interest features of these four European Sites that are influenced by transitional/coastal waters.

Table 5.5: Identification of Qualifying Features of Interest/Special Conservation Interests Influenced Transitional/Coastal Waters

European Site	Qualifying Interest	Is the qualifying feature of interest/special conservation interest Influenced by Transitional/Coastal Waters
North Dublin Bay SAC	Mudflats and sandflats not covered by seawater at low tide	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Annual vegetation of drift lines	No. This habitat is not influenced by surface waters and lotic processes.
	Salicornia and other annuals colonizing mud and sand	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Spartina swards (Spartinion maritimae)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.

	Petalwort (Petalophyllum ralfsii)	No. This species is reliant on humid dune slacks occurring within the terrestrial environment. This dune slacks will not be influenced by hydrological emissions.
	Mediterranean salt meadows (Juncetalia maritimi)	No. Examples of this habitat are restricted to the northwestern end of Bull Island and are considered to lie outside the influence of the hydrological pathway established by the River Liffey.
	Embryonic shifting dunes Shifting dunes along the shoreline with Ammophila arenaria (white dunes)	No. This is a terrestrial habitat that will not be influence by hydrological emissions.
	Fixed coastal dunes with herbaceous vegetation (grey dunes)	No. This is a terrestrial habitat that will not be influence by hydrological emissions.
	Humid dune slacks	No. This is a terrestrial habitat that will not be influence by hydrological emissions.
North Dublin Bay SPA	Light-bellied Brent Goose (*Branta bernicla hrota*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Shelduck (*Tadorna tadorna*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.

	Teal (*Anas crecca*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Pintail (*Anas acuta*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Shoveler (*Anas clypeata*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Oystercatcher (*Haematopus ostralegus*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Golden Plover (*Pluvialis apricaria*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Grey Plover (*Pluvialis squatarola*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Knot (*Calidris canutus*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River

		Liffey will have the potential to link the project to this qualifying habitat.
	Sanderling (*Calidris alba)*	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Dunlin (*Calidris alpina*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Black-tailed Godwit (*Limosa limosa*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Bar-tailed Godwit (*Limosa lapponica*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Curlew (*Numenius arquata*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Redshank (*Tringa totanus*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.

	Turnstone (*Arenaria interpres*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Black-headed Gull (*Larus ridibundus*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Wetlands & Waterbirds	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
South Dublin Bay River Tolka Estuary SPA	Light-bellied Brent Goose (*Branta bernicla hrota*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Oystercatcher (*Haematopus ostralegus*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Ringed Plover (*Charadrius hiaticula*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.

	Grey Plover (*Pluvialis squatarola*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Knot (*Calidris canutus*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Sanderling (*Calidris alba*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Dunlin (*Calidris alpina*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Bar-tailed Godwit (*Limosa lapponica*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Redshank (*Tringa totanus*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.

	Black-headed Gull (*Croicocephalus ridibundus*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Roseate Tern (*Sterna dougallii*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Common Tern (*Sterna hirundo*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Arctic Tern (*Sterna paradisaea*)	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.
	Wetlands & Waterbirds	Yes. Hydrological pathways in the form of surface water discharges to the Griffeen River and on downstream to the River Liffey will have the potential to link the project to this qualifying habitat.

Following on from Table 5.5 above, Table 5.6 provides a summary of the qualifying features of interest that can be influenced by transitional/coastal waters and their associated water quality. The qualifying features of interest are grouped into broader groups that will be referred to in the assessment sections below.

Table 5.6: Summary of qualifying features of interest/special conservation interests occurring within the Zone Of Influence of the Project

Qualifying feature Group	Qualifying feature of interest	Associated European Site
Coastal/Littoral Habitats	Mudflats and sandflats not covered by seawater at low tide	North Bull Island SAC
	Salicornia and other annuals colonising mud and sand	North Bull Island SAC
	Spartina swards (Spartinion maritimae)	North Bull Island SAC
	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	North Bull Island SAC
Coastal/Littoral Bird Species	Special conservation interests wetland bird species	South Dublin Bay River Tolka Estuary SPA & North Dublin Bay SPA

6.0 EXAMINATION OF LIKELY SIGNIFICANT EFFECTS TO FEATURES OF INTEREST WITHIN THE ZONE OF INFLUENCE

The consideration of likely significant effects to European Sites as a result of the project relates to an examination of the project's potential to result in contamination to local surface waters, with consequent negative indirect effects downstream at Dublin Bay to transitional/coastal waters influencing the features of interest listed in Table 5.6 above.

The local surface water that could receive contaminated surface water in the event of a release of pollutants to the aquatic environment are the Griffeen River, Grand Canal and the River

Liffey. Whether the project will have the potential to result in negative effects to the European Sites at Dublin Bay downstream is dependent on the capacity of the hydrological pathway between the project site and Dublin Bay to function as an effective impact pathway. An assessment of the hydrological pathway and its potential to function as an impact pathway is provided in the following sub-section.

6.1 EXAMINATION OF EFFECTS

6.1.1 Surface Water Pathway

The nearest point of the three Dublin Bay European Sites to the project site is approximately 30km downstream along the River Liffey and the Liffey Estuary. The surface water that will be generated at the project site and the proposed discharge volumes to the Griffeen River and downstream to the River Liffey and the Liffey Estuary represent a minor fraction of the overall volume of freshwater draining into the Liffey estuary and Dublin Bay. This will prevent the project from impacting the conservation status of European Sites downstream at Dublin Bay, even in the event of contaminated surface water entering the hydrological pathway. Further details supporting this evaluation of an absence of a functional impact pathway established by the hydrological pathway between the project site and the Dublin Bay European Sites are as follows:

- The works required in the vicinity of the Griffeen Rive and Grand Canal are not considered to have the potential to result in the generation of contaminated surface water runoff with potential to undermine the water quality of the River Liffey downstream. The works associated with the project will not result in instream works or interactions with the river. The Girffeen River and the Grand Canal will be buffered from all areas of proposed upgrade works by existing grassy verges. The presence of this buffer strip provides natural protection for the entrainment of surface water runoff from any works relating to the upgrade of footpaths and cyclepath. It is also noted that all footpaths and cyclepaths to be upgraded camber towards the road side and as such any surface water runoff generated at works areas along footpaths and cyclepaths will fall towards the road surface. Entrainment for such runoff is also provided by an existing grassy strip between the majority of footpath/cyclepaths and road sections. Existing surface water infrastructure in the form of surface water sewer drains occur along the existing road infrastructure subject to the upgrade works. These drains are

subject to existing surface water management measures such as silt interception and hydrocarbons interception. These surface water management measures are provided in accordance with water quality management standards set out in the Greater Dublin Regional Code of Practice for Drainage Works and the South Dublin County Development Plan..

- As per Section 2 above no wet cement works will be undertaken at or in close proximity of the Griffeen River during the project works. Only small quantities of hydrocarbons and other construction fluids will be held on site at any one time. These quantities will be held in bunded containers and stored within lock up facilities within the temporary construction compound which will be located in the main compound area of the site away from the Griffeen and Grand Canal. There will be no refuelling of plant or equipment in the vicinity of the Griffeen River or Grand Canal.

- The volumes of surface water draining the project site represents a miniscule fraction of the volumes discharging to the Liffey Estuary upstream of the Dublin Bay European Sites. This is supported by an examination of the area occupied by the footprint of the project site (i.e. approximately 1.71 Ha within the Liffey_SC_090 subcatchment approximately 14,000 Ha in size) in which the project site is located. The project site represents 0.01% of the land surface occurring within this catchment and the runoff generated at the project site will therefore represent a miniscule extent of the runoff draining from lands within this sub-catchment. In the unlikely event that contaminated waters enter the Griffeen River or Grand Canal, based on the above any associated pollutants will be entirely diluted within the Griffeen River, Grand Canal and the River Liffey and the Liffey estuary downstream such that there will be no potential for them to result in perturbations to coastal water interacting with the Dublin Bay European Sites.

- Further to the fact that the waters draining represent a miniscule fraction of freshwater inputs to the Liffey estuary, it is noted that there are multiple other sources of freshwater (11 in total, some of which include the River Dodder, Royal Canal, River Cammock etc.) entering the Liffey Estuary. These other sources combine with the River Liffey discharges to further dilute freshwater discharging the Liffey Estuary and Dublin Bay. In light of this any discharges to the River Liffey Estuary from the project site will be

thoroughly mixed and imperceptible downstream within the Liffey Estuary and will be further diluted by the tidal coastal waters at Dublin Bay.

- Finally, in support of the above, other studies have shown that pollutants in the estuary are rapidly mixed and become diluted within the estuary and Dublin Bay (O'Higgins and Wilson, 2005; Wilson and Jackson, 2011) again indicating that any potential for the release of contaminants to the River Liffey during the project will not have the potential to result in any perceptible effect to water quality downstream at Dublin Bay.

6.2 IN-COMBINATION EFFECTS

The OPR guidelines (2021) state that if there is no ecological pathway or functional link between a proposed development and European Sites, there is no potential for impact and the project can be screened out. The OPR Guidelines (2021) also state that if there is no pathway, then the proposed development can be screened out *with confidence.* Cumulative in-combination effects can arise as a result of projects where they have the potential to generate emissions to the environment, in this instance surface waters, with potential to result in negative impact to the receiving environment. However, given:

- the approach to the project works, which will not result in interactions with the Griffeen River or Grand Canal;

- the local implications to water quality in the unlikely event of a breakout during the installation of the rising main. Under such a scenario any materials released to the Griffeen River or Grand Canal will become disperse, attenuated and settled along this watercourse, with no potential for their transport downstream to Dublin Bay;

- the presence of vegetated buffer zones between the Project and the Griffeen River and Grand Canal;

It is concluded that the project will pose a negligible risk to the water quality of the Griffeen River, Grand Canal and that the hydrological pathway connecting the project to Dublin Bay will not have the potential to function as an impact pathway between the project and European Sites at Dublin Bay. As such it is considered that there will be no potential for the project to

combine with other projects in the surrounding area or downstream along the River Liffey to result in negative impacts to European Sites downstream at Dublin Bay.

Furthermore it is noted that with respect to potential emissions from any other construction sites that may be connected to Dublin Bay, it is noted that the works contractors for all planned or permitted developments will be obliged to ensure that measures are in place to protect water quality in compliance with legislative requirements for receiving water quality (European Communities Environmental Objectives (Surface Water) Regulations (S.I. 272 of 2009 and S.I. 77 of 2019). It is further noted that any other construction projects overlapping with the duration of upgrade works will only be permitted where the Planning Authority has concluded that such projects do not pose a risk to European Sites or significant effects to the environment, including surface water quality. Standard measures will be required, as a minimum by the consenting authority for any other projects in the surrounding area.

7.0 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS IN VIEW OF EUROPEAN SITE CONSERVATION OBJECTIVES

The function of this screening exercise is to determine whether the project is likely to have significant effects on European Sites. The screening is required to be completed in view of the Conservation Objectives for the qualifying features of interest of these European Sites that also occur within the zone of influence of the project.

Site Specific Conservation Objectives (SSCOs) have been formulated for all three European Sites occurring within the zone of influence of the project. The structural and functional elements of a European Site to maintain the favourable conservation status of qualifying features of interest is embedded into the list of SSCOs for each of the site's interest features. As such the SSCOs of a European Site represent the parameters against which an assessment of a project's potential to result in likely significant effects should be undertaken.

SSCOs for the special conservation interests of the South Dublin Bay River Tolka Estuary SPA and the North Bull Island SPA; and the relevant qualifying features of interest of the North Dublin Bay cSAC occurring within the zone of influence of the project have been published by the NPWS (NPWS, 2013; 2015a; 2015b). Table 7.1 lists the Conservation Objectives attributes and targets for each of these features and provides an assessment of the project's potential to result in likely significant effects to these objectives.

Table 7.1: Assessment of the Project potential to effect the SSCOs of the qualifying feature occurring within its Zone of Influence

Attribute. No.	Attribute	Target	Assessment
Mudflats (North Dublin Bay cSAC)			
1	Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
2	Community distribution	Conserve the following community types in a natural condition: Intertidal sand with *Scolelepis squamata* and *Pontocrates* spp. community; and Intertidal sand to mixed sediment with polychaetes, molluscs and crustaceans community complex.	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
Salicornia and other annuals colonising mud (North Dublin Bay cSAC)			
3	Habitat area	Area stable or increasing, subject to natural processes, including erosion and succession.	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
4	Habitat distribution	No decline or change in habitat distribution, subject to natural processes.	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
5	Physical structure: sediment supply	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
6	Physical structure: creeks and pans	Maintain creek and pan structure, subject to natural processes, including erosion and succession	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.

7	Physical structure: flooding regime	Maintain natural tidal regime	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
8	Vegetation structure: zonation	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
9	Vegetation structure: vegetation height	Maintain structural variation within sward	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
10	Vegetation structure: vegetation cover	Maintain more than 90% of the saltmarsh area vegetated	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
11	Vegetation composition: typical species and sub-communities	Maintain range of sub-communities with typical species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009)	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
12	Vegetation structure: negative indicator species- *Spartina anglica*	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
Special conservation interest bird species (South Dublin Bay River Tolka Estuary SPA & North Bull Island SPA)			
22	Population trend	Long term population trend stable or increasing	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.
23	Distribution	There should be no significant decrease in the range, timing or intensity of use of areas by special conservation interest bird species of the SPA occurring within the zone of influence other than that occurring from natural patterns of variation	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.

Wetland habitat (South Dublin Bay River Tolka Estuary SPA & North Bull Island SPA)			
24	Wetland habitat area	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 32,261ha, other than that occurring from natural patterns of variation	For reasons outlined in Section 6 above the project will not have the potential to undermine the targets for this conservation objective attribute.

8.0 CONCLUSION

During the examination of the project it was found that 4 no. European Sites are connected to the project via a hydrological pathway established by the Griffeen River, Grand Canal and the River Liffey. The nearest European Sites to the project site (i.e. the Rye Water Valley SAC) is located approximately c. 6km to the northwest. Using the SPR model no pathways were identified connecting the project to the Rye Water Valley SAC or the South Dublin Bay SAC. The potential for the River Liffey to function as an impact pathway between the project site and the remaining three European Sites was examined further as part of this screening exercise. This examination was completed by considering all aspects of the project that could result in the emission of potentially polluting material to the Griffeen River, Grand Canal and the River Liffey.

The potential for the River Liffey to function as impact pathway between the project and these three European Sites was examined as part of this screening exercise. This examination was completed by considering all aspects of the proposed project that could result in the emission of potentially polluting material to the River Liffey.

This examination found that the project and the associated works will pose a negligible risk to the water quality of the River Griffeen. Grand Canal and the River Liffey locally in the vicinity of the project site works or downstream along the river.

The examination also found that, even in the unlikely event that the project were to result in the emission of contaminants to the Griffeen River, Grand Canal and the River Liffey, such

contaminants will become entirely diluted and dispersed within these rivers and the Liffey estuary further downstream, thereby eliminating the potential for perturbations to coastal waters that interact with the three European Sites located downstream at Dublin Bay.

The absence of a functional surface water hydrological impact pathway between the project site and the Dublin Bay European Sites will ensure that the project will not have the potential to result in likely significant effects to the future conservation status of qualifying features of interest and special conservation interests for which these European Sites are designated and will not undermine the achievement of their site-specific conservation objectives. It addition, given the absence of a functional hydrological pathway connecting the project site to the three European Sites at Dublin Bay and the negligible risk posed by the project to the water quality of the River Liffey it was found that the project will not have the potential to combine with other projects to result in cumulative negative effects to the European Sites at Dublin Bay.

In light of the findings of this report it is the considered view of the authors of this Screening Report for Appropriate Assessment that it can be concluded by South Dublin County Council that the project is not likely, alone or in-combination with other plans or projects, to have a significant effect on any European Sites in view of their Conservation Objectives and on the basis of best scientific evidence and there is no reasonable scientific doubt as to that conclusion.

Accordingly, the competent authority is enabled to determine that it can be excluded, on the basis of objective information, that the project, individually or in combination with other plans or projects, will have a significant effect on any European Site.

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