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Appropriate Assessment Screening Report

PRESENTED TO

Marina Quarter Ltd.
Former Ford Distribution Site,
Ballintemple, Cork

November 24

Environmental Consultancy Services

DOCUMENT CONTROL SHEET

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 INTRODUCTION

1.1 Background

Enviroguide Consulting was commissioned by McCutcheon Halley Planning Consultants, acting on behalf of Marina Quarter Ltd. to prepare an Appropriate Assessment Screening Report in relation to a proposed Large-scale Residential Development (LRD) at the Old Ford Site, Centre Park Road, South Docklands, Cork, hereafter referred to as 'Proposed Development' or 'Site' where referring to the lands within the application boundary. This report contains information to enable the Competent Authority to undertake Stage 1 Appropriate Assessment (AA) screening in respect of the Proposed Development.

1.2 Quality Assurance and Competence

Enviroguide Consulting is multi-disciplinary consultancy specialising in the areas of the Environment, Waste Management and Planning. All Enviroguide consultants carry scientific or engineering qualifications and have a wealth of experience working within the Environmental Consultancy sectors, having undergone extensive training and continued professional development.

Enviroguide Consulting as a company remains fully briefed in European and Irish environmental policy and legislation. Enviroguide staff members are highly qualified in their field. Professional memberships include the Chartered Institution of Wastes Management (CIWM), the Irish Environmental Law Association, and Chartered Institute of Ecology and Environmental Management (CIEEM).

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants. TR, Senior Ecologist with Enviroguide, undertook the Breeding Bird surveys and desktop research for this report. KM, and CRK, Ecologists with Enviroguide, undertook the bat survey for this project. WMC, Ecologist with Enviroguide, edited the latest version of this report.

TR has a B.Sc. in Environmental and Natural Resource Management (Hons) and a Post-Graduate Diploma in Environmental Management with GIS. TR is an experienced Ecologist who has specialised in ornithology and terrestrial mammals with over 8 years' experience in ecological consultancy along with a lifetime of personal interest and experience in wildlife management. TR has extensive field experience with further experience and competencies in desktop research, preparing AA Screening Reports (AA), Ecological Impact Assessment Reports (EcIAs), Bird Activity Reports and detailed Species-Specific Maps. His ability to deal with and understand a range of species, survey methods and habitats is excellent, having an in-depth knowledge and understanding of EU and Irish legislation.

CRK is an intern Ecologist with an M.Sc. in Biodiversity and Conservation from Trinity College Dublin. CRK's experience as an ecologist is broad in both variety of ecological reports and literature, and field surveys conducted. CRK has experience in surveying habitats, birds, plants, bats, mammals and invasive species. In addition, CRK has experience in assessing welfare conditions of animals using behavioural repertoires

as indicators. CRK's experience in ecological report writing extends from Research associated literature reviews to AA screening reports and Municipal District Summary reports.

KM is an intern Ecologist with a wealth of experience in desktop research, report writing, and QGIS mapping, as well as practical field and laboratory experience. Field experience includes bat surveys, freshwater macroinvertebrate surveys, fallow deer tagging in Pheonix Park, and trail camera set-up and analysis. KM has prepared several Municipal District Summaries and Stage I Appropriate Assessment Reports.

WMC has a B.Sc. in Applied Freshwater and Marine Biology from Galway-Mayo Institute of Technology. WMC has five years of experience in ecological surveying and in this time, he has covered a wide range of ecological topics including ornithological surveying, bat surveying, badger surveying/exclusions, otter surveying, macroinvertebrate surveying and habitat surveying among others. WMC has also completed the field and report work of numerous planning surveys including Preliminary Ecological Appraisals (PEA), Appropriate Assessment (AA), Natura Impact Statement (NIS) and Ecological Clerk of Works (ECoW) surveys.

1.3 Description of Proposed Development

1.3.1 Site Location

The development site is located in the south-eastern suburb of Cork City, approximately 2km from Cork City Centre, within the South Docklands area. The site is bound by an existing Strategic Housing Development (SHD) (ABP Ref: TA28.309059). to the west, and Centre Park Road to the north. The Proposed Development site is bordered by the Marquee Road to the southwest, and by a pedestrian trail to the southeast. Lee Rowing Club is adjoining the Proposed Development Site to the northeast. The existing SHD is in the early stages of the construction phase and backs directly onto the proposed site. The site is located within a 35-minute walk of Mahon Point, a significant employment centre. The total site area is c.0.84 hectares.

The location of the site is presented in Figure 1 below.

1.3.2 Proposed Development Description

For context, a SHD application was submitted for the adjoining Site and granted permission with conditions in 2021 (ABP Ref: TA28.309059). The new development will include the following.

i. Permission for the construction of 176 no. 1, 2 and 3 bed apartment units in 2 no. blocks, 1 no. creche, 1 no. gym, a retail/café space and all associated ancillary development works.

1.3.3 Drainage and Water Supply

1.3.3.1 Surface water

As outlined in the Infrastructure Design Report (IDR) accompanying this planning application prepared by DBFL Consulting Engineers (2024), the management of surface water for the proposed development has been designed to comply with the

policies and guidelines outlined in the Cork City Development Plan Objectives 2022-2028. The guidelines require the following 4 main criteria to be provided by the design:

Criterion 1: Sustainable Urban Drainage Systems (SUDS) – for any new residential development it is required to incorporate SUDS by providing interception storage and treatment within the green roof, bio-retention/filter drains and green courtyard and garden.

Criterion 2: Discharging – to require that onsite petrol/interceptors and silt traps shall be installed to all significant road projects where surface water otherwise discharges to watercourse, to prevent hydrocarbon pollution of the water.

Criterion 3: Storm Water– satisfied by the development's surface water drainage design, planned flood routing, run-off contained within site and that flood management ensures that measures are implemented to protect property and infrastructure.

Criterion 4: Water quality– to support Irish water in its implementation of water quality for ground, surface, coastal and estuarine. To support mitigation and protection measures for all protected areas and associated source protection plan in line with the Water framework Directives.

In summary the design of the surface water network is aligned with the requirements of the Cork South Docklands Levels Strategy as set out in planning reference: ABP-3090059-20 and as stated by DBFL (2024). The surface water strategy for the proposed development incorporates SuDS features to reduce runoff and all surface water will be directed to the neighbouring SHD development where surface water will be attenuated to a volume of 1:100 years plus 20%. The previously granted SHD application has been designed to accommodate the addition of the subject Site and is under the same ownership, making the linkage of infrastructure possible in this case.

1.3.3.1.1 SUDS

1.3.3.1.1.1 SuDS 1: Extensive Green Roofs

Green roofs are extensive in the design of the development with the inclusion of bioretention areas, green podiums and filter drains included to provide attenuation, treatment and infiltration where possible.

1.3.3.1.1.2 SuDS 2: Attenuation Storage

The use of an approved infiltration/filtration type system to encourage infiltration and treatment of run-off.

1.3.3.1.1.3 SuDS 3: Planted roof area

Inclusion of a planted roof area with plants including mosses, sedums, herbs or grasses over a drainage layer and waterproofing membrane. To provide an intercept to treat, retain and reduce the volume of surface water runoff and reduction of peak flows.

1.3.3.2 Foul Drainage

It is understood that wastewater resulting from the Proposed Development will be treated at Cork City Waste Water Treatment Plant (WWTP) (Licence No. D0033-01) during the operational phase, before discharging to Lough Mahon transitional

waterbody (Enviroguide, 2024). The current capacity of Cork City WWTP will be reduced as a result of the Proposed Development.

Further details on foul water are provided in the below summary which was taken from the IDR report accompanying the proposed development application (DBFL, 2024).

‘’*The proposed developments wastewater will be discharged to the Uisce Eireann 225 mm diameter foul sewer on Marquee Road via the proposed foul water network within the adjacent Fords SHD development.*

All matters relating to wastewater will be agreed with Uisce Eireann. A confirmation of feasibility was received from Irish Water confirming feasibility without need for any upgrade works.’’

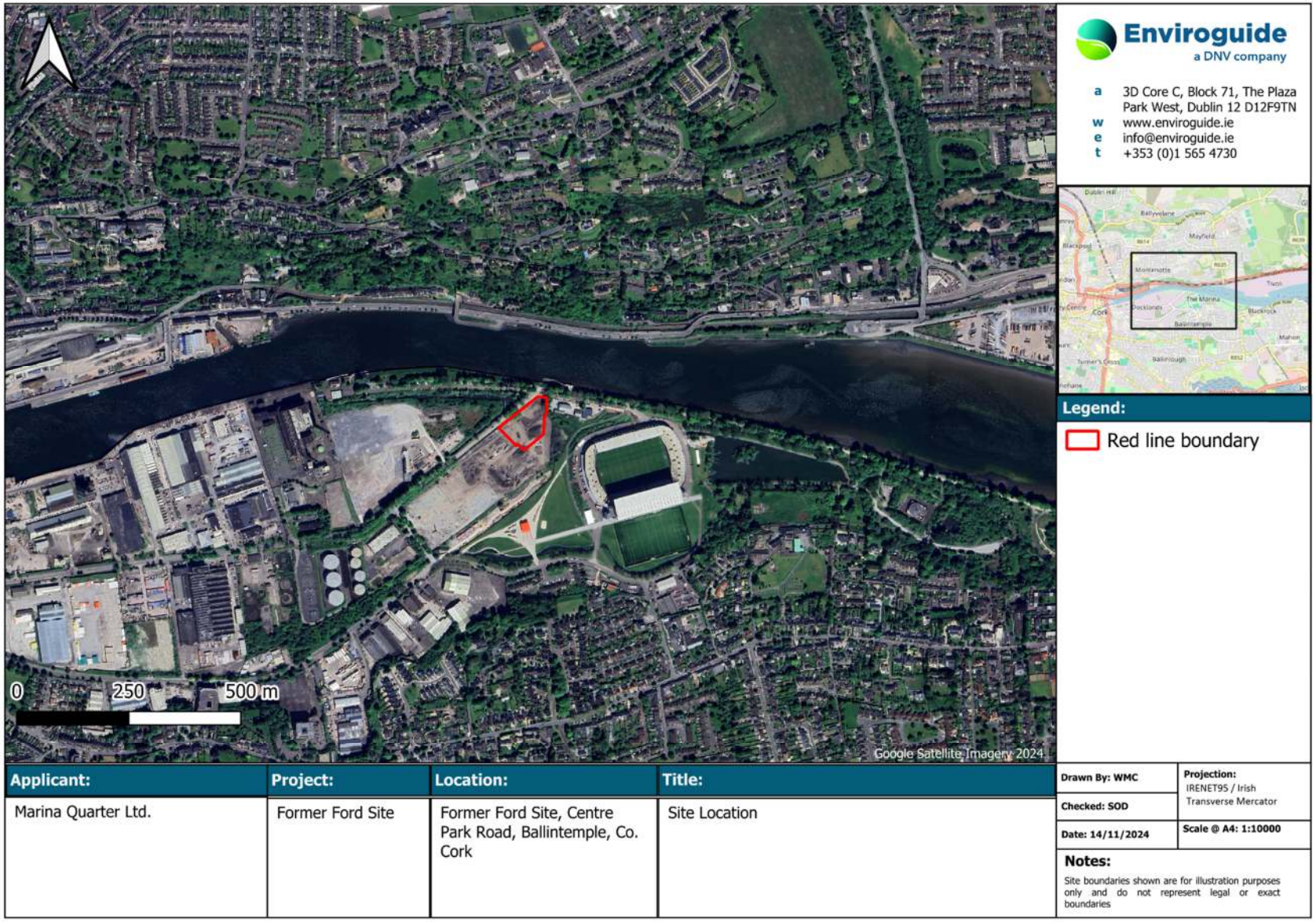

FIGURE 1. SITE LOCATION.

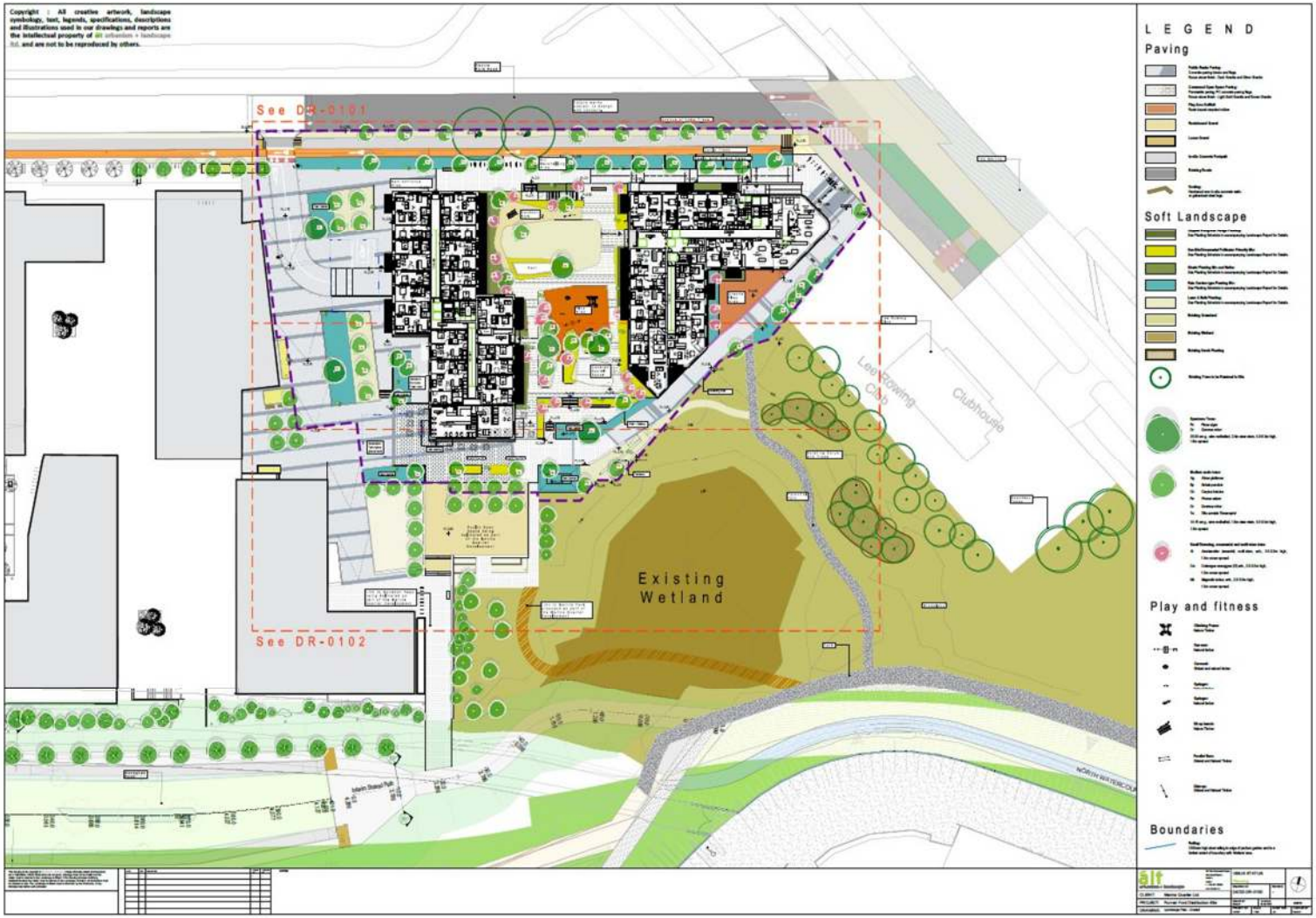

FIGURE 2. PROPOSED SITE LAYOUT (ÁIT, 2024).

2 LEGISLATIVE AND POLICY CONTEXT

2.1 Legislative Background

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of Special Areas of Conservation (SACs) and the Birds Directive (2009/147/EC) seeks to protect birds of special importance by the designation of Special Protection Areas (SPAs). The Habitats Directive has been transposed into Irish law through the EC (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011).

It is the responsibility of each Member State to designate SPAs and SACs, both of which will form part of the Natura 2000 Network, a network of protected sites throughout the European Community. These designated sites are referred to as "Natura 2000 sites" or "European sites". SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the sites; from these the conservation objectives of the site are derived.

An AA is a required assessment to determine the likelihood of significant effects, based on best scientific knowledge, of any plans or projects on European sites. A screening for AA determines whether a plan or project, either alone or in combination with other plans and projects, is likely to have significant effects on a European site, in view of its conservation objectives.

This AA Screening has been undertaken to determine the potential for significant effects on relevant European sites. The purpose of this assessment is to determine, the appropriateness, or otherwise, of the Proposed Development in the context of the conservation objectives of such sites.

2.1.1 Legislative Context

The obligations in relation to Appropriate Assessment have been implemented in Ireland under Part XAB of the Planning and Development Act 2000, as amended ("the 2000 Act"), and in particular Section 177U and Section 177V thereof. The relevant provisions of Section 177U in relation to AA screening have been set out below:

"***177U.—*** *(1) A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.*

(2)…

(3)…

(4) 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.

(5) 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 not required if it can 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."

An Appropriate Assessment is required under Article 6 of the Habitats Directive where a project or plan may give rise to significant effects upon a European site. Paragraph 3 states that:

"*6(3) 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."*

According to the ruling delivered in open court in Luxembourg on 15th June 2023 regarding the interpretation of Article 6(3) of Directive 92/43, the Article must be interpreted as meaning that:

"In order to determine whether it is necessary to carry out an appropriate assessment of the implications of a plan or project for a site, account may be taken of the features of that plan or project which involve the removal of contaminants and which therefore may have the effect of reducing the harmful effects of the plan or project on that site, where those features have been incorporated into that plan or project as standard features, inherent in such a plan or project, irrespective of any effect on the site".

As such, standardised embedded mitigation (such as the use of Sustainable Drainage Systems (SuDS) in large-scale residential developments), that are incorporated into the design of a proposal or project and which may result in a reduction of effects impacting European sites, but where the primary reason of the embedded mitigation is not to protect a European site, are permitted for consideration during the undertaking of AA.

2.2 Policy Context

2.2.1 Cork City Development Plan

Policies and objectives of the Cork County Development Plan 2022 – 2028 that are of relevance to this Screening Report are outlined below:

- Under the EU Freshwater Fish Directive the River Lee is designated as a Salmonoid River from its source to Cork City Waterworks. This imposes an obligation to maintain specific water quality standards and to control pollution. Species of fish found along its length include Brook, Sea Lamprey and Salmon. In addition, the River Lee and its

banks provide habitats, feeding and resting grounds for a variety of protected species of birds, bats and other mammals such as the otter.

- No plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects.

2.2.2 Cork City Biodiversity Action Plan 2021-2026

Cork City Biodiversity Action Plan aims to improve biodiversity through identifying measures to protect and enhance the biodiversity of Cork City. In addition to researching and disseminating information on the biodiversity of Cork City, promoting interest and knowledge of Cork City's biodiversity through training and education, and raising awareness and enjoyment of Cork City's biodiversity by encouraging participation and partnership amongst all.

2.3 Stages of Appropriate Assessment

This AA Screening Report (the 'Screening Report') has been prepared by Enviroguide Consulting. It considers whether the Proposed Development is likely to have a significant effect on a European site and whether a Stage 2 AA is required.

The AA process is a four-stage process. Each stage requires different considerations, assessments and tests to ultimately arrive at the relevant conclusion for each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

The four stages of an AA, can be summarised as follows:

- **Stage 1: *Screening***. The Screening for AA considers whether a plan or project is directly connected to or necessary for the management of a European site, or whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European site in view of its conservation objectives.

- **Stage 2: *Natura Impact Statement (NIS).*** Where Stage 1 determines that significant effects are likely, uncertain or unknown, the preparation of a NIS is required. The NIS must include a scientific examination of evidence and data to classify potential impacts on any European site(s) in view of their conservation objectives in the absence of mitigation. The NIS will identify appropriate mitigation to remove the potential for likely significant adverse effects on any European site(s). If the competent authority determines that the plan or project would have an adverse effect on the integrity of any European site(s) despite mitigation, it can only grant consent after proceeding through stages 3 and 4.

- **Stage 3: *Assessment of alternative solutions***. If the outcome of Stage 2 is negative i.e., adverse impacts to the sites cannot be scientifically ruled out, despite mitigation,

the plan or project should proceed to Stage 3 or be abandoned. This stage examines alternative solutions to the proposal.

- **Stage 4:** ***Assessment where no alternative solutions exist and where adverse impacts remain***. The final stage is the main derogation process examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a European site, where no less damaging solution exists.

The Habitats Directive promotes a hierarchy of avoidance, mitigation, and compensatory measures. First the project should aim to avoid any negative effects on European sites by identifying possible effects early in the planning stage and designing the project to avoid such effects. Second, mitigation measures should be applied, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, a refusal for planning permission may be recommended. In this case, the project will generally only be considered where no alternative solutions are identified and the project is required for IROPI, or, in the case of priority habitats, considerations of health or safety, or beneficial consequences of primary importance for the environment or to other IROPI. Then compensation measures are required for any remaining adverse effects.

3 AA SCREENING METHODOLOGY

3.1 Guidance

This Screening Report has been undertaken in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision);
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPW 1/10 & PSSP 2/10;
- *Communication from the Commission on the precautionary principle* (European Commission, 2000);
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019);
- *Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* Brussels, 28.9.2021 C (European Commission, 2021); and
- *Appropriate Assessment Screening for Development Management, OPR Practice Note PN01, Office of the Planning Regulator March 2021.*

3.2 Screening Steps

Screening for AA involves the following steps:

- Establish whether the plan or project is directly connected with or necessary for the management of a European site;
- Description of the baseline existing environment at the Site of the Proposed Development;
- Identification of relevant European site(s) potentially affected;
- Identification and description of potential effects on the relevant European site(s);
- Assessment of the likely significance of the effects identified on the relevant European site(s);
- Description and characterisation of other projects or plans that in combination with the Proposed Development have the potential for having significant effects on the European site; and
- Exclusion of sites where it can be objectively concluded that there will be no significant effects.

It should be noted that any targeted ecological mitigation measures and/or measures intended or included for the purposes of avoiding adverse effects arising as a result of the Proposed Development on any European site **have not been considered** as part of this Screening Report.

3.3 Desk Study

A desktop study was carried out in May 2024 to collate and review available information, datasets and documentation sources relevant for the completion of this Screening Report. The desktop study relied on the following sources:

- Information on the network of European Sites, boundaries, QIs and conservation objectives, obtained from the National Parks and Wildlife Service (NPWS) at *www.npws.ie*;
- Text summaries of the relevant European sites taken from the respective Standard Data Forms (available at *https://natura2000.eea.europa.eu/*) and Site Synopses (available at *www.npws.ie*);
- Information on waterbodies, catchment areas and hydrological connections obtained from the Environmental Protection Agency (EPA) at www.*gis.epa.ie*;
- Information on bedrock, groundwater, aquifers and their statuses, obtained from Geological Survey Ireland (GSI) at *www.gsi.ie*;
- Satellite imagery and mapping obtained from various sources and dates including Google, Digital Globe, Bing and Ordnance Survey Ireland; and
- Information on the existence of permitted developments, or developments awaiting decision, in the vicinity of the Proposed Development from the Cork City County Council online planning database at Cork City Planning Applications & Enforcement Register (arcgis.com) and the National Planning Database (DHLGH, 2023).

For a complete list of the documents consulted as part of this assessment, see *Section 6 References*.

3.4 Field surveys

A range of field surveys have been carried out at the Site to date. These are summarised in Table 1. For full details on the methods and results of the fields surveys listed, please refer to Chapter 11, Biodiversity of the Environmental Impact Assessment Report (EIAR) accompanying this application under separate cover. All surveys were carried out at the appropriate time of year by suitably qualified ecologists. Results relevant to this Screening Report have been summarised in section 4.1.2.

TABLE 1. FIELD SURVEYS UNDERTAKEN AT THE PROPOSED DEVELOPMENT SITE.

Survey	Surveyor	Dates
Breeding Bird Survey	Enviroguide Consulting (TR)	30th May 2024, 26th June 2024 & 31st July 2024
Habitats & Invasive Species	Enviroguide Consulting (TR)	9th May 2024
Bat Activity Survey	Enviroguide Consulting (TR), (WS), (KM), (CRK), (BMC)	30th of May 2024, 27th of June 2024 & 20th of August 2024

3.5 Identification of Relevant European sites

The Zone of Influence (ZOI) for a project is the area over which ecological features may be affected by changes as a result of a development and associated activities. This is likely to

extend beyond the development site, for example where there are ecological or hydrological links beyond the site boundaries. Furthermore, ZOI in relation to European sites is described as follows in the 'OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management' (OPR, 2021):

> "*The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km).*"

Thus, to identify the European sites that potentially lie within the ZOI of the Proposed Development, a Source-Path-Receptor (S-P-R) method was adopted, as described in OPR PN01 (OPR 2021). This note was published to provide guidance on screening for AA during the planning process, and although it focuses on the approach a planning authority should take in screening for AA, the methodology is also readily applied in the preparation of Screening Reports such as this.

The relevant European sites were identified based on the following:

- Identification of potential sources of effects based on the Proposed Development description and details, including changes to potentially suitable ex-situ habitats at the Site (i.e., habitats utilised by SCI bird species outside of their designated SPAs);
- Use of up-to-date GIS spatial datasets for European designated sites and water catchments – downloaded from the NPWS website (*www.npws.ie*) and the EPA website (*www.epa.ie*) to identify European sites which could potentially be affected by the Proposed Development; and
- Identification of potential pathways between the Site of the Proposed Development and any European sites within the ZOI of any of the identified sources of impacts.
    - The catchment data were used to establish or discount potential hydrological connectivity between the Proposed Development and any European sites.
    - Groundwater, soils, and bedrock information used to establish or discount potential hydrogeological connectivity between the Proposed Development and any European sites.
    - Air and land connectivity assessed based on Proposed Development details and proximity to European sites.
    - Consideration of potential indirect pathways, e.g., impacts to flight paths, *ex-situ* habitats, etc.
- Defining the likely ZOI based on the identified sources of effects and potential pathways between the Proposed Development and any European sites.

3.6 Assessment of Significant Effects

The conservation objectives of the European sites identified to lie within the ZOI were reviewed and assessed in order to establish whether the construction and operation of the Proposed

Development has the potential to have a negative impact on any of the QIs and/or conservation objectives listed for the site.

The assessment framework is taken from the best practice guidelines issued by the European Commission, i.e., "*Assessment of plans and projects significantly affecting Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*".

The potential for significant effects that may arise from the Proposed Development was considered through the use of key indicators:

- Habitat loss or alteration.
- Habitat/species fragmentation.
- Disturbance and/or displacement of species.
- Changes in population density.
- Changes in water quality and resource.

In addition, information pertaining to the conservation objectives of the European sites, the ecology of the designated habitats and species and known or perceived sensitivities of the habitats and species were considered.

3.7 Limitations

One limitation was encountered which may prevent robust conclusions being drawn as to the potential impacts of the Proposed Development on the relevant European sites.

- An extensive search of available datasets for records of rare and protected species within proximity of the Proposed Development has been undertaken as part of this assessment. However, the records from these datasets do not constitute a complete species list. The absence of species from these datasets does not necessarily confirm an absence of species in the area. This limitation is unlikely to be of significance due to the urban brownfield nature of the Site and the ecological surveys carried out on the Site which noted the presence of flora/fauna.

4 STAGE 1 SCREENING ASSESSMENT

4.1 Existing Environment

4.1.1 Desk Study Results

4.1.1.1 Hydrology, Geology and Hydrogeology

The Site is located in the Lee, Cork Harbour and Youghal Bay Catchment (Catchment I.D 19) and in the Glasheen [Corkcity]_SC_010 Sub-catchment (Sub-catchment I.D.19_17) (EPA, 2024). The Lee Estuary Lower is located approximately 30m north of the site and flows east into Lough Mahon located approximately 3.1 km north-east of the Site (EPA, 2024).

The Bride (Cork City) River IE_SW_19B140300 is located approximately 1.5km north of the Site which flows southwest and ultimately discharges to the River Lee (North Channel) IE_SW_060_0950, which flows into the Lee Estuary Lower (EPA, 2024).

The EPA water quality monitoring data for the stations on the Lee Estuary Lower located closest to the Site is summarised in Table 2. The reported Q-value results indicate that water quality in the Lee Estuary Lower in the vicinity of the Site is moderate, the water quality of the more distant Bride (Cork City) River is classified as poor.

TABLE 2. EPA MONITORING STATIONS AND ASSIGNED Q VALUES

EPA Monitoring Station name	Station Code	Location from Site	Distance from Site	Assigned Q value
Lee (Cork) Estuary Lower – Tivoli	TW04003159LE2006	East downstream	330m	3 - 4 "Moderate"
Bride (Cork City) River – M13 Glen Rec. Park	RS19G090400	North-west upstream	1.6km	3 "Poor"

The Site of the Proposed Development is situated on the Lee Valley Gravel (IE_EA_G_094) groundwater body. The bedrock aquifer identified beneath the Site is mapped as "Locally Important – Bedrock which is Moderately Productive only in Local Zones" (Pl) (GSI, 2024).

The Groundwater Vulnerability Rating assigned to groundwater beneath the Site is mapped as "*Moderate" (M)* (GSI, 2024). The quaternary sediments beneath the majority of the Site are mapped as Urban (GSI, 2024). The soil beneath the Site is mapped as "Made - Made Ground" (GSI, 2024). Based on groundwater levels in the Made Ground, the groundwater flows southwest away from the Lee Estuary Lower and towards the open drainage channels at the southeast and northwest of the site. These open drainage channels discharge into the Lee Estuary Lower. However, the volumes of discharge into the open drainage channels are deemed insignificant.

The Waterbody Status for river, groundwater, and transitional water bodies relevant to the Site as recorded by the EPA (2024) in accordance with European Communities (Water Policy) Regulations 2003 (SI no. 722/2003), Part IV of the European Communities Environmental Objectives (Surface Waters) Regulations 2009 and Part IV of the European Communities Environmental Objectives (Groundwater) Regulations 2010, are provided in Table 3.

TABLE 3. WFD RISK AND WATER BODY STATUS

Waterbody Name	Water body; EU code	Location from Site	Distance from Site (km)	WFD water body status (2016-2021)	WFD 3rd cycle Risk Status	Hydraulic Connection to the Site
Surface Water Bodies						
Bride (Cork City) River	IE_SW_19B 140300	North	1.6	Poor	At risk	Upstream tributary of Lee (Cork) Estuary Lower
Transitional Water Bodies						
Lee (Cork) Estuary Lower	IE_SW_060_ 0900	North	0.03	Moderate	At risk	Downstream of the Site
Groundwater Bodies						
Lee Valley Gravels	IE_SW_G_0 94	N/A	N/A	Good	At risk	Underlying groundwater-body

4.1.1.2 Site Drainage

In the previous neighbouring SHD EIAR, an open drainage channel was found along the northwest boundary of the site, and a second open drainage channel was identified along the southeastern edge of the site. Both channels flow northeast. The southern channel flows directly into the Atlantic Pond (350m east of the site), which discharges into the Lee (Cork) Estuary Lower. Historical maps suggest the northern channel is connected to the Tedcastles Channel located on the northern side of Centre Park Road via a culvert under Centre Park Road "The Centre Park Road Culvert". The Tedcastles channel discharges to the Lee Estuary Lower via a pond in the Tedcastles site.

During a site walkover in September 2019, it was noted that the Tedcastles pond is controlled by a one-way valve which is designed to stop water flowing back into the pond during high tide, however, during the site visit the valve was not functioning, and the pond was seen to fill with water from the River Lee during high tide.

4.1.2 Relevant Field Survey results

4.1.2.1 Fauna

4.1.2.1.1 Breeding Bird Surveys

To inform the evaluation of the on-Site habitats for breeding birds, three breeding bird survey visits were made to the Site and surrounding areas during the 2024 breeding season, between May and July. The ZOI in relation to birds was set at 500m based on the Proposed Development description and the avifauna species most likely to be encountered on Site and in the surrounding hinterland. The ZOI was chosen with cognisance to guidelines set out by the Bird Survey & Assessment Steering Group (2022) and all surveys were carried out by experienced and suitably qualified ornithologists (TR & BMc) with c. 20 years' experience between them in their field.

Breeding Bird Surveys were carried out in accordance with and adapted from standard literature and guidelines set out in for example Gilbert et. al. (1998), Bibby et al (2000), Gillings et al (2007) and Birdwatch Ireland & National Parks and Wildlife Service (2012), which has subsequently been adapted into guidelines for ecological consultants by the Bird Survey & Assessment Steering Group. (2022).

No bird species of Special Conservation Interest of relevant designated areas (Cork Harbour SPA) were recorded on Site. One SCI species of Cork Harbour SPA, Grey Heron (*Ardea cinerea*), was confirmed as breeding off-Site c.430m to the east of the Site boundary at Atlantic Pond. One observation of a foraging individual juvenile was made in the swamp area directly adjacent to the Site during surveys.

The nature of the small scale of the swamp area adjacent to the Site and the current favourable conservation status of Grey Heron (Gilbert et al., 2021), coupled with the extensive availability of suitable breeding and roosting habitat within the broader surrounds of the Site mean the conservation objectives of Cork harbour SPA are assessed as not being affected by the Proposed Development as a result of the presence of foraging Grey Heron in the swamp area adjoining the Site.

4.2 Identification of Relevant European Sites

4.2.1 Potential Sources of Impacts

The Proposed Development is not directly connected with or necessary to the management of European sites. However, the following elements of the Proposed Development were identified and assessed for their potential to cause likely significant effects on European sites.

Construction Phase (*Estimated duration: **18-24 months***)

- Uncontrolled releases of dust, sediments and/or other pollutants to air due to earthworks;
- Surface water run-off containing silt, sediments and/or other pollutants into nearby waterbodies or surface water network;
- Surface water run-off containing silt, sediments and/or other pollutants into the local groundwater;
- Waste generation during the Construction Phase comprising soils and construction wastes;
- Increased noise, dust and/or vibrations as a result of construction activity;
- Increased dust and air emissions from construction traffic;
- Increased lighting in the vicinity as a result of construction activity; and
- Increased human presence and activity as a result of construction activity.

Operational Phase *(Estimated duration: Indefinite)*

- Surface water drainage from the Site of the Proposed Development;
- Foul water from the Proposed Development;
- Increased lighting at the Site and in the vicinity emitted from the Proposed Development; and
- Increased human presence and activity at the Site and in the vicinity as a result of the Proposed Development.
- Increased impermeable surfaces due to the access roads and houses that will result in a reduction of recharge to the underlying aquifer.
- Increased risk of bird collisions with Proposed Development.

4.2.2 Potential Pathways to European Sites

For the above listed potential sources of effects to have the potential to cause likely significant effects on any European site, a pathway between the source of potential effects (i.e., the Site of the Proposed Development) and the receptor is required. Potential impact pathways are discussed in the following sections in the context of the identified impact sources as identified in section 4.2.1.

4.2.2.1.1 Hydrological pathways

The Site is within 100m of the Lee (Cork) Estuary Lower transitional waterbody. There is a risk of runoff with entrained sediment or other contaminants from groundworks areas and stockpiled soils entering the Lee (Cork) Estuary Lower transitional waterbody via overland flow or via existing surface water drainage within the Site. The excavation, handling, stockpiling, reprofiling and removal offsite of soils and subsoils could result in generation of runoff with entrained sediment or other contaminants to the nearby Lee (Cork) Estuary. This contamination may flow via the transitional waterbody to European sites located in the vicinity.

Great Island Channel SAC (001058) is located c. 6.45km from the Proposed Development. As a result of this substantial distance and the assimilative effects of the Lee (Cork) Estuary Lower transitional waterbody, it has been foreseen that there will be no potential for a significant hydrological pathway to be established between the Proposed Site and this European site.

Cork Harbour SPA (004030) is located 1.6km from the Proposed Site. Due to the potential for surface water runoff from the contaminated soil to enter the nearby transitional waterbody and the proximity of the Site to this SPA, it has been determined that a potential hydrological pathway may be established during Construction Phase between the Proposed Site and the nearby **Cork Harbour SPA (004030)** as a result of Site works.

4.2.2.1.2 Hydrogeological pathways

Based on groundwater levels in the made ground, the groundwater flow direction has been inferred to be generally to the southwest away from the Lee Estuary Lower and towards the open drainage channels which flow along the southeast and northwest of the site. Hence groundwater in the made ground appears to drain into the surrounding open drainage channels which ultimately discharge into the Lee Estuary Lower. However, the volumes of discharge into the open drainage channels are not likely to be significant.

The difference in groundwater levels between the Lee Valley gravel and Made ground suggests that hydraulic continuity between the two units is limited. The layer of silt between the two units is considered to act as at least an aquitard, limiting movement from one body of water to the other.

The potential impact from this pathway upon **Cork Harbour SPA (004030)** is deemed imperceptible, due to the mobilisation of any contamination into the Lee Valley Gravel and the dilution effect of contaminants after dischargement into Lee Estuary Lower. As such, it is considered that the likely ZOI via hydrogeological pathways is limited to the immediate habitats and shoreline adjacent to the Proposed Site.

4.2.2.1.3 Air and land pathways

The likely ZOI via air and land pathways is considered to be limited to surrounding areas within approx. 200-300m from the Site boundary for any noise and dust sources, depending on prevailing weather conditions. Additionally, light spill is considered to be limited to areas within the Site and habitats immediately adjacent to the boundaries. Under these considerations, no European sites are linked to the Site via air and land pathways due to the relatively small scale of the Proposed Development and the distance between the Site and nearest European site of **Cork Harbour SPA (004030)** (1.6km East).

4.2.2.2 Indirect Pathways

An increased risk of bird fatalities as a result of collision will result from the Proposed Development. A small number of SCI species of Cork Harbour SPA, Including Herring Gull, Lesser Black-backed Gull, Grey Heron and Cormorant were recorded in flight close to the Site, Cormorant being the only SCI species to be observed travelling through the Site footprint during Site visits in 2024. Most commuting activity was by Gull species, and this occurred c.20-50m to the north of the Site in an east west direction over Cork Harbour transitional waterbody and birds were not observed associating with the Site area.

4.2.3 Relevant European sites

A European site will only be at risk from likely significant effects where a S-P-R link exists between the Proposed Development Site and the European site. All of the European sites considered under the S-P-R method are listed in Table 4, however only one European site was identified to have a S-P-R link of note to the Proposed Development Site (Cork Harbour SPA (004030)). This site is highlighted in green in the below.

TABLE 4. EUROPEAN SITES CONSIDERED WITH THE SOURCE-PATHWAY-RECEPTOR (S-P-R) METHOD TO ESTABLISH NOTABLE LINKS BETWEEN THE SOURCES OF EFFECTS ARISING FROM THE PROPOSED DEVELOPMENT, AND ANY RELEVANT EUROPEAN SITES. THOSE SITES WITH NOTABLE S-P-R LINKS ARE HIGHLIGHTED IN GREEN (IF ANY). QUALIFYING INTERESTS (QIS) TAKEN FROM THE RELEVANT CONSERVATION OBJECTIVES DOCUMENTS (AS REFERENCED) AND/OR THE STANDARD DATA FORMS (EEA, 2024)[1].

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Potential Pathways
Special Areas of Conservation (SAC)		
Great Island Channel SAC (001058) Linear Distance to Proposed Development: approx. 6.45 km	**As per NPWS (2014a)** **Habitats** • Mudflats and sandflats not covered by seawater at low tide [1140] • Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]	Hydrological via the River Lee, deemed insignificant due to distance.
Special Protection Areas (SPAs)		
Cork Harbour SPA (004030) Linear Distance to Proposed Development: approx. 1.6km	**QIs as per NPWS (2014b)** • Little Grebe (*Tachybaptus ruficollis*) [A004] • Great Crested Grebe (*Podiceps cristatus*) [A005] • Cormorant (*Phalacrocorax carbo*) [A017] • Grey Heron (*Ardea cinerea*) [A028] • Shelduck (*Tadorna tadorna*) [A048] • Wigeon (*Anas penelope*) [A050] • Teal (*Anas crecca*) [A052] • Pintail (*Anas acuta*) [A054] • Shoveler (*Anas clypeata*) [A056] • Red-breasted Merganser (*Mergus serrator*) [A069] • Oystercatcher (*Haematopus ostralegus*) [A130] • Golden Plover (*Pluvialis apricaria*) [A140] • Grey Plover (*Pluvialis squatarola*) [A141] • Lapwing (*Vanellus vanellus*) [A142] • Dunlin (*Calidris alpina*) [A149] • Black-tailed Godwit (*Limosa limosa*) [A156] • Bar-tailed Godwit (*Limosa lapponica*) [A157] • Curlew (*Numenius arquata*) [A160] • Redshank (*Tringa totanus*) [A162] • Black-headed Gull (*Chroicocephalus ridibundus*) [A179]	Direct hydrological, pathway. Indirect pathway present via potential collision risk for SCI species.

[1] Where applicable, the full species list included in this table is as per the latest updated information as indicated, so either the Conservation Objectives (CO) document for the site, or the latest Standard Data Form (SDF) (EEA, 2024). For SDF updates, CO are not yet available for the newly added species but are assumed, for the purposes of assessment, to follow the same format as for other feature species.

Site Name & Site Code	Qualifying Interests (*= priority habitats)	Potential Pathways
	• Common Gull (*Larus canus*) [A182] • Lesser Black-backed Gull (*Larus fuscus*) [A183] • Common Tern (*Sterna hirundo*) [A193] • Wetland and Waterbirds [A999]	

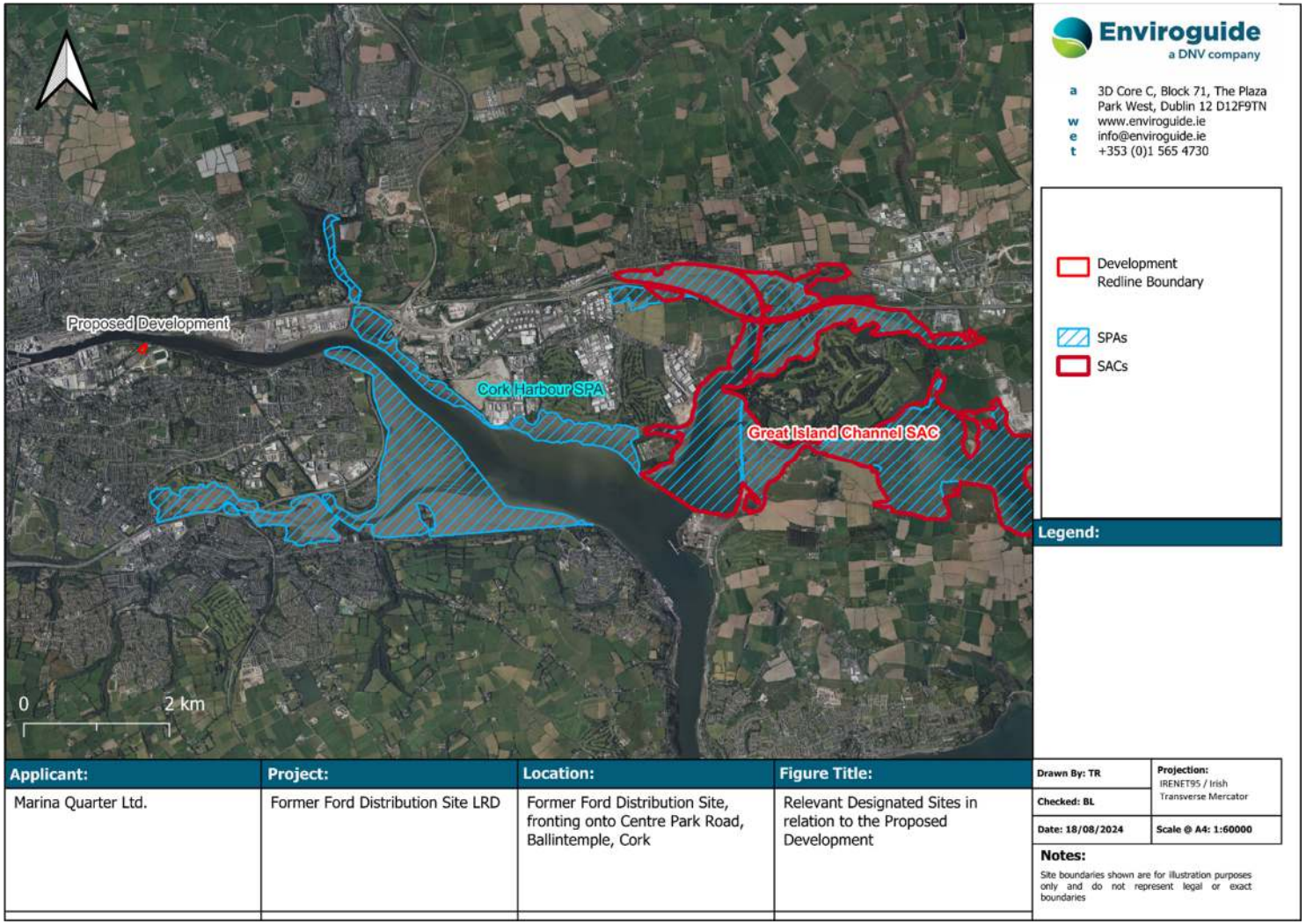

FIGURE 3. LOCATION OF EUROPEAN SITES RELATIVE TO THE PROPOSED DEVELOPMENT.

4.2.3.1 Cork Harbour SPA (004030)

The following descriptions of the Cork Harbour SPA are extracted from the Site Synopsis (NPWS 2014b) for the site:

> *"Cork Harbour is a large, sheltered bay system, with several river estuaries - principally those of the Rivers Lee, Douglas, Owenboy and Owennacurra. The SPA site comprises most of the main intertidal areas of Cork Harbour, including all of the North Channel, the Douglas River Estuary, inner Lough Mahon, Monkstown Creek, Lough Beg, the Owenboy River Estuary, Whitegate Bay, Ringabella Creek and the Rostellan and Poulnabibe inlets.*
>
> *Owing to the sheltered conditions, the intertidal flats are often muddy in character. These muds support a range of macro-invertebrates, notably Macoma balthica, Scrobicularia plana, Hydrobia ulvae, Nepthys hombergi, Nereis diversicolor and Corophium volutator. Green algae species occur on the flats, especially Ulva spp. Cordgrass (Spartina spp.) has colonised the intertidal flats in places, especially where good shelter exists, such as at Rossleague and Belvelly in the North Channel. Salt marshes are scattered through the site and these provide high tide roosts for the birds. Some shallow bay water is included in the site. Rostellan Lake is a small brackish lake that is used by swans throughout the winter. The site also includes some marginal wet grassland areas used by feeding and roosting birds.*
>
> *Cork Harbour is of major ornithological significance, being of international importance both for the total numbers of wintering birds (i.e. > 20,000) and also for its populations of Black-tailed Godwit and Redshank. In addition, it supports nationally important wintering populations of 22 species, as well as a nationally important breeding colony of Common Tern. Several of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Little Egret, Golden Plover, Bar-tailed Godwit, Ruff, Mediterranean Gull and Common Tern. The site provides both feeding and roosting sites for the various bird species that use it. Cork Harbour is also a Ramsar Convention site and part of Cork Harbour SPA is a Wildfowl Sanctuary."*

4.2.3.2 Qualifying Interests and Conservation Objectives

The QIs/SCIs and their respective conservation objectives for each of the relevant European site(s) are detailed in Table 5 below.

TABLE 5. QUALIFYING INTERESTS (QIS) / SPECIAL CONSERVATION INTERESTS (SCIS) AND THEIR CONSERVATION OBJECTIVES FOR THE RELEVANT EUROPEAN SITES. THE CONSERVATION STATUS OF EACH QI / SCI WAS SOURCED FROM THE RELEVANT STANDARD DATA FORM(S) (SOURCE: EEA (2024)), AND THE LATEST NATIONAL STATUS IS TAKEN FROM THE LATEST ARTICLE 17 REPORT (NPWS, 2019A & 2019B) AND BOCCI[2] RESPECTIVELY.

QI / SCI (* = priority habitat)	Conservation Status	BoCCI Status	Conservation Objective
Cork Harbour SPA (004030)			
Little Grebe (*Tachybaptus ruficollis*) [A004]	Least Concern	Green	To maintain the favourable conservation condition of Little Grebe in Cork Harbour SPA.
Great Crested Grebe (*Podiceps cristatus*) [A005]	Least Concern	Green	To maintain the favourable conservation condition of Great Crested Grebe in Cork Harbour SPA.
Cormorant (*Phalacrocorax carbo*) [A017]	Least Concern	Amber	To maintain the favourable conservation condition of Cormorant in Cork Harbour SPA.
Grey Heron (*Ardea cinerea*) [A028]	Least Concern	N/A	To maintain the favourable conservation condition of Grey Heron in Cork Harbour SPA.
Shelduck (*Tadorna tadorna*) [A048]	Least Concern	Amber	To maintain the favourable conservation condition of Shelduck in Cork Harbour SPA.
Wigeon (*Anas penelope*) [A050]	Least Concern	Amber	To maintain the favourable conservation condition of Wigeon in Cork Harbour SPA.
Teal (*Anas crecca*) [A052]	Least Concern	Amber	To maintain the favourable conservation condition of Teal in Cork Harbour SPA.
Pintail (*Anas acuta*) [A054]	Least Concern	Amber	To maintain the favourable conservation condition of Pintail in Cork Harbour SPA.
Shoveler (*Anas clypeata*) [A056]	Least Concern	Red	To maintain the favourable conservation condition of Shoveler in Cork Harbour SPA.
Red-breasted Merganser (*Mergus serrator*) [A069]	Near Threatened	Amber	To maintain the favourable conservation condition of Red-breasted Merganser in Cork Harbour SPA.
Oystercatcher (*Haematopus ostralegus*) [A130]	Vulnerable	Red	To maintain the favourable conservation condition of Oystercatcher in Cork Harbour SPA.

[2] Birds of Conservation Concern in Ireland (BOCCI) 2020-2026 (Gilbert, Stanbury & Lewis, 2021). The colours represent the species designation on the various BOCCI lists.

Golden Plover (*Pluvialis apricaria*) [A140]	Least Concern	Red	To maintain the favourable conservation condition of Golden Plover in Cork Harbour SPA.
Grey Plover (*Pluvialis squatarola*) [A141]	Least Concern	Red	To maintain the favourable conservation condition of Grey Plover in Cork Harbour SPA.
Lapwing (*Vanellus vanellus*) [A142]	Vulnerable	Red	To maintain the favourable conservation condition of Lapwing in Cork Harbour SPA.
Dunlin (*Calidris alpina*) [A149]	Least Concern	Red	To maintain the favourable conservation condition of Dunlin in Cork Harbour SPA.
Black-tailed Godwit (*Limosa limosa*) [A156]	Vulnerable	Red	To maintain the favourable conservation condition of Black-tailed Godwit in Cork Harbour SPA.
Bar-tailed Godwit (*Limosa lapponica*) [A157]	Least Concern	Red	To maintain the favourable conservation condition of Bar-tailed Godwit in Cork Harbour SPA.
Curlew (*Numenius arquata*) [A160]	Vulnerable	Red	To maintain the favourable conservation condition of Curlew in Cork Harbour SPA.
Redshank (*Tringa totanus*) [A162]	Least Concern	Red	To maintain the favourable conservation condition of Redshank in Cork Harbour SPA.
Black-headed Gull (*Chroicocephalus ridibundus*) [A179]	Least Concern	Amber	To maintain the favourable conservation condition of Black-headed Gull in Cork Harbour SPA.
Common Gull (*Larus canus*) [A182]	Least Concern	Amber	To maintain the favourable conservation condition of Common Gull in Cork Harbour SPA.
Lesser Black-backed Gull (*Larus fuscus*) [A183]	Least Concern	Amber	To maintain the favourable conservation condition of Lesser Black-backed Gull in Cork Harbour SPA.
Common Tern (*Sterna hirundo*) [A193]	Least Concern	Amber	To maintain the favourable conservation condition of Common Tern in Cork Harbour SPA.

4.3 Assessment of Likely Significant Effects

The following sections discuss the potential for likely significant effects on the relevant European site(s), taking into consideration the QIs, SCIs and SSCOs (where available), and assesses whether the Proposed Development has the capacity to adversely affect the integrity of this European site. Furthermore, due consideration shall be given to species not formally identified but which may be present within Cork Harbour SPA and adversely effected by the Proposed Development, provided that those potential impacts are likely to affect the conservation objectives of the designated site. The potential for significant effects that may arise from the Proposed Development was considered through the use of key indicators as detailed in section 3.6.

4.3.1 Habitat Loss and Alteration

There will be no direct habitat loss as the Proposed Development is located c. 1.6km from the **Cork Harbour SPA (004030)**. However, there may be potential indirect habitat loss and alteration as a result of the Proposed Development. There may be potential hydrological impacts arising from the Site and impacting on **Cork Harbour SPA (004030)** as specified in section 4.2.2.1.1 above. This may include pollution, predominantly in the form of contaminated surface water runoff originating from the contaminated soil on the Site of the Proposed Development impacting on the wetland habitat of the **Cork Harbour SPA (004030)**, potentially altering the forage of SCI species found within this habitat such as species of molluscs, crustaceans, polychaetes and oligochaetes on which the SCI species rely as food. Therefore, the Proposed Development has the potential to alter the wetlands habitat of the **Cork Harbour SPA (004030)** through the influx of contaminated surface water.

4.3.2 Habitat / Species Fragmentation

There will be no direct habitat/species fragmentation as a result of the Proposed Development being located at distance from the **Cork Harbour SPA (004030)**. However, siltation arising from the Site of the Proposed Development may have an impact on the alteration of wetland habitats and may cause habitat fragmentation as a result. Species fragmentation of SCI species is unlikely as they are less reliant on continuous stretches of habitat and can easily commute to another more suitable habitat for foraging.

Therefore, the Proposed Development may result in indirect habitat fragmentation of the wetlands of **Cork Harbour SPA (004030)**.

4.3.3 Changes in Water Quality and Resource

There is a potential hydrological pathway between the Site and the **Cork Harbour SPA (004030)**. The Construction Phase of the Proposed Development has the potential to produce a source of pollutants, the most emphasised of which being surface water runoff contaminated by soil, which may be transferred by hydrological pathway to the **Cork Harbour SPA (004030)** via the Lee (Cork) Estuary Lower located 30m north of the Site's boundary. While changes in water quality may not directly affect the SCI bird species of the **Cork Harbour SPA (004030)**, it may impact upon the prey availability for SCI bird species, as mentioned above (section **Error! Reference source not found.**), and may cause them to move elsewhere in search of an area with a better concentration of forage.

4.3.4 Disturbance and / or Displacement of Species

As stated in section **Error! Reference source not found.**, there are no foreseen air and land pathways linking the Site and the **Cork Harbour SPA (004030)**. This is due to the already high baseline of noise emanating from the urban area in which the Site is located. The Site is also located 1.6km from the **Cork Harbour SPA (004030)**, a substantial distance which will buffer most significant noise and vibration impacts the Site may produce.

However, as mentioned in section **Error! Reference source not found.**, potential contaminated runoff arising from the Site of the Proposed Development has the potential to alter the wetlands habitat on which the SCI species rely on for forage and may cause them to commute elsewhere in search of a better foraging area. Therefore, the Construction Phase at the Site may have the potential to cause indirect displacement on SCI species of the **Cork Harbour SPA (004030)**.

4.3.5 Changes in Population Density

There may be a potential for collision risk between SCI species of the **Cork Harbour SPA (004030)** and the Proposed Development to occur.

4.3.5.1 Collision Risk

In relation to collision risk, as outlined by Martin (2011) birds are vulnerable to collision with objects that seem obvious or conspicuous to humans, such as buildings, and it is unclear as to why this occurs, even under conditions of apparent clear visibility. It is suggested that bird collisions may be the result of factors such as the use of binocular and lateral vision, making commuting birds periodically blind in the direction of travel. Birds are at highest risk from objects such as buildings when they protrude un-naturally above the surrounding natural vegetation.

Some of the most at-risk groups (classified as 'medium' and 'high' collision risk species) include wader species; waterfowl such as geese, swan and duck species; and some raptor species. Species such as Redshank (*Tringa tetanus*) and Black-tailed Godwit (*Limosa limosa*) are classed of Medium susceptibility to collision with powerlines. Gulls such as Herring Gull (*Larus argentatus*), and Lesser Black-backed Gull (*Larus fuscus*) are classed as 'low' collision risk species due to their superior manoeuvrability when flying (Eirgrid, 2012).

Tall structures such as electrical pylons, wind farms and tall buildings can lead to fatal collisions with commuting bird species. This is particularly true for those species considered to be "poor" fliers, with relatively low manoeuvrability compared to other more agile bird species (see Eirgrid, 2012).

4.3.5.2 Likelihood of Collision Impacts

The physical location of buildings and structures can influence the likelihood of bird collisions, with structures placed on or near areas regularly used by large numbers of feeding, breeding, or roosting birds, or on local flight path; such as those located between important foraging and roosting areas, can present a higher risk of collision.

The Site itself is located within an urban area and is not deemed to be located in a sensitive area in terms of bird flight paths i.e., it is not located along the coast, or adjacent to any SPAs designated for wetland bird populations. While wintering bird species have the potential to use the Lee (Cork) Estuary Lower for commuting, they are likely to remain within the bounds of the estuary as this provides a clearer path for commuting rather than commuting over the built-up city area.

4.3.5.3 Building Height

The Proposed Development entails the construction of 2 no. apartment blocks ranging in height from 7 to 10 storeys over podium level. Although the structures are relatively tall, they are located in an already built-up area with the substantial Páirc Uí Chaoimh

GAA grounds being located downstream on the same riverbank and less than 100m from the Proposed Development. Due to this, the risk of migrating birds colliding with the structure due to its height is deemed to be negligible (Migrating species tend to commute far above this with Swans and Geese flying up to 2500ft (ca.750m) during migration along Irish Coasts (Irish Aviation Authority, 2020). Birds that fly over the Site to commute between feeding grounds at various locations would fly lower than this, however, once the proposed structures are made of visible materials i.e., not entirely comprised of reflective materials such as glass, the birds would simply fly around or over them.

4.3.5.4 Building Appearance

The overall façades of the proposed buildings are well broken up, with a varied material composition interspersing any reflective areas. These architectural design features provide important visible cues as to the presence and extent of the proposed structures to any commuting/foraging bird species should they be in the vicinity of the Site. This overall visual heterogeneity of the building façades will be sufficient to further ensure that the risk of bird collisions as a result of the Proposed Development is negligible. These architectural design features are part of the overall design of the Proposed Development and are not considered to represent specific mitigation measures to prevent collisions, however, they will contribute to the overall effect in this regard. It is noted that birds are not deemed to be at any particular risk of collisions with the proposed buildings at the Site.

As such, based on the heights of the proposed structures, their physical appearance and the nature of their location, it is deemed that birds including any 'at-risk' species, do not have the potential to be impacted by the Proposed Development in terms of collisions and the risk is therefore deemed to be **imperceptible** in the absence of any mitigation.

As a result of the above, it has been foreseen that changes in population density will not occur as a result of the construction of the Proposed Development.

4.3.6 Potential for In-combination Effects

Although the Proposed Development is not considered to have the capacity to cause significant effects on any European sites alone, it is important to consider the potential for cumulative effects with other plans and/or projects. The following sections outline existing granted or pending planning permissions in the vicinity of the Proposed Development and assess the potential for adverse in-combination effects on any European sites.

4.3.6.1 Existing Planning Permissions

A search of planning applications located within a 300m radius of the Site of the Proposed Development was conducted using online planning resources such as the National Planning Application Database (NPAD) (MyPlan.ie) and Cork City Council Planning Applications online map. Any planning applications listed as granted or decision pending from within the last five years were assessed for their potential to act in-combination with the Proposed Development and cause likely significant effects on the relevant European sites. Long-term developments granted outside of this time period were also considered where applicable. Table 6 below lists the projects

considered, all of which were ruled out as having the ability to cause likely significant effects on European Sites.

TABLE 6. EXISTING PLANNING PERMISSIONS WITHIN THE VICINITY OF THE PROPOSED DEVELOPMENT

Planning Reference	Planning Authority	Status	Location
TA28.313277	**Cork City Council**	**Live Case**	**Former Tedcastles Yard, Centre Park Road and the Marina, Cork**
Development Description Demolition of existing structures, construction of 823 no. apartments, creche and associated site works. **Potential for In-combination effects** The Natura Impact Statement provided for this Development states: 'It has been objectively concluded following an examination, analysis and evaluation of the relevant information, including in particular the nature of the predicted effects from the Proposed Development and with the implementation of the mitigation measures proposed, that the construction and operation of the Proposed Development will not adversely affect (either directly or indirectly) the integrity of any European site, either alone or in combination with other plans or projects. There is no reasonable scientific doubt in relation to this conclusion. The competent authority will make the final determination in this regard.			
TA28.309059	**Cork City Council**	**Permission Granted**	**SHD. The Former Ford Distribution Site, Fronting on to Centre Park Road, Marquee Road and Monahan's Road, Cork.**
Development Description Demolition of existing structures, 10 year permission for the construction of 1,002 no. apartments, childcare facilities and associated site works. **Potential for In-combination effects** The Natura Impact Statement provided for this Development states: Following an Appropriate Assessment, it has been ascertained that the Proposed Development, individually or in combination with other plans or projects would not adversely affect the integrity of the Cork Harbour SPA and Great Island Channel SAC, or any other European site, in view of the sites's Conservation Objectives'.			

4.3.6.2 Relevant Policies and Plans

The local policies and plans detailed in section 2.2 above were reviewed and considered for possible in-combination effects with the Proposed Development. Each of these plans has undergone AA, and where potential for likely significant effects has been identified (e.g., in the case of the Cork County Development Plan), an NIS has been prepared which identifies appropriate mitigation. As such, it is considered that the plans and policies listed will not result in in-combination effects with the Proposed Development. The Cork County Development Plan 2022-2028 has directly addressed the protection of European sites and biodiversity through specific objectives. The above listed plans are not being relied upon to rule out potential significant effects on European sites.

TABLE 7. SUMMARY OF IMPACT ASSESSMENT ON EUROPEAN SITES AS A RESULT OF THE PROPOSED DEVELOPMENT.

Site	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	In-combination effects	Stage 2 AA Required
SAC							
Great Island Channel SAC (001058)	No	No	No	None	None	None	NO
SPA							
Cork Harbour SPA (004030)	No	**Yes**	**Yes**	None	**Yes**	None	**Yes**

5 APPROPRIATE ASSESSMENT SCREENING CONCLUSION

The Proposed Development at Centre Park Road, Ballintemple, Cork has been assessed taking into account:

- The nature, size and location of the proposed works and possible impacts arising from the construction works.
- The QIs and conservation objectives of the European sites.
- The potential for in-combination effects arising from other plans and projects.

In conclusion, upon the examination, analysis and evaluation of the relevant information and applying the precautionary principle, it is concluded by the authors of this report that the possibility **cannot be excluded** that the Proposed Development will have a significant effect on any of the European sites listed below:

- *Cork Harbour SPA (004030)*

On the basis of the screening exercise carried out above, it can be concluded, on the basis of the best scientific knowledge available and objective information, that the possibility of any significant effects on the above listed European sites, whether arising from the project itself or in combination with other plans and projects, cannot be excluded in light of the above listed European sites' conservation objectives. Thus, there is a requirement to proceed to Stage 2 of the Appropriate Assessment process; and a NIS has been prepared and accompanies this submission under separate cover.

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