



POINT BRIDGE AND TOM CLARKE BRIDGE WIDENING PROJECT



Appropriate Assessment Screening Report



May 2024



Appropriate Assessment Screening Report

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1. INTRODUCTION

1.1 Introduction

Roughan & O'Donovan (ROD) was appointed by Dublin City Council to produce an Appropriate Assessment (AA) Screening Report in respect of the Point Bridge and Tom Clarke Bridge Widening Project ("the Proposed Development") in Dublin City.

The AA Screening Report is intended to determine whether or not the Proposed Development, either individually or in combination with other plans or projects, in view of best scientific knowledge, is likely to have a significant effect on areas designated as being of European importance for nature conservation ("European sites"), thereby enabling Dublin City Council, as the Competent Authority in this case, to fulfil its obligations under Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive").

This document comprises the AA Screening Report in respect of the Proposed Development and has been prepared by ROD on behalf of Dublin City Council in accordance with the requirements of the Habitats Directive, as transposed into Irish law by Part XAB of the Planning and Development Act, 2000 (as amended) ("the Planning and Development Act") and by the European Communities (Birds and Natural Habitats) Regulations 2011 as amended (S.I. No.477 of 2011) ("the Habitats Regulations"), including Part 5 thereof). The aim of this AA Screening Report is to inform and assist the competent authority in determining whether or not the Proposed Development, either individually or in combination with other plans and projects, has the potential to significantly affect one or more European sites in view of their Conservation Objectives.

It is the considered opinion of ROD, as the author of this AA Screening Report, that the Proposed Development, either individually or in combination with other plans or projects, in view of best scientific knowledge, has the potential to result in likely significant effects on six European sites, namely The South Dublin Bay and River Tolka SPA, The North Bull Island SPA, The North Dublin Bay SAC, The North-west Irish Sea SPA, The Howth Head Coast SPA and The Dalkey Islands SAC. Therefore, AA is required in respect of the Proposed Development.

1.2 Competent Experts

The AA Screening Report was prepared by Mark Gilligan and reviewed by Patrick O'Shea. Mark is an Ecologist with a years' experience in ecological consultancy and wildlife conservation. He holds a MSc in Applied Ecology from the University of Gloucestershire, Cheltenham and is a Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Patrick is a Principal Ecologist with over ten years' experience in consultancy and research. He holds a B.A. (Mod) Hons. in Botany from Trinity College Dublin and a MSc. in Ecological Management & Conservation Biology from Queen's University Belfast. Patrick is a Full member of CIEEM.

1.3 Legislative Context

Council Directive 92/43/EEC of the 21st May 1992 on the conservation of natural habitats of wild fauna and flora (“the Habitats Directive”) and Directive 2009/147/EC of the European Parliament and of the Council of the 30th November 2009 on the conservation of wild birds (“the Birds Directive”) list habitats and species which are, in a European context, important for conservation and in need of protection. This protection is afforded in part through the designation of sites which support significant examples of habitats or populations of species. (“European sites”). Sites designated for wild birds are termed “Special Protection Areas” (SPAs) and sites designated for natural habitat types or other species are termed “Special Areas of Conservation” (SACs). The complete network of European sites is referred to as “Natura 2000”.

In order to ensure the protection of European sites in the context of land use planning and development, Article 6(3) of the Habitats Directive provides for the assessment of the implications of plans and projects for European sites, as follows:

“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 site¹ 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.”

In Case C-323/17[§34], *People Over Wind*, the Court of Justice of the European Union (‘the CJEU’) referred to the nature of the test to be applied in making a screening determination as follows:

“[...] it is settled case-law that Article 6(3) of the Habitats Directive makes the requirement for an appropriate assessment of the implications of a plan or project conditional on there being a probability or a risk that the plan or project in question will have a significant effect on the site concerned. In the light, in particular, of the precautionary principle, such a risk exists if it cannot be excluded on the basis of objective information that the plan or project will have a significant effect on the site concerned (judgment of 26 May 2011, Commission v Belgium, C-538/09, EU:C:2011:349, paragraph 39 and the case-law cited). The assessment of that risk must be made in the light inter alia of the characteristics and specific environmental conditions of the site concerned by such a plan or project (see, to that effect, judgment of 21 July 2016, Orleans and Others, C-387/15 and C-388/15, EU:C:2016:583, paragraph 45 and the case-law cited).”

Further clarification on the use of mitigation measures was provided in *Eco Advocacy*, where the CJEU ruled that where constituent elements are incorporated into the design of a project as standard features required for all projects of that nature and not with the aim of reducing negative effects of a project on European sites, those features cannot be regarded as indicative of likely significant effects on European sites concerned and should not be interpreted as mitigation measures intended to avoid or reduce harmful effects (i.e. likely significant effects) of a plan or project on those European sites. The judgment stated that:

¹ Including, where applicable, ‘sites’.

“In the light of the foregoing considerations, the answer to the fourth question is that Article 6(3) of the Directive 92/43 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 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.”

Article 7 of the Habitats Directive provides that the provisions of, *inter alia*, Article 6(3) are to apply to SPAs under Directive 2009/147/EC (the “Birds Directive”).

As stated, the requirements arising out of Article 6(3) of the Habitats Directive are transposed into Irish law by Part XAB of the 2000 Act and by the European Communities (Birds and Natural Habitats) Regulations 2011 as amended² (S.I. No.477 of 2011) (the Habitats Regulations), including Part 5 thereof.

The determination of whether or not a plan or project requires AA is referred to as “Stage 1” or “AA Screening”. A “Stage 1” or “AA Screening” is completed to determine whether or not the Proposed Development, either individually or in combination with other plans or projects, in view of best scientific knowledge, is likely to have a significant effect on areas designated as being of European importance for nature conservation (“European sites”), thereby enabling the Applicant, to fulfil its obligations under Article 6(3) of the Habitats Directive.

Article 6(3) of the Habitats Directive specifies that AA must be undertaken by the “competent national authorities”. In Ireland, the “competent authority” is the relevant planning authority for each plan or project, e.g. the local authority or An Bord Pleanála. Consequently, the responsibility for carrying out AA Screening lies solely with the competent authority. In that respect, the AA Screening Report is not in itself an AA Screening Assessment but provides the competent authority with the information it needs in order to carry out its AA Screening.

1.4 Screening Methodology

At this stage of the process, the AA Screening Report assesses the potential effects from the plan or project on the European sites within the zone of influence and evaluates them in view of the sites’ Conservation Objectives.

This AA Screening Report has had regard *inter alia* to the following matters³:

- The threshold test is that an appropriate assessment will be required if the Proposed Development is likely *to have a significant effect* on (a) European site(s) either individually or in combination with other plans or projects.
- It is not necessary, in order to trigger the requirement to proceed to stage 2 AA that the Proposed Development will *‘definitely’* have significant effects on the protected site, but such a requirement will arise if it is a *‘mere probability’* that such an effect exists. The requirement to carry out an AA will be satisfied if there is a *‘probability or a risk’* that the Proposed Development will have *‘significant effects’* on (a) European site(s).

² Including *inter alia* S.I. 290 of 2013; SI 499 of 2013; SI 355 of 2015; the Planning, Heritage and Broadcasting (Amendment) Act 2021, Chapter 4; SI 293 of 2021.

³ See Eoin Kelly v. An Bord Pleanála [2019] IEHC 84; Kelly v. An Bord Pleanála [2014] IEHC 400; Connelly v. An Bord Pleanála [2018] IESC 31; [2018] ILRM 453.

- Consequent upon the application of the precautionary principle, such a 'risk' will be found to exist if *'it cannot be excluded on the basis of objective information'* that the particular Proposed Development *'will have significant effects'* on (a) European site(s).
- An AA will be required if, on the basis of objective information, a *'significant effect'* on a European site *'cannot be excluded'*. An AA will not be required if, on the basis of objective information, a *'significant effect'* on (a) European site(s) *'can be excluded'*.
- In the case of *'doubt as to the absence of significant effects'* an AA must be carried out.
- The requirement to conduct an AA will arise where, at the screening stage, it is ascertained that the particular development is *'capable of having any effect'* (albeit this must be any *'significant effect'*) on (a) European site(s).
- The *'possibility'* of there being a *'significant effect'* on (a) European site(s) will give rise to a requirement to carry out an AA for the purposes of Article 6(3). There is no need to *'establish'* such an effect and it is merely necessary to determine that there *'may be'* such an effect.
- In order to meet the threshold of likelihood of significant effect, the word *'likely'* in Article 6(3) means less than the balance of probabilities. The test does not require any *'hard and fast evidence'* that such a significant effect was likely. It merely has to be shown that there is a *'possibility'* that this significant effect is likely.
- The assessment of whether there is a risk of *'significant effect'* on the European site must be made in light, *inter alia*, of the *'characteristics and specific environmental conditions of the site concerned'* by the relevant plan or project.
- Plans or projects or applications for developments which have *no appreciable effect* on European sites are excluded from the requirement to proceed to AA. If all applications for permission for Proposed Developments capable of having *any effect whatsoever* on such sites were to be caught by Article 6(3) *activities on or near the site would risk being impossible by reason of legislative overkill.*

While the threshold at the screening stage of Article 6(3) is very low nonetheless it is a threshold which must be met before it is necessary to proceed to the stage 2 AA.

Accordingly, best practice in undertaking AA Screening involves five steps as follows:

- (1) The first step involves gathering the information and data necessary to carry out a screening assessment. These include, but are not limited to, the details of all phases of the plan or project, environmental data pertaining to the area in which the plan or project is located, e.g. rare or protected habitats and species present or likely to be present, and the details of the European sites within the zone of influence.
- (2) The second step involves examining the information gathered in the first step and a scientific analysis of the potential impacts of the project on the receiving environment, particularly the European sites in the zone of influence.
- (3) The third step evaluates the impacts analysed in the second step against the Conservation Objectives of the relevant European sites, thereby determining whether or not those impacts constitute "likely significant effects, within the meaning of Article 6(3) of the Habitats Directive.

- (4) The fourth step involves considering the potential for likely significant effects to arise from the combination of the impacts of the plan or project with those of other plans or projects. If it is determined in the third step that Stage 2 (AA) is required, consideration of potential cumulative impacts may be deferred to that stage.
- (5) The last step involves the issuing of a statement of the determination of the AA Screening. Notwithstanding the recommendation made in the AA Screening Report, the responsibility for completing this step lies solely with the competent authority.

The following guidance documents informed the assessment methodology:

- European Commission (EC) (2021) *Assessment of plans and projects in relation to Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. Environment Directorate-General of the European Commission.
- European Commission (EC) (2018) *Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*. European Commission, Brussels.
- Department of Environment, Heritage, and Local Government (DEHLG) (2010) *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*. Department of the Environment, Heritage and Local Government, Dublin.
- National Parks and Wildlife Service (NPWS) (2010a) *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular Letter NPW 1/10 & PSSP 2/10. National Parks & Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.
- Office of the Planning Regulator (OPR) (2021) *Practice Note PN01: Appropriate Assessment Screening for Development Management*. Office of the Planning Regulator.

1.5 Ecological Assessment

In order to fully inform this AA Screening Report in respect of the Proposed Development, it was necessary to establish the baseline ecological conditions in the receiving environment, particularly with regard to European sites.

1.5.1 Desk Study

During the desk study, the statutory consultee, the National Parks & Wildlife Service (NPWS), provided data on designations of sites, habitats, and species (including birds) of conservation interest. This included reporting pursuant to Article 17 of the Habitats Directive⁴ (NPWS, 2019a, b, c) and Article 12 of the Birds Directive⁵ (Eionet, 2018), as well as the Site Synopses and Conservation Objectives for the relevant European sites.

⁴ Under Article 17, to report to the European Commission every six years on their status and on the implementation of the measures taken under the Directive.

⁵ Every three years, Member States of the European Union are required by Article 12 of the Birds Directive to report on implementation of the Directive. The most recent reporting available is for the period 2008-2012.

The desk study involved a thorough review of existing information relating to ecology in the vicinity of the Proposed Development and in the surrounding area. A number of web-based geographic information systems (GISs) were used to obtain information relating to the natural environment surrounding the Proposed Development. These included the NPWS *Map Viewer* (NPWS, 2024), which provided information on the locations of protected sites, the National Biodiversity Data Centre's *Biodiversity Maps* (NBDC, 2024), which provided recent and historic records of rare and protected species in the area as well as the Environmental Protection Agency's (EPA) *Unified GIS Application* (EPA, 2024) which provided additional information on the wider environment.

In 2018 and 2019, ROD undertook ecological surveys for the Dodder Public Transportation Opening Bridge at the mouth of the Dodder. The surveys included 19 vantage point surveys on from March to July in 2018 and 2019. The Common Tern colony on the Grand Canal lock gates was surveyed in 2018 and 2019, where three and four nests were recorded, respectively.

As with all desk studies, the data considered were only as good as the data supplied by the recorders and recording schemes. The recording schemes provide disclaimers in relation to the quality and quantity of the data they provide, and these were considered when examining outputs of the desk study.

1.5.2 Assessment

The ecological baseline which was established by the desk study described above was used to inform the assessment of the potential ecological effects arising from the Proposed Development particularly with regard to European sites. Any assumptions that were made in view of gaps in the ecological data were made in accordance with the Precautionary Principle.

1.5.3 Field Surveys

The following ecological surveys relevant to Appropriate Assessment were carried out for the proposed development:

- Habitats (July, 2022)
- Wintering birds (Feb, Oct, Nov, Dec 2022 and January 2023)
- Breeding birds (July, 2022)
- Invasive species (July 2022)

The wintering bird surveys were carried out within 550m of the proposed development, and the remainder of the surveys were carried out within 150m of the proposed development.

2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Overview

The Proposed Development is located directly on and adjacent to the west side of the existing Tom Clarke Bridge in Dublin City, spanning from North Wall Quay to Ringsend on the southside of the River Liffey.

The Proposed Development consists Construction of a circa 150m long pedestrian and cyclist bridge known as Point Bridge, and Improvement and widening works to the existing Tom Clarke Bridge. These key elements are outlined further below:

- (1) Construction of a circa 150m long pedestrian and cyclist bridge known as Point Bridge (Shown in Figure 2-1). The arrangement of the Point Bridge is as follows:
 - The proposed bridge will have the same span arrangement as the existing Tom Clarke Bridge, consisting of five spans; four fixed spans and a central movable span. Each of the four fixed spans will be c. 26m in length. The central movable span will have an overall length of c. 46m and will be a single leaf rolling bascule type with an integrated below deck counterweight.
 - The deck on the two northern fixed spans and the bascule span of the Point Bridge will typically have a width of c. 8.9m (c. 3.4m wide footway, c. 5.3m wide cycleway and a 0.2m wide raised demarcation between the footway and cycleway). The top 1.0m of the quay wall along North Wall Quay, a protected structure (RPS ref. no. 5835) over a length of c. 11m at the proposed bridge location will need to be demolished to allow the installation of the bridge deck. The southern fixed spans will have a width which varies from 8.4m at the southern abutment to 17.4m in the vicinity of the bascule pier.
 - The river navigational channel through the Point Bridge will have the same horizontal and vertical clearance as currently provided through the existing Tom Clarke Bridge when the movable span is in the open position.
- (2) Works on the existing Tom Clarke Bridge to include:
 - Widening of the northern and southern fixed deck bridge spans to accommodate a left turn vehicle traffic lane onto North Wall Quay and a potential future right turn vehicle traffic lane to Sir John Rogerson's Quay (via the proposed Dodder Bridge (part of the separate BusConnects Ringsend to City Centre Core Bus Corridor Scheme) respectively. Upgrading/ replacement of the existing bridge parapets on the existing Tom Clarke bridge.
 - The narrowing of the northbound and southbound traffic lanes on the northern fixed spans to 3.25m each to facilitate the addition of a 3.25m wide left turn lane to North Wall Quay on the widened bridge deck.
 - The existing footpaths will no longer be for public use and will be replaced with raised verges to deterrent paving at the bridge ends to discourage use by the public.
 - Upgrades to the bridge deck furniture, public lighting and finishes will be carried out.
- (3) Works common to both bridges to include:
 - Demolition of existing and the provision of new vessel collision protection structures on the western approach of the proposed Point Bridge.

- Demolition of the existing control building and the construction of a new three-storey control room building with external structural envelope dimensions of c. 7.5m x 7.5m on plan and c. 14.5m in height. A feature light pole is proposed to be located at the centre of the roof of the building which is c. 8m in height. The new control building will be used to operate both the Tom Clarke Bridge and Point Bridge.
- Provision of lighting to enhance the aesthetics of the Point Bridge, Tom Clarke Bridge and the Control Room Building at night-time.

The proposed Point Bridge and Tom Clarke Bridge Widening project is located between the extents of two other separately proposed projects, namely the approved Point Junction Improvement Scheme (DCC Ref: DSDZ3341/15) and the BusConnects Ringsend to City Centre Core Bus Corridor (CBC) Scheme (ABP Case Ref: HA29N.317679) which has been submitted for planning. Works proposed as part of these other projects that are of relevance to the Proposed Development are described in Chapter 4 of the Environmental Impact Assessment Report (EIAR).

The Proposed Development is not directly connected with or necessary for the management of any European site.

This report provides further detail of each of the aforementioned components of the Proposed Development insofar as is relevant to the AA Screening guidelines outlined in Section 1.4. A full and detailed description of the Proposed Development is provided in Chapter 4 of the Environmental Impact Assessment Report (EIAR).

2.2 Location

The Proposed Development is located directly on and adjacent to the west side of the existing Tom Clarke Bridge in Dublin City, spanning from North Wall Quay to Ringsend on the southside of the River Liffey, shown below and in Figure 2-1 and also in Appendix A – Drawings (Drawing No. 02_PTCB Location Map with Other Projects).

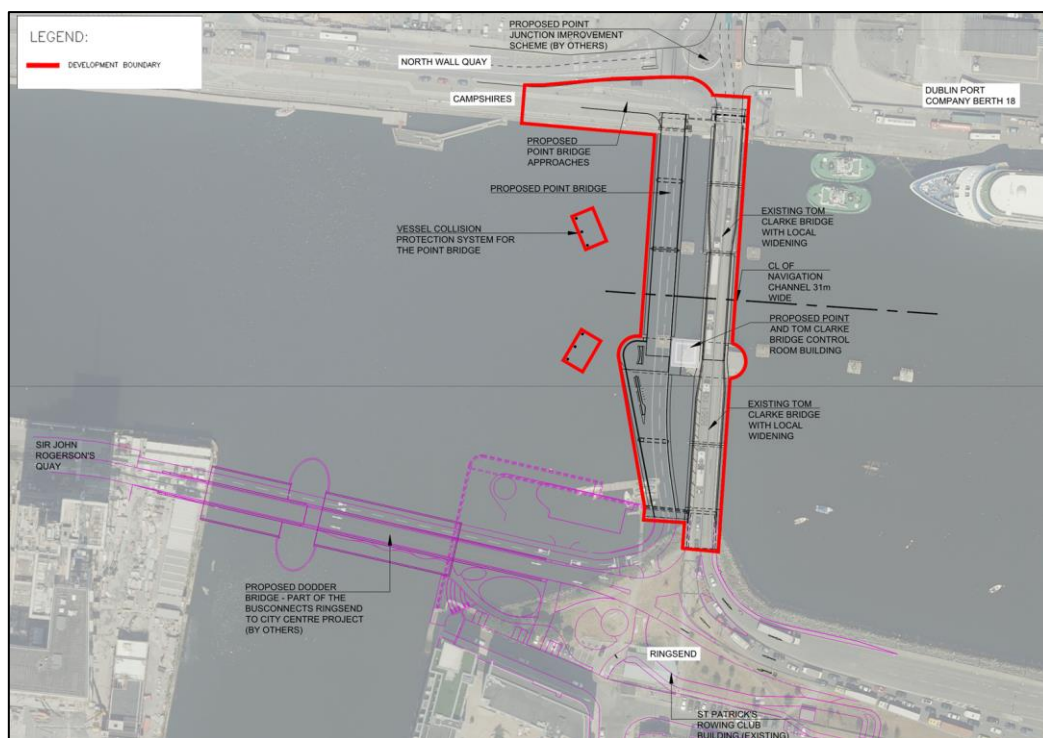


Figure 2-1 Location and layout of the Proposed Development

2.3 Purpose of the Proposed Development

The overriding purpose of the Proposed Development is to provide enhanced pedestrian and cyclist provision over the River Liffey adjacent to the Tom Clarke Bridge (via the Point Bridge) which improves safety, permeability and connectivity for pedestrians and cyclists between the North and South Docklands.

The secondary purpose of the Proposed Development is to undertake necessary upgrades to Tom Clarke Bridge to make provision for a turning lane to North Wall Quay and a potential future turning lane to Sir John Rogerson's Quay via the Dodder Bridge (proposed as part of the Route 16 BusConnects Ringsend to City Centre Core Bus Scheme).

2.4 Likely Effects on the Natural Environment

2.4.1 Construction Phase

During the construction phase, a number of elements of the Proposed Development are considered likely to give rise to environmental and ecological impacts, particularly on the aquatic environment in the River Liffey around the location of the Proposed Development, upstream of the Proposed Development within the tidal reach of the River Liffey and River Dodder and downstream of the Proposed Development.

Impacts to water quality

Piling and installation of cofferdams for the construction of the bridge pier foundations are likely to cause significant disturbance of the fine sediment, causing it to become temporarily suspended in the water column. This constitutes a physical impact on the riverbed itself and could affect habitats or species that are dependent on or sensitive to fine sediments. It also constitutes a temporary water quality impact, which could affect habitats and species that are sensitive to high sediment loads in the water column such.

The construction of the bridge pier, deck and landing areas, in-situ concrete pouring and the finishing of the bridge provide for water quality impacts through the potential input of pollutants, including fine sediments and construction materials, e.g. concrete, spilled fuel, oil etc. into the water. In addition to water quality impacts, these elements of the construction also provide for noise and vibration impacts which could cause temporary disturbance to both aquatic and terrestrial species.

Noise disturbance

Piling and installation of cofferdams provide for considerable noise and vibration impacts, both on land and underwater. This has the potential to cause disturbance to species that are sensitive to noise and vibration.

Visual disturbance

Excessive artificial lighting of the Proposed Development during the construction phase (15 months) also presents the risk of light disturbance for both aquatic and terrestrial species. Prolonged or repetitive disturbances have the potential to cause barriers to connectivity for species moving upstream and downstream past the Proposed Development area.

2.4.2 Operational Phase

Impacts to water quality

During the operational phase, drainage of the Proposed Development will function as per the existing drainage system which outfalls into the River Liffey (as outlined in Section 2.4.3.3). Given that the outfall of the existing drainage network is directly connected to the River Liffey, and that the Proposed Development will not result in an increase in amount of traffic in the area (a potential source of pollutants), it is not anticipated that the operation of the Proposed Development has the potential to cause an increase in pollution via run-off into the River Liffey or to any other connecting waterbodies.

Noise disturbance

The Proposed Development is located in a busy port city with high levels of activity and noise in both the marine and terrestrial environments. It is therefore not considered that the Proposed Development has the potential to give rise to any changes in noise levels or noise disturbance in the significant effects as a result of noise disturbance on any designated habitats or species during the operational phase.

Visual disturbance

During the operational phase of the Proposed Development, there will be no increase in artificial lighting to the surrounding environment. The lighting design of the Proposed Development (outlined in Section 2.4.3.2) will reduce the overall amount of artificial lighting in the Proposed Development area by directing light onto the built structures and with cowls to minimise light spill to non-intended surfaces and to the surrounding environment including the River Liffey.

Furthermore, owing to the small scale of Proposed Development (i.e., the total area of the Proposed Development relative to the size of the river), the impact of shading on the river channel is not considered to be significant.

Injury or mortality

New structures within the river channel and within flight lines poses a collision risk to bird species which may commute along the Liffey River Corridor. However, the Proposed Development does not pose a significant collision risk to bird species as the design of the two bridges encompassed by the Proposed Development will align with the existing layout, span arrangement and opening schedules (as specified in S2.5.8). As such, the flight lines and sight lines along the River Liffey Estuary will not be altered by the Proposed Development.

Furthermore, the proposed control tower is not seen as a collision risk as it will be located c. 2m west of the existing control tower for the Tom Clarke Bridge which will be a negligible difference to birds commuting through the Proposed Development Area, as they predominately fly in an east-west direction (parallel to the location of the tower). Bird collisions with man-made structures are normally considered to be caused by 'invisibility', particularly at night; deception, caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist. Structures that do not exhibit these features are rarely implicated in scientific literature as agents of bird mortality. The lighting design of the Proposed Development will ensure that both the bridge and control tower will be clearly visible to birds at night.

3. IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

3.1 Establishing the Zone of Influence

Section 3.2.3 of DEHLG (2010) outlines the procedure for selecting the European sites to be considered in AA. It states that European sites potentially affected should be identified and listed, bearing in mind the potential for direct, indirect and cumulative effects. It also states that the specific approach in each case is likely to differ depending on the scale and likely effects of the plan or project. However, it advises that the following sites should generally be included:

- All European sites within or immediately adjacent to the plan or project area;
- All European sites within the zone of influence of the plan or project; and,
- In accordance with the Precautionary Principle, all European sites for which there is doubt as to whether or not they might be significantly affected.

The “Zone of Influence” of a project is the geographic extent over which significant ecological effects are likely to occur. In the case of projects, the guidance recognises that the zone of influence must be established on a case-by-case basis using the Source-Pathway-Receptor Model (OPR, 2021). A project may only lead to significant effects on the integrity of the European site where all three elements of Source-Pathway-Receptor are linked. In the absence of one element of this model, likely significant effects can be screened out with confidence. The assessment should make reference to the following key variables:

- The nature, size and location of the Proposed Development;
- The nature of the impacts which may arise from the Proposed Development;
- The sensitivities of the ecological receptors; and,
- The potential for in-combination effects.

For example, in the case of a project that could affect a watercourse, it may be necessary to include the entire upstream and/or downstream catchment in order to capture all European sites with water-dependent features of interest.

Having regard to the above key variables, the Zone of Influence was defined as:

- The entire area within 550m of the Proposed Development;
- The transitional waters of Dublin Bay;
- The tidal reaches of the River Liffey up to Islandbridge;
- The tidal reaches of the River Dodder, up to Ballsbridge; and,
- The coastal waterbodies of Dublin Bay from Howth Head to Dalkey Island.

The buffer was defined as 550m around the Proposed Development as beyond this limit, noise and visual disturbance to terrestrial species is unlikely to occur (Cutts et al., 2009; Cutts et al., 2013). The ‘transitional waters of Dublin Bay’ are the extent to which hydrological impacts could potentially occur upstream and downstream of the Proposed Development in the River Liffey and Dublin Bay⁶.

⁶ As defined in Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy (the “Water Framework Directive”), transitional waters are as bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows.

The tidal reach of the River Liffey and River Dodder is the extent to which hydrological impacts could potentially occur upstream of construction works in the River Liffey which are connected to the River Dodder.

Where the area around the Proposed Development provided supporting habitat to Qualifying Interest species of European Sites outside of the Zone of Influence as defined above, impacts to such species were also considered in this assessment. A geographical representation of the Zone of Influence was produced in QGIS using the Proposed Development boundary and publicly available Ordnance Survey Ireland maps. This was used in combination with NPWS shapefiles to identify the boundaries of European sites in relation to the Zone of Influence.

It was determined that nine European sites, namely the South Dublin Bay & River Tolka Estuary SPA, the North Bull Island SPA, the North Dublin Bay SAC, South Dublin Bay SAC, North-west Irish Sea SPA, Rockabill to Dalkey Island SAC, Howth Head Coast SPA, Howth Head SAC and Dalkey Islands SPA occur within the Zone of Influence for the Proposed Development.

Table 3-1 below lists all of the European sites which are connected to the Proposed Development and describes how those sites are connected to the Proposed Development. There are no connections between the Proposed Development and any European sites other than those listed in Table 3-1. Detailed descriptions of those sites are given in Section 3.2. The locations of these sites in relation to the Proposed Development are illustrated in Appendix B – Zone of Influence of this report.

Table 3-1 European sites located within and adjacent to the Zone of Influence

European site [site code]	Are there potential pathways for impacts from the Proposed Development to this site? Explain.
South Dublin Bay and River Tolka Estuary SPA [004024]	Yes. The shortest direct distances from the Proposed Development to this site are 1.3km north-east to the Tolka Estuary and 1.4km south-east to Sandymount Strand. The shortest distance from the Proposed Development to the site via a hydrological connection is 2.4km east (down the River Liffey) to the ESB Dolphin, which is within the Zone of Influence. Therefore, the shortest possible distance for likely significant effects to occur to the Qualifying Interests of this site is 2.4km.
North Bull Island SPA [004006]	Yes. The shortest direct distance from the Proposed Development to this site is 3.4km north-east. The shortest distance from the Proposed Development to the site via a hydrological connection is 4.2km north-east (down the River Liffey and across the River Tolka Estuary) which is within the Zone of Influence. Therefore, the shortest possible distance for likely significant effects to occur to the Qualifying Interests of this site is 4.2km.
North Dublin Bay SAC [000206]	Yes. The shortest direct distance from the Proposed Development to this site is 3.4km north-east. The shortest distance from the Proposed Development to the site via a hydrological connection is 4.3km north-east (down the River Liffey and across the River Tolka Estuary), which is within the Zone of Influence. Therefore, the shortest possible distance for likely significant effects to occur to the Qualifying Interests of this site is 4.3km.

European site [site code]	Are there potential pathways for impacts from the Proposed Development to this site? Explain.
South Dublin Bay SAC [000210]	Yes. The shortest direct distance from the Proposed Development to this site is 1.5km south-east. The shortest distance from the Proposed Development to the site via a hydrological connection is 6.4km east (down the River Liffey into Dublin Bay and back to the south of the Great South Wall), which is within the Zone of Influence. Therefore, the shortest possible distance for likely significant effects to occur to the Qualifying Interests of this site is 6.4km.
North-West Irish Sea SPA [004236]	Yes. The shortest direct distance from the Proposed Development to this site is 5.1km, which is also the shortest distance to the site via a hydrological connection. This distance is along the River Liffey, which is in the Zone of Influence. Therefore, the shortest possible distance for likely significant effects to occur to the Qualifying Interests of this site is 5.1km.
Rockabill to Dalkey Island SAC [003000]	Yes. The shortest direct distance from the Proposed Development to this site is 9.2km east. This distance is a hydrological connection (down the River Liffey and into Dublin Bay to the east), which is within the Zone of Influence. Therefore, the shortest possible distance for likely significant effects to occur to the Qualifying Interests of this site is 6.4km.
Howth Head Coast SPA [004113]	Yes. The shortest direct distance from the Proposed Development to this site is 11.8km north-east. The shortest distance from the Proposed Development to the site via a hydrological connection is 12km north-east (down the River Liffey and into Dublin Bay to the northeast). Although this is beyond the Zone of Influence, the species for which this site is designated is mobile and has been recorded in the vicinity of the Proposed Development. Therefore, there is the potential for ex-situ impacts and likely significant effects to occur to this species as a result of the Proposed Development.
Howth Head SAC [000202]	Yes. The shortest direct distance from the Proposed Development to this site is 9.2km north-east. The shortest distance from the Proposed Development to the site via a hydrological connection is 10km north-east (down the River Liffey and into Dublin Bay to the northeast), which is within the Zone of Influence. Therefore, the shortest possible distance for likely significant effects to occur to the Qualifying Interests of this site is 10km.
Dalkey Islands SPA [004172]	The shortest direct distance from the Proposed Development to this site is 11.5km south-east. The shortest distance from the Proposed Development to the site via a hydrological connection is 13.1km south-east (down the River Liffey and into Dublin Bay to the south), which is within the Zone of Influence. Therefore, the shortest possible distance for likely significant effects to occur to the Qualifying Interests of this site is 13.1km. The Qualifying Interest species of this site are known to forage in the vicinity of the Proposed Development, there is also potential for ex-situ likely significant effects to occur to the Qualifying Interests of this site.

3.2 Site Descriptions

3.2.1 South Dublin Bay and River Tolka Estuary SPA

The description of the South Dublin Bay and River Tolka Estuary SPA provided here is based on the Site Synopsis (NPWS, 2015a) and Conservation Objectives (NPWS, 2015b) for the site, as well as the Conservation Objectives Supporting Document (NPWS, 2014a).

Site Overview

This site comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dún 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 of ornithological importance as it supports an internationally important population of Light-bellied Brent Goose and nationally important populations of a further nine wintering species. Furthermore, the site supports a nationally important colony of breeding Common Tern and is an internationally important passage/staging site for three tern species. Notably, four of the species that regularly occur at this site are listed on Annex I of the Birds Directive, namely Bar-tailed Godwit, Common Tern, Arctic Tern and Roseate Tern. Parts of the site are also designated as the Ramsar Convention site "Sandymount Strand/Tolka Estuary".

Qualifying Interests of the Site

- [A046] Light-bellied Brent Goose (*Branta bernicla hrota*)
- [A130] Oystercatcher (*Haematopus ostralegus*)
- [A137] Ringed Plover (*Charadrius hiaticula*)
- [A141] Grey Plover (*Pluvialis squatarola*)
- [A143] Knot (*Calidris canutus*)
- [A144] Sanderling (*Calidris alba*)
- [A149] Dunlin (*Calidris alpina*)
- [A157] Bar-tailed Godwit (*Limosa lapponica*)
- [A162] Redshank (*Tringa totanus*)
- [A179] Black-headed Gull (*Chroicocephalus ridibundus*)
- [A192] Roseate Tern (*Sterna dougallii*)
- [A193] Common Tern (*Sterna hirundo*)
- [A194] Arctic Tern (*Sterna paradisaea*)
- [A999] Wetlands

Being an integral part of the internationally important Dublin Bay complex, the site is important for wintering waterfowl – all counts for wintering waterbirds are five-year mean peaks for the period 1995/96 to 1999/2000. Although birds regularly commute between the south bay and the north bay, recent studies have shown that certain populations which occur in the south bay spend most of their time there.

An internationally important population of Light-bellied Brent Goose (368) occurs regularly and newly arrived birds in the autumn feed on the Eelgrass bed at the Merrion Gates. At the time of designation the site supported nationally important numbers of a further nine species: Oystercatcher (1,145), Ringed Plover (161), Grey Plover (45), Knot (548), Sanderling (321), Dunlin (1,923), Bar-tailed Godwit (766), Redshank (260) and Black-headed Gull (3,040). Other species occurring in smaller numbers include Great Crested Grebe (21), Curlew (127) and Turnstone (52). Little Egret, a species which has recently colonised Ireland, also occurs at this site.

South Dublin Bay is a significant site for wintering gulls, with a nationally important population of Black-headed Gull, but also Common Gull (330) and Herring Gull (348). Mediterranean Gull is also recorded from here, occurring through much of the year, but especially in late winter/spring and again in late summer into winter.

Both Common Tern and Arctic Tern breed in Dublin Docks, on a man-made mooring structure known as the ESB Dolphin – this is included within the site. Small numbers of Common Tern and Arctic Tern were recorded nesting on this dolphin in the 1980s. A survey in 1995 recorded nationally important numbers of Common Tern nesting here (52 pairs). The breeding population of Common Tern at this site has increased, with 216 pairs recorded in 2000. This increase was largely due to the ongoing management of the site for breeding terns. More recent data highlights this site as one of the most important Common Tern sites in the country with over 400 pairs recorded here in 2007.

South Dublin Bay is an important staging/passage site for a number of tern species in the autumn (mostly late July to September). The origin of many of the birds is likely to be the Dublin breeding sites (Rockabill and the Dublin Docks) though numbers suggest that the site is also used by birds from other sites, perhaps outside the state. This site is selected for designation for its autumn tern populations: Roseate Tern (2,000 in 1999), Common Tern (5,000 in 1999) and Arctic Tern (20,000 in 1996).

Sensitivities of the Site and its Qualifying Interests

As this site is mostly comprised of coastal wetlands and is located directly adjacent to a major city and port, expansion of the city and port poses the greatest threat to its integrity. Reclamation of land from the sea, estuary or marsh represents a direct loss of key Qualifying Interests of the Site. Roads, urbanisation, human habitation, industrial and commercial activities and discharges present pressures on the site in terms of disturbance and pollution.

Watersports, walkers, horse riding and non-motorised vehicles also cause persistent disturbance to the birds within the site. Angling, particularly bait collection, causes both disturbance to birds and reduces food availability. The site is also subject to some natural eutrophication pressures.

Conservation Objectives for the Qualifying Interests

All of the Qualifying Interests of the site are currently considered to be in a favourable conservation condition. Therefore, all Qualifying Interests, with the exception of Grey Plover, which is proposed for removal as a Qualifying Interests, have been assigned Conservation Objectives requiring the maintenance of this condition. These Conservation Objectives predominantly focus on the Attributes of "*Population trend*" and "*Distribution*", but those for the three tern species cover a broader range of Attributes, e.g. "*Breeding population abundance: apparently occupied nests (AONs)*" and "*Productivity rate: fledged young per breeding pair*", and that for Wetlands focuses exclusively on the Attribute of "*Habitat area*".

Grey Plover is proposed for removal from the list of Qualifying Interests⁷ of the site. Therefore, there is currently no site-specific Conservation Objective for Grey Plover in the South Dublin Bay and River Tolka Estuary SPA.

3.2.2 North Bull Island SPA

The description of the North Bull Island SPA provided here is based on the Site Synopsis (NPWS, 2014b) and Conservation Objectives (NPWS, 2015) for the site, as well as the Conservation Objectives Supporting Document (NPWS, 2014a).

⁷ In NPWS (2015c), Grey Plover is referred to as a "Special Conservation Interest" of the site. This term is sometimes used in place of "Qualifying Interest" but has the same meaning.

Site Overview

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 North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th Centuries. It is c. 5km long and 1km wide and runs parallel to the coast between Clontarf and Sutton. Part of the interior of the island has been converted to golf courses.

The North Bull Island SPA is an excellent example of an estuarine complex and is one of the top sites in Ireland for wintering waterfowl. It is of international importance on account of both the total number of waterfowl and the individual populations of Light-bellied Brent Goose, Black-tailed Godwit and Bar-tailed Godwit that use it. Also of significance is the regular presence of several species that are listed on Annex I of the Birds Directive, notably Golden Plover and Bar-tailed Godwit, but also Ruff and Short-eared Owl. North Bull Island is a Ramsar Convention site, and part of the North Bull Island SPA is a Statutory Nature Reserve and a Wildfowl Sanctuary.

Qualifying Interests of the Site

- [A046] Light-bellied Brent Goose (*Branta bernicla hrota*)
- [A048] Shelduck (*Tadorna tadorna*)
- [A052] Teal (*Anas crecca*)
- [A054] Pintail (*Anas acuta*)
- [A056] Shoveler (*Anas clypeata*)
- [A130] Oystercatcher (*Haematopus ostralegus*)
- [A140] Golden Plover (*Pluvialis apricaria*)
- [A141] Grey Plover (*Pluvialis squatarola*)
- [A143] Knot (*Calidris canutus*)
- [A144] Sanderling (*Calidris alba*)
- [A149] Dunlin (*Calidris alpina*)
- [A156] Black-tailed Godwit (*Limosa limosa*)
- [A157] Bar-tailed Godwit (*Limosa lapponica*)
- [A160] Curlew (*Numenius arquata*)
- [A162] Redshank (*Tringa totanus*)
- [A169] Turnstone (*Arenaria interpres*)
- [A179] Black-headed Gull (*Chroicocephalus ridibundus*)
- [A999] Wetlands

Saltmarsh extends along the length of the landward side of the island and provides the main roost site for wintering birds in Dublin Bay. The island shelters two intertidal lagoons which are divided by a solid causeway. These lagoons provide the main feeding grounds for the wintering waterfowl. The sediments of the lagoons are mainly sands with a small and varying mixture of silt and clay. Green algal mats (*Ulva* spp.) are a feature of the flats during summer. These sediments have a rich macro-invertebrate fauna, with high densities of Lugworm (*Arenicola marina*) and Ragworm (*Hediste diversicolor*).

This site is of international importance for waterfowl on the basis that it regularly supports in excess of 20,000 waterfowl. The site supports internationally important populations of three species, Light-bellied Brent Goose (1,548), Black-tailed Godwit (367) and Bar-tailed Godwit (1,529) - all figures are mean peaks for the five winters between 1995/96 and 1999/2000. The site is one of the most important in the country for Light-bellied Brent Goose. A further 14 species have populations of national importance: Shelduck (1,259), Teal (953), Pintail (233), Shoveler (141), Oystercatcher (1,784), Grey Plover (517), Golden Plover (2,033), Knot (2,837), Sanderling (141), Dunlin (4,146), Curlew (937), Redshank (1,431), Turnstone (157) and Black-headed Gull (2,196). The populations of Pintail and Knot are of particular note as they comprise 14% and 10% respectively of the all-Ireland population totals. Other species that occur regularly in winter include Grey Heron, Little Egret, Cormorant, Wigeon, Goldeneye, Red-breasted Merganser, Ringed Plover and Greenshank. Gulls are a feature of the site during winter and, along with the nationally important population of Black-headed Gull (2,196), other species that occur include Common Gull (332) and Herring Gull (331). While some of the birds also frequent South Dublin Bay and the River Tolka Estuary for feeding and/or roosting purposes, the majority remain within the site for much of the winter. The wintering bird populations have been monitored more or less continuously since the late 1960s and the site is now surveyed each winter as part of the larger Dublin Bay complex.

The North Bull Island SPA is a regular site for passage waders, especially Ruff, Curlew Sandpiper and Spotted Redshank. These are mostly observed in single figures in autumn but occasionally in spring or winter. The site formerly had an important colony of Little Tern but breeding has not occurred in recent years. Several pairs of Ringed Plover breed, along with Shelduck in some years. Breeding passerines include Skylark, Meadow Pipit, Stonechat and Reed Bunting. The island is a regular wintering site for Short-eared Owl, with up to 5 present in some winters.

Sensitivities of the Site and its Qualifying Interests

The greatest pressures/threats to the integrity of the North Bull SPA come from the bridge/viaduct located within the site (and the potential for other structures to be built within the site) and from walking, horse riding and non-motorised vehicles within the site. Bait digging/collection, nautical sports and the golf course (all inside the site) and roads, motorways, shipping lanes, continuous urbanisation and industrial or commercial areas (all outside the site) also represent significant pressures/threats to the integrity of this site. Other patterns of habitation within the site represent a lower-level pressure/threat.

Conservation Objectives for the Qualifying Interests

All of the Qualifying Interests of the site are currently considered to be in a favourable conservation condition. Therefore, all Qualifying Interests have been assigned Conservation Objectives requiring maintenance of this condition. These Conservation Objectives focus on the Attributes of "*Population trend*" and "*Distribution*", but that for Wetlands focuses exclusively on the Attribute of "*Habitat area*".

3.2.3 North Dublin Bay SAC

The description of the North Dublin Bay SAC provided here is based on the Site Synopsis (NPWS, 2013a), Conservation Objectives (NPWS, 2013b) for the site, as well as the Conservation Objectives Supporting Documents (NPWS, 2013c, d).

Qualifying Interests of the Site

- [1140] Tidal mudflats and sandflats not covered by seawater at low tide
- [1210] Annual vegetation of drift lines
- [1310] Salicornia and other annuals colonising mud and sand
- [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritima*)
- [1410] Mediterranean salt meadows (*Juncetalia maritimi*)
- [2110] Embryonic shifting dunes
- [2120] Shifting dunes along the shoreline with *Ammophila Arenaria* (white dunes)
- [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)
- [2190] Humid dune slacks
- [1395] Petalwort (*Petalophyllum ralfsii*)

Site Overview

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.

North Bull Island is a sandy spit which formed after the building of the South Wall and Bull Wall in the 18th and 19th centuries. It now extends for about 5km in length and is up to 1km wide in places. A well-developed and dynamic dune system stretches along the seaward side of the island. Various types of dunes occur, from fixed dune grassland to pioneer communities on foredunes.

About 1km from the tip of the island, a large dune slack with a rich flora occurs, usually referred to as the 'Alder Marsh' because of the presence of Alder trees (*Alnus glutinosa*). The water table is very near the surface and is only slightly brackish.

Saltmarsh extends along the length of the landward side of the island. The edge of the marsh is marked by an eroding edge which varies from 20cm to 60cm high. The marsh can be zoned into different levels according to the vegetation types present. Towards the tip of the island, the saltmarsh grades naturally into fixed dune vegetation.

The habitat 'annual vegetation of drift lines' is found in places, along the length of Dollymount Strand, with species such as Sea Rocket (*Cakile maritima*), Oraches (*Atriplex* spp.) and Prickly Saltwort (*Salsola kali*).

The island shelters two intertidal lagoons which are divided by a solid causeway. The sediments of the lagoons are mainly sands with a small and varying mixture of silt and clay. The north lagoon has an area known as the "Salicornia flat", which is dominated by *Salicornia dolichostachya*, a pioneer glasswort species, and covers about 25 ha. The sediments on the seaward side of North Bull Island are mostly sands. The site extends below the low spring tide mark to include an area of the sublittoral zone.

Three rare plant species which are legally protected under the Flora (Protection) Order, 2015 have been recorded on the North Bull Island. These are Lesser Centaury (*Centaureum pulchellum*), Red Hemp-nettle (*Galeopsis angustifolia*) and Meadow Saxifrage (*Saxifraga granulata*). Two further species listed as threatened in the Red Data Book, Wild Clary/Sage (*Salvia verbenaca*) and Spring Vetch (*Vicia lathyroides*), have also been recorded. A rare liverwort, *Petalophyllum ralfsii*, was first recorded from the North Bull Island in 1874 and has recently been confirmed as still present. This species is of high conservation value as it is listed on Annex II of the E.U. Habitats Directive. The North Bull is the only known extant site for the species in Ireland away from the western seaboard.

North Dublin Bay is of international importance for waterfowl. Some of these species frequent South Dublin Bay and the River Tolka Estuary for feeding and/or roosting purposes (mostly Light-bellied Brent Goose, Oystercatcher, Ringed Plover, Sanderling and Dunlin). The tip of the North Bull Island is a traditional nesting site for Little Tern. A high total of 88 pairs nested in 1987. However, nesting attempts have not been successful since the early 1990s. A well-known population of Irish Hare is resident on the island.

The invertebrates of the North Bull Island have been studied and the island has been shown to contain at least seven species of regional or national importance in Ireland.

The main land uses of this site are amenity activities and nature conservation. The North Bull Island is the main recreational beach in Co. Dublin and is used throughout the year. Much of the land surface of the island is taken up by two golf courses. Two separate Statutory Nature Reserves cover much of the island east of the Bull Wall and the surrounding intertidal flats. The site is used regularly for educational purposes. North Bull Island has been designated a Special Protection Area under the E.U. Birds Directive and it is also a statutory Wildfowl Sanctuary, a Ramsar Convention site, a Biogenetic Reserve, a Biosphere Reserve and a Special Area Amenity Order site.

This site is an excellent example of a coastal site with all the main habitats represented. The site holds good examples of nine habitats that are listed on Annex I of the E.U. Habitats Directive; one of these is listed with priority status. Several of the wintering bird species have populations of international importance, while some of the invertebrates are of national importance. The site contains a number of rare and scarce plants including some which are legally protected. Its proximity to the capital city makes North Dublin Bay an excellent site for educational studies and research.

Sensitivities of the Site and its Qualifying Interests

As this site is located directly adjacent to a major city and port, expansion of the city and port poses the greatest threat to its integrity. Reclamation of land from the sea, estuary or marsh represents a direct loss of key Qualifying Interests of the site. Roads, urbanisation, human habitation, industrial and commercial activities and accumulation of organic material present pressures on the site in terms of disturbance and pollution. Walkers, horse riding and non-motorised vehicles also cause persistent disturbance to the birds within the site.

3.2.4 South Dublin Bay SAC

The description of the South Dublin Bay SAC provided here is based on the Site Synopsis (NPWS, 2013e) and Conservation Objectives (NPWS, 2015d) for the site, as well as the Conservation Objectives Supporting Documents (NPWS, 2013f) and the site Statutory Instrument (S.I. No. 525/2019).

Qualifying Interests of the Site

Mudflats and sandflats not covered by seawater at low tide [1140]

Annual vegetation of drift lines [1210]

Salicornia and other annuals colonising mud and sand [1310]

Embryonic shifting dunes [2110]

Site Overview

This site lies south of the River Liffey in Co. Dublin, and extends from the South Wall to the west pier at Dun Laoghaire. It is an intertidal site with extensive areas of sand and mudflats. The sediments are predominantly sands but grade to sandy muds near the shore at Merrion Gates. The main channel which drains the area is Cockle Lake.

The bed of Dwarf Eelgrass (*Zostera noltii*) found below Merrion Gates is the largest stand on the east coast. Green algae (*Enteromorpha spp.* and *Ulva lactuca*) are distributed throughout the area at a low density. Furoid algae occur on the rocky shore in the Maretimo to Dún Laoghaire area.

Several small, sandy beaches with incipient dune formation occur in the northern and western sectors of the site, notably at Poolbeg, Irishtown and Merrion/ Booterstown. The formation at Booterstown is very recent. Drift line vegetation occurs in association with the embryonic and incipient fore dunes. Typically drift lines occur in a band approximately 5 m wide, though at Booterstown this zone is wider in places. The habitat occurs just above the High Water Mark and below the area of embryonic dune.

A small area of pioneer saltmarsh now occurs in the lee of an embryonic sand dune just north of Booterstown Station. This early stage of saltmarsh development is here characterised by the presence of pioneer stands of glassworts (*Salicornia spp.*) occurring below an area of drift line vegetation. As this is of very recent origin, it covers a small area but ample areas of substrate and shelter are available for the further development of this habitat.

Lugworm (*Arenicola marina*), Cockles (*Cerastoderma edule*) and annelids and other bivalves are frequent throughout the site. The small gastropod *Hydrobia ulvae* occurs on the muddy sands off Merrion Gates.

South Dublin Bay is an important site for waterfowl. Although birds regularly commute between the south bay and the north bay, recent studies have shown that certain populations which occur in the south bay spend most of their time there. The principal species are Oystercatcher (1215), Ringed Plover (120), Sanderling (344), Dunlin (2628) and Redshank (356) (average winter peaks 1996/97 and 1997/98). Up to 100 Turnstones are usual in the south bay during winter. Brent Goose regularly occur in numbers of international importance (average peak 299). Bar-tailed Godwit (565), a species listed on Annex I of the E.U. Birds Directive, also occur.

Large numbers of gulls roost in South Dublin Bay, e.g. 4,500 Black-headed Gulls in February 1990; 500 Common Gulls in February 1991. It is also an important tern roost in the autumn, regularly holding 2000-3000 terns including Roseate Terns, a species listed on Annex I of the E.U. Birds Directive. South Dublin Bay is largely protected as a Special Protection Area.

This site is a fine example of a coastal system, with extensive sand and mudflats, and incipient dune formations. South Dublin Bay is also an internationally important bird site.

Sensitivities of the Site and its Qualifying Interests

As this site is located directly adjacent to a major city and port, expansion of the city and port poses the greatest threat to its integrity. Reclamation of land from the sea, represents a direct loss of key Qualifying Interests of the site. Roads, urbanisation, human habitation, industrial and commercial activities and accumulation of organic material present pressures on the site in terms of disturbance and pollution.

At low tide the inner parts of the south bay are used for amenity purposes which represents further pressures of disturbance and pollution. Bait digging is a regular activity on the sandy flats. At high tide some areas have windsurfing and jet-skiing.

3.2.5 North-west Irish Sea SPA

The description of the North-west Irish Sea SPA provided here is based on the Site Synopsis (NPWS, 2023a) and Conservation Objectives (NPWS, 2023b).

Qualifying Interests of the Site

- [A065] Common Scoter (*Melanitta nigra*)
- [A001] Red-throated Diver (*Gavia stellata*)
- [A003] Great Northern Diver (*Gavia immer*)
- [A009] Fulmar (*Fulmarus glacialis*)
- [A013] Manx Shearwater (*Puffinus puffinus*)
- [A018] Shag (*Phalacrocorax aristotelis*)
- [A017] Cormorant (*Phalacrocorax carbo*)
- [A117] Little Gull (*Larus minutus*)
- [A188] Kittiwake (*Rissa tridactyla*)
- [A179] Black-headed Gull (*Chroicocephalus ridibundus*)
- [A183] Common Gull (*Larus fuscus*)
- [A183] Lesser Black-backed Gull (*Larus marinus*)
- [A184] Herring Gull (*Larus argentatus*)
- [A187] Great Black-backed Gull (*Larus marinus*)
- [A195] Little Tern (*Sterna albifrons*)
- [A192] Roseate Tern (*Sterna dougalii*)
- [A193] Common Tern (*Sterna hirundo*)
- [A194] Artic Tern (*Sterna paradisaea*)
- [A204] Puffin (*Fratercula arctica*)
- [A200] Razorbill (*Alca torda*)
- [A199] Guillemot (*Uria aalge*)

Site Overview

The North-west Irish Sea SPA constitutes an important resource for marine birds. The estuaries and bays that open into it along with connecting coastal stretches of intertidal and shallow subtidal habitats, provide safe feeding and roosting habitats for waterbirds throughout the winter and migration periods.

These areas, along with more pelagic marine waters further offshore, provide additional supporting habitats (for foraging and other maintenance behaviours) for those seabirds that breed at colonies on the north-west Irish Sea's islands and coastal headlands. These marine areas are also important for seabirds outside the breeding period.

This SPA extends offshore along the coasts of counties Louth, Meath and Dublin, and is approximately 2,333km² in area. This SPA is ecologically connected to several existing SPAs in this area.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Common Scoter, Red-throated Diver, Great Northern Diver, Fulmar, Manx Shearwater, Shag, Cormorant, Little Gull, Kittiwake, Black-headed Gull, Common Gull, Lesser Black-backed Gull, Herring Gull, Great Black-backed Gull, Little Tern, Roseate Tern, Common Tern, Arctic Tern, Puffin, Razorbill and Guillemot.

The breeding seabird species listed for those SPAs, which abut the North-West Irish Sea SPA are: Fulmar (Lambay Island SPA); Cormorant (Skerries Island SPA; Ireland's Eye SPA; Lambay Island SPA); Shag (Skerries Island SPA; Lambay Island SPA); Lesser Black-backed Gull (Lambay Island SPA); Herring Gull (Skerries Island SPA; Ireland's Eye SPA; Lambay Island SPA); Kittiwake (Lambay Island SPA; Ireland's Eye SPA; Howth Head SPA); Roseate Tern (Rockabill SPA); Common Tern (Rockabill SPA); Arctic Tern (Rockabill SPA); Little Tern (Boyne Estuary SPA); Guillemot (Lambay Island SPA, Ireland's Eye SPA); Razorbill (Lambay Island SPA, Ireland's Eye SPA); and Puffin (Lambay Island SPA). The Common Tern population that is listed for the nearby South Dublin Bay and River Tolka Estuary SPA is also likely to use this SPA as a foraging resource.

Informed by two surveys of the western Irish Sea region in 2016 an estimated 120,232 and 34,626 individual marine birds occurred in this SPA during autumn and winter respectively. Those marine bird species whose estimated abundances equalled or exceeded 1% of the total estimated size of the winter assemblage are: Red-throated Diver (538), Fulmar (506), Little Gull (391), Kittiwake (944), Black-headed Gull (508), Common Gull (2,866), Herring Gull (6,893), Great Black-backed Gull (2,096), Razorbill (4,638) and Guillemot (13,914).

The estimated 2016 summer abundance of Manx Shearwater in the North-west Irish Sea SPA is 13,010 and is of international importance. The estimated 2016 autumn and winter abundances of Great Northern Diver in the North-west Irish Sea SPA is 248 and 230 respectively and are of international importance. The estimated abundances of Common Scoter over parts of this SPA can reach significant numbers (e.g. 14,567 in December 2018) which is also of international importance.

Sensitivities of the Site and its Qualifying Interests

The site is exclusively located in coastal and marine environments. As such the greatest threats to the integrity of the Qualifying Interests of the site are disturbance (via recreational, commercial and industrial activities) which causes a reduction in foraging opportunities and impacts to water quality and local food webs which directly reduce prey abundances for the Qualifying Interests of the site.

3.2.6 Rockabill to Dalkey Island SAC

The description of the Rockabill to Dalkey Island SAC provided here is based on the Site Synopsis (NPWS, 2014c) and Conservation Objectives (NPWS, 2013g) for the site, as well as the Conservation Objectives Supporting Documents (NPWS, 2013h).

Qualifying Interests of the Site

[1170] Reefs

[1351] Harbour Porpoise (*Phocoena phocoena*)

Site Overview

This site includes a range of dynamic inshore and coastal waters in the western Irish Sea. These include sandy and muddy seabed, reefs, sandbanks and islands. This site extends southwards, in a strip approximately 7km wide and 40km in length, from Rockabill, running adjacent to Howth Head, and crosses Dublin Bay to Frazer Bank in south Co. Dublin. The site encompasses Dalkey, Muglins and Rockabill islands.

Reef habitat is uncommon along the eastern seaboard of Ireland due to prevailing geology and hydrographical conditions. Expansive surveys of the Irish coast have indicated that the greatest resource of this habitat within the Irish Sea is found fringing offshore islands which are concentrated along the Dublin coast. A detailed survey of selected suitable islands has shown areas with typical biodiversity for this habitat both intertidally and subtidally. These reefs are subject to strong tidal currents with an abundant supply of suspended matter resulting in good representation of filter feeding fauna such as sponges, anemones and echinoderms.

The area selected for designation represents a key habitat for the Annex II species Harbour Porpoise within the Irish Sea. Population survey data show that porpoise occurrence within the site boundary meets suitable reference values for other designated sites in Ireland. The species occurs year-round within the site and comparatively high group sizes have been recorded. Porpoises with young (i.e. calves) are observed at favourable, typical reference values for the species. Casual and effort-related sighting rates from coastal observation stations are significant for the east coast of Ireland and the latter appear to be relatively stable across all seasons. The selected site contains a wide array of habitats believed to be important for Harbour Porpoise including inshore shallow sand and mudbanks and rocky reefs scoured by strong current flow. The site also supports Common Seal and Grey Seal, for which terrestrial haul-out sites occur in immediate proximity to the site. Bottlenosed Dolphins has also occasionally been recorded in the area. A number of other marine mammals have been recorded in this area including Minke, Fin and Killer Whales and Risso's and Common Dolphins.

The coastal environment of Co. Dublin is a very significant resource to birds with some nationally and internationally important populations. Of particular note in this site are the large number of terns (Arctic, Common and Roseate) known to use Dalkey Island as a staging area (approx. 2,000) after breeding. Other seabirds commonly seen include Kittiwake, Razorbill, Guillemot, Puffin, Fulmar, Shag, Cormorant, Manx Shearwater, Gannet and gulls.

Sensitivities of the Site and its Qualifying Interests

The greatest threats to the integrity of the Qualifying Interests of this site are presented by habitat loss / degradation and disturbance resulting from recreational, industrial and commercial activities that impact water quality and the populations dynamics of the Qualifying Interests of this site.

3.2.7 Howth Head Coast SPA

The description of the Howth Head Coast SPA provided here is based on the Site Synopsis (NPWS, 2011), Conservation Objectives (NPWS, 2022b) for the site.

Qualifying Interests of the Site

[A188] Kittiwake (*Rissa tridactyla*)

Site Overview

Howth Head is a rocky headland situated on the northern side of Dublin Bay. The peninsula is composed of Cambrian rock of the Bray Group, the most conspicuous component being quartzite. The site comprises the sea cliffs extending from just east of the Nose of Howth to the tip of the Bailey Lighthouse peninsula. The marine area to a distance of 500 m from the cliff base is included within the site.

The cliffs vary from between about 60 m and 90 m in height, and in places comprise fairly sheer, exposed rock face.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Kittiwake.

A range of seabird species breed within the Howth Head SPA, including a nationally important population of Kittiwake. A census in 1999 recorded the following species: Fulmar (33 pairs), Shag (12 pairs), Herring Gull (17 pairs), Great Black-backed Gull (5 pairs), Kittiwake (2,269 pairs), Guillemot (663 pairs) and Razorbill (279 pairs). In addition, 39 individual Black Guillemot were counted within the site in May 1998.

The cliffs also support a breeding pair of Peregrine Falcon. The seabird colony at Howth Head has been monitored at intervals since the Operation Seafarer project in 1969/70.

Howth Head Coast SPA is of high ornithological importance as it supports a nationally important population of Kittiwake. It is also a traditional nesting site for Peregrine Falcon, a species that is listed on Annex I of the E.U. Birds Directive. The site is easily accessible and has important amenity and educational value due to its proximity to Dublin City.

Sensitivities of the Site and its Qualifying Interests

The greatest threats to the integrity of the Qualifying Interest of the site are disturbance (via recreational, commercial and industrial activities) which causes a reduction in foraging opportunities and impacts to water quality and local food webs which directly reduce prey abundances for the Qualifying Interest of the site.

3.2.8 Howth Head SAC

The description of the Howth Head SAC provided here is based on the Site Synopsis (NPWS, 2013i) and Conservation Objectives (NPWS, 2016a) for the site, as well as the Conservation Objectives Supporting Documents (NPWS, 2016b).

Qualifying Interests of the Site

[1230] Vegetated Sea Cliffs

[4030] Dry Heath

Site Overview

Howth Head is a rocky headland situated on the northern side of Dublin Bay. The peninsula is composed of Cambrian slates and quartzites, joined to the mainland by a post-glacial raised beach. Limestone occurs on the north-west side while glacial drift is deposited against the cliffs in places.

A mosaic of heathland vegetation occurs on the slopes above the sea cliffs and in the area of the summit. The heath merges into dry grassland in places. In the summit area there are a few wet flushes and small bogs. The maritime flora is of particular interest as a number of scarce and local plants have been recorded.

Rock outcrops which are important for lichens are distributed widely around Howth Head. The richest area for lichens appears to be around Balscadden quarries. In addition, the Earlscliffe area is of national importance for lichens and is the type locality for the black, yellow and grey lichen zonation.

A number of Red Data Book plant species, the latter five of which are legally protected under the Flora (Protection) Order, 1999, have been recorded at this site - Green-winged Orchid (*Orchis morio*), Bird's-foot (*Ornithopus perpusillus*), Hairy Violet (*Viola hirta*), Rough Poppy (*Papaver hybridum*), Pennyroyal (*Mentha pulegium*), Heath Cudweed (*Omalotheca sylvatica*) and Betony (*Stachys officinalis*).

Curved Hard-grass (*Parapholis incurva*), a species which had not previously been recognized as occurring in Ireland, was found at Red Rock in 1979.

The site is of national importance for breeding seabirds. A census in 1985-87 recorded the following numbers: Fulmar (105 pairs), Shags (25 pairs), Herring Gulls (70 pairs), Kittiwake (c. 1,700 pairs), Guillemot (585 birds), Razorbill (280 birds). In 1990, 21 pairs of Black Guillemot were counted.

A number of rare invertebrates have been recorded from the site.

Howth Head displays a fine range of natural habitats, including two Annex I habitats, within surprisingly close proximity to Dublin city. The site is also of scientific importance for its seabird colonies, invertebrates and lichens. It also supports populations of at least two legally protected plant species and several other scarce plants.

Sensitivities of the Site and its Qualifying Interests

The main land use within the area is recreation, mostly walking and horse-riding, and this has led to some erosion within the site. Fires also pose a danger to the site. There may also be a threat in some areas from further housing development.

3.2.9 Dalkey Islands SPA

The description of the Dalkey Islands SPA provided here is based on the Site Synopsis (NPWS, 2015e) and Conservation Objectives (NPWS, 2022c) for the site.

Qualifying Interests of the Site

Roseate Tern (*Sterna dougallii*) [A192]

Common Tern (*Sterna hirundo*) [A193]

Arctic Tern (*Sterna paradisaea*) [A194]

Site Overview

The site comprises Dalkey Island, Lamb Island and Maiden Rock, the intervening rocks and reefs, and the surrounding sea to a distance of 200m. Dalkey Island, which is the largest in the group, lies c. 400m off Sorrento Point on the Co. Dublin mainland from which it is separated by a deep channel. The island is low-lying, the highest point of which (c. 15m) is marked by a Martello Tower. Soil cover consists mainly of a thin peaty layer, though in a few places there are boulder clay deposits. Vegetation cover is low-growing and consists mainly of grasses. Dense patches of Bracken (*Pteridium aquilinum*) and Hogweed (*Heracleum sphondylium*) occur in places. Lamb Island lies to the north of Dalkey Island, and at low tide is connected by a line of rocks. It has a thin soil cover and some vegetation, mainly of grasses, Nettles (*Urtica dioica*) and Hogweed. Further north lies Maiden Rock, a bare angular granite rock up to 5 m high that is devoid of higher plant vegetation.

This site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Roseate Tern, Common Tern and Arctic Tern.

Dalkey Islands SPA is both a breeding and a staging site for *Sterna* terns. There is a good history of nesting by terns though success has been variable over the years. Common Tern is the most common species, usually outnumbering Arctic Tern by at least 3:1. Up to 1988, the range given for Common Tern was 15-53 pairs, and for Arctic Tern 'a few' pairs. Also, Roseate Tern attempted nesting in 1986, with 2 pairs recorded. A tern conservation scheme, co-ordinated by BirdWatch Ireland / National Parks and Wildlife Service, began in 1995, with wardening, nestbox deployment and monitoring being carried out. The ultimate aim was to attract Roseate Tern to breed. Numbers of terns increased in subsequent years, though numbers and breeding success is still variable between years. In 2003 62 pairs of Common Tern and 24 pairs of Arctic Tern were recorded. Of great significance is that Roseate Tern has returned, with 5 pairs recorded in 2003 and 11 pairs in 2004 - this is one of only three known sites in the country for this rare species.

The site, along with other parts of south Dublin Bay, is used by the three tern species as a major post-breeding/pre-migration autumn roost area. The site is linked to another important post-breeding/pre-migration autumn tern roost area in Dublin Bay. Birds are present from about late-July to September, with c. 2,000 terns, comprising individuals of all three species, recorded in 1998. The origin of the birds is likely to be the Dublin breeding sites (Rockabill and Dublin Docks) though the numbers recorded suggests that birds from other sites, perhaps outside the State, are also present.

Sensitivities of the Site and its Qualifying Interests

The greatest threats to the integrity of the Qualifying Interests of the site are disturbance (via recreational, commercial and industrial activities) which causes a reduction in foraging opportunities and impacts to water quality and local food webs which directly reduce prey abundances for the Qualifying Interests of the site.

3.3 Evaluation against Conservation Objectives

Table 3-2 to 3-10 below details the evaluation of the likely significant effects of the Proposed Development in view of the Conservation Objectives of the sites identified in Section 3.1 and described in Section 3.2. As explained in Sections 1.3 and 1.4, AA Screening is carried out in view of the Conservation Objectives of the relevant European sites, which are in turn defined by detailed Attributes and corresponding Targets. Therefore, the evaluation of whether or not a likely effect is significant (in view of the Conservation Objective in question) is made with regard to these Attributes and Targets.

Table 3-2 Evaluation of the likely significant effects of the Proposed Development in view of the Conservation Objectives of the South Dublin Bay and River Tolka Estuary SPA.

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<p>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</p>	<p><i>“To maintain the favourable conservation condition of Light-bellied Brent Goose in South Dublin Bay and River Tolka Estuary SPA”.</i></p>	<p>The site occurs a hydrological distance of c. 2.6km downstream to the east of the Proposed Development.</p> <p>Light-bellied Brent Goose use the Proposed Development area occasionally as confirmed during surveys undertaken by ROD in 2018, 2019, 2022 and 2023, with a peak count of 50 individuals representing the highest daily total of the species during any one survey. This represents 10% of the SPA population (NPWS, 2014a). Light-bellied Brent geese were observed flying along the River Dodder and River Liffey corridors and congregating on the mudflats at the confluence of the two rivers.</p> <p>This species may forage on the intertidal mudflats around the Proposed Development area. There is limited intertidal habitat (c. .01km²) for this species within 150 m of the Proposed Development. There is a total of 2,192ha wetland habitat in the SPA. This habitat is located outside of the SPA and the small area adjacent to the Proposed Development will not be removed as part of the Proposed Development. Given that c. 10% of the baseline wintering population was recorded within 550m of the Proposed Development area and the high sensitivity of this species to visual and noise disturbance (Cutts et al., 2013) potential impacts resulting from visual and noise disturbance that may occur during the construction phase of the Proposed Development have the potential for likely significant effects on the ‘Distribution’ Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>Changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages in the wider SPA area (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas.</p>	<p>Yes</p>

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		<p>Therefore, this has the potential for likely significant effects on the 'Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>Therefore, the potential for likely significant effects on the South Dublin Bay and River Tolka Estuary SPA, in view of its Conservation Objective for this Qualifying Interest through visual and noise disturbance and changes in water quality cannot be ruled out at this stage.</p>	
Oystercatcher (<i>Haematopus ostralegus</i>) [A130]	<i>"To maintain the favourable conservation condition of Oystercatcher in South Dublin Bay and River Tolka Estuary SPA".</i>	<p>The site occurs a hydrological distance of c. 2.6km downstream to the east of the Proposed Development.</p>	Yes
Ringed Plover (<i>Charadrius hiaticula</i>) [A137]	<i>"To maintain the favourable conservation condition of Ringed Plover in South Dublin Bay and River Tolka Estuary SPA".</i>	<p>These species were not recorded during surveys undertaken, but are likely to utilise the Proposed Development area occasionally.</p>	Yes
Grey Plover (<i>Pluvialis squatarola</i>) [A141]	<i>"Grey Plover is proposed for removal from the list of Special Conservation Interests for South Dublin Bay and River Tolka Estuary SPA. As a result, a site-specific conservation objective has not been set for this species."</i>	<p>These species may forage on the intertidal mudflats around the Proposed Development area. There is limited suitable habitat (c. 100m²) for this species within 150 m of the Proposed Development. There is a total of 2,192ha wetland habitat in the SPA. This habitat is located outside of the SPA and the small area adjacent to the Proposed Development will not be removed as part of the Proposed Development. There is potential for low numbers of these species using the area within 550 m of the Proposed Development. Therefore, potential impacts resulting from visual and noise disturbance that may occur during the construction phase of the Proposed Development, if any, will be limited to very few individuals and will not result in likely significant effects on these Qualifying Interests.</p>	Yes
Knot (<i>Calidris canutus</i>) [A143]	<i>"To maintain the favourable conservation condition of Knot in South Dublin Bay and River Tolka Estuary SPA".</i>	<p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which these species forage in the wider SPA area (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing these species to move into more suitable areas. Therefore, this has the potential for</p>	Yes
Sanderling (<i>Calidris alba</i>) [A144]	<i>"To maintain the favourable conservation condition of Sanderling in South Dublin Bay and River Tolka Estuary SPA".</i>		Yes
Dunlin	<i>"To maintain the favourable conservation condition of Dunlin in</i>		Yes

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
(<i>Calidris alpina alpina</i>) [A149]	<i>South Dublin Bay and River Tolka Estuary SPA</i> ".	likely significant effects on the 'Distribution' Attribute of the Conservation Objectives for these Qualifying Interests.	
Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]	<i>"To maintain the favourable conservation condition of Bar-tailed Godwit in South Dublin Bay and River Tolka Estuary SPA"</i> .	Therefore, the potential for likely significant effects on the South Dublin Bay and River Tolka Estuary SPA, in view of its Conservation Objective for these Qualifying Interests through changes in water quality cannot be ruled out at this stage.	Yes
Redshank (<i>Tringa totanus</i>) [A162]	<i>"To maintain the favourable conservation condition of Redshank in South Dublin Bay and River Tolka Estuary SPA"</i> .		Yes
Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]	<i>"To maintain the favourable conservation condition of Black-headed Gull in South Dublin Bay and River Tolka Estuary SPA"</i> .	<p>The site occurs a hydrological distance of c. 2.6km downstream to the east of the Proposed Development.</p> <p>Black-headed Gull typically breeds in the west of Ireland as well as inland sites and occurs at the site in autumn and winter. Black-headed Gull was recorded in low numbers during the surveys that were undertaken to inform this assessment. A peak count of 50 Black-headed Gulls represented the highest daily total for the species during any one survey.</p> <p>The numbers of Black-headed Gull present within 550 m of the Proposed Development represent a small proportion (1.6%) of the total numbers in the SPA (NPWS, 2014a). This species is also tolerant of human activity and noise disturbance which may occur during the construction phase. Therefore, potential impacts resulting from visual and noise disturbance that may occur during the construction phase of the Proposed Development, if any, will be limited to very few individuals and will not result in likely significant effects on this Qualifying Interest.</p>	Yes

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		<p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>Therefore, the potential for likely significant effects on the South Dublin Bay and River Tolka Estuary SPA, in view of its Conservation Objective for this Qualifying Interest through changes in water quality cannot be ruled out at this stage.</p>	
<p>Roseate Tern (<i>Sterna dougallii</i>) [A192]</p>	<p><i>"To maintain the favourable conservation condition of Roseate Tern in South Dublin Bay and River Tolka Estuary SPA".</i></p>	<p>The site occurs a hydrological distance of c. 2.6km downstream to the east of the Proposed Development.</p> <p>The closest known breeding site for Roseate Tern is at the Electricity Supply Board dolphin on the River Liffey between Poolbeg power station and the Pigeon House (2.4km east of the Proposed Development). Roosting is known to occur between Martello towers at Sandymount and Williamstown (c. 3.9km southeast of the Proposed Development). Given the distance between the Proposed Development and the breeding site, impacts resulting from visual and noise disturbance, will be limited to very few individuals and will not interfere with the achievement of the Conservation Objectives for this Qualifying Interest.</p> <p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages and breeds in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas.</p>	<p>Yes</p>

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		<p>Therefore, this has the potential for likely significant effects on the 'Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>Therefore, the potential for likely significant effects on the South Dublin Bay and River Tolka Estuary SPA, in view of its Conservation Objective for this Qualifying Interest through changes in water quality cannot be ruled out at this stage.</p>	
<p>Common Tern (<i>Sterna hirundo</i>) [A193]</p>	<p><i>"To maintain the favourable conservation condition of Common Tern in South Dublin Bay and River Tolka Estuary SPA".</i></p>	<p>The site occurs a hydrological distance of c. 2.6km downstream to the east of the Proposed Development.</p> <p>Three and four Common Tern nests were recorded on the seaward ends of the walls between Camden, Buckingham and Westmoreland Locks, at the entrance to Grand Canal Docks from the River Dodder, approximately 230m from the Proposed Development.</p> <p>While Common Tern is known to breed successfully at high-disturbance sites in Dublin Bay, it cannot be ruled out at this stage that the construction phase of the proposed development would not result in significant noise disturbance at the Grand Canal Dock breeding site, which could lead to the failure or abandonment of the nests at this site. This has the potential to alter the 'breeding population abundance', 'productivity rate', or 'Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>Changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages and breeds in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Distribution' attribute of the Conservation Objectives for this Qualifying Interest.</p>	<p>Yes</p>

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		Therefore, the potential for likely significant effects on the South Dublin Bay and River Tolka Estuary SPA, in view of its Conservation Objective for this Qualifying Interest through disturbance to nesting individuals and changes in water quality cannot be ruled out at this stage.	
Arctic Tern (<i>Sterna paradisaea</i>) [A194]	<i>"To maintain the favourable conservation condition of Arctic Tern in South Dublin Bay and River Tolka Estuary SPA".</i>	<p>The site occurs a hydrological distance of c. 2.6km downstream to the east of the Proposed Development.</p> <p>The closest known breeding site for Arctic Tern is at the Electricity Supply Board dolphin on the River Liffey between Poolbeg power station and the Pigeon House (c. 2.4km east of the Proposed Development). Roosting is known to occur between Martello towers at Sandymount and Williamstown (c. 2.6km southeast of the Proposed Development). Given the distance between the Proposed Development and the breeding site and the low numbers of Roseate Tern using the area within 550 m of the Proposed Development, impacts resulting from visual and noise disturbance, will be limited to very few individuals and will not interfere with the achievement of the Conservation Objectives for this Qualifying Interest.</p> <p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages and breeds in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>Therefore, the potential for likely significant effects on the South Dublin Bay and River Tolka Estuary SPA, in view of its Conservation Objective for this Qualifying Interest through changes in water quality cannot be ruled out at this stage.</p>	Yes
Wetlands [A999]	<i>"To maintain the favourable conservation condition of the wetland habitat in South Dublin Bay and River</i>	<p>The site occurs a hydrological distance of c. 2.4km downstream to the east of the Proposed Development.</p>	No

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
	<p><i>Tolka Estuary SPA as a resource for the regularly occurring migratory waterbirds that utilise it</i>”.</p>	<p>The Conservation Objective for Wetlands is defined by a single Attribute, namely “Habitat area”, the Target for which is “<i>The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,192 hectares, other than that occurring from natural patterns of variation.</i>”. As the Proposed Development does not provide for any reduction in the permanent area of this habitat within the site, there is no potential for likely significant effects on the South Dublin Bay and River Tolka Estuary SPA, in view of its Conservation Objective for this Qualifying Interest habitat.</p>	

Table 3-3 Evaluation of the likely significant effects of the Proposed Development in view of the Conservation Objectives of the North Bull Island SPA

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<p>Light-bellied Brent Goose <i>(Branta bernicla hrota)</i> [A046]</p>	<p><i>“To maintain the favourable conservation condition of Light-bellied Brent Goose in North Bull Island SPA”.</i></p>	<p>The site occurs a hydrological distance of c. 4.2km downstream to the east of the Proposed Development.</p> <p>Light-bellied Brent Goose use the Proposed Development area occasionally as confirmed during surveys undertaken by ROD in 2018, 2019, 2022 and 2023, with a peak count of 50 individuals representing the highest daily total of the species during any one survey. This represents 3.2% of the SPA population (NPWS, 2014a). Light-bellied Brent geese were observed flying along the River Dodder and River Liffey corridors and congregating on the mudflats at the confluence of the two rivers.</p> <p>This species may forage on the intertidal mudflats around the Proposed Development area. There is limited suitable habitat (c.100m²) for this species within 150 m of the Proposed Development. There is a total of 1,713ha wetland habitat in the SPA. This habitat is located outside of the SPA and the small area adjacent to the Proposed Development will not be removed as part of the Proposed Development. Given that c. 3.2% of the baseline wintering population was recorded within 550m of the Proposed Development area and the high sensitivity of this species to visual and noise disturbance (Cutts et al., 2013) potential impacts resulting from visual and noise disturbance that may occur during the construction phase of the Proposed Development have the potential for likely significant effects on the ‘Distribution’ Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable</p>	<p>Yes</p>

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		<p>areas. Therefore, this has the potential for likely significant effects on the 'Distribution' Attribute of the Conservation Objectives for this Qualifying Interest. Therefore, the potential for likely significant effects on the North Bull Island SPA, in view of its Conservation Objective for this Qualifying Interest through visual and noise disturbance and changes in water quality cannot be ruled out at this stage.</p>	
<p>Shelduck <i>(Tadorna tadorna)</i> [A048]</p>	<p><i>"To maintain the favourable conservation condition of Shelduck in North Bull Island SPA".</i></p>	<p>The site occurs a hydrological distance of c. 4.2km downstream to the east of the Proposed Development.</p>	<p>Yes</p>
<p>Teal (<i>Anas crecca</i>) [A052]</p>	<p><i>"To maintain the favourable conservation condition of Teal in North Bull Island SPA".</i></p>	<p>These species may forage on the intertidal mudflats around the Proposed Development area. There is limited suitable habitat (c. .01km²) for these species within 150 m of the Proposed Development. There is a total of 1,713ha wetland habitat in the SPA. This habitat is located outside of the SPA and the small area adjacent to the Proposed Development will not be removed as part of the Proposed Development. There are low numbers of these species using the area within 550 m of the Proposed Development. Therefore, potential impacts resulting from visual and noise disturbance that may occur during the construction phase of the Proposed Development, considering the temporary nature of construction works and ambient visual and noise disturbance levels in the area, if any, will be limited to very few individuals and will not have any likely significant effects on these Qualifying Interests.</p> <p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which these species forage in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing these species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Distribution' Attribute of the Conservation Objectives for these Qualifying Interests.</p>	<p>Yes</p>
<p>Pintail <i>(Anas acuta)</i> [A054]</p>	<p><i>"To maintain the favourable conservation condition of Pintail in North Bull Island SPA".</i></p>		<p>Yes</p>
<p>Shoveler <i>(Anas clypeata)</i> [A056]</p>	<p><i>"To maintain the favourable conservation condition of Shoveler in North Bull Island SPA".</i></p>		<p>Yes</p>
<p>Oystercatcher <i>(Haematopus ostralegus)</i> [A130]</p>	<p><i>"To maintain the favourable conservation condition of Oystercatcher in North Bull Island SPA".</i></p>		<p>Yes</p>
<p>Golden Plover <i>(Pluvialis apricaria)</i> [A140]</p>	<p><i>"To maintain the favourable conservation condition of Grey Plover in North Bull Island SPA".</i></p>		<p>Yes</p>
<p>Grey Plover <i>(Pluvialis squatarola)</i> [A141]</p>	<p><i>"To maintain the favourable conservation condition of Grey Plover in North Bull Island SPA".</i></p>	<p>Yes</p>	

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Knot <i>(Calidris canutus)</i> [A143]	<i>"To maintain the favourable conservation condition of Knot in North Bull Island SPA".</i>	Therefore, the potential for likely significant effects on the North Bull Island SPA, in view of its Conservation Objective for these Qualifying Interests through changes in water quality cannot be ruled out at this stage.	Yes
Sanderling <i>(Calidris alba)</i> [A144]	<i>"To maintain the favourable conservation condition of Sanderling in North Bull Island SPA".</i>		Yes
Dunlin <i>(Calidris alpina alpina)</i> [A149]	<i>"To maintain the favourable conservation condition of Dunlin in North Bull Island SPA".</i>		Yes
Black-tailed Godwit (<i>Limosa limosa</i>) [A156]	<i>"To maintain the favourable conservation condition of Black-tailed Godwit in North Bull Island SPA".</i>		Yes
Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]	<i>"To maintain the favourable conservation condition of Bar-tailed Godwit in North Bull Island SPA".</i>		Yes
Curlew <i>(Numenius arquata)</i> [A160]	<i>"To maintain the favourable conservation condition of Curlew in North Bull Island SPA".</i>		Yes
Redshank <i>(Tringa totanus)</i> [A162]	<i>"To maintain the favourable conservation condition of Redshank in North Bull Island SPA".</i>		Yes
Turnstone <i>(Arenaria interpres)</i> [A169]	<i>"To maintain the favourable conservation condition of Turnstone in North Bull Island SPA".</i>		Yes
Black-headed Gull <i>(Chroicocephalus ridibundus)</i> [A179]	<i>"To maintain the favourable conservation condition of Black-headed Gull in North Bull Island SPA".</i>	The site occurs a hydrological distance of c. 4.2km downstream to the east of the Proposed Development.	Yes

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		<p>Black-headed Gull typically breeds in the west of Ireland as well as inland sites and occurs at the site in autumn and winter. Black-headed Gull was recorded in low numbers during the surveys that were undertaken to inform this assessment. A peak count of 50 Black-headed Gulls represented the highest daily total for the species during any one survey.</p> <p>The numbers of Black-headed Gull present within 550 m of the Proposed Development represent a small proportion (2.2%) of the total numbers in the SPA (NPWS, 2014a). This species is also tolerant of human activity and noise disturbance which may occur during the construction phase. Therefore, potential impacts resulting from visual and noise disturbance that may occur during the construction phase of the Proposed Development, if any, will be limited to very few individuals and will not result in likely significant effects on this Qualifying Interest.</p> <p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>Therefore, the potential for likely significant effects on the South Dublin Bay and River Tolka Estuary SPA, in view of its Conservation Objective for this Qualifying Interest through changes in water quality cannot be ruled out at this stage.</p>	

Qualifying Interest	Conservation Objective as per NPWS (2015b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<p>Wetlands [A999]</p>	<p><i>“To maintain the favourable conservation condition of the wetland habitat in North Bull Island SPA as a resource for the regularly occurring migratory waterbirds that utilise it”.</i></p>	<p>The site occurs a hydrological distance of c. 4.2km downstream to the east of the Proposed Development.</p> <p>The Conservation Objective for Wetlands is defined by a single Attribute, namely “Habitat area”, the Target for which is <i>“The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 1,713 hectares, other than that occurring from natural patterns of variation”</i>. As the Proposed Development does not provide for any reduction in the permanent area of this habitat within the site, there is no potential for likely significant effects on the North Bull Island SPA, in view of its Conservation Objective for this Qualifying Interest habitat.</p>	<p>No</p>

Table 3-4 Evaluation of the likely effects of the Proposed Development in view of the Conservation Objectives of the North Dublin Bay SAC

Qualifying Interest	Conservation Objective as per NPWS (2013b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Mudflats and sandflats not covered by seawater at low tide [1140]	<i>“To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in North Dublin Bay SAC”.</i>	<p>The site occurs a hydrological distance of c. 4.2km downstream to the east of the Proposed Development.</p> <p>This habitat occurs below the mean high-water mark. Therefore, a hydrological connection exists between this habitat and the Proposed Development. Changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in this habitat (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.). Therefore, this has the potential for likely significant effects on the 'community extent', 'community structure' and 'community distribution' Attributes of the Conservation Objectives for this Qualifying Interest.</p> <p>This habitat occurs in a small section (c. 100m²) of the Proposed Development area at the confluence of the River Liffey and the River Dodder. This habitat is located outside of the SAC and will not be lost as part of the Proposed Development.</p> <p>Therefore, the potential for likely significant effects on the North Dublin Bay SAC, in view of its Conservation Objective for this Qualifying Interest through changes in water quality cannot be ruled out at this stage</p>	Yes
Salicornia and other annuals colonising mud and sand [1310]	<i>“To restore the favourable conservation condition of Salicornia and other annuals colonizing mud and sand in North Dublin Bay SAC”.</i>	<p>The site occurs a hydrological distance of c. 4.2km downstream to the east of the Proposed Development.</p> <p>These habitats do not occur within the Proposed Development area. These habitats occur a hydrological distance of c. 4.2 km downstream to the east of the Proposed Development at North Bull Island. All of these habitats occur at or below the mean high-water mark therefore a hydrological connection exists between these habitats and the Proposed Development. Changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in these</p>	Yes
Atlantic salt meadows (Glauco-	<i>“To maintain the favourable conservation condition of Atlantic Salt meadows (Glauco-Puccinellietalia</i>	<p>Changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in these</p>	Yes

Qualifying Interest	Conservation Objective as per NPWS (2013b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<i>Puccinellietalia maritima</i> [1330]	<i>maritima</i>) in North Dublin Bay SAC".	habitats and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.). Therefore, this has the potential for likely significant effects on the physical and biological Attributes of the Conservation Objectives for these Qualifying Interests.	
Mediterranean salt meadows (<i>Juncetalia maritima</i>) [1410]	"To maintain the favourable conservation condition of Mediterranean salt meadows (<i>Juncetalia maritima</i>) in North Dublin Bay SAC".	Therefore, the potential for likely significant effects on the North Dublin Bay SAC, in view of its Conservation Objective for these Qualifying Interests through changes in water quality cannot be ruled out at this stage.	
Embryonic shifting dunes [2110]	"To restore the favourable conservation condition of Embryonic shifting dunes in North Dublin Bay SAC".	These habitats do not occur within the Proposed Development area. All of these habitats are located a direct distance of c. 3.3km to the northeast of the Proposed Development at North Bull Island and above the mean high-tide water mark. There is no hydrological connection between the Proposed Development and the location of these Qualifying Interests. Therefore, there is no pathway for impacts (such as direct loss, fragmentation or habitat degradation) to occur as a result of the Proposed Development.	No
Annual vegetation of drift lines [1210]	"To restore the favourable conservation condition of Annual vegetation of drift lines in North Dublin Bay SAC".	Therefore, there is no potential for the Proposed Development to result in Likely Significant Effects to the North Dublin Bay SAC, in view of its Conservation Objectives for these Qualifying Interests.	
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]	"To restore the favourable conservation condition of Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes') in North Dublin Bay SAC".		
Fixed coastal dunes with herbaceous vegetation (grey dune) [2130]	"To restore the favourable conservation condition of fixed coastal dunes with herbaceous vegetation ('grey dunes') in North Dublin Bay SAC".		
Humid dune slacks [2190]	"To restore the favourable conservation condition of Humid dune slacks in North Dublin Bay SAC".		

Qualifying Interest	Conservation Objective as per NPWS (2013b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<p>Petalwort <i>Petalophyllum ralfsii</i> [1395]</p>	<p><i>“To maintain the favourable conservation condition of Petalwort in North Dublin Bay SAC”.</i></p>	<p>The nearest occurrence of Petalwort is a c. 7.5km direct distance to the north-east of the Proposed Development among the fixed dunes on the north end of Bull Island (Campbell et al., 2019). Petalwort is a terrestrial species and thus has no hydrological connection to the Proposed Development. Therefore, there is no pathway for impacts (such as direct loss or habitat degradation) to occur as a result of the Proposed Development.</p> <p>Therefore, there is no potential for the Proposed Development to result in likely significant effects to the North Dublin Bay SAC, in view of its Conservation Objective for Petalwort.</p>	<p>No</p>

Table 3-5 Evaluation of the likely effects of the Proposed Development in view of the Conservation Objectives of the South Dublin Bay SAC

Qualifying Interest	Conservation Objective as per NPWS (2013e)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<p>Mudflats and sandflats not covered by seawater at low tide [1140]</p>	<p><i>“To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in South Dublin Bay SAC”.</i></p>	<p>The site occurs a hydrological distance of c. 6.4km downstream to the east of the Proposed Development.</p> <p>This habitat occurs in a small section (c. 100m²) of the Proposed Development area at the confluence of the River Liffey and the River Dodder. This habitat is located outside of the SAC and will not be removed as part of the Proposed Development.</p> <p>Within the SAC, this habitat occurs a hydrological distance of c. 6.4km from the Proposed Development eastward down the River Liffey, into Dublin Bay and back to the south of the Great South Wall. As this habitat occurs below the mean high-water mark, a hydrological connection exists between this habitat and the Proposed Development. Changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in this habitat (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.). However, due to the flow of water downstream from the Proposed Development out to sea, along the northern side of the Great South Wall, which forms a barrier from pollutants flowing directly into the SAC and the assimilative capacity (dilution effect) of Dublin Bay it is likely that the concentration of pollutants will be negligible upon reaching the SAC.</p> <p>Therefore, there is no potential for the Proposed Development to result in likely significant effects to the South Dublin Bay SAC, in view of its Conservation Objectives for this Qualifying Interest.</p>	<p>No</p>
<p>Annual vegetation of drift lines [1210]</p>	<p>NPWS (2013e) does not contain a Conservation Objective for this Qualifying Interest. The attributes and targets for this Qualifying Interests have been taken from the Conservation</p>	<p>The site occurs a hydrological distance of c. 6.4km downstream to the east of the Proposed Development.</p> <p>This habitat does not occur within the Proposed Development area. The extent of this habitat in the SAC is not mapped. However, applying the precautionary principle, it is assumed that this habitat may occur in any suitable location found within the SAC. This habitat occurs above the mean high-tide water mark.</p>	<p>No</p>

Qualifying Interest	Conservation Objective as per NPWS (2013e)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
	Objectives document for the North Dublin Bay SAC (NPWS, 2013b): <i>“To restore the favourable conservation of the Qualifying Interest habitat in North Dublin Bay SAC”</i> .	<p>Therefore, the closest possible direct distance between this habitat and the Proposed Development is c. 1.5km at Sandymount Strand. There is no hydrological connection between the Proposed Development and the location of this Qualifying Interest. Therefore, there is no pathway for impacts (such as direct loss, fragmentation or habitat degradation) to occur as a result of the Proposed Development.</p> <p>Therefore, there is no potential for the Proposed Development to result in likely significant effects to the South Dublin Bay SAC, in view of its Conservation Objectives for this Qualifying Interest.</p>	
Salicornia and other annuals colonising mud and sand [1310]	NPWS (2013e) does not contain a Conservation Objective for this Qualifying Interest. The attributes and targets for this Qualifying Interests have been taken from the Conservation Objectives document for the North Dublin Bay SAC (NPWS, 2013b): <i>“To restore the favourable conservation of the Qualifying Interest habitat in North Dublin Bay SAC”</i> .	<p>The site occurs a hydrological distance of c. 6.4km downstream to the east of the Proposed Development.</p> <p>This habitat does not occur within the Proposed Development area. The extent of this habitat in the SAC is not mapped. However, applying the precautionary principle, it is assumed that this habitat may occur in any suitable location found within the SAC. This habitat occurs below the mean high-tide water mark. Therefore, the closest possible hydrological distance between this habitat and the Proposed Development is c. 6.4km from the Proposed Development eastward down the River Liffey, into Dublin Bay and back to the south of the Great South Wall. Changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in this habitat (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.).</p> <p>However, due to the flow of water downstream from the Proposed Development out to sea, along the northern side of the Great South Wall, which forms a barrier from pollutants flowing directly into the SAC and the assimilative capacity (dilution effect) of Dublin Bay it is likely that the concentration of pollutants will be negligible upon reaching the SAC.</p> <p>Therefore, there is no potential for the Proposed Development to result in likely significant effects to the South Dublin Bay SAC, in view of its Conservation Objectives for this Qualifying Interest.</p>	No

Qualifying Interest	Conservation Objective as per NPWS (2013e)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<p>Embryonic shifting dunes [2110]</p>	<p>NPWS (2013e) does not contain a Conservation Objective for this Qualifying Interest. The attributes and targets for this Qualifying Interests have been taken from the Conservation Objectives document for the North Dublin Bay SAC (NPWS, 2013b): <i>“To restore the favourable conservation of the Qualifying Interest habitat in North Dublin Bay SAC”</i>.</p>	<p>The site occurs a hydrological distance of c. 6.4km downstream to the east of the Proposed Development.</p> <p>This habitat does not occur within the Proposed Development area. The extent of this habitat in the SAC is not mapped. However, applying the precautionary principle, it is assumed that this habitat may occur in any suitable location found within the SAC. This habitat occurs above the mean high-tide water mark. Therefore, the closest possible direct distance between this habitat and the Proposed Development is c. 1.5km at Sandymount Strand. There is no hydrological connection between the Proposed Development and the location of this Qualifying Interest. Therefore, there is no pathway for impacts (such as direct loss, fragmentation or habitat degradation) to occur as a result of the Proposed Development.</p> <p>Therefore, there is no potential for the Proposed Development to result in likely significant effects to the South Dublin Bay SAC, in view of its Conservation Objectives for this Qualifying Interest.</p>	<p>No</p>

Table 3-6 Evaluation of the likely effects of the Proposed Development in view of the Conservation Objectives of the North-west Irish Sea SPA

Qualifying Interest	Conservation Objective as per NPWS (2023b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Shag (<i>Phalacrocorax aristotelis</i>) [A018] (Breeding population)	<i>To restore the favourable conservation condition of Shag in the North-West Irish Sea SPA.</i>	The site is located a hydrological distance of c. 5.2 km downstream to the east of the Proposed Development.	Yes
Cormorant (<i>Phalacrocorax carbo</i>) [A017] (Breeding population)	<i>To restore the favourable conservation condition of Cormorant in the North-West Irish Sea SPA.</i>	These species occur within the SPA throughout the year and are known to forage in the Liffey Estuary and the downstream waters of Dublin Bay and are therefore likely to occur within the Proposed Development area. Guillemot, Herring Gull, Lesser Black-backed Gull, Black-headed Gull, Cormorant and Common Gull were recorded in low numbers surrounding the Proposed Development during the surveys that were undertaken to inform this assessment. Shag and Great Black-backed Gull were not recorded in the Proposed Development Area during these surveys.	Yes
Lesser Black-backed Gull (<i>Larus marinus</i>) [A183] (Breeding population)	<i>To maintain the favourable conservation condition of Lesser Black-backed Gull in the North-West Irish Sea SPA.</i>	Shag and Cormorant forage in shallow waters (<10m) and the gull species may forage in both the estuary around the Proposed Development and on intertidal mudflats. The small area of mudflat (c.100m ²) in the Proposed Development Area is located outside the SPA and will not be removed as part of the Proposed Development. There are low numbers of these species using the area within 550 m of the Proposed Development. Therefore, potential impacts resulting from visual and noise disturbance that may occur during the construction phase of the Proposed Development, if any, will be limited to very few individuals and will not have any likely significant effects on these Qualifying Interests.	Yes
Herring Gull (<i>Larus argentatus</i>) [A184] (Breeding and non-breeding population)	<i>To restore the favourable conservation condition of Herring Gull in the North-West Irish Sea SPA.</i>	However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing these species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Spatial Distribution' Attribute of the Conservation Objectives for these Qualifying Interests.	Yes
Great Black-backed Gull (<i>Larus marinus</i>) [A187] (Non-breeding population)	<i>To maintain the favourable conservation condition of Great Black-backed Gull in the North-West Irish Sea SPA.</i>		Yes
Guillemot (<i>Uria aalge</i>) [A199]	<i>To maintain the favourable conservation condition of</i>		Yes

Qualifying Interest	Conservation Objective as per NPWS (2023b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
(Breeding and non-breeding population)	<i>Guillemot in the North-West Irish Sea SPA.</i>	Therefore, the potential for likely significant effects on the North-west Irish Sea SPA, in view of its Conservation Objective for these Qualifying Interests through changes in water quality cannot be ruled out at this stage.	
Common Gull (<i>Larus fuscus</i>) [A183] (Non-breeding population)	<i>To maintain the favourable conservation condition of Common Gull in the North-West Irish Sea SPA.</i>		Yes
Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] (Non-breeding population)	<i>To maintain the favourable conservation condition of Black-headed Gull in the North-West Irish Sea SPA.</i>		Yes
Kittiwake (<i>Rissa tridactyla</i>) [A188] (Breeding population)	<i>To restore the favourable conservation condition of Kittiwake in the North-West Irish Sea SPA.</i>	<p>This species is a summer visitor and breeds in colonies located along the coast of Ireland, foraging over a widespread range marine waters throughout the year, with a general preference exhibited toward offshore areas during winter (Jessop et al., 2018). The closest known breeding colony of this species to the Proposed Development is located at Howth Head SPA c. 12km northeast of the Proposed Development.</p> <p>The site is located a hydrological distance of c. 5.2 km downstream to the east of the Proposed Development.</p> <p>There are records of this species in the vicinity of the Proposed Development (NBDC, 2024). Thus, this species may occur occasionally around the Proposed Development.</p> <p>This species may forage in the estuary around Proposed Development. There are low numbers of this species using the area within 550 m of the Proposed Development. Therefore, potential impacts resulting from visual and noise disturbance that may occur during the construction phase of the Proposed Development, if any, will be limited to very few individuals and will not have any likely significant effects on these Qualifying Interests.</p>	Yes

Qualifying Interest	Conservation Objective as per NPWS (2023b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		<p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Spatial Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>Therefore, the potential for likely significant effects on the North-west Irish Sea SPA, in view of its Conservation Objective for this Qualifying Interest through changes in water quality cannot be ruled out at this stage.</p>	
<p>Roseate Tern (<i>Sterna dougalii</i>) [A192] (Breeding Population)</p>	<p><i>To maintain the favourable conservation condition of Roseate Tern in the North-West Irish Sea SPA.</i></p>	<p>The closest known breeding site to the Proposed Development for Roseate Tern is at the Electricity Supply Board dolphin on the River Liffey between Poolbeg power station and the Pigeon House (c. 3.9km east of the Proposed Development), with roosting known to occur between Martello towers at Sandymount and Williamstown (c. 3.9km southeast of the Proposed Development).</p> <p>The site is located a hydrological distance of c. 5.2 km downstream to the east of the Proposed Development.</p> <p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages and breeds in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Spatial Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p>	<p>Yes</p>

Qualifying Interest	Conservation Objective as per NPWS (2023b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		<p>Given the distance between the Proposed Development and the breeding site and the low numbers of Roseate Tern using the area within 550 m of the Proposed Development, impacts resulting from visual and noise disturbance, considering the temporary nature of construction works and ambient visual and noise disturbance levels in the area, if any, will be limited to very few individuals and will not interfere with the achievement of the Conservation Objectives for this Qualifying Interest.</p> <p>Therefore, the potential for likely significant effects on the North-West Irish Sea SPA, in view of its Conservation Objectives for this Qualifying Interest through changes in water quality cannot be ruled out at this stage.</p>	
<p>Common Tern (<i>Sterna hirundo</i>) [A193] (Breeding Population)</p>	<p><i>To maintain the favourable conservation condition of Common Tern in the North-West Irish Sea SPA.</i></p>	<p>The site is located a hydrological distance of c. 5.2 km downstream to the east of the Proposed Development.</p> <p>Three and four Common Tern nests were recorded on the seaward ends of the walls between Camden, Buckingham and Westmoreland Locks, at the entrance to Grand Canal Docks from the River Dodder, approximately 230m from the Proposed Development.</p> <p>While Common Tern is known to breed successfully at high-disturbance sites in Dublin Bay, it cannot be ruled out at this stage that the construction phase of the Proposed Development would not result in significant noise disturbance at the Grand Canal Dock breeding site, which could lead to the failure or abandonment of the nests at this site. This has the potential to alter the 'breeding population abundance', 'productivity rate', or 'Distribution' Attribute of the Conservation Objectives for this Qualifying Interest</p> <p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages and breeds in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Spatial Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p>	<p>Yes</p>

Qualifying Interest	Conservation Objective as per NPWS (2023b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		Therefore, the potential for likely significant effects on the North-West Irish Sea SPA, in view of its Conservation Objective for this Qualifying Interest through disturbance to nesting individuals and changes in water quality cannot be ruled out at this stage.	
Arctic Tern (<i>Sterna paradisaea</i>) [A194] (Breeding Population)	<i>To maintain the favourable conservation condition of Arctic Tern in the North-West Irish Sea SPA.</i>	<p>The site is located a hydrological distance of c. 5.2 km downstream to the east of the Proposed Development.</p> <p>The closest known breeding site for Arctic Tern is at the Electricity Supply Board dolphin on the River Liffey between Poolbeg power station and the Pigeon House (c. 3.9km east of the Proposed Development). Roosting is known to occur between Martello towers at Sandymount and Williamstown (c. 3.9km southeast of the Proposed Development). Given the distance between the Proposed Development and the breeding site and the low numbers of Roseate Tern using the area within 550 m of the Proposed Development, impacts resulting from visual and noise disturbance, will be limited to very few individuals and will not interfere with the achievement of the Conservation Objectives for this Qualifying Interest.</p> <p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages and breeds in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Spatial Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>Therefore, the potential for likely significant effects on the North-West Irish Sea SPA, in view of its Conservation Objective for this Qualifying Interest through changes in water quality cannot be ruled out at this stage.</p>	Yes
Common Scoter (<i>Melanitta nigra</i>) [A065]	<i>To maintain the favourable conservation condition of</i>	<p>The site is located a hydrological distance of c. 5.2 km downstream to the east of the Proposed Development.</p>	No

Qualifying Interest	Conservation Objective as per NPWS (2023b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
(Non-breeding population)	<i>Common Scoter in the North-West Irish Sea SPA.</i>	<p>Common Scoter and Red-throated Diver typically breed in western Ireland and inland sites in Ireland and are generally known to occur at the site around Dundalk Bay (c. 60km to the north of the Proposed Development) in the shallower waters (5-20m) of the Irish Sea in autumn and winter, with small numbers of Common Scoter also known to occur east of Dublin Bay in deeper waters during winter (Jessop et al., 2018).</p> <p>Puffins and Manx shearwater breed on islands off the coast of Ireland and forage in deep waters along the east coast during summer, spending winter further offshore and in the case of the Manx shearwater, in the southern hemisphere. Little Gull and Great Northern Diver and do not breed in Ireland and are generally known to occur in the wider Dublin Bay area during winter (Jessop et al., 2018).</p> <p>Razorbill and Fulmar breed in colonies located along the coast of Ireland, foraging over a widespread range marine waters throughout the year, with a general preference exhibited toward offshore areas (Jessop et al., 2018). The closest known breeding colony of these species to the Proposed Development are located at Howth Head c. 12km northeast of the Proposed Development.</p> <p>Little Tern breeds at selected colonies in Louth, Wicklow, Wexford and Dublin and generally forages in deeper waters (20-30m) close (<5km) to these colonies. The closest of these breeding colonies to the Proposed Development is located c. 19.5km to the north at Portrane, Co. Dublin.</p> <p>The habitat around the Proposed Development area is not suitable for these species to forage or breed. Therefore, they are unlikely to occur in the area surrounding the Proposed Development. Therefore, there is no potential for disturbance impacts to occur to these species.</p>	
Red-throated Diver (<i>Gavia stellata</i>) [A001] (Non-breeding population)	<i>To maintain the favourable conservation condition of Red-throated Diver in the North-West Irish Sea SPA.</i>		No
Great Northern Diver (<i>Gavia immer</i>) [A003] (Non-breeding population)	<i>To maintain the favourable conservation condition of Great Northern Diver in the North-West Irish Sea SPA.</i>		No
Little Gull (<i>Larus minutus</i>) [A117] (Non-breeding population Size)	<i>To maintain the favourable conservation condition of Little Gull in the North-West Irish Sea SPA.</i>		No
Manx Shearwater (<i>Puffinus puffinus</i>) [A013] (Breeding population)	<i>To maintain the favourable conservation condition of Manx Shearwater in the North-West Irish Sea SPA</i>		No
Puffin (<i>Fratercula arctica</i>) [A204] (Breeding population)	<i>To restore the favourable conservation condition of Puffin in the North-West Irish Sea SPA</i>		No

Qualifying Interest	Conservation Objective as per NPWS (2023b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Razorbill (<i>Alca torda</i>) [A200] (Breeding and non-breeding population)	<i>To maintain the favourable conservation condition of Razorbill in the North-West Irish Sea SPA.</i>	Changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which these species forage in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.). However, given that the Proposed Development is located far away from the offshore areas utilised by these species, and the assimilative capacity (dilution effect) of Dublin Bay, it is likely that any water quality impacts resulting from the construction phase of the Proposed Development will be negligible upon reaching supporting habitat for these species.	No
Fulmar (<i>Fulmarus glacialis</i>) [A009] (Breeding and non-breeding population)	<i>To restore the favourable conservation condition of Fulmar in the North-West Irish Sea SPA</i>	Therefore, there is no potential for the Proposed Development to result in likely significant effects to the North-west Irish Sea SPA, in view of its Conservation Objectives for these Qualifying Interests.	No
Little Tern (<i>Sterna albifrons</i>) [A195]	<i>To maintain the favourable conservation condition of Little Tern in the North-West Irish Sea SPA.</i>		No

Table 3-7 Evaluation of the likely effects of the Proposed Development in view of the Conservation Objectives of the Rockabill to Dalkey Island SAC

Qualifying Interest	Conservation Objective as per NPWS (2013f)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Reefs [1170]	<i>“To maintain the favourable conservation condition of Reefs in the Rockabill to Dalkey Island SAC”</i>	<p>This site occurs a hydrological distance of c. 9.2km downstream to the east of the Proposed Development.</p> <p>This habitat does not occur within the Proposed Development area. This habitat is located on the fringes of offshore islands which are concentrated along the Dublin coast at Howth, Dalkey Islands, Lambay Island, Ireland’s Eye and Rockabill.</p> <p>This is a fully marine habitat with intertidal components. Therefore, a hydrological connection exists between this habitat and the Proposed Development. Thus, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in this habitat and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.). Therefore, this has the potential for likely significant effects on the ‘Community Structure’ Attribute of the Conservation Objectives for this Qualifying Interest.</p> <p>However, given the considerable distance between the SAC and the Proposed Development as well the assimilative capacity (dilution effect) of Dublin Bay, it is likely that potential water quality impacts resulting from the construction phase of the Proposed Development will be negligible upon reaching the SAC.</p> <p>Therefore, there is no potential for water quality impacts from the Proposed Development to result in likely significant effects on the on the Rockabill to Dalkey Island SAC, in view of its Conservation Objective for this Qualifying Interest.</p>	No
Harbour Porpoise (<i>Phocoena Phocoena</i>) [1351]	<i>“To maintain the favourable conservation condition of Harbour Porpoise in the Rockabill to Dalkey Island SAC”</i>	<p>This site occurs a hydrological distance of c. 9.2km downstream to the east of the Proposed Development.</p>	Yes

Qualifying Interest	Conservation Objective as per NPWS (2013f)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		<p>A hydrological connection exists between and the Proposed Development and this Qualifying Interest species. This species is also known to occur within the waters of Dublin Bay outside of the SAC. Changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.). However, due to the considerable distance between the SAC and the Proposed Development (9.2km), the assimilative capacity of Dublin Bay, the large aquatic environment available for refuge/foraging within Dublin Bay and the Irish Sea, there is no potential for water quality impacts resulting from the construction phase of the Proposed Development to result in likely significant effects on Harbour Porpoise.</p> <p>Harbour Porpoise have the potential to be impacted by underwater noise and construction activities during the construction phase of the Proposed Development when piling is being undertaken. Noise impacts and construction activities could include disturbance, injury or mortality. Therefore, there is potential for impacts to occur as a result of the noise and vibration from construction phase of the Proposed Development to result in likely significant effects on the 'Disturbance' Attribute on the Rockabill to Dalkey Island SAC, in view of its Conservation Objective for Harbour Porpoise.</p>	

Table 3-8 Evaluation of the likely effects of the Proposed Development in view of the Conservation Objectives of the Howth Head Coast SPA

Qualifying Interest	Conservation Objective as per NPWS (2022b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<p>Kittiwake <i>(Rissa tridactyla)</i> [A188]</p>	<p>NPWS (2022b) does not contain a Conservation Objective for this Qualifying Interest. The attributes and targets for this Qualifying Interests have been taken from the Conservation Objectives document for the North-West Irish Sea SPA (NPWS, 2023b) <i>“To restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA”</i></p>	<p>The site is located a direct distance of c. 12 km to the east of the Proposed Development.</p> <p>However, there are records of this species within the vicinity of the Proposed Development (NBDC, 2024). Thus, this species may occur occasionally around the Proposed Development.</p> <p>This species is a summer visitor and breeds in colonies located along the coast of Ireland, foraging over a widespread range marine waters throughout the year, with a general preference exhibited toward offshore areas during winter (Jessop et al., 2018). The closest known breeding colony of this species to the Proposed Development is located at Howth Head SPA c. 12km northeast of the Proposed Development.</p> <p>This species may forage in the estuary around Proposed Development. There are low numbers of this species using the area within 550 m of the Proposed Development. Therefore, potential impacts resulting from visual and noise disturbance that may occur during the construction phase of the Proposed Development, if any, will be limited to very few individuals and will not have any likely significant effects on these Qualifying Interests.</p> <p>However, changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in the habitats in which this species forages in the wider SPA area and in suitable supporting habitat outside of the SPA (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.), forcing the species to move into more suitable areas. Therefore, this has the potential for likely significant effects on the 'Spatial Distribution' Attribute of the Conservation Objectives for this Qualifying Interest.</p>	<p>Yes</p>

Qualifying Interest	Conservation Objective as per NPWS (2022b)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		Therefore, the potential for likely significant effects on the Howth Head SPA, in view of its Conservation Objective for this Qualifying Interest through changes in water quality cannot be ruled out at this stage.	

Table 3-9 Evaluation of the likely effects of the Proposed Development in view of the Conservation Objectives of the Howth Head SAC

Qualifying Interest	Conservation Objective as per NPWS (2016)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	<i>“To maintain the favourable conservation condition of Vegetated sea cliffs of the Atlantic and Baltic coasts in the Howth Head SAC”</i>	<p>The site is located a direct distance of c. 9 km to the northeast of the Proposed Development.</p> <p>This habitat does not occur within the Proposed Development area. This habitat is located c. 9.5 km a hydrological distance from the Proposed Development. The base of this habitat lies within the intertidal or subtidal zone; therefore, a hydrological connection exists between this habitat and the Proposed Development. Changes to water quality via potential pollution and sedimentation that may occur during the construction phase of the Proposed Development have the potential to indirectly impact the biological communities in this habitat (via an alteration of food webs, quantity of primary producers, nutrient cycles etc.). However, given the considerable distance between the SAC and the Proposed Development as well the assimilative capacity (dilution effect) of Dublin Bay, it is likely that potential water quality impacts resulting from the construction phase of the Proposed Development will be negligible upon reaching the SAC.</p> <p>Therefore, there is no potential for the Proposed Development to result in likely significant effects to the Howth Head SAC, in view of its Conservation Objective for this Qualifying Interest.</p>	<p>No</p>
European dry heaths [4030]	<i>“To maintain the favourable conservation condition of European dry heaths in the Howth Head SAC”</i>	<p>The site is located a direct distance of c. 9 km to the northeast of the Proposed Development.</p> <p>This habitat does not occur within the Proposed Development area. The extent of this habitat in the SAC is not mapped. However, applying the precautionary principle, it is assumed that this habitat may occur in any suitable location found within the SAC. Therefore, the closest distance between this habitat and the Proposed Development is located at Howth Head, a direct distance of c.9km to the northeast of the Proposed Development. This is a fully terrestrial habitat. Therefore, there is no pathway for impacts (such as direct loss or habitat degradation) to occur as a result of the Proposed Development.</p> <p>Therefore, there is no potential for the Proposed Development to result in likely significant effects to the Howth Head SAC, in view of its Conservation Objective for this Qualifying Interest.</p>	<p>No</p>

Table 3-10 Evaluation of the likely effects of the Proposed Development in view of the Conservation Objectives of the Dalkey Islands SPA

Qualifying Interest	Conservation Objective as per NPWS (2022c)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<p>Roseate Tern (<i>Sterna dougallii</i>) [A192]</p>	<p><i>“To maintain the favourable conservation condition of Roseate Tern in the Dalkey Islands SPA”</i></p>	<p>The site is located a c. 11.5km direct distance and c. 13km hydrological distance to the southeast of the Proposed Development.</p> <p>As outlined above in Table 3-2, and 3-6, Roseate Tern may occur in the vicinity of the Proposed Development to forage in the estuary area and downstream waters. Impacts to this species as a result of the proposed development have been assessed in Table 3-2, and 3-6 and the populations are considered distinct from those of the Dalkey Islands SPA. This is due to the considerable distance between the site and the Proposed Development and abundant foraging habitat in Dublin Bay and Irish Sea for individuals of this SPA.</p> <p>Thus, there is no potential for likely significant effects on the Dalkey Islands SPA in view of its Conservation Objectives for this Qualifying Interest with respect to potential water quality impacts resulting from the construction phase of the Proposed Development.</p>	<p>No</p>
<p>Common Tern (<i>Sterna hirundo</i>) [A193]</p>	<p><i>“To maintain the favourable conservation condition of Common Tern in the Dalkey Islands SPA”</i></p>	<p>The site is located a c. 11.5km direct distance and c. 13km hydrological distance to the southeast of the Proposed Development.</p> <p>As outlined above in Table 3-2, and 3-6, Common Tern may occur in the vicinity of the Proposed Development to forage in the estuary area and downstream waters. Impacts to this species as a result of the proposed development have been assessed in Table 3-2, and 3-6 and the populations are considered distinct from those of the Dalkey Islands SPA. This is due to the considerable distance between the site and the Proposed Development and abundant foraging habitat in Dublin Bay and Irish Sea for individuals of this SPA.</p> <p>Thus, there is no potential for likely significant effects on the Dalkey Islands SPA in view of its Conservation Objectives for this Qualifying Interest with respect to potential water quality impacts resulting from the construction phase of the Proposed Development.</p>	<p>No</p>

Qualifying Interest	Conservation Objective as per NPWS (2022c)	Does the Proposed Development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<p>Arctic Tern (<i>Sterna paradisaea</i>) [A194]</p>	<p><i>“To maintain the favourable conservation condition of Arctic Tern in the Dalkey Islands SPA”</i></p>	<p>The site is located a c. 11.5km direct distance and c. 13km hydrological distance to the southeast of the Proposed Development.</p> <p>As outlined above in Table 3-2, and 3-6, Arctic Tern may occur in the vicinity of the Proposed Development to forage in the estuary area and downstream waters. Impacts to this species as a result of the proposed development have been assessed in Table 3-2, and 3-6 and the populations are considered distinct from those of the Dalkey Islands SPA. This is due to the considerable distance between the site and the Proposed Development and abundant foraging habitat in Dublin Bay and Irish Sea for individuals of this SPA.</p> <p>Thus, there is no potential for likely significant effects on the Dalkey Islands SPA in view of its Conservation Objectives for this Qualifying Interest with respect to potential water quality impacts resulting from the construction phase of the Proposed Development.</p>	<p>No</p>

3.4 Summary of likely significant effects

In Section 3.1, it was established that nine European sites, namely the South Dublin Bay & River Tolka Estuary SPA, the North Bull Island SPA, the North Dublin Bay SAC, South Dublin Bay SAC, North-west Irish Sea SPA, Rockabill to Dalkey Island SAC, Howth Head Coast SPA, Howth Head SAC and Dalkey Islands SPA occur within the Zone of Influence of the Proposed Development and that there are no pathways for effects between the Proposed Development and any other European sites.

In Section 3.3, it was established that, in the absence of appropriate mitigation, interruptions or delays in achieving certain Conservation Objectives for those sites, i.e. likely significant effects on the integrity of six of those sites, as a result of the Proposed Development, cannot be ruled out. A summary of the likely significant effects identified is given in Table 3-11 below.

Table 3-11 Summary of the European sites likely to be affected by the Proposed Development and the Qualifying Interests likely to be affected in each site.

European site	Qualifying Interest
South Dublin Bay and River Tolka Estuary SPA [004024]	Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143] Sanderling (<i>Calidris alba</i>) [A144] Dunlin (<i>Calidris alpina</i>) [A149] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Redshank (<i>Tringa totanus</i>) [A162] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Roseate Tern (<i>Sterna dougallii</i>) [A192] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194]
North Bull Island SPA [004006]	Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Teal (<i>Anas crecca</i>) [A052] Pintail (<i>Anas acuta</i>) [A054] Shoveler (<i>Anas clypeata</i>) [A056] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Knot (<i>Calidris canutus</i>) [A143] Sanderling (<i>Calidris alba</i>) [A144] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Redshank (<i>Tringa totanus</i>) [A162] Turnstone (<i>Arenaria interpres</i>) [A169] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]

European site	Qualifying Interest
North Dublin Bay SAC [000206]	Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritima</i>) [1410]
North-west Irish Sea SPA	Shag (<i>Phalacrocorax aristotelis</i>) [A018] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Lesser Black-backed Gull (<i>Larus marinus</i>) [A183] Herring Gull (<i>Larus argentatus</i>) [A184] Great Black-backed Gull (<i>Larus marinus</i>) [A187] Guillemot (<i>Uria aalge</i>) [A199] Common Gull (<i>Larus fuscus</i>) [A183] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Kittiwake (<i>Rissa tridactyla</i>) [A188] Roseate Tern (<i>Sterna dougallii</i>) [A192] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194]
Howth Head Coast SPA	Kittiwake (<i>Rissa tridactyla</i>) [A188]
Rockabill to Dalkey Island SAC [003000]	Harbour Porpoise (<i>Phocoena Phocoena</i>) [1351]

4. IN-COMBINATION EFFECTS

Article 6(3) of the Habitats Directive requires that AA be carried out in respect of any plan or project which is likely to have a significant effect on one or more European sites, "either individually or in combination with other plans or projects". Therefore, regardless of whether or not the likely effects of a plan or project are significant when considered in isolation, the potential for the plan or project to significantly affect European sites in combination with other past, present or foreseeable future plans or projects must also be assessed.

In the case of the Proposed Development, this AA Screening Report has found that the Proposed Development, individually, is likely to have significant effects on six European sites. Therefore, the assessment of the Proposed Development must proceed to Stage 2 (AA). The in-combination assessment of likely significant effects on these European sites arising from the Proposed Development, in combination with other plans or projects, should be undertaken at that stage.

5. CONCLUSION

In accordance with Article 6(3) of the Habitats Directive, Part 5 of the Birds and Natural Habitats Regulations, Part XAB of the Planning and Development Acts, the relevant case law, established best practice and the Precautionary Principle, this AA Screening Report has considered the Proposed Development and its potential to significantly affect European sites. This report has concluded, on the basis of objective information, that the Proposed Development, either individually or in combination with other plans or projects, is likely to give rise to impacts which would constitute significant effects on six European sites, namely South Dublin Bay and River Tolka SPA, North Bull Island SPA, North Dublin Bay SAC, North-west Irish Sea SPA, Howth Head SPA and Rockabill to Dalkey Island SAC in view of their Conservation Objectives.

In light of this conclusion, it is the considered opinion of ROD, as the author of this AA Screening Report, that An Bord Pleanála (“the Board”), as the Competent Authority in this case, in completing its AA Screening in respect of the Point Bridge and Tom Clarke Widening, should find that the Proposed Development, either individually or in combination with other plans or projects, is likely to have a significant effect on six European sites, namely the South Dublin Bay and River Tolka SPA, North Bull Island SPA, North Dublin Bay SAC, North-west Irish Sea SPA, Howth Head SPA and Rockabill to Dalkey Island SAC in view of their Conservation Objectives. Therefore, An Bord Pleanála should determine that AA is required in respect of the Proposed Development.

The AA must contain complete, precise and definitive findings and conclusions in relation to the implications of the Proposed Development for the integrity of the South Dublin Bay and River Tolka SPA, North Bull Island SPA, North Dublin Bay SAC, North-west Irish Sea SPA, Howth Head SPA and Rockabill to Dalkey Island SAC. A Natura Impact Statement (NIS) should be prepared to provide the Board with the scientific information upon which it will base its findings and conclusions. The NIS should take the form of a comprehensive examination, analysis and evaluation, including recommendations, in respect of the implications of the Proposed Development, individually and in combination with other and project, for the integrity of the European sites concerned.

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APPENDIX A

DETAILED DESCRIPTION OF THE PROPOSED DEVELOPMENT

1. DESCRIPTION OF THE PROPOSED DEVELOPMENT

1.1 Description of Proposed Development

The description of the proposed development outlined below should be read in conjunction with drawings contained in Appendix A of this Report. The proposed development consists of the construction of a new approx. 150m five span Point Bridge which is described in section 2.1.1 and the upgrade works to the existing Tom Clarke Bridge described in section 2.1.2 of this Chapter. Common elements to both structures, namely lighting, drainage, power supply and control building are described in section 2.1.3 of this Chapter.

1.1.1 Proposed Point Bridge Structure

1.1.1.1 *Span Arrangement*

The Point Bridge will have a five-span arrangement (four fixed spans and a central movable span across the river navigation channel) with an overall bridge length of circa 150m between the north and south abutments. The span lengths and associated bridge substructure arrangement (piers and abutments) will align with those of the Tom Clarke Bridge; each of the four fixed spans are approx. 26m in length, whilst the central movable span is approx. 46m in length. The central movable span will be a single leaf rolling bascule type with an integrated below deck counterweight.

The river navigational channel through the Point Bridge will have the same horizontal and vertical clearance as currently provided through the existing Tom Clarke Bridge when the movable span is in the open position.

1.1.1.2 *Superstructure*

The deck on the two northern fixed spans and the bascule span of the Point Bridge will typically have a width of c. 8.9m (c. 3.4m wide footway, c. 5.3m wide cycleway and a 0.2m wide raised demarcation between the footway and cycleway). The southern fixed spans will have a width which varies from 8.4m at the southern abutment to 17.4m in the vicinity of the bascule pier (minimum of a 3.4m wide footway, c. 5.3m wide cycleway and a 0.2m wide raised demarcation between the footway and cycleway).

The spans will have a maximum apparent deck depth when viewed in elevation of 1.7m.

1.1.1.3 *Substructure*

The northern abutment will be of in-situ concrete construction and will be integrally connected to the steel bridge deck. The abutment will be set back from the face of the quay wall along North Wall Quay (Record of Protected Structures reference no. 5835) to ensure that the raking piles proposed for the abutment foundation do not interfere with the historic wall foundations.

The intermediate piers located within the river channel will be formed using a combination of precast and in-situ concrete construction. The concrete piers will be supported on piled foundations. The bascule pier will be constructed using a combination of precast and in-situ concrete construction and will abut the western side of the existing Tom Clarke Bridge bascule pier. The inner chambers of both piers will be connected at the interface between the piers but the pier structures will be structurally separate. The width (c. 13m width) and alignment of the new pier

section will match the existing which will give the appearance that both piers are one structure.

The south abutment will be of in-situ concrete construction and will be integrally connected to the in-situ concrete bridge deck. The Point Bridge abutment will abut the western face of the Tom Clarke bridge southern abutment but will be structurally separate.

1.1.1.4 Bridge Foundations

The Point Bridge substructure will be supported on piled foundations. The proposed piles are large diameter bored concrete piles (approximately 900mm diameter) which will be socketed into the underlying bedrock and provided with permanent steel casings.

1.1.1.5 Bridge approaches

The proposed development ties in with two projects namely the approved Point Junction Improvement Scheme and the BusConnects Ringsend to City Centre Core Bus Corridor (CBC) Scheme which has been submitted for planning.

The foot and cycle path on the approach to the Point Bridge from the south are to be fully designed and constructed as part of the CBC Scheme.

On the northern approach to the bridge, the signalised cycle priority junction directly off the bridge and the pedestrian areas on the Campshires south of the road kerb line at the Point Junction are to be fully designed and constructed as part of the proposed development. The road, foot and cycle paths beyond these extents are to be fully designed and constructed as part of the Point Junction Improvement Scheme.

On the northern approach, the bridge will land circa 0.9m above the existing ground level of the North Wall Quay Campshires. The landing level will slope to meet the road and Campshires on the eastern approach at a shallow gradient (less than 5%). Steps will be provided to tie in the slopes on the eastern and western side of the bridge landing with the existing ground level along the quay wall.

Similarly, on the southern approach the bridge end will be circa 1.4 m above the level of the pavement adjacent to the proposed St Patrick's Rowing Club building (constructed as part of the CBC Scheme). A low retaining wall structure, constructed on the pile supported slab (reclaimed land) will be required to ramp the foot and cycle path down to the surrounding road network (constructed as part of the CBC Scheme).

1.1.1.6 Bridge Finishes Works

The Point Bridge deck will be provided with bespoke pedestrian parapets (1.25m high) along its western edge (fixed and movable spans) and at locations where they are required to combine with control barriers to prevent pedestrian and cyclist access to the moveable span.

A bespoke 1.45m high pedestrian and cyclist parapet will be provided on the eastern edge along the cycle path located on the Point Bridge movable and fixed spans. A 200mm kerb is proposed to divide the cycle path and footpath on the Point Bridge.

The bridge will be provided with a thin combined waterproofing/surfacing pavement system over its entire deck area.

1.1.2 Tom Clarke Bridge Upgrade Works

The widening of the northern and southern fixed spans is proposed to accommodate left and right turn vehicle traffic lanes onto North Wall Quay and Sir John Rogerson's Quay (via the proposed Dodder Bridge (part of the separately BusConnects Ringsend to City Centre Core Bus Corridor Scheme)) respectively.

The existing carriageway on the bridge consists of two 3.65m traffic lanes (R131 north and south bound lanes) and 1.6m wide footways on either side. The proposed upgrade works will reduce the width of the northbound and southbound traffic lanes on the northern fixed spans to 3.25m each to facilitate the addition of a 3.25m wide left turn lane to North Wall Quay on the widened bridge deck.

The existing footpaths will no longer be for public use and will be replaced with raised verges. The raised verges will be constructed with deterrent paving at the bridge ends to discourage use by the public.

Upgrades to the bridge deck furniture, public lighting and finishes will be carried out. Upgrades to the movable span deck steelwork, and associated counterweight are anticipated to be required due to changes to the bridge furniture and finishes on the span along with the provision of a new bridge control, CCTV and power supply and distribution systems to allow the integration of operation of the Point and Tom Clarke Bridges.

1.1.3 Common design elements for both structures

1.1.3.1 Control Building

The existing control building on Tom Clarke Bridge will be demolished. A new control building will be constructed on the eastern side of the existing Tom Clarke Bridge bascule pier (approximately at the location of the existing Tom Clarke Bridge control room building structure). The new control room building will be a three-storey structure with external structural envelope dimensions of approx. 7.5 m x 7.5 m on plan and floor to ceiling heights of approx. 3 m. The control room will be located on the 3rd storey with a floor level of circa 10m above bridge deck level. The overall height of the building will be circa 14.5m above bridge level on the bascule pier. A feature light pole is proposed to be located at the centre of the roof of the building which is c. 8m in height.

1.1.3.2 Movable Span Power Supply

This existing ESB power supply to the Tom Clarke Bridge will be replaced with a new upgraded single electrical service entrance (3-phase, 275 kVA, 400V) to power both the existing Tom Clarke Bridge and the new Point Bridge. A new ESB double MV substation is planned as part of the BusConnects Ringsend to City Centre CBC Scheme. This substation has been sized to cater for the power requirements of all three bridges (Point Bridge, Tom Clarke Bridge and Dodder Bridge) and will be located at the junction of Thorncastle street and York street at the location of the existing St Patrick's Rowing Club Building which will be demolished and relocated to the west as part this BusConnects Ringsend to City Centre CBC Scheme.

1.1.3.3 Lighting

The proposed development will utilise various forms of lighting to enhance the aesthetics of the Point Bridge, Tom Clarke Bridge and the Control Room Building at night-time and to provide functional lighting to the Point Bridge and the Tom Clarke Bridge decks for pedestrian, cyclist and vehicles respectively.

Functional (Public) low level lighting is proposed for the Point Bridge viewing area integrated with the seating, planters and along the footpath /cycle path in the parapet top rail. Discrete feature pole lighting is proposed at the entrance to the bridge from the north and south to mark the bridge threshold.

The existing regular grid of pole lighting on Tom Clarke Bridge will be replaced as part of the proposed development. Functional (Public) lighting will be provided via luminaries located in the bespoke low-level safety barriers and some discrete pole lighting on the bridge approaches.

Discrete architectural feature lighting is proposed along the Point Bridge and Tom Clarke Bridge deck external edge and to the control building exterior (using wall wash projectors and pole top feature lighting luminaries). The control building lighting will be illuminated at dusk and then reduced to minimal lighting at set times each evening.

1.1.3.4 Drainage

Point Bridge

Surface water drainage on the fixed spans and bascule pier of the Point Bridge will be provided via bespoke continuous or intermittent drainage channel inlets and the collected surface water will be brought through to the existing road surface water drainage network. Surface water collected on the movable span will be channelled along the eastern deck edge parapet upstand to a bespoke single drainage gully, and discharged into the road drainage network on North Wall Quay.

Tom Clarke Bridge

As part of the bridge deck upgrade works, the existing drainage system on the fixed spans will be replaced with a continuous kerb drainage system. The surface water collected in the kerb drainage system will outfall to the existing road surface water drainage network on the north and south sides. The movable span (bascule) existing drainage system will not be altered as part of the upgrade works and will continue to outfall directly into the River Liffey.

Bridge Approaches

Northern Approach

Surface water drainage on the Point Bridge northern approach (North Wall Quay Campshires) will be provided via intermittent drainage channels inlets or gullies located at the paved area low points. Connections will be provided to the road surface water drainage network.

The road drainage gullies on the northern approach to Tom Clarke Bridge will be connected to the existing road surface water drainage network at the Point Junction.

The deck widening works proposed to the fixed spans of the Tom Clarke bridge will require the demolition of the existing Point Junction road drainage river outfalls directly to the east and west of the existing Tom Clarke Bridge northern abutment. Construction of a replacement road drainage outfall with petrol interceptor is required. The replacement outfall will be located either to the east or west of the proposed Point Bridge.

Southern Approach

The drainage required on the bridge southern approaches is proposed to be developed as part of the BusConnects Ringsend to City Centre Core Bus Corridor Scheme.

1.1.3.5 Vessel Collision Protection Structures

The existing vessel protection structures will be removed and new structure will be provided on the western approach of Point Bridge. These structures will be formed using groups of large diameter bored concrete piles (circa 1200mm diameter) which will be socketed into the underlying bedrock and provided with permanent steel casings. These piles will be connected together with a reinforced concrete pile cap located below low water springs tide level. The pile cap in turn will support several smaller diameter steel piles (circa 750-900mm diameter) which will be visible above water level.

1.2 Work Programme

The construction programme for the proposed development is anticipated to be approximately 15 months. The current project programme shows construction commencing on site in Q1 2027.

1.3 Main Construction Elements and Construction Sequence

The assumed construction methodology at this stage has been planned so as to minimise disruption during construction, while ensuring ease of buildability. The main activities likely to take place during the construction phase are outlined below:

- 1. Site Set Up, Clearance** including the implementation of traffic management system, set up of construction compounds, removal or diversion of utilities, and complete the construction of a replacement road drainage outfall to the east or west side of Point Bridge.
- 2. Undertake initial demolition works:**
 - Demolition of the bridge vessel collision protection/ mooring dolphins to the west of Tom Clarke Bridge.
 - Demolition of the reinforced concrete retaining wall structure supporting the left turn lane to North Wall Quay located on the north western end of Tom Clarke Bridge.
 - Partial demolition of the quay wall to facilitate the installation of the Point Bridge northern bridge spans.
- 3. Off-site Fabrication of Point Bridge Superstructure Steelwork and Movable Span MEICA (Point Bridge and Tom Clarke Bridge)**
- 4. Construction of the Point Bridge Substructure**
 - a) Construct Point Bridge northern abutment (located behind North Wall Quay);
 - i) Undertake the piling works (using a land-based piling rig located on the Campshires) comprising of large diameter bored concrete piles (circa 900mm diameter with permanent steel casings) socketed into the underlying bedrock. Cut down each pile to the required level following installation & testing.
 - ii) Construction of the in-situ concrete pile cap to the underside of the bridge deck beam level.
 - iii) Construct Point Bridge southern abutment (located in front of the reclaimed land (pile supported slab) proposed to be constructed as

- part of the BusConnects Ringsend to City Centre Bus Corridor Scheme);
- iv) Complete steps 4(i) and 4(ii) above.
 - v) Installation of masonry clad precast concrete panels to the south abutment river side face to align with face of the reclaimed land river wall and existing Tom Clarke Bridge southern abutment wall.
- b) Construct Point Bridge intermediate pier structures (3 no.);
- i) Undertake the permanent piling works using a crane mounted piling rig located on a barge/pontoon comprising of large diameter bored concrete piles (circa 900mm diameter with permanent steel casings) socketed into the underlying bedrock.
 - ii) Installation of steel supports on the perimeter of the permanent piles to support the pier hollow precast concrete shell elements during construction.
 - iii) Temporary H-piles or equivalent and associated framing will be place on the perimeter of each of the proposed pier structures to act as a guide for the placement of the hollow precast concrete shell element(s) which will form the pier structure.
 - iv) Placement of a single hollow precast reinforced concrete shell element on the permanent piling (or several elements joined together) to act as permanent formwork for the subsequent infilling with in-situ concrete (reinforced).
- c) Construct Point Bridge Bascule Pier and initial MEICA installation;
- i) Construction of a temporary works sheet pile cofferdam (c. 17mx17m plan dimensions) using a crane mounted piling rig located on a pontoon/ barge (jack-up or anchored) to facilitate the construction of the bascule pier.
 - ii) Complete the pier foundation piles (bored concrete piles (c. 900mm diameter) within the confines of the cofferdam using a crane mounted rig operated from a barge/pontoon.
 - iii) The cofferdam will be de-watered in stages to allow installation of additional cofferdam bracing as required.
 - iv) Cut down each pile to the required level following pile testing.
 - v) Construct the bascule pier in-situ concrete pile cap, bascule span eastern and western supporting walls and front and back walls (north and south side respectively) to the underside of the pier top slab level (deck level).
 - vi) Construction of the west side cutwater section and the bascule pier section between the Point Bridge movable span eastern supporting wall and the Tom Clarke Bridge bascule pier western side either in precast reinforced concrete or in-situ reinforced concrete.
 - vii) Complete the installation of the necessary machinery to enable the erection of the movable span and ducting for utilities to be brought through the southern fixed spans from Ringsend.
 - viii) Complete the new bascule pier top slab and the concrete plinths on top of the slab required to support the new control room building.
 - ix) Complete the bascule pier internal stairs, gratings, vents, access hatches, internal lighting and electrical fittings etc.

- 5. Upgrade Works to Tom Clarke Bridge Substructure (Bascule Pier)**
 - a) Undertake preparatory temporary works to the face of the Tom Clarke bridge bascule pier (west side external face of the cutwater) to allow the construction of cantilever walls.
 - b) Construction 2 no. in-situ concrete cantilever walls.
 - c) Demolition of the existing Tom Clarke Bridge top slab on the west side cutwater including the removal of equipment fixed to the top slab.
 - d) Construction of the new bascule pier top slab and concrete plinths on top of the slab to support the new control room building.
- 6. Construction of Point Bridge Superstructure (Fixed Spans)**
 - a) Construct Point Bridge northern fixed spans;
 - i) The prefabricated steel deck of the northern fixed spans will be erected on the substructure via a barge mounted crane (sheer leg crane or equivalent) which will be made integral via an in-situ concrete connection.
 - b) Construct Point Bridge southern fixed spans;
 - i) Installation of a temporary deck falsework supported off the permanent substructure piers and abutment.
 - ii) Install the deck formwork, reinforcement, void formers and any required utility ducting (power, communications and water).
 - iii) Install the structural bearing supports at the intermediate pier and bearing shelf on the bascule pier.
 - iv) Pour the bridge deck in-situ concrete integral with the pier structural bearing supports and abutment.
- 7. Construction of Point Bridge Superstructure (Movable Span) and associated MEICA Installation**
 - a) Erect the movable (bascule) span on the track, rack and support assemblies located on the Point Bridge bascule pier supporting walls using a barge mounted crane.
 - b) install the bascule span live load shoes (bearings) on the intermediate (rest) pier.
 - c) Install the new submarine cables connecting the Point Bridge bascule pier to the intermediate (rest) pier on the opposite side of the channel.
 - d) Complete the installation of the MEICA for the Point Bridge bascule span and connections to utilities.
 - e) Install the bridge deck parapets and drainage system.
 - f) Complete the Point Bridge bascule pier top slab spanning over the bascule span counterweight and remaining slab sections adjacent to the bascule leaf.
 - g) Install the replacement river navigational traffic light system, Aids to Navigation on the upriver side of the Point Bridge and road traffic control barrier on the northern and southern approach to the bridge opening span.
- 8. Construction of Point Bridge Vessel Collision Protection Structures**
 - a) Construction of a temporary works sheet pile cofferdam (c. 14m x 10m plan dimensions) using a crane mounted piling rig located on a pontoon/ barge (jack-up or anchored).

- b) Permanent piling (tubular piles circa 1200mm diameter) to be completed within the confines of the cofferdam using a crane mounted piling rig operated from the barge/ pontoon.
- c) The cofferdam will be de-watered in stages to allow installation of additional cofferdam bracing as required.
- d) Install ground anchors in each pile, fill piles with concrete and cut down each pile to the required level.
- e) Install the prefabricated steel frame to connect the piles as a structural group.
- f) Install the three number c. 0.9m diameter vessel collision protection piles to the top of the steel frame which will extend above the waterbody surface.
- g) Complete finishes (painting, access ladders, Aids to Navigation).
- h) Repeat steps (a-g) for the second vessel collision protection structure.
- i) Remove the temporary works cofferdams.

9. Construction of new Control Room Building

- a) Erection of the new steel framed control room building structure on the reinforced concrete plinths. The frame will be erected either using a crane mounted on a barge/pontoon or a suitably sized crane located on the Point Bridge. The building will be erected in several large, prefabricated sections or as single pieces (to suit the contractor's means and method).
- b) Completion of the building external fabric, utility connections and internal fitout (including the control system, CCTV system etc for both bridges).
- c) Connection of new Control Room Building Control Systems with the Point Bridge and Tom Clarke Bridge Movable Span MEICA

10. Construction of Point Bridge Finishes

- a) Installation of the bridge deck edge steel fascia on the fixed spans and bascule pier.
- b) Complete the bridge deck drainage channels, movement joints, parapets, functional (public) and feature lighting and combined waterproofing and surfacing.

11. Upgrade Works to Tom Clarke Bridge Superstructure & Finishes

- a) Divert Northbound R131 traffic on to the Point Bridge. Southbound R131 traffic to remain on the eastern traffic lane of Tom Clarke Bridge.
- b) Completion of upgrade works to the west side of Tom Clarke Bridge:
 - i) Plane back the existing road surfacing on the Tom Clarke Bridge northbound carriageway.
 - ii) Demolish the western edge of the Tom Clarke Bridge fixed spans, and complete partial demolition of the following:
 - the western side of the Tom Clarke bridge northern and southern abutments.
 - the quay wall and river access stairs on North Wall Quay (to the west of Tom Clarke Bridge).
 - localised sections of the bascule pier southern perimeter wall.
 - iii) Complete the widening of the west side of the southern and northern abutment.

- iv) Installation of permanent bearings on the substructure piers and abutments.
- v) Erect a new precast prestressed concrete bridge beam (fabricated off-site) on each span (4 no. in total) using a crane mounted on a pontoon/ barge.
- vi) Pour in-situ concrete deck diaphragms at each substructure support to tie the new bridge beams into the existing deck.
- vii) Install the permanent and any required temporary formwork for the new sections of deck slab and pour the in-situ concrete slabs.
- viii) Install the bridge deck waterproofing system on Tom Clarke Bridge over the sections of exposed deck.
- ix) Install all required utilities on the northern and southern bridge approaches and construct the realigned western raised verge.
- x) Install the deck furniture and complete the road surfacing on the Tom Clarke Bridge northbound carriageway and new turning lane to North Wall Quay.
- xi) Divert southbound traffic to the west side of Tom Clarke Bridge.

12. Completion of upgrade works to the east side of Tom Clarke Bridge;

- a) Complete upgrade works to the east side in the same sequence as that outlined in item 11 (b) (i-xi) above.
- b) Complete the decommissioning and demolition of the existing Tom Clarke Bridge control room building and the demolition of the bascule pier deck furniture.
- c) Complete upgrade works to the bascule pier east side parapets and pier internal access from deck level.
- d) Complete the new carriageway movement joints and line markings.
- e) Remove temporary traffic management and divert northbound traffic from the Point Bridge back on to the Tom Clarke Bridge.

13. Completion of Point Bridge Deck and Approaches Finishes

- a) Remove any temporary roadworks (road and traffic markings) and traffic barrier on Point Bridge southern and northern approaches.
- b) Install the architectural finishes (planters and benches etc) on the bridge.
- c) Complete all surfacing, steps, lighting, drainage etc on the northern and southern approaches.
- d) Open the bridge to pedestrians and cyclists.

1.4 Resources to be Used in Construction

The most significant resources expected to be used during the construction stage of the project include those outlined in Table 1.1.

Table 1.1 Resources to be Used During Construction

Element	Resources
Land and Property	At the time of writing, Dublin City Council (DCC) are progressing land acquisition through an agreement with Dublin Port Company (DPC) who are the only other land owner at the site of the proposed development. If an agreement cannot be reached with DPC, then DCC would need to commence the Compulsory Purchase Order process.

Element	Resources
Earthworks	<p>Volume of earthworks</p> <p><u>Land based excavations – North Wall Quay (abutment and retaining wall)</u> Excavation volume (approx. 220m³)</p> <p><u>Land based excavations –Campshires (general clearance)</u> Excavation volume (approx. 200m³)</p> <p>Exported material from site to landfill (assume all material excavated is exported from site). We don't have any classification of material at this location at present.</p> <p>Import of earthworks materials 6N fill volume (abutment and retaining walls) (105m³)</p> <p>Import of earthworks materials acceptable fill (campshires) (225m³)</p> <p><u>River based excavations – (bascule pier and arising from bored piles)</u> Excavation volume (approx. 930m³)</p> <p>Exported material from the site (all material excavated is exported from site - likely disposed of via dumping at sea) – Grab samples available in the vicinity of the bridge site - river bed sediment is expected to be Category C1 non-hazardous.</p> <ul style="list-style-type: none"> • Import of earthworks materials (it is not anticipated that there will be any)
Pavements	<p>A combined waterproofing and surfacing wearing course is proposed on Point Bridge. This accounts to approx 10m³ of material noting the membrane thickness is <6mm. Pavement material comprising of wearing course, binder and base courses in bituminous material will be required on the Tom Clarke fixed spans (approx. 90m³)</p>
Structures	<p>The project requires the import of substantial volumes of concrete (approximately 3800 m³ inclusive of piling), steel reinforcement (approximately 500 t) and structural steel beam elements (approximately 720t) in order to complete the proposed development.</p>
Demolition	<p>Upper 1.5m section of the North Wall Quay and river access steps over the circa 9m width of the Point Bridge (approx. 20 m³).</p> <p>The eastern and western edge of the Tom Clarke Bridge fixed spans (approx. 140m³).</p> <p>The bascule pier wall on the west side of Tom Clarke Bridge (approx. 30m³).</p> <p>The bridge vessel collision protection/ mooring dolphins to the west of Tom Clarke Bridge (approx. 280m³).</p> <p>Existing control room (5m³).</p>

1.5 Design Considerations

The proposed Point Bridge and Tom Clarke Bridge Widening project is located between the extents of two other separately proposed projects, namely the approved Point Junction Improvement Scheme (DCC Ref: DSDZ3341/15) and the BusConnects Ringsend to City Centre Core Bus Corridor (CBC) Scheme (ABP Case Ref: HA29N.317679) which has been submitted for planning. Works proposed as part of these other projects that are of relevance to the proposed development are described below.

Point Junction Improvement Scheme

On the northern approach to the proposed Point bridge, the signalised cycle priority junction directly off the bridge and the pedestrian areas on the Campshires south of

the road kerb line at the Point Junction are to be fully designed and constructed as part of the proposed development. The road, foot and cycle paths beyond these extents are to be fully designed and constructed as part of the separately approved Point Junction Improvement Scheme. The proposed development has been designed to fully integrate with the design of the Point Junction Improvement Scheme.

BusConnects Ringsend to City Centre Core Bus Corridor Scheme

On the southern approach, the proposed Point Bridge end will be circa 1.4 m above the level of the pavement. As part of the separately proposed BusConnects Ringsend to City Centre CBC Scheme, a low retaining wall structure, constructed on the pile supported slab (reclaimed land) will be constructed to ramp the foot and cycle path down to the surrounding road network which will be constructed, which will tie in both schemes together.

The existing St. Patrick's Rowing Club and associated facilities currently located on the southern bank of the River Liffey are proposed to be demolished and relocated to the west as part of the BusConnects Ringsend to City Centre Core Bus Corridor Scheme.

This existing ESB power supply to the Tom Clarke Bridge will be replaced with a new upgraded single electrical service entrance (3-phase, 275 kVA, 400V) to power both the existing Tom Clarke Bridge and the new Point Bridge. A new ESB double MV substation is planned as part of the BusConnects Ringsend to City Centre CBC Scheme. This substation has been sized to cater for the power requirements of all three bridges (Point Bridge, Tom Clarke Bridge and Dodder Bridge) and will be located at the junction of Thorncastle street and York street at the location of the existing St Patrick's Rowing Club Building which will be demolished and relocated to the west as part this BusConnects Ringsend to City Centre CBC Scheme.

An assessment will be carried out as part of the EIAR to determine the cumulative impacts associated with developments within the environs surrounding the project area, including those listed above. Consultation with An Bord Pleanála, Dublin City Council planning department and other relevant planning resources will be carried out to determine likely cumulative impacts.

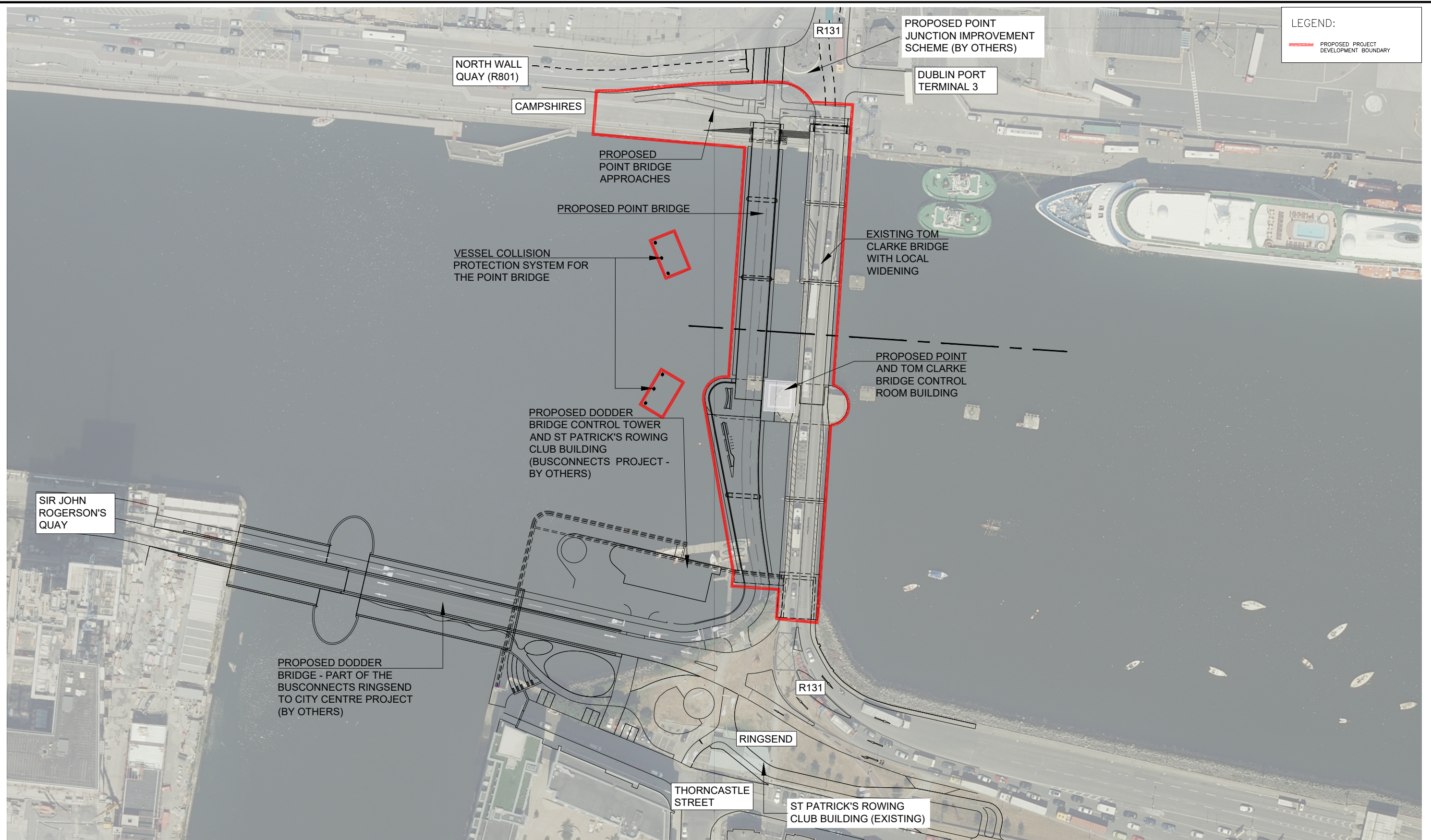
1.6 Other Permits required for the Project

A number of other permits and licences will be required for the project including:

- Maritime Area Consent (MAC) from the Maritime Area Regulatory Authority.
- Archaeological Licences and consents from National Monuments Service, as appropriate.
- OPW Consent Section 50 of the Arterial Drainage Act, 1945, as amended.
- Ministerial Consent for a Bridge over a Navigable Waterway (Section 245 of Local Government Act, 2001).

APPENDIX B

PROJECT DRAWINGS



Client:

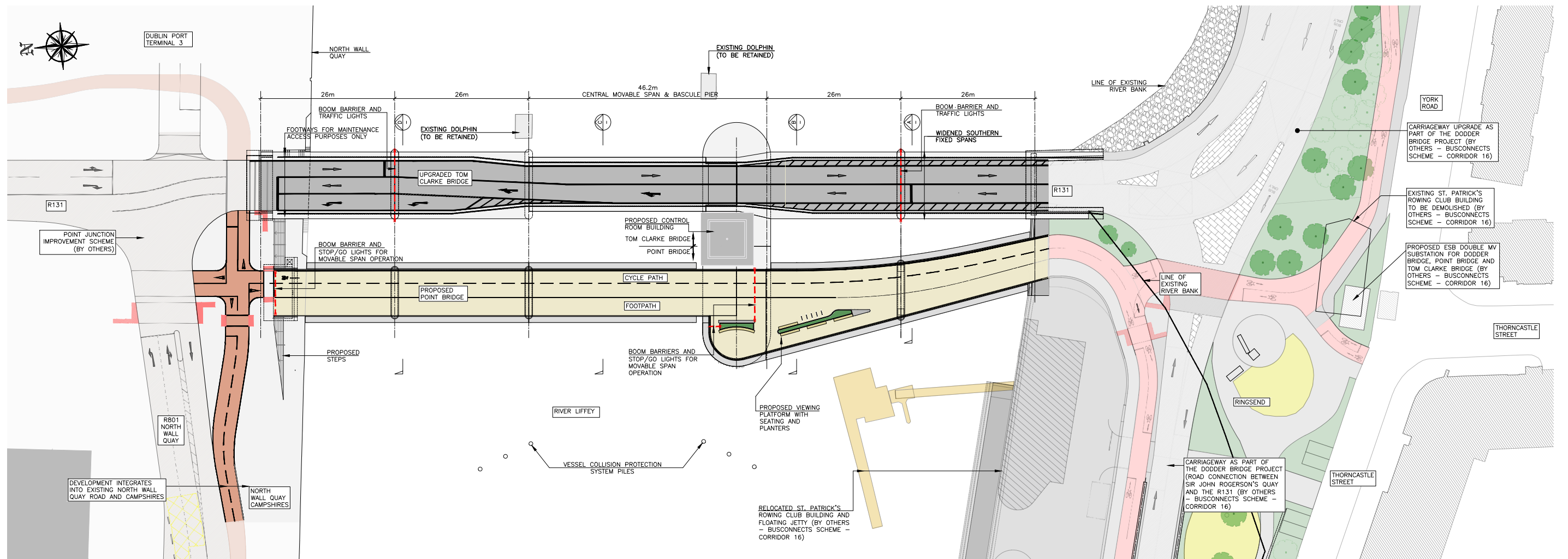
JOINT VENTURE

No.	Revision	Date	By	Chkd	App'd
P01	ISSUED FOR PUBLIC CONSULTATION	27/05/2024	PE	YB	CS

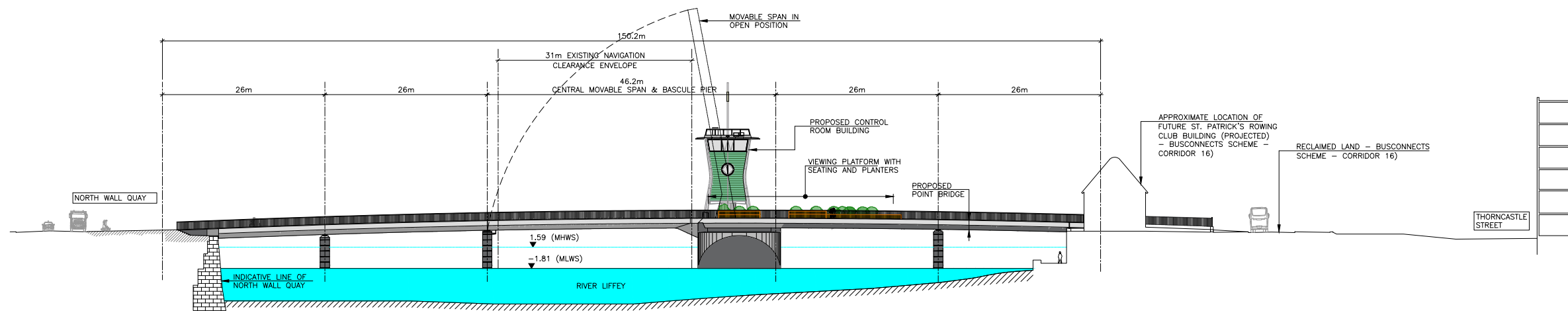
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Drawn	Designed	Checked	Approved	Suitability Code - Description
PE	MD	MD	CS	S2 - Information/Planning

Project Stage	STATUTORY PROCESS				
Project Title	POINT BRIDGE AND TOM CLARKE BRIDGE WIDENING PROJECT				
Drawing Title	PROJECT SITE LOCATION MAP (WITH ADJACENT FUTURE PLANNED PROJECTS SHOWN)				
Drawing Number	Project	Originator	Volume	Location	Type Role Number
PTCB	-	ROD	-	ENV	- AE - DR - EN - 401000
Scale (A1)	AS SHOWN	Date:	MAY 2024	Job No:	21.124
				Rev:	P01



PROJECT DEVELOPMENT PLAN LAYOUT
SCALE 1:400



POINT BRIDGE ELEVATION (WEST SIDE)
SCALE 1:400

LEGEND:
MLWS: MEAN LOW WATER SPRINGS TIDE
MHWS: MEAN HIGH WATER SPRINGS TIDE



No.	Revision	Date	By	Chkd	App'd
P03	ISSUED FOR PUBLIC CONSULTATION	27/05/2024	CS	YB	CS



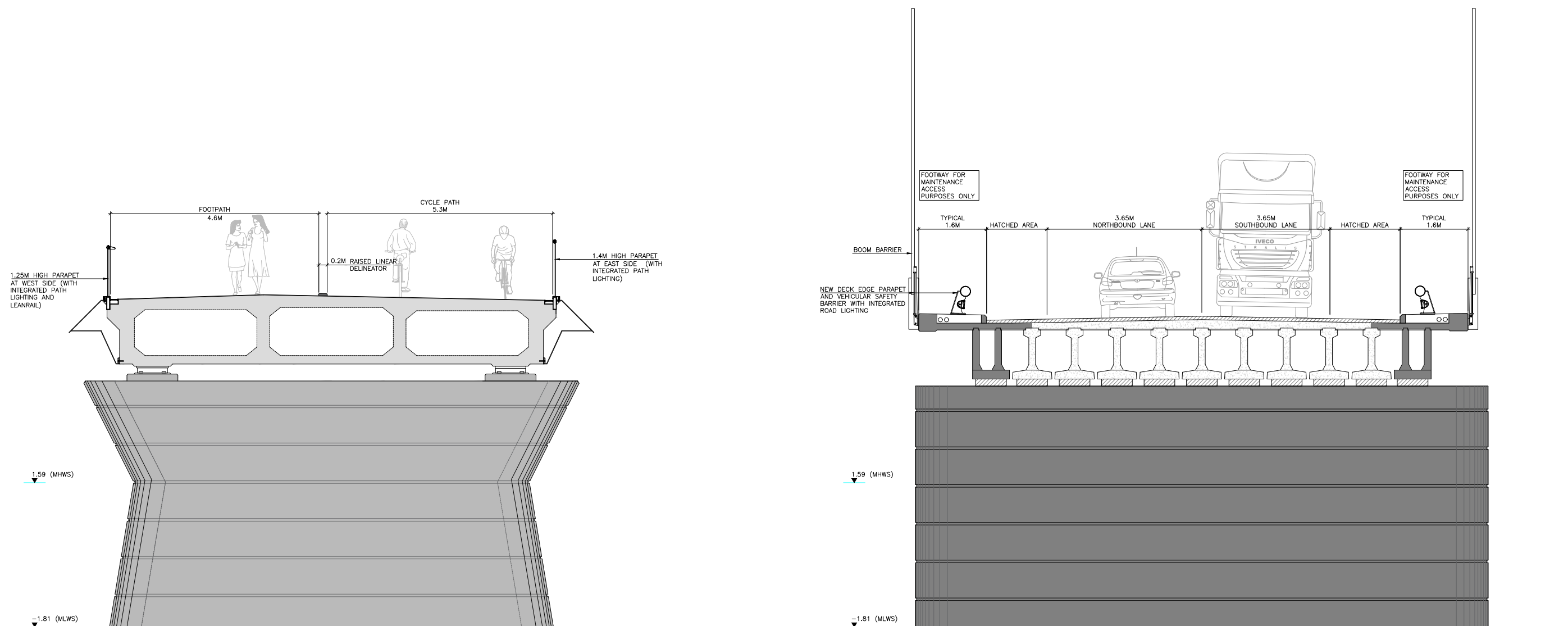
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Drawn	Designed	Checked	Approved	Suitability Code - Description
CS/PE	MD/CB	CS/YB	CS	S2 - Information/Planning

Project Stage						
STATUTORY PROCESS						
Project Title						
POINT BRIDGE AND TOM CLARKE BRIDGE WIDENING PROJECT						
Drawing Title						
GENERAL ARRANGEMENT LAYOUT PLAN & ELEVATION						
Project	Originator	Volume	Location	Type	Role	Number
PTCB	ROD	ENV	AE	DR	EN	401001
Scale (A1)	AS SHOWN	Date:	MAY 2024	Job No:	21.124	Rev: P03

LEGEND:

MLWS: MEAN LOW WATER SPRINGS TIDE
 MHWS: MEAN HIGH WATER SPRINGS TIDE



POINT BRIDGE

TYPICAL SOUTHERN FIXED DECK CROSS SECTION WITH ELEVATION ON INTERMEDIATE PIERS (LOOKING NORTH) - SECTION A

TOM CLARKE BRIDGE

Client:



No.	Revision	Date	By	Chkd	App'd
P03	ISSUED FOR PUBLIC CONSULTATION	27/05/2024	CS	YB	CS



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Drawn	Designed	Checked	Approved	Suitability Code - Description
CS/PE	MD/CB	CS/YB	CS	S2 - Information/Planning

Project Stage	STATUTORY PROCESS				
Project Title	POINT BRIDGE AND TOM CLARKE BRIDGE WIDENING PROJECT				
Drawing Title	GENERAL ARRANGEMENT LAYOUT CROSS SECTIONS SHEET 1				
Drawing Number	Project	Originator	Volume	Location	Type Role Number
PTCB	- ROD	- ENV	- AE	- DR	- EN - 401006
Scale (A1)	AS SHOWN	Date:	MAY 2024	Job No:	21.124
				Rev:	P03

LEGEND:
 MLWS: MEAN LOW WATER SPRINGS TIDE
 MHWS: MEAN HIGH WATER SPRINGS TIDE



POINT BRIDGE

SECTIONAL ELEVATION OF SOUTHERN FIXED DECK AND
 BASCULE PIER (LOOKING NORTH) – SECTION B
 SCALE 1:50

TOM CLARKE BRIDGE

Client:

SEAN HARRINGTON ARCHITECTS

JOINT VENTURE
ROD
 ROUGHAN & O'DONOVAN
Hardesty & Hanover
 engineering that moves you

No.	Revision	Date	By	Chkd	App'd
P03	ISSUED FOR PUBLIC CONSULTATION	27/05/2024	CS	YB	CS

ROD
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 Consulting Engineers
 Civil - Structural - Transportation - Environmental

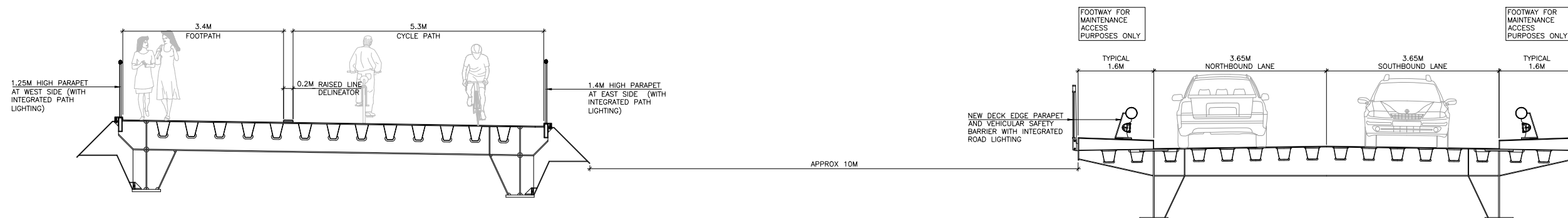
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Drawn	Designed	Checked	Approved	Suitability Code - Description
CS/PE	MD/CB	CS/YB	CS	S2 - Information/Planning

Project Stage	STATUTORY PROCESS				
Project Title	POINT BRIDGE AND TOM CLARKE BRIDGE WIDENING PROJECT				
Drawing Title	GENERAL ARRANGEMENT LAYOUT CROSS SECTIONS SHEET 2				
Drawing Number	Project	Originator	Volume	Location	Type Role Number
PTCB	ROD	ENV	AE	DR	EN - 401007
Scale (A1)	AS SHOWN	Date:	MAY 2024	Job No:	21.124
				Rev:	P03

LEGEND:

MLWS: MEAN LOW WATER SPRINGS TIDE
 MHWS: MEAN HIGH WATER SPRINGS TIDE



POINT BRIDGE

TYPICAL MOVABLE SPAN CROSS SECTION
 (LOOKING NORTH) - SECTION C

TOM CLARKE BRIDGE

SCALE 1:50

Client:



No.	Revision	Date	By	Chkd	App'd
P03	ISSUED FOR PUBLIC CONSULTATION	27/05/2024	CS	YB	CS



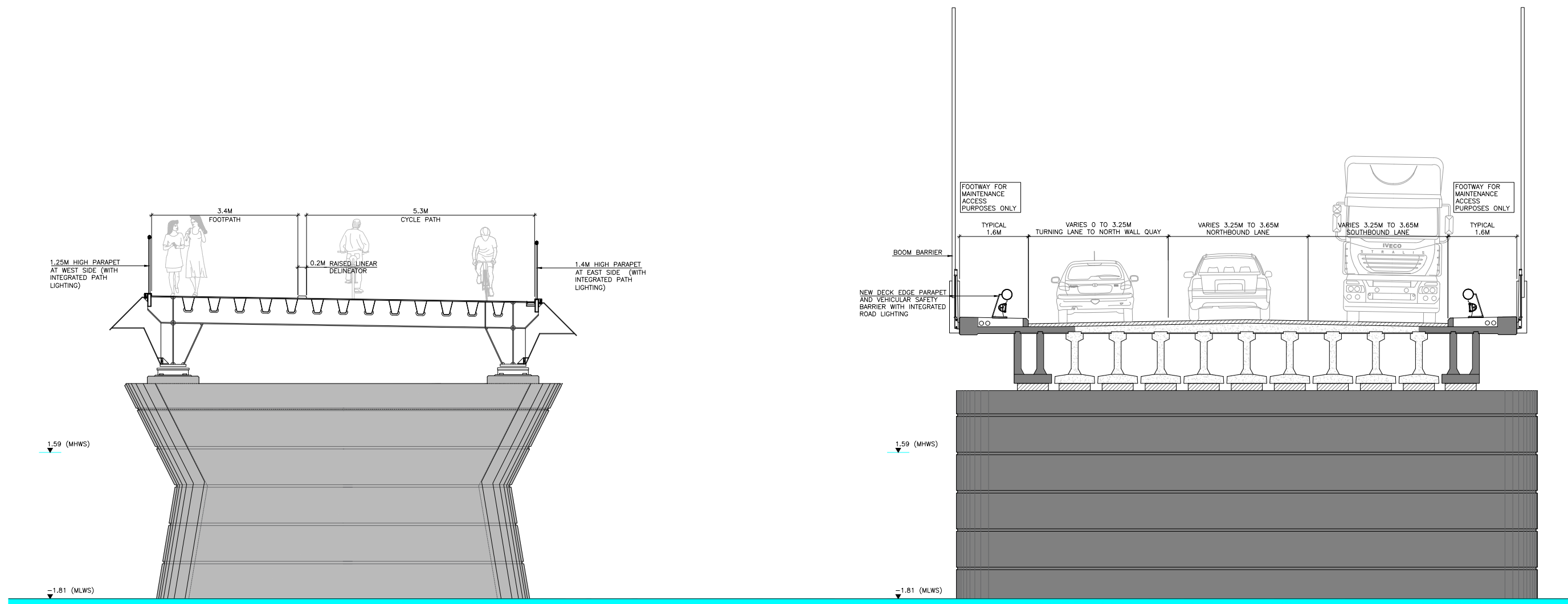
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Drawn CS/PE	Designed MD/CB	Checked CS/YB	Approved CS	Suitability Code - Description S2 - Information/Planning
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STATUTORY PROCESS						
Project Stage	POINT BRIDGE AND TOM CLARKE BRIDGE WIDENING PROJECT					
Project Title	GENERAL ARRANGEMENT LAYOUT CROSS SECTIONS SHEET 3					
Drawing Title	GENERAL ARRANGEMENT LAYOUT CROSS SECTIONS SHEET 3					
Drawing Number	Project	Originator	Volume	Location	Type	Role Number
PTCB	ROD	ENV	AE	DR	EN	401008
Scale (A1)	AS SHOWN	Date:	MAY 2024	Job No:	21.124	Rev: P03

LEGEND:

MLWS: MEAN LOW WATER SPRINGS TIDE
 MHWS: MEAN HIGH WATER SPRINGS TIDE



POINT BRIDGE

TYPICAL NORTHERN FIXED DECK CROSS SECTION WITH ELEVATION ON INTERMEDIATE PIERS (LOOKING NORTH) - SECTION D
 SCALE 1:50

TOM CLARKE BRIDGE

Client:

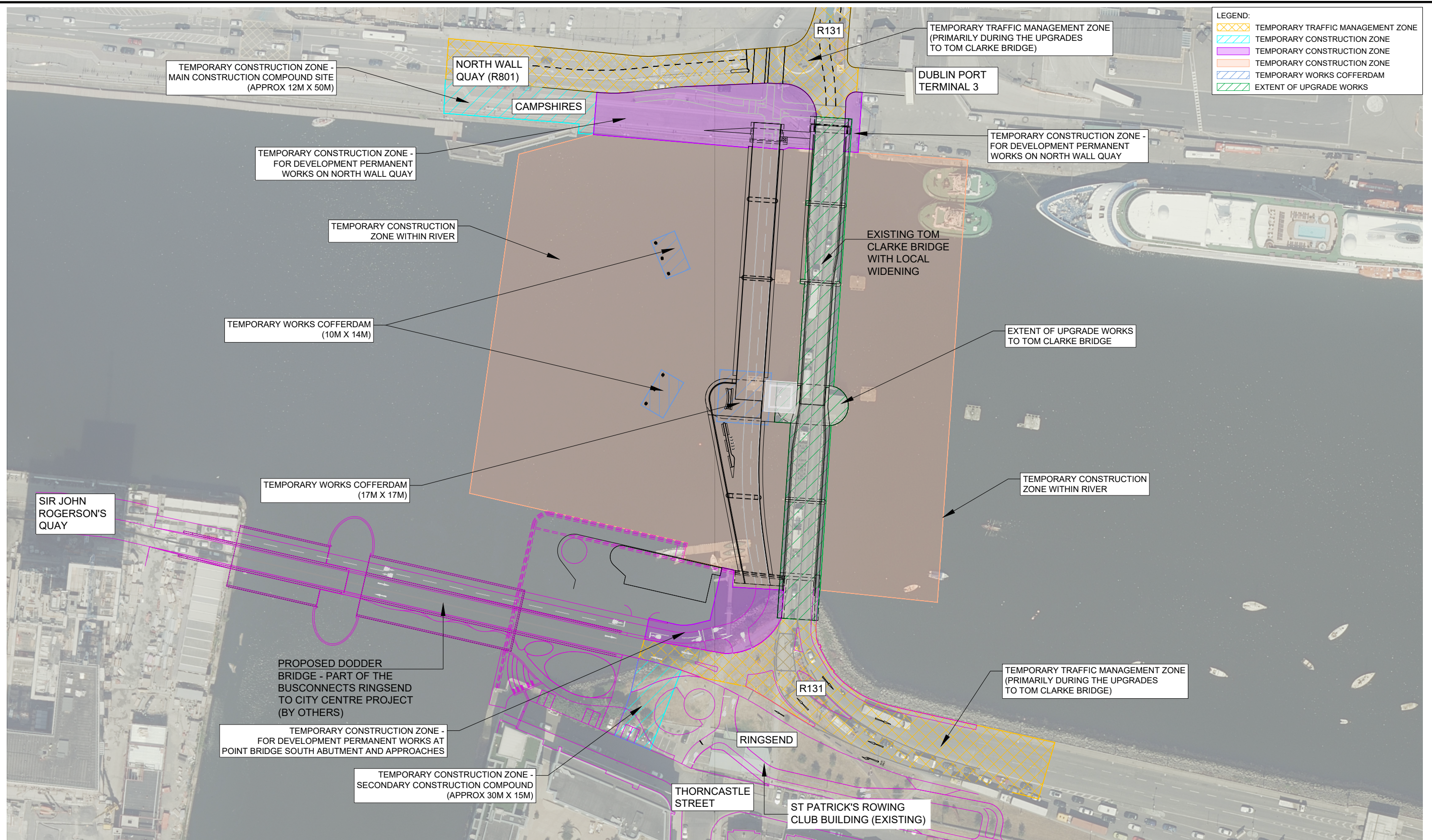
JOINT VENTURE

No.	Revision	Date	By	Chkd	App'd
P02	ISSUED FOR PUBLIC CONSULTATION	27/05/2024	CS	YB	CS

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CS/PE	MD/CB	CS/YB	CS	S2 - Information/Planning

STATUTORY PROCESS						
Project Stage	POINT BRIDGE AND TOM CLARKE BRIDGE WIDENING PROJECT					
Project Title	GENERAL ARRANGEMENT LAYOUT CROSS SECTIONS SHEET 4					
Drawing Title	Project	Originator	Volume	Location	Type	Role Number
Drawing Number	PTCB	ROD	ENV	AE	DR	EN - 401009
Scale (A1)	AS SHOWN	Date:	MAY 2024	Job No:	21.124	Rev: P02



LEGEND:

	TEMPORARY TRAFFIC MANAGEMENT ZONE
	TEMPORARY CONSTRUCTION ZONE
	TEMPORARY CONSTRUCTION ZONE
	TEMPORARY CONSTRUCTION ZONE
	TEMPORARY WORKS COFFERDAM
	EXTENT OF UPGRADE WORKS

<p>Client:</p> Comhairle Cathrach Bhaile Átha Cliath Dublin City Council		NTA Údarás Náisiúnta Iompair National Transport Authority		Project Ireland 2040 Building Ireland's Future		SEÁN HARRINGTON ARCHITECTS		<p>JOINT VENTURE</p> FROD ROUGHAN & O'DONOVAN		Hardesty & Hanover engineering that moves you		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>Date</th> <th>By</th> <th>Chkd</th> <th>App'd</th> </tr> </thead> <tbody> <tr> <td>P01</td> <td>ISSUED FOR PUBLIC CONSULTATION</td> <td>27/05/2024</td> <td>CS</td> <td>YB</td> <td>CS</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		No.	Revision	Date	By	Chkd	App'd	P01	ISSUED FOR PUBLIC CONSULTATION	27/05/2024	CS	YB	CS																									FROD ROUGHAN & O'DONOVAN Consulting Engineers Civil - Structural - Transportation - Environmental		ARENA HOUSE ARENA ROAD SANDYFORD DUBLIN 18 IRELAND t +353 (0) 1 294 0800 www.rod.ie		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2">Project Stage</td> <td colspan="2">STATUTORY PROCESS</td> </tr> <tr> <td colspan="2">Project Title</td> <td colspan="2">POINT BRIDGE AND TOM CLARKE BRIDGE WIDENING PROJECT</td> </tr> <tr> <td colspan="2">Drawing Title</td> <td colspan="2">TEMPORARY CONSTRUCTION WORKING ZONES</td> </tr> <tr> <td>Project</td> <td>Originator</td> <td>Volume</td> <td>Location</td> </tr> <tr> <td>PTCB</td> <td>ROD</td> <td>ENV</td> <td>AE</td> </tr> <tr> <td>Type</td> <td>Role</td> <td>Number</td> <td></td> </tr> <tr> <td>DR</td> <td>EN</td> <td>401050</td> <td></td> </tr> <tr> <td>Scale (A1)</td> <td>AS SHOWN</td> <td>Date:</td> <td>MAY 2024</td> </tr> <tr> <td>Job No:</td> <td>21.124</td> <td>Rev:</td> <td>P01</td> </tr> </table>		Project Stage		STATUTORY PROCESS		Project Title		POINT BRIDGE AND TOM CLARKE BRIDGE WIDENING PROJECT		Drawing Title		TEMPORARY CONSTRUCTION WORKING ZONES		Project	Originator	Volume	Location	PTCB	ROD	ENV	AE	Type	Role	Number		DR	EN	401050		Scale (A1)	AS SHOWN	Date:	MAY 2024	Job No:	21.124	Rev:	P01
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Job No:	21.124	Rev:	P01																																																																																								

APPENDIX C

ZONE OF INFLUENCE

