

**Ringsend to  
City Centre Core  
Bus Corridor Scheme**  
July 2023

**Natura  
Impact  
Statement**

**BUS  
CONNECTS**

SUSTAINABLE TRANSPORT FOR A BETTER CITY.

**Ringsend to  
City Centre Core  
Bus Corridor Scheme**  
July 2023

**Natura  
Impact  
Statement**

**Main Report**

**BUS  
CONNECTS**

SUSTAINABLE TRANSPORT FOR A BETTER CITY.

The image features a vibrant, abstract graphic design. The background is a solid orange color. In the top-left corner, there is a curved shape in dark blue with a white circle inside, partially overlapping a green shape. The top-right corner is decorated with horizontal stripes in blue, dark blue, and orange, with a vertical green bar and a blue rounded rectangle overlapping them. Two white circles are positioned on the right side, one above the other, overlapping the green and blue shapes. In the bottom-left corner, there is a large dark blue curved shape containing a white circle with a blue center, overlapping an orange curved shape.

Natura Impact  
Statement

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## 1 Introduction

- 1 This Natura Impact Statement (NIS) has been prepared Scott Cawley Ltd. with input from Roughan & O'Donovan Consulting Engineers (hereafter referred to as ROD) on behalf of the National Transport Authority (NTA) in respect of the Ringsend to City Centre Core Bus Corridor Scheme (hereinafter referred to as the Proposed Scheme). The Proposed Scheme consists of the delivery of an enhanced bus and cycleway system between Ringsend and the City Centre.
- 2 This NIS has been prepared in accordance with the provisions of Part XAB of the Planning and Development Act, 2000 (as amended) and in accordance with the requirements 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).
- 3 It considers the implications of the Proposed Scheme, on its own and in combination with other plans or projects, for European sites<sup>1</sup> in view of the conservation objectives of those sites. It includes a scientific examination of evidence and data to identify and assess the implications of the Proposed Scheme for any European sites in view of the conservation objectives of those sites. It considers whether the Proposed Scheme, by itself and in combination with other plans or projects, would adversely affect the integrity of any European sites. In reaching a conclusion in this regard consideration is given to any mitigation measures necessary to avoid or reduce any potential negative impacts.
- 4 This report has been prepared following an assessment of the potential in view of best scientific knowledge for, the Proposed Scheme to have significant effects, either individually or in combination with other plans or projects on European sites, set out in the Appropriate Assessment (AA) Screening report (Scott Cawley Ltd., 2021a).
- 5 An Screening for AA was undertaken and a determination was prepared by the NTA (both published on the NTA website). The AA Screening concluded that *"there is the possibility for significant effects on the following European sites, in the absence of mitigation, either arising from the project alone or in combination with other plans and projects, as a result of Habitat Loss and fragmentation, Hydrological impacts, invasive species, disturbance and displacement, and direct injury / mortality only: North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye BusConnects Ringsend CBC16 30 Appropriate Assessment Screening SPA, Lambay Island SPA, Rockabill SPA, Murrough SPA, Wicklow Mountains SAC and Wicklow Mountains SPA"*.
- 6 Since the publication of the AA Screening, there have been minor design updates to the Proposed Scheme. However, the conclusions of the AA Screening and determination remain unchanged. This NIS assesses the final Proposed Scheme.
- 7 The purpose of this NIS is to provide an examination, analysis and evaluation of the potential impacts of the Proposed Scheme on European sites and to present findings and conclusions with respect to the Proposed Scheme in light of the best scientific knowledge in the field. This NIS will inform and assist the competent authority in carrying out its Appropriate Assessment as to whether or not the Proposed Scheme will adversely affect the integrity of any European sites, either alone or in combination with other plans and projects, taking into account their conservation objectives.

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<sup>1</sup> The Natura 2000 network of sites are defined under the Habitats Directive (Article 3) as a European ecological network of special areas of conservation, composed of sites hosting the natural habitat types listed in Annex I and species listed in Annex II, and special protection areas classified pursuant to the Birds Directive (2009/147/EC). The aim of the network is to aid the long-term survival of Europe's most valuable and threatened species and habitats. In Ireland, these sites are designated as *European sites* – as defined under the Planning and Development Acts 2000 (as amended) as (a) a candidate site of Community importance, (b) a site of Community importance, (ba) a candidate special area of conservation, (c) a special area of conservation, (d) a candidate special protection area, or (e) a special protection area.

- 8 The Proposed Scheme is neither connected with nor necessary to the management of any European sites.
- 9 It is the considered view of the authors of this NIS (Scott Cawley Ltd) that following the implementation of the mitigation measures prescribed in Section 7.1.4, the Proposed Scheme will not individually or in combination with other plans or projects, have any adverse effect on the integrity of any European sites in view of their conservation objectives.

## 2 Legislative Context

- 10 Article 6(3) of the Habitats Directive states that:

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

- 11 For the purpose of this application for approval, which is made pursuant to the provisions of section 51 of the Roads Act 1993, as amended, the obligations under Article 6(3) are transposed into Irish law by Part XAB of the Planning and Development Act 2000, (as amended) ("the 2000 Act"). Subsection 177U(4) of the 2000 Act provides for screening for Appropriate Assessment as follows:

*'The competent authority shall determine that an appropriate assessment of [...] a proposed development [...] is required if it cannot be excluded, on the basis of objective information, that the [...] proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.'*

- 12 For the reason set out in detail in the AA Screening Report included in the application documentation, a Stage Two Appropriate Assessment of the Proposed Scheme is required to be undertaken by the Board pursuant to Article 6(3) of the Habitats Directive and section 177V of the 2000 Act.

- 13 In the latter context, section 177T(1) and (2) provide:

- 14 A Natura impact statement means a statement *for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites'*

- 15 ...a Natura impact statement.. *'shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites'.*

- 16 Consideration has been given in the preparation of this report, to the evolution in interpretation and application of provisions of EU Directives and Irish legislation arising from jurisprudence of the European and Irish courts, in respect of Article 6 of the Habitats Directive, in particular.

## 3 Description of the Proposed Scheme

- 17 The following sections provide information to facilitate the Appropriate Assessment of the Proposed Scheme to be undertaken by the competent authority.

- 18 A description of the Proposed Scheme and the receiving environment is provided to identify the potential ecological impacts. The environmental baseline conditions are discussed, as relevant to the assessment of ecological impacts where they may highlight potential pathways for impacts associated with the Proposed Scheme to affect the receiving ecological environment (e.g., air quality, geological, hydrogeological and hydrological data etc.).

- 19 The potential impacts are examined in order to define the potential zone of influence of the Proposed Scheme on the receiving environment. This then informs the assessment of whether the Proposed Scheme



will result in significant effects on any European sites; i.e., affect the conservation objectives supporting the favourable conservation condition of the European site's QIs or SCIs.

### 3.1 Overview

- 20 The Proposed Scheme has an overall length of approximately 4.3km (2 x 1.6km along the Liffey Estuary Quays and 1.1km of cycle route through Ringsend and Irishtown to Sean Moore Road), and is routed along the north and south quays of the River Liffey, linking the city centre with the Docklands and an onward cycling connection to Ringsend and Irishtown, all within the County of Dublin and within the Dublin City Council (DCC) administrative area. The Proposed Scheme includes priority for buses along the entire length of the north quays from Talbot Memorial Bridge to the Tom Clarke East Link Bridge, consisting of dedicated bus lanes in both directions, which will require the relocation of both pairs of Scherzer Bridges along the north quays. Bus priority will also be achieved on the south quays through the provision of intermittent sections of bus lane to ensure bus priority on the approach to all major junctions as well as a new opening bridge (i.e. the Dodder Public Transport Opening Bridge (DPTOB)) across the confluence of the River Liffey and the River Dodder. Full bus lane provision on the south quays is not considered necessary in the context of the layout of the traffic cells and existing one-way restrictions, which prevent congestion developing. Eastbound buses will use the north quays only between the Customs House and the Samuel Becket Bridge, with eastbound buses proceeding on both quays from this point to the Tom Clarke East Link Bridge.
- 21 Segregated two-way cycle tracks will be provided along the quaysides (campshires) on both sides of the River Liffey. A continuation of the two-way cycle route on the south quays will extent through Ringsend and Irishtown towards Sandymount Strand and the Poolbeg peninsula. The route will run via quiet streets at Pembroke Cottages, across Cambridge Road, then through Ringsend Park as a shared path with pedestrian priority, and a cycle track along the northern side of Strand Street and Pembroke Street in Irishtown to the junction of Sean Moore Road and Beach Road. A spur cycle route will be provided towards the Poolbeg Strategic Development Zone (SDZ) lands via Irishtown Stadium and Bremen Road. Shared use symbols will also be installed along York Road and Pigeon House Road to provide a second alternative route towards the Poolbeg SDZ lands. This road has recently been closed to through traffic and is suitable for shared use.
- 22 Pedestrian facilities will be upgraded, and additional crossings will be provided at side roads, road crossings, and at junctions. In addition, public realm works will be undertaken at key locations with higher quality materials, planting and street furniture provided to enhance the pedestrian experience. Examples of such works can be seen at the pair of Scherzer Bridges at Custom House Quay and North Wall Quay as well as the junction of North Wall Quay and Excise Walk. Pedestrian Boardwalks are proposed at Excise Walk and also at the former DCC Dublin Docklands offices at Custom House Quay to enhance the pedestrian environment (the latter to be provided on completion of the redevelopment of the offices).
- 23 The Proposed Scheme includes a local modification to Mayor Street at Spencer Dock. In order to accommodate proposed turning movement restrictions at the Guild Street / Samuel Beckett Bridge junction for the purposes of provided enhanced bus, cycle and pedestrian priority, it is proposed to open an eastbound traffic lane north of the LUAS between the National Convention Centre Car Park and Park Lane. This will facilitate traffic exiting the car park towards the M50 Port Tunnel.
- 24 The removal of vegetation relates to established landscape planting in the city centre, typically comprising individual trees or planted treelines. Further towards Ringsend, a mix of individual trees and clusters of trees will be removed. The Proposed Scheme includes for complimentary landscape planting within and adjacent to the site. An area of estuarine land reclamation within the Liffey Estuary Lower is proposed to facilitate the construction of the proposed DPTOB.
- 25 See Figure 1 (at the end of the NIS) for Proposed Scheme Location Plan. Appendix I to this NIS includes the General Arrangement drawings in respect of the Proposoed Scheme and the location of its various elements including details on Bridges and major retaining strucutres, landsacpe planting. Appendix III includes the Proposed Surface Water Drainage Works Drawings.

- 26 The main characteristics of the Construction Phase of the Proposed Scheme that have potential for ecological impact are listed below. Full details of the Proposed Scheme are presented in Appendix II of this NIS contains a copy of Chapter 5 (Construction) of volume 2 of the EIAR as well as the General Arrangement Drawings.
- Site preparation and clearance;
  - Removal of existing boundaries, pavements, lighting columns, bus stops, and signage;
  - Protection and / or diversion of buried services;
  - Road widening, pavement reconstruction, and kerb improvements;
  - Construction of DCC Docklands boardwalk;
  - Construction of North Wall Quay boardwalk;
  - Deconstruction, relocation and reconstruction of the Scherzer Bridges at George's Dock and Spenser Dock;
  - Construction of the DPTOB;
  - Demolition and reconstruction of the SPRC Building;
  - Reconfiguration of traffic lanes throughout;
  - Property boundary reinstatement, signage replacement; relocation of and/or installation of lighting columns; and
  - Landscaping and tree planting, and reinstatement of temporary land acquisitions.

### 3.2 Structural / Demolition Works

- 27 The following are the main structural works to form part of the Proposed Scheme. A full description of the construction works, and phasing is presented in Appendix II:
- Structure Reference 01: Deconstruction of George's Dock Scherzer Bridges and construction of George's Dock Replacement Carriageway Bridge (and associated works);
  - Structure Reference 02: Construction of Custom House Quay Boardwalk;
  - Structure Reference 03: Construction of North Wall Quay Boardwalk;
  - Structure Reference 04: Deconstruction of Royal Canal Scherzer Bridges and construction of Royal Canal Replacement Carriageway Bridge (and associated works); and
  - Structure Reference 05: Construction of the DPTOB (and associated works, including the demolition and relocation of the SPRC).

### 3.3 Drainage Infrastructure

- 28 The existing road and bridge network consist primarily of curb and gully, with no treatment or attenuation within the network. No SuDS were identified within the study area. The existing drainage system drains by way of a surface water network (including stormwater overflows) to the Liffey Estuary Lower as well as a combined sewer to the Ringsend wastewater treatment plant.
- 29 There are five water bodies with hydrological connectivity to the Proposed Scheme, namely, Liffey Estuary Upper, Liffey Estuary Lower, the Royal Canal, Dodder\_050, and Dublin Bay. The proposed drainage system for the Proposed Scheme will discharge to two main surface water receptors, namely: the Liffey Estuary Lower, and the combined sewer system directing water to Ringsend WWTP. Both of these ultimately drain to Dublin Bay. All drainage outfall discharges to surface waters represent point discharges.
- 30 For this Proposed Scheme, there will be a net increase of 9038m<sup>2</sup> in the impermeable area discharging to the Liffey Estuary Lower and subsequently Dublin Bay. There is no change in impermeable area for the drainage proposed to the other waterbodies. The drainage design principles ensure that there will be no net increase in the surface water flow discharged to any receptors.
- 31 The proposed drainage design includes the relocation and addition of drainage gullies. Attenuation will be in the form of filter drains and oversized pipes. These measures allow a level of attenuation to be provided

before discharge to the network, reducing the impact on water quality as well as preventing an increase in runoff rates. The following drainage types are proposed in respect of the Proposed Scheme:

- Oversized pipes; and
- Infiltration trench.

32 Proposed Surface Water Drainage Works is provided in Appendix III. The proposed SuDS and Impermeable Area for the Proposed Scheme is listed in **Table 1** and summarised per water body in **Table 2**.

**Table 1 Proposed SuDS and Impermeable Area**

Existing Catchment Reference	Water body	Approx. Impermeable Surface Area m <sup>2</sup>			SuDS Measures Proposed
		Existing	Additional Impermeable	Percentage Change %	
R_01	Liffey Estuary Lower	4254	0	0	None
R_02	Liffey Estuary Lower	7134	0	0	None
R_03	Liffey Estuary Lower	20462	0	0	None
R_04	Liffey Estuary Lower	9457	0	0	None
R_05	Liffey Estuary Lower	4636	0	0	None
R_06	Combined sewer to Ringsend WwTP	9201	0	0	None
R_07	Liffey Estuary Lower	3856	0	0	None
R_08	Combined Sewer to Ringsend WwTP	10469	0	0	None
R_09	Liffey Estuary Lower	14,400	6,050	42	Inflow from proposed Dodder bridge. OSP
R_10	Liffey Estuary Lower	19,256	1,901	9.9	Infiltration trench
R_11	Combined sewer to Ringsend WwTP	8,824	1,086	12.3	Infiltration trench

**Table 2 Summary of Increased Impermeable areas per water body**

Water body	Approx. Impermeable Surface Area m <sup>2</sup>		
	Existing	Additional Impermeable	Percentage Change %
Liffey Estuary Lower	83,455	7,952	89.5
Ringsend	928,494	1,086	4.383.8

### 3.4 Landscape and Public Realm

33 Complimentary urban realm planting and landscaping will be provided throughout the Proposed Scheme. The landscape and urban realm proposals along the various sections of the Proposed Scheme are illustrated in the General Arrangements (Appendix I) of this report.

### 3.5 Construction Compounds

34 A number of Construction Compound locations have been selected based on where there is the most available space, in close proximity to the majority of the Proposed Scheme major works and with access to the National and Regional Road network. A total of four Construction Compounds will be located at the following sites and their locations are shown below:

- Construction Compound R1 (Phase 1 and Phase 2): Construction Compound at the George’s Dock Scherzer Bridges on the north side of Custom House Quay;
- Construction Compound R2 (Phase 1 and Phase 2): Construction Compound at the Royal Canal Scherzer Bridges on the north side of North Wall Quay;
- Construction Compound R3A/R3B: Construction Compound at west side of DPTOB – at the eastern end of Sir John Rogerson’s Quay; and
- Construction Compound R4 (Phase 1 and Phase 2): Construction Compound at east side of DPTOB – between Thorncastle Street / York Road and Tom Clarke East Link Bridge (including a portion of reclaimed land required to facilitate the DPTOB).

35 There will be rolling temporary compounds throughout the Proposed Scheme as necessary, and these will typically be sited on-street.

Image 1 Proposed Location, Extent, and Layout Construction Compound R1 (Phase 1)

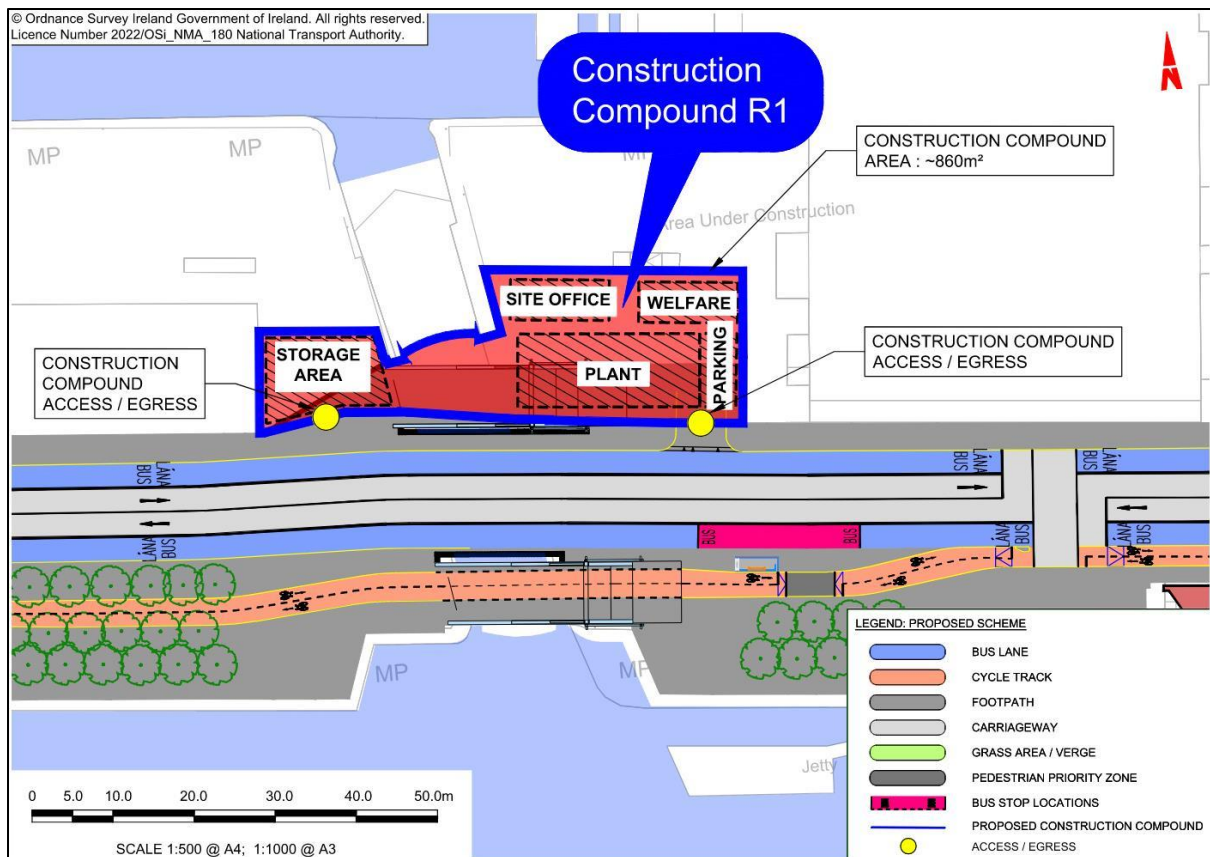






Image 4 Proposed Location, Extent, and Layout Construction Compound R2 (Phase 2 (after relocation of Scherzer Bridges))

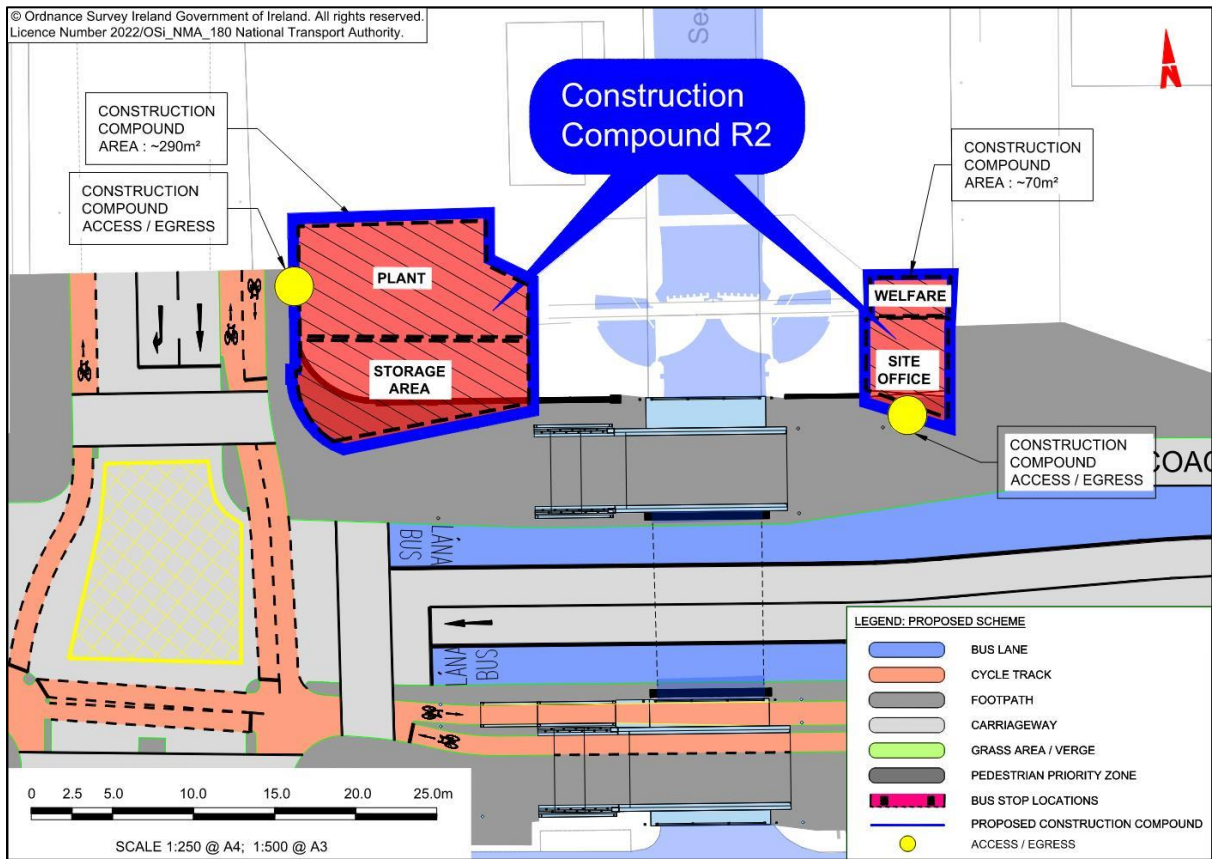


Image 5 Proposed Location, Extent, and Layout Construction Compound R3

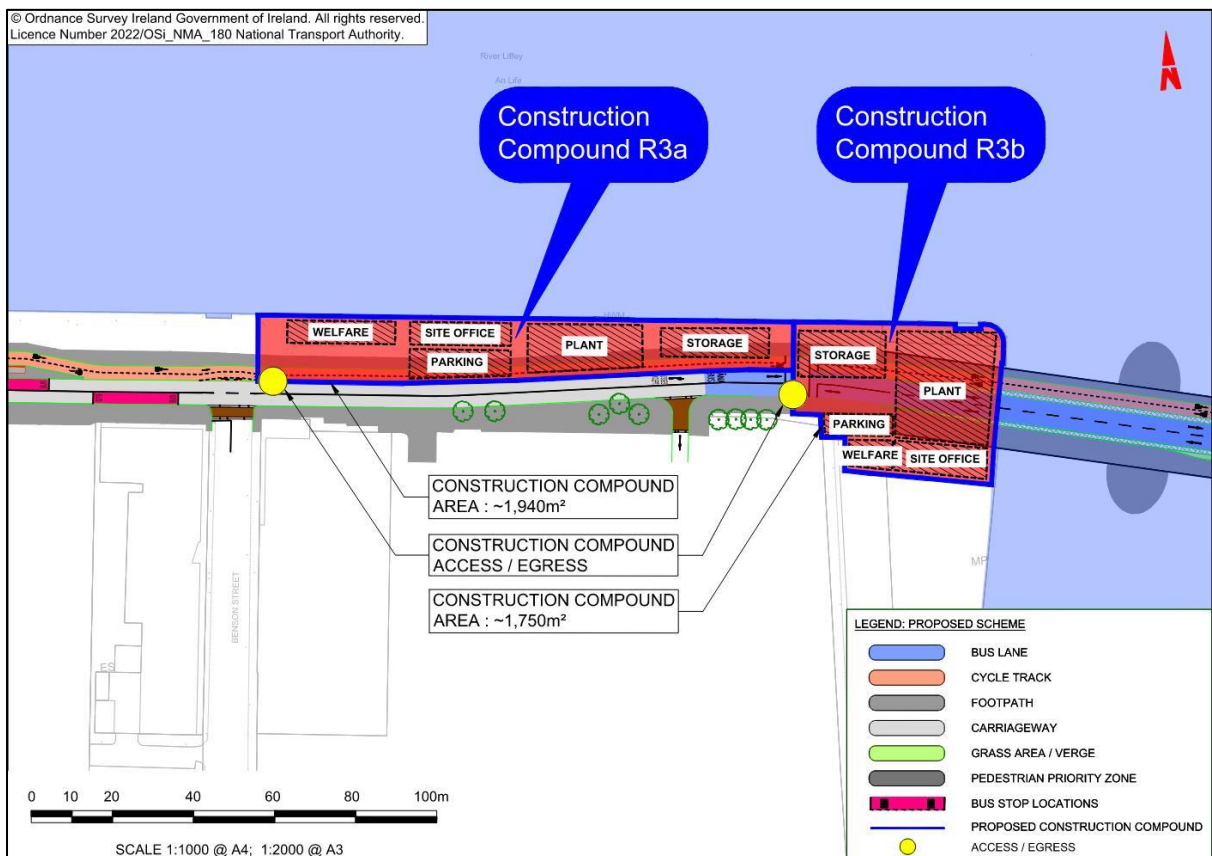


Image 6 Proposed Location, Extent, and Layout Construction Compound R4 (start of DPTOB construction programme)

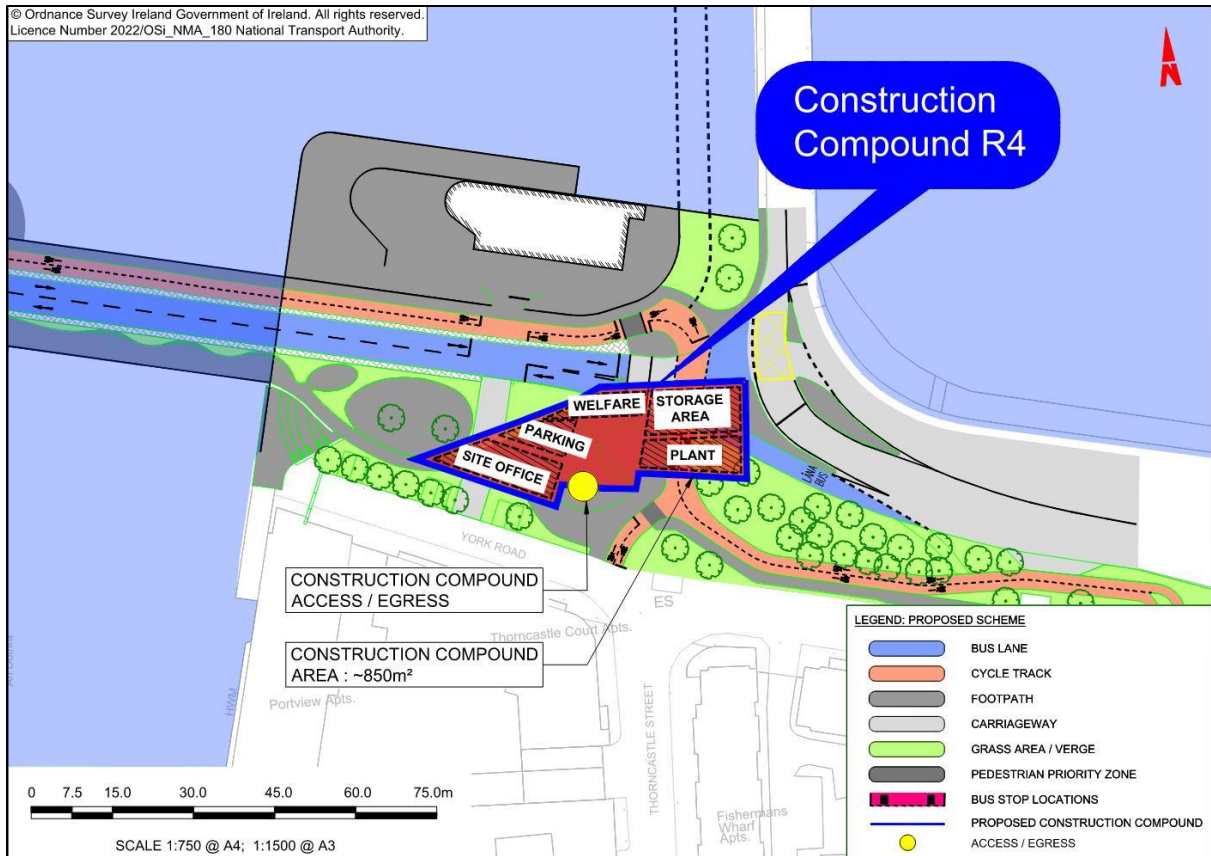
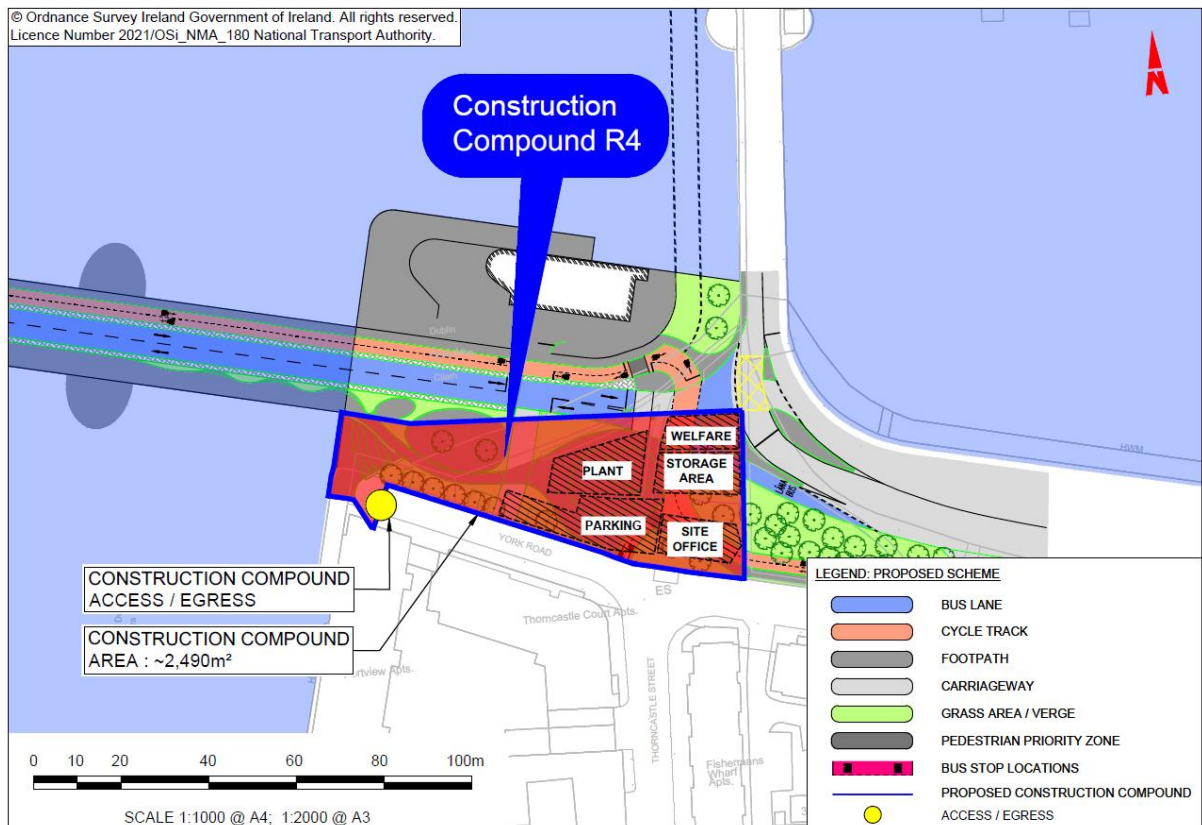


Image 7 Proposed Location, Extent, and Layout Construction Compound R4 (end of DPTOB construction programme)



### 3.6 Construction Site Decommissioning

- 36 On completion of construction, all construction facilities and equipment such as plant, materials, temporary signage, laydown areas, and the Construction Compounds, etc. will be removed. All areas which were occupied by the Construction Compounds will be reinstated.

### 3.7 Estimated Project Duration

- 37 The total Construction Phase for the Proposed Scheme is estimated at approximately 30 months, assuming that construction of the DPTOB and the elements of the Proposed Scheme are constructed concurrently. It should be noted however that it is envisaged that the DPTOB will be constructed under a separate Construction Contract from the remainder of the Proposed Scheme, therefore it is possible that the construction of the DPTOB could be undertaken in a different sequence (e.g., either independently of the other elements of overlapping with them). The Proposed Scheme will be constructed in section, with each individual section being constructed in a shorter duration, typically between nine and 30 months. Works are envisaged to proceed concurrently on multiple work-fronts to minimise the overall construction duration.
- 38 The following are the estimated duration of works for the key elements for the Proposed Scheme:
- Structure Reference 01: Deconstruction of George's Dock Scherzer Bridges and construction of George's Dock Replacement Carriageway Bridge (and associated works);
  - Structure Reference 02: Construction of Custom House Quay Boardwalk;
  - Structure Reference 03: Construction of North Wall Quay Boardwalk;
  - Structure Reference 04: Deconstruction of Royal Canal Scherzer Bridges and construction of Royal Canal Replacement Carriageway Bridge (and associated works); and Structure Reference 05: Construction of the DPTOB (and associated works, including the demolition and relocation of the SPRC) – 30 months.

### 3.8 Operational Phase

- 39 The main characteristics of the Operational Phase of the Proposed Scheme that have potential for ecological impact are:
- The presence and operation (traffic) of the road;
  - The presence of additional pedestrian traffic along the proposed boardwalks;
  - The presence of additional lighting;
  - Occasional opening of Scherzer bridges at George's Dock and Royal Canal; and
  - Routine maintenance, including road maintenance and landscaping of urban realm focal points.

## 4 Methodology

### 4.1 Scientific and Technical Competence Relied Upon

- 40 This NIS was authored by Laura Higgins, Kristie Watkin Bourne and Tim Ryle and reviewed by Aebhín Cawley and Sui Harris, all of Scott Cawley Ltd. Previous iterations of the Proposed Scheme involved a separate assessment of the proposed DPTOB by ROD. The Proposed Scheme amalgamates these section and incorporates survey and assessment from ROD. The background and experience of the authors and contributors to this report are set out below.

#### *Laura Higgins*

- 41 Laura Higgins is a Senior Ecologist with Scott Cawley Ltd. She holds a first-class honours degree in Zoology from Trinity College Dublin. Laura has a range of fieldwork experience in Ireland including habitat, invasive species and protected species surveys. She has surveyed a wide range of mammal, bird and invertebrate



species in terrestrial and aquatic habitats in Ireland. Laura has a great interest in ecology and is continually improving her professional skills through training courses and volunteer work. Since joining Scott Cawley, her work has included the collection of ecological data, data analysis and preparing Appropriate Assessment reports and Ecological Impact Assessments for residential and infrastructural projects across the country.

*Eoin Cussen*

- 42 Eoin Cussen is a Senior Consultant Ecologist with Scott Cawley Ltd. Eoin holds a BSc (Hons) in Zoology from University College Cork and MSc (Hons) in Ecological Assessment from the same institution. Eoin is an experienced ecologist with over 4 years' professional postgraduate experience in ecological consultancy including planning related casework for state and non-governmental organisations within Ireland and the UK, input to and preparation of Appropriate Assessment (AA) screenings, Natura Impact Statements, Preliminary Ecological Assessments and Ecological Impact Assessments, and a wide range of experience of ecological surveys for protected habitats and species including otters, bats, birds.

*Caroline Kelly*

- 43 Caroline holds an honours degree in Environmental Biology, from University College Dublin (UCD) and a Masters in Applied Ecological Assessment from University College Cork (UCC). She is a Principal Ecologist at Scott Cawley Ltd., having worked at the company since 2015. Caroline has experience in habitat survey and assessment (including Annex I habitats and legally protected sites) in a range of terrestrial, freshwater and coastal environments, surveys for protected species (e.g. bats, badger, otter), bird surveys (both breeding and overwintering), and surveys for invasive species. Whilst working at Scott Cawley Ltd. Caroline has managed ecological assessments for a wide range of projects including tourism, recreational, industrial, commercial, residential, transport and renewable energy developments.

*Kristie Watkin-Bourne*

- 44 Kristie Watkin-Bourne is a Senior Consultant Ecologist at Scott Cawley Ltd. She holds a first-class honours degree in Physical Geography from Swansea University, and a first-class master's degree in Applied Environmental Science from University College Dublin. She is a CIEEM Member (Qualifying) and is experienced in conducting a range of terrestrial and aquatic ecological surveys for habitat and site appraisals, species monitoring, and impact assessment. With five years consultancy experience, Kristie has a wide range of experience in Appropriate Assessment, Ecological Impact Assessment, Cumulative Impact Assessment, and Strategic Environmental Assessment of plans and projects within the Irish planning environment. Kristie has worked on behalf of public sector bodies including Irish Water, The National Transport Authority, and several County Councils in addition to private developers across infrastructure, renewable energy, and residential development projects.

*Tim Ryle*

- 45 Tim Ryle is a Principal Ecologist with Scott Cawley Ltd. He holds an honours degree in Botany from University College Dublin and was later awarded a Ph.D. from the same institution. He is a full Member of the Institute of Environmental Scientists. Tim is an experienced ecological consultant with twenty years' experience in private consultancy in designing, undertaking and managing a wide range of ecological surveys and in assessing impacts and designing mitigation measures and biodiversity enhancements, in particular for protected species including badgers, otters, bats, birds, amphibians as well as habitats of conservation importance. He is also experienced in undertaking appropriate Assessment for small-scale development projects and larger infrastructural projects, land plans as well as national/government plans.

*Suvi Harris*

- 46 Suvi Harris is a Senior Environmental Project Manager at Scott Cawley Ltd. Suvi holds an honours degree BSc. in Botany from University College Dublin and a Ph.D. in Environmental Risk Assessment from University College Dublin. Suvi is a Full member of the CIEEM. Suvi has over 8 years' experience in environmental consultancy and over 12 years' experience in the environmental field with a particular focus on aquatics. Suvi has worked on national and international multidisciplinary teams developing environmental and

ecological solutions for engineering challenges. Suvi leads, coordinates and assists on a range of areas including EIA, AA, WFD Compliance Assessment, Surface Water Impact Assessment, Sustainability Appraisal, Planning, Licencing etc. Suvi holds a deep technical understanding of the relevant National and European Legislation which govern environmental protection and planning in Ireland.

#### *Aebhín Cawley*

- 47 Aebhín Cawley is Chief Executive Officer (CEO) with Scott Cawley Ltd. She holds an honours degree in Zoology from Trinity College, Dublin and a postgraduate diploma in Physical Planning at Trinity. She is a Chartered Environmentalist (CEnv) with the Society for the Environment (Soc Env) and a Full Member of the CIEEM. Aebhin Cawley is an experienced ecological consultant with extensive experience in public and private sector projects including complex development types including infrastructure, renewable energy and ports. Aebhín has delivered lectures and training on Appropriate Assessment to a range of organisations and professional institutes and regularly provides Appropriate Assessment training to local authorities and other public sector organisations. She authored guidelines on Appropriate Assessment for the EPA and delivered training on its application to its inspectorate.

#### *ROD*

#### *Patrick O'Shea, BA (Hons), MSc, MCIEEM, Roughan & O'Donovan*

- 48 Patrick O'Shea is an ecologist with 10 years' experience in consultancy and research. He has a thorough knowledge of ecological requirements on infrastructure and development projects. He has experience in undertaking surveys, monitoring, data analysis and reporting for habitats, including habitats listed on Annex I to Council Directive 92/43/EEC (the Habitats Directive), as well as a variety of species, including newt, otter, red squirrel, pine marten, badger, birds, bats and reptiles. He also has extensive experience as an Ecological Clerk of Works (ECoW) for archaeology, tree felling, ground investigation and hydrological testing works and supervision of the implementation as well of ecological mitigation. Patrick has undertaken numerous surveys for invasive species and has worked as ECoW on a number of construction sites with active Japanese Knotweed control. Patrick has held a number of project-specific protected species licences in Ireland and the UK for red squirrel, badger, otter, newt and bat species. Patrick has provided environmental services on a range of projects involving sensitive watercourses and Natura 2000 Sites. In particular, the Dublin Mountains Visitor Centre and the Waterford City to Rosslare Europort Greenway was particularly complex and covered both SACs and SPAs and the potential impacts of the developments, ranging from habitat loss to water quality to increased footfall.
- 49 Since 2017, Patrick has led the ROD ecology team on the Leinster Bridges Routine Maintenance Contract, preparing ecological reports, AA Screening Reports and Natura Impact Statements for routine and reactive maintenance works. During the life-time of the project, Patrick has liaised with the TII environment team, TII engineers, Inland Fisheries Ireland and the environmental consultants for the other regions which has ensured that the contract has run smoothly while complying with the environmental legislative obligations. Patrick's experience includes the ecological surveying and the preparation of EIAR Biodiversity Chapters, Construction Environmental Management Plans, Invasive Species Management Plans, AA Screening Reports and Natura Impact Statements. Details of Patrick's project experience is presented in the table below.

#### *Owen O'Keefe, BSc, ACIEEM, Roughan & O'Donovan*

- 50 Having graduated from University College Cork in 2015, Owen joined the ROD Environmental team. Owen's academic and professional experience covers a broad range of topics, including environmental assessment, but with a focus on the aquatic aspect throughout. Since joining ROD, Owen has undertaken both field work and reporting. He has carried out extensive watercourse surveys, electric fishing and White-clawed Crayfish surveys and is certified to carry out standardised River Habitat Survey, as prescribed by the Environment Agency for England. He has also undertaken numerous ecological surveys (including habitats, invasive alien plant species, protected mammals etc.) and acted as Ecological Clerk of Works. Given his strong understanding of Article 6 of the Habitats Directive (92/43/EEC), Owen has prepared Appropriate Assessment Screening Reports for a large number of projects and plans and has produced Natura Impact

Statements for projects such as the River Suir Sustainable Transport Bridge and Natura Impact Reports for land use plans such as the Planning Scheme for the North Quays (Waterford) Strategic Development Zone. Owen has also produced a number of Ecological Impact Assessments and Biodiversity chapters for Environmental Impact Assessment Reports. Owen also has training and experience in the use of ArcGIS.

*Kate Moore, BSc, GradCIEEM, Roughan & O'Donovan*

- 51 Kate is an ecologist with over five years' experience. Kate graduated from University College Dublin in 2015 with academic experience covering a broad range of ecology-related topics, including environmental impact assessment, biological invasions and field biology. Since joining ROD, Kate has carried out multidisciplinary walkover surveys for a number of projects including the DART+ West and the River Dodder Greenway. She also has experience in undertaking specialized surveys of wintering birds, red squirrel, badger, otter, newt, bat and invasive plant species. She has authored and contributed to numerous Environmental Impact Assessments, Appropriate Assessment and Strategic Environmental Assessment reports.

#### 4.2 Guidance and Approach

- 52 This NIS has been prepared having regard to the following documents.

##### European Commission Guidance

- *Assessment of Plans and Projects in Relation to Affecting Natura 2000 sites: Methodological Guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2021);
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019);
- *Communication from the Commission on the Precautionary Principle* (European Commission, 2000)<sup>2</sup>;
- *Nature and Biodiversity Cases – Ruling of the European Court of Justice* (European Commission, 2006);
- *Interpretation Manual of European Union Habitats. Version EUR 28* (European Commission, 2013); and,
- *Article 6 of the Habitats Directive – Rulings of the European Court of Justice* (European Commission Final Draft September 2014).

##### Irish Guidance

- *OPR Practice Note PN01. Appropriate Assessment Screening for Development Management* (Office of the Planning Regulator, 2021);
- *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities* (Department of Environment, Heritage and Local Government 2010 revision); and,
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPW 1/10 & PSSP 2/10* (NPWS, 2010).

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<sup>2</sup> The precautionary principle is a guiding principle that derives from Article 191 of the Treaty on the Functioning of the European Union and has been developed in the case law of the European Court of Justice (e.g. ECJ case C-127/02 – Waddenzee, Netherlands).

This guidance document notes that the precautionary principle “covers those specific circumstances where scientific evidence is insufficient, inconclusive or uncertain and there are indications through preliminary objective scientific evaluation that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the chosen level of protection”.

Applying the precautionary principle in the context of screening for appropriate assessment requires that where there is uncertainty or doubt about the risk of significant effects on a European site(s), it should be assumed that significant effects are likely, and AA must be carried out.

53 In addition, regard has been had to guidance in characterising impacts, including determining magnitude and significance of impacts, as relevant in the application to Appropriate Assessment and European sites, including:

- *Guidelines for Ecological Impact Assessment in the UK and Ireland* (Chartered Institute of Ecology and Environmental Assessment, 2018).

#### **4.3 Assessment Methodology**

54 The Proposed Scheme (including the proposed design, construction methodologies and operational effects) was analysed and appraised to identify the potential impacts could affect the ecological environment.

55 From this, the ecological Zone of Influence (Zoi) of the Proposed Scheme was defined. Based on the identified impacts, and their zone of influence, the European sites potentially at risk of any direct or indirect impacts were identified.

56 A source-pathway-receptor approach has been applied. In order for an impact to occur, there must be a risk enabled by having a source (e.g. water abstraction or construction works), a receptor (e.g. a European site or its Qualifying Interest(s) (QIs) or Special Conservation Interest(s) (SCIs) species), and a pathway between the source and the receptor (e.g. pathway by air for air borne pollution, or a pathway by a watercourse for mobilisation of pollution). For an impact to occur, all three elements must exist; the absence or removal of one of the elements means there is no possibility for the impact to occur.

57 The identification of source-pathway-receptor connection(s) between the Proposed Scheme and European sites essentially is the process of identifying which European sites are within the zone of influence of the Proposed Scheme, and therefore potentially at risk of significant effects. The zone of influence is defined as the area within which the Proposed Scheme could affect the receiving environment such that it could potentially have significant effects on the QI habitats or QI / SCI species of a European site, or on the achievement of their conservation objectives (as defined in CIEEM, 2018).

58 The identification of a source-pathway-receptor risk does not mean that significant effects will arise. Rather, the likelihood of significant effects will depend upon the characteristics of the source (e.g. extent and duration of construction works), the characteristics of the pathway (e.g. direction and strength of prevailing winds for air borne pollution) and the characteristics of the receptor (e.g. the sensitivities of the European site and its QIs / SCIs). However, identification of the risk does mean that there is a possibility of an effect on the environment, with the significance of the effect depending upon the nature of and exposure to the risk and the characteristics of the receptor. Where there is uncertainty, the precautionary principle has been applied.

59 This assessment has been undertaken in consideration of all potential impact sources and pathways connecting the Proposed Scheme to European sites, in view of the conservation objectives supporting the conservation condition of the sites' QIs / SCIs.

60 The conservation objectives relating to each European site and its QIs/SCIs are expressed generally for SACs as "to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the cSAC has been selected", and for SPAs "to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA".

61 Following on from this, and as defined in the Habitats Directive, favourable conservation status (or condition, at a site level) of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable

62 The favourable conservation status (or condition, at a site level) of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
  - the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
  - there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis
- 63 Where site-specific conservation objectives have been prepared for the individual European sites, these include a series of specific attributes and targets against which effects on conservation condition, or integrity, can be measured, i.e. an impact which affects the achievement of favourable conservation condition, as measured by the attributes and targets, is an impact on site integrity.
- 64 In the case of the sites where site-specific conservation objectives are not yet available, or have not been published, sample site specific attributes and targets for a given QI / SCI have been compiled, based on those from other relevant European sites, as a guide in assessing how the conservation condition of these sites could potentially be affected by the Proposed Scheme.
- 65 In the case of some QIs / SCIs in certain European sites, the conservation objective is to restore rather than maintain conservation condition and this distinction is taken into account in the assessment; as is any legacy damage to European sites that has occurred since their designation, insofar as possible.
- 66 To the extent that the assessment carried out as part of the preparation the NIS has found that the Proposed Scheme has the potential to impact on European sites, avoidance and mitigation measures have been included as part of the Proposed Scheme to ensure that, in view of the European sites' conservation objectives, the Proposed Scheme will not adversely affect the integrity of the sites concerned.

#### 4.4 Desk Study

- 67 The data sources used to inform the assessment presented in this report are as follows (accessed in October 2022):
- Online data available on European sites and on Natural Heritage Areas (NHAs) or proposed Natural Heritage Areas (pNHAs) held by the National Parks and Wildlife Service (NPWS) from [www.npws.ie](http://www.npws.ie)<sup>4</sup>, including conservation objectives documents;
  - Online data records available on National Biodiversity Data Centre Database (NBDC Online Database, Accessed 2022);
  - Online data records made available via an NPWS data request (NPWS 2020);
  - Information on the status of EU protected habitats and species in Ireland (National Parks & Wildlife Service, 2019a, 2019b and 2019c);
  - Ordnance Survey of Ireland (OSI) orthophotography for the proposed study area available from [www.osi.ie](http://www.osi.ie);
  - Habitat and species GIS datasets provided by the NPWS, including Article 12 and Article 17 data<sup>5</sup>;
  - Records from the Botanical Society of Britain and Ireland (BSBI);
  - Information contained within the Flora of County Dublin<sup>6</sup>;
  - Environmental information/data for the area available from the EPA website;

<sup>3</sup> The following SAC and SPA GIS boundary datasets are the most recently available at the time of writing: SAC\_ITM\_2023\_02 and SPA\_ITM\_2021\_10.

<sup>4</sup> The following SAC and SPA GIS boundary datasets are the most recently available at the time of writing: SAC\_ITM\_2023\_02 and SPA\_ITM\_2021\_10.

<sup>5</sup> Article 17 of the EU Directive on the Conservation of habitats, Floras and Fauna (Habitats Directive) requires that all member states report to the European Commission every six years on the status and on the implementation of the measures taken under the Habitats Directive. In a similar manner, there is an obligation to report on the status and trends of bird species required under Article 12 of the Bird's Directive.

<sup>6</sup> Doogue, D., Nash, D., Parnell, J., Reynolds, S. & Wyse Jackson, P. (eds) (1998) Flora of County Dublin. The Dublin Naturalists' Field Club, Dublin

- Bus Connects drone imagery (surveyed 2020);
- Information on light-bellied brent goose inland feeding sites<sup>7</sup>;
- The results of ecological surveys undertaken as part of the Environmental Impact Assessment (EIA) studies for the Proposed Scheme (see Section 5 below for details);
- Information on the location, nature and design of the Proposed Scheme; and,
- Information contained in the Dublin City Otter Survey <sup>8</sup>.

#### 4.5 Consultations

68 **Table 3** outlines the Appropriate Assessment issues raised during the consultation.

**Table 3 Appropriate Assessment issues raised during Consultation**

Consultee	Date of Consultation	Issues Raised	Relevant Section of this NIS where the issues in consultation is addressed
Department of Housing, Local Government and Heritage (formerly Department of Culture, Heritage, and the Gaeltacht)	30/07/19 Ref. G Pre00165/2019	The Department recommend identification, description, and assessment of direct and indirect impacts of the Proposed Scheme on the following features: <ul style="list-style-type: none"> <li>• Biodiversity in general and with specific attention to Natura 2000 sites.</li> <li>• Habitats and species protected under the Habitats Directive, such as Annex I habitats, Annex II species and their habitats, and Annex IV species and their breeding sites and resting places (wherever they occur), bird species protected under the Birds Directive, such as Annex I species and other regularly occurring migratory species, and their habitats (wherever they occur).</li> <li>• Species and / or habitats listed in the Habitats Directive inside or outside of Natura 2000 sites be recorded.</li> </ul>	Section 5.1 European Sites, Section 4.6 Baseline, Section 7 Assessment of Effects on European Sites
		Detailed bird surveys should be undertaken at all times of the year to establish areas of the Proposed Scheme used by birds.	Section 4.6 Baseline, Section 7 Assessment of Effects on European Sites
		The Department requires that the Appropriate Assessment addresses the issue of invasive alien plant and animal species and includes detailed methods to ensure that the accidental introduction or spreading of invasive species does not occur. The Department recommended that an Invasive Species Action Plan should form part of the planning application.	Section 6.3 Habitat degradation as a result of introducing/spreading non-native invasive species.

<sup>7</sup> Scott Cawley Ltd. (2017). *Natura Impact Statement – Information for Stage 2 Appropriate Assessment for the Proposed Residential Development St. Paul’s College, Sybill Hill, Raheny, Dublin 5.*

<sup>8</sup> Macklin, R., Brazier, B. & Sleeman, P. (2019). *Dublin City otter survey.* Report prepared by Triturus Environmental Ltd. For DCC as an action of the Dublin City Biodiversity Action Plans 2015-2020.



Consultee	Date of Consultation	Issues Raised	Relevant Section of this NIS where the issues in consultation is addressed
		<p>Department recommended that the Cumulative impacts of the Proposed Scheme be considered, to include interaction between different and / or approved plans and projects in the same area as the Proposed Scheme.</p>	<p>Section 1 Introduction, Section 2 Legislative Context, Section 6.4 Disturbance and Displacement Impacts</p>
		<p>The Proposed Scheme be subject to Appropriate Assessment, and must contain complete (i.e., no lacunae), precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned.</p> <p>Mitigation requirements should outline measures proposed and timescales provided relative to the Proposed Scheme. These measures should be based on scientific evidence with their effectiveness considered.</p> <p>Where residual impacts remain, further mitigation measures may be required:</p> <ul style="list-style-type: none"> <li>• Evidence should be provided of how mitigation measures will be monitored.</li> <li>• Monitoring should take place immediately down-stream of the Proposed Scheme.</li> </ul> <p>The applicant should not use any proposed post construction monitoring as mitigation to supplement inadequate information in the assessment.</p>	<p>The Proposed Scheme has been subject to Screening for AA and the production of a Natura Impact statement, which accompanies the planning submission.</p> <p>Section 6 Potential Impacts, Zone of Influence, and Identifying European Sites at Risk of Effects</p>
<p>Inland Fisheries Ireland (IFI)</p>	<p>3rd November 2020 (letter received from IFI)</p>	<p>Topics addressed in the IFI letter received on 3rd November 2020 did not specifically mention Appropriate Assessment. They included:</p> <ul style="list-style-type: none"> <li>• Water bodies that will be crossed by the Proposed Scheme;</li> <li>• Fisheries importance of water bodies that will be crossed by the Proposed Scheme;</li> <li>• Scheme design in regard to structures at water crossings;</li> <li>• Baseline data;</li> <li>• Impact Assessment; and</li> <li>• Mitigation measures</li> </ul>	<p>Section 4.6 Baseline Surveys, Section 5 Overview of the Receiving Environment, Section 6 Potential Impacts and Section 7 Assessment of Potential Impacts on European Sites</p>

**4.6 Baseline Surveys**

69 Baseline ecological surveys were undertaken as necessary to inform environmental assessments of the Proposed Scheme. This section describes those ecological surveys which are relevant to, and have informed the assessment of, likely significant effects on European sites. Surveys have been carried out by Scott Cawley Ltd., independent sub-contractors and Roughan O’Donovan Consulting Engineers; hereafter referred to as ROD (See **Table 4**).

**Table 4 Ecological Surveys and Survey Dates Between 2018 and 2023**

Survey	Survey Date(s)	Surveyor Reference	Informed Appropriate Assessment
Habitat Survey	June to August 2018 August 2020 February 2021	Scott Cawley Ltd. ROD (2018)	Yes
Mammal surveys	June to August 2018 August 2020 February 2021	Scott Cawley Ltd. (August 2020; February 2021) ROD (2018)	Yes (Otter)
Kingfisher / Nesting Bird Suitability Survey	September 2020 February 2021	Scott Cawley Ltd.	No – Assessed under EIAR chapter 12 (Biodiversity)
Breeding Bird Surveys	<u>Common Tern Nest Search</u> April to June 2018 April to July 2019	ROD	Yes
	<u>Vantage Point Surveys</u> April to June 2018 April to July 2019	ROD	Yes
	<u>Vantage Point Surveys</u> May to June 2018 May to July 2019 May to August 2021 April to August 2022	ROD  Scott Cawley Ltd.	Yes
Wintering Bird Surveys	<u>Walked Transect Activity Surveys</u> February to March 2020 October to April 2021 October 2022 to March 2023	Scott Cawley Ltd.	Yes
	<u>Proposed Dodder Bridge Vantage Point Surveys</u> March and April 2018 March and April 2019 November 2020 to April 2021 <u>October 2021 to April 2022</u> <u>October 2022 to March 2023</u>	ROD (2018 & 2019) Scott Cawley Ltd & Sub-Contractors (2020-2021 & 2022-2023)	Yes

#### 4.6.1 Habitats and Flora

- 70 Habitat surveys were carried out by Scott Cawley Ltd. Between June and August 2018 along the then Proposed Scheme alignment. Confirmatory surveys were subsequently undertaken on the Proposed Scheme in August 2020 to check and update the presence and extent of habitats found in the 2018 habitat surveys. Additional habitat surveys were carried out in February 2021 along new route sections added since 2018. All habitats located within or immediately adjacent to the Proposed Scheme footprint were surveyed



and mapped to level three of the Heritage Council's habitat codes, after Fossitt<sup>9</sup> and in accordance with *Best Practice Guidance for Habitat Survey and Mapping*<sup>10</sup>. The level of field data quality was also recorded. Plant species present that were either representative of a habitat or considered to be of conservation interest (i.e. those listed on the Flora (Protection) Order or listed in the 'threatened' category or higher on the Red List for vascular plants and bryophytes) were recorded, along with their relative abundances. Non-native invasive plant species listed on the Third Schedule of the (Birds and Natural Habitats) Regulations were also recorded. The habitat's extent was mapped onto an aerial photograph, with GPS points taken where a habitat's extent could not be clearly identified from the aerial photograph. Vascular plant nomenclature follows that of the *New Flora of the British Isles 4<sup>th</sup> Edition*<sup>11</sup>.

- 71 The subtidal and intertidal habitats in the vicinity of the Proposed Scheme were surveyed by Aquafact International Services Ltd., in 2020 and again in 2022 (Aquafact, 2020a, 2020b, 2022). Marine habitats were classified according to their Joint Nature Conservancy Council (JNCC) biotope (<https://mhc.jncc.gov.uk/>) and EUNIS (<https://www.eea.europa.eu/data-and-maps/data/eunis-habitat-classification>). The assessment of the subtidal and intertidal habitats is contained in Chapter 12 Biodiversity of the EIAR included with this planning application (as they fall outside the ZOI of European sites that might support analogous Annex I habitats). Mention is made in the NIS in respect of ex-situ Annex I estuarine habitat around Tom Clarke East Link Bridge. The proposed reclamation of estuarine territory is discussed in the NIS in terms of supporting habitat for Habitats Directive Annex I species or Birds Directive Annex I birds. However, it is outside the ZOI for European site in terms of Habitat Loss / Functioning and as such is assessed in Chapter 5 (Biodiversity) of Volume 2 of the EIAR, published separately to this NIS.

#### 4.6.2 Fauna Surveys

- 72 Ecological surveys relevant to this report include habitat surveys, surveys for the presence or signs of terrestrial, mobile Annex II species (i.e. otter *Lutra lutra*), and surveys for SCI bird species. Dedicated fisheries or aquatic surveys were not required for this assessment (fish surveys were undertaken to inform the EIAR) as the Proposed Scheme is not hydrologically connected to any European site designated for Annex II fish species or white-clawed crayfish. The nearest known European site designated for salmon, river lamprey and brook lamprey is the River Boyne and River Blackwater SAC, located approximately 42km north-west of the Proposed Scheme in the Boyne river catchment. The nearest known European site designated for white-clawed crayfish is the River Barrow and River Nore SAC, which is located approximately 60km south-west of the Proposed Scheme in the River Barrow catchment, River Nore catchment and River Ballyteigue-Bannow river catchment.

##### 4.6.2.1 Otter

- 73 The footprint of the Proposed Scheme and suitable lands (e.g. greenfield sites) immediately adjacent were surveyed for otter *Lutra lutra* activity as part of the multi-disciplinary walkover survey, undertaken between June and August 2018, in August 2020, and February 2021. A watching brief was maintained between November 2020 and April 2021 for otter during vantage point surveys for wintering birds at the proposed DPTOB, referred to as CBC0016WB003. The presence / absence of these species was surveyed through the detection of field signs such as tracks, markings, feeding signs, and droppings as well as by direct observation. In addition, the study area was surveyed for the presence of otter holts. Where present, any evidence of use was recorded.
- 74 Construction methodologies which involved in-stream works, modifications to banks or significant disturbance require otter surveys. A desk study was carried out to identify all hydrological crossing points

<sup>9</sup> Fossitt, J.A. (2000) A Guide to Habitats in Ireland. Heritage Council, Kilkenny.

<sup>10</sup> Smith, G.F., O'Donoghue, P., O'Hora, K. & Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council Church Lane, Kilkenny, Ireland.

<sup>11</sup> Stace, C. (2019) *New Flora of the British Isles. 4th Edition*. C&M Floristics

within the footprint of the Proposed Scheme. The desk study identified three sites where water bodies may be subject to significant disturbance as a consequence of the Proposed Scheme, the proposed DPTOB connecting Sir John Rogerson's Quay and the Tom Clarke East Link Bridge referred to as CBC00016AR001, and two proposed boardwalk structures at North Wall Quay and Custom House Quay (referred to as CBC0016AR002 and CBC0016AR003 respectively). A corridor of approximately 150m upstream and downstream of these sites were surveyed to identify the presence of otter holts in September 2020, and February 2021 in relation to the boardwalk surveys.

- 75 Records of otter were also returned from a recent otter survey (Macklin *et al.*, 2019) where a holt was recorded behind a floating pontoon serving the MV Cill Airne along North Wall Quay. This holt is within the study area for the Proposed Scheme and has been monitored on a fortnightly basis by Scott Cawley Ltd. Surveyors from October 2020 to April 2021 to identify signs of use (coinciding with wintering bird surveys carried out for the Proposed Scheme).

#### 4.6.2.2 Kingfisher

- 76 A desk study was carried out to identify all hydrological crossing points within the footprint of the Proposed Scheme. Construction methodologies which involved in-stream works, modifications to banks or significant disturbance required habitat suitability assessments for nesting kingfisher. The desk study identified three sites where water bodies may be subject to significant disturbance as a consequence of the Proposed Scheme, the proposed DPTOB Tom Clarke East Link Bridge referred to as CBC0016AR001, and two proposed boardwalk structures at North Wall Quay and Custom House Quay (referred to as CBC0016AR002 and CBC0016AR003 respectively). The suitability of water features and associated foraging, roosting, and nesting habitats, located within or directly adjacent to the Proposed Scheme, were assessed for kingfisher potential in September 2020 and February 2021 in relation to the Boardwalks. Where suitable habitat existed, surveys extended approximately 500m upstream and downstream of the proposed crossing point. The survey did not record evidence of any nest holes across the Proposed Scheme. The quay walls do not contain bare earth bank faces considered suitable to support nesting.
- 77 Vantage point surveys for breeding and wintering birds were undertaken in 2018, 2019, 2020 and 2021 and 2022 (See Tables 4) to establish bird flight lines in relation to the proposed DPTOB according to methodology in Bird Monitoring Methods (Gilbert *et al.* 1998). As part of this, Kingfisher activity was monitored in the vicinity of the proposed DPTOB over 15 visits. The locations of the vantage point and results of the surveys are included in Figure 2 and Appendix IV for breeding bird surveys and in Figures 3.1.1 – 3.1.6 and Appendix V for wintering bird surveys.

#### 4.6.2.1 Breeding Birds

A desk study was carried out to inform the assessment of potential impacts on SCI breeding bird species arising from the Proposed Scheme. Vantage point surveys for common tern were undertaken on a weekly / fortnightly basis between April and June 2018 and April and July 2019 by ecologists from ROD to establish bird flight lines in relation to the proposed DPTOB and tern nesting potential at the Grand Canal Dock. Vantage point surveys were also undertaken on a fortnightly basis between May and August 2021, and April and August 2022 by Scott Cawley Ltd. The surveys were undertaken according to methodology in Bird Monitoring Methods (Gilbert *et al.* 1998). Surveys were timed to cover a range of tidal conditions. During each survey, bird flight lines across and presence in the area of the proposed bridge were recorded. In each instance the species, maximum count, activity / behaviour, breeding status and habitat relevant to the proposed DPTOB was recorded. The data collected in 2019 was merged with the 2018 data to take account of changes in bird movements from year to year (**Table 8**).

- 78 Vantage point survey locations are shown with the results of the breeding bird surveys in Figure 2, with full details of the survey results provided in Appendix IV.
- 79 The location and size of the breeding tern colony at Grand Canal Dock was monitored in early July 2019 following methodology for monitoring tern productivity in Bird Monitoring Methods (Gilbert *et al.* 1998).

On each visit the approach taken was to count apparently incubating adults (or active nests) and count large chicks (10 to 14 days old) including any nearby fledglings which were associated with the colony.

- 80 Productivity was estimated as the number of large chicks plus fledged young divided by the maximum count of apparently incubating adults.

#### 4.6.2.2 Wintering Birds

- 81 A desk study was carried out to identify any potential suitable inland feeding and / or roosting sites for winter birds located within or directly adjacent to the Proposed Scheme. This included a review of recent aerial photography and known inland feeding sites for the SCI bird species light-bellied brent goose *Branta bernicla hrota*<sup>8</sup> (Scott Cawley Ltd. 2017). A habitat suitability assessment was carried out in October 2020 to verify the suitability of potential inland feeding / roosting sites identified during the desk study.
- 82 The desk study identified three suitable sites along or adjacent to the Proposed Scheme with potential for wintering birds that would be subject to direct habitat loss. These were located at the southern end of the Tom Clarke East Link Bridge (CBC0016WB001), a section of Ringsend Park (CBC0016WB002) and an area of amenity grassland adjacent Irishtown Stadium (CBC0016WB003) (See Figure 3.1.1). These figures show surveyor view only and do not show flight paths for the entire scheme extent. Each site was surveyed over seven consecutive weeks across February and March 2020, and on a fortnightly basis between October 2020 and April 2021, October 2021 and April 2022, and between October 2022 and March 2023. The results of the desk study and field surveys have informed the assessment of potential impacts on wintering bird species arising from the Proposed Scheme.
- 83 In general, the approach was a ‘look-see’ methodology (based on Gilbert *et al.* 1998). All birds present within a site were identified with reference to Collins Bird Guide (Svensson, 2009) to confirm identification (where necessary), and were recorded using the British Trust for Ornithology (BTO) species codes. The total flock size of birds present, their general location within the site and any activity exhibited were also recorded. Evidence of bird droppings were recorded at pre-defined transect lines. The length of the transect line varied per site. Transect lines were only completed at sites where no bird species were present, to avoid any potential disturbance.
- 84 The sites included the following:
- CBC0016WB001: Small amenity grassland area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge;
  - CBC0016WB002: Gaelic pitch and grass area within Ringsend park; and
  - CBC0016WB003: Grassy verge within Irishtown Stadium and grass area with trees between the stadium and Bremen Avenue.
- 85 In total, vantage point surveys for wintering birds were undertaken on a weekly / fortnightly basis between March and April 2018, March and April 2019 by ROD and fortnightly, by Scott Cawley Ltd, between November 2020 and April 2021, and October 2021 and April 2022 and again fortnightly between October 2022 and March 2023 to establish bird flight lines in relation to the proposed DPTOB. The surveys were undertaken according to methodology in Bird Monitoring Methods (Gilbert *et al.* 1998). Surveys were timed to cover a range of tidal conditions. During each survey, bird flight lines across and presence in the area of the proposed bridge were recorded. In each instance the species, flight path and height of the flight relative to the proposed bridge was recorded (See Figures 3.1.2 – 3.1.6 and Appendix V).

## 5 Overview of the Receiving Environment

### 5.1 European Sites

- 86 The Proposed Scheme does not overlap with any European site, although it is located in close proximity to Dublin Bay which is variously designated for a number of overlapping European sites. The nearest European sites to the Proposed Scheme are South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC, which are both located approximately 0.5km, terrestrially, south-east of the Proposed Scheme.

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- 87 There are eight European Sites located in Dublin Bay that are hydrologically connected to the Proposed Scheme, via three watercourses i.e., the Liffey Estuary Lower, the River Dodder\_050 and the Royal Canal. These European sites are North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA, South Dublin Bay and River Tolka SPA, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC and Dalkey Island SPA.
- 88 There are 13 SPAs designated for SCI bird species that are known to forage and / or roost across Dublin City, and / or utilise Dublin Bay. These are Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA, Ireland's Eye SPA, Lambay Island SPA, Rockabill SPA, Dalkey Islands SPA, Wicklow Mountains SPA, Howth Head Coast SPA and The Murrrough SPA.
- 89 There are two European sites containing marine mammals which are known to frequent Dublin Bay and the Liffey Estuary Lower. These are Rockabill to Dalkey Island SAC and Lambay Island SAC.
- 90 There is one European site located upstream of the Proposed Scheme that is within the ZoI, this is Wicklow Mountains SAC, and is designated for otter (the remainder of its QI habitat are not within the ZOI of the Proposed Scheme).
- 91 The European sites present in the vicinity of the Proposed Scheme are shown on **Figure 4** and are listed in **Table 5**, along with their qualifying interests and proximity to the Proposed Scheme.

**Table 5 European sites in the vicinity of the Proposed Scheme**

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Scheme (as the crow flies)
<b>Special Area of Conservation (SAC)</b>	
<p><b>South Dublin Bay SAC [000210]</b>            1140 Mudflats and sandflats not covered by seawater at low tide            1210 Annual vegetation of drift lines            1310 <i>Salicornia</i> and other annuals colonising mud and sand            2110 Embryonic shifting dunes</p> <p><i>S.I. No. 525/2019 – European Union Habitats (South Dublin Bay Special Area of Conservation 000210) Regulations 2019</i>            NPWS (2013a) <i>Conservation Objectives: South Dublin Bay SAC 000210</i>. Version 1.            National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	Approximately 0.5km from the Proposed Scheme
<p><b>North Dublin Bay SAC [000206]</b>            1140 Mudflats and sandflats not covered by seawater at low tide            1210 Annual vegetation of drift lines            1310 <i>Salicornia</i> and other annuals colonising mud and sand            1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)            1395 Petalwort <i>Petalophyllum ralfsii</i>            1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)            2110 Embryonic shifting dunes            2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)            2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)*            2190 Humid dune slacks</p> <p><i>S.I. No. 524/2019 – European Union Habitats (North Dublin Bay Special Area of Conservation 000206) Regulations 2019</i>            NPWS (2013b) <i>Conservation Objectives: North Dublin Bay SAC 000206</i>. Version 1.            National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	Approximately 3km from the Proposed Scheme
<p><b>Baldoye Bay SAC [000199]</b>            1140 Mudflats and sandflats not covered by seawater at low tide            1310 <i>Salicornia</i> and other annuals colonizing mud and sand            1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)            1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p><i>S.I. No. 472/2021 – European Union Habitats (Baldoye Bay Special Area of Conservation 000199) Regulations 2021</i>            NPWS (2012a) <i>Conservation Objectives: Baldoye Bay SAC 000199</i>. Version 1.0.            National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht</p>	Approximately 8.4km from the Proposed Scheme
<p><b>Malahide Estuary SAC [000205]</b>            1140 Mudflats and sandflats not covered by seawater at low tide            1310 <i>Salicornia</i> and other annuals colonising mud and sand</p>	Approximately 11.8km from the Proposed Scheme

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Scheme (as the crow flies)
<p>1320 <i>Spartina</i> swards (<i>Spartinion maritimae</i>)<sup>12</sup></p> <p>1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</p> <p>1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)</p> <p>2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)*</p> <p><i>S.I. No. 91/2019 – European Union Habitats (Malahide Estuary Special Area of Conservation 000205) Regulations 2019</i></p> <p>NPWS (2013c) <i>Conservation Objectives: Malahide Estuary SAC 000205</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	
<p><b>Howth Head SAC [000202]</b></p> <p>1230 Vegetated sea cliffs of the Atlantic and Baltic coasts</p> <p>4030 European dry heaths</p> <p><i>S.I. No. 524/2021 – European Union Habitats (Howth Head Special Area of Conservation 000202) Regulations 2021</i></p> <p>NPWS (2016a) <i>Conservation Objectives: Howth Head SAC 000202</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.</p>	Approximately 8.4km from the Proposed Scheme
<p><b>Rockabill to Dalkey Island SAC [003000]</b></p> <p>1170 Reefs</p> <p>1351 Harbour porpoise <i>Phocoena phocaena</i></p> <p><i>S.I. No. 94/2019 – European Union Habitats (Rockabill to Dalkey Island Special Area of Conservation 003000) Regulations 2019</i></p> <p>NPWS (2013d) <i>Conservation Objectives: Rockabill to Dalkey Island SAC 003000</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	Approximately 8.2km from the Proposed Scheme
<p><b>Ireland's Eye SAC [002193]</b></p> <p>1220 Perennial vegetation of stony banks</p> <p>1230 Vegetated sea cliffs of the Atlantic and Baltic coasts</p> <p><i>S.I. No. 501/2017 – European Union Habitats (Ireland's Eye Special Area of Conservation 002193) Regulations 2017</i></p> <p>NPWS (2017a) <i>Conservation Objectives: Ireland's Eye SAC 002193</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.</p>	Approximately 11.9km from the Proposed Scheme

<sup>12</sup> 1320 *Spartina* swards (*Spartinion maritimae*) habitat is included within the conservation objectives document for Malahide Estuary SAC, but not within the Statutory Instruments document. This is likely because *Spartina* is an invasive alien species in Ireland.



European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Scheme (as the crow flies)
<p><b>Glenasmole Valley SAC [001209]</b>                      6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)                      6410 <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)                      7220 Petrifying springs with tufa formation (Cratoneurion)*</p> <p><i>S.I. No. 345/2021 – European Union Habitats (Glenasmole Valley Special Area of Conservation 001209) Regulations 2021</i>                      NPWS (2021a) Conservation Objectives: Glenasmole Valley SAC 001209. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	<p>Approximately 12.5km from the Proposed Scheme</p>
<p><b>Knocksink Wood SAC [000725]</b>                      7220 Petrifying springs with tufa formation (Cratoneurion)*;                      91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles; and                      91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) *.</p> <p><i>S.I. No. 93/2019 – European Union Habitats (Knocksink Wood Special Area of Conservation 000725) Regulations 2019</i>                      NPWS (2021b) Conservation Objectives: Knocksink Wood SAC 000725. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage</p>	<p>Approximately 14km from the Proposed Scheme</p>
<p><b>Ballyman Glen SAC [000713]</b>                      7220 Petrifying springs with tufa formation (Cratoneurion)*                      7230 Alkaline fens</p> <p><i>S.I. No. 92/2019 – European Union Habitats (Ballyman Glen Special Area Of Conservation 000713) Regulations 2019</i>                      NPWS (2019e) Conservation Objectives: Ballyman Glen SAC 000713. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht</p>	<p>Approximately 14.8km from the Proposed Scheme</p>
<p><b>Wicklow Mountains SAC [002122]</b>                      3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)                      3160 Natural dystrophic lakes and ponds                      4010 Northern Atlantic wet heaths with <i>Erica tetralix</i>                      4030 European dry heaths                      4060 Alpine and Boreal heaths                      6130 Calaminarian grasslands of the <i>Violetalia calaminariae</i>                      6230 Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)*                      7130 Blanket bogs (* if active bog)                      8110 Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)</p>	<p>Approximately 11.8km from the Proposed Scheme</p>

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Scheme (as the crow flies)
<p>8210 Calcareous rocky slopes with chasmophytic vegetation                      8220 Siliceous rocky slopes with chasmophytic vegetation                      91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles                      1355 <i>Lutra lutra</i> (Otter)</p> <p>NPWS (2017b) <i>Conservation Objectives: Wicklow Mountains SAC 002122</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.</p>	
<p><b>Lambay Island SAC [000204]</b>                      1170 Reefs                      1230 Vegetated sea cliffs of the Atlantic and Baltic coasts                      1364 Grey seal <i>Halichoerus grypus</i>                      1365 Harbour seal <i>Phoca vitulina</i></p> <p><i>S.I. No. 294/2019 – European Union Habitats (Lambay Island Special Area of Conservation 000204) Regulations 2019</i>                      NPWS (2013e) <i>Conservation Objectives: Lambay Island SAC 000204</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>Approximately 20km from the Proposed Scheme</p>
<b>Special Protection Area (SPA)</b>	
<p><b>South Dublin Bay and River Tolka Estuary SPA [004024]</b>                      A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i>                      A130 Oystercatcher <i>Haematopus ostralegus</i>                      A137 Ringed Plover <i>Charadrius hiaticula</i>                      A141 Grey Plover <i>Pluvialis squatarola</i>                      A143 Knot <i>Calidris canutus</i>                      A144 Sanderling <i>Calidris alba</i>                      A149 Dunlin <i>Calidris alpina</i>                      A157 Bar-tailed Godwit <i>Limosa lapponica</i>                      A162 Redshank <i>Tringa totanus</i>                      A179 Black-headed Gull <i>Chroicocephalus ridibundus</i>                      A192 Roseate Tern <i>Sterna dougallii</i>                      A193 Common Tern <i>Sterna hirundo</i>                      A194 Arctic Tern <i>Sterna paradisaea</i>                      A999 Wetland and Waterbirds</p> <p><i>S.I. No. 212/2010 – European Communities (Conservation of Wild Birds (South Dublin Bay and River Tolka Estuary Special Protection Area 004024)) Regulations 2010</i>.                      NPWS (2015a) <i>Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>Approximately 0.5km from the Proposed Scheme</p>
<p><b>North Bull Island SPA [004006]</b></p>	<p>Approximately 3km from the Proposed Scheme</p>



European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Scheme (as the crow flies)
<p>A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i>  A048 Shelduck <i>Tadorna tadorna</i>  A052 Teal <i>Anas crecca</i>  A054 Pintail <i>Anas acuta</i>  A056 Shoveler <i>Anas clypeata</i>  A130 Oystercatcher <i>Haematopus ostralegus</i>  A140 Golden Plover <i>Pluvialis apricaria</i>  A141 Grey Plover <i>Pluvialis squatarola</i>  A143 Knot <i>Calidris canutus</i>  A144 Sanderling <i>Calidris alba</i>  A149 Dunlin <i>Calidris alpina</i>  A156 Black-tailed Godwit <i>Limosa limosa</i>  A157 Bar-tailed Godwit <i>Limosa lapponica</i>  A160 Curlew <i>Numenius arquata</i>  A162 Redshank <i>Tringa totanus</i>  A169 Turnstone <i>Arenaria interpres</i>  A179 Black-headed Gull <i>Chroicocephalus ridibundus</i>  A999 Wetlands &amp; Waterbirds</p> <p><i>S.I. No. 211/2010 – European Communities (Conservation of Wild Birds (North Bull Island Special Protection Area 004006)) Regulations 2010.</i>  NPWS (2015b) <i>Conservation Objectives: North Bull Island SPA 004006. Version 1.</i> National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	
<p><b>Baldoyle Bay SPA [004016]</b>  A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i>  A048 Shelduck <i>Tadorna</i>  A137 Ringed Plover <i>Charadrius hiaticula</i>  A140 Golden Plover <i>Pluvialis apricaria</i>  A141 Grey Plover <i>Pluvialis squatarola</i>  A157 Bar-tailed Godwit <i>Limosa lapponica</i>  A999 Wetland and Waterbirds</p> <p><i>S.I. No. 275/2010 – European Communities (Conservation of Wild Birds (Baldoyle Bay Special Protection Area 004016)) Regulations 2010.</i>  NPWS (2013f) <i>Conservation Objectives: Baldoyle Bay SPA 004016. Version 1.</i> National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>Approximately 8.4km from the Proposed Scheme</p>
<p><b>Malahide Estuary SPA [004025]</b>  A005 Great Crested Grebe <i>Podiceps cristatus</i>  A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i>  A048 Shelduck <i>Tadorna</i></p>	<p>Approximately 12.3km from the Proposed Scheme</p>

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Scheme (as the crow flies)
<p>A054 Pintail <i>Anas acuta</i>  A067 Goldeneye <i>Bucephala clangula</i>  A069 Red-breasted Merganser <i>Mergus serrator</i>  A130 Oystercatcher <i>Haematopus ostralegus</i>  A140 Golden Plover <i>Pluvialis apricaria</i>  A141 Grey Plover <i>Pluvialis squatarola</i>  A143 Knot <i>Calidris canutus</i>  A149 Dunlin <i>Calidris alpina</i>  A156 Black-tailed Godwit <i>Limosa</i>  A157 Bar-tailed Godwit <i>Limosa lapponica</i>  A162 Redshank <i>Tringa totanus</i>  A999 Wetland and Waterbirds</p> <p><i>S.I. No. 285/2011 – European Communities (Conservation of Wild Birds (Malahide Estuary Special Protection Area 004025)) Regulations 2011.</i>  NPWS (2013g) <i>Conservation Objectives: Malahide Estuary SPA 004025.</i>  Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	
<p><b>Wicklow Mountains SPA [004040]</b>  A098 Merlin <i>Falco columbarius</i>  A103 Peregrine <i>Falco peregrinus</i></p> <p><i>S.I. No. 586/2012 – European Communities (Conservation of Wild Birds (Wicklow Mountains Special Protection Area 004040)) Regulations 2012.</i>  NPWS (2022a) <i>Conservation objectives for Wicklow Mountains SPA [004040].</i> First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</p>	Approximately 12.1km from the Proposed Scheme
<p><b>Ireland's Eye SPA [004117]</b>  A017 Cormorant <i>Phalacrocorax carbo</i>  A184 Herring Gull <i>Larus argentatus</i>  A188 Kittiwake <i>Rissa tridactyla</i>  A199 Guillemot <i>Uria aalge</i>  A200 Razorbill <i>Alca torda</i></p> <p><i>S.I. No. 240/2010 – European Communities (Conservation of Wild Birds (Ireland's Eye Special Protection Area 004117)) Regulations 2010.</i>  NPWS (2022b) <i>Conservation objectives for Ireland's Eye SPA [004117].</i> First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</p>	Approximately 11.7km from the Proposed Scheme
<p><b>Rogerstown Estuary SPA [004015]</b>  A043 Greylag Goose <i>Anser anser</i>  A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i>  A048 Shelduck <i>Tadorna</i></p>	Approximately 17.1km from the Proposed Scheme

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Scheme (as the crow flies)
<p>A056 Shoveler <i>Anas clypeata</i>  A130 Oystercatcher <i>Haematopus ostralegus</i>  A137 Ringed Plover <i>Charadrius hiaticula</i>  A141 Grey Plover <i>Pluvialis squatarola</i>  A143 Knot <i>Calidris canutus</i>  A149 Dunlin <i>Calidris alpina</i>  A156 Black-tailed Godwit <i>Limosa</i>  A162 Redshank <i>Tringa totanus</i>  A999 Wetlands</p> <p><i>S.I. No. 271/2010 – European Communities (Conservation of Wild Birds (Rogerstown Estuary Special Protection Area 004015) Regulations 2010.</i>  NPWS (2013h) <i>Conservation Objectives: Rogerstown Estuary SPA 004015.</i> Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	
<p><b>Howth Head Coast SPA [004113]</b>  A188 Kittiwake <i>Rissa tridactyla</i></p> <p><i>S.I. No. 185/2012 – European Communities (Conservation of Wild Birds (Howth Head Coast Special Protection Area 004113)) Regulations 2012.</i>  NPWS (2022c) <i>Conservation objectives for Howth Head Coast SPA [004113].</i> First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</p>	Approximately 10.9km from the Proposed Scheme
<p><b>Dalkey Islands SPA [004172]</b>  A192 Roseate Tern <i>Sterna dougallii</i>  A193 Common Tern <i>Sterna hirundo</i>  A194 Arctic Tern <i>Sterna paradisaea</i></p> <p><i>S.I. No. 238/2010 – European Communities (Conservation of Wild Birds (Dalkey Islands Special Protection Area 004172)) Regulations 2010</i>  NPWS (2022d) <i>Conservation objectives for Dalkey Islands SPA [004172].</i> First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</p>	Approximately 10.5km from the Proposed Scheme
<p><b>Rockabill SPA [004014]</b>  A148 Purple Sandpiper <i>Calidris maritima</i>  A192 Roseate Tern <i>Sterna dougallii</i>  A193 Common Tern <i>Sterna hirundo</i>  A194 Arctic Tern <i>Sterna paradisaea</i></p> <p><i>S.I. No. 94/2012 – European Communities (Conservation of Wild Birds (Rockabill Special Protection Area 004014)) Regulations 2012.</i>  NPWS (2013i) <i>Conservation Objectives: Rockabill SPA [004014].</i> Version 1. Department of Arts, Heritage and the Gaeltacht.</p>	Approximately 26.8km from the Proposed Scheme

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Scheme (as the crow flies)
<p><b>Lambay Island SPA [004069]</b>  A009 Fulmar <i>Fulmarus glacialis</i>  A017 Cormorant <i>Phalacrocorax carbo</i>  A018 Shag <i>Phalacrocorax aristotelis</i>  A043 Greylag Goose <i>Anser</i>  A183 Lesser Black-backed Gull <i>Larus fuscus</i>  A184 Herring Gull <i>Larus argentatus</i>  A188 Kittiwake <i>Rissa tridactyla</i>  A199 Guillemot <i>Uria aalge</i>  A200 Razorbill <i>Alca torda</i>  A204 Puffin <i>Fratercula arctica</i></p> <p><i>S.I. No. 242/2010 – European Communities (Conservation of Wild Birds (Lambay Island Special Protection Area 004069)) Regulations 2010.</i>  NPWS (2022e) <i>Conservation objectives for Lambay Island SPA [004069].</i> First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</p>	<p>Approximately 19.8km from the Proposed Scheme</p>
<p><b>Skerries Islands SPA [004122]</b>  A017 Cormorant <i>Phalacrocorax carbo</i>  A018 Shag <i>Phalacrocorax aristotelis</i>  A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i>  A148 Purple Sandpiper <i>Calidris maritima</i>  A169 Turnstone <i>Arenaria interpres</i>  A184 Herring Gull <i>Larus argentatus</i></p> <p><i>S.I. No. 245/2010 – European Communities (Conservation of Wild Birds (Skerries Islands Special Protection Area 004122)) Regulations 2010.</i>  NPWS (2022f) <i>Conservation objectives for Skerries Islands SPA [004122].</i> First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</p>	<p>Approximately 26.3km from the Proposed Scheme</p>
<p><b>The Murrough SPA [004186]</b>  A001 Red-throated Diver <i>Gavia stellata</i>  A043 Greylag Goose <i>Anser</i>  A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i>  A050 Wigeon <i>Anas penelope</i>  A052 Teal <i>Anas crecca</i>  A179 Black-headed Gull <i>Chroicocephalus ridibundus</i>  A184 Herring Gull <i>Larus argentatus</i>  A195 Little Tern <i>Sterna albifrons</i></p> <p><i>S.I. No. 298/2011 – European Communities (Conservation of Wild Birds (The Murrough Special Protection Area 004186)) Regulations 2011.</i></p>	<p>Approximately 28.3km from the Proposed Scheme</p>

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Scheme (as the crow flies)
NPWS (2022g) <i>Conservation objectives for The Murrrough SPA [004186]</i> . First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.	

\* Denotes priority habitat

### 5.1.1 Habitats

92 The Proposed Scheme is located in a highly urbanised environment. Habitats present in the footprint of the Proposed Scheme include the following:

- Horticultural land (BC2);
- Flower beds and borders (BC4);
- Stone walls and other stonework (BL1);
- Buildings and artificial surfaces (BL3);
- Sea walls, piers and jetties (CC1);
- Tidal rivers (CW2);
- Canals (FW3);
- Mud Shores (LS4) / Muddy sand shores (LS3);
- Spoil and bare ground (ED2);
- Recolonising bare ground (ED3);
- Amenity Grassland (Improved) (GA2);
- Dry meadows and grassy verges (GS2);
- Residential<sup>13</sup>;
- Scattered trees and parkland (WD5);
- Hedgerows (WL1);
- Treelines (WL2);
- Scrub (WS1); and
- Ornamental / non-native shrub (WS3).

93 The habitat type tidal rivers (CW2) corresponds with the Annex I habitat Estuaries [1130] and Mudflats and sandflats not covered by seawater at low tide [1140] is present within the Liffey Estuary Lower, adjacent to the Proposed Scheme. The proposed reclamation of estuarine territory to facilitate the construction and operation of the proposed DPTOB will result in the loss of habitat (Approximately 3950m<sup>2</sup>). This habitat is a Qualifying Interest habitat European sites designated for these habitat types are outside the ZoI of the Proposed Scheme. The assessment on the direct loss of habitat is discussed in Chapter 12 (Biodiversity) of Volume 2 of the EIAR, published separately to this NIS. The supporting role that the Estuarine habitat

<sup>13</sup>This non-Fossitt classification is used to represent residential properties along the Proposed Scheme corridor and generally consists of a mosaic of buildings and artificial surfaces (BL3), amenity grassland (GA2), flower beds and borders (BC4), ornamental shrubs (WS3) and hedgerows (WL1).

provides for Habitats Directive Annex II species or Birds Directive Annex I birds is however discussed in this NIS.

### 5.1.2 Flora and Fauna Species

#### 5.1.2.1 Flora

- 94 No records of any Annex II plant species were recorded within the footprint of the Proposed Scheme during field surveys. The desk study returned records of a total of six species listed on the Flora Protection Order across the wider study area (i.e. Grid Square O13) and are listed in Appendix VI.
- 95 The desk study returned records of a total of five invasive species listed on the Third Schedule of the (Birds and Natural Habitats) Regulations within 1km of the Proposed Scheme. These included several records of Himalayan balsam *Impatiens glandulifera* (2012) and Japanese knotweed *Reynoutria japonica* (2019) in Irishtown and Irishtown Nature Park. Additional records of Canadian waterweed *Elodea canadensis*<sup>14</sup> (2009), sea-buckthorn *Hippophae rhamnoides* (2019), and three-cornered garlic *Allium triquetrum* (2018) were also returned. Records in the wider vicinity of the Proposed Scheme included: giant-rhubarb *Gunnera tinctoria* (2020), American skunk-cabbage *Lysichiton americanus* (2019), giant hogweed *Heracleum mantegazzianum* (2012), parrot's-feather *Myriophyllum aquaticum* (2008), curly waterweed *Lagarosiphon major* (1999), water fern *Azolla filiculoides* (1984), giant knotweed *Reynoutria sachalinensis* (2009), New Zealand pigmyweed *Crassula helmsii* (2009), rhododendron *Rhododendron ponticum* (2004) and Spanish bluebell *Hyacinthoides hispanica* (2018).
- 96 There were no areas of non-native invasive plant species listed on the Third Schedule of the (Birds and Natural Habitats) Regulations identified along or adjacent to the Proposed Scheme during surveys. Similarly, no Third Schedule non-native invasive plants were recorded during surveys undertaken for the Dodder Transportation Bridge project (ROD 2019).

#### 5.1.2.2 Otter

- 97 A dedicated survey in respect of the proposed DPTOB did not record any otter activity, however incidental sightings (in August 2019) by ROD noted an otter running under a gate next to the Waterways Ireland building on the South Dock Road, as well as an otter swimming adjacent to Tom Clarke East link Bridge.
- 98 Two incidental sightings of otter during vantage point wintering bird surveys carried out by Scott Cawley Ltd. In the 2020 / 2021 wintering bird surveys. The first sighting was of an otter diving, north-east of Grand Canal Street Upper on 19<sup>th</sup> November 2020, outside of the Proposed Scheme boundary. The second sighting was of an otter swimming at the slipway west of Thorncastle Street (within the Proposed Scheme boundary), on 6<sup>th</sup> January 2021 (See Figure 5).
- 99 A desk study found that otter are known to occur within 1km of the Proposed Scheme, and across the wider study area along the Liffey Estuary Lower, Dodder\_050 and the Grand Canal. These included live sightings of otter alongside Tom Clarke East Link Bridge and The Grand Canal Dock, as well as an historic record from O'Connell Bridge (See Appendix VI).
- 100 Records of otter were also returned from a recent otter survey<sup>15</sup> where a holt was recorded behind a floating pontoon serving the MV Cill Airne along North Wall Quay. This holt is within the study area for the Proposed Scheme and has been monitored on a fortnightly basis by surveyors from October 2020 to April 2021 (coinciding with wintering bird surveys carried out for the Proposed Scheme). No evidence of otter was recorded during these surveys and the holt is therefore considered to be inactive. However, otter

<sup>14</sup>This species was delisted as a third schedule species with the introduction of SI 355/2015.

<sup>15</sup>Macklin, R., Brazier, B. & Sleeman, P. (2019). *Dublin City otter survey. Report prepared by Triturus Environmental Ltd. for Dublin City Council as an action of the Dublin City Biodiversity Action Plan 2015- 2020.*

spraints have been recorded on the pontoon associated with the MV Cill Airne. Additional records within approximately 5km of the Proposed Scheme include holts at Poolbeg lighthouse and Dublin Port and otter signs recorded within 1km at the Pidgeon House.

- 101 The nearest European site for which this species is designated is the Wicklow Mountains SAC, which is located approximately 12.3km terrestrially (as the crow flies) south-west of the Proposed Scheme and is hydrologically connected to the Proposed Scheme via the River Dodder.

#### 5.1.2.3 Marine mammals

- 102 No specific marine mammal survey was undertaken as part of the Proposed Scheme. The Irish Whale and Dolphin Group (hereafter referred to as IWDG) undertook a Marine Mammal Risk Assessment (See Appendix VII) which included data from the ongoing Alexandra Basin Redevelopment Project<sup>16</sup>. This project has over a period of years from 2017-present returned considerable records of Annex II marine mammals further downstream of the Tom Clarke East Link Bridge, including alongside parts of the Toll Bridge Road (R131) towards Ringsend, which is alongside the Proposed Scheme.
- 103 Harbour seal and grey seal have been recorded in the vicinity of the Proposed Scheme and harbour porpoise has been recorded further afield in Dublin Bay. Surveys in 2018 / 2019 for the proposed DPTOB recorded marine mammals adjacent to the Proposed Scheme. Grey seal *Halichoerus grypus* was recorded in the Liffey Estuary Lower at St. Patricks Rowing Club returning frequently for a period of 25 minutes in May 2019 (See Figure 5). Two sightings of marine mammals were recorded during vantage point surveys carried out in the 2020 / 2021 wintering bird survey season. The first sighting was of an unidentified marine mammal next to Grand Canal Dock on 4<sup>th</sup> December 2020. The second sighting was of a grey seal within the Proposed Scheme boundary at the location of the proposed DPTOB on 4<sup>th</sup> March 2021. The 2021 breeding bird vantage point surveys carried out by Scott Cawley between May and August 2021 recorded 2 sightings of marine mammals. The first sighting was of a grey seal in the River Liffey opposite the Convention Centre Dublin on the 14 July 2021. The second sighting was of an unidentified seal species swimming upstream along the River Liffey to the west of the East Link Bridge on the 20 July 2021. A single grey seal was recorded within the Liffey Estuary lower east of Custom House Quay on the 26<sup>th</sup> May 2022. The 2022 / 2023 wintering bird surveys recorded a grey seal on one occasion directly adjacent to the north of the proposed DPTOB on the 26 October 2022.
- 104 Harbour seal, grey seal, and harbour porpoise are known to be present in Dublin Bay. Both seal species are listed on Annex II of the habitats directive while harbour porpoise are listed on Annex IV of the Habitats Directive. The nearest European site for which harbour seal and grey seal have been designated is Lambay Island SAC located approximately 20.1km from the Proposed Scheme. The nearest European site for which harbour porpoise has been designated is Rockabill to Dalkey Island SAC located approximately 8.2km from the Proposed Scheme.

#### 5.1.2.4 Breeding Birds

##### Kingfisher

Kingfisher habitat suitability assessments surveys carried out in September 2020 and February 2021 confirmed there was no suitable nesting habitat present within the Proposed Scheme and did not record evidence of any nest holes across the Proposed Scheme. However, kingfisher were occasionally recorded during vantage point surveys for the proposed DPTOB carried out by Scott Cawley Ltd. In the 2020-2021 wintering bird survey season and were recorded on two occasions in the 2021 breeding bird survey season (see **Table 6**). Kingfisher were recorded perching on structures in the vicinity of Camden Lock on the Grand Canal. Kingfisher were also recorded flying along the River Dodder, the Grand Canal and the Liffey Estuary

<sup>16</sup> Russell, C., O'Brien, J. and Berrow, S. (2020). *Marine Mammal Annual Report Alexandra Basin Redevelopment Project: 2019-2020*. Dublin Port Company. Unpublished report from the Irish Whale and Dolphin Group (and references therein)



Lower, through the proposed DPTOB location. Kingfisher were not recorded during surveys carried out in 2018 or 2019. However, kingfisher was recorded on 7 of the 12 survey dates during the 2022-2023 wintering bird survey season. All of these records consisted of single individuals either flying from the River Liffey through the proposed DPTOB and upstream along the River Dodder, or to and from the Liffey Estuary Lower and the Grand canal docks.

- 105 The common trend observed from surveys found the kingfisher going to / from the Grand Canal Dock area. Flight paths were typically concentrated along the western quay or from the direction of the slipway.

**Table 6 Vantage Point Survey Records of Kingfisher at the Proposed DPTOB in 2020-2021**

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)		Conservation Importance		
	Low Tide	High Tide	BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol
Kingfisher <i>Alcedo atthis</i> (KF)	2 individuals flying north then west along western quay (07/10/2020)	1 individual flying north-east next to slipway at c.1m in height above water (07/10/2020)  Other dates of 1 individual: 15/10/2020 19/11//2020 04/12/2020 18/12/2020 06/01/2021 03/02/2021 25/06/2021 14/07/2021	Amber (B)	✓	N /A – outside Zol

- 106 The desk study found that kingfisher are known to occur within 1km of the Proposed Scheme and across the wider study area. In particular, there are a considerable number of records from along the River Dodder particularly around between Milltown, Clonskeagh and Herbert Park. Separately, a population is documented<sup>17</sup> to be present in the River Liffey upstream of Heuston Station.

- 107 The nearest European site for which this species is designated is River Boyne and River Blackwater SPA, which is located approximately 38km from the Proposed Scheme, outside of the Zol.

#### Terns

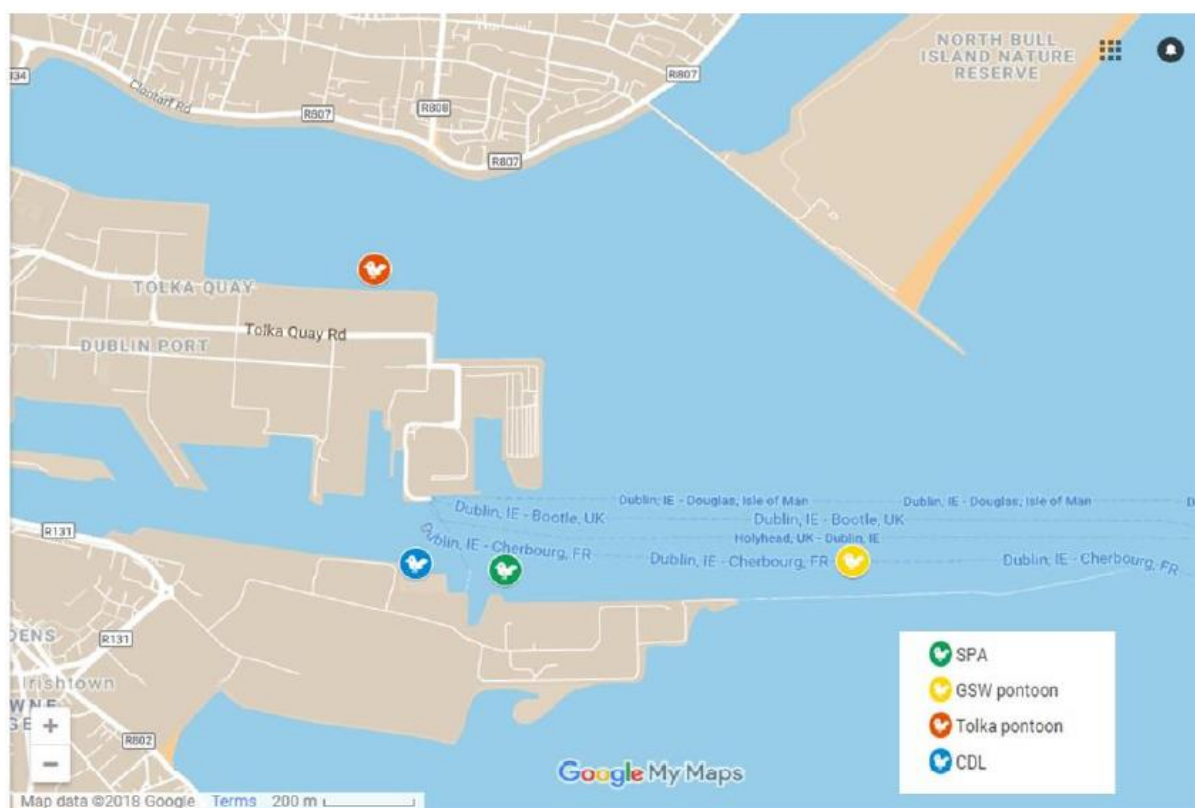
- 108 Common terns were recorded in 2018 and 2019 and 2022 breeding on the lock gates at Grand Canal Dock approximately 120m upstream of the Proposed Scheme.

- 109 Within the vicinity of the proposed DPTOB, there was a total of 56 observations of common tern, with a peak count of 3 individuals, between May and June 2018. Between May and July 2019, there were 129 observations, with a peak count of 4 individuals. Between May and August 2021, there were a total of 253 observed, with a peak count of 9 individuals. Between April and August 2022 there was 229 observations and a peak count of 5 common terns recorded. A summary of these results are illustrated in **Table 7**. Full results are presented in Appendix IV.

<sup>17</sup> DCC (2015) *Dublin City Biodiversity Action Plan 2015-2020*.

- 110 Four apparently occupied nests (AONs) were recorded at the site in 2018. Three AONs were recorded at the site in July 2019 before it was reported that the nests were intentionally destroyed (pers. Comm. Shay Connelly). No AONs were recorded throughout the 2021 surveys although nesting behaviours were observed, including food sharing between pairs, and copulation (25th June 2021). There was one AON nest observed during the 2022 season, with 2 chicks recorded on the 29<sup>th</sup> June 2022. The nest was recorded at the lock gates at Grand Canal Dock (same location to previous AONs recorded in 2018 and 2019). Chicks were observed to be fed consistently by adults on this occasion.
- 111 It is unknown whether chick rearing was successful at this location in 2018 or 2019 and is considered unlikely for the 2021 season due to the lack of AONs. Chicks were observed on one occasion during the 2022 survey period (2 chicks observed on the 29<sup>th</sup> June 2022). As chicks were not sighted at subsequent surveys, successful fledging of the nest cannot be confirmed, however for the purposes of this assessment using the precautionary principle, chick rearing is considered to be successful during the 2022 period.
- 112 It should be noted that due to the likely level of interchange of common tern between nesting sites year to year (BWI 2020), SPAs designated for terns in the wider Dublin Bay area (e.g. Dalkey Islands SPA, South Dublin Bay and River Tolka Estuary SPA and Rockabill Island SPA) are considered to overlap. As such, it is unclear which SPA the Grand Canal Dock colony is associated with, however terns utilising the Grand Canal Dock are most likely associated with the adjacent South Dublin Bay and River Tolka Estuary SPA owing to proximity.
- 113 The Dublin Bay tern colony nest across four platforms: ESB (SPA) dolphin, the CDL dolphin, the Tolka pontoon, and the GSW pontoon (See Image 8 for locations). The Proposed Scheme will be closest to the CDL dolphin, located 2km downstream of the proposed DPTOB. The ESB (SPA) dolphin is specifically designated under the South Dublin Bay and River Tolka Estuary SPA, located 2.4km downstream of the Proposed Scheme. As stated above, there is considerable interchange between nesting sites for tern populations (BWI 2021). Furthermore, due to the close proximity of the four platforms associated with the Dublin Port tern colony, there is likely interchange between these platforms. As such, all terns from these platforms are considered as one colony and are monitored as such by Bird Watch Ireland (BWI, 2021). Common tern nesting at the Grand Canal Dock are considered to be connected to the Dublin Port colony and SPA population, utilising the Grand Canal Dock lock gates as an overflow or satellite nesting platform.
- 114 The Dublin Bay Birds Project recorded 538 tern nests in 2021 across the four platforms (528 attributed to common tern, 10 attributed to artic tern). The tern colony has been experiencing a pattern of decline in recent years (6% decline compared to 2020), considered to be as a result of low productivity possibly due to predation events particularly impacting the CDL dolphin and Tolka pontoon in recent years (BWI, 2021). Predation events are considered to have resulted in very limited productivity specifically at the CDL dolphin (the only structure where artic tern are recorded to nest at) between 2019 and 2020 and complete failure in 2021. Other than at the CDL dolphin, common tern productivity shows improvement compared to previous years and appears stable at 1.06 (productivity is defined as chicks raised to fledglings per nesting pair per year) (BWI, 2021). The 2022 Dublin Bay Birds Project report was not published at the time of writing, however consultation with Bird Watch Ireland (pers comm, 2022) confirmed that mortality due to avian influenza was not recorded at the Dublin Port tern colony in 2022.
- 115 The Dublin Port tern colony conservation work is carried out as part of the Dublin Bay Birds Project, managed by BirdWatch Ireland and supported by Dublin Port Company

**Image 8 Location of Nesting Structures in Dublin Port (Source: BWI, 2021)**



116 The highest recorded number of AONs recorded at the Grand Canal Dock during field surveys was in 2018, totalling 4 AONs. As such terns nesting at this site are estimated to represent 2.2% of the current SPA platform colony or 0.7% of the overall Dublin Port common tern colony. As stated above, the Grand Canal Dock nesting site is considered as a satellite nesting structure for the overall Dublin Port colony.

117 The 1% threshold for international importance for common tern is 1,800 individuals (Wetlands International, 2019) and 100 individuals for national importance (Cummins et al. 2019). As such terns nesting at this site are estimated to represent 0.08% of the national population and 0.004% of the international population.

*Table 9 Number of nests (Common and Arctic combined) per season since the Dublin Bay Birds Project began.*

Structure	2013	2014	2015	2016	2017	2018	2019	2020	2021
CDL	25	76	58	0	24	105	97	58	43
SPA Platform	418	427	416	382 <sup>1</sup>	n/a <sup>2</sup>	156	261	204	182
Tolka Pontoon	1	38	73	7	84	132	83	74	103
GSW Pontoon <sup>3</sup>	n/a	n/a	1	114	308	203	204	238	210
<b>Total</b>	<b>444</b>	<b>541</b>	<b>548</b>	<b>503</b>	<b>416<sup>2</sup></b>	<b>596</b>	<b>645</b>	<b>574</b>	<b>538</b>

<sup>1</sup> Estimated due to partial access

<sup>2</sup> Platform replaced in 2017: no data gathered

<sup>3</sup> Pontoon 2 was deployed as follows:

2015: base of GSW

2016 & 2017: adjacent to SPA Platform

2018, 2019, 2020, 2021: south of buoyed channel, 120m north of GSW

118 Surveyor observations during breeding bird surveys indicated that there were three main territorial areas utilised by common tern across the survey period, this included an area encompassing the Grand Canal Dock; an area encompassing the Liffey Estuary Lower to the north of the vantage point, downstream of the Dodder\_050 confluence (including the area of the proposed DPTOB) and the Liffey Estuary Lower to the east of the Tom Clarke East Link Bridge extending downstream towards Dublin Port.

**Table 7 Vantage Point Records of Common Terns Proposed DPTOB 2018-2022**

Common name /Scientific name /BTO Code	Activity and Distribution in the study area (Peak count)				Conservation Importance			Threshold of International Population	Threshold of National Population
	May – June 2018	May – July 2019	May to August 2021	April to August 2022	BoCCI* (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol		
Common tern <i>Sterna hirundo</i>	3 individuals circling at proposed DPTOB (27/06/2018)	4 individuals flying over proposed DPTOB (08/05/2019)	9 Individuals roosting at Grand Canal Dock lock gates (19th May 2021) (consisting of 4 pairs and a single individual)	5 individuals circling proposed DPTOB and landing at Grand Canal lock gates (16.06.2022)	Amber (B)	✓	South Dublin Bay and River Tolka Estuary SPA approximately 0.5km Dalkey Islands SPA Rockabill SPA	1800	100

Peregrine

119 Peregrine falcon were recorded on one occasion during the 2021 wintering bird surveys. The individual was observed in transit within the vicinity of the proposed DPTOB being harried by a hooded crow. No breeding / nesting behaviour was observed.

120 Peregrine are known to nest in the Pigeon Towers of the Poolbeg Generating Station, which is approximately 2.5km from the Proposed Scheme. Peregrine falcons have a maximum foraging range of 18km during the breeding season (Scottish National Heritage, 2016) and the nearest European site which has been designated is Wicklow Mountains SPA, approximately 12.1km from the Proposed Scheme. Therefore, it is considered possible that peregrine falcon are present in the vicinity of the Proposed Scheme are associated with the Wicklow Mountains SPA population. This species is known to overwinter on the coast and feed on the high concentrations of waterbirds present on the estuaries, and pigeons in the city centre (Birdwatch Ireland, no date).

Gulls

121 Gulls were less frequently recorded across the breeding bird surveys in comparison to the wintering bird surveys. Some gull species have adapted to breeding on inaccessible areas atop buildings in urban and city areas. No gull species were recorded to be breeding within the survey area, although breeding behaviours were recorded (e.g. fledged young still dependant on adults for food). Full survey results are provided in Appendix IV with the single evidence of breeding behaviour shown on Figure 12.8 in Volume 3 of the EIAR.

122 Herring Gull was recorded on five out of eight survey dates, with a peak count of 65 individuals on 20<sup>th</sup> July 2021. The birds were generally observed flying and loafing within the area of the proposed DPTOB, and at the confluence of the River Dodder and Grand Canal Dock. No active nesting behaviour of herring gull was recorded, although a single recently fledged juvenile, still dependant on adults for food, was recorded on the 20<sup>th</sup> June 2022 within the footprint of the proposed DPTOB. During the 2022 breeding season, herring gulls were recorded throughout the study area with a peak count of 89 individuals recorded on 26<sup>th</sup> of May

2022. Two individuals were recorded flying, carrying nesting materials on the 27th April 2022 and the 12th May 2022.

- 123 Black-headed gull was recorded on four out of eight survey dates flying, swimming or foraging within the survey area, with a peak count of 32 individuals recorded adjacent to the eastern slipway at low tide on 27th August 2021. No nesting or breeding behaviour was recorded across the survey period. Common gull (singular individual) was observed perching within Grand Canal Dock on the 28th July 2021 in full breeding plumage, although no nesting or breeding behaviour was recorded. During the 2022 surveys, black headed gulls were commonly recorded and became more numerous from June onwards, with a peak count of five on the 15th July 2022. There were no breeding behaviours observed for this species. Common gull was not recorded during the 2022 season.
- 124 Lesser black-back gull was recorded on three out of eight surveys, with a peak count of two individuals on the 25th June 2021. No nesting or breeding behaviour were recorded. In 2022, there was a peak count of 2 individuals on the 16th June 2022 with no nesting or breeding behaviours observed.
- 125 Greater black-back gull was recorded on two of the eight surveys, on both occasions only singular individuals were recorded (19th May and 27th August 2021). The birds were observed flying or foraging within the survey area, although no nesting or breeding behaviours were recorded. During 2022 surveys, a peak count of two individuals was recorded on the 15th July 2022 with no nesting or breeding behaviours observed.

#### Other Breeding Birds

- 126 Breeding SCI bird species recorded during surveys for the Proposed Scheme are listed in **Table 8**, full results are presented in Appendix IV.
- 127 Additional birds with breeding populations within the Zol include light bellied brent geese, redshank, common guillemot, oystercatcher, Gull and cormorant. These species were noted during wintering bird surveys however breeding behaviour were not observed.
- 128 Mallard, grey heron and coot were observed during field surveys, however SPA breeding populations are not considered to be within the Zol of the Proposed Scheme.
- 129 Light bellied brent goose do not currently breed within Ireland. These species were recorded in April prior to their summer migration to high-Arctic breeding grounds in late April, therefore are assessed in Section 5.1.2.5.

**Table 8 Vantage Point Records of SCI Breeding Birds of Conservation Concern at the Footprint of the Proposed DPTOB 2018 & 2019 and the Proposed Scheme 2021 & 2022.**

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)				Conservation Importance		
	May – June 2018	May – July 2019	May - August 2021	April – August 2022	BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol
Common tern <i>Sterna hirundo</i>	3 individuals circling at bridge (27/06/2018)	4 individuals flying over bridge (08/05/2019)	9 Individuals roosting at Grand Canal Dock (19/05/2021) (consisting of 4 pairs and a single individual)	5 individuals circling Dodder-Liffey area and then landing in nesting area at lock gates. (16/06/2022)	Amber (B)	✓	South Dublin Bay and River Tolka Estuary SPA approximately <1km
Cormorant <i>Phalacrocorax carbo</i>	1 individual at bridge (5 dates)	3 individuals flying over bridge (08/05/2019)	3 individuals flying south-west through the proposed	3 individuals flying along the Liffey (upstream)	Amber (B/W)	-	Ireland's Eye SPA approximately 12km Lambay Island SPA approximately 20km

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)				Conservation Importance		
	May – June 2018	May – July 2019	May - August 2021	April – August 2022	BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol
			DPTOB (28/07/2021).	(26/05/2022)			Skerries Islands SPA approximately 26km
Kingfisher <i>Alcedo atthis</i>	-	-	Singular individuals flying around Grand Canal Dock (25/06/2021 and 14/07/2021))	-	Amber (B)	✓	Not in Zol
Little egret <i>Egretta garzetta</i>	-	-	Singular individuals flying / foraging through the proposed DPTOB (19/05/2021, 06/08/2021, 27/08/2021)	1 individual foraging at proposed DPTOB. (26/08/2022)	Green (B/W)	✓	-
Oystercatcher <i>Haematopus ostralegus</i>	-	-	Singular individuals flying at Grand Canal Dock and River Liffey (20/08/2021, 27/08/2021)	-	Red (B/W)	-	South Dublin Bay and River Tolka SPA approximately 0.5km North Bull Island SPA approximately 3km Malahide Estuary SPA approximately 12.3km Rogerstown Estuary SPA approximately 17.1km
Grey Heron <i>Ardea cinerea</i>	1 individual at bridge (30/05/2018; 27/06/2018)	1 individual at bridge (25/06/2019)		Singular individuals flying / feeding along the Dodder or feeding west of the Tom Clarke East Link Bridge. (27/04/2022, 29/06/2022, 15/07/2022, and 22/07/2022)	Green (B/W)	-	N / A – outside Zol
Mallard <i>Anas platyrhynchos</i>	3 individuals at bridge (19/04/2018)	3 individuals circling at bridge (11/06/2019)	4 birds (2x pairs) flying or swimming at mouth of River Dodder (27/08/2021)	3 individuals flying over Liffey (26/05/2022) 3 individuals on water at proposed DPTOB. (14/04/2022)	Green (B)	-	Dundalk Bay SPA approximately 56.9km



Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)				Conservation Importance		
	May – June 2018	May – July 2019	May - August 2021	April – August 2022	BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within 201
Brent goose (Light bellied) <i>Branta bernicla hrota</i> (Note: Not considered as a breeding SCI species in Ireland)	-	-	-	10 individuals swimming along Liffey (13/04/2022)	Amber (W)	-	South Dublin Bay and River Tolka SPA approximately 0.5km, Rogerstown Estuary SPA approximately 17.1km Malahide Estuary SPA approximately 12.3km Skerries Islands SPA approximately 26km The Murrough SPA, Approximately 29.5km North Bull Island SPA approximately 3km Baldoyle Bay SPA approximately 9.2km
Black-headed gull <i>Chroicocephalus ridibundus</i>	-	-	32 Individuals flying through the proposed DPTOB during Low Tide (27/08/2021)	5 individuals on water of Liffey. (15/07/2022)	Amber (B/W)	-	South Dublin Bay and River Tolka SPA approximately 0.5km North Bull Island SPA approximately 3km
Herring gull <i>Larus argentatus</i>	-	-	65 individuals on banks of the River Dodder (20/07/2021)	89 individuals swimming in Grand Canal Dock area (26/05/2022)	Amber (B/W)	-	Ireland’s Eye SPA approximately 11.7km Lambay Island SPA approximately 20km Skerries Islands SPA approximately 26km
Lesser black-backed gull <i>Larus fuscus</i>	-	-	2 individuals flying within Grand Canal Dock (25/06/2021)	2 individuals loafing on Liffey. (16./06/2022)	Amber (B/W)	-	Lambay Island SPA approximately 20km
Redshank <i>Tringa totanus</i>	-	-	-	1 individual flying over Liffey (13/04/2022)	Red (B/W)	-	North Bull Island SPA approximately 3km Rogerstown Estuary SPA approximately 17.1km South Dublin Bay and River Tolka Estuary SPA approximately 0.5km Malahide Estuary SPA approximately 12.3km

130 The desk study returned records of a total of 63 breeding bird species across the study area (i.e., Grid Squares O13). Records included 24 SCI species, 13 species listed under Annex I of the Birds Directive, and an additional five Red Listed and 21 Amber Listed species. Of the 63 species recorded, four had breeding and wintering populations.

- 131 The majority of bird species for which records were returned in the desk study are those typically found in coastal, estuarine and intertidal habitats, such as the Liffey Estuary Lower and Dublin Bay. Many gull, auk and tern species breed in steep inaccessible cliffs outside of the ZoI i.e. Howth Head, offshore islands, Dublin Port. Seabirds such as terns, guillemots and kittiwakes nest on the cliffs and crevices of Rockabill Island in Dublin Bay SPA (Birdwatch Ireland, 2020). Fulmar, shag razorbill and gannet nest in the cliffs of Irelands Eye SPA, which also has numbers of large *Larus* gulls, cormorant and puffin (Merne & Madden 2000). Gulls favour nesting along coasts on shingle and cliffs but may utilise inland public areas for scavenging and buildings for roof nesting (Birdwatch Ireland, 2020). As such, some gull species may utilise buildings within the footprint of the Proposed Scheme for nesting; however, the majority of other species are not likely to breed within the footprint of the Proposed Scheme.
- 132 The desk study returned records of three SCI breeding gull species within 300m of the Proposed Scheme which may use inland amenity grassland feeding sites, species including black-headed gull *Chroicocephalus ridibundus*, herring gull *Larus argentatus* and lesser black-backed gull *Larus fuscus*.

#### 5.1.2.5 Wintering Birds

- 133 The desk study returned records of a total of 32 wintering bird species in the wider study area (i.e., Grid Squares O13). Records included 29 SCI species, one species listed under Annex I of the Birds Directive, and one additional Amber Listed species. Of the 32 species recorded, four species had breeding and wintering populations.
- 134 The majority of wintering birds identified in the desk study are typically found in coastal, estuarine and intertidal habitats including the Liffey Estuary and Dublin Bay. The desk study of lands within 300m of the Proposed Scheme returned records of SCI wintering bird species which may use inland amenity grassland feeding sites, including light-bellied brent goose, lapwing, black-headed gull, herring gull, lesser black-backed gull, black-tailed godwit, oystercatcher and curlew.
- 135 A review of a study into light-bellied brent goose inland feeding sites<sup>8</sup> has identified four known inland wintering bird feeding sites within approximately 900m of the Proposed Scheme i.e., the disturbance ZoI<sup>18</sup>, these are:
- Irishtown / Ringsend Park immediately adjacent to the Proposed Scheme (major importance);
  - Irishtown Stadium approximately 20m from the Proposed Scheme (high importance);
  - Irishtown / Sean Moore Park approximately 77m from the Proposed Scheme (high importance); and,
  - Shelbourne Park Dog Track approximately 284m from the Proposed Scheme (high importance).
- 136 Wintering bird transect surveys were carried out at three no. sites identified through the desk study. These sites included the following:
- CBC0016WB001: Small amenity grassland area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge. The site is not maintained for cutting and a path entrance by Tom Clarke East Link Bridge has been fenced off in recent years. Disturbance on site is moderate-high, and historically known for use by resting mute swan, in addition to public use. Through observations of swan droppings, the eastern transect has been less used by the swans over time. The western transect is still in use by swans for resting and outside the transect beside the small area of treeline.
  - CBC0016WB002: Gaelic pitch and amenity grassland area within Ringsend park. Site is maintained with cutting by the local authority. Disturbance on site is very high mainly due to the use of the park by dogs off the leash, but also includes frequent recreation use (sports

<sup>18</sup> Major importance site 401+ geese; high importance site 51-400 geese; and, moderate importance site 1-50 geese as defined by Benson's study in 2009.

activities) by the public. No droppings were observed within the transect by the Brent geese, anecdotal observations witnessed a flock of light-bellied Brent geese looking to land on the pitch but circled a number of times before abandoning to a different site. Oystercatchers have been witnessed using the pitches to feed and next to the transect.

- CBC0016WB003: Grassy verge within Irishtown Stadium and amenity grassland area with trees between the stadium and Bremen Avenue. Site is maintained with cutting by the local authority. The grassy verge within Irishtown Stadium is fenced off from the public and considered low disturbance. The amenity grassland area between has a high level of disturbance as it frequently walked over by the public. Light-bellied brent geese or waders were not observed using areas. However, the central grassland area within Irishtown Stadium has been observed hosting large numbers of light-bellied brent geese, oystercatchers and gulls on the ground/feeding on the grass.

- 137 Transect surveys were carried out at the above sites weekly in February-March 2020 (a total of seven visits were carried out in this period) and fortnightly between October 2020-April 2021 and again between October 2021 and April 2022, and fortnightly between October 2022 and March 2023. SCI wintering bird species identified during the wintering bird transect surveys included whooper swan, herring gull, common gull, black-headed gull, lesser black-backed gull, oystercatcher and light-bellied brent geese. A single whooper swan was recorded at CBC0016WB001 regularly during the transect surveys carried out in the 2019-2020 winter bird season. This individual was associated with a group of mute swans.
- 138 **Table 9** and Figure 3.1.1 provide a summary of the findings of the winter bird surveys with respect to those species which are of highest conservation concern and were recorded within winter bird survey sites.

**Table 9 Transect Survey Records of Wintering Birds of Conservation Concern Recorded at Inland Feeding Sites**

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)				Conservation Importance			Surveyor Observations outside of transect	Threshold of International Population	Threshold of National Population
	February – March 2020	October 2020 – March 2021	October 2021 – April 2022	October 2022 – March 2023	BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within ZOI			
Herring gull <i>Larus argentatus</i> (HG)	CBC0016WB001: 2 individuals resting within transect (14/02/2020) CBC0016WB002: No records CBC0016WB003: 1 individual feeding grass area within transect (14/02/2020)	CBC0016WB001: No records CBC0016WB002: 4 individuals feeding on pitches (30/11/2020) CBC0016WB003: 15 individuals feeding in transect (14/02/2020)	CBC0016WB001: No Records CBC0016WB002: 22 individuals adjacent to transect on pitches (30/03/2022) CBC0016WB003: 3 individuals loafing within transect area (24/11/2021)	CBC0016WB001: No Records CBC0016WB002: 8 individuals flying over (26/10/2022) CBC0016WB003: 2 individuals perched within transect area (07/03/2023)	Amber (B/W)	-	Ireland’s Eye SPA approximately 12km Lambay Island SPA approximately 20km Skerries Islands SPA approximately 26km The Murrrough SPA approximately 28km	44 individuals feeding within center of Irishtown stadium outside survey area next to CBC0016WB003 (09/02/2021) 31 individuals feeding within Irishtown stadium outside survey area next to CBC0016WB003 (22/12/2021)	14,400	n/a
Light-bellied brent goose <i>Branta bernicla</i> (BG)	CBC0016WB001: No records CBC0016WB002: 51 individuals feeding at Ringsend Park at (09/03/2020) CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: One dropping within transect (06/01/2021)	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: no records	CBC0016WB001: No Records CBC0016WB002: No Records CBC0016WB003: 97 individuals landed in Irishtown Stadium (08/02/2023)	Amber (W)	-	South Dublin Bay and River Tolka Estuary SPA approximately <1km North Bull Island SPA approximately 2.9km Baldoyle SPA approximately 8km Malahide Estuary SPA approximately 12km	120 individuals flying over and resting Lower Liffey Estuary outside survey area next to CBC0016WB001 (21/02/2020) 48 individuals swimming in Lower Liffey Estuary (03/02/2021) 25 individuals flying over	400	350

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)				Conservation Importance			Surveyor Observations outside of transect	Threshold of International Population	Threshold of National Population
	February – March 2020	October 2020 – March 2021	October 2021 – April 2022	October 2022 – March 2023	BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol			
							Rogerstown Estuary SPA approximately 17km Skerries Islands SPA approximately 26km The Murrough SPA approximately 28km	Ringsend Park, not landing in CBC0016WB002 (24/11/2021) 459 individuals feeding within center of Irishtown stadium outside survey area next to CBC0016WB003 (03/02/2021)		
Whooper Swan <i>Cygnus cygnus</i> (WS)	CBC0016WB001: 1 individual feeding in site (14/02/2020) CBC0016WB002: No records CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: No records	Amber (B/W)	✓	Lough Derravarragh SPA (outside of Zol)		340	150
Oystercatcher <i>Haematopus ostralegus</i>	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: 2 individuals feeding on pitches (27/01/2021) CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: no records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: 216 individuals on ground within Irishtown Stadium (02/12/2022)	Red (B/W)	-	South Dublin Bay and River Tolka Estuary SPA approximately <1km North Bull Island SPA approximately 2.9km Malahide Estuary SPA approximately 12km	24 individuals feeding within centre of Irishtown stadium outside survey area next to CBC0016WB003 (27/01/2021)	8,200	610

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)				Conservation Importance			Surveyor Observations outside of transect	Threshold of International Population	Threshold of National Population
	February – March 2020	October 2020 – March 2021	October 2021 – April 2022	October 2022 – March 2023	BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol			
							Rogerstown Estuary SPA approximately 17km			
Black-headed gull <i>Chroicocephalus ridibundus</i>	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: 34 individuals feeding on pitches (09/02/2021) CBC0016WB003: 2 individuals feeding in transect (27/01/2021)	CBC0016WB001: No records CBC0016WB002: 132 individuals feeding in transect (09/03/2022) CBC0016WB003: No records	CBC0016WB001: One individual flying over (26/10/2022) CBC0016WB002: 5 individuals (13/01/2023) CBC0016WB003: 12 individuals (13/01/2023)	Amber (B/W)	-	South Dublin Bay and River Tolka Estuary SPA approximately <1km North Bull Island SPA approximately 2.9km The Murrrough SPA c.28km	130 individuals feeding within centre of Irishtown stadium outside survey area next to CBC0016WB003 (09/02/2021)	31,000	n/a
Common gull <i>Larus canus</i> (CM)	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: no records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: no records	Amber (B/W)	-	Dundalk Bay SPA approximately 57km (outside of Zol)	1 individual on ground within centre of Irishtown stadium outside survey area next to CBC0016WB003 (23/03/2021)	16,400	n/a



Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)				Conservation Importance			Surveyor Observations outside of transect	Threshold of International Population	Threshold of National Population
	February – March 2020	October 2020 – March 2021	October 2021 – April 2022	October 2022 – March 2023	BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol			
Lesser black-back gull <i>Larus fuscus</i> (LB)	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: No records	CBC0016WB001: No records CBC0016WB002: No records CBC0016WB003: no records	Amber (B/W)	-	Lambay Island SPA approximately 20km	2 individuals on ground within center of Irishtown stadium outside survey area next to CBC0016WB003 (23/03/2021)	5,500 (Western Europe)/ 6,300 (Southern Scandinavia)	n/a

- 140 Seven wintering bird vantage point surveys were undertaken at the proposed DPTOB crossing point referred to as CBC0016WP001 in 2018 and 2019 (ROD), a summary is presented in **Table 10**, and full results are included in Appendix V.
- 141 A further 15 vantage point surveys were carried out fortnightly during October 2020-April 2021, and October 2021-April 2022, and a further 12 vantage point surveys were carried out between October 2022-March 2023. Provides a summary of the findings of the wintering bird surveys with respect to SCI species for which European sites are designated. Activity summaries are provided below and preferred flight paths are presented in and Figures 3.1.2 – 3.1.6. Peak counts per species area presented in **Table 11** with full results included in Appendix V.
- 142 In respect of the wintering birds recorded across the various surveys, **Table 11** also provides a comparison to the recorded threshold of international and national populations.
- Light-bellied Brent Goose *Branta bernicla hrota* [A046]
- 143 Light-bellied brent geese were observed either swimming and / or on mudflats within the proposed DPTOB on 10 out of 15 survey dates in the 2020-2021 period. The light-bellied brent geese favoured landing within the Liffey Estuary Lower between the eastern quay and the slipway. The light-bellied brent geese rarely utilized the mudflats during low tide and were generally sighted in the water at the edge of the mudflats.
- 144 During the 2021-2022 season the behaviour exhibited by the geese was much the same, with the majority of geese observed rafting on the water either within the footprint of the proposed DBTOB or in the Lower Liffey Estuary just north of it. A max count of 240 individuals were observed rafting within the proposed DBTOB on the 19th of January 2022, having flown in from the east.
- 145 During the 2022-2023 season, the behaviour exhibited by the geese was similar to previous years, with the majority of geese observed rafting on the water either within the footprint of the proposed DPTOB or in the Lower Liffey Estuary just north of it. A maximum count of 532 individuals was recorded rafting within the footprint of the proposed DPTOB on the 13 of January 2023, having flown in from the east.
- 146 Flocks of light-bellied brent geese were observed flying either across the footprint of the proposed DPTOB or neighbouring buildings adjacent to the VP on 11, out of 15 survey dates in the 2020-2021 period. A peak count of 80 birds flew east at a height c.50m recorded on 6<sup>th</sup> January 2021. Light-bellied brent geese were observed using the Liffey Estuary Lower as a guide for flying to feeding areas east and west of the Proposed Scheme. Additional light-bellied brent geese flocks were observed flying over the buildings of Thorncastle street and the VP via Grand Canal Dock & Dodder\_050 toward nearby feeding areas within Ringsend. Flight path heights were variable. Flocks were observed to fly c.<10m over Grand Canal Dock, upstream & downstream of the Dodder\_050 and River Liffey, or c.20-50m over the buildings.
- 147 Light-bellied brent geese were also regularly observed flying across the footprint of the proposed DPTOB survey area during the 2021-2022 season or through areas within the Liffey Estuary Lower adjacent to the survey area. A peak count also of 80 birds was observed flying in and landing on the site within the proposed DPTOB before taking off again a short time later. Similarly to the previous season, most birds observed flying over the water did so generally at a height between 0 and 10m, or if over land were observed to fly mostly between 20-50m over the buildings.
- 148 Flocks of light-bellied brent geese were observed flying either across the footprint of the proposed DPTOB or neighbouring buildings adjacent to the vantage point on 7 of 12 survey dates in the 2022-2023 period. A peak count of 89 birds flew east at a height c.20-100m recorded on 07 March 2023. Similar to the previous season, most birds observed flying over the water did so generally at a height between 0 and 10m, or if over land were observed to fly mostly between 20-50m over the buildings.
- 149 Light-bellied brent geese were also observed at CBC0016WB002 at the playing pitches and amenity grassland area within Ringsend Park. A peak flock of 500 was observed feeding on the pitch on 10th of December 2021.

- 150 Light-bellied brent geese were also observed in proximity to CBC0016WB003 at Irishtown Stadium. A peak flock of 97 was observed feeding on the pitch on 8 of February 2023.

#### Waders

- 151 Redshank *Tringa totanus* [A162] was observed during nine, out of 15, survey dates during the 2020-2021 period and five, out of 13, survey dates during the 2021-2022 period. Peak counts of birds during the VP surveys were recorded feeding next to the slipway, within the footprint of the proposed DPTOB. Redshank were commonly observed feeding during low tide along mudflat habitat, outside the proposed DPTOB footprint. There were few sightings of redshank flying across the Proposed Scheme during the 2020-2021 period.
- 152 Redshank were occasionally observed flying across the footprint of the proposed DPTOB during the 2021-2022 period, from an area to the right of the VP through the proposed DPTOB and then east over the Lower Liffey Estuary. They appeared to follow a similar back to the same area.
- 153 Similar to the previous season, Redshank were mostly observed foraging at low tide in the mudflats next to the slipway within the footprint of the proposed DPTOB and in the mudflats immediately south of the proposed DPTOB.
- 154 Redshank were rarely recorded during the 2022-2023 survey season, with 2 no. individuals recorded flying across the proposed DPTOB on the 24 October 2022, while also being recorded to the south of the proposed DPTOB on 2 no. dates 13 January and 27 February 2023.
- 155 Curlew *Numenius arquata* [A160] were observed during three, out of 15, survey dates during the 2020-2021 period. No curlew were observed within the footprint proposed DPTOB during the 2021-2022 period. Curlew were commonly observed feeding during low tide along mudflat habitat, outside the proposed DPTOB footprint. One curlew was observed flying within the proposed DPTOB area on the 22nd of October 2021.

#### Waterfowl

- 156 Tufted duck *Aythya fuligula* [A061] was observed flying across the footprint of the proposed DPTOB area on one, out of 15, survey dates during the 2020-2021 survey season. One individual was observed flying at height c. 2m upstream towards the Liffey Estuary Upper, and were not observed landing. No Tufted duck were observed during the 2021-2022 period.
- 157 Mallard *Anas platyrhynchos* were observed swimming across the footprint of the proposed DPTOB area on five, out of 15, survey dates: 3rd February 4<sup>th</sup> & 19<sup>th</sup> March 2021, and 1st & 30th April 2021. Mallard were generally observed flying through the survey area between the Liffey Estuary Lower and around the Grand Canal Dock or the confluence of the Dodder\_050 and Liffey Estuary Lower. This was also the case for the 2021-2022 period. A peak count of nine birds were observed flying across the footprint of the proposed DPTOB, at c.4m in height heading upstream of the Liffey Estuary Lower on 6<sup>th</sup> January 2021. A peak count of 9 birds were observed foraging during low tide on the 9th of March 2022.
- 158 Mallard were recorded on 8 of the 12 survey dates during the 2022-2023 season, with a peak count of 4 individuals recorded within the River Dodder on 24 October 2022.

#### Gulls

- 159 Herring gull *Larus argentatus* [A184] were commonly observed flying and feeding within the footprint of the Proposed Scheme. The peak count of Herring gull was 54 foraging on the banks of the River Dodder on the 12 December 2022. The peak count of herring gulls feeding within the footprint of the proposed DPTOB was 33 birds on 16th April 2021 during low tide. Herring gull were abundant within the proposed DPTOB footprint. The peak count of birds flying through the proposed DPTOB area was 431 on 19<sup>th</sup> November 2020. The birds were observed at various heights from c.10-40m heading east downstream of the East Link Bridge towards the Dublin Bay. Flight paths were not limited to one direction and could be observed circling the survey area frequently. They were observed flying at various heights (i.e., low as c.1m to high as c.40m) over the proposed DPTOB area and perching on built up areas (i.e., buildings, slipway, quays). Herring gull were the dominant gull species recorded.

- 160 Black-headed gull *Chroicocephalus ridibundus* [A179] were commonly observed feeding within the footprint of the Proposed Scheme. The peak count of black-headed-gull within the footprint of the proposed DPTOB was 42 on 14 March 2023. The peak count of black-headed gulls within the footprint of the proposed DPTOB during the 2020-2021 period was 225 birds on the ground / swimming on 3rd February 2021 during low tide. The peak count during the 2021-2022 period was 28 birds, rafting within the footprint of the proposed DPTOB area. Black-headed gulls were frequently observed flying within the proposed DPTOB area in all survey seasons.
- 161 Common gulls *Larus canus* were observed on the ground within the footprint of the proposed DPTOB on two, out of 15, survey dates during the 2020-2021 survey season: 6<sup>th</sup> January 2021 and 19<sup>th</sup> March 2021. During the 2021-2022 survey season, common gull were observed on five, out of 13, survey dates. During the 2022-2023 survey season, common gull were recorded on 3 of the 12 survey dates. The peak count of common gull within the footprint of the DPTOB during the 2022-2023 season was 3 no. individuals on 13 January 2023. The peak count of common gull within the footprint of the proposed DPTOB during the 2020-2021 period was eight birds roosting next to the slipway on 6th January 2021. The peak count during the 2021-2022 period was 11 birds, observed being fed by pedestrians. Common gulls were occasionally observed flying across the footprint of the proposed DPTOB area.
- 162 Lesser black-backed gull *Larus fuscus* [A183] were observed feeding within the proposed DPTOB on three, out of 15, survey dates: 5 November 2020 and 1<sup>st</sup> and 16<sup>th</sup> April 2021. The peak count of birds within the proposed DPTOB footprint was two birds on the ground next to the slipway on 5 November 2020. Lesser black-backed gulls were not observed within the footprint of the proposed DPTOB during the 2021-2022 period. Lesser black-backed gull were recorded on 2 of the 12 survey dates during the 2022-2023 survey season with a peak count of 2 no. individuals on 13 January 2023.
- 163 The peak count of gulls flying through the Proposed Scheme was recorded as 350 on 20<sup>th</sup> January 2021 flying east downstream of the Liffey Estuary Lower heading toward Dublin Bay. These birds consisted of a mixed flock of black-headed gull and herring gull at heights ranging c.20-40m.

#### Other bird species

- 164 Little egret *Egretta garzetta* was observed flying across the footprint of the proposed DPTOB on one, out of 15 survey dates during the 2020-2021 period (16<sup>th</sup> April 2021). The observation was flying at a height of c.10m upstream, and not observed landing in the Liffey Estuary Lower. Little egret was observed flying across the footprint of the proposed DPTOB on three, out of 13, survey dates during the 2021-2022 period. A single little egret was recorded on a single occasion during the 2022-2023 survey season, on the 24 October 2022.
- 165 Grey heron *Ardea cinerea* was observed during six, out of 15, survey dates: 5 November 2020, 18th December 2020, 20<sup>th</sup> January 2021, 19<sup>th</sup> March 2021, and 16<sup>th</sup> & 30<sup>th</sup> April 2021. The peak count was two birds feeding adjacent to the slipway on 18th December 2020. However, were largely observed as individuals flying across the study area at various heights. Heights were recorded as low as c.5m or as high as c.30m. Grey heron was also observed foraging within the footprint of the DPTOB on two, out of 13, survey dates for the 2021-2022 period at low tide both times. A peak count of one bird was recorded on each of these dates. Grey heron was recorded on 3 of the 12 survey dates during the 2022-2023 survey season (the 24 October 2022, 02 December 2022 and 07 March 2023), all being single individuals.
- 166 Cormorant *Phalacrocorax carbo* [A017] were present throughout all 15 survey dates during the 2020-2021 period, and on eleven, out of 13, survey dates during the 2021-2022 period. A peak count of four birds were observed flying across the footprint of the proposed DPTOB, at c.2m in height heading upstream of the Liffey Estuary Lower on the 3<sup>rd</sup> February 2021. A peak count of eight birds was recorded on the 27<sup>th</sup> of October 2021. The common trend of cormorant flying was either to / from Grand Canal Dock area via the Liffey Estuary Lower or upstream / downstream of the Liffey Estuary Lower at various heights. Majority of flight heights were near the water (i.e., c.1m) or level with buildings (i.e., c.20m to c.40m). This was largely true of the 2021-2022 period as well. Cormorant was recorded on 8 of the 12 survey dates during the 2022-2023 survey season, with a peak count of 2 individuals on the 24 January 2023.

**Table 10 Vantage Point Records of SCI Wintering Birds of Conservation Concern at the Proposed Dodder Bridge 2018 & 2019 (ROD)**

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)		Conservation Importance		
	March – April 2018	March – April 2019	BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol
Black-headed gull <i>Chroicocephalus ridibundus</i> (BH)	3 individuals over Bridge (04/04/2018) Other date of 3 individuals: 29/03/2018	1 individual flying west over Bridge at height 0m (28/03/2019)	Red (B/W)	-	South Dublin Bay and River Tolka Estuary SPA approximately <1km North Bull Island SPA approximately .2.9km The Murrough SPA approximately .28km
Light-bellied brent goose <i>Branta bernicla</i> (BG)	67 individuals at VP flying north at height 0m (11/04/2018)	25 individuals flying south-west over Bridge at height 30m (28/03/2019)	Amber (W)	-	South Dublin Bay and River Tolka Estuary SPA approximately <1km North Bull Island SPA approximately .2.9km Baldoyle SPA c.8km Malahide Estuary SPA approximately 12km Rogerstown Estuary SPA approximately 17km Skerries Islands SPA approximately 26km The Murrough SPA approximately .28km
Common gull <i>Larus canus</i> (CM)	4 individuals flying at height 25m (04/04/2018)	1 individual flying north over Bridge at height 15m (02/04/2019)	Amber (B/W)	-	No SPA in Zol of Proposed Scheme
Common tern <i>Sterna hirundo</i> (CN)	No individuals were recorded during March – April 2018 vantage point surveys	2 individuals flying south over Bridge at height 10m (02/04/2019) Other date of 2 individuals: 25/04/2019	Amber (B)	✓	South Dublin Bay and River Tolka Estuary SPA c.<1km Dalkey Islands SPA approximately 10.5km Rockabill SPA approximately 26km
Cormorant <i>Phalacrocorax carbo</i> (CA)	1 individual flying east over Bridge at height 15m (04/04/2018) Other date of 1 individual: 29/03/2018	1 individual flying south of Bridge at height -2m (08/04/2019) Other dates of 1 individual: 02/04/2019 25/04/2019	Amber (B/W)	-	Ireland’s Eye SPA approximately 12km Lambay Island SPA approximately 20km Skerries Islands SPA approximately 26km
Grey heron <i>Ardea cinerea</i> (H.)	No individuals were recorded during March – April 2018 vantage point surveys	1 individual flying north-east at Bridge at height -2m (28/03/2019)	-	-	No SPA in Zol of Proposed Scheme
Herring gull <i>Larus argentatus</i> (HG)	15 individuals (29/03/2018)	28 individuals swimming at mouth of River Dodder (28/03/2019)	Red (B)	-	Ireland’s Eye SPA approximately 12km Lambay Island SPA approximately 20km

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)		Conservation Importance		
	March – April 2018	March – April 2019	BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within ZOI
					The Murrough SPA approximately 28km Skerries Islands SPA approximately.26km
Lesser black-backed gull <i>Larus fuscus</i> (LB)	15 individuals flying north-east over Bridge at height 10m (04/04/2018) Other date of 5 individuals: 29/03/2018	No individuals were recorded during March – April 2019 vantage point surveys	Amber (B)	-	Lambay Island SPA approximately 20km
Mallard <i>Anas platyrhynchos</i> (MA)	2 individuals flying north-west over Bridge at height 50m (11/04/2018)	2 individuals swimming at River Dodder (02/04/2019)	-	-	No SPA in ZOI of Proposed Scheme
Redshank <i>Tringa tetanus</i> (RK)	1 individual flying north-east at VP at height -1m (04/04/2018)	1 individual wading at River Dodder (08/04/2019) Other date of 1 individual: 28/03/2019	Red (B/W)	-	South Dublin Bay and River Tolka Estuary SPA approximately <1km North Bull Island SPA approximately.2.9km Malahide Estuary SPA approximately 12km Rogerstown Estuary SPA approximately 17km



**Table 11 Vantage Point Records of SCI Wintering Birds of Conservation Concern at the Proposed DPTOB 2021 and 2022, October 2021 – April 2022 and October 2022 – March 2023**

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)						Conservation Importance			Threshold of International Population	Threshold of National Population
	2020 - 2021		2021 – 2022		2022-2023		BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol		
	Low Tide	Hide Tide	Low Tide	High Tide	Low Tide	High Tide					
Black-headed gull <i>Chroicocephalus ridibundus</i> (BH)	225 individuals feeding middle of boundary (03/02/2021)	49 individuals swimming next to slipway (18/02/2021)	123 individuals foraging at transitional zone between Liffey and Dodder (23/02/2022)	15 individuals loafing by boardwalk at north end of boundary (10/12/2021)	42 Individuals foraging at the slipway within the proposed DPTOB (14/03/2023)		Red (B/W)	-	South Dublin Bay and River Tolka Estuary SPA approximately 1km North Bull Island SPA approximately 2.9km The Murrough SPA approximately 28km	31,000	n/a
Light-bellied brent goose <i>Branta bernicla</i> (BG)	157 individuals swimming within boundary in middle of Liffey Estuary Lower (03/02/2021)	270 individuals swimming within boundary in middle of Liffey Estuary Lower (19/03/2021)	500 Individuals flying over from Shelbourne park (10/12/2021)	240 individuals rafting in middle of the Liffey Estuary Lower. Flew in from the east (19/01/2022)	532 individuals rafting in the center of the Liffey Estuary Lower north of the proposed DPTOB (24/02/2023)		Amber (W)	-	South Dublin Bay and River Tolka Estuary SPA approximately 1km North Bull Island SPA approximately 2.9km Baldoyle SPA c.8km Malahide Estuary SPA approximately 12km Rogerstown Estuary SPA approximately 17km Skerries Islands SPA approximately 26km The Murrough SPA approximately 28km	400	350
Common gull <i>Larus canus</i> (CM)	1 individual swimming transitional zone between Liffey and Dodder (18/12/2020)	5 individuals swimming at mouth of Grand canal (18/02/2021)	3 individuals foraging in transitional zone between Liffey and Dodder (06/01/2022)	11 individuals foraging (being fed by pedestrians) transitional zone between Liffey and Dodder (22/12/2021)	3 individuals foraging on exposed mud to the south of the slipway within the proposed DPTOB (13/01/2023)		Amber (B/W)	-	Dundalk Bay SPA approximately 57km	16,400	n/a

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)						Conservation Importance			Threshold of International Population	Threshold of National Population
	2020 - 2021		2021 – 2022		2022-2023		BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol		
	Low Tide	Hide Tide	Low Tide	High Tide	Low Tide	High Tide					
Cormorant <i>Phalacrocorax carbo</i> (CA)	4 individuals flying west through middle of boundary (03/02/2021)	4 individuals flying west through middle of boundary (07/10/2020)	8 individuals Foraging in Middle of Liffey Estuary Lower (27/10/2021)	20 individuals flying over middle of Liffey Estuary Lower (10/11/2021)	2 individuals foraging within Grand canal docks (24/01/2023)		Amber (B/W)	-	Ireland’s Eye SPA approximately.12km Lambay Island SPA approximately.20km Skerries Islands SPA approximately 26km	1,200	110
Grey heron <i>Ardea cinerea</i> (H.)	2 individuals feeding next to slipway (18/12/2020)	1 individual flying through middle of boundary (30/04/2021)	1 individual foraging close to slipway (24/11/2021)	No individuals recorded at high tide	1 individual foraging at the mouth of the Dodder river (07/03/2023)		-	-	Wexford Harbour and Slobbs SPA approximately 97.5km	5,000	25
Herring gull <i>Larus argentatus</i> (HG)	33 individuals swimming and on ground at southern part of boundary (16/04/2021)	431 individuals flying east at various heights over River Liffey for a period of 20 minutes (19/11/2020)	44 individuals foraging in area of slipway (23/02/2022)	65 Individuals flying over from North to South (22/12/2021)	54 individuals foraging at the mouth of the Dodder river (22/12/2022)		Red (B/W)	-	Ireland’s Eye SPA approximately 12km Lambay Island SPA approximately 20km The Murrough SPA approximately 28km Skerries Islands SPA approximately.26km	14,400	n/a
Lesser black-backed gull <i>Larus fuscus</i> (LB)	2 individuals on ground next to slipway (05/11/2020)	1 individual flying over eastern quay next to slipway (19/03/2021) Other dates of 1 individual: 30/04/2021	1 individual flying in circles above VP (19/01/2022)	2 individuals flying over area above transitional zone between Liffey and Dodder (09/03/2022)	2 individuals foraging to the south of the slipway within he proposed DPTOB (13/01/2023)		Amber (B/W)	-	Lambay Island SPA approximately.20km	5,500 (Western Europe)/ 6,300 (Southern Scandinavia)	n/a
Mallard <i>Anas platyrhynchos</i> (MA)	9 individuals flying north west through middle of	14 individuals swimming at eastern quay (06/01/2021)	2 individuals flying over from north to south over the proposed	18 individuals rafting transitional zone between Liffey and	4 individuals foraging at the mouth of the Dodder river (24/10/2022)		Amber (B/W)	-	Dundalk Bay SPA approximately 57km	53,000	280

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)						Conservation Importance			Threshold of International Population	Threshold of National Population
	2020 - 2021		2021 – 2022		2022-2023		BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol		
	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide					
	boundary (06/01/2021)		DPTOB (02/02/2022)	Dodder (06/01/2022)							
Redshank <i>Tringa tetanus</i> (RK)	2 individuals feeding next to slipway (06/01/2021)	1 individual flying northeast through middle of boundary (19/03/2021)	2 individuals flying over area directly north of VP (24/11/2021)	2 individuals flying over middle of Liffey Estuary Lower (23/02/2022)	2 individuals foraging at the slipway on the southern edge of the proposed DPTOB (27/02/2023)		Red (B/W)	-	South Dublin Bay and River Tolka Estuary SPA approximately <1km North Bull Island SPA approximately 2.9km Malahide Estuary SPA approximately 12km Rogerstown Estuary SPA approximately 17km	2,400 (Iceland & Faeroe Islands)/760 (Britain & Ireland)	240
Curlew <i>Numenius arquata</i> (CU)	1 individual feeding at transitional zone between Liffey and Dodder and flying north-west (05/11/2020) Other dates of 1 individual: 19/11/2020 04/12/2020	No individuals were recorded during high tide 2020/2021 vantage point surveys	1 individual foraging in the dodder 22/10/2021)	No individuals recorded	No individuals recorded		Red (W)	-	North Bull Island SPA approximately 2.9km	7,600	350
Kingfisher <i>Alcedo atthis</i> (KF)	2 individuals flying north then west along western quay (07/10/2020)	1 individual flying north-east next to slipway at c.1m in height above water (07/10/2020) Other dates of 1 individual: 15/10/2020	1 individual flying along dock wall to the west of VP (23/02/2022)	1 individual flying over middle of Liffey Estuary Lower and to the west (10/12/2021)	1 individuals flying over the proposed DPTOB (14/03/2023)		Amber (B)	✓	River Boyne and River Blackwater SPA approximately 38.9km	N/A	N/A

Common name/Scientific name/BTO Code	Activity and Distribution in the study area (Peak count)						Conservation Importance			Threshold of International Population	Threshold of National Population
	2020 - 2021		2021 – 2022		2022-2023		BoCCI (B – Breeding / W – Wintering)	Annex I	SPA designated for SCI species within Zol		
	Low Tide	Hide Tide	Low Tide	High Tide	Low Tide	High Tide					
		19/11//2020 04/12/2020 18/12/2020 06/01/2021 03/02/2021									
Little egret <i>Egretta garzetta</i> (ET)	1 individual flying south towards River Dodder (16/04/2021)	No individuals recorded	1 individual foraging transitional zone between Liffey and Dodder (22/10/2021)	No individuals recorded	1 individual perched on mud at the mouth of the Dodder river (24/10/2022)	-	✓	-	1,100	20	
Little grebe <i>Tachybaptus ruficollis</i> (LG)	3 individuals feeding and swimming at Liffey Estuary Lower and Grand Canal dock gates (06/01/2021)	2 individuals feeding and swimming at western quay (06/01/2021)	1 individual rafting in Liffey Estuary Lower directly in front of VP (10/11/2021)	No individuals recorded at high tide	1 individual foraging at the Grand canal lock gates (27/02/2023)	Amber (B/W)	-	Wexford Harbour and Slobbs SPA approximately 96.9km	4,700	20	
European shag <i>Phalacrocorax aristotelis</i>	No individuals recorded	No individuals recorded	No individuals recorded	No individuals recorded	1 individual foraging at the mouth of the Dodder river (13/01/2023)	Amber	-	Lambay Island SPA approximately 20km	N/A	N/A	
Tufted duck <i>Aythya fuligula</i> (TU)	1 individual flying south towards River Dodder (19/03/2021)	No individuals recorded	No individuals recorded	No individuals recorded	No individuals recorded	Amber (B/W)	-	-	8,900	270	
Whimbrel <i>Numenius phaeopus</i> (WM)	1 individual feeding on ground in middle of boundary (30/04/2021)	No individuals recorded	No individuals recorded	No individuals recorded	No individuals recorded	-	-	-	6,700	n/a	

- 167 There are large areas of suitable foraging and/or roosting habitat available for these wintering bird species both adjacent to, and in the wider locality of the Proposed Scheme (i.e. beyond the 900m study area, from approximately 900m – 3km from these existing sites located within the footprint of the Proposed Scheme) including:
- Parks and greenspaces such as Fairview Park, Irishtown Nature Park and Sean Moore Park, Monkstown Football Club & Pembroke Cricket Club, East Point Park; and
  - Wetland habitat associated with South Dublin Bay and River Tolka Estuary SPA, and North Dublin Bay SPA.
- 168 It is very likely that these wintering bird species currently utilise these and other suitable lands in the wider area to a similar intensity.
- 169 Wetland birds are mobile species and can regularly travel up to 20km between roosting and feeding sites<sup>19</sup>. There are no European sites for which the following SCI species are designated within 20km of the Proposed Scheme or Dublin Bay: common gull, grey heron, mallard, and tufted duck. It is therefore not considered likely that the individuals recorded during vantage point surveys are associated with the SCI populations of any European site. It is considered likely that the remaining SCI species are associated with European sites in the vicinity of the Proposed Scheme i.e. light-bellied brent goose, herring gull, black-headed gull, cormorant, curlew, lesser black-backed gull and redshank.

### 5.1.3 Hydrology

- 170 The Proposed Scheme crosses two water bodies: Liffey Estuary Lower and the Royal Canal and is located within close proximity to the Liffey Estuary Upper and Dodder\_050, both of which are tidal at this location and therefore hydrologically connected to the Proposed Scheme. All watercourses are within the Lower Liffey Estuary catchment. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Upper and the Liffey Estuary Lower.
- 171 Details on the water quality of each watercourse, as sourced from the Environmental Protection Agency (EPA), and the distances from the proposed crossing point to downstream waterbodies are also provided in **Table 12** and displayed in Figure 6.

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<sup>19</sup> Scottish Natural Heritage (2016) *Guidance: Assessing connectivity with Special Protection Areas (SPAs). Version 3*

**Table 12 Water Quality of Watercourses / Waterbodies in the vicinity of the Proposed Scheme**

Watercourse	Location in relation to the Proposed Scheme	EPA Q-Values (Monitoring Station) and Water Framework Directive Water Quality Status / Risk Score (2016-2021 period where applicable)	Name of and Distance to Downstream Waterbodies along with their associated Water Quality
Liffey Estuary Lower	The Proposed Scheme runs parallel to Liffey Estuary Lower on both banks of the waterbody, crossing it twice at Samuel Beckett Bridge and Tom Clarke East Link Bridge and at the end of York Road	Q-Value Score not applicable  Good 'At risk'	The Liffey Estuary Lower transitional waterbody (classified as "Unpolluted") at Grand Canal Dock, which ultimately drains to Dublin Bay coastal waterbody (classified as "Unpolluted").
Liffey Estuary Upper	40m upstream of the Proposed Scheme	Q-Value Score not applicable  Good 'At risk'	It flows into the Liffey Estuary Lower transitional waterbody (classified as "Unpolluted") at Grand Canal Dock, which ultimately drains to Dublin Bay coastal waterbody (classified as "Unpolluted").
River Dodder (Dodder_050)	One proposed crossing point at the confluence with the Liffey Estuary Lower at York Road and Sir John Rogerson's Quay	Q3-4 (Lowest assigned Q-Value along the length of the watercourse)  Moderate 'At risk'	It enters the Liffey Estuary Lower transitional waterbody (classified as "Unpolluted") at Grand Canal Dock, which ultimately drains to Dublin Bay coastal waterbody (classified as "Unpolluted").
Grand Canal	Located approximately 200m upstream of the Proposed Scheme.	Q-Value Score not applicable  Good Ecological Potential 'At risk'	It enters the Liffey Estuary Lower transitional waterbody (classified as "Unpolluted") at Grand Canal Dock, which ultimately drains to Dublin Bay coastal waterbody (classified as "Unpolluted").
Royal Canal	The Proposed Scheme crosses the Royal Canal at the Scherzer Bridges at Spencer Dock	Q-Value Score not applicable  Good Ecological Potential Risk status under review	It enters the Liffey Estuary Lower transitional waterbody (classified as "Unpolluted") at Grand Canal Dock, which ultimately drains to Dublin Bay coastal waterbody (classified as "Unpolluted").
Dublin Bay	The Proposed Scheme will ultimately discharge into Dublin Bay. Located 430m south of the Proposed Scheme	Q-value score N/A  Good 'Not at Risk'	N/A

#### 5.1.4 Hydrogeology

- 172 Geological Survey of Ireland (GSI) data indicates that the bedrock formation 1:500k in the Proposed Scheme is part of the Tobercolleen & Lucan Formations "Calp", a marine basinal facies characterised by "Dark-grey argillaceous & cherty limestone and shale (Calp)".
- 173 The Proposed Scheme transverses one groundwater body. Environmental data sourced from the EPA for this groundwater body is presented below:



### Dublin Groundwater Body

- For the majority of this area, it is considered to be of “Good” Groundwater Body WFD Status (2016-2021) and “not at risk” of failing the WFD groundwater quality objectives for the majority of its area;
- The aquifers located within this groundwater body and where the Proposed Scheme transverses are classified as “locally important aquifer – moderately productive only in local zones” and poor aquifer – bedrock which is generally unproductive except for local zones.

174 The vulnerability of the Dublin groundwater body is ranked as “Low” within the footprint of the Proposed Scheme.

### 5.1.5 Soils & Geology

175 The 1:100,000 GSI bedrock geology map of the area indicates that the underlying bedrock along the Proposed Scheme comprises the Lucan Formation – (Calp) dark limestone and shale. The main subsoils encountered across the Proposed Scheme include made ground, with localised pockets of alluvium, marine beach sands, till derived from limestones and gravels derived from limestones.

176 The bedrock encountered in the study area is the Lucan Formation, a dark Carboniferous limestone and shale. The formation comprises dark-grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. No structural bedrock features were identified within the study area.

## 6 Potential Impacts, Zone of Influence and Identifying European Sites at Risk of Effects

177 Based on the baseline and receiving ecological environment and the nature and characteristics of the Proposed Scheme the following potential impacts have been identified:

- Habitat loss and fragmentation;
- Habitat degradation / effects on QI / SCI species as a result of hydrological impacts;
- Habitat degradation as a result of hydrogeological impacts;
- Habitat degradation as a result of introducing/spreading non-native invasive species;
- Disturbance and displacement impacts; and
- Direct injury/mortality impacts.

### 6.1 Habitat loss and fragmentation

178 The Proposed Scheme does not overlap with any European site, although it is located in close proximity to Dublin Bay which is variously designated for a number of overlapping European sites. The nearest European sites to the Proposed Scheme are South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC, which are approximately 0.5km south-east of the Proposed Scheme (as the crow flies). These European sites are hydrologically connected to the Proposed Scheme via the Liffey Estuary Lower. South Dublin Bay and River Tolka Estuary SPA is approximately 2.4km downstream of the Tom Clarke East Link Bridge and South Dublin Bay SAC is located approximately 3.2km downstream to the east. Therefore, there is no potential for direct habitat loss or fragmentation. There is potential for direct ex-situ estuarine habitat loss and fragmentation to occur, as a result of land reclamation adjacent to the Tom Clarke East Link Bridge. Habitat loss may also occur indirectly as a consequence of severe habitat degradation arising from a reduction in water quality and/or a change to the hydrological regime, as described in the section below.

179 Otter populations are known to utilise the Liffey Estuary Lower for breeding and foraging purposes. Otter territories are within the range of 7.5km for females and 21km for males (O’Neill *et al.*, 2009). It is considered that the Proposed Scheme is within the potential home range of male otter associated with the Wicklow Mountains SAC, which is located 12.3km away. The reclamation of land to facilitate the Proposed Scheme will not result in the loss of any breeding sites, however, will result in the removal of 3950m<sup>2</sup> estuarine habitat suitable to support this species.

- 180 Peregrine falcon, an Annex I bird species was recorded flying in the vicinity of the Proposed Scheme. No suitable breeding habitat for peregrine falcon will be lost as a result of the Proposed Scheme.
- 181 SCI species for which SPAs in the vicinity of the Proposed Scheme have been designated are known to utilise *ex-situ* feeding sites in the Dublin area (i.e. South Dublin Bay and River Tolka SPA, North Bull Island SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA and The Murrough SPA). Three potential inland feeding sites within the footprint of the Proposed Scheme were surveyed to inform this assessment, namely CBC0016WB001 (Small amenity grassland area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge), CBC0016WB002 (Gaelic pitch and amenity grassland area within Ringsend Park) and CBC0016WB003 (Grassy verge within Irishtown Stadium and amenity grassland area with scattered trees between the stadium and Bremen Avenue). Wintering SCI bird species were recorded at all three sites. It is proposed to remove approximately 10m<sup>2</sup> of existing amenity grassland at CBC0016WB001 to facilitate the proposed Dodder Bridge and associated land reclamation.
- 182 To facilitate a shared user path through Ringsend Park the existing path will require widening by approximately 2 m for its length and therefore an approximate 43m<sup>2</sup> strip of amenity grassland habitat within CBC0016WB002 will be removed. Similarly, to facilitate the widening of an existing path connecting Strand Street to Irishtown Stadium at CBC0016WB003 it is proposed to widen the path by approximately 2 m for its length and therefore remove approximately 153m<sup>2</sup> area of suitable wintering bird habitat.
- 183 SCI species for which SPAs in the vicinity of the Proposed Scheme have been designated have been recorded loafing and foraging in the vicinity of the proposed DPTOB, during vantage point surveys. These species include herring gull, black-headed gull, lesser black-backed gull, cormorant, light-bellied brent goose, curlew, redshank and common tern (i.e. North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Rockabill SPA, Dalkey Islands SPA and The Murrough SPA). The reclamation of land to facilitate the Proposed Scheme will result in the removal of 3950m<sup>2</sup> estuarine habitat suitable to support these species.
- 184 In summary therefore, there is potential for impacts on SCI species associated with SPAs to occur as a result of habitat loss / fragmentation. The Proposed Scheme also has the potential to result in habitat degradation of the qualifying / special conservation interest species of European sites as the result of hydrological impacts. Therefore, there is potential for in combination effects to occur.

The ZoI of this impact is potentially any habitat area within or traversed by the proposed development boundary that lies either within/ immediately adjacent to Dublin Bay or those potential *ex-situ* sites supporting QI/SCI listed species of Wicklow Mountains SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA, Skerries Islands SPA, Ireland's Eye SPA, Dalkey Islands SPA, Rockabill SPA, Lambay Island SPA and The Murrough SPA.

## 6.2 Habitat degradation / effects on QI / SCI species as a result of hydrological impacts

- 185 The Proposed Scheme is hydrologically connected to Dublin Bay via the Liffey Estuary Lower, and Ringsend WWTP. There is additional hydrological connectivity to the Royal Canal and Dodder\_050.
- 186 The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during construction, or operation, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and/or leaks of containments into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge point and therefore impact the downstream environment of Dublin Bay, including the following European sites: North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Rockabill to Dalkey Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA and

Dalkey Islands SPA. This reduction in water quality (either alone or in combination with other pressures on water quality) could result in the degradation of sensitive habitats present within these European sites, which in turn would negatively affect the SCI bird species that rely upon these habitats as foraging and / or roosting habitat. It could also negatively affect the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that the conservation objectives of North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA are undermined.

- 187 In a worst case scenario, in the absence of mitigation measures, the release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during construction, or operation, also has the potential to affect SCI bird species and QI mammal species that commute, forage and in respect of SCI birds loaf in Dublin Port i.e. birds associated with Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Ireland's Eye SPA, North Dublin Bay SPA, South Dublin Bay, Howth Head SPA, and River Tolka Estuary SPA, Malahide Estuary SPA, Rogerstown SPA, Baldoyle Bay SPA, Dalkey Islands SPA, Murrough SPA, marine mammals associated with Rockabill to Dalkey Island SAC and Lambay Island SAC and the otter population associated with the Wicklow Mountains SAC. This reduction in water quality (either alone or in combination with other pressures on water quality) could result in the degradation of sensitive habitats present within downstream European sites, which in turn would negatively affect the SCI bird species that rely upon these habitats as foraging and / or roosting habitat. It could also negatively affect the quantity and quality of prey available to SCI and QI populations. These potential impacts could occur to such a degree that the conservation objectives of the Skerries Islands SPA, Rockabill SPA and Lambay Island SPA, Ireland's Eye SPA, North Dublin Bay SPA, South Dublin Bay and River Tolka Estuary SPA, Malahide Estuary SPA, Rogerstown SPA, Dalkey Islands SPA, Murrough SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC and Wicklow Mountains SAC are undermined.

The Zol of this impact is any wetland, coastal or marine habitat downstream of any watercourse crossings or drainage outfalls, and any aquatic/marine species therein and includes North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Rockabill to Dalkey Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Skerries Islands SPA, Rockabill SPA, Dalkey Islands SPA, Lambay Island SPA, Ireland's Eye SPA, Malahide Estuary SPA, Rogerstown SPA, Baldoyle Bay SPA, Murrough SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC and Wicklow Mountains SAC.

### 6.3 Habitat degradation effects as a result of Hydrogeological Impacts

- 188 Groundwater effects could arise as a consequence of an accidental pollution event potentially causing a reduction in groundwater quality and / or dewatering activity potentially causing a reduction in groundwater levels in the locality. Long-term discharge of surface water runoff to groundwater during operation of the Proposed Scheme may result in a reduction in groundwater quality and / or quantity in the receiving environment, also resulting in the degradation of groundwater dependent terrestrial ecosystem and any species that they may support.
- 189 The potential for hydrogeological impacts is highly variable depending on the nature of the proposed works at specific locations and the receiving environment ground conditions. The unmitigated hydrogeological Zol of the Proposed Scheme is not considered to extend to any groundwater dependent terrestrial ecosystems linked to European sites. This Zol follows the professional judgement of the design team hydrogeology specialists.
- 190 There is potential for contaminated land and groundwater to be discharged to surface water during excavation works associated with the Proposed Scheme. This potential impact is addressed in the Section 6.2 above.
- 191 Groundwater effects could arise as a consequence of an accidental pollution event potentially causing a reduction in groundwater quality and / or dewatering activity potentially causing a reduction in groundwater levels in the locality. However there are no groundwater dependent terrestrial ecosystems located within the hydrogeological Zol of the Proposed Scheme, which are linked to European sites.

#### **6.4 Habitat degradation as a result of introducing / spreading Non-Native invasive species**

- 192 No non-native invasive plant species listed on the Third Schedule of the (Birds and Natural Habitats) Regulations were recorded within, or in close proximity to, the Proposed Scheme. However, the desk study returned records of species listed on the Third Schedule of the (Birds and Natural Habitats) Regulations in the vicinity of the Proposed Scheme. In the absence of mitigation, there is potential for these species to spread or be introduced, during construction and / or routine maintenance / management works, to terrestrial habitat areas in European sites downstream in Dublin Bay. (i.e. North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA). These in turn may result in the degradation of the existing habitats and therefore undermine the conservation objectives of these European sites.
- 193 It is considered unlikely that invasive species could spread to European sites which are located a significant distance from the outfall locations of the Liffey Estuary Lower (i.e. Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC and Dalkey Islands SPA).
- 194 In summary therefore, the Proposed Scheme has the potential to result in habitat degradation of the qualifying / special conservation interest species of European sites as the result of the spread of invasive species, there is the potential for in combination effects to occur in association with other activities / plans / projects.

The Zol of this impact is any wetland, coastal or marine habitat downstream of any watercourse crossings or drainage outfalls, and any aquatic/marine species therein and includes South Dublin Bay SAC, North Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA,

#### **6.5 Habitat degradation as a result of air quality impacts**

- 195 A reduction in air quality within the immediate vicinity of the construction works may occur as a consequence of dust deposition associated with these construction activities. This includes reduction in photosynthesis due to smothering from dust on the plants and chemical changes such as acidity to soils. Furthermore, emissions from car exhausts, and the deposition of particulate matter and heavy metals produced by engine, brake and tyre wear, can contribute to increased deposition of pollutants such as oxides of nitrogen (NO<sub>x</sub>, NO<sub>s</sub>), volatile organic compounds (VOCs), particulate matter (PM), heavy metals (HM) and ammonia (NH<sub>4</sub>) in the vicinity of a road carriageway. This can affect the ecosystems and vegetation present, influencing plant growth rates and species composition, diversity, and abundance.
- 196 The unmitigated Zol for air quality effects arising from the Proposed Scheme has the potential to extend 50m from the Proposed Scheme boundary, and 500m from construction compounds during the construction phase, and up to 200m the Proposed Scheme boundary during the operational phase. There are no European sites present within these distances.
- 197 As the Proposed Scheme does not have the potential to result in habitat degradation of the Qualifying / Special Conservation Interest species of any European site as the result of air quality impacts, either during the construction phase or the operational phase, there is no potential for in combination effects to occur in that regard.

#### **6.6 Disturbance and displacement impacts**

- 198 A temporary and / or permanent increase in noise, vibration and / or human activity levels during the construction and / or operation of the Proposed Scheme could result in the disturbance to and / or displacement of fauna species present within the vicinity of the Proposed Scheme.

- 199 For mammal species such as otter, disturbance effects would not be expected to extend beyond 250m<sup>20</sup>. For birds, disturbance effects would not be expected to extend beyond a distance of approximately 300m<sup>21</sup>, as noise levels associated with general construction activities would attenuate to close to background levels at that distance. There are no European sites within the disturbance ZOI of the Proposed Scheme (the nearest European site(s) are the South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC located 0.5km south-east of the Proposed Scheme), however, *ex-situ* populations of SCI and QI species associated with European sites have been recorded in the vicinity of the Proposed Scheme.
- 200 Noisy works associated with the construction of the Proposed Scheme include piling associated with the proposed pedestrian boardwalks and the proposed DPTOB, deconstruction, relocation and reconstruction of the Scherzer Bridges (at George's Dock and the Royal Canal), and the demolition and reconstruction of the existing SPRC building.
- 201 It is considered that the Proposed Scheme is within the potential home range of male otter associated with the Wicklow Mountains SAC. Otter are documented from along the Royal Canal, Grand Canal, Dodder\_050 and the Liffey Estuary Lower. Although otter present in the vicinity of the Liffey Estuary Lower are likely to be habituated to a degree of human related disturbance; noise and vibration associated with the construction works involved in the construction of the Proposed Scheme (i.e. piling and building demolition) have the potential to disturb or displace otter during this period. Therefore, there is potential for the construction phase of the Proposed Scheme to result in disturbance / displacement impacts on QI otter populations associated with the Wicklow Mountains SAC.
- 202 Marine mammals associated with European sites have been recorded commuting and foraging within the Liffey Estuary Lower, in the vicinity of the Proposed Scheme. The construction methodology for the proposed structural and demolition works of the DPTOB, proposed pedestrian boardwalks and Scherzer bridges involves noisy activities in or adjacent to the aquatic environment such as piling and noise from additional support / delivery vessels associated with the Construction Phase. The Marine Mammal Risk Assessment (IWDG, 2020) prepared for the Proposed Scheme states that in the absence of mitigation, prolonged exposure to pile installation could lead to Temporary Threshold Shift (TTS) (i.e. temporary hearing loss as a result of exposure to noise, and changes in the behaviour of marine mammals) (IWDG 2020). Therefore, there is potential for the construction of the Proposed Scheme to result in the disturbance / displacement of QI marine mammal populations associated with Rockabill to Dalkey Island SAC and Lambay Island SAC during the Construction Phase.
- 203 It is considered possible that peregrine falcon in the vicinity of the Proposed Scheme are associated with the SPA population of Wicklow Mountains SPA. This species is known to overwinter on the coast and feed on the high concentrations of waterbirds present on the estuaries, and pigeons in the city centre<sup>22</sup>. Therefore, there is potential that peregrine falcon associated with the Wicklow Mountains SPA may hunt in the vicinity of the Proposed Scheme. Therefore, there is potential for the Proposed Scheme to result in disturbance / displacement impacts on SCI populations of peregrine falcon associated with the Wicklow Mountains SPA.

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<sup>20</sup> This is consistent with Transport Infrastructure Ireland (TII) guidance (Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes (2006) and Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes(2005)) documents. This is a precautionary distance, and likely to be moderated by the screening effect provided by surrounding vegetation and buildings, with the actual ZOI of construction related disturbance likely to be much less in reality.

<sup>21</sup> Current understanding of construction related noise disturbance to wintering waterbirds is based on the research presented in Cutts *et al.* (2009) and Wright *et al.* (2010). In terms of construction noise, levels below 50dB would not be expected to result in any response from foraging or roosting birds. Noise levels between 50dB and 70dB would provoke a moderate effect/level of response from birds, i.e. birds becoming alert and some behavioural changes (e.g. reduced feeding activity), but birds would be expected to habituate to noise levels within this range. Noise levels above 70dB would likely result in birds moving out of the affected zone or leaving the site altogether. At c. 300m, typical noise levels associated with construction activity (BS 5228) are generally below 60dB or, in most cases, are approaching the 50dB threshold.

<sup>22</sup> Birdwatch Ireland. *Peregrine webpage*. Available from: <https://birdwatchireland.ie/birds/peregrine/>



- 204 There are a number of SPAs located in relatively close proximity to the Proposed Scheme which are designated for SCI species that are known to forage and/or roost at inland sites, such as amenity grassland playing pitches (i.e. Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA, Murrough SPA, Skerries Islands SPA, Ireland's Eye SPA and Lambay Island SPA). These species include light-bellied brent goose, lapwing, oystercatcher, black-headed gull, herring gull and lesser black-backed gull. Species recorded using inland feeding sites in the vicinity of the Proposed Scheme include black-headed gull, herring gull, light-bellied brent goose, and oystercatcher. Suitable inland foraging/roosting sites, which these bird species utilise, are located within the potential Zol of the Proposed Scheme (See Section 5.1.2). Therefore, there is potential for the Proposed Scheme to result in disturbance/displacement impacts on SCI populations associated with European Sites.
- 205 Special Conservation Interest (SCI) species for which SPAs in the vicinity of the Proposed Scheme have been designated have been recorded loafing and foraging in the vicinity of the proposed DPTOB, during vantage point surveys. These species include herring gull, black-headed gull, lesser black-backed gull, cormorant, light-bellied brent goose, curlew, redshank and common tern (i.e. North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Rockabill SPA, Dalkey Islands SPA and The Murrough SPA). Therefore, there is potential for the Proposed Scheme to result in disturbance / displacement impacts on SCI populations associated with European sites.
- 206 There is potential that other SCI species including common tern which was observed during surveys, and arctic tern (which is noted from Desk study at Pigeon house Power station) could be negatively impacted, particularly in respect of the proposed DPTOB, where its construction could impact on nesting sites on Grand Canal Dock breeding site resulting in abandonment of nests or impacting distribution through displacement during construction and operation of the bridge acting as a significant barrier to the tern species.
- 207 In summary therefore, the Proposed Scheme has the potential to result in the disturbance / displacement of the qualifying/special conservation interest species of any European site, there is the potential for in combination effects to occur in association with other activities / plans / projects.

The Zol for disturbance associated with general construction activities for mammal species such as otter, is 150m, while for wintering birds, disturbance effects would not be expected to extend beyond a distance of approximately 300m. There are no European sites within the disturbance Zol of the Proposed Scheme, however SCI species are known to forage and/or roost within this Zol and European sites potentially impacted includes; Wicklow Mountains SAC, Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA, Murrough SPA, Skerries Islands SPA, Ireland's Eye SPA, Dalkey Islands SPA and Lambay Island SPA.

### 6.7 Direct injury / Mortality impacts

- 208 Considering the location of the Proposed Scheme on the Liffey Estuary Lower, in close proximity to a number of SPAs present in Dublin Bay, there is potential for the proposed DPTOB to present a collision risk to mobile SCI species which are present in the area, during the construction and operational phases. SCI bird species for which SPAs in the Dublin area have been designated have been recorded in the vicinity of the proposed DPTOB, on amenity grassland areas and loafing / feeding downstream of the proposed DPTOB location on the Liffey Estuary Lower / Dodder\_050 confluence. These species include herring gull, black-headed gull, lesser black-backed gull, cormorant, light-bellied brent goose, curlew, redshank and common tern (i.e. North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Rockabill SPA, Dalkey Islands SPA and The Murrough SPA). Therefore, there is potential for the Proposed Scheme to result in mortality of SCI bird species associated with European sites.

- 209 It is considered possible that peregrine falcons in the vicinity of the Proposed Scheme are associated with the SPA population of Wicklow Mountains SPA. Therefore, there is potential that peregrine falcons associated with the Wicklow Mountains SPA may hunt in the vicinity of the Proposed Scheme. There is potential for the proposed DPTOB to present a collision risk to hunting peregrine falcons, during the construction and operational phases. Therefore, there is potential for the Proposed Scheme to result in direct injury / mortality impacts on SCI populations of peregrine falcon associated with the Wicklow Mountains SPA.
- 210 Marine mammals associated with European sites have been recorded commuting and foraging within the Liffey Estuary Lower, in the vicinity of the Proposed Scheme. During the construction phase of the proposed DPTOB, there will be an increase of vessels in the vicinity. According to the Marine Mammal Risk Assessment<sup>23</sup> prepared for the Proposed Scheme, the risk of injury and mortality is considered extremely low as marine mammals in Dublin Harbour are exposed to considerable vessel traffic on a daily basis and would be aware of their presence. There will be no increase in vessels associated with the operational phase of the Proposed Scheme. Therefore, it is not likely that the Proposed Scheme will pose a significant collision / mortality risk for marine mammals in Dublin Bay.
- 211 Otter which may be associated with the QI population of the Wicklow Mountains SAC have been recorded in the vicinity of the Proposed Scheme. Vehicular and vessel traffic associated with the operational phase of the Proposed Scheme is not likely to result in significant injury / mortality risk to QI otter populations as otter present in the vicinity of the Proposed Scheme are habituated to existing traffic and shipping levels in the vicinity of the Proposed Scheme. During the construction phase of the proposed DPTOB, there will be an increase of vessels in the vicinity as well as human and construction disturbance for a period of approximately 30 months. The risk of injury or mortality arising from the construction phase of the Proposed Scheme as a result of vessel collision is considered to be extremely low as otter present in this area are exposed to considerable vessel traffic on a daily basis and would be aware of their presence. As otter in the vicinity of the Proposed Scheme are habituated to normal traffic levels associated with Dublin City Centre it is unlikely that an increase in construction related vehicles and machinery during construction would present a significant injury / mortality risk. However, given that a proposed Construction Compound will be located adjacent to the River Dodder and Liffey Estuary Lower, and that there will be in-stream disturbance associated with the construction of the proposed DPTOB, there is potential for injury / mortality of otter during the construction phase of the Proposed Scheme.

The Zol of direct injury / mortality impacts is considered to be the Proposed Scheme extent. There are no European sites within the disturbance Zol of the Proposed Scheme, however SCI species are known to forage, loaf and/or roost within this Zol, potentially presenting a collision risk, and includes; North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Rockabill SPA, Dalkey Islands SPA, The Murrough SPA, Wicklow Mountains SPA and Wicklow Mountains SAC.

## 6.8 Summary

- 212 The potential impacts associated with the Proposed Scheme have the possibility to affect the receiving environment and, as a result, the conservation objectives supporting the Qualifying Interest / Special Conservation Interests of the following European sites: North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Malahide Estuary SPA, Baldoyle Bay SPA,

<sup>23</sup> IWDG (2020). *Marine Mammal Risk Assessment of Proposed Dodder Public Transportation Opening Bridge. Report prepared in support of Environmental assessment for Planning application.*



Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Rockabill SPA, Murrough SPA, Wicklow Mountains SAC and Wicklow Mountains SPA.

213 The potential impacts of the Proposed Scheme on the receiving environment, their zone of influence, and the European sites at risk of likely significant effects are summarised in **Table 13**.

**Table 13 Summary of the potential impacts of the Proposed Scheme on the receiving environment, their potential zone of influence, and the European sites within the zone of influence**

Potential Direct, Indirect In Combination Effects and the Zol of the Potential Effects	Are there any European sites within the Zol of the Proposed Scheme?
<p>Habitat loss and fragmentation</p> <p>There are no European sites intersected by the Proposed Scheme. There is potential for permanent loss of <i>ex-situ</i> inland feeding sites used by SCI wintering bird species and long term loss of forage territory used by otter</p>	<p>Yes</p> <p>No European sites are at risk of direct habitat loss impacts; however, there are European sites at risk of <i>ex-situ</i> habitat loss impacts associated with the Proposed Scheme.</p> <p>Wicklow Mountains SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA, Skerries Islands SPA, Ireland’s Eye SPA, Dalkey Islands SPA, Rockabill SPA, Lambay Island SPA and The Murrough SPA</p>
<p>Habitat degradation / effects on QI / SCI species as a result of hydrological impacts</p> <p>Habitats and species downstream of the Proposed Scheme and the associated surface water drainage discharge points, and downstream of offsite wastewater treatment plants.</p>	<p>Yes</p> <p>There are European sites at risk of hydrological effects associated with the Proposed Scheme.</p> <p>North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Rockabill to Dalkey Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Skerries Islands SPA, Rockabill SPA, Dalkey Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, Malahide Estuary SPA, Rogerstown SPA, Baldoyle Bay SPA, Murrough SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC and Wicklow Mountains SAC</p>
<p>Habitat degradation as a result of hydrogeological impacts</p> <p>Groundwater-dependant habitats, and the species those habitats support, in the local area that lie downgradient of the Proposed Scheme.</p>	<p>No</p> <p>There are no European sites at risk of hydrogeological effects associated with the Proposed Scheme.</p>
<p>Habitat degradation as a result of introducing / spreading non-native invasive species</p> <p>Habitat areas within, adjacent to, and potentially downstream of the Proposed Scheme.</p>	<p>Yes</p> <p>There are records of non-native invasive species present adjacent to the Proposed Scheme and, therefore, a risk associated with the construction and operation of the Proposed Scheme to downstream European sites from the spread / introduction of non-native invasive species.</p>

Potential Direct, Indirect In Combination Effects and the Zol of the Potential Effects	Are there any European sites within the Zol of the Proposed Scheme?
	North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA
Habitat degradation as a result of air quality impacts Potentially up to 200m from the Proposed Scheme boundary.	No There are no European sites at risk of air quality effects associated with the Proposed Scheme
Disturbance and displacement impacts Potentially up to several hundred metres from the Proposed Scheme, dependent upon the predicted levels of noise, vibration and visual disturbance associated with the Proposed Scheme, taking into account the sensitivity of the qualifying interest species to disturbance effects	Yes There are no European sites within the potential zone of influence of disturbance effects associated with the construction or operation of the Proposed Scheme. However, there are <i>ex-situ</i> inland feeding sites and suitable loafing / foraging habitat which are utilised by SCI wintering bird species within the potential disturbance Zol of the Proposed Scheme. QI marine mammal populations may also be present within the disturbance Zol of the Proposed Scheme, as are QI otter. Wicklow Mountains SAC, Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA, Murrough SPA, Skerries Islands SPA, Ireland's Eye SPA, Dalkey Islands SPA and Lambay Island SPA
Direct injury / Mortality Impacts Potential for injury / mortality of mobile SCI species as a result of collision with structures or machinery during construction and operation	Yes There are SCI bird populations associated with European sites at risk of mortality as a result of direct injury / mortality impacts. Similarly, there is potential during construction for QI otter and marine mammals to suffer injury and or mortality owing to increased boat traffic and installation of Piles / sheet piles along the Liffey Estuary Lower, as well as otter along the Dodder with the installation of 2 number coffer dams. North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Rockabill SPA, Dalkey Islands SPA and The Murrough SPA, Wicklow Mountains SAC and Wicklow Mountains SPA

## 7 Assessment of Potential Effects on European Sites

214 This section of the NIS assesses the direct and indirect impacts of the Proposed Scheme on the European sites which fall within its zone of influence. For each of these European sites, the assessment below sets out the relevant ecological baseline information, the analysis of the potential impacts, the qualifying

interests/special conservation interests at risk of these potential impacts, in view of the sites’ conservation objectives, and the mitigation measures (if required) to avoid/reduce the effects of any potential impacts.

- 215 European sites have been grouped in the sub-sections below where the impact pathways, European sites' sensitivities, and potential effects are identical.
- 216 The assessment of the Proposed Scheme in combination with any other plans or projects on European sites is presented in Section 8.

**7.1 North Dublin Bay SAC [000206] and South Dublin Bay SAC [000210]**

*7.1.1 Ecological Baseline Description for North Dublin Bay SAC & South Dublin Bay SAC*

North Dublin Bay SAC

217 The Natura 2000 Standard Data Form (NPWS, 2020a) lists the SAC as having an excellent diversity of coastal habitats. The dune system is one of the most important systems on the east coast, one of few in Ireland that is actively accreting. Saltmarsh habitat is well represented at the site with particularly good zonation evident. Of note is the occurrence of Petalwort, a QI, its only known location away from the western seaboard. Threats to the site include pollution from Dublin Port, commercial bait digging, recreational activities and water abstraction by golf clubs.

South Dublin Bay SAC

218 According to the Natura 2000 standard data form for South Dublin Bay SAC (NPWS, 2020b), the European site possesses a fine and fairly extensive example of intertidal flats, mudflats and sandflats not covered by seawater at low tide [1140]. Sediment type is predominantly sand, with muddy sands in the more sheltered areas and a typical macro-invertebrate fauna exists. The largest stand of *Zostera* on the east coast is located at Merrion Gates. The site supports internationally important numbers of wintering waterfowl, including light-bellied brent geese which feed on *Zostera*. South Dublin Bay SAC also supports small areas of annual vegetation of drift lines [1210], *Salicornia* and other annuals colonising mud and sand [1310] and embryonic shifting dunes [2110]. Given Dublin Bay’s proximity to a major population centre, recreational activities and disturbance on land and at sea is an existing pressure on habitats within the European site. Additional pressures and threats include reclamation of land, industrial or commercial areas e.g. Dublin Port, bait digging, marine water pollution, discharges and disposal of wastes, and accumulation of organic materials.

*7.1.2 Qualifying Interests and Conservation Objectives of North Dublin Bay SAC and South Dublin Bay SAC*

219 The QIs of North Dublin Bay SAC and South Dublin Bay SAC, and the overall conservation objectives, are listed in **Table 14**.

**Table 14 Qualifying Interests and Conservation Objectives of North Dublin Bay SAC & South Dublin Bay SAC**

Qualifying Interest(s)	Conservation Objective(s)
<p><b>North Dublin Bay SAC [000206]</b></p> <p>1140 Mudflats and sandflats not covered by seawater at low tide</p> <p>1210 Annual vegetation of drift lines</p> <p>1310 <i>Salicornia</i> and other annuals colonising mud and sand</p> <p>1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)</p> <p>1395 Petalwort <i>Petalophyllum ralfsii</i></p> <p>1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected</p>

Qualifying Interest(s)	Conservation Objective(s)
2110 Embryonic shifting dunes 2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* 2190 Humid dune slacks  <i>S.I. No. 524/2–19 - European Union Habitats (North Dublin Bay Special Area of Conservation 000206) Regulations 2019</i> NPWS (2013b) <i>Conservation Objectives: North Dublin Bay SAC 000206</i> . Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	
<b>South Dublin Bay SAC [000210]</b> 1140 Mudflats and sandflats not covered by seawater at low tide 1210 Annual vegetation of drift lines 1310 <i>Salicornia</i> and other annuals colonising mud and sand 2110 Embryonic shifting dunes  <i>S.I. No. 525/2–19 - European Union Habitats (South Dublin Bay Special Area of Conservation 000210) Regulations 2019</i> NPWS (2013a) <i>Conservation Objectives: South Dublin Bay SAC 000210</i> . Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected

220 In conjunction with considering the generic conservation objective for this SAC “To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected”, the site-specific conservation objectives document for North Dublin Bay SAC and South Dublin Bay SAC also informed this assessment.

221 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the qualifying interests within the European site. Affecting the conservation condition of the qualifying interests / special conservation interests would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the qualifying interests of North Dublin Bay SAC and South Dublin Bay SAC are presented in Section 7.1.3.3.

*7.1.3 Examination and Analysis of Potential Direct and Indirect Impacts*

222 The direct and/or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of North Dublin Bay SAC and South Dublin Bay SAC, are:

- Habitat degradation / effects on QI / SCI species as a result of hydrological impacts; and
- Habitat degradation as a result of introducing/spreading non-native invasive species.

*7.1.3.1 Habitat degradation / effects on QIs as a result of hydrological impacts*

223 The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during Construction, or Operation phases, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and / or leaks of contaminants into receiving waters. The associated effects of a reduction of

surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower and Ringsend WWTP. Therefore, there is potential for the Proposed Scheme to result in significant effects which could have implications for the conservation objectives of North Dublin Bay SAC and South Dublin Bay SAC as a result of hydrological impacts.

#### 7.1.3.2 Habitat degradation as a result of introducing / spreading non-native invasive species

224 No non-native invasive plant species listed on the Third Schedule of the (Birds and Natural Habitats) Regulations were recorded within, or in close proximity to the Proposed Scheme. However, the desk study returned records of non-native invasive plant species present within, or in close proximity to, the Proposed Scheme. During construction and/or routine maintenance/management work, these species could potentially spread or be introduced to terrestrial habitats located within downstream European sites via surface water features. The introduction and / or spread of these invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat. This in turn could undermine the conservation objectives of these European sites. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, and the Liffey Estuary Lower. Therefore, there is potential for the Proposed Scheme to result in significant effects which could have implications for the conservation objectives of North Dublin Bay SAC and South Dublin Bay SAC as a result of invasive species spread.

#### 7.1.3.3 Summary

225 **Table 15** presents a summary of the potential impacts and effects of the Proposed Scheme on the QIs of North Dublin Bay SAC and South Dublin Bay SAC, and how these impacts relate to affecting the site's conservation objectives.

**Table 15 Potential Impacts / Effects on the Conservation Objectives of North Dublin Bay SAC and South Dublin Bay SAC**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>North Dublin Bay SAC</b>			
<b>Mudflats and sandflats not covered by water at low tide [1140]</b>			
To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / The permanent habitat area is stable or increasing, subject to natural processes	<p>Yes</p> <p>An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could affect the quality of the intertidal habitats and the fauna communities they support.</p> <p>The introduction and / or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and</p>	<p>Yes</p> <p>The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.</p>	No
Community extent / Hectares / Maintain the extent of the <i>Mytilus edulis</i> -dominated community, subject to natural processes			
Community structure: <i>Mytilus edulis</i> density / Individuals/m <sup>2</sup> / Conserve the high quality of the <i>Mytilus edulis</i> dominated community, subject to natural processes			
Community distribution / Hectares / Conserve the following community types in a natural condition: Fine sand to sandy mud with <i>Pygospio elegans</i> and <i>Crangon crangon</i> community complex; Fine sand with <i>Spio martinensis</i> community complex			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	abundance and the physical structural integrity of the habitat.		
<b>Annual Vegetation of drift lines [1210]</b> To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area increasing, subject to natural processes, including erosion and succession	Yes An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of intertidal/coastal habitats.  The introduction and / or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats permanently or regularly inundated by seawater. These species may outcompete other	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.  The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.	No
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes			
Physical structure: functionality and sediment supply / Presence/ absence of physical barriers / Maintain the natural circulation of sediment and organic matter, without any physical obstructions			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain the presence of species-poor communities with typical species: sea rocket ( <i>Cakile maritima</i> ), sea sandwort ( <i>Honckenya peploides</i> ), prickly saltwort ( <i>Salsola kali</i> ) and oraches ( <i>Atriplex</i> spp.)			
Vegetation composition: negative indicator species / Percentage cover / Negative indicator species (including non-natives) to represent less than 5% cover			



Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.		
<b>Salicornia and other annuals colonising mud and sand [1310]</b>			
To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession	Yes An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area / distribution of intertidal/coastal habitats.  The introduction and / or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.  The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.	No
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes			
Physical structure: sediment supply / Presence/ absence of physical barriers Maintain, or where necessary restore, natural circulation of sediments and organic matter, without any physical obstructions			
Physical structure: creeks and pans / Occurrence / Maintain creek and pan structure, subject to natural processes, including erosion and succession			
Physical structure: flooding regime / Hectares flooded; frequency / Maintain natural tidal regime			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation structure: vegetation height / Centimetres / Maintain structural variation within sward			
Vegetation structure: vegetation cover / Percentage cover at a representative number of monitoring stops / Maintain more than 90% of area outside creeks vegetated			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation composition: typical species and subcommunities / Percentage cover / Maintain the presence of species-poor communities listed in SMP (McCorry and Ryle, 2009)	inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.		
Vegetation structure: negative in-icator species - <i>Spartina anglica</i> / Hectares / No significant expansion of common cordgrass ( <i>Spartina anglica</i> ), with an annual spread of less than 1%			
<b>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330]</b> To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession	Yes  An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of intertidal/coastal habitats.  The introduction and/or spread of invasive species to downstream European sites could potentially	Yes  The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.  The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and	No
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes			
Physical structure: sediment supplyPresence/ absence of physical barriers / Maintain natural circulation of sediments and organic matter, without any physical obstructions			
Physical structure: creeks and pans / Occurrence / Maintain creek and pan structure, subject to natural processes, including erosion and succession			
Physical structure: flooding regime / Hectares flooded; frequency / Maintain natural tidal regime			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation structure: vegetation height / Centimetres / Maintain structural variation within sward			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation structure: vegetation cover / Percentage cover at a representative number of monitoring stops / Maintain more than 90% of area outside creeks vegetated	result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.	operation of the Proposed Scheme.	
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain the presence of species-poor communities listed in SMP (McCorry and Ryle, 2009)			
Vegetation structure: negative indicator species - <i>Spartina anglica</i> / Hectares / No significant expansion of common cordgrass ( <i>Spartina anglica</i> ), with an annual spread of less than 1%			
<b>Mediterranean salt meadow (ows (<i>Juncetalia maritimi</i>) [1410])</b> To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession	Yes An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of intertidal/coastal habitats.	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.  The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to	No
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes			
Physical structure: sediment supply / Presence/ absence of physical barriers / Maintain natural circulation of sediments and organic matter, without any physical obstructions			
Physical structure: creeks and pans / Occurrence / Maintain creek and pan structure, subject to natural processes, including erosion and succession			
Physical structure: flooding regime / Hectares flooded; frequency / Maintain natural tidal regime			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation structure: vegetation height / Centimetres / Maintain structural variation within sward	The introduction and/or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.	downstream European sites during construction and operation of the Proposed Scheme.	
Vegetation structure: vegetation cover / Percentage cover at a representative number of monitoring stops / Maintain more than 90% of area outside creeks vegetated			
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain the presence of species-poor communities listed in SMP (McCorry and Ryle, 2009)			
Vegetation structure: negative indicator species - <i>Spartina anglica</i> / Hectares / No significant expansion of common cordgrass ( <i>Spartina anglica</i> ), with an annual spread of less than 1%			
<b>Embryonic shifting dunes [2110]</b> To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession.	Yes Terrestrial habitats above the high tide line are not at risk of effects from water pollution in Dublin Bay.  The introduction and/or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly	Yes The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.	No
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes.			
Physical structure: functionality sediment supply / Presence/ absence of physical barriers / Maintain natural circulation of sediments and organic matter, without any physical obstructions			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation composition: plant health of foredune grasses / Percentage cover / More than 95% of sand couch ( <i>Elytrigia juncea</i> ) and/or lyme-grass ( <i>Leymus</i>			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<i>arenarius</i> ) should be healthy (i.e. green plant parts above ground and flowering heads present)	inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.		
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain the presence of species-poor communities with typical species: sand couch ( <i>Elytrigia juncea</i> ) and/or lyme-grass ( <i>Leymus arenarius</i> )			
Vegetation composition: negative indicator species / Percentage cover / Negative indicator species (including non-native species) to represent less than 5% cover			
<p><b>Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</b> To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:</p>			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession	<p>Yes</p> <p>Terrestrial habitats above the high tide line are not at risk of effects from water pollution in Dublin Bay.</p> <p>The introduction and/or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species</p>	<p>Yes</p> <p>The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.</p>	No
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes			
Physical structure: functionality sediment supply / Presence/ absence of physical barriers / Maintain natural circulation of sediments and organic matter, without any physical obstructions			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation composition: plant health of dune grasses / Percentage cover / 95% of marram grass ( <i>Ammophila arenaria</i> ) and/or lyme-grass ( <i>Leymus arenarius</i> ) should be healthy (i.e. green plant parts above ground and flowering heads present)			
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain the presence			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
of species-poor communities dominated by marram grass ( <i>Ammophila arenaria</i> ) and/or lymegrass ( <i>Leymus arenarius</i> )	composition, diversity and abundance and the physical structural integrity of the habitat.		
Vegetation composition: negative indicator species / Percentage cover / Negative indicator species (including non-native species) to represent less than 5% cover			
<p><b>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] *</b> To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:</p>			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession	<p>Yes</p> <p>Terrestrial habitats above the high tide line are not at risk of effects from water pollution in Dublin Bay.</p> <p>The introduction and / or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.</p>	<p>Yes</p> <p>The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.</p>	<p>No</p>
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes			
Physical structure: functionality sediment supply / Presence/ absence of physical barriers / Maintain natural circulation of sediments and organic matter, without any physical obstructions			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation structure: bare ground / Percentage cover / Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes			
Vegetation structure: sward height / Centimetres / Maintain structural variation in the sward			
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain range of sub-communities with typical species listed in Delaney <i>et al.</i> (2013)			
Vegetation composition: negative indicator species (including <i>Hippophae rhamnoides</i> ) / Percentage cover / Negative indicator species (including non-native species) to represent less than 5% cover			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation composition: scrub/trees / Percentage cover / No more than 5% cover or under control			
<b>Humid dune slacks [2190]</b> To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area increasing, subject to natural processes, including erosion and succession	Yes Terrestrial habitats above the high tide line are not at risk of effects from water pollution in Dublin Bay.  The introduction and/or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.	Yes The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.	No
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes			
Physical structure: functionality sediment supply / Presence/ absence of physical barriers / Maintain natural circulation of sediments and organic matter, without any physical obstructions			
Physical structure: hydrological and flooding regime / Water table levels; groundwater fluctuations (metres) / Maintain natural hydrological regime			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation structure: bare ground / Percentage cover / Bare ground should not exceed 5% of dune slack habitat, with the exception of pioneer slacks which can have up to 20% bare ground			
Vegetation structure: vegetation height / Centimetres / Maintain structural variation within the sward			
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain range of sub-communities with typical species listed in Delaney <i>et al.</i> (2013)			
Vegetation composition: cover of <i>Salix repens</i> / Percentage cover; centimetres / Maintain less than 40% cover of creeping willow ( <i>Salix repens</i> )			



Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation composition: negative indicator species / Percentage cover / Negative indicator species (including non-native species) to represent less than 5% cover			
Vegetation composition: scrub/trees / Percentage cover / No more than 5% cover or under control			
<b>Petalwort <i>Petalophyllum ralfsii</i> [1395]</b> To maintain the favourable conservation condition of the species in the SAC, which is defined as follows:			
Distribution of populations / Number and geographical spread of populations / No decline	Yes As a terrestrial flora species of damp calcareous dune slacks, found above the high tide line, it is not at risk of effects from water pollution in Dublin Bay.  The introduction and/or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.	Yes The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.	No
Population size / Number of individuals / No decline			
Area of suitable habitat / Hectares / No decline			
Hydrological conditions: soil moisture / Occurrence / Maintain hydrological conditions so that substrate is kept moist and damp throughout the year, but not subject to prolonged inundation by flooding in winter			
Vegetation structure: height and cover / Centimetres and percentage / Maintain open, low vegetation with a high percentage of bryophytes (small acocarps and liverwort turf) and bare ground			
<b>South Dublin Bay SAC</b>			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<p><b>Mudflats and sandflats not covered by water at low tide [1140]</b>                      To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows:</p>			
Habitat area / Hectares / The permanent habitat area is stable or increasing, subject to natural processes	Yes	Yes	No
Community extent / Hectares / Maintain the extent of the <i>Zostera</i> -dominated community, subject to natural processes	An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of intertidal/coastal habitats.	The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	
Community structure: <i>Mytilus edulis</i> density / Individuals/m <sup>2</sup> / Conserve the high quality of the <i>Zostera</i> dominated community, subject to natural processes			
Community distribution / Hectares / Conserve the following community type in a natural condition: Fine sands with <i>Angulus tenuis</i> community complex	The introduction and/or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.	The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.	

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Annual Vegetation of drift lines [1210]</b> To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area increasing, subject to natural processes, including erosion and succession	Yes	Yes	No
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes	An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of intertidal/coastal habitats.	The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	
Physical structure: functionality and sediment supply / Presence/ absence of physical barriers / Maintain the natural circulation of sediment and organic matter, without any physical obstructions			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain the presence of species-poor communities with typical species: sea rocket ( <i>Cakile maritima</i> ), sea sandwort ( <i>Honckenia peploides</i> ), prickly saltwort ( <i>Salsola kali</i> ) and oraches ( <i>Atriplex</i> spp.)	The introduction and/or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.	The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.	
Vegetation composition: negative indicator species / Percentage cover / Negative indicator species (including non-natives) to represent less than 5% cover			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Salicornia and other annuals colonising mud and sand [1310]</b>			
To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession	<p>Yes</p> <p>An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area/distribution of intertidal/coastal habitats.</p> <p>The introduction and/or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.</p>	<p>Yes</p> <p>The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.</p>	No
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes			
Physical structure: sediment supply / Presence/ absence of physical barriers. Maintain, or where necessary restore, natural circulation of sediments and organic matter, without any physical obstructions			
Physical structure: creeks and pans / Occurrence / Maintain creek and pan structure, subject to natural processes, including erosion and succession			
Physical structure: flooding regime / Hectares flooded; frequency / Maintain natural tidal regime			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation structure: vegetation height / Centimetres / Maintain structural variation within sward			
Vegetation structure: vegetation cover / Percentage cover at a representative number of monitoring stops / Maintain more than 90% of area outside creeks vegetated			
Vegetation composition: typical species and subcommunities / Percentage cover / Maintain the presence of species-poor communities listed in SMP (McCorry and Ryle, 2009)			
Vegetation structure: negative indicator species - <i>Spartina anglica</i> / Hectares / No significant expansion of common cordgrass ( <i>Spartina anglica</i> ), with an annual spread of less than 1%			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<p><b>Embryonic shifting dunes [2110]</b> To restore the favourable conservation condition of the habitat in the SAC, which is defined as follows:</p>			
Habitat area / Hectares / Area stable or increasing, subject to natural processes, including erosion and succession.	<p>Yes</p> <p>Terrestrial habitats above the high tide line are not at risk of effects from water pollution in Dublin Bay.</p> <p>The introduction and/or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat.</p>	<p>Yes</p> <p>The mitigation measures prescribed in Section 7.1.4.2 will prevent the introduction and/or spread of non-native invasive species to downstream European sites during construction and operation of the Proposed Scheme.</p>	<p>No</p>
Habitat distribution / Occurrence / No decline, or change in habitat distribution, subject to natural processes.			
Physical structure: functionality sediment supply / Presence/ absence of physical barriers / Maintain natural circulation of sediments and organic matter, without any physical obstructions			
Vegetation structure: zonation / Occurrence / Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession			
Vegetation composition: plant health of foredune grasses / Percentage cover / More than 95% of sand couch ( <i>Elytrigia juncea</i> ) and/or lyme-grass ( <i>Leymus arenarius</i> ) should be healthy (i.e. green plant parts above ground and flowering heads present)			
Vegetation composition: typical species and sub-communities / Percentage cover at a representative number of monitoring stops / Maintain the presence of species-poor communities with typical species: sand couch ( <i>Elytrigia juncea</i> ) and / or lyme-grass ( <i>Leymus arenarius</i> )			
Vegetation composition: negative indicator species / Percentage cover / Negative indicator species (including non-native species) to represent less than 5% cover			

#### 7.1.4 Mitigation Measures

226 This section presents the mitigation measures that will be implemented during construction and operation to avoid or reduce the potential impacts of the Proposed Scheme on North Dublin Bay SAC and South Dublin Bay SAC. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment. Mitigation measures and associated Management Plans are included within the Construction Environmental Management Plan (CEMP) provided in Appendix VIII, all of which shall, at a minimum, be implemented during the construction phase of the Proposed Scheme.

227 The CEMP (Appendix VIII of this NIS) summarises the overall environmental management strategy that will be adopted and implemented during the construction phase of the proposed road development. The purpose of the CEMP is to demonstrate how the proposed construction works can be delivered in a logical, sensible and safe sequence with the incorporation of specific environmental control measures relevant to construction works of this nature. The CEMP sets out the mechanism by which environmental protection is to be achieved during the Construction phase of the proposed road development. The CEMP has been prepared in accordance with the following industry best practice guidance:

- TII's Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan (TII 2007); and,
- Construction Industry Research and Information Association (CIRIA) in the UK, Environmental Good Practice on Site Guide, 4th Edition (CIRIA 2015).

228 The CEMP has been prepared in conjunction with the Environmental Impact Assessment (EIA) Report and Natura Impact Statement (NIS), with input from members of the BusConnects Infrastructure team. The CEMP supports the information already provided in the EIA Report and the NIS and must be read in conjunction with the information already provided in the NIS. The details relevant to European sites are already provided in the NIS.

229 The information included in the CEMP is presented under the following topics:

- Proposed Scheme Details;
- Planning Consent;
- Contact Sheets;
- Roles and Responsibilities;
- Communication;
- Environmental Awareness Training;
- Compliance and Review;
- Environmental Commitments;
- Site Specific Method Statements/Management Plans;
  - Construction Traffic Management Plan;
  - Invasive Species Management Plan;
  - Surface Water Management Plan;
  - Construction and Demolition Resource and Waste Management Plan; and,
  - Environmental Incident Response Plan.

230 The CEMP has been prepared and is included as Appendix VIII of this NIS. The CEMP will be updated by the NTA prior to the commencement of the construction phase, so as to include any additional measures required pursuant to conditions attached to any decision to grant approval. The CEMP has regard to the guidance contained in the TII Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan, and the handbook published by Construction Industry Research and Information Association (CIRIA) in the UK, Environmental Good Practice on Site Guide, 4th Edition (CIRIA 2015).

231 A number of sub-plans have also been prepared as part of the CEMP, including a SWMP and an ISMP, as outlined above. For the avoidance of doubt, all of the measures set out in the CEMP and the sub-plans appended to this EIAR will be implemented in full by the appointed contractor to the satisfaction of the NTA.

#### *7.1.4.1 Measures to Protect Surface Water Quality*

232 This section presents the mitigation measures that will be implemented during Construction and Operation phases to avoid the potential impacts of the Proposed Scheme on downstream European sites. All of the mitigation measures will be implemented in full. They are in accordance with best practice, and tried and tested, effective control measures to protect the receiving environment.

233 A CEMP, including an ISMP, have been submitted with the application documentation to An Bord Pleanála (see Appendix VIII of this NIS).

234 These measures have been developed in consideration of the following standard best international practice including but not limited to:

- Construction Industry Research and Information Association (CIRIA), 2005. Environmental Good Practice on Site (C692);
- CIRIA, (2001) Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532);
- CIRIA, (2000) Environmental Handbook for Building and Civil Engineering Projects (C512);
- CIRIA, (2007) The SUDS Manual (C697);
- CIRIA (2006a) *Control of water pollution from linear construction projects: Technical guidance (C648)*;
- CIRIA (2006b) *Control of water pollution from linear construction projects: Site guide (C649)*;
- IFI (2016) Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters;
- UK Pollution Prevention Guidelines (PPG) UK Environment Agency, 2004; and,
- BPGCS005, Oil Storage Guidelines

#### *Measures to Protect Surface Water Quality during Construction*

235 The following specific mitigation measures, all of which are set out in the CEMP, shall be implemented to mitigate against the release of hydrocarbons, polluting chemicals, sediment/silt and contaminated waters control:

- Specific measures to prevent the release of sediment over baseline conditions in the downstream receiving water environment, during the construction work. These measures include, but are not limited to, the use of silt fences, silt curtains, settlement lagoons and filter materials.
- Provision of exclusion zones and barriers (e.g. silt fences) between earthworks, stockpiles and temporary surfaces to prevent sediment washing into the existing drainage systems and hence the downstream receiving water environment.
- Provision of temporary construction surface drainage and sediment control measures to be in place before earthworks commence.
- Weather conditions will be taken into account when planning construction activities to minimise risk of run-off from the site.
- Prevailing weather and environmental conditions will be taken into account prior to the pouring of cementitious materials for the works adjacent to any surface water drainage features, or drainage features connected to same. Pumped concrete will be monitored to ensure no accidental discharge. Mixer washings and excess concrete will not be discharged to existing surface water drainage systems. Concrete washout areas will be located remote from any surface water drainage features, to avoid accidental discharge to watercourses. Concrete trucks will not be washed out on site.



- Any fuels or chemicals (including hydrocarbons or any polluting chemicals) will be stored in a designated, secure bunded area(s) within the construction compound to prevent any seepage of potential pollutants into the local surface water network. These designated areas will be clearly sign-posted and all personnel on site will be made aware of their locations and associated risks.
- All mobile fuel bowsers shall carry a spill kit and operatives must have spill response training. All fuel containing equipment such as portable generators shall be placed on drip trays. All fuels and chemicals required to be stored on-site will be clearly marked. Care and attention will be taken during refuelling and maintenance operations. Particular attention will be paid to gradient and ground conditions, which could increase risk of discharge to waters.
- A register of all hazardous substances, which will either be used on site or expected to be present (in the form of soil and/or groundwater contamination) will be established and maintained. This register will be available at all times and shall include as a minimum:
  - Valid Safety Data Sheets;
  - Health & Safety, Environmental controls to be implemented when storing, handling, using and in the event of spillage of materials;
  - Emergency response procedures/precautions for each material; and,
  - The Personal Protective Equipment (PPE) required when using the material.
- Implementation of response measures to potential pollution incidents.
  - An Environmental Incident Response Plan has been included within section 5.6 of the CEMP and will be finalised prior to works commencing and they will be communicated, resourced and implemented for the duration of the works. The EIRP describes the procedures, lines of authority and processes that will be followed to ensure that incident response efforts are prompt, efficient, and suitable for particular circumstances. The EIRP details the procedures to be undertaken in the event of the release of any sediment into a watercourse, serious spillage of chemical, fuel or other hazardous wastes (e.g. concrete), non-compliance incident with any permit or license, or other such risks that could lead to a pollution incident, including flood risks.
  - Emergency procedures/precautions and spillage kits will be available and construction staff will be trained and experienced in emergency procedures in the event of accidental fuel spillages. Details of these are included in section 5.6 of the CEMP, in Appendix VIII of this NIS.
- All trucks will have a tarpaulin that will cover excavated material as it is being hauled off-site and wheel wash facilities will be provided at all site egress points.
- Water supplies shall be recycled for use in the wheel wash. All waters shall be drained through appropriate filter material prior to discharge from the construction sites.
- The removal of any made ground material, which may be contaminated, from the construction site and transportation to an appropriate licenced facility shall be carried out in accordance with the Waste Management Act, best practice and guidelines for same.
- In relation to contaminated land:
  - The appointed contractor will ensure that excavations shall be kept to a minimum, using shoring or trench boxes where appropriate. For more extensive excavations, a temporary works designer shall be appointed by the appointed contractor to design excavation support measures in accordance with all relevant guidelines that minimises the excavation of contaminated ground.
  - The appointed contractor will be responsible for regular testing of excavated soils to monitor the suitability of the soil for reuse.
  - Samples of ground suspected of contamination will be tested for contamination during the detailed ground investigation and ground excavated from these areas will be disposed

of to a suitably licensed or permitted sites in accordance with the current Irish waste management legislation.

- Any dewatering in areas of contaminated ground shall be designed by the appointed contractor to minimise the mobilisation of contaminants into the surrounding environment.
- Implementation of measures to minimise waste and ensure correct handling, storage and disposal of waste (most notably wet concrete, pile arisings and asphalt).
- All of the above measures implemented on site will be monitored throughout the duration of construction to ensure that they are working effectively, to implement maintenance measures if required/applicable and to address any potential issues that may arise.

#### Surface Water Mitigation Measures for Demolition and Structural Works

236 This section presents the mitigation measures that will be implemented during demolition and structural works to avoid the potential impacts of the Proposed Scheme on downstream European sites. All of the mitigation measures will be implemented in full. They are in accordance with best practice, and tried and tested, effective control measures to protect the receiving environment.

#### **Custom House Boardwalk**

237 The three piles to support the pedestrian boardwalk will be hollow steel tubes. As a result, this means they will not result in the displacement of material from the estuary bed which could create a preferential pathway for historic contaminants.

238 For associated works to the quay wall to secure the boardwalk to the DCC building, sheeting will be attached below the area of works to catch any debris. In-channel and riverbank working general principles as set out in the SWMP will apply. In addition:

- The steel piles may be driven from the land if feasible, reducing the need for machinery in the water;
- All construction machinery operating within or close to any water body will be mechanically sound to avoid leaks and
- The area of disturbance of the watercourse bed and bank will be the absolute minimum required for the installation of the piles.

#### **Scherzer Bridges**

239 The main concerns relating to the Scherzer Bridge at the Royal Canal and Georges Dock are as a result of overland runoff of surface water carrying debris, silt, and concrete washings. There is also the potential for hydrocarbon contamination from vehicles and plant. These will largely be addressed through the general mitigation measures, however the pouring of concrete associated with the replacement carriageway bridge directly over the Royal Canal and adjacent to the Liffey Estuary Lower means additional measures are required.

240 The pouring of concrete will take place in dry weather only. Silt fences or similar will be installed to prevent overland flow into the canal or the Liffey Estuary Lower.

241 Other general water protection principles as set out in the SWMP will apply.

#### **Dodder Public Transport Opening Bridge**

242 The main control measures for works to construct the DPTOB are the installation of coffer dams for the bridge itself and sheet piling for the reclaimed land. Once dewatered internally, these allow the construction to be undertaken in a dry area and minimise the potential for contaminants entering the water body.

243 The coffer dams and area behind the sheet piling will be dewatered via silt-buster tanks (or similar) and discharged directly to the estuary. The appointed contractor will liaise with the suitably qualified ecologist

and/or environmental specialist engaged by them to ensure that any required permits/licences are obtained.

- 244 The dynamic nature of the waterbody in this area i.e., estuarine would result in varied level of suspended solids depending on the time of year and weather conditions. Therefore, the NTA will ensure that monitoring will be carried out monthly for a period of at least six months prior to the commencement of construction at this location, in the manner and of a frequency necessary to inform any applications for permits or licenses to discharge that may be required. The NTA will also ensure that any discharges from the coffer dam will be comply with conditions set out in all relevant permits and licenses.
- 245 Excavation material will be generated as a result of the construction of the Dodder Public Transport Opening Bridge (DPTOB). The appointed contractor will reuse the material generated, if practicable and appropriate, where it meets the required standards and regulations. Where the excavated material cannot be reused within the Proposed Scheme works, it will be sent for reuse, recovery or recycling, where practicable by the appointed contractor. Where reuse, recycling and recovery are not possible the material will be disposed of to an authorised facility by the appointed contractor. Any hazardous waste arising will be managed by the appointed contractor in accordance with the applicable legislation. Where such material is transported within Ireland this will be undertaken in accordance with the European Communities (Shipments of Hazardous Waste Exclusively within Ireland) Regulations 2011 to authorised facilities (e.g. EPA licenced facilities) or exported to authorised facilities outside of Ireland in accordance with the Transfrontier Shipment Regulations 2007. Where there are sites with planning permission and required authorisations such as foreshore licences granted and to which the material can be delivered for placement, reuse, recovery or disposal excavated material may also be delivered to these sites by the appointed contractor.
- 246 Activities within the Construction Compounds on either side of the DPTOB (R3 and R4) will be largely controlled as set out in general measures in the SWMP. In addition, all surface water drains in the vicinity will be identified and either stopped up or bunded on the side closest to both Construction Compounds. A cut off drain or equivalent measure and a silt fence will be installed along the estuary side of the Construction Compounds. The appointed contractor will ensure that appropriate spill control equipment is available (e.g., a suitably sized floating boom), to control any spillages to the river should a spillage occur. The CEMP includes an Environmental Incident Response Plan, which will apply for the management of any incidents that may occur.

#### Measures to Protect Surface Water Quality during Operation

- 247 Mitigation for the Operational phase has been built into the design of the Proposed Scheme. The overall net increase in impermeable area for the road corridor will be 9,037m<sup>2</sup>. This increase in impermeable area will be managed for the Proposed Scheme through a combination of filter drains, infiltration pipes and oversized pipes as required in accordance with DMRB and CIRIA design standards. Where no new paved areas are proposed, the existing drainage network will be retained and utilised (See Appendix III for Proposed Surface Water Drainage Works).
- 248 These measures will ensure that there is no increase in runoff rates from newly paved areas and appropriate treatment to ensure runoff quality.
- 249 The range of measures including SuDS systems installed during the Construction Phase will reduce both the volume and rate of surface waters discharging into the existing surface water drainage network, as well as improving the environmental quality of any such discharges during the Operational Phase of the Proposed Scheme.
- 250 These standard drainage design controls have been proven through widespread use in developments across the country. The proposed drainage system incorporated into the engineering design of the site are common drainage systems that are used in most development types. They are proposed and designed in accordance with the Greater Dublin Strategic Drainage Study (DDS, 2005).

251 In the Operational Phase, the infrastructure (including the maintenance regime for SuDS and monitoring of waterbodies) will be carried out by the relevant local authority and will be subject to their management procedures. No additional mitigation is required.

*7.1.4.2 Measures to Prevent the Spread of Invasive Species to Downstream European Sites During Construction*

Confirmatory Pre-construction survey

252 The NTA will ensure that a confirmatory pre-construction invasive species survey will be undertaken by a suitably qualified specialist to confirm the absence and / or extent of all Third Schedule invasive species within the footprint of the Proposed Scheme. Where an infestation is confirmed / identified within the footprint of the Proposed Scheme, this will require the implementation of a Non-Native Invasive Species Management Plan (refer to the CEMP in Appendix VIII of this NIS).

Non-native Invasive Species Management Plan (ISMP)

253 Where a pre-construction invasive species re-survey has confirmed the presence of previously identified Third Schedule non-native invasive species, or identifies newly established non-native invasive species within the footprint of the Proposed Scheme, the ISMP produced will provide a detailed description of the infestations (e.g. approximate area of the respective colonies (m<sup>2</sup>), where feasible; approximate total number of stems, pattern of growth and information on other vegetation present), and where necessary, include calculations of volumes of infested soils to be excavated.

254 The ISMP for the Proposed Scheme will be implemented, including the detailed control measures contained within it, as advised by a suitably qualified specialist, in accordance with the Transport Infrastructure Ireland's (2020) The Management of Invasive Alien Plant Species on National Roads - Technical Guidance (2020a) and The Management of Invasive Alien Plant Species on National Roads – Standard (2020b), and other species-specific guidance documents including those listed in the non-native ISMP, as necessary.

255 The NTA will ensure that all control measures specified in the Proposed Scheme non-native ISMP shall be implemented by a suitably qualified and licenced specialist prior to the construction of the Proposed Scheme to control the spread of newly established non-native invasive species within the footprint of the Proposed Scheme. Furthermore, the appointed contractor will adhere to control measures specified within the Non-Native ISMP throughout the Construction Phase of the Proposed Scheme

256 The site will be monitored by the appointed contractor in consultation with the suitably qualified and licensed specialist after the control measures have been implemented. Any re-growth, will be subsequently treated as detailed in the Proposed Scheme ISMP. The ISMP is contained within Appendix VIII to the NIS.

Measures to Prevent the Spread of Non-Native Invasive Species to Downstream European Sites During Operation

257 Once the Proposed Scheme is in operation, the control of invasive species will be subject to the local authorities management procedures. No additional mitigation is required.

*7.1.5 Residual Impacts*

258 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the QIs of North Dublin Bay SAC and South Dublin Bay SAC, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of North Dublin Bay SAC and South Dublin Bay SAC. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

7.1.6 Conclusion of Assessment for North Dublin Bay SAC and South Dublin Bay SAC

259 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the QIs of North Dublin Bay SAC and South Dublin Bay SAC, the potential impacts, and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the QIs, it has been concluded that the Proposed Scheme does pose a risk of adversely affecting (either directly or indirectly) the integrity of North Dublin Bay SAC and South Dublin Bay SAC.

7.2 Howth Head SAC [000202] and Howth Head Coast SPA [004113]

7.2.1 Ecological Baseline Description for Howth Head SAC

260 According to the Natura 2000 Standard Data Form (NPWS, 2021c). This SAC is a rocky headland situated on the northern side of Dublin Bay. This SAC has been designated for the Annex I habitats: [1230] Vegetated Sea Cliffs and [4030] Dry Heath. The flora within this SAC is very diverse, there are records of several Red data book species and species of very restricted Irish distribution. The dry heath and sea cliff vegetation is extensive and well developed. Major threats to the site include walking, horse riding and non-motorised vehicles, burning vegetation, mining and quarrying.

7.2.2 Ecological Baseline Description for Howth Head Coast SPA

261 The Natura 2000 Standard Data Form (NPWS, 2020c) lists the SPA as a rocky headland on the northern side of Dublin Bay. The site comprises approximately 3km of sea cliff, varying between 60m and 90m in height. Howth Head SPA is of importance to breeding seabirds. This SPA is designated for its population of breeding kittiwake *Rissa tridactyla*. There are also nationally important populations of breeding razorbill *Alca torda* and black guillemot *Cepphus grylle*, and a regionally important population of common guillemot *Uria aalge*. The cliffs also support a breeding pair of peregrine falcon *Falco peregrinus*, a species listed on Annex I of the E.U. Birds Directive. Threats to the site include walking, horse-riding and non-motorised vehicles as well as fire and fire suppression.

7.2.3 Qualifying Interests / Special Conservation Interests and Conservation Objectives of Howth Head SAC and Howth Head Coast SPA

262 The QIs of Howth Head SAC and SCIs of Howth Head Coast SPA, and their overall conservation objectives, are listed in **Table 16**.

**Table 16 Qualifying Interests / Special Conservation Interests and Conservation Objectives of Howth Head SAC and Howth Head Coast SPA**

Qualifying Interest(s)	Conservation Objective(s)
<p><b>Howth Head SAC [000202]</b> 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts 4030 European dry heaths</p> <p>NPWS (2016a) <i>Conservation Objectives: Howth Head SAC 000202</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.</p>	<p>To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected</p>
Special Conservation Interest(s)	Conservation Objective(s)
<p><b>Howth Head Coast SPA [004113]</b> A188 Kittiwake <i>Rissa tridactyla</i></p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p>

Qualifying Interest(s)	Conservation Objective(s)
<p><i>S.I. No. 185/2012 - European Communities (Conservation of Wild Birds (Howth Head Coast Special Protection Area 004113)) Regulations 2012.</i></p> <p>NPWS (2022c) <i>Conservation objectives for Howth Head Coast SPA [004113]. First Order Site-specific Conservation Objectives. Version 1.</i> Department of Housing, Local Government and Heritage.</p>	

263 In conjunction with considering the generic conservation objective for this SAC “To maintain the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected”, the site-specific conservation objectives documents for Howth Head SAC and Howth Head Coast SPA also informed this assessment.

264 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the qualifying interests within the European site. Affecting the conservation condition of the qualifying interests/special conservation interests would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the Qualifying Interests of Howth Head SAC and Special Conservation Interests of Howth Head Coast SPA are presented in Section 7.2.4.2.

*7.2.4 Examination and Analysis of Potential Direct and Indirect Impacts*

265 The direct and/or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the Qualifying Interests of Howth Head SAC and Special Conservation Interests of Howth Head Coast SPA, are:

*7.2.4.1 Habitat degradation and effects on QI / SCI species as a result of hydrological impacts*

266 The release of contaminated surface water runoff and/or an accidental spillage or pollution event into any surface water features during construction, or operation, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and/or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower, and Ringsend WWTP. Therefore, this reduction in water quality (either alone or in combination with other pressures on water quality) could result in the degradation of sensitive habitats present within these European sites, which in turn would negatively affect the SCI bird species that rely upon these habitats as foraging and/or roosting habitat. It could also negatively affect the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that they result in significant effects which could have implications for the conservation objectives of Howth Head SAC and Howth Head Coast SPA.

*7.2.4.2 Summary*

267 **Table 17** presents a summary of the potential impacts and effects of the Proposed Scheme on the QI’s / SCIs of Howth Head SAC and Howth Head Coast SPA, and how these impacts relate to affecting the site’s conservation objectives.



**Table 17 Potential Impacts / Effects on the Conservation Objectives of Howth Head SAC and Howth Head Coast SPA**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Howth Head SAC</b>			
<b>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]</b>			
To maintain the favourable conservation condition of Vegetated sea cliffs of the Atlantic and Baltic coasts in Howth Head SAC, which is defined as follows:			
Habitat length/ Kilometres/ Area stable, subject to natural processes, including erosion	Yes An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area / distribution of intertidal / coastal habitats.	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	No
Habitat distribution/ Occurrence/ No decline, subject to natural processes			
Physical structure: functionality and hydrological regime/ Occurrence of artificial barriers/ No alteration to natural function of geomorphological and hydrological processes, including groundwater quality, due to artificial structures			
Vegetation structure: zonation/ Occurrence/ Maintain range of sea cliff habitat zonation including transitional zones, subject to natural processes including erosion and succession			
Vegetation structure: vegetation height/ Centimetres/ Maintain structural variation within sward			
Vegetation composition: typical species and sub-communities/ Percentage cover at a representative number of monitoring stops/ Maintain range of sub-communities with typical species listed in the Irish Sea Cliff Survey (Barron <i>et al.</i> , 2011)			
Vegetation composition: negative indicator species/ Percentage/Negative indicator species (including non-natives) to represent less than 5% cover			



Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation composition: bracken and woody species/ Percentage/ Cover of bracken ( <i>Pteridium aquilinum</i> ) on grassland and/or heath less than 10%. Cover of woody species on grassland and/or heath less than 20%			
<b>European Dry Heaths [4030]</b> To maintain the favourable conservation condition of European dry heaths in Howth Head SAC, which is defined as follows:			
Habitat area/ Hectares/ Area stable or increasing, subject to natural processes	No Terrestrial habitats above the high tide line are not at risk of effects from water pollution in Dublin Bay.	No	No
Habitat distribution/ Occurrence/ No decline, subject to natural processes			
Ecosystem function: soil nutrients/ Soil pH and appropriate nutrient levels at a representative number of monitoring stops/ Maintain soil nutrient status within natural range			
Community diversity/ Abundance of variety of vegetation communities/ Maintain variety of vegetation communities, subject to natural processes			
Vegetation composition: lichens and bryophytes/ Number of species at a representative number of 2m x 2m monitoring stops/ Number of bryophyte or non-crustose lichen species present at each monitoring stop is at least three, excluding <i>Campylopus</i> and <i>Polytrichum</i> mosses			
Vegetation composition: number of positive indicator species/ Number of species at a representative number of 2m x 2m monitoring stops/ Number of positive indicator species present at each monitoring stop is at least two			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Vegetation composition: cover of positive indicator species/ Percentage cover at a representative number of 2m x 2m monitoring stops/ Cover of positive indicator species at least 50% for siliceous dry heath and 50- 75% for calcareous dry heath			
Vegetation composition: dwarf shrub composition/ Percentage cover at a representative number of 2m x 2m monitoring stops/ Proportion of dwarf shrub cover composed collectively of bog-myrtle ( <i>Myrica gale</i> ), creeping willow ( <i>Salix repens</i> ) and western gorse ( <i>Ulex gallii</i> ) is less than 50%			
Vegetation composition: negative indicator species/ Percentage cover at a representative number of 2m x 2m monitoring stops/ Total cover of negative indicator species less than 1%			
Vegetation composition: non-native species/ Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops/ Cover of non-native species less than 1%			
Vegetation composition: native trees and shrubs/ Percentage cover in local vicinity of a representative number of monitoring stops/ Cover of scattered native trees and shrubs less than 20%			
<b>Howth Head Coast SPA</b>			
<b>Kittiwake [A188]</b> There is no detailed site-specific conservation objectives document <sup>24</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the detailed specific conservation objectives available for kittiwake in the Saltee Islands SPA [004002] (NPWS, 2011)			
Breeding population abundance: apparently occupied nests (AONs) / Number / No significant decline	Yes	Yes	No

<sup>24</sup> NPWS have published “First Order Site-specific Conservation Objectives” for this SPA, but have yet to provide detailed site-specific conservation objectives with specific attributes and targets for this European site.

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Productivity rate / Mean number / No significant decline Distribution: breeding colonies / Number; location; area (hectares) / No significant decline Prey biomass available / Kilogrammes / No significant decline Barriers to connectivity / Number; location; shape; area (hectares) / No significant increase Disturbance at the breeding site/ Level of impact / No significant increase	An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quantity and quality of prey fish species and the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.	The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	

### 7.2.5 Mitigation Measures

268 This section presents the mitigation measures that will be implemented during Construction and Operation phases to avoid or reduce the potential impacts of the Proposed Scheme on Howth Head SAC and Howth Head Coast SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

#### 7.2.5.1 Measures to Protect Surface Water Quality

##### Measures to Protect Surface Water Quality during Construction

269 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

##### Measures to Protect Surface Water Quality during Operation

270 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

### 7.2.6 Residual Impacts

271 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of adversely affecting the conservation objectives, or the favourable conservation condition, of the QI habitats of Howth Head SAC and SCIs Howth Head Coast SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of Howth Head SAC and Howth Head Coast SPA. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

### 7.2.7 Conclusion of Assessment for Howth Head SAC and Howth Head Coast SPA

272 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the QIs of Howth Head SAC and SCIs of Howth Head Coast SPA, the potential impacts and mitigation measures and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the QIs / SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of Howth Head SAC and Howth Head Coast SPA.

## 7.3 Rockabill to Dalkey Island SAC [003000] and Lambay Island SAC [000204]

### 7.3.1 Ecological Baseline Description for Rockabill to Dalkey Island SAC

273 According to the Natura 2000 Standard Data Form (NPWS, 2019f), this SAC is a marine site that is a rectangle shaped area extending from Rockabill south to Dalkey Island in south Dublin. The SAC has been selected for the Annex I habitat: [1170] Reefs. The only species listed as a qualifying interest for the Rockabill to Dalkey Island SAC is the Harbour porpoise *Phocoena phocoena* [1351]. Surveys of the site estimated that there are 211±47 Harbour porpoises in the northern part of the site and 138±33 in the southern part (Berrow *et al.*, 2010). Calves and juveniles have been recorded across the SAC, which suggests the site has value in the reproductive cycle of the species.

### 7.3.2 Ecological Baseline Description for Lambay Island SAC

274 The Natura 2000 Standard Data Form (NPWS, 2019g) lists this SAC as Ireland's largest east coast island, lying 4km off Dublin. The island is surrounded by steep cliffs on the north, east and south sides which hold

internationally important populations of seabirds. Most of the western third of the island is intensively farmed, while the rest is a mixture of less intensively grazed land, rock outcrops, scrub and bracken. Lambay Island is surrounded by intertidal and subtidal reef habitat. This site provides year-round haul-out habitat for the Annex II seal species grey seal *Halichoerus grypus* and harbour seal *Phoca vitulina* and includes regionally significant breeding and moulting sites.

**7.3.3 Qualifying Interests and Conservation Objectives of Rockabill to Dalkey Island SAC and Lambay Island SAC**

275 The QIs of Rockabill to Dalkey Island SAC and Lambay Island SAC, and the overall conservation objectives, are listed in **Table 18**.

**Table 18 Qualifying Interests and Conservation Objectives of Rockabill to Dalkey Island SAC and Lambay Island SAC**

Qualifying Interest(s)	Conservation Objective(s)
<p><b>Rockabill to Dalkey Island SAC [003000]</b></p> <p>1170 Reefs</p> <p>1351 Harbour porpoise <i>Phocoena phocoena</i></p> <p><i>S.I. No. 94/2019 - European Union Habitats (Rockabill to Dalkey Island Special Area of Conservation 003000) Regulations 2019</i></p> <p>NPWS (2013d) <i>Conservation Objectives: Rockabill to Dalkey Island SAC 003000</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>To maintain the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected</p>
<p><b>Lambay Island SAC [000204]</b></p> <p>1170 Reefs</p> <p>1230 Vegetated sea cliffs of the Atlantic and Baltic coasts</p> <p>1364 Grey seal <i>Halichoerus grypus</i></p> <p>1365 Harbour seal <i>Phoca vitulina</i></p> <p><i>S.I. No. 294/2019 - European Union Habitats (Lambay Island Special Area of Conservation 000204) Regulations 2019</i></p> <p>NPWS (2013e) <i>Conservation Objectives: Lambay Island SAC 000204</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>To maintain the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected</p>

276 In conjunction with considering the generic conservation objective for this SAC “To maintain the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected”, the site-specific conservation objectives documents for Rockabill to Dalkey Island SAC and Lambay Island SAC also informed this assessment.

277 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the QIs within the European site. Affecting the conservation condition of the QIs would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the QIs of Rockabill to Dalkey Island SAC and Lambay Island SAC are presented in Section 7.3.4.3.

**7.3.4 Examination and Analysis of Potential Direct and Indirect Impacts**

278 The direct and / or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of Rockabill to Dalkey Island SAC and Lambay Island SAC, are:

- Habitat degradation and effects on QI / SCI species as a result of hydrological impacts; and
- Disturbance and displacement effects.

#### 7.3.4.1 Habitat degradation and effects on QI / SCI species as a result of hydrological impacts

279 The release of contaminated surface water runoff and/or an accidental spillage or pollution event into any surface water features during construction, or operation, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the accidental spillage and/or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower, and Ringsend WWTP. Therefore there is potential for the Proposed Scheme to result in significant effects which could have implications for the conservation objectives of Rockabill to Dalkey Island SAC and Lambay Island SAC as a result of hydrological impacts.

280 The Marine Mammal Risk Assessment prepared for the Proposed Scheme assessed the potential impact of suspended material and contaminants arising from the construction of the proposed DPTOB. Seabed disturbance as a result of piling and other construction works including the installation of sheet piles can result in increased turbidity and the creation of sediment plumes (Todd *et al.*, 2015). IWDG have stated that sedimentation and any increases in turbidity arising from the Proposed Scheme are unlikely to affect marine mammals, which use echolocation. Marine mammals often inhabit turbid environments, and research carried out on blind harbour seals (Newby *et al.*, 1970) and grey seals (McConnell *et al.*, 1999) indicate that vision is not essential to pinniped's survival or ability to forage. Therefore, there is no potential for increased sedimentation produced as a result of the Proposed Scheme to result in significant effects on marine mammals associated with Rockabill to Dalkey Island SAC and Lambay Island SAC.

281 A reduction in water quality as a result of the Proposed Scheme (either alone or in combination with other pressures on water quality) could negatively affect the quantity and quality of prey available to QI marine mammal species. The Marine Mammal Risk Assessment prepared for the Proposed Scheme states that the diet of marine mammals in the River Liffey is not known but it is likely that they are quite opportunistic and feed on both benthic and pelagic or migratory fish species if available. Small shoaling fish that occur regularly in the diet of seals and porpoises are unlikely to be affected during operations. Therefore, it is not likely that hydrological effects arising from the Proposed Scheme will result in significant effects on the prey species of marine mammals associated with Rockabill to Dalkey Island SAC and Lambay Island SAC.

#### 7.3.4.2 Disturbance and displacement effects

282 Marine mammals, particularly harbour seals and grey seals associated with European sites have been recorded commuting and foraging within the Liffey Estuary Lower, in the vicinity of the Proposed Scheme. The construction methodology for the proposed DPTOB and the proposed boardwalks involves noisy activities in the aquatic environment such as piling and noise from additional vessels associated with the Construction Phase. The Marine Mammal Risk Assessment (Appendix VII) prepared for the Proposed Scheme states that in the absence of mitigation, prolonged exposure to pile installation could lead to Temporary Threshold Shift (TTS) (i.e. temporary hearing loss as a result of exposure to noise, and changes in the behaviour of marine mammals).

283 Therefore, there is potential for the Proposed Scheme to result in disturbance / displacement impacts on QI marine mammal populations associated with Rockabill to Dalkey Island SAC and Lambay Island SAC during the construction phase.

#### 7.3.4.3 Summary

284 **Table 19** presents a summary of the potential impacts and effects of the Proposed Scheme on the QIs of Rockabill to Dalkey Island SAC and Lambay Island SAC, and how these impacts relate to affecting the site's conservation objectives.

**Table 19 Potential Impacts / Effects on the Conservation Objectives of Rockabill to Dalkey Island SAC and Lambay Island SAC**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Rockabill to Dalkey Island SAC</b>			
<b>Reefs [1170]</b>			
To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows			
Habitat area / Hectares / The permanent habitat area is stable or increasing, subject to natural processes	Yes An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality (vegetation structure and composition) and area / distribution of intertidal / coastal habitats.	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	No
Habitat distribution / Occurrence/ Distribution is stable or increasing, subject to natural processes			
Community structure / Biological composition / Conserve the following community types in a natural condition: Intertidal reef community complex; and Subtidal reef community complex			
<b>Harbour porpoise <i>Phocoena phocoena</i> [1351]</b>			
To maintain the favourable conservation condition of Harbour porpoise in Rockabill to Dalkey Island SAC, which is defined as follows:			
Access to suitable habitat/ Number of artificial barriers/ Species range within the site should not be restricted by artificial barriers to site use	Yes An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality of the	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	No
Disturbance/ Level of impact/ Human activities should occur at levels that do not adversely affect the harbour porpoise community at the site			



Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>intertidal / marine habitats which support harbour porpoise.</p> <p>Noise, vibration and increased additional vessels associated with the construction phase of the Proposed Scheme could lead to TTS and behavioural disturbance in marine mammals.</p>	<p>The mitigation measures described in Section 7.3.5.2 to specifically manage the risk to marine mammals from man-made sound.</p>	
<b>Lambay Island SAC</b>			
<b>Reefs [1170]</b>			
To maintain the favourable conservation condition of the habitat in the SAC, which is defined as follows:			
Habitat area / Hectares / The permanent habitat area is stable or increasing, subject to natural processes	<p>No</p> <p>There is no potential for impacts to occur on any habitats associated with the Lambay Island SAC as it is located a significant distance from the Proposed Scheme, and on the far side of the Howth peninsula.</p>	No	No
Habitat distribution / Occurrence / Distribution is stable or increasing, subject to natural processes			
Community structure / Biological composition / Conserve the following community types in a natural condition: Intertidal reef community complex; <i>Laminaria</i> -dominated community complex			
<b>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]</b>			
To maintain the favourable conservation condition of Vegetated sea cliffs of the Atlantic and Baltic coasts in Lambay Island SAC, which is defined as follows:			
Habitat length Kilometres Area stable, subject to natural processes, including erosion	<p>No</p> <p>There is no potential for impacts to occur on any habitats associated with the Lambay Island SAC as it is located a significant distance from</p>	No	No
Habitat distribution / Occurrence/ No decline, subject to natural processes			
Physical structure: functionality and hydrological regime / Occurrence of artificial barriers / No alteration to natural functioning of			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
geomorphological and hydrological processes due to artificial structures	the Proposed Scheme, and on the far side of the Howth peninsula.		
Vegetation structure: zonation / Occurrence/ Maintain range of sea cliff habitat zonation including transitional zones, subject to natural processes including erosion and succession			
Vegetation structure: vegetation height / Centimetres / Maintain structural variation within sward			
Vegetation composition: typical species and subcommunities/ Percentage cover at a representative sample of monitoring stops / Maintain range of subcommunities with typical species listed in the Irish Sea Cliff Survey			
Vegetation composition: negative indicator species / Percentage/ Negative indicator species (including non-natives) to represent less than 5% cover			
Vegetation composition: bracken and woody species / Percentage Cover of bracken ( <i>Pteridium aquilinum</i> ) on grassland and /or heath less than 10% / Cover of woody species on grassland and /or heath less than 20%			
<b>Grey Seal <i>Halichoerus grypus</i> [1364]</b>			
To maintain the favourable conservation condition of Grey Seal in Lambay Island SAC, which is defined as follows:			
Access to suitable habitat / Number of artificial barriers / Species range within the site should not be restricted by artificial barriers to site use	Yes An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will	No
Breeding behaviour/ Breeding sites / The breeding sites should be maintained in a natural condition			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Moulting behaviour / Moulting haul-out sites / The moulting haul-out sites should be maintained in a natural condition	event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality of the intertidal / marine habitats which support grey seal.  Noise, vibration and increased additional vessels associated with the construction phase of the Proposed Scheme could lead to TTS and behavioural disturbance in marine mammals.	ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.  The mitigation measures described in Section 7.3.5.2 to manage the risk to marine mammals from man-made sound.	
Resting behaviour / Resting haul-out sites / The resting haul-out sites should be maintained in a natural condition			
Disturbance / Level of impact / Human activities should occur at levels that do not adversely affect the grey seal population at the site			
<b>Harbour Seal <i>Phoca vitulina</i> [1365]</b> To maintain the favourable conservation condition of Harbour Seal in Lambay Island SAC, which is defined as follows:			
Access to suitable habitat /Number of artificial barriers Species range within the site should not be restricted by artificial barriers to site use	Yes  An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality of the intertidal/marine habitats which support harbour seal.  Noise, vibration and increased additional vessels associated with the construction phase of the Proposed Scheme could lead to TTS	Yes  The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.  The mitigation measures described in Section 7.3.5.2 to manage the risk to marine mammals from man-made sound.	No
Breeding behaviour / Breeding sites / The breeding sites should be maintained in a natural condition			
Moulting behaviour / Moulting haul-out sites / The moulting haul-out sites should be maintained in a natural condition			
Resting behaviour / Resting haul-out sites / The resting haul-out sites should be maintained in a natural condition			
Disturbance / Level of impact / Human activities should occur at levels that do not adversely affect the harbour seal population at the site			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	and behavioural disturbance in marine mammals.		

### 7.3.5 Mitigation Measures

285 This section presents the mitigation measures that will be implemented during Construction and Operation phases to avoid or reduce the potential impacts of the Proposed Scheme on Rockabill to Dalkey Island SAC and Lambay Island SAC. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

#### 7.3.5.1 Measures to Protect Surface Water Quality

##### Measures to Protect Surface Water Quality during Construction

286 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

##### Measures to Protect Surface Water Quality during Operation

287 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

#### 7.3.5.2 Measures to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters

288 This section presents the mitigation measures that will be implemented during Construction to avoid the potential impacts of the Proposed Scheme on downstream European sites, as adapted from the Marine Mammal Risk Assessment (IWDG, 2020) prepared for the Proposed Scheme. All of the mitigation measures will be implemented in full. They are in accordance with best practice, and tried and tested, effective control measures to protect marine mammals.

- A qualified and experienced marine mammal observer (MMO)<sup>25</sup> shall be appointed by the appointed contractor to monitor for marine mammals and to log all relevant events using standardised data forms<sup>26</sup>.
- Pile driving activity shall not commence if marine mammals are detected within a 1,000m radial distance of the pile driving sound source, i.e. within the Monitored Zone;
- Pile driving activities shall only commence in daylight hours where effective visual monitoring, as determined by the MMO, has been achieved. Where effective visual monitoring, as determined by the MMO, is not possible the sound-producing activities shall be postponed until effective visual monitoring is possible;
- An agreed and clear on-site communication signal must be used between the MMO and the appointed contractor as to whether the relevant activity may or may not proceed, or resume following a break. It shall only proceed on positive confirmation with the MMO; and
- In waters up to 200m deep, the MMO shall conduct pre-start-up constant effort monitoring at least 30 minutes before the sound-producing activity is due to commence. Sound-producing activity shall not commence until at least 30 minutes have elapsed with no marine mammals detected within the Monitored Zone by the MMO.
- The prescribed Pre-Start Monitoring shall subsequently be followed by an appropriate Ramp-Up Procedure which should include continued monitoring by the MMO.
- In commencing a pile driving or other noise generating operation where the output peak sound pressure level (in water) from any source including equipment testing exceeds 170 dB re: 1µPa @1m an appropriate Ramp-up Procedure (i.e., “soft-start”) must be used. The procedure for use should be informed by the risk assessment undertaken giving due

<sup>25</sup> DAHG (2014) *Guidance to Manage the Risks to Marine Mammals from Manmade sound sources in Irish Waters*

<sup>26</sup> [www.npws.ie/marine/best-practice-guidelines](http://www.npws.ie/marine/best-practice-guidelines)

- consideration to the pile specification, the driving mechanism, the receiving substrate, the duration of the activity, the receiving environment and species therein, and other information.
- Where it is possible according to the operational parameters of the equipment and materials concerned, the underwater acoustic energy output shall commence from a lower energy start-up (i.e., a peak sound pressure level not exceeding 170 dB re: 1 $\mu$ Pa @1m) and thereafter be allowed to gradually build up to the necessary maximum output over a period of 20-40 minutes.
  - The controlled build-up of acoustic energy output shall occur in consistent stages to provide a steady and gradual increase over the ramp-up period.
  - Where the measures outlined in the two steps above are not possible, alternatives must be examined whereby the underwater output of acoustic energy is introduced in a consistent, sequential and gradual manner over a period of 20-40 minutes prior to commencement of the full necessary output.
  - In all cases where a Ramp-Up Procedure is employed the delay between the end of the ramp-up and the necessary full output must be minimised to prevent unnecessary high-level sound introduction into the environment.
  - Once an appropriate and full Ramp-Up Procedure commences, there is no requirement to halt or discontinue the procedure at night-time (if permitted), nor if weather or visibility conditions deteriorate nor if marine mammals occur within a 1,000m radial distance of the sound source, i.e., within the Monitored Zone.
  - If there is a break in pile driving sound output for a period greater than 30 minutes (e.g., due to equipment failure, shut-down or location change) then all Pre-Start Monitoring and a subsequent Ramp-up Procedure (where appropriate following Pre-Start Monitoring) must be undertaken.
  - For higher output pile driving operations which have the potential to produce injurious levels of underwater sound as informed by the associated risk assessment, there is likely to be a regulatory requirement to adopt shorter 5-10 minute break limit after which period all Pre-Start Monitoring and a subsequent Ramp-up Procedure (where appropriate following Pre-Start Monitoring) shall recommence as for start-up.

### 7.3.6 Residual Impacts

289 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of adversely affecting the conservation objectives, or the favourable conservation condition, of the QIs of Rockabill to Dalkey Island SAC and Lambay Island SAC, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of Rockabill to Dalkey Island SAC and Lambay Island SAC. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

### 7.3.7 Conclusion of Assessment for Rockabill to Dalkey Island SAC and Lambay Island SAC

290 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the QIs of Rockabill to Dalkey Island SAC and Lambay Island SAC, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the QIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of Rockabill to Dalkey Island SAC and Lambay Island SAC.

## 7.4 South Dublin Bay and River Tolka Estuary SPA [004024]

### 7.4.1 Ecological Baseline Description for South Dublin Bay and River Tolka Estuary SPA

- 291 The Natura 2000 Standard Data Form (NPWS, 2020d) states that the SPA possesses extensive intertidal flats, part of which are designated as South Dublin Bay SAC, and which supports wintering waterfowl as part of the wider Dublin Bay population. The site also supports an internationally important population of light-bellied brent geese, feeding on the stands of *Zostera*. It hosts nationally important numbers of six species, is an important site for wintering gulls and is an autumn roosting site for a significant number of terns.
- 292 Both common tern and arctic tern have been known to breed in Dublin Port. A man-made mooring structure known as the ESB (SPA) dolphin is designated within the SPA. Small numbers of Common Tern and Arctic Tern were originally recorded nesting on this platform in the 1980s. The breeding population of Common Tern at this site has increased, with 216 pairs recorded in 2000, and over 400 pairs in 2007. It is considered as one of the most important Common Tern sites in the country<sup>27</sup> with over 400 pairs recorded here in 2007. Over the years additional platforms have been constructed as breeding platforms for the Dublin Port colony and monitored since 2014 (Bird Watch Ireland, 2021). The Dublin Bay tern colony now nest across four platforms: ESB dolphin, the CDL dolphin, the Tolka pontoon, and the GSW pontoon.
- 293 As discussed in Section 5.1.2.4, the Dublin Bay Birds Project recorded 538 tern nests in 2021 across the four nesting platforms (528 attributed to common tern, 10 attributed to arctic tern). The tern colony has been experiencing a pattern of decline in recent years (6% decline compared to 2020), considered to be as a result of low productivity possibly due to predation events particularly impacting the CDL dolphin and Tolka pontoon in recent years (BWI, 2021). Predation events are considered to have resulted in very limited productivity specifically at the CDL dolphin (the only structure where arctic tern are recorded to nest at) between 2019 and 2020 and complete failure in 2021. Other than at the CDL dolphin, common tern productively shows improvement compared to previous years and appears stable at 1.06 (chicks raised to fledglings per nesting pair per year) (BWI, 2021). The 2022 Dublin Bay Birds Project report was not published at the time of writing, however consultation with Bird Watch Ireland (pers. comm., 2022) confirmed that mortality due to avian influenza was not recorded at the Dublin Port tern colony in 2022.
- 294 The main threat to the site is land reclamation, with other threats including oil pollution from Dublin Port, commercial bait digging and disturbance by walkers and dogs.

### 7.4.2 Special Conservation Interests and Conservation Objectives of South Dublin Bay and River Tolka Estuary SPA

- 295 The SCIs of South Dublin Bay and River Tolka Estuary SPA, and the overall conservation objective, are listed in **Table 20**.

**Table 20 Special Conservation Interests and Conservation Objectives of South Dublin Bay and River Tolka Estuary SPA**

Special Conservation Interest(s)	Conservation Objective(s)
<b>South Dublin Bay and River Tolka Estuary SPA [004024]</b> A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i> A130 Oystercatcher <i>Haematopus ostralegus</i> A137 Ringed Plover <i>Charadrius hiaticula</i>	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA

<sup>27</sup> NPWS (2015) South Dublin Bay and River Tolka Estuary SPA: Site Synopsis



Special Conservation Interest(s)	Conservation Objective(s)
<p>A141 Grey Plover <i>Pluvialis squatarola</i>                      A143 Knot <i>Calidris canutus</i>                      A144 Sanderling <i>Calidris alba</i>                      A149 Dunlin <i>Calidris alpina</i>                      A157 Bar-tailed Godwit <i>Limosa lapponica</i>                      A162 Redshank <i>Tringa totanus</i>                      A179 Black-headed Gull <i>Chroicocephalus ridibundus</i>                      A192 Roseate Tern <i>Sterna dougallii</i>                      A193 Common Tern <i>Sterna hirundo</i>                      A194 Arctic Tern <i>Sterna paradisaea</i>                      A999 Wetland and Waterbirds</p> <p><i>S.I. No. 212/2010 - European Communities (Conservation of Wild Birds (South Dublin Bay and River Tolka Estuary Special Protection Area 004024)) Regulations 2010.</i></p> <p><i>NPWS (2015a) Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</i></p>	

296 In conjunction with considering the generic conservation objective for this SPA “To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.”, the site-specific conservation objectives document for South Dublin Bay and River Tolka Estuary SPA also informed this assessment.

297 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the SCIs within the European site. Affecting the conservation condition of the SCIs is deemed to constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the qualifying interests of South Dublin Bay and River Tolka Estuary SPA are presented in Section 7.4.3.6.

#### 7.4.3 Examination and Analysis of Potential Direct and Indirect Impacts

298 The direct and / or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the SCIs of South Dublin Bay and River Tolka Estuary SPA, are:

- Habitat loss and fragmentation;
- Habitat degradation / effects on SCI species as a result of hydrological impacts;
- Habitat degradation as a result of introducing / spreading non-native invasive species;
- Disturbance and displacement impacts; and
- Direct injury / mortality impacts.

##### 7.4.3.1 Habitat loss and fragmentation

###### Estuarine Land Reclamation

299 The proposed DPTOB will require the construction of piers downstream of the tidal confluence of the River Dodder with the Liffey Estuary Lower, and the reclamation of a small piece of land adjacent to the Tom Clarke East Link Bridge. SCI species for which South Dublin Bay and River Tolka Estuary SPA has been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. Many of the SCI species associated with this SPA are wholly coastal and would not be predicted to venture inland nor into populated estuarine or brackish areas such as around the proposed DPTOB. There is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and loafing habitat for

SCI species associated with Dublin Bay, namely light-bellied brent goose, black-headed gull, common tern and redshank. However, no significant effects will occur on any SCI bird species population of South Dublin Bay and River Tolka Estuary SPA, in light of their conservation objectives, as a consequence of loss or fragmentation of foraging/loafing aquatic habitat due to the following reasons:

- The availability of large areas of suitable marine foraging and/or loafing habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to South Dublin Bay and River Tolka Estuary SPA;
- Relatively low peak flocks recorded on lands during vantage point surveys, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA (see **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis; and
- There are extensive areas of suitable foraging and loafing habitat in the Liffey Estuary Lower and wider Dublin Bay area. The area of proposed land reclamation (3,950m<sup>2</sup>) will only result in the loss of a small area of suitable foraging / loafing habitat relative to the surrounding environment and is not anticipated to significantly reduce the habitat available to SCI bird species.

#### Removal of potential *ex-situ* amenity grassland inland feeding sites

300 Wintering SCI bird species for which South Dublin Bay and River Tolka Estuary SPA is designated were recorded on *ex-situ* inland feeding sites during transect surveys. These species include light-bellied Brent goose, oystercatcher and black-headed gull (**Table 9**). Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and roosting habitat for SCI species associated with South Dublin Bay and River Tolka Estuary SPA. However, no significant effects will occur on any SCI bird species population of South Dublin Bay and River Tolka Estuary SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to loss or fragmentation of habitat due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and / or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 10** and **Table 11** with reference to the thresholds); and,
- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, Clontarf Golf Club and Royal Dublin and St. Anne's golf courses on the Bull Island.

#### 7.4.3.2 Habitat degradation / effects on QI / SCI species as a result of hydrological impacts

301 The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during the Construction Phase, or Operation Phase, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and/or leaks of contaminants into receiving waters. The associated effects of a reduction

of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower, and Ringsend WWTP.

- 302 Therefore, this reduction in water quality (either alone or in combination with other pressures on water quality) could result in the degradation of sensitive habitats present within these European sites, which in turn would negatively affect the SCI bird species that rely upon these habitats as foraging and/or roosting habitat. It could also negatively affect the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that they result in significant effects which could have implications for the conservation objectives of South Dublin Bay and River Tolka Estuary SPA.

#### 7.4.3.3 Habitat degradation as a result of introducing / spreading Non-Native invasive species

- 303 There were no areas of non-native invasive plant species listed on the Third Schedule of the (Birds and Natural Habitats) Regulations identified during field surveys. However, the desk study returned records of non-native invasive plant species present within, or in close proximity to, the Proposed Scheme. During the Construction and / or Operational Phase (which includes routine maintenance / management work), these species could potentially spread or be introduced to terrestrial habitats located within downstream European sites via surface water features. The introduction and / or spread of these invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat. This in turn could undermine the conservation objectives of these European sites. The Proposed Scheme is hydrologically connected to the Dodder\_050, Liffey Estuary Lower and Ringsend Wastewater Treatment Plant, both of which flow into Dublin Bay. Therefore, there is potential for the Proposed Scheme to result in significant effects which could have implications for the conservation objectives of South Dublin Bay and River Tolka Estuary SPA as a result of invasive species spread.

#### 7.4.3.4 Disturbance and Displacement impacts

- 304 A temporary and / or permanent increase in noise, vibration and/or human activity levels during the construction and / or operation of the Proposed Scheme could result in the disturbance to and / or displacement of SCI bird species present within footprint and/or the vicinity of the Proposed Scheme. Such disturbance effects would not be expected to extend beyond a distance of approximately 300m for the majority of the Proposed Scheme, as noise levels associated with general construction activities would attenuate to close to background levels at that distance and beyond. General construction activities will have a less pronounced affect than piling, in terms of its ZOI, but will be on-going for the duration of the construction phase, including multiple breeding seasons.
- 305 In terms of construction noise, levels below 50dB would not be expected to result in any response from foraging or roosting birds. Noise levels between 50dB and 70dB would provoke a moderate effect / level of response from birds (i.e. birds becoming alert and some behavioural changes (e.g. reduced feeding activity)) (Cutts *et al.*, 2013). However, birds would be expected to habituate to noise levels within this range. Noise levels above 70dB would likely result in birds moving out of the affected zone or leaving the site altogether. This is supported by the findings of Wright *et al.* (2010) which found that average noise levels above 60dB resulted in behavioural responses, with birds abandoning the site in response to noise levels above 70dB.
- 306 **Table 21** provides the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the ZOI of disturbance

effects. The Grand Canal Dock tern breeding site is within this buffer zone, located 120m upstream of the proposed DPTOB. No other SCI breeding sites within this buffer were identified during field surveys.

- 307 Noisy works associated with the construction of the Proposed Scheme at this location include piling associated with the proposed DPTOB, land reclamation from the Liffey Estuary and the demolition of the existing SPRC building. In particular as terns are often low flying, approximately 10metres over water, the presence of a construction site (2 no. coffer dams) at the confluence of the Dodder\_050 and Liffey Estuary Lower for a period estimated at 30 months could result in an alteration to flight path, temporarily away from the watercourse.
- 308 As a result, noise and vibration from piling, demolition, dredging and any additional works to reclaim the Liffey Estuary Lower, will have the potential to result in the reduced breeding success of birds breeding in the vicinity of the works and abandonment of current nesting sites. Noise and disturbance levels as a result of the construction of the DPTOB are predicted to be a maximum of 90dB at 10m from the Proposed Scheme. At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold. At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of sheet piling rigs and breakers during demolition and approach structure works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance for breeding bird species is estimated to reach 250m from the Proposed Scheme. The Grand Canal Dock tern breeding site is within this buffer zone, located 120m upstream of the proposed DPTOB. No other SCI breeding sites within this buffer were identified during field surveys.

**Table 21 Indicative Construction Noise Calculations at Varying Distances from the Proposed Scheme**

Activity	Predicted CNL at Stated Distance from Edge of Works (dB $L_{Aeq,12hr}$ Or $L_{Aeq,4hr}$ )								
	(dB)	10m	15m	20m	30m	50m	75m	100m	150m
General Road works	79	76	73	69	65	61	59	55	51
Road Widening, Road Upgrade and Utility Diversion	83	80	77	73	69	65	63	59	55
Quiet street treatment	80	77	74	70	66	62	60	56	52
Urban realm landscaping	79	76	73	69	65	61	59	55	51
Site compounds	78	75	72	68	64	60	58	54	50
Boundary wall construction	80	77	74	70	66	62	60	56	49
CFA Bored / Auger piling works	80	77	74	70	66	62	60	56	52
Hydraulic Hammer piling works	81	78	75	71	67	63	61	57	53
Retaining walls	81	78	75	71	67	63	61	57	53
Boardwalk construction and deconstructing and replacement of Scherzer Bridges	80	77	74	70	66	62	60	56	52

**Table 22 Indicative Construction Noise Calculations at the Proposed DPTOB at Varying Distances from the Proposed Scheme**

Construction Programme Activity	Description of Typical Works	Cumulative Predicted CNL at a Specific Distance (dB $L_{Aeq,12hr}$ Or $L_{Aeq,4hr}$ )								
		10m	15m	20m	30m	50m	75m	100m	150m	250m
High Intrusive Noise Level Works	Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works	90	87	84	80	76	72	70	66	62

Construction Programme Activity	Description of Typical Works	Cumulative Predicted CNL at a Specific Distance (dB <sub>L<sub>Aeq,12hr</sub></sub> or L <sub>Aeq,4hr</sub> )								
		10m	15m	20m	30m	50m	75m	100m	150m	250m
Main Structural Works	Bored Piling Rigs, Excavators and Asphalt Pavers During Construction of Retaining Walls and Structural Elements of the Bridge, Jetty, SPRC Club House, Access Roads and Provisional Works to Facilitate Future Luas Line	85	82	79	75	71	67	65	61	57
Less Intrusive Structural Works	Construction of Support Structures Including Use of Mobile Cranes	80	77	74	70	66	62	60	56	52
General Site Work	Material Handling, Concreting Works and Use of Generators and Hand-Tools	75	72	69	65	61	57	55	51	47

- 309 **Table 21** and **Table 22** in Section 7.4.4.3 provide the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the Zol of disturbance effects arising from construction activities listed in **Table 21**.
- 310 At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold (see **Table 22** for indicative construction noise calculations). At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance is estimated to reach 250m from the Proposed Scheme.

### Terns

- 311 As discussed in Section 6.6, noisy works associated with the construction of the Proposed Scheme include piling associated with the proposed boardwalks and the proposed DPTOB, construction of boardwalks, removal and reinstallation of the Scherzer Bridges, and the demolition of the existing SPRC building. In particular as terns are often low flying approximately 10metres over water, the presence of a construction site (2 number coffer dams) downstream of the confluence of the Dodder\_050 and Liffey Estuary Lower for a period estimated at 30 months could result in an alteration to flight path, temporarily away from the watercourse.
- 312 As a result, noise and vibration from piling, demolition, rock breaking and any dredging works to reclaim the Liffey Estuary Lower, will have the potential to result in the reduced breeding success of birds breeding in the vicinity of the works and abandonment of any existing current nesting sites.
- 313 The Dublin Bay tern colony nest across four platforms: ESB (SPA) dolphin, the CDL dolphin, the Tolka pontoon, and the GSW pontoon (See Image 8 for locations). The Proposed Scheme will be located closest to the CDL dolphin, located 2km downstream of the proposed DPTOB. The ESB (SPA) dolphin is specifically designated under the South Dublin Bay and River Tolka Estuary SPA, located 2.4km downstream of the Proposed Scheme. The location of these nesting platforms, within the highly urbanised Dublin Port area, are subject to existing levels of disturbance associated with frequent vessel traffic to and from Dublin Port. Common tern therefore are likely to be resilient against noise disturbance. However, while common tern

breed successfully at high-disturbance sites in Dublin Bay, it cannot be ruled out that the construction of the proposed DPTOB, would not result in significant disturbance at the Grand Canal Dock breeding site.

- 314 Common tern nesting at the Grand Canal Dock are considered to be connected to the Dublin Port colony and SPA population, utilising the Grand Canal Dock lock gates as an overflow or satellite nesting platform.
- 315 It should be noted that this nesting area at the Grand Canal Dock had been destroyed in 2019, however surveys in 2022 recorded a single nest with a chick. The highest number of AONs recorded at the Grand Canal Dock during field surveys was in 2018, totalling four AONs. As such, the maximum number of tern pairs nesting at Grand Canal Dock site, are estimated to represent 2.2% of the current SPA platform colony or 0.7% of the overall Dublin Port common tern colony. Despite the ESB (SPA) dolphin being the only platform designated under the SPA, the CDL dolphin, the Tolka pontoon, and the GSW pontoon are all considered to contribute to the South Dublin Bay and River Tolka SPA tern colony.
- 316 The effects of construction-related disturbance could lead to the failure or abandonment of nests at this site which has the potential to reduce the breeding population abundance (number of apparently occupied nests) or alter the distribution of breeding colonies considered to be part of the SPA. It should be noted that due to the likely, but undetermined, level of interchange between SPAs in the wider Dublin Bay area, for which tern species are designated (e.g. Dalkey Islands SPA, South Dublin Bay and River Tolka Estuary SPA and Rockabill Island SPA), it is not definite which SPA terns within the vicinity of the Proposed Scheme are associated with in a given year.
- 317 The construction of the proposed DPTOB will require 30 months, therefore potentially displacing breeding terns from the Grand Canal Dock nesting site. This temporary, short term disturbance affecting the Grand Canal Dock site, during the construction of the Proposed Scheme over two to three breeding seasons, forms a relatively small part of larger expanses of similar, and more suitable, nesting sites in the wider locality of Dublin Port. These include the ESB (SPA) dolphin, CDL dolphin, the Tolka pontoon, and the GSW pontoon providing the main nesting sites for common tern within the South Dublin Bay and River Tolka SPA. The Grand Canal Dock is subject to high footfall from walkers in close proximity to the nesting site, in addition to limited refuge from predators i.e. gulls and rat populations.
- 318 As such, the potential loss of this breeding site for the duration for the construction phase of the proposed DPTOB is not considered to significantly affect the conservation objective attributes and targets supporting the conservation condition of SCI species of the South Dublin Bay and River Tolka Estuary SPA for the following reasons:
- The maximum recorded number of AONs at the Grand Canal Dock was 4 no. recorded in 2018, representing 0.7% of the overall Dublin Port common tern colony, therefore breeding populations are unlikely to rely on this area, instead are considered to utilise this site opportunistically as a satellite site of the main colony;
  - Common tern breeding within the Dublin Port nesting platforms are currently subject to high disturbance associated with vessels navigating to and from the Port, therefore are considered to be habituated to a degree to regular noise disturbance;
  - Low peak flocks recorded foraging and loafing within the footprint of the Proposed Scheme, when compared to 1% of both their international flyway and national populations (See **Table 7**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
  - The lock gates are subject to high footfall from pedestrians therefore subject to regular human disturbance. The Grand Canal Dock nesting site has been historically subject to vandalism and anti-social behaviour, causing destruction of the site in 2019. In addition, the site also offers little refuge from predators i.e. gulls and rat populations. Therefore, suggesting that the overall contribution of the Grand Canal Dock nesting site to the overall SPA common tern colony is irregular and limited; and
  - The construction phase will be completed within 30 months. As such, disturbance impacts are temporary and short term.



319 Excluding the potential impacts on the historic Grand Canal Dock breeding site (discussed above), no significant adverse effects on the integrity of the European site will occur on any SCI bird species population, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites as a result of increased levels of disturbance during construction due to the following reasons:

- The peak count of common tern recorded in the vicinity of the Proposed Scheme is nine no. individuals recorded between May and August 2021 (**Table 7**). Core breeding and foraging areas lie outside of the footprint of the Proposed Scheme, although may lie partially within the Zol. Therefore breeding populations are unlikely to rely on this area, instead using other suitable sites at closer proximity to their core territories. Potential direct impacts on common tern breeding sites, excluding the historic site at Grand Canal Dock (discussed above), can therefore be excluded;
- Relatively low peak flocks recorded foraging and loafing within the footprint of the Proposed Scheme, when compared to 1% of both their international flyway and national populations (See **Table 7**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- There are extensive areas of suitable foraging and loafing habitat for terns in the Liffey Estuary Lower and wider Dublin Bay area, including areas in closer proximity to nearby SPAs;
- Construction of the Proposed Scheme will result in temporary disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods including the various elements of the reclamation and piling construction of the proposed DPTOB;
- SCI bird species present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre.

320 The Operational Phase is not considered to result in significant changes to existing noise levels due to the urban locality of the Proposed Scheme as an existing transport route. The operational phase of the development may temporarily disturb foraging and loafing SCI bird species until such a time that they become habituated to the new levels of noise and human activity. The proposed DPTOB will not be lifted regularly, and the Dodder channel itself does not regularly accommodate large boats.

#### Wintering Birds

321 South Dublin Bay and River Tolka Estuary SPA is designated for wintering SCI species that are known to forage and / or roost at inland sites across Dublin, such as amenity grassland playing pitches. These species include light-bellied brent goose, oystercatcher and black-headed gull. There are three areas of suitable foraging, and / or roosting habitat for these species within the footprint of the Proposed Scheme: CBC0016WB001 (Small grass area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge), CBC0016WB002 (Gaelic pitch and grass area within Ringsend Park) and CBC0016WB003 (Grassy verge within Irishtown Stadium and grass area with scattered trees between the stadium and Bremen Avenue). Additionally, there are four known wintering bird sites within the disturbance Zol of the Proposed Scheme which were returned from the desk study<sup>28</sup> as follows:

- Irishtown / Ringsend Park immediately adjacent to the Proposed Scheme (major importance);
- Irishtown Stadium approximately 19.7m from the Proposed Scheme (high importance);
- Irishtown / Sean Moore Park approximately 76.7m from the Proposed Scheme (high importance); and,

<sup>28</sup> Major importance site 401+ geese; high importance site 51-400 geese; and, moderate importance site 1-50 geese as defined by Benson's study in 2009.

Benson (2009) *Use of Inland Feeding Sites by Light-bellied Geese in Dublin 2008-2009: A New Conservation Concern?* Irish Birds 8: 563-570.



- Shelbourne Park Dog Track approximately 284m from the Proposed Scheme (high importance).
- 322 Records of SCI bird species that are known to forage and / or roost at inland sites across Dublin have been returned from the desk study in the vicinity of the Proposed Scheme (i.e. light-bellied brent goose, black-headed gull and oystercatcher), and SCI bird species were recorded during wintering bird surveys carried out.
- 323 It is therefore possible that SCI bird species associated with the South Dublin Bay SPA currently utilise these and other suitable lands in the wider area. However, there is no potential for impacts to occur on inland feeding SCI populations associated with South Dublin Bay and River Tolka SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9**);
  - Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within a nine to 30 month period. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb foraging and loafing birds until such a time that they become habituated to the new levels of noise and human activity; and,
  - The availability of large areas of suitable foraging and/or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, the Red Arches and Seagrang Park, the Baldoyle Bird Quiet Zone and agricultural lands to the north of the Proposed Scheme.
- 324 Vantage point surveys have confirmed the use of the Proposed Scheme for foraging, commuting and loafing SCI birds within the Construction Phase disturbance Zol. However, no significant effects will occur on any SCI bird species population, in light of their conservation objectives, as a consequence of the disturbance and/or displacement from inland feeding/roosting sites due to increased levels of disturbance due to the following reasons:
- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre.
  - Relatively low peak flocks recorded foraging and loafing within the footprint of the Proposed Scheme, when compared to 1% of both their international flyway and national populations (See **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
  - There are extensive areas of suitable foraging and loafing habitat for light-bellied brent goose, black-headed gull, common tern and redshank in the Liffey Estuary Lower and wider Dublin Bay area, including areas in closer proximity to the South Dublin Bay and River Tolka Estuary SPA; and,
  - SCI bird species present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The Operational phase of the development may temporarily disturb foraging and loafing SCI bird species until such a time that they become habituated to the new levels of noise and human activity. The proposed

DPTOB will not be lifted regularly, and the Dodder channel itself does not regularly accommodate large boats.

#### 7.4.3.5 Direct Injury / Mortality impacts

- 325 SCI bird species for which South Dublin Bay and River Tolka Estuary SPA is designated for, have been recorded foraging and loafing in the vicinity of the proposed DPTOB during surveys, namely light-bellied brent goose, black-headed gull, common tern and redshank. Considering the location of the Proposed Scheme on the Liffey Estuary Lower and the presence of SCI bird species in the vicinity of the Proposed Scheme, there is potential for injury/mortality of small numbers of SCI bird species as a result of collision arising from the construction and operation of the proposed DPTOB. The main causes of bird collisions with man-made structures are considered to be invisibility, particularly at night; deception caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist<sup>29</sup>.
- 326 During the construction phase a collision risk may arise from the presence of construction machinery required for the construction of the proposed DPTOB such as mobile cranes and cherry pickers, representing a new obstacle for SCI birds which forage and loaf in this area. Black-headed gull and tern species are aerially agile with documented high avoidance rates (a minimum micro-avoidance rate of 99.94% for black-headed gull and 99.83% for tern species at offshore wind farms<sup>30</sup>). In collision risk modelling for offshore windfarms, an avoidance rate of 99.8% is applied for goose species, including light-bellied brent goose (SNH, 2018). Although not generally associated with urban environments, terns and redshank present in the vicinity of the Proposed Scheme are likely to be habituated to a degree of vessel and construction activity. Black-headed gull and light-bellied brent goose are species that regularly navigate Dublin City Centre. However, given the lattice structures and mobility of cranes and cherry pickers, it is considered that they may pose a collision risk to birds, particularly at night and in adverse weather conditions. Given that these species are habituated to the urban environment, it is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with South Dublin Bay and River Tolka Estuary SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of birds with construction machinery.
- 327 During the operational phase, the proposed DPTOB represents a collision risk to SCI bird species. Literature available on bridges over wetlands (Oresund Bridge and Sabo Bridge cable-stay and bowstring structures, respectively) suggest that such bridges present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect<sup>31,32</sup>. To put these studies into context, approximately 10 million migrant birds pass the Oresund Bridge during autumn migration and 27,000 bird movements (approximately 83% aquatic birds) were recorded crossing the Sabo Bridge during 400 hours of observation, suggesting that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect. In addition, both of the Oresund Bridge and Sabo Bridge are cable-stay and bowstring structures and pose a greater collision risk than the proposed clear span bridge over the River Dodder / River Liffey confluence in Dublin City Centre.

<sup>29</sup>Jaroslow, B. (1979). A review of factors involved in bird-tower kills, and mitigative procedures. P 469-473 in: G.A. Swanson, tech. coord. *The mitigation symposium: a national workshop on mitigation losses of fish and wildlife habitats*. U.S. Forest Service General Technical Report R<-65.

<sup>30</sup>Smart Wind (2013). Review of Avoidance Rates in Seabirds at Offshore Wind Farms and Applicability of Use in the Band Collision Risk Model.

<sup>31</sup>FEBI (2013). *Fehmarnbelt Fixed Link EIA. Fauna and Flora – Birds. Birds of the Fehmarnbelt Area – Impact Assessment. Report No. E3TR0015*

<sup>32</sup>Godinho C., Marques, J.T., Salgueiro, P., Catarino, L., Osório de Castro, C., Mira, A., and Beja, P. (2017) *Bird Collisions in a Railway Crossing a Wetland of International Importance (Sado Estuary, Portugal)*. In: Borda-de-Água L., Barrientos R., Beja P., Pereira H. (eds) *Railway Ecology*. Springer, Cham

328 Birds present in the vicinity of the Proposed Scheme successfully navigate around cranes / container lifting machinery present in Dublin Port and bridges present in the Liffey Estuary Lower daily. There have been no known reports of bird species colliding with the Tom Clarke East Link Bridge, an opening bridge which is adjacent to the Proposed Scheme or machinery associated with Dublin Port. Additionally, the proposed DPTOB. has been designed to be highly visible and avoid the use of features that are a potential hazard to birds. The main crossing spans and the handrails will be horizontal and comprised of steel. No structures generally considered hazardous to birds, such as pylons and cables, are included in the design of this bridge. Therefore, there will be no significant injury/mortality risk to SCI bird species as a result of the Proposed Scheme.

#### 7.4.3.6 Summary

329 **Table 23** presents a summary of the potential impacts and effects of the Proposed Scheme on the SCIs of South Dublin Bay and River Tolka Estuary SPA, and how these impacts relate to affecting the site's conservation objectives.

**Table 23 Potential Impacts / Effects on the Conservation Objectives of South Dublin Bay and River Tolka Estuary SPA**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>South Dublin Bay and River Tolka Estuary SPA</b>			
<p><b>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046], Oystercatcher (<i>Haematopus ostralegus</i>) [A130], Ringed Plover (<i>Charadrius hiaticula</i>) [A137], Knot (<i>Calidris canutus</i>) [A143], Sanderling (<i>Calidris alba</i>) [A144], Dunlin (<i>Calidris alpina 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]</b></p> <p><b>Note: Grey Plover (<i>Pluvialis squatarola</i>) [A141] is proposed for removal from the list of SCI's for the site so no site-specific conservation objective is included for the species</b></p> <p>To maintain the favourable conservation condition of the special conservation interests of the SPA, which is defined as follows:</p>			
Population trend / Percentage change / Long term population trend stable or increasing	Yes	Yes	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation	<p>An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>The introduction and / or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly</p>	<p>See the relevant mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment.</p> <p>See the relevant mitigation measures described in Section 7.1.4.2 will prevent the introduction and / or spread of invasive species.</p> <p>See the relevant mitigation measures described in Section 7.4.5 to avoid any potential collision risk of SCI bird species with construction machinery.</p>	

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>inundated by seawater. This in turn could affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p>		
<p><b>Roseate Tern (<i>Sterna dougallii</i>) [A192]</b> To maintain the favourable conservation condition of the special conservation interests of the SPA, which is defined as follows:</p>			
<p>Passage population: individuals / Number / No significant decline</p>	<p>Yes</p>	<p>Yes</p>	<p>No</p>
<p>Distribution: roosting areas / Number; location; area (hectares) / No significant decline</p>	<p>An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quantity and quality of prey fish and the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and</p>	<p>The relevant mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p>	
<p>Prey biomass available / Kilogrammes / No significant decline</p>			
<p>Barriers to connectivity / Number; location; shape; area (hectares) / No significant increase</p>			
<p>Disturbance at roosting site / Level of impact / Human activities should occur at levels that do not adversely affect the numbers of roseate tern among the post-breeding aggregation of terns.</p>		<p>The relevant mitigation measures described in Section 7.1.4.2 will prevent the introduction and / or spread of invasive species to downstream European sites during construction and</p>	

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>have long-term effects on the SPA populations.</p> <p>The introduction and / or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. This in turn could affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p> <p>Significant construction related disturbance could result in the reduced breeding success of this SCI bird species and abandonment of nest sites (e.g. if terns were to re-establish the previously destroyed Grand Canal nest site). This has the potential to reduce the breeding population abundance (number of apparently occupies nests) or alter distribution of</p>	<p>operation of the Proposed Scheme.</p> <p>The relevant mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p> <p>The relevant mitigation measure described in Section 7.4.4.4 to avoid any potential disturbance related impacts on this SCI bird species during construction.</p>	

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?	
	breeding colonies associated with this SPA.			
<b>Common Tern (<i>Sterna hirundo</i>) [A193]</b>				
To maintain the favourable conservation condition of the special conservation interests of the SPA, which is defined as follows:				
Breeding population abundance: apparently occupied nests (AONs) / Number / No significant decline	Yes	Yes	No	
Productivity rate: fledged young per breeding pair / Mean number / No significant decline	An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quantity and quality of prey fish and the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.	The relevant mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.		
Passage population: individuals / Number / No significant decline				
Distribution: breeding colonies / Number; location; area (Hectares) / No significant decline				
Distribution: roosting areas / Number; location; area (Hectares) / No significant decline				
Prey biomass available / Kilogrammes / No significant decline				
Barriers to connectivity / Number; location; shape; area (hectares) / No significant increase				
Disturbance at breeding site / Level of impact / Human activities should occur at levels that do not adversely affect the breeding common tern population				
Disturbance at roosting site / Level of impact / Human activities should occur at levels that do not adversely affect the numbers of common tern among the post-breeding aggregation of terns				The introduction and / or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats permanently or regularly inundated by seawater. This in turn could affect the use of habitat areas by birds and have long-term effects on the SPA populations.



Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery</p> <p>Significant construction related disturbance could result in the reduced breeding success of this SCI bird species and abandonment of nest sites (e.g. if terns were to re-establish the previously destroyed Grand Canal nest site). This has the potential to reduce the breeding population abundance (number of apparently occupies nests) or alter distribution of breeding colonies associated with this SPA.</p>	<p>The relevant mitigation measure described in Section 7.4.4.4 to avoid any potential disturbance related impacts on this SCI bird species during construction.</p>	
<p><b>Arctic Tern (<i>Sterna paradisaea</i>) [A194]</b> To maintain the favourable conservation condition of the special conservation interests of the SPA, which is defined as follows:</p>			
<p>Passage population / Number of individuals / No significant decline</p>	<p>Yes</p>	<p>Yes</p>	<p>No</p>
<p>Distribution: roosting areas / Number; location; area (hectares) / No significant decline</p>	<p>An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a</p>	<p>The relevant mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure</p>	
<p>Prey biomass available / Kilogrammes / No significant decline</p>			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<p>Barriers to connectivity / Number; location; shape; area (hectares) / No significant increase</p> <hr/> <p>Disturbance at roosting site / Level of impact / Human activities should occur at levels that do not adversely affect the numbers of Arctic tern among the post-breeding aggregation of terns</p>	<p>sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quantity and quality of prey fish and the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>The introduction and / or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. This in turn could affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>See the relevant mitigation measures described in Section 7.1.4.2 will prevent the introduction and / or spread of invasive species to downstream European sites during construction and operation of the Proposed Scheme.</p> <p>See the relevant mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p> <p>See the relevant mitigation measure described in Section 7.4.4.4 to avoid any potential disturbance related impacts on this SCI bird species during construction.</p>	

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>Significant construction related disturbance could result in the reduced breeding success of this SCI bird species and abandonment of nest sites (e.g. if terns were to re-establish the previously destroyed Grand Canal nest site). This has the potential to reduce the breeding population abundance (number of apparently occupies nests) or alter distribution of breeding colonies associated with this SPA.</p>		
<p><b>Wetlands [A999]</b> To maintain the favourable conservation condition of wetland habitats within the SPA, which is defined as follows:</p>			
<p>Habitat area / Hectares / The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,192ha, other than that occurring from natural patterns of variation</p>	<p>Yes An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations. The introduction and / or spread of invasive species to downstream</p>	<p>Yes The relevant mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.  The relevant mitigation measures described in Section 7.1.4.2 will prevent the introduction and / or spread of invasive species to downstream European sites during construction and</p>	<p>No</p>

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. This in turn could affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p>	<p>operation of the Proposed Scheme.</p>	

#### 7.4.4 Mitigation Measures

330 This section presents the mitigation measures that will be implemented during Construction and Operation to avoid or reduce the potential impacts of the Proposed Scheme on South Dublin Bay and River Tolka Estuary SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

##### 7.4.4.1 Measures to Protect Surface Water Quality

###### Measures to Protect Surface Water Quality during Construction

331 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

###### Measures to Protect Surface Water Quality during Operation

332 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

##### 7.4.4.2 Measures to Prevent the Spread of Invasive Species to Downstream European Sites

333 The mitigation measures presented above in Section 7.1.4.2 will prevent the spread of invasive species to downstream European sites as a result of the Proposed Scheme.

##### 7.4.4.3 Measures to Reduce Direct Injury / Mortality Impacts during Construction

334 This section presents the mitigation measures that will be implemented during construction to avoid direct injury / mortality impacts on SCI bird species. All of the mitigation measures will be implemented in full:

- When not in use, construction machinery such as cranes and cherry pickers will not overhang the aquatic environment; and
- Where the above measure cannot be implemented fully (i.e. due to health and safety issues), UV lighting or UV paint will be used on construction machinery to illuminate extendable parts (such as the arm of cranes) which may overhang the aquatic environment. The objective of this is to make these lattice structures more detectable for birds that may fly at dusk or at night. The UV decoys will be installed prior to the erection of construction machinery at night.

##### 7.4.4.4 Measures to Reduce the Effects of Construction Related Disturbance on breeding SCI Bird Species

335 This section presents the mitigation measures that will be implemented to reduce the effects of construction related disturbance on SCI bird species. Precautionary mitigation is included in this report to avoid disturbance and displacement to nesting terns at the Grand Canal Dock within the breeding bird season. The mitigation measure will be implemented in full.

- Construction of the proposed DPTOB, will commence outside of the breeding bird season (i.e. 1st March – 31st August). This will ensure that a level of construction related disturbance exists in the vicinity of the confluence of the Dodder\_050 and Liffey Estuary Lower before the SCI tern species arrive in the area for breeding purposes. This will deter tern species from re-establishing the previously destroyed Grand Canal nest site over the course of construction works in this area, which was used in earlier years, and breeding in close proximity to the DPTOB works area, which will avoid impacts such as abandonment of nest sites. This mitigation measure will result in the displacement of terns during construction. However, this displacement will not result in a significant effect on the associated SPA populations given the low number of terns which were recorded in the area during surveys undertaken and the availability of suitable breeding habitat in the wider vicinity of Dublin Port. Furthermore, the fact that the terns will be displaced prior to the breeding season will mean that impacts which

could affect their population dynamics, such as the abandonment of nests and reduced breeding success, will be avoided.

#### 7.4.5 Residual Impacts

336 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the SCIs of South Dublin Bay and River Tolka Estuary SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of South Dublin Bay and River Tolka Estuary SPA. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

#### 7.4.6 Conclusion of Assessment for South Dublin Bay and River Tolka Estuary SPA

337 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the qualifying interests of South Dublin Bay and River Tolka Estuary SPA, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of South Dublin Bay and River Tolka Estuary SPA.

### 7.5 Dalkey Islands SPA [004172] and Rockabill SPA [004014]

#### 7.5.1 Ecological Baseline Description for Dalkey Islands SPA

338 According to the Natura 2000 Standard Data Form for Dalkey Islands SPA (NPWS, 2020e), the site is an important site for both breeding and staging tern species. This SPA is designated for breeding terns and there is a well-established colony of common tern *Sterna hirundo* and smaller numbers of Arctic tern *Sterna paradisaea* and roseate tern *Sterna dougallii*. The site along with other parts of south Dublin Bay are used by the three tern species as a major post-breeding/pre-migration autumn roost area, populations are linked to additional roost areas across Dublin Bay. Terns are present between July and September with up to 2000 individuals recorded. At the time of designation, the site supported a variable population of tern species year to year. Common tern is the most dominant species with 62 pairs recorded in 2003, and 24 pairs of Arctic tern. Roseate terns are considered few, with 11 pairs recorded in 2004.

339 The site also has breeding great black-backed gull *Larus marinus*, shelduck *Tadorna tadorna* and oystercatcher *Haematopus ostralegus*. The site is known to be frequented in winter by significant numbers of turnstone *Arenaria interpres* and purple sandpiper *Calidris maritima*. Threats to the site include urbanisation and human habitation, human intrusions and disturbances, and agriculture.

#### 7.5.2 Ecological Baseline Description for Rockabill SPA

340 The Natura 2000 Standard Data Form (NPWS, 2020f) lists the site as an internationally tern colony. It supports the largest population of roseate tern *Sterna dougallii* in north-west Europe amounting to 1,093 pairs in 2010, and the largest colony of *Sterna hirundo* in the country with 1,940 pairs recorded in 2010., The Arctic Tern population has also increased with 250 pairs recorded in 2010. Sandwich Tern nested up to the 1930s. With management for the benefit of terns, numbers of all three species have been steadily increasing since 1989. Key foraging resources are located within 3.5km of the islands, and as such are also included within the SPA boundary.

341 Rockabill also supports a nationally important population of black guillemot *Cephus grille* and a small colony of kittiwake *Rissa tridactyla*.

7.5.3 *Special Conservation Interests and Conservation Objectives of Dalkey Islands SPA and Rockabill SPA*

342 The SCIs of Dalkey Islands SPA and Rockabill SPA, and the overall conservation objective, are listed in Table 24.

**Table 24 Special Conservation Interests and Conservation Objectives of Dalkey Islands SPA and Rockabill SPA**

Special Conservation Interest(s)	Conservation Objective(s)
<p><b>Dalkey Islands SPA [004172]</b>                      A192 Roseate Tern <i>Sterna dougallii</i>                      A193 Common Tern <i>Sterna hirundo</i>                      A194 Arctic Tern <i>Sterna paradisaea</i></p> <p><i>S.I. No. 238/2010 - European Communities (Conservation of Wild Birds (Dalkey Islands Special Protection Area 004172)) Regulations 2010</i>                      NPWS (2022d) <i>Conservation objectives for Dalkey Islands SPA [004172]. First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</i></p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p>
<p><b>Rockabill SPA [004014]</b>                      A148 Purple Sandpiper <i>Calidris maritima</i>                      A192 Roseate Tern <i>Sterna dougallii</i>                      A193 Common Tern <i>Sterna hirundo</i>                      A194 Arctic Tern <i>Sterna paradisaea</i></p> <p><i>S.I. No. 94/2012 - European Communities (Conservation of Wild Birds (Rockabill Special Protection Area 004014)) Regulations 2012.</i>                      NPWS (2013i) <i>Conservation Objectives: Rockabill SPA 004014. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</i></p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p>

343 In conjunction with considering the generic conservation objective for these SPAs “*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*”, the site-specific conservation objectives document for Dalkey Islands SPA and Rockabill SPA also informed this assessment.

344 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the qualifying interests within the European site. Affecting the conservation condition of the qualifying interests/special conservation interests would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the qualifying interests of Dalkey Islands SPA and Rockabill SPA are presented in Section 7.5.4.5.

7.5.4 *Examination and Analysis of Potential Direct and Indirect Impacts*

345 The direct and / or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of Dalkey Islands SPA and Rockabill SPA, are:

- Habitat loss and fragmentation;
- Habitat degradation / effects on SCI species as a result of hydrological impacts;
- Disturbance and displacement effects; and,
- Direct injury / mortality impacts.



#### 7.5.4.1 Habitat loss and fragmentation

346 The proposed DPTOB will require the construction of piers downstream of the tidal confluence of the Dodder\_050 with the Liffey Estuary Lower, and the reclamation of estuarine habitat adjacent to the Tom Clarke East Link Bridge. Common tern, a Special Conservation Interest (SCI) species for which Dalkey Islands SPA and Rockabill SPA have been designated has been recorded loafing and foraging in the vicinity of the proposed DPTOB, during vantage point surveys. Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and loafing habitat for common tern. However, no significant effects will occur on any SCI bird species population of Dalkey Islands SPA or Rockabill SPA, in light of their conservation objectives, as a consequence of loss or fragmentation of habitat due to the following reasons:

- The availability of large areas of suitable marine foraging and / or loafing habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to Dalkey Islands SPA and Rockabill SPA.
- The peak count of common tern recorded nesting in the vicinity of the Proposed Scheme is nine no. individuals recorded between May and August 2021 (Table 7). Core breeding and foraging areas lie outside of the footprint of the Proposed Scheme, although may lie partially within the Zol. Therefore, breeding populations are unlikely to rely on this area, instead using other suitable sites at closer proximity to their core territories. This low number of terns implies that it is not an important foraging area for tern species.
- There are extensive areas of suitable foraging and loafing habitat for terns in the Liffey Estuary Lower and wider Dublin Bay area. The area of proposed land reclamation (3,950m<sup>2</sup>) will result in the loss of a small area of suitable foraging/loafing habitat relative to the surrounding environment and is not considered to significantly reduce the habitat available to terns.

#### 7.5.4.2 Habitat degradation / effects on QI / SCI species as a result of hydrological impacts

347 The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during construction, or operation, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and/or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower, and Ringsend WWTP. Therefore, this reduction in water quality (either alone or in combination with other pressures on water quality) could result in the degradation of sensitive habitats present within these European sites, which in turn would negatively affect the SCI bird species that rely upon these habitats as foraging and / or roosting habitat. It could also negatively affect the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that they result in significant effects which could have implications for the conservation objectives of Dalkey Islands SPA and Rockabill SPA.

#### 7.5.4.3 Disturbance and Displacement effects

348 A temporary and / or permanent increase in noise, vibration and/or human activity levels during the construction and / or operation of the Proposed Scheme could result in the disturbance to and / or displacement of SCI bird species present within footprint and/or the vicinity of the Proposed Scheme. Estuarine habitat within the footprint of the proposed scheme is more likely to be of greater value as supporting habitat for South Dublin Bay and River Tolka Estuary tern populations due to the proximity of this European site, however as there are linkages between sites across Dublin Bay and the wider environs, Dalkey Island SPA and Rockabill SPA populations are also considered for impact. Such disturbance effects would not be expected to extend beyond a distance of approximately 300m for the majority of the Proposed Scheme, as noise levels associated with general construction activities would attenuate to close to background levels at that distance and beyond. General construction activities will have a less

pronounced affect than piling, in terms of its ZoI, but will be on-going for the duration of the construction phase, including breeding seasons.

- 349 In terms of construction noise, levels below 50dB would not be expected to result in any response from foraging or roosting birds. Noise levels between 50dB and 70dB would provoke a moderate effect / level of response from birds (i.e. birds becoming alert and some behavioural changes (e.g. reduced feeding activity)) (Cutts *et al.*, 2013). However, birds would be expected to habituate to noise levels within this range. Noise levels above 70dB would likely result in birds moving out of the affected zone or leaving the site altogether. This is supported by the findings of Wright *et al.* (2010) which found that average noise levels above 60dB resulted in behavioural responses, with birds abandoning the site in response to noise levels above 70dB.
- 350 **Table 21** and **Table 22** in Section 7.4.4.3 provides the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the ZoI of disturbance effects arising from construction activities listed in **Table 21**.
- 351 At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold (see **Table 22** for indicative construction noise calculations). At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance is estimated to reach 250m from the Proposed Scheme.
- 352 As discussed in section 7.4.4.3, noisy works associated with the construction of the Proposed Scheme include piling associated with the proposed boardwalks and the proposed DPTOB, construction of boardwalks, removal and reinstallation of the Scherzer Bridges, and the demolition of the existing SPRC building. In particular as terns are often low flying, approximately 10 metres over water, the presence of a construction site (2 number coffer dams) downstream of the confluence of the Dodder\_050 and Liffey Estuary Lower for a period estimated at 30 months could result in an alteration to flight path, temporarily away from the watercourse.
- 353 As a result, noise and vibration from piling, demolition, dredging and any additional works to reclaim the Liffey Estuary Lower, will have the potential to result in the reduced breeding success of birds breeding in the vicinity of the works and abandonment of current nesting sites. While Common Tern is known to breed successfully at high-disturbance sites in Dublin Bay, e.g. the ESB Dolphin, it cannot be ruled out that the construction of the bridge would not result in significant disturbance at the Grand Canal Dock breeding site.
- 354 Considering there is potential interchange between tern populations for which SPAs (i.e. Dalkey Islands SPA, South Dublin Bay and River Tolka Estuary SPA and Rockabill Island SPA) within Dublin Bay area are designated for, it cannot be confirmed which SPA the terns within the vicinity of the Proposed Scheme are associated with.
- 355 The temporary, short-medium term, disturbance within this area during the construction of the Proposed Scheme forms a relatively small part of larger expanses of similar, and more preferable, habitat types in the wider locality of Dublin Port (i.e. ESB (SPA) dolphin CDL dolphin, the Tolka pontoon, and the GSW pontoon Alexandra Basin providing the main nesting sites for common tern). The Grand Canal Dock is subject to high footfall from walkers near to the nesting site, in addition to limited refuge from predators. As such, the potential loss of this breeding site due to displacement as a result of the Proposed Scheme for the duration for the construction phase of the proposed DPTOB is not considered to affect to integrity of Dalkey Island SPA or Rockabill SPA.

356 Excluding the potential impacts on the historic Grand Canal Dock breeding site (discussed above), no significant adverse effects on the integrity of the European site will occur on any SCI bird species population, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites as a result of increased levels of disturbance during construction due to the following reasons:

- The peak count of common tern recorded in the vicinity of the Proposed Scheme is nine no. individuals recorded between May and August 2021 (**Table 7**). Core breeding and foraging areas lie outside of the footprint of the Proposed Scheme, although may lie partially within the Zol. Therefore, breeding populations are unlikely to rely on this area, instead using other suitable sites at closer proximity to their core territories. Potential direct impacts on common tern breeding sites, excluding the historic site at Grand Canal Dock (discussed above), can therefore be excluded.
- Relatively low peak flocks recorded foraging and loafing within the footprint of the Proposed Scheme, when compared to 1% of both their international flyway and national populations (See **Table 7**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- There are extensive areas of suitable foraging and loafing habitat for terns in the Liffey Estuary Lower and wider Dublin Bay area, including areas in closer proximity to nearby SPAs;
- Construction of the Proposed Scheme will result in temporary disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods including the various elements of the reclamation and piling construction of the proposed DPTOB.
- SCI bird species present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre.

357 The operation of the Proposed Scheme is not considered to result in significant changes to existing noise levels due to the urban locality of the Proposed Scheme as an existing transport route. The operational phase of the development may temporarily disturb foraging and loafing SCI bird species until such a time that they become habituated to the new levels of noise and human activity. The proposed DPTOB will not be lifted regularly, and the Dodder channel itself does not regularly accommodate large boats.

#### 7.5.4.4 Direct Injury / Mortality impacts

358 Small numbers of common tern, a SCI bird species for which Dalkey Islands SPA and Rockabill SPA are designated, have been recorded foraging and loafing in the vicinity of the proposed DPTOB during surveys (peak count of 4). Considering the location of the Proposed Scheme on the Liffey Estuary Lower and the presence of breeding common tern on a range of structures present in Dublin Port and on the Grand Canal, there is potential for mortality of small numbers of terns as a result of collision arising from the Construction Phase and Operation Phase of the proposed DPTOB. The main causes of bird collisions with man-made structures are considered to be invisibility, particularly at night; deception caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist<sup>33</sup>.

359 During the construction phase a collision risk may arise from the presence of construction machinery required for the construction of the proposed DPTOB such as mobile cranes and cherry pickers, representing a new obstacle for terns which forage in this area. Terns are an aerially agile species with

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<sup>33</sup>Jaroslow, B. (1979). A review of factors involved in bird-tower kills, and mitigative procedures. P 469-473 in: G.A. Swanson, *tech. coord. The mitigation symposium: a national workshop on mitigation losses of fish and wildlife habitats*. U.S. Forest Service General Technical Report R-65.

documented high avoidance rates (a minimum micro-avoidance<sup>34</sup> rate of 99.83% at offshore wind farms<sup>35</sup>). Additionally, terns which are present in Dublin Port are likely to be habituated to a certain degree of vessel and construction activity. However, given the lattice structures and mobility of cranes and cherry pickers, it is considered that they may pose a collision risk to birds, particularly at night and in adverse weather conditions. Given the low numbers of tern species recorded in the vicinity of the Proposed Scheme, it is not considered likely that the collision risk associated with construction machinery will cause a significant effect on SCI tern populations associated with Dalkey Islands SPA and Rockabill SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of terns with construction machinery.

360 During the Operational Phase, the proposed DPTOB represents a collision risk to tern species. Literature available on bridges over wetlands (Oresund Bridge and Sabo Bridge cable-stay and bowstring structures, respectively) suggest that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect<sup>36,37</sup>. To put these studies into context, approximately 10 million migrant birds pass the Oresund Bridge during autumn migration and 27,000 bird movements (c. 83% aquatic birds) were recorded crossing the Sabo Bridge during 400 hours of observation, suggesting that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect. In addition, both of the Oresund Bridge and Sabo Bridge are cable-stay and bowstring structures and pose a greater collision risk than the proposed clear span bridge over the River Dodder/ River Liffey confluence in Dublin City Centre. Furthermore, this is not predicted to be significant as it is likely that bridge lifts would not be frequent given that the River Dodder is shallow tidal and not navigable by large boats.

361 Birds present in the vicinity of the Proposed Scheme successfully navigate around cranes/container lifting machinery present in Dublin Port and bridges present in the Liffey Estuary Lower daily. There have been no known reports of bird species colliding with the Tom Clarke East Link Bridge, an opening bridge which is adjacent to the Proposed Scheme or machinery associated with Dublin Port. Additionally, the proposed DPTOB has been designed to be highly visible and avoid the use of features that are a potential hazard to birds. The main crossing spans and the handrails will be horizontal and comprised of steel. No structures generally considered hazardous to birds, such as pylons and cables, are included in the design of this bridge. Therefore, there will be no significant injury / mortality risk to SCI tern species as a result of the Proposed Scheme.

#### 7.5.4.5 Summary

362 **Table 25** presents a summary of the potential impacts and effects of the Proposed Scheme on the SCIs of Dalkey Islands SPA and Rockabill SPA, and how these impacts relate to affecting the site's conservation objectives.

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<sup>34</sup> A term used to describe the active avoidance that may occur at short distances.

<sup>35</sup> Smart Wind (2013). Review of Avoidance Rates in Seabirds at Offshore Wind Farms and Applicability of Use in the Band Collision Risk Model.

<sup>36</sup> FEBI (2013). *Fehmarnbelt Fixed Link EIA. Fauna and Flora – Birds. Birds of the Fehmarnbelt Area – Impact Assessment. Report No. E3TR0015*

<sup>37</sup> Godinho C., Marques, J.T., Salgueiro, P., Catarino, L., Osório de Castro, C., Mira, A., and Beja, P. (2017) *Bird Collisions in a Railway Crossing a Wetland of International Importance (Sado Estuary, Portugal)*. In: Borda-de-Água L., Barrientos R., Beja P., Pereira H. (eds) *Railway Ecology*. Springer, Cham

**Table 25 Potential Impacts / Effects on the Conservation Objectives of Dalkey Islands SPA and Rockabill SPA**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Dalkey Islands SPA</b>			
<b>Roseate Tern (<i>Sterna dougallii</i>) [A192]</b>			
There is no site-specific conservation objectives document <sup>38</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for roseate tern in the South Dublin Bay and River Tolka Estuary SPA [004024].:			
Passage population: individuals / Number / No significant decline	Yes	Yes	No
Distribution: roosting areas / Number; location; area (hectares) / No significant decline	An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect this SCI species through direct contact with pollutants, a decline in the quantity and quality of prey fish species and/or the quality and suitability of roosting sites within the SPA.  It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI tern populations associated with these SPAs. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any	The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.  The relevant mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.  The relevant mitigation measure described in Section 7.4.4.4 to avoid any potential disturbance related impacts on this SCI bird species during construction.	
Prey biomass available / Kilogrammes / No significant decline			
Barriers to connectivity / Number; location; shape; area (hectares) / No significant increase			
Disturbance at roosting site / Level of impact / Human activities should occur at levels that do not adversely affect the numbers of roseate tern among the post-breeding aggregation of terns			

<sup>38</sup> NPWS have published “First Order Site-specific Conservation Objectives” for this SPA, but have yet to provide detailed site-specific conservation objectives with specific attributes and targets for this European site.

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>potential collision risk of SCI bird species with construction machinery.</p> <p>Significant construction related disturbance could result in the reduced breeding success of this SCI bird species and abandonment of nest sites (e.g. if terns were to re-establish the previously destroyed Grand Canal nest site). This has the potential to reduce the breeding population abundance (number of apparently occupies nests) or alter distribution of breeding colonies associated with this SPA.</p>		
<p><b>Common Tern (<i>Sterna hirundo</i>) [A193]</b></p> <p>There is no site-specific conservation objectives document<sup>38</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for common tern in the South Dublin Bay and River Tolka Estuary SPA [004024].</p>			
Breeding population abundance: apparently occupied nests (AONs) / Number / No significant decline	<p>Yes</p> <p>An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect this SCI species through direct contact with pollutants, a decline in the quantity and quality of prey fish species and/or the quality and suitability of roosting sites within the SPA.</p>	<p>Yes</p> <p>The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>No</p>
Productivity rate: fledged young per breeding pair / Mean number / No significant decline			
Passage population: individuals / Number / No significant decline			
Distribution: breeding colonies / Number; location; area (Hectares) / No significant decline			
Distribution: roosting areas / Number; location; area (Hectares) / No significant decline			
Prey biomass available / Kilogrammes / No significant decline			
Barriers to connectivity / Number; location; shape; area (hectares) / No significant increase			



Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Disturbance at breeding site / Level of impact / Human activities should occur at levels that do not adversely affect the breeding common tern population	It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI tern populations associated with these SPAs. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery. Significant construction related disturbance could result in the reduced breeding success of this SCI bird species and abandonment of nest sites (e.g. if terns were to re-establish the previously destroyed Grand Canal nest site). This has the potential to reduce the breeding population abundance (number of apparently occupies nests) or alter distribution of breeding colonies associated with this SPA.	The mitigation measure described in Section 7.4.4.4 to avoid any potential disturbance related impacts on this SCI bird species during construction.	
Disturbance at roosting site / Level of impact / Human activities should occur at levels that do not adversely affect the numbers of common tern among the post-breeding aggregation of terns			
<p><b>Arctic Tern (<i>Sterna paradisaea</i>) [A194]</b></p> <p>There is no site-specific conservation objectives document<sup>38</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for arctic tern in the South Dublin Bay and River Tolka Estuary SPA [004024].</p>			
Passage population / Number of individuals / No significant decline	Yes	Yes	No
Distribution: roosting areas / Number; location; area (hectares) / No significant decline	An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution	The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during	
Prey biomass available / Kilogrammes / No significant decline			
Barriers to connectivity / Number; location; shape; area (hectares) / No significant increase			



Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<p>Disturbance at roosting site / Level of impact / Human activities should occur at levels that do not adversely affect the numbers of Arctic tern among the post-breeding aggregation of terns</p>	<p>sources, could potentially affect this SCI species through direct contact with pollutants, a decline in the quantity and quality of prey fish species and/or the quality and suitability of roosting sites within the SPA.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI tern populations associated with these SPAs. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p> <p>Significant construction related disturbance could result in the reduced breeding success of this SCI bird species and abandonment of nest sites (e.g. if terns were to re-establish the previously destroyed Grand Canal nest site). This has the potential to reduce the breeding population abundance (number of apparently occupies nests) or alter distribution of breeding colonies associated with this SPA.</p>	<p>construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p> <p>The mitigation measure described in Section 7.4.4.4 to avoid any potential disturbance related impacts on this SCI bird species during construction.</p>	
<p><b>Rockabill SPA</b></p>			
<p><b>Purple Sandpiper (<i>Calidris maritima</i>) [A148]</b> To maintain the favourable conservation condition of Purple Sandpiper in Rockabill SPA, which is defined as follows:</p>			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
Population trend/ Percentage change/ Long term population trend stable or increasing	No There is no potential for impacts to occur on this SCI species as it is located a significant distance from the Proposed Scheme, and on the far side of the Howth peninsula.	No	No
Distribution/ Range, timing and intensity of use of areas/ No significant decrease in the range, timing or intensity of use of areas by purple sandpiper other than that occurring from natural patterns of variation			
<p><b>Roseate Tern (<i>Sterna dougallii</i>) [A192]</b> To maintain the favourable conservation condition of Roseate Tern in Rockabill SPA, which is defined as follows:</p>			
Breeding population abundance: apparently occupied nests (AONs) Number No significant decline	<p>Yes</p> <p>An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect this SCI species through direct contact with pollutants and/or a decline in the quantity and quality of prey fish species.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI tern populations associated with these SPAs. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>Yes</p> <p>The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p> <p>The mitigation measure described in Section 7.4.4.4 to avoid any potential disturbance related impacts on this SCI bird species during construction.</p>	<p>No</p>
Productivity rate: fledged young per breeding pair/ Mean number/ No significant decline			
Distribution: breeding colonies/ Number; location; area (hectares)/ No significant decline			
Prey biomass available/ Kilogrammes/ No significant decline			
Barriers to connectivity/ Number; location; shape; area (hectares)/ No significant increase			
Disturbance at breeding site/ Level of impact/ Human activities should occur at levels that do not adversely affect the breeding roseate tern population			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>Significant construction related disturbance could result in the reduced breeding success of this SCI bird species and abandonment of nest sites (e.g. if terns were to re-establish the previously destroyed Grand Canal nest site). This has the potential to reduce the breeding population abundance (number of apparently occupied nests) or alter distribution of breeding colonies associated with this SPA.</p>		
<p><b>Common Tern (<i>Sterna hirundo</i>) [A193]</b> To maintain the favourable conservation condition of Common Tern in Rockabill SPA, which is defined as follows:</p>			
Breeding population abundance: apparently occupied nests (AONs) / Number/ No significant decline	Yes	Yes	No
Productivity rate: fledged young per breeding pair / Mean number / No significant decline	An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect this SCI species through direct contact with pollutants and/or a decline in the quantity and quality of prey fish species.	The mitigation measures described in Section 7.1.4.1to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	
Distribution: breeding colonies / Number; location; area (Hectares) / No significant decline		The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.	
Prey biomass available / Kilogrammes / No significant decline	It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI tern populations associated with these SPAs. However, to minimise any potential impacts, mitigation measures	The mitigation measure described in Section 7.4.4.4 to avoid any potential disturbance	
Barriers to connectivity / Number; location; shape; area (hectares) / No significant increase			
Disturbance at breeding site / Level of impact / Human activities should occur at levels that do not adversely affect the breeding common tern population			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p> <p>Significant construction related disturbance could result in the reduced breeding success of this SCI bird species and abandonment of nest sites (e.g. if terns were to re-establish the previously destroyed Grand Canal nest site). This has the potential to reduce the breeding population abundance (number of apparently occupies nests) or alter distribution of breeding colonies associated with this SPA.</p>	<p>related impacts on this SCI bird species during construction.</p>	
<p><b>Arctic Tern (<i>Sterna paradisaea</i>) [A194]</b> To maintain the favourable conservation condition of Arctic Tern in Rockabill SPA, which is defined as follows:</p>			
Breeding population abundance: apparently occupied nests (AONs)/ Number / No significant decline	Yes	Yes	No
Productivity rate: fledged young per breeding pair / Mean number / No significant decline	<p>An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect this SCI species through direct contact with pollutants and/or a decline in the quantity and quality of prey fish species.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect</p>	<p>The mitigation measures described in Section 7.1.4 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p>	
Distribution: breeding colonies / Number; location; area (Hectares) / No significant decline			
Prey biomass available / Kilogrammes/ No significant decline			
Barriers to connectivity / Number; location; shape; area (hectares) / No significant increase			
Disturbance at breeding site / Level of impact / Human activities should occur at levels that do not adversely affect the breeding common tern population			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>on SCI tern populations associated with these SPAs. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p> <p>Significant construction related disturbance could result in the reduced breeding success of this SCI bird species and abandonment of nest sites (e.g. if terns were to re-establish the previously destroyed Grand Canal nest site). This has the potential to reduce the breeding population abundance (number of apparently occupies nests) or alter distribution of breeding colonies associated with this SPA.</p>	<p>The mitigation measure described in Section 7.4.4.4 to avoid any potential disturbance related impacts on this SCI bird species during construction.</p>	

### 7.5.5 Mitigation Measures

363 This section presents the mitigation measures that will be implemented during Construction and Operation to avoid or reduce the potential impacts of the Proposed Scheme on Dalkey Islands SPA and Rockabill SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

#### 7.5.5.1 Measures to Protect Surface Water Quality

##### Measures to Protect Surface Water Quality during Construction

364 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

##### Measures to Protect Surface Water Quality during Operation

365 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

#### 7.5.5.2 Measures to Reduce Direct Injury / Mortality Impacts during Construction

366 The mitigation measures presented above in Section 7.4.4.3 will reduce direct injury / mortality effects on SCI bird species during the construction of the Proposed Scheme.

#### 7.5.5.3 Measures to Reduce the Effects of Construction Related Disturbance on SCI Bird Species

367 The mitigation measures presented above in Section 7.4.4.4 will reduce disturbance and displacement effects on SCI bird species during the construction of the Proposed Scheme.

### 7.5.6 Residual Impacts

368 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of adversely affecting on the conservation objectives, or the favourable conservation condition, of the SCIs of Dalkey Islands SPA and Rockabill SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of Dalkey Islands SPA and Rockabill SPA. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

### 7.5.7 Conclusion of Assessment for Dalkey Islands SPA and Rockabill SPA

369 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the SCIs of Dalkey Islands SPA and Rockabill SPA, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of Dalkey Islands SPA and Rockabill SPA.

**7.6 North Bull Island SPA [004006]**

**7.6.1 Ecological Baseline Description for North Bull Island SPA**

370 The Natura 2000 Standard Data Form (NPWS,2020g) lists the SPA as one of the top ten sites in the country for wintering waterfowl. It provides important feeding and roosting habitat for bird species listed as Special Conservation Interests for the site and supports internationally important populations of light-bellied brent goose and bar-tailed godwit. The quality of the estuarine habitats in the SPA are considered to be very good, part of which are designated as North Dublin Bay SAC. There are no serious imminent threats to the wintering birds. Threats to the site include oil pollution from Dublin Port along with localised commercial bait digging, disturbance from activities such as sailing, walkers and dogs.

**7.6.2 Special Conservation Interests and Conservation Objectives of North Bull Island SPA**

371 The SCIs of North Bull Island SPA, and the overall conservation objective, are listed in **Table 26**.

**Table 26 Special Conservation Interests and Conservation Objectives of North Bull Island SPA**

Special Conservation Interest(s)	Conservation Objective(s)
<p><b>North Bull Island SPA [004006]</b></p> <p>A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i></p> <p>A048 Shelduck <i>Tadorna</i></p> <p>A052 Teal <i>Anas crecca</i></p> <p>A054 Pintail <i>Anas acuta</i></p> <p>A056 Shoveler <i>Anas clypeata</i></p> <p>A130 Oystercatcher <i>Haematopus ostralegus</i></p> <p>A140 Golden Plover <i>Pluvialis apricaria</i></p> <p>A141 Grey Plover <i>Pluvialis squatarola</i></p> <p>A143 Knot <i>Calidris canutus</i></p> <p>A144 Sanderling <i>Calidris alba</i></p> <p>A149 Dunlin <i>Calidris alpina</i></p> <p>A156 Black-tailed Godwit <i>Limosa</i></p> <p>A157 Bar-tailed Godwit <i>Limosa lapponica</i></p> <p>A160 Curlew <i>Numenius arquata</i></p> <p>A162 Redshank <i>Tringa totanus</i></p> <p>A169 Turnstone <i>Arenaria interpres</i></p> <p>A179 Black-headed Gull <i>Chroicocephalus ridibundus</i></p> <p>A999 Wetlands &amp; Waterbirds</p> <p><i>S.I. No. 211/2010 - European Communities (Conservation of Wild Birds (North Bull Island Special Protection Area 004006)) Regulations 2010.</i></p> <p>NPWS (2015b) <i>Conservation Objectives: North Bull Island SPA 004006</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p>

372 In conjunction with considering the generic conservation objective for this SPA “To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA”, the site-specific conservation objectives document for North Bull Island SPA also informed this assessment.

373 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the qualifying interests within the European site. Affecting the conservation condition of the SCIs is deemed to constitute an adverse effect on the integrity of a



European site. The specific attributes and targets used to define the conservation objectives of the qualifying interests of North Bull Island SPA are presented in Section 7.6.3.6.

### 7.6.3 Examination and Analysis of Potential Direct and Indirect Impacts

374 The direct and/or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of North Bull Island SPA, are:

- Habitat loss and fragmentation;
- Habitat degradation/effects on SCI species as a result of hydrological impacts;
- Habitat degradation as a result of introducing/spreading non-native invasive species;
- Disturbance and displacement impacts; and,
- Direct injury/mortality impacts.

#### 7.6.3.1 Habitat loss and fragmentation

##### Estuarine Land Reclamation

375 The Proposed Scheme will require the construction of piers downstream of the tidal confluence of the River Dodder with the Liffey Estuary Lower, and the reclamation of a small piece of land adjacent to the Tom Clarke East Link Bridge. SCI species for which North Bull Island SPA has been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and loafing habitat for SCI species associated with North Bull Island SPA, namely light-bellied brent goose and black-headed gull and curlew to a lesser extent, although this latter species was infrequently recorded. However, no significant effects will occur on any SCI bird species population of North Bull Island SPA, in light of their conservation objectives, as a consequence of loss or fragmentation of foraging / loafing aquatic habitat due to the following reasons:

- The availability of large areas of suitable marine foraging and / or loafing habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to North Bull Island SPA.
- Relatively low peak flocks recorded on lands during vantage point surveys, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA (See **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis.
- There are extensive areas of suitable foraging and loafing habitat in the Liffey Estuary Lower and wider Dublin Bay area. The area of proposed land reclamation (3,950m<sup>2</sup>) will only result in the loss of a small area of suitable foraging / loafing habitat relative to the surrounding environment and is not anticipated to significantly reduce the habitat available to SCI bird species.

##### Removal of potential ex-situ amenity grassland inland feeding sites

376 Wintering SCI bird species for which North Bull Island SPA is designated were recorded on *ex-situ* inland feeding sites during transect surveys. These species include light-bellied brent goose, oystercatcher and black-headed gull (**Table 9**). Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and roosting habitat for SCI species associated with North Bull Island SPA. However, no significant effects will occur on any SCI bird species population of North Bull Island SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to loss or fragmentation of habitat due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely

upon many of these lands as foraging and / or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;

- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis ; and,
- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne’s Park, Clontarf Golf Club and Royal Dublin and St. Anne’s golf courses on the Bull Island.

#### 7.6.3.2 Habitat degradation / effects on QI / SCI species as a result of hydrological impacts

377 The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during construction, or operation, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and / or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower and Ringsend WWTP.

378 Therefore, this reduction in water quality (either alone or in combination with other pressures on water quality) could result in the degradation of sensitive habitats present within these European sites, which in turn would negatively affect the SCI bird species that rely upon these habitats as foraging and / or roosting habitat. It could also negatively affect the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that they result in significant effects which could have implications for the conservation objectives of North Bull Island SPA.

#### 7.6.3.3 Habitat degradation as a result of introducing / spreading Non-Native invasive species

379 There were no areas of non-native invasive plant species listed on the Third Schedule of the (Birds and Natural Habitats) Regulations identified during field surveys. However, the desk study returned records of non-native invasive plant species present within, or in close proximity to, the Proposed Scheme. During Construction and / or Operational Phases (including routine maintenance / management work), these species could potentially spread or be introduced to terrestrial habitats located within downstream European sites via surface water features. The introduction and / or spread of these invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. These species may outcompete other native species present, negatively impacting the species composition, diversity and abundance and the physical structural integrity of the habitat. This in turn could undermine the conservation objectives of these European sites. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, and the Liffey Estuary Lower. Therefore, there is potential for the Proposed Scheme to result in significant effects which could have implications for the conservation objectives of North Bull Island SPA as a result of invasive species spread.

#### 7.6.3.4 Disturbance and Displacement impacts

380 As discussed in Section 7.4.4.3 temporary and / or permanent increase in noise, vibration and/or human activity levels during the construction and / or operation of the Proposed Scheme could result in the disturbance to and / or displacement of SCI bird species present within the footprint and/or vicinity of the Proposed Scheme. Such disturbance effects would not be expected to extend beyond a distance of

approximately 300m for the majority of the Proposed Scheme, as noise levels associated with general construction activities would attenuate to close to background levels at that distance and beyond. General construction activities will have a less pronounced affect than piling, in terms of its Zol, but will be on-going for the duration of the construction phase, including breeding seasons.

381 **Table 21** and **Table 22** in Section 7.4.4.3 provide the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the Zol of disturbance effects.

382 The North Bull Island SPA is designated for wintering SCI species that are known to forage and/or roost at inland sites across Dublin, such as amenity grassland playing pitches. These species include light-bellied brent goose, golden plover oystercatcher, curlew, black-headed gull and black-tailed godwit. There are three areas of suitable foraging, and/or roosting habitat for these species within the footprint of the Proposed Scheme: CBC0016WB001 (Small grass area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge), CBC0016WB002 (Gaelic pitch and grass area within Ringsend park) and CBC0016WB003 (Grassy verge within Irishtown Stadium and grass area with scattered trees between the stadium and Bremen Avenue). Additionally, there are four known wintering bird sites within the disturbance Zol of the Proposed Scheme which were returned from the desk study<sup>39</sup> as follows:

- Irishtown / Ringsend Park immediately adjacent to the Proposed Scheme (major importance) (referred to as CBC0016WB002);
- Irishtown Stadium approximately 19.7m from the Proposed Scheme (high importance);
- Irishtown / Sean Moore Park approximately 76.7m from the Proposed Scheme (high importance); and,
- Shelbourne Park Dog Track approximately 284.4m from the Proposed Scheme (high importance).

383 Records of SCI bird species that are known to forage and/or roost at inland sites across Dublin have been returned from the desk study in the vicinity of the Proposed Scheme (i.e. light-bellied brent goose, oystercatcher and black-headed gull), and SCI bird species were recorded during wintering bird surveys carried out (See **Table 10** and **Table 11**). It is therefore possible that SCI bird species associated with the North Bull Island SPA currently utilise these and other suitable lands in the wider area. However, there is no potential for impacts to occur on inland feeding SCI populations associated with North Bull Island SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding/roosting sites due to increased levels of disturbance due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the potential ex-situ inland feeding sites within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and/or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national

<sup>39</sup> Major importance site 401+ geese; high importance site 51-400 geese; and, moderate importance site 1-50 geese as defined by Benson's study in 2009.

Benson (2009) *Use of Inland Feeding Sites by Light-bellied Brent Geese in Dublin 2008-2009: A New Conservation Concern?* Irish Birds 8: 563-570.

populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 10** and **Table 11** with reference to the thresholds); and,

- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within a nine to 30 month period. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb SCI bird species until such a time that they become habituated to the new levels of noise and human activity.
- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, Clontarf Golf Club and Royal Dublin and St. Anne's golf courses on Bull Island.

384 Vantage point surveys have confirmed the use of the Proposed Scheme for foraging, commuting and loafing SCI birds within the Construction Phase disturbance Zol of the proposed DPTOB. However, no significant effects will occur on any SCI bird species population, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:

- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within a nine to 30 month period. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre.
- Relatively low peak flocks recorded during vantage point surveys for the proposed DPTOB, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 10** and **Table 11**);
- There are extensive areas of suitable foraging and loafing habitat for light-bellied brent goose and black-headed gull in the Liffey Estuary Lower and wider Dublin Bay area, including areas in closer proximity to the North Bull Island SPA.
- SCI bird species present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb foraging and loafing SCI bird species until such a time that they become habituated to the new levels of noise and human activity. The proposed DPTOB will not be lifted regularly, and the Dodder channel itself does not regularly accommodate large boats.

#### 7.6.3.5 Direct Injury / Mortality impacts

385 SCI bird species for which North Bull Island SPA is designated for, have been recorded foraging and loafing in the vicinity of the proposed DPTOB during surveys, namely light-bellied brent goose, redshank and black-headed gull. Considering the location of the Proposed Scheme on the Liffey Estuary Lower and the presence of wintering light-bellied brent goose, redshank and black-headed gull in the vicinity of the Proposed Scheme, there is potential for mortality of small numbers of SCI bird species as a result of collision arising from the construction and operation of the proposed DPTOB. The main causes of bird collisions with man-

made structures are considered to be invisibility, particularly at night; deception caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist<sup>40</sup>.

- 386 During the construction phase a collision risk may arise from the presence of construction machinery required for the construction of the proposed DPTOB such as mobile cranes and cherry pickers, representing a new obstacle for SCI birds which forage and loaf in this area. Black-headed gull are an aerially agile gull species with documented high avoidance rates (a minimum micro-avoidance rate of 99.94% at offshore wind farms<sup>41</sup>). In collision risk modelling for offshore windfarms, an avoidance rate of 99.8% is applied for goose species, including light-bellied brent goose (SNH, 2018). Additionally, black-headed gull and light-bellied brent goose are likely to be habituated to a degree of construction activity as they are species that regularly navigate Dublin City Centre. However, given the lattice structures and mobility of cranes and cherry pickers, it is considered that they may pose a collision risk to birds, particularly at night and in adverse weather conditions. Given that these species are habituated to the urban environment, it is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with North Bull Island SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of birds with construction machinery.
- 387 During the Operational Phase, the proposed DPTOB represents a potential collision risk to SCI bird species. Literature available on bridges over wetlands (e.g. Oresund Bridge and Sabo Bridge cable-stay and bowstring structures, respectively) suggest that such bridges present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect<sup>42,43</sup>. To put these studies into context, approximately 10 million migrant birds pass the Oresund Bridge during autumn migration and 27,000 bird movements (approximately 83% aquatic birds) were recorded crossing the Sabo Bridge during 400 hours of observation, suggesting that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect. In addition, both of the Oresund Bridge and Sabo Bridge are cable-stay and bowstring structures and pose a greater collision risk than the proposed clear span bridge over the River Dodder / River Liffey confluence in Dublin City Centre.
- 388 Birds present in the vicinity of the Proposed Scheme successfully navigate around cranes / container lifting machinery present in Dublin Port and bridges present in the Liffey Estuary Lower daily. There have been no known reports of bird species colliding with the Tom Clarke East Link Bridge, an opening bridge which is adjacent to the Proposed Scheme or machinery associated with Dublin Port. Additionally, the proposed DPTOB has been designed to be highly visible avoid the use of features that are a potential hazard to birds. The main crossing spans and the handrails will be horizontal and comprised of steel. No structures generally considered hazardous to birds, such as pylons and cables, are included in the design of this bridge. Therefore, there will be no significant injury/mortality risk to SCI bird species as a result of the Proposed Scheme.

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<sup>40</sup> Jaroslow, B. (1979). A review of factors involved in bird-tower kills, and mitigative procedures. P 469-473 in: G.A. Swanson, tech. coord. *The mitigation symposium: a national workshop on mitigation losses of fish and wildlife habitats*. U.S. Forest Service General Technical Report R<-65.

<sup>41</sup> Smart Wind (2013). Review of Avoidance Rates in Seabirds at Offshore Wind Farms and Applicability of Use in the Band Collision Risk Model.

<sup>42</sup> FEBI (2013). *Fehmarnbelt Fixed Link EIA. Fauna and Flora – Birds. Birds of the Fehmarnbelt Area – Impact Assessment. Report No. E3TR0015*

<sup>43</sup> Godinho C., Marques, J.T., Salgueiro, P., Catarino, L., Osório de Castro, C., Mira, A., and Beja, P. (2017) *Bird Collisions in a Railway Crossing a Wetland of International Importance (Sado Estuary, Portugal)*. In: Borda-de-Água L., Barrientos R., Beja P., Pereira H. (eds) *Railway Ecology*. Springer, Cham

7.6.3.6 Summary

389 **Table 27** presents a summary of the potential of the Proposed Scheme on the SCI's of North Bull Island SPA, and how these impacts relate to affecting the site's conservation objectives.

**Table 27 Potential Impacts / Effects on the Conservation Objectives of North Bull Island SPA**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>North Bull Island SPA</b>			
<p>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 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]</p>			
<p>To restore the favourable conservation condition of the special conservation interests of the SPA, which is defined as follows:</p>			
<p>Population trend / Percentage change / Long term population trend stable or increasing</p>	<p>Yes</p>	<p>Yes</p>	<p>No</p>
<p>Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation</p>	<p>An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>The introduction and / or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats</p>	<p>The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.1.4.2 will prevent the introduction and/or spread of invasive species to downstream European sites during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.4.4.3 to</p>	<p>.</p>



Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>present, in particular coastal habitats not permanently or regularly inundated by seawater. This in turn could affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>avoid any potential collision risk of SCI bird species with construction machinery.</p>	
<p><b>Wetlands [A999]</b> To maintain the favourable conservation condition of wetland habitats within the SPA, which is defined as follows:</p>			
<p>Habitat area / Hectares / The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 1,713ha, other than that occurring from natural patterns of variation</p>	<p>Yes</p> <p>An accidental pollution event during construction or operation could affect surface water downstream in Dublin Bay. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats</p>	<p>Yes</p> <p>The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p>	<p>No</p>

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>The introduction and / or spread of invasive species to downstream European sites could potentially result in the degradation of existing habitats present, in particular coastal habitats not permanently or regularly inundated by seawater. This in turn could affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p>	<p>The mitigation measures described in Section 7.1.4.2 will prevent the introduction and/or spread of invasive species to downstream European sites during construction and operation of the Proposed Scheme.</p>	

#### 7.6.4 Mitigation Measures

390 This section presents the mitigation measures that will be implemented during Construction and Operation to avoid or reduce the potential impacts of the Proposed Scheme on North Bull Island SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

##### 7.6.4.1 Measures to Protect Surface Water Quality

###### Measures to Protect Surface Water Quality during Construction

391 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

###### Measures to Protect Surface Water Quality during Operation

392 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

##### 7.6.4.2 Measures to Prevent the Spread of Invasive Species to Downstream European Sites

393 The mitigation measures presented above in Section 7.1.4.2 will prevent the spread of invasive species to downstream European sites.

##### 7.6.4.3 Measures to Reduce Direct Injury / Mortality Impacts during Construction

394 The mitigation measures presented above in Section 7.4.4.3 will reduce the risk of direct injury/mortality of SCI bird species during the construction of the proposed DPTOB.

#### 7.6.5 Residual Impacts

395 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of affecting on the conservation objectives, or the favourable conservation condition, of the SCIs of North Bull Island SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of North Bull Island SPA. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the Proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

#### 7.6.6 Conclusion of Assessment for North Bull Island SPA

396 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the SCIs of North Bull Island SPA, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of North Bull Island SPA.

**7.7 Malahide Estuary SPA [004025]**

7.7.1 Ecological Baseline Description for Malahide Estuary SPA

- 397 Malahide Estuary SPA comprises the estuary of the River Broadmeadow. According to the Natura 2000 Standard Data Form for the site (NPWS, 2020h), the estuary comprises, saltmarsh habitats and extensive intertidal flats. This site is of high importance for wintering waterfowl and supports a particularly good diversity of species. It provides both feeding and roosting areas for a range of wintering waterfowl. It supports an internationally important population of light-bellied brent geese and nationally important populations of a further 12 species. The site is also an important and regular site for a range of autumn passage migrants.
- 398 The special conservation interests of Malahide Estuary SPA, and the overall conservation objective, are listed in Table 28.

**Table 28 Special conservation Interests and Conservation Objectives of Malahide Estuary SPA**

Special Conservation Interest(s)	Conservation Objective(s)
<p><b>Malahide Estuary SPA [004025]</b></p> <p>A005 Great Crested Grebe <i>Podiceps cristatus</i></p> <p>A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i></p> <p>A048 Shelduck <i>Tadorna</i></p> <p>A054 Pintail <i>Anas acuta</i></p> <p>A067 Goldeneye <i>Bucephala clangula</i></p> <p>A069 Red-breasted Merganser <i>Mergus serrator</i></p> <p>A130 Oystercatcher <i>Haematopus ostralegus</i></p> <p>A140 Golden Plover <i>Pluvialis apricaria</i></p> <p>A141 Grey Plover <i>Pluvialis squatarola</i></p> <p>A143 Knot <i>Calidris canutus</i></p> <p>A149 Dunlin <i>Calidris alpina</i></p> <p>A156 Black-tailed Godwit <i>Limosa</i></p> <p>A157 Bar-tailed Godwit <i>Limosa lapponica</i></p> <p>A162 Redshank <i>Tringa totanus</i></p> <p>A999 Wetland and Waterbirds</p> <p><i>S.I. No. 285/2011 - European Communities (Conservation of Wild Birds (Malahide Estuary Special Protection Area 004025)) Regulations 2011.</i></p> <p>NPWS (2013g) <i>Conservation Objectives: Malahide Estuary SPA 004025. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</i></p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p>

- 399 In conjunction with considering the generic conservation objective for this SPA “To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.”, the site-specific conservation objectives document for Malahide Estuary SPA also informed this assessment.
- 400 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the qualifying interests within the European site. Affecting the conservation condition of the qualifying interests/special conservation interests would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the qualifying interests of Malahide Estuary SPA are presented in Section 7.7.2.5.

### 7.7.2 Examination and Analysis of Potential Direct and Indirect Impacts

401 The direct and / or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of Malahide Estuary SPA, are:

- Habitat loss and fragmentation;
- Habitat degradation / effects on SCI species as a result of hydrological impacts;
- Disturbance and displacement impacts; and,
- Direct injury / mortality impacts.

#### 7.7.2.1 Habitat loss and fragmentation

##### Estuarine Land Reclamation

402 The proposed DPTOB will require the construction of piers downstream of the tidal confluence of the River Dodder with the Liffey Estuary Lower, and the reclamation of a small piece of land adjacent to the Tom Clarke East Link Bridge. SCI species for which Malahide Estuary SPA has been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and loafing habitat for SCI species associated with Malahide Estuary SPA, namely light-bellied brent goose and black-headed gull. However, no significant effects will occur on any SCI bird species population of Malahide Estuary SPA, in light of their conservation objectives, as a consequence of loss or fragmentation of foraging/loafing aquatic habitat due to the following reasons:

- The availability of large areas of suitable marine foraging and/or loafing habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to Malahide Estuary SPA.
- Relatively low peak flocks recorded on lands during vantage point surveys, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA (see **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis.
- There are extensive areas of suitable foraging and loafing habitat in the Liffey Estuary Lower and along the Dublin coastline. The area of proposed land reclamation (3,950m<sup>2</sup>) will only result in the loss of a small area of suitable foraging/loafing habitat relative to the surrounding environment and is not anticipated to significantly reduce the habitat available to SCI bird species.

##### Removal of potential *ex-situ* amenity grassland inland feeding sites

403 Wintering SCI bird species for which Malahide Estuary SPA is designated were recorded on *ex-situ* inland feeding sites during transect surveys. These species include Brent goose and oystercatcher (See Table 7). Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and roosting habitat for SCI species associated with Malahide Estuary SPA. However, no significant effects will occur on any SCI bird species population of Malahide Estuary SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to loss or fragmentation of habitat due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and / or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest

SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9** with reference to the thresholds); and

- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, Clontarf Golf Club and Royal Dublin and St. Anne's golf courses on the Bull Island.

#### 7.7.2.2 Habitat degradation / effects on QI / SCI species as a result of hydrological impacts

404 SCI species for which Malahide Estuary SPA has been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during construction, or operation, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and / or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower, and Ringsend WWTP.

405 Therefore, this reduction in water quality (either alone or in combination with other pressures on water quality) could affect SCI bird species through direct contact with pollutants and the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that they result in significant effects which could have implications for the conservation objectives of Malahide Estuary SPA.

#### 7.7.2.3 Disturbance and displacement impacts

406 A temporary and / or permanent increase in noise, vibration and/or human activity levels during the construction and / or operation of the Proposed Scheme could result in the disturbance to and / or displacement of SCI bird species present within footprint and/or the vicinity of the Proposed Scheme. Such disturbance effects would not be expected to extend beyond a distance of approximately 300m for the majority of the Proposed Scheme, as noise levels associated with general construction activities would attenuate to close to background levels at that distance and beyond. General construction activities will have a less pronounced affect than piling, in terms of its ZOI, but will be on-going for the duration of the construction phase, including breeding seasons.

407 In terms of construction noise, levels below 50dB would not be expected to result in any response from foraging or roosting birds. Noise levels between 50dB and 70dB would provoke a moderate effect / level of response from birds (i.e. birds becoming alert and some behavioural changes (e.g. reduced feeding activity)) (Cutts *et al.*, 2013). However, birds would be expected to habituate to noise levels within this range. Noise levels above 70dB would likely result in birds moving out of the affected zone or leaving the site altogether. This is supported by the findings of Wright *et al.* (2010) which found that average noise levels above 60dB resulted in behavioural responses, with birds abandoning the site in response to noise levels above 70dB.

408 **Table 21** and **Table 22** in Section 7.4.4.3 provide the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the ZOI of disturbance effects arising from construction activities listed in **Table 21**.

- 409 At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold (see Table 22) for indicative construction noise calculations). At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance is estimated to reach 250m from the Proposed Scheme.
- 410 The Operational Phase is not considered to result in significant changes to existing noise levels due to the urban locality of the Proposed Scheme as an existing transport route.
- 411 Malahide Estuary SPA is designated for wintering SCI species that are known to forage and/or roost at inland sites across Dublin, such as amenity grassland playing pitches. These species include light-bellied brent goose, oystercatcher and black-headed gull. There are three areas of suitable foraging, and / or roosting habitat for these species within the footprint of the Proposed Scheme: CBC0016WB001 (Small grass area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge), CBC0016WB002 (Gaelic pitch and grass area within Ringsend Park) and CBC0016WB003 (Grassy verge within Irishtown Stadium and grass area with scattered trees between the stadium and Bremen Avenue). Additionally, there are four known wintering bird sites within the disturbance ZoI of the Proposed Scheme which were returned from the desk study<sup>44</sup> as follows:
- Irishtown / Ringsend Park immediately adjacent to the Proposed Scheme (major importance);
  - Irishtown Stadium approximately 19.7m from the Proposed Scheme (high importance);
  - Irishtown / Sean Moore Park approximately 76.7m from the Proposed Scheme (high importance); and,
  - Shelbourne Park Dog Track approximately 284m from the Proposed Scheme (high importance).
- 412 Records of SCI bird species that are known to forage and / or roost at inland sites across Dublin have been returned from the desk study in the vicinity of the Proposed Scheme (i.e. light-bellied brent goose and oystercatcher), It is possible that SCI bird species associated with the Malahide Estuary SPA currently utilise these and other suitable lands in the wider area. However, there is no potential for impacts to occur on inland feeding SCI populations associated with Malahide Estuary SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:
- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and / or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
  - Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See Table 10- with reference to the thresholds); and,
  - Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month

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<sup>44</sup> Major importance site 401+ geese; high importance site 51-400 geese; and, moderate importance site 1-50 geese as defined by Benson's study in 2009.

Benson (2009) *Use of Inland Feeding Sites by Light-bellied Brent Geese in Dublin 2008-2009: A New Conservation Concern?* Irish Birds 8: 563-570.



periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb SCI bird species until such a time that they become habituated to the new levels of noise and human activity.

- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, the Red Arches and Seagrang Park, the Baldoyle Bird Quiet Zone and agricultural lands to the north of the Proposed Scheme.

413 Vantage point surveys have confirmed the use of the Proposed Scheme for foraging, commuting and loafing SCI birds within the Construction Phase disturbance Zol. However, no significant effects will occur on any SCI bird species population, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding/roosting sites due to increased levels of disturbance due to the following reasons:

- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre.
- Relatively low peak flocks recorded foraging and loafing within the footprint of the Proposed Scheme, when compared to 1% of both their international flyway and national populations (See **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- There are extensive areas of suitable foraging and loafing habitat for light-bellied brent goose, black-headed gull, oystercatcher and redshank in the Liffey Estuary Lower and wider Dublin Bay area, including areas in closer proximity to Malahide Estuary SPA; and,
- SCI bird species present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb foraging and loafing SCI bird species until such a time that they become habituated to the new levels of noise and human activity. The proposed DPTOB will not be lifted regularly, and the Dodder channel itself does not regularly accommodate large boats.

#### 7.7.2.4 Direct injury / Mortality impacts

414 SCI bird species for which Malahide Estuary SPA is designated, have been recorded foraging and loafing in the vicinity of the proposed DPTOB during surveys, namely light-bellied brent goose and redshank. Considering the location of the Proposed Scheme on the Liffey Estuary Lower and the presence of SCI bird species in the vicinity of the Proposed Scheme, there is potential for injury / mortality of small numbers of SCI bird species as a result of collision arising from the construction and operation of the proposed DPTOB. The main causes of bird collisions with man-made structures are considered to be invisibility, particularly at night; deception caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist<sup>45</sup>.

415 During the construction phase a collision risk may arise from the presence of construction machinery required for the construction of the proposed DPTOB such as mobile cranes and cherry pickers, representing a new obstacle for SCI bird species which forage and loaf in this area. Black-headed gull are

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<sup>45</sup>Jaroslow, B. (1979). A review of factors involved in bird-tower kills, and mitigative procedures. P 469-473 in: G.A. Swanson, *tech. coord. The mitigation symposium: a national workshop on mitigation losses of fish and wildlife habitats*. U.S. Forest Service General Technical Report R<-65.

aerially agile gull species with documented high avoidance rates (a minimum micro-avoidance rate of 99.94% at offshore wind farms<sup>46</sup>). In collision risk modelling for offshore windfarms, an avoidance rate of 99.8% is applied for goose species, including light-bellied brent goose (SNH, 2018). Although not generally associated with urban environments, redshank present in the vicinity of the Proposed Scheme are likely to be habituated to a degree of vessel and construction activity. Black-headed gull, oystercatcher and light-bellied brent goose are species that regularly navigate Dublin City Centre. However, given the lattice structures and mobility of cranes and cherry pickers, it is considered that they may pose a collision risk to birds, particularly at night and in adverse weather conditions. Given that these species are habituated to the urban environment, it is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with Malahide Estuary SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of birds with construction machinery.

- 416 During the Operational Phase, the proposed DPTOB represents a collision risk to SCI bird species. Literature available on bridges over wetlands (Oresund Bridge and Sabo Bridge cable-stay and bowstring structures, respectively) suggest that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect<sup>47,48</sup>. To put these studies into context, approximately 10 million migrant birds pass the Oresund Bridge during autumn migration and 27,000 bird movements (approximately 83% aquatic birds) were recorded crossing the Sabo Bridge during 400 hours of observation, suggesting that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect. In addition, both of the Oresund Bridge and Sabo Bridge are cable-stay and bowstring structures and pose a greater collision risk than the proposed clear span bridge downstream of the Dodder\_050 and Liffey Estuary Lower confluence in Dublin City Centre.
- 417 Birds present in the vicinity of the Proposed Scheme successfully navigate around cranes/container lifting machinery present in Dublin Port and bridges present in the Liffey Estuary Lower daily. There have been no known reports of bird species colliding with the Tom Clarke East Link Bridge, an opening bridge which is adjacent to the Proposed Scheme or machinery associated with Dublin Port. Additionally, the proposed DPTOB has been designed to be highly visible and avoid the use of features that are a potential hazard to birds. The main crossing spans and the handrails will be horizontal and comprised of steel. No structures generally considered hazardous to birds, such as pylons and cables, are included in the design of this bridge. Therefore, there will be no significant injury / mortality risk to SCI bird species as a result of the Proposed Scheme.

#### 7.7.2.5 Summary

- 418 **Table 29** presents a summary of the potential impacts of the Proposed Scheme on SCIs of Malahide Estuary SPA, and how these impacts relate to affecting the site's conservation objectives.

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<sup>46</sup> Smart Wind (2013). Review of Avoidance Rates in Seabirds at Offshore Wind Farms and Applicability of Use in the Band Collision Risk Model.

<sup>47</sup> FEBI (2013). *Fehmarnbelt Fixed Link EIA. Fauna and Flora – Birds. Birds of the Fehmarnbelt Area – Impact Assessment. Report No. E3TR0015*

<sup>48</sup> Godinho C., Marques, J.T., Salgueiro, P., Catarino, L., Osório de Castro, C., Mira, A., and Beja, P. (2017) *Bird Collisions in a Railway Crossing a Wetland of International Importance (Sado Estuary, Portugal)*. In: Borda-de-Água L., Barrientos R., Beja P., Pereira H. (eds) *Railway Ecology*. Springer, Cham

**Table 29 Potential Impacts / Effects on the Conservation Objectives of Malahide Estuary SPA**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Malahide Estuary SPA</b>			
<p>Great Crested Grebe (<i>Podiceps cristatus</i>) [A005], Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046], Shelduck (<i>Tadorna tadorna</i>) [A048], Pintail (<i>Anas acuta</i>) [A054], Goldeneye (<i>Bucephala clangula</i>) [A067], Red-breasted Merganser (<i>Mergus serrator</i>) [A069], 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], Dunlin (<i>Calidris alpina alpina</i>) [A149], Black-tailed Godwit (<i>Limosa limosa</i>) [A156], Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157], Redshank (<i>Tringa totanus</i>) [A162]</p> <p>To restore the favourable conservation condition of the special conservation interests of the SPA, which is defined as follows:</p>			
Population trend / Percentage change / Long term population trend stable or increasing	Yes	Yes	No
<p>Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation</p>	<p>An accidental pollution event during construction or operation could affect surface water. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p>	

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Wetlands [A999]</b> To maintain the favourable conservation condition of wetland habitats within the SPA, which is defined as follows:			
Habitat area / Hectares / The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 765ha, other than that occurring from natural patterns of variation	No There is no potential for impacts to occur on any habitats associated with the Malahide Estuary SPA as the Proposed Scheme is not hydrologically connected to the Malahide Estuary.	No	No

### 7.7.3 Mitigation Measures

419 This section presents the mitigation measures that will be implemented during Construction and Operation Phases to avoid or reduce the potential impacts of the Proposed Scheme on Malahide Estuary SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

#### 7.7.3.1 Measures to Protect Surface Water Quality

##### Measures to Protect Surface Water Quality during Construction

420 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

##### Measures to Protect Surface Water Quality during Operation

421 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

#### 7.7.3.2 Measures to Reduce Direct Injury / Mortality Impacts during Construction

422 The mitigation measures presented above in Section 7.4.4.3 will reduce the risk of direct injury / mortality of SCI bird species during the construction of the proposed DPTOB.

### 7.7.4 Residual Impacts

423 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the SCIs of Malahide Estuary SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of Malahide Estuary SPA. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

### 7.7.5 Conclusion of Assessment for Malahide Estuary SPA

424 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the SCIs of Malahide Estuary SPA, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of Malahide Estuary SPA.

**7.8 Baldoyle Bay SPA [004016]**

*7.8.1 Ecological Baseline Description for Baldoyle Bay SPA*

425 The Natura 2000 Standard Data Form (NPWS, 2020i) lists the SPA as an estuarine and bay system with habitats of variable but generally good quality. It has extensive mud and sand flats, often with a high organic content and salt marsh habitat. It has good salt marsh fringes where birds roost. The site supports wintering waterfowl, most notably an internationally important population of light-bellied brent goose. It also supports nationally important populations of shelduck, pintail, ringed plover, golden plover, grey plover and bar-tailed godwit. At high tide, the shallow waters attract species such as great-crested grebe and red-breasted merganser. Threats to the site include hunting, eutrophication, bait-digging and human habitation/ urbanisation.

*7.8.2 Special Conservation Interests and Conservation Objectives of Baldoyle Bay SPA*

426 The Special Conservation interests of Baldoyle Bay SPA, and the overall conservation objective, are listed in **Table 30**.

**Table 30 Special Conservation Interests and Conservation Objectives of Baldoyle Bay SPA**

Special Conservation Interest(s)	Conservation Objective(s)
<p><b>Baldoyle Bay SPA [004016]</b>                      A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i>                      A048 Shelduck <i>Tadorna tadorna</i>                      A137 Ringed Plover <i>Charadrius hiaticula</i>                      A140 Golden Plover <i>Pluvialis apricaria</i>                      A141 Grey Plover <i>Pluvialis squatarola</i>                      A157 Bar-tailed Godwit <i>Limosa lapponica</i>                      A999 Wetland and Waterbirds                      S.I. No. 275/2010 - European Communities (Conservation of Wild Birds (Baldoyle Bay Special Protection Area 004016)) Regulations 2010.                      NPWS (2013f) Conservation Objectives: Baldoyle Bay SPA 004016. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p>

427 In conjunction with considering the generic conservation objective for this SPA “To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.”, the site-specific conservation objectives document for Baldoyle Bay SPA also informed this assessment.

428 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the SCIs within the European site. Affecting the conservation condition of the SCIs would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the SCIs of Baldoyle Bay SPA are presented in Section 7.8.3.5.

*7.8.3 Examination and Analysis of Potential Direct and Indirect Impacts*

429 The direct and / or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the special conservation interests of Baldoyle Bay SPA, are:

- Habitat loss and fragmentation;
- Habitat degradation / effects on SCI species as a result of hydrological impacts;

- Disturbance and displacement impacts; and,
- Direct injury / mortality impacts.

#### 7.8.3.1 Habitat loss and fragmentation

##### 430 Estuarine Land Reclamation

431 The proposed DPTOB will require the construction of piers downstream of the tidal confluence of the River Dodder with the Liffey Estuary Lower, and the reclamation of a small piece of land adjacent to the Tom Clarke East Link Bridge. SCI species for which Baldoyle Bay SPA has been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and loafing habitat for an SCI species associated with Baldoyle Bay, namely light-bellied brent goose. However, no significant effects will occur on any SCI bird species population of Baldoyle Bay SPA, in light of their conservation objectives, as a consequence of fragmentation/loss of foraging/loafing aquatic habitat due to the following reasons:

- The availability of large areas of suitable marine foraging and / or loafing habitat for light-bellied brent goose in the wider locality of the Proposed Scheme, including those in closer proximity to Baldoyle Bay SPA.
- Relatively low peak flocks recorded on lands during vantage point surveys, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA (see **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis.
- There are extensive areas of suitable foraging and loafing habitat in the Liffey Estuary Lower and along the Dublin coastline. The area of proposed land reclamation (3,950m<sup>2</sup>) will only result in the loss of a small area of suitable foraging / loafing habitat relative to the surrounding environment and is not anticipated to significantly reduce the habitat available to SCI bird species.

##### Removal of potential *ex-situ* amenity grassland inland feeding sites

432 One wintering SCI bird species for which Baldoyle Bay SPA is designated were recorded on *ex-situ* inland feeding sites during transect surveys, namely, light-bellied brent goose. (See **Table 9**). Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and roosting habitat for SCI species associated with Baldoyle Bay SPA. However, no significant effects will occur on any SCI bird species population of Baldoyle Bay SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to loss or fragmentation of habitat due to the following reasons:

- Relatively low frequency of occurrence of this SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and/or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9** with reference to the thresholds); and
- The availability of large areas of suitable foraging and / or roosting habitat for this SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches



such as St. Anne's Park, Clontarf Golf Club and Royal Dublin and St. Anne's golf courses on the Bull Island.

#### 7.8.3.2 Habitat degradation / effects on QI / SCI species as a result of hydrological impacts

433 SCI species for which Baldoyle Bay SPA has been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during construction, or operation, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and / or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower and Ringsend WWTP.

434 Therefore, this reduction in water quality (either alone or in combination with other pressures on water quality) could affect SCI bird species through direct contact with pollutants and the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that they result in significant effects which could have implications for the conservation objectives of Baldoyle Bay SPA.

#### 7.8.3.3 Disturbance and displacement impacts

435 A temporary and / or permanent increase in noise, vibration and/or human activity levels during the construction and / or operation of the Proposed Scheme could result in the disturbance to and / or displacement of SCI bird species present within footprint and/or the vicinity of the Proposed Scheme. Such disturbance effects would not be expected to extend beyond a distance of approximately 300m for the majority of the Proposed Scheme, as noise levels associated with general construction activities would attenuate to close to background levels at that distance and beyond. General construction activities will have a less pronounced affect than piling, in terms of its ZoI, but will be on-going for the duration of the construction phase, including several breeding seasons.

436 In terms of construction noise, levels below 50dB would not be expected to result in any response from foraging or roosting birds. Noise levels between 50dB and 70dB would provoke a moderate effect / level of response from birds (i.e. birds becoming alert and some behavioural changes (e.g. reduced feeding activity)) (Cutts *et al.*, 2013). However, birds would be expected to habituate to noise levels within this range. Noise levels above 70dB would likely result in birds moving out of the affected zone or leaving the site altogether. This is supported by the findings of Wright *et al.* (2010) which found that average noise levels above 60dB resulted in behavioural responses, with birds abandoning the site in response to noise levels above 70dB.

437 **Table 21** and **Table 22** in Section 7.4.4.3 provide the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the ZoI of disturbance effects arising from construction activities listed in **Table 21**.

438 At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold (see Table 22) for indicative construction noise calculations). At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance is estimated to reach 250m from the Proposed Scheme.

439 The Operational Phase is not considered to result in significant changes to existing noise levels due to the urban locality of the Proposed Scheme as an existing transport route.

440 Baldoyle Bay SPA is designated for light-bellied brent goose, which is known to forage and / or roost at inland sites across Dublin, such as amenity grassland playing pitches. There are three areas of suitable foraging, and/or roosting habitat for these species within the footprint of the Proposed Scheme: CBC0016WB001 (Small grass area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge), CBC0016WB002 (Gaelic pitch and grass area within Ringsend Park) and CBC0016WB003 (Grassy verge within Irishtown Stadium and grass area with scattered trees between the stadium and Bremen Avenue). Additionally, there are four known wintering bird sites within the disturbance ZOI of the Proposed Scheme which were returned from the desk study<sup>49</sup> as follows:

- Irishtown / Ringsend Park immediately adjacent to the Proposed Scheme (major importance);
- Irishtown Stadium approximately 19.7m from the Proposed Scheme (high importance);
- Irishtown / Sean Moore Park approximately 76.7m from the Proposed Scheme (high importance); and,
- Shelbourne Park Dog Track approximately 284m from the Proposed Scheme (high importance).

441 Records of SCI bird species that are known to forage and / or roost at inland sites across Dublin have been returned from the desk study in the vicinity of the Proposed Scheme (i.e. light-bellied brent goose,), and brent goose was recorded during wintering bird surveys carried out. It is therefore possible that SCI bird species associated with the Baldoyle Bay SPA currently utilise these and other suitable lands in the wider area. However, there is no potential for impacts to occur on inland feeding SCI populations associated with Baldoyle Bay SPA, in light of their conservation objectives, as a consequence of the disturbance and/or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:

- Relatively low frequency of occurrence of brent goose on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and/or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA (see **Table 9**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb SCI bird species until such a time that they become habituated to the new levels of noise and human activity; and,
- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches

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<sup>49</sup> Major importance site 401+ geese; high importance site 51-400 geese; and, moderate importance site 1-50 geese as defined by Benson's study in 2009.

Benson (2009) *Use of Inland Feeding Sites by Light-bellied Brent Geese in Dublin 2008-2009: A New Conservation Concern?* Irish Birds 8: 563-570.

such as St. Anne's Park, the Red Arches and Seagrang Park, the Baldoyle Bird Quiet Zone and agricultural lands to the north of the Proposed Scheme.

442 Vantage point surveys have confirmed the use of the Proposed Scheme for foraging, commuting and loafing SCI birds within the Construction Phase disturbance Zol. However, no significant effects will occur on any SCI bird species population, in light of their conservation objectives, as a consequence of the disturbance and/or displacement from inland feeding/roosting sites due to increased levels of disturbance due to the following reasons:

- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre.
- Relatively low peak flocks recorded foraging and loafing within the footprint of the Proposed Scheme, when compared to 1% of both their international flyway and national populations (See **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- There are extensive areas of suitable foraging and loafing habitat for light-bellied brent goose, in the Liffey Estuary Lower and wider Dublin Bay area, including areas in closer proximity to Baldoyle Bay SPA; and,
- SCI bird species present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb foraging and loafing SCI bird species until such a time that they become habituated to the new levels of noise and human activity. The proposed DPTOB will not be lifted regularly, and the Dodder channel itself does not regularly accommodate large boats.

#### 7.8.3.4 Direct injury / mortality impacts

443 One SCI bird species for which Baldoyle Bay SPA is designated, has been recorded foraging and loafing in the vicinity of the proposed DPTOB during surveys, namely light-bellied brent goose. Considering the location of the Proposed Scheme on the Liffey Estuary Lower and the presence of wintering light-bellied brent goose in the vicinity of the Proposed Scheme, there is potential for mortality of small numbers of SCI bird species as a result of collision arising from the construction and operation of the proposed DPTOB. The main causes of bird collisions with man-made structures are considered to be invisibility, particularly at night; deception caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist<sup>50</sup>.

444 During the construction phase a collision risk may arise from the presence of construction machinery required for the construction of the proposed DPTOB such as mobile cranes and cherry pickers, representing a new obstacle for SCI birds which forage and loaf in this area. In collision risk modelling for offshore windfarms, an avoidance rate of 99.8% is applied for goose species, including light-bellied brent goose (SNH, 2018). Additionally, light-bellied brent goose are likely to be habituated to a degree of construction activity as they are species that regularly navigate Dublin City Centre. However, given the lattice structures and mobility of cranes and cherry pickers, it is considered that they may pose a collision risk to birds, particularly at night and in adverse weather conditions. Given that these species are habituated to the urban environment, it is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with Baldoyle Bay

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<sup>50</sup>Jaroslow, B. (1979). A review of factors involved in bird-tower kills, and mitigative procedures. P 469-473 in: G.A. Swanson, *tech. coord. The mitigation symposium: a national workshop on mitigation losses of fish and wildlife habitats*. U.S. Forest Service General Technical Report R<-65.

SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of birds with construction machinery.

- 445 During the Operational Phase, the proposed DPTOB represents a collision risk to SCI bird species. Literature available on bridges over wetlands (Oresund Bridge and Sabo Bridge cable-stay and bowstring structures, respectively) suggest that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect<sup>51,52</sup>. To put these studies into context, approximately 10 million migrant birds pass the Oresund Bridge during autumn migration and 27,000 bird movements (approximately 83% aquatic birds) were recorded crossing the Sabo Bridge during 400 hours of observation, suggesting that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect. In addition, both of the Oresund Bridge and Sabo Bridge are cable-stay and bowstring structures and pose a greater collision risk than the proposed clear span bridge downstream of the Dodder\_050 and Liffey Estuary Lower confluence in Dublin City Centre.
- 446 Birds present in the vicinity of the Proposed Scheme successfully navigate around cranes/container lifting machinery present in Dublin Port and bridges present in the Liffey Estuary Lower daily. There have been no known reports of bird species colliding with the Tom Clarke East Link Bridge, an opening bridge which is adjacent to the Proposed Scheme or machinery associated with Dublin Port. Additionally, the proposed DPTOB has been designed to be highly visible and avoid the use of features that are a potential hazard to birds. The main crossing spans and the handrails will be horizontal and comprised of steel. No structures generally considered hazardous to birds, such as pylons and cables, are included in the design of this bridge. Therefore, there will be no significant injury / mortality risk to SCI bird species as a result of the Proposed Scheme.

#### 7.8.3.5 Summary

- 447 **Table 31** presents a summary of the potential impacts of the Proposed Scheme on the SCIs of Baldoyle Bay SPA, and how these impacts relate to affecting the site's conservation objectives.

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<sup>51</sup> FEBI (2013). *Fehmarnbelt Fixed Link EIA. Fauna and Flora – Birds. Birds of the Fehmarnbelt Area – Impact Assessment. Report No. E3TR0015*

<sup>52</sup> Godinho C., Marques, J.T., Salgueiro, P., Catarino, L., Osório de Castro, C., Mira, A., and Beja, P. (2017) *Bird Collisions in a Railway Crossing a Wetland of International Importance (Sado Estuary, Portugal)*. In: Borda-de-Água L., Barrientos R., Beja P., Pereira H. (eds) *Railway Ecology*. Springer, Cham

**Table 31 Potential Impacts / Effects on the Conservation Objectives of Baldoyle Bay SPA**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Mitigation?	Requiring Are mitigation measures required?	Residual Impacts?
<b>Baldoyle Bay SPA</b>			
<b>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046], Shelduck (<i>Tadorna tadorna</i>) [A048], Ringed Plover (<i>Charadrius hiaticula</i>) [A137], Golden Plover (<i>Pluvialis apricaria</i>) [A140], Grey Plover (<i>Pluvialis squatarola</i>) [A141], Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</b>			
To restore the favourable conservation condition of the special conservation interests of the SPA, which is defined as follows:			
Population trend / Percentage change / Long term population trend stable or increasing	Yes	Yes	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation	<p>An accidental pollution event during construction or operation could affect surface water. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on the single SCI bird population associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>The mitigation measures described in Section 7.1.4.1to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.4.4.3to avoid any potential collision risk of SCI bird species with construction machinery.</p>	

Conservation Objectives Attribute/Measure/Target	Potential Impacts Mitigation?	Requiring Are mitigation measures required?	Residual Impacts?
<b>Wetlands [A999]</b> To maintain the favourable conservation condition of wetland habitats within the SPA, which is defined as follows:			
Habitat area / Hectares / The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 263ha, other than that occurring from natural patterns of variation	No There is no potential for impacts to occur on any habitats associated with the Baldoyle Bay SPA as the Proposed Scheme is not hydrologically connected to the Baldoyle Bay.	No	No

#### 7.8.4 Mitigation Measures

448 This section presents the mitigation measures that will be implemented during Construction and Operation phases to avoid or reduce the potential impacts of the Proposed Scheme on Baldoyle Bay SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

##### 7.8.4.1 Measures to Protect Surface Water Quality

###### Measures to Protect Surface Water Quality during Construction

449 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

###### Measures to Protect Surface Water Quality during Operation

450 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

##### 7.8.4.2 Measures to Reduce Direct Injury / Mortality Impacts during Construction

451 The mitigation measures presented above in Section 7.4.4.3 will reduce the risk of direct injury / mortality of SCI bird species during the construction of the Proposed Scheme.

#### 7.8.5 Residual Impacts

452 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the SCIs of Baldoyle Bay SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of Baldoyle Bay SPA. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

#### 7.8.6 Conclusion of Assessment for Baldoyle Bay SPA

453 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the SCIs of Baldoyle Bay SPA, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of Baldoyle Bay SPA.



**7.9 Rogerstown Estuary SPA [004015]**

*7.9.1 Ecological Baseline Description for Rogerstown Estuary SPA*

454 The Natura Standard Data Form (NPWS, 2020j) lists Rogerstown Estuary SPA as a relatively small estuarine system in north County Dublin. It has salt marsh and sand dune habitat as well as agricultural fields which have ornithological and botanical interest. It has extensive sand and mud flats and supports wintering waterfowl. It supports an internationally important population of light-bellied brent goose and nationally important populations of a further 15 species. It is an important and regular site for a range of autumn passage migrants. Little tern has bred in Rogerstown Estuary in the past and there are populations of three Red Data Book plant species present. The main threats to the site include disposal of household/recreational facility waste, invasive species, disposal of industrial waste, fertilisation and landfill, land reclamation and drying out.

*7.9.2 Special Conservation Interests and Conservation Objectives of Rogerstown Estuary SPA*

455 The SCIs of Rogerstown Estuary SPA, and the overall conservation objective, are listed in **Table 32**.

**Table 32 Special conservation Interests and Conservation Objectives of Rogerstown Estuary SPA**

Special Conservation Interest(s)	Conservation Objective(s)
<p><b>Rogerstown Estuary SPA [004015]</b>                      A043 Greylag Goose <i>Anser anser</i>                      A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i>                      A048 Shelduck <i>Tadorna tadorna</i>                      A056 Shoveler <i>Anas clypeata</i>                      A130 Oystercatcher <i>Haematopus ostralegus</i>                      A137 Ringed Plover <i>Charadrius hiaticula</i>                      A141 Grey Plover <i>Pluvialis squatarola</i>                      A143 Knot <i>Calidris canutus</i>                      A149 Dunlin <i>Calidris alpina alpina</i>                      A156 Black-tailed Godwit <i>Limosa limosa</i>                      A162 Redshank <i>Tringa totanus</i>                      A999 Wetlands  <i>S.I. No. 271/2010 - European Communities (Conservation of Wild Birds (Rogerstown Estuary Special Protection Area 004015)) Regulations 2010.</i>                      NPWS (2013h) <i>Conservation Objectives: Rogerstown Estuary SPA 004015</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p>

456 In conjunction with considering the generic conservation objective for this SPA “*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*” the site-specific conservation objectives document for Rogerstown Estuary SPA also informed this assessment.

457 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the SCIs within the European site. Affecting the conservation condition of the SCIs would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the SCIs of Rogerstown Estuary SPA are presented in Section 7.9.3.5.

### 7.9.3 Examination and Analysis of Potential Direct and Indirect Impacts

458 The direct and / or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the SCIs of Rogerstown Estuary SPA, are:

- Habitat loss and fragmentation;
- Habitat degradation / effects on SCI species as a result of hydrological impacts;
- Disturbance and displacement impacts; and,
- Direct injury / mortality impacts.

#### 7.9.3.1 Habitat loss and fragmentation

##### Estuarine Land Reclamation

459 The proposed DPTOB will require the construction of piers across the tidal confluence of the River Dodder with the Liffey Estuary Lower, and the reclamation of a small piece of land adjacent to the Tom Clarke East Link Bridge. SCI species for which Rogerstown Estuary SPA has been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and loafing habitat for an SCI species associated with Rogerstown Estuary, namely light-bellied brent goose, oystercatcher and redshank. However, no significant effects will occur on any SCI bird species population of Rogerstown Estuary SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding/roosting sites due to loss or fragmentation of foraging / loafing aquatic habitat due to the following reasons:

- The availability of large areas of suitable marine foraging and / or loafing habitat for light-bellied brent goose in the wider locality of the Proposed Scheme, including those in closer proximity to Rogerstown Estuary SPA;
- Relatively low peak flocks recorded on lands during vantage point surveys, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA (See **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis; and,
- There are extensive areas of suitable foraging and loafing habitat in the Liffey Estuary Lower and along the Dublin coastline. The area of proposed land reclamation (3,950m<sup>2</sup>) will only result in the loss of a small area of suitable foraging/loafing habitat relative to the surrounding environment and is not anticipated to significantly reduce the habitat available to SCI bird species.

##### Removal of potential *ex-situ* amenity grassland inland feeding sites

460 Wintering SCI bird species for which Rogerstown Estuary SPA is designated were recorded on *ex-situ* inland feeding sites during transect surveys. These species include brent goose and oystercatcher (See **Table 9**). Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and roosting habitat for SCI species associated with Rogerstown Estuary SPA. However, no significant effects will occur on any SCI bird species population of Rogerstown Estuary SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to loss or fragmentation of habitat due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and / or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national

populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9** with reference to the thresholds); and

- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, Clontarf Golf Club and Royal Dublin and St. Anne's golf courses on the Bull Island.

### 7.9.3.2 Habitat degradation / effects on QI / SCI species as a result of hydrological impacts

461 SCI species for which Rogerstown Estuary SPA has been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during Construction Phase, or Operation Phase, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and/or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower, and Ringsend WWTP.

462 Therefore, this reduction in water quality (either alone or in combination with other pressures on water quality) could affect SCI bird species through direct contact with pollutants and the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that they result in significant effects which could have implications for the conservation objectives of Rogerstown Estuary SPA.

### 7.9.3.3 Disturbance and Displacement impacts

463 A temporary and / or permanent increase in noise, vibration and / or human activity levels during the Construction Phase and / or Operation Phase of the Proposed Scheme could result in the disturbance to and / or displacement of SCI bird species present within footprint and / or the vicinity of the Proposed Scheme. Such disturbance effects would not be expected to extend beyond a distance of approximately 300m for the majority of the Proposed Scheme, as noise levels associated with general construction activities would attenuate to close to background levels at that distance and beyond. General construction activities will have a less pronounced affect than piling, in terms of its Zol, but will be on-going for the duration of the construction phase, including multiple breeding seasons.

464 In terms of construction noise, levels below 50dB would not be expected to result in any response from foraging or roosting birds. Noise levels between 50dB and 70dB would provoke a moderate effect / level of response from birds (i.e. birds becoming alert and some behavioural changes (e.g. reduced feeding activity)) (Cutts *et al.*, 2013). However, birds would be expected to habituate to noise levels within this range. Noise levels above 70dB would likely result in birds moving out of the affected zone or leaving the site altogether. This is supported by the findings of Wright *et al.* (2010) which found that average noise levels above 60dB resulted in behavioural responses, with birds abandoning the site in response to noise levels above 70dB.

465 **Table 21** and **Table 22** in Section 7.4.4.3 provide the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and bird sites would contribute to further

reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the ZOI of disturbance effects arising from construction activities listed in **Table 21**.

466 At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold (see **Table 22** for indicative construction noise calculations). At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance is estimated to reach 250m from the Proposed Scheme.

467 Rogerstown Estuary SPA is designated for wintering SCI species that are known to forage and / or roost at inland sites across Dublin, such as amenity grassland playing pitches. These species include light-bellied brent goose, golden plover, oystercatcher, black-headed gull and black-tailed godwit. There are three areas of suitable foraging, and/or roosting habitat for these species within the footprint of the Proposed Scheme: CBC0016WB001 (Small grass area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge), CBC0016WB002 (Gaelic pitch and grass area within Ringsend Park) and CBC0016WB003 (Grassy verge within Irishtown Stadium and grass area with scattered trees between the stadium and Bremen Avenue). Additionally, there are four known wintering bird sites within the disturbance ZOI of the Proposed Scheme which were returned from the desk study<sup>53</sup> as follows:

- Irishtown / Ringsend Park immediately adjacent to the Proposed Scheme (major importance);
- Irishtown Stadium approximately 19.7m from the Proposed Scheme (high importance);
- Irishtown / Sean Moore Park approximately 76.7m from the Proposed Scheme (high importance); and,
- Shelbourne Park Dog Track approximately 284m from the Proposed Scheme (high importance).

468 Records of SCI bird species that are known to forage and/or roost at inland sites across Dublin have been returned from the desk study in the vicinity of the Proposed Scheme (i.e. light-bellied brent goose, and oystercatcher), and SCI bird species were recorded during wintering bird surveys carried out (See **Tables 8, 9 and 10**) It is therefore possible that SCI bird species associated with the Rogerstown Estuary SPA currently utilise these and other suitable lands in the wider area. However, there is no potential for impacts to occur on inland feeding SCI populations associated with Rogerstown Estuary SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and / or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9**);
- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing

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<sup>53</sup> Major importance site 401+ geese; high importance site 51-400 geese; and, moderate importance site 1-50 geese as defined by Benson's study in 2009.

Benson (2009) *Use of Inland Feeding Sites by Light-bellied Brent Geese in Dublin 2008-2009: A New Conservation Concern?* Irish Birds 8: 563-570.

disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb SCI bird species until such a time that they become habituated to the new levels of noise and human activity; and,

- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, the Red Arches and Seagrang Park, the Baldoyle Bird Quiet Zone and agricultural lands to the north of the Proposed Scheme.

469 Vantage point surveys have confirmed the use of the Proposed Scheme for foraging, commuting and loafing SCI birds within the Construction Phase disturbance Zol. However, no significant effects will occur on any SCI bird species population, in light of their conservation objectives, as a consequence of the disturbance and/or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:

- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre.
- Relatively low peak flocks recorded foraging and loafing within the footprint of the Proposed Scheme, when compared to 1% of both their international flyway and national populations (See **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- There are extensive areas of suitable foraging and loafing habitat for light-bellied brent goose, black-headed gull, common tern and redshank in the Liffey Estuary Lower and wider Dublin Bay area, including areas in closer proximity to Rogerstown Estuary SPA; and,
- SCI bird species present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb foraging and loafing SCI bird species until such a time that they become habituated to the new levels of noise and human activity. The proposed DPTOB will not be lifted regularly, and the Dodder channel itself does not regularly accommodate large boats.

#### 7.9.3.4 Direct injury / Mortality impacts

470 SCI bird species for which Rogerstown Estuary SPA is designated, have been recorded foraging and loafing in the vicinity of the proposed DPTOB during surveys, namely light-bellied brent goose, and redshank. Considering the location of the Proposed Scheme on the Liffey Estuary Lower and the presence of SCI bird species in the vicinity of the Proposed Scheme, there is potential for injury / mortality of small numbers of SCI bird species as a result of collision arising from the construction and operation of the proposed DPTOB. The main causes of bird collisions with man-made structures are considered to be invisibility, particularly at night; deception caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist<sup>54</sup>.

471 During the construction phase a collision risk may arise from the presence of construction machinery required for the construction of the proposed DPTOB such as mobile cranes and cherry pickers, representing a new obstacle for SCI birds which forage and loaf in this area. In collision risk modelling for offshore windfarms, an avoidance rate of 99.8% is applied for goose species, including light-bellied brent

<sup>54</sup>Jaroslow, B. (1979). A review of factors involved in bird-tower kills, and mitigative procedures. P 469-473 in: G.A. Swanson, *tech. coord. The mitigation symposium: a national workshop on mitigation losses of fish and wildlife habitats*. U.S. Forest Service General Technical Report R<-65.

goose (SNH, 2018). Although not generally associated with urban environments, redshank present in the vicinity of the Proposed Scheme are likely to be habituated to a degree of vessel and construction activity. Light-bellied brent goose is a species that regularly navigates Dublin City Centre. However, given the lattice structures and mobility of cranes and cherry pickers, it is considered that they may pose a collision risk to birds, particularly at night and in adverse weather conditions. Given that these species are habituated to the urban environment, it is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with Rogerstown Estuary SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of birds with construction machinery.

472 During the operational phase, the proposed DPTOB represents a collision risk to SCI bird species. Literature available on bridges over wetlands (Oresund Bridge and Sabo Bridge cable-stay and bowstring structures, respectively) suggest that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect<sup>55,56</sup>. To put these studies into context, approximately 10 million migrant birds pass the Oresund Bridge during autumn migration and 27,000 bird movements (approximately 83% aquatic birds) were recorded crossing the Sabo Bridge during 400 hours of observation, suggesting that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect. In addition, both of the Oresund Bridge and Sabo Bridge are cable-stay and bowstring structures and pose a greater collision risk than the proposed clear span bridge downstream of the Dodder\_050 and Liffey Estuary Lower confluence in Dublin City Centre.

473 Birds present in the vicinity of the Proposed Scheme successfully navigate around cranes/container lifting machinery present in Dublin Port and bridges present in the Liffey Estuary Lower daily. There have been no known reports of bird species colliding with the Tom Clarke East Link Bridge, an opening bridge which is adjacent to the Proposed Scheme or machinery associated with Dublin Port. Additionally, the proposed DPTOB has been designed to be highly visible and avoid the use of features that are a potential hazard to birds. The main crossing spans and the handrails will be horizontal and comprised of steel. No structures generally considered hazardous to birds, such as pylons and cables, are included in the design of this bridge. Therefore, there will be no significant injury / mortality risk to SCI bird species as a result of the Proposed Scheme.

#### 7.9.3.5 Summary

474 **Table 33** presents a summary of the potential impacts of the Proposed Scheme on the SCIs of Rogerstown Estuary SPA, and how these impacts relate to affecting the site's conservation objectives.

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<sup>55</sup> FEBI (2013). *Fehmarnbelt Fixed Link EIA. Fauna and Flora – Birds. Birds of the Fehmarnbelt Area – Impact Assessment. Report No. E3TR0015*

<sup>56</sup> Godinho C., Marques, J.T., Salgueiro, P., Catarino, L., Osório de Castro, C., Mira, A., and Beja, P. (2017) *Bird Collisions in a Railway Crossing a Wetland of International Importance (Sado Estuary, Portugal)*. In: Borda-de-Água L., Barrientos R., Beja P., Pereira H. (eds) *Railway Ecology*. Springer, Cham



**Table 33 Potential Impacts / Effects on the Conservation Objectives of Rogerstown Estuary SPA**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Rogerstown Estuary SPA</b>			
<p><b>Greylag Goose (<i>Anser anser</i>) [A043], Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046], Shelduck (<i>Tadorna tadorna</i>) [A048], Shoveler (<i>Anas clypeata</i>) [A056], 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], Dunlin (<i>Calidris alpina alpina</i>) [A149], Black-tailed Godwit (<i>Limosa limosa</i>) [A156] and Redshank (<i>Tringa tetanus</i>) [A162]</b></p>			
To restore the favourable conservation condition of the special conservation interests of the SPA, which is defined as follows:			
Population trend / Percentage change / Long term population trend stable or increasing	Yes	Yes	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation	<p>An accidental pollution event during construction or operation could affect surface water. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p>	



Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Wetlands [A999]</b> To maintain the favourable conservation condition of wetland habitats within the SPA, which is defined as follows:			
Habitat area / Hectares / The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 646ha, other than that occurring from natural patterns of variation	No There is no potential for impacts to occur on any habitats associated with the Rogerstown Estuary SPA as the Proposed Scheme is not hydrologically connected to Rogerstown Estuary.	No	No

#### 7.9.4 *Mitigation Measures*

475 This section presents the mitigation measures that will be implemented during Construction and Operation phases to avoid or reduce the potential impacts of the Proposed Scheme on Rogerstown Estuary SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

##### 7.9.4.1 *Measures to Protect Surface Water Quality*

###### Measures to Protect Surface Water Quality during Construction

476 The mitigation measures presented above in 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

###### Measures to Protect Surface Water Quality during Operation

477 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

##### 7.9.4.2 *Measures to Reduce Direct Injury / Mortality Impacts during Construction*

478 The mitigation measures presented above in Section 7.4.4.3 will reduce the risk of direct injury / mortality of SCI bird species during the construction of the Proposed Scheme.

#### 7.9.5 *Residual Impacts*

479 With the effective Implementation of appropriate mitigation measures identified in the NIS, the Proposed Scheme poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the SCIs of Rogerstown Estuary SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of Rogerstown Estuary SPA. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

#### 7.9.6 *Conclusion of Assessment for Rogerstown Estuary SPA*

480 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the SCIs of Rogerstown Estuary SPA, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of Rogerstown Estuary SPA.

**7.10 Skerries Islands SPA [004122]**

*7.10.1 Ecological Baseline Description for Skerries Islands SPA*

481 The Natura Standard Data Form (NPWS, 2020k) lists Skerries Islands SPA as a group of three small, uninhabited islands between approximately 0.5 and 1.5km off the north Dublin coastline. Habitats on the islands include low cliffs, rocky shores, sandflats and a shingle bar. Vegetation of the islands is dominated by rank grasses and brambles. The site has nationally important breeding colonies of cormorant, shag, herring gull and greater black-backed gull. In winter, the site is visited by a good diversity of waterfowl. It supports an internationally important population of light-bellied brent goose and nationally important populations of cormorant, purple sandpiper and turnstone.

*7.10.2 Special Conservation Interests and Conservation Objectives of Skerries Islands SPA*

482 The SCIs of Skerries Islands SPA, and the overall conservation objective, are listed in **Table 34**.

**Table 34 Special Conservation Interests and Conservation Objectives of Skerries Islands SPA**

Special Conservation Interest(s)	Conservation Objective(s)
<p><b>Skerries Islands SPA [004122]</b></p> <p>A017 Cormorant <i>Phalacrocorax carbo</i></p> <p>A018 Shag <i>Phalacrocorax aristotelis</i></p> <p>A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i></p> <p>A148 Purple Sandpiper <i>Calidris maritima</i></p> <p>A169 Turnstone <i>Arenaria interpres</i></p> <p>A184 Herring Gull <i>Larus argentatus</i></p> <p><i>S.I. No. 245/2010 - European Communities (Conservation of Wild Birds (Skerries Islands Special Protection Area 004122)) Regulations 2010.</i></p> <p>NPWS (2022f) <i>Conservation objectives for Skerries Islands SPA [004122]. First Order Site-specific Conservation Objectives. Version 1.</i> Department of Housing, Local Government and Heritage.</p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p>

483 In conjunction with considering the generic conservation objective for this SPA “*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*”, the site-specific conservation objectives document for Skerries Islands SPA also informed this assessment.

484 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the SCIs within the European site. Affecting the conservation condition of the SCIs would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the SCIs of Skerries Islands SPA are presented in Section 7.10.3.5.

*7.10.3 Examination and Analysis of Potential Direct and Indirect Impacts*

485 The direct and / or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the special conservation interests of Skerries Islands SPA, are:

- Habitat loss and fragmentation;
- Habitat degradation / effects on SCI species as a result of hydrological impacts;
- Disturbance and displacement impacts; and
- Direct injury / mortality impacts.

### 7.10.3.1 Habitat loss and fragmentation

#### Estuarine Land Reclamation

486 The proposed DPTOB will require the construction of piers downstream of the tidal confluence of the River Dodder with the Liffey Estuary Lower, and the reclamation of a small piece of land adjacent to the Tom Clarke East Link Bridge. SCI species for which Skerries Islands SPA have been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and loafing habitat for an SCI species associated with Skerries Islands SPA, namely cormorant, light-bellied brent goose and herring gull. However, no significant effects will occur on any SCI bird species population of Skerries Islands SPA, in light of their conservation objectives, as a consequence of loss or fragmentation of foraging / loafing aquatic habitat due to the following reasons:

- The availability of large areas of suitable marine foraging and / or loafing habitat for SCI species in the wider locality of the Proposed Scheme, including those in closer proximity to Skerries Islands SPA.
- Relatively low peak flocks recorded on lands during vantage point surveys, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA (see **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis.
- There are extensive areas of suitable foraging and loafing habitat in the Liffey Estuary Lower and along the Dublin coastline. The area of proposed land reclamation (3,950m<sup>2</sup>) will only result in the loss of a small area of suitable foraging / loafing habitat relative to the surrounding environment and is not anticipated to significantly reduce the habitat available to SCI bird species.

#### Removal of potential *ex-situ* amenity grassland inland feeding sites

487 Wintering SCI bird species for which Skerries Islands SPA is designated were recorded on *ex-situ* inland feeding sites during transect surveys. These species include light-bellied brent goose and herring gull (See **Table 9**). Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and roosting habitat for SCI species associated with Skerries Islands SPA. However, no significant effects will occur on any SCI bird species population of Skerries Islands SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding/roosting sites due to loss or fragmentation of habitat due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and / or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9** with reference to the thresholds); and,
- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, Clontarf Golf Club and Royal Dublin and St. Anne's golf courses on the Bull Island.

### 7.10.3.2 Habitat degradation / effects on QI / SCI species as a result of hydrological impacts

- 488 SCI species for which Skerries Islands SPA has been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during Construction Phase, or Operation Phase, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and / or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower, and Ringsend WWTP.
- 489 Therefore, this reduction in water quality (either alone or in combination with other pressures on water quality) could affect SCI bird species through direct contact with pollutants and the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that they result in significant effects which could have implications for the conservation objectives of Skerries Islands SPA.

### 7.10.3.3 Disturbance and Displacement impacts

- 490 A temporary and / or permanent increase in noise, vibration and/or human activity levels during the Construction Phase and / or Operation Phase of the Proposed Scheme could result in the disturbance to and / or displacement of SCI bird species present within footprint and/or the vicinity of the Proposed Scheme. Such disturbance effects would not be expected to extend beyond a distance of approximately 300m for the majority of the Proposed Scheme, as noise levels associated with general construction activities would attenuate to close to background levels at that distance and beyond. General construction activities will have a less pronounced affect than piling, in terms of its ZoI, but will be on-going for the duration of the construction phase, including multiple breeding seasons.
- 491 In terms of construction noise, levels below 50dB would not be expected to result in any response from foraging or roosting birds. Noise levels between 50dB and 70dB would provoke a moderate effect / level of response from birds (i.e. birds becoming alert and some behavioural changes (e.g. reduced feeding activity)) (Cutts *et al.*, 2013). However, birds would be expected to habituate to noise levels within this range. Noise levels above 70dB would likely result in birds moving out of the affected zone or leaving the site altogether. This is supported by the findings of Wright *et al.* (2010) which found that average noise levels above 60dB resulted in behavioural responses, with birds abandoning the site in response to noise levels above 70dB.
- 492 **Table 21** and **Table 22** in Section 7.4.4.3 provide the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the ZoI of disturbance effects arising from construction activities listed in **Table 21**.
- 493 At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold (see **Table 22** for indicative construction noise calculations). At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance is estimated to reach 250m from the Proposed Scheme.
- 494 Skerries Islands SPA is designated for light-bellied brent goose and herring gull, which are known to forage and / or roost at inland sites across Dublin, such as amenity grassland playing pitches. There are three areas of suitable foraging, and / or roosting habitat for these species within the footprint of the Proposed

Scheme: CBC0016WB001 (Small grass area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge), CBC0016WB002 (Gaelic pitch and grass area within Ringsend Park) and CBC0016WB003 (Grassy verge within Irishtown Stadium and grass area with scattered trees between the stadium and Bremen Avenue). Additionally, there are four known wintering bird sites within the disturbance Zol of the Proposed Scheme which were returned from the desk study<sup>57</sup> as follows:

- Irishtown / Ringsend Park immediately adjacent to the Proposed Scheme (major importance);
- Irishtown Stadium approximately 19.7m from the Proposed Scheme (high importance);
- Irishtown / Sean Moore Park approximately 76.7m from the Proposed Scheme (high importance); and,
- Shelbourne Park Dog Track approximately 284m from the Proposed Scheme (high importance).

495 Records of SCI bird species that are known to forage and / or roost at inland sites across Dublin have been returned from the desk study in the vicinity of the Proposed Scheme (i.e. light-bellied Brent goose and herring gull), and SCI bird species were recorded during wintering bird surveys carried out.

496 It is therefore possible that SCI bird species associated with the Skerries Islands SPA currently utilise these and other suitable lands in the wider area. However, there is no potential for impacts to occur on inland feeding SCI populations associated with Skerries Islands SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and / or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9**);
- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb SCI bird species until such a time that they become habituated to the new levels of noise and human activity; and,
- The availability of large areas of suitable foraging and/or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, the Red Arches and Seagrang Park, the Baldoyle Bird Quiet Zone and agricultural lands to the north of the Proposed Scheme.

497 Vantage point surveys have confirmed the use of the Proposed Scheme for foraging, commuting and loafing SCI birds within the Construction Phase disturbance Zol. However, no significant effects will occur on any SCI bird species population, in light of their conservation objectives, as a consequence of the disturbance

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<sup>57</sup> Major importance site 401+ geese; high importance site 51-400 geese; and, moderate importance site 1-50 geese as defined by Benson's study in 2009.

Benson (2009) *Use of Inland Feeding Sites by Light-bellied Brent Geese in Dublin 2008-2009: A New Conservation Concern?* Irish Birds 8: 563-570.

and/or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:

- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre.
- Relatively low peak flocks recorded foraging and loafing within the footprint of the Proposed Scheme, when compared to 1% of both their international flyway and national populations (See **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- There are extensive areas of suitable foraging and loafing habitat for light-bellied brent goose, cormorant and herring gull in the Liffey Estuary Lower and wider Dublin Bay area, including areas in closer proximity to Skerries Islands SPA; and,
- SCI bird species present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb foraging and loafing SCI bird species until such a time that they become habituated to the new levels of noise and human activity. The proposed DPTOB will not be lifted regularly, and the Dodder channel itself does not regularly accommodate large boats.

#### 7.10.3.4 Direct injury / mortality impacts

498 SCI bird species for which Skerries Islands SPA is designated, have been recorded foraging and loafing in the vicinity of the proposed DPTOB during surveys, namely light-bellied brent goose, cormorant and herring gull. Considering the location of the Proposed Scheme on the Liffey Estuary Lower and the presence of SCI bird species in the vicinity of the Proposed Scheme, there is potential for injury / mortality of small numbers of SCI bird species as a result of collision arising from the construction and operation of the proposed DPTOB. The main causes of bird collisions with man-made structures are considered to be invisibility, particularly at night; deception caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist<sup>58</sup>.

499 During the Construction Phase a collision risk may arise from the presence of construction machinery required for the construction of the proposed DPTOB such as mobile cranes and cherry pickers, representing a new obstacle for SCI birds which forage and loaf in this area. Herring gull are an urban gull species documented high avoidance rates (a minimum micro-avoidance rate of 99.93% at offshore wind farms<sup>59</sup>). In collision risk modelling for offshore windfarms, an avoidance rate of 99.8% is applied for goose species, including light-bellied brent goose (SNH, 2018). Cormorants are an adaptable aquatic bird species and are known to occur on rivers inland. Cormorant present in the vicinity of the Proposed Scheme are likely to be habituated to a degree of vessel and construction activity. Herring gull and light-bellied brent goose are species that regularly navigate Dublin City Centre. However, given the lattice structures and mobility of cranes and cherry pickers, it is considered that they may pose a collision risk to birds, particularly at night and in adverse weather conditions. Given that these species are habituated to the urban environment, it is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with Skerries Island SPA. However, to minimise any

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<sup>58</sup> Jaroslow, B. (1979). A review of factors involved in bird-tower kills, and mitigative procedures. P 469-473 in: G.A. Swanson, *tech. coord. The mitigation symposium: a national workshop on mitigation losses of fish and wildlife habitats*. U.S. Forest Service General Technical Report R-65.

<sup>59</sup> Smart Wind (2013). Review of Avoidance Rates in Seabirds at Offshore Wind Farms and Applicability of Use in the Band Collision Risk Model.



potential impacts, mitigation measures have been proposed to avoid any potential collision risk of birds with construction machinery.

- 500 During the Operational Phase, the proposed DPTOB represents a collision risk to SCI bird species. Literature available on bridges over wetlands (Oresund Bridge and Sabo Bridge cable-stay and bowstring structures, respectively) suggest that such bridges present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect<sup>60,61</sup>. To put these studies into context, approximately 10 million migrant birds pass the Oresund Bridge during autumn migration and 27,000 bird movements (approximately 83% aquatic birds) were recorded crossing the Sabo Bridge during 400 hours of observation, suggesting that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect. In addition, both of the Oresund Bridge and Sabo Bridge are cable-stay and bowstring structures and pose a greater collision risk than the proposed clear span bridge downstream of the Dodder\_050 and Liffey Estuary Lower confluence in Dublin City Centre.
- 501 Birds present in the vicinity of the Proposed Scheme successfully navigate around cranes / container lifting machinery present in Dublin Port and bridges present in the Liffey Estuary Lower daily. There have been no known reports of bird species colliding with the Tom Clarke East Link Bridge, an opening bridge which is adjacent to the Proposed Scheme or machinery associated with Dublin Port. Additionally, the proposed DPTOB has been designed to be highly visible and avoid the use of features that are a potential hazard to birds. The main crossing spans and the handrails will be horizontal and comprised of steel. No structures generally considered hazardous to birds, such as pylons and cables, are included in the design of this bridge. Therefore, there will be no significant injury / mortality risk to SCI bird species as a result of the Proposed Scheme.

#### 7.10.3.5 Summary

- 502 **Table 35** presents a summary of the potential impacts and effects of the Proposed Scheme on the SCIs of Skerries Islands SPA, and how these impacts relate to affecting the site's conservation objectives.

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<sup>60</sup> FEBI (2013). *Fehmarnbelt Fixed Link EIA. Fauna and Flora – Birds. Birds of the Fehmarnbelt Area – Impact Assessment. Report No. E3TR0015*

<sup>61</sup> Godinho C., Marques, J.T., Salgueiro, P., Catarino, L., Osório de Castro, C., Mira, A., and Beja, P. (2017) *Bird Collisions in a Railway Crossing a Wetland of International Importance (Sado Estuary, Portugal)*. In: Borda-de-Água L., Barrientos R., Beja P., Pereira H. (eds) *Railway Ecology*. Springer, Cham

**Table 35 Potential Impacts / Effects on the Conservation Objectives of Skerries Islands SPA**

Conservation Objectives Attribute/Measure/Target	Potential Mitigation?	Impacts Requiring	Are mitigation measures required?	Residual Impacts?
<b>Skerries Islands SPA</b>				
<b>Cormorant (<i>Phalacrocorax carbo</i>) [A017], Shag <i>Phalacrocorax aristotelis</i>) [A018], Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046], Purple Sandpiper (<i>Calidris maritima</i>) [A148], Turnstone (<i>Arenaria interpres</i>) [A169] and Herring Gull (<i>Larus argentatus</i>) [A184]</b>				
There is no site-specific conservation objectives document <sup>62</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for Rogerstown Estuary SPA [004015]				
Population trend / Percentage change / Long term population trend stable or increasing	Yes	An accidental pollution event during construction or operation could affect surface water. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation		It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to	The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.	

<sup>62</sup> NPWS have published “First Order Site-specific Conservation Objectives” for this SPA, but have yet to provide detailed site-specific conservation objectives with specific attributes and targets for this European site.

Conservation Objectives Attribute/Measure/Target	Potential Impacts Mitigation?	Requiring Are mitigation measures required?	Residual Impacts?
	minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.		

#### 7.10.4 Mitigation Measures

503 This section presents the mitigation measures that will be implemented during Construction and Operation phases to avoid or reduce the potential impacts of the Proposed Scheme on Skerries Islands SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

##### 7.10.4.1 Measures to Protect Surface Water Quality

###### Measures to Protect Surface Water Quality during Construction

504 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

###### Measures to Protect Surface Water Quality during Operation

505 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

##### 7.10.4.2 Measures to Reduce Direct Injury / Mortality Impacts during Construction

506 The mitigation measures presented above in Section 7.4.4.3 will reduce the risk of direct injury / mortality of SCI bird species during the construction of the Proposed Scheme.

#### 7.10.5 Residual Impacts

507 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the SCIs of Skerries Islands SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of Skerries Islands SPA. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

##### 7.10.6 Conclusion of Assessment for Skerries Islands SPA

508 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the SCIs of Skerries Islands SPA, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of Skerries Islands SPA.

**7.11 The Murrough SPA [004186]**

*7.11.1 Ecological Baseline Description for The Murrough SPA*

509 According to the Natura 2000 Standard Data Form (NPWS, 2020I), this SPA comprises a coastal wetland complex stretching for 13km from Kilcoole train station southwards towards Wicklow town. The site extends between the 200metre low water mark inland up to 1km in places. In terms of habitat diversity it includes the coastal water, a shingle shore with some sand and cobble. The SPA is bisected by the Dublin Rosslare railway line which runs along the upper part of the shingle beach. Much of the low-lying land behind the railway is manged for agriculture including reclaimed wetland, although a number of wet and brackish marshes remain including Broad Lough at its southern end and the manged wetland complex associated with Kilcoole reserve. This extensive coastal wetland complex is considered oh high importance owing to the numbers and variety of waterfowl species that it holds in winter and on passage. Its shingle beach also supports the country largest breeding colony of Little Tern. The main threats listed for the site include: the presence of Railway lines, Fertilisation of agricultural lands and the presence of walkers, horse riders and non-motorised vehicles.

*7.11.2 Special Conservation Interests and Conservation Objectives for The Murrough SPA*

510 The SCIs of The Murrough SPA and the overall conservation objectives are listed in **Table 36**.

**Table 36 Special Conservation Interests and Conservation Objectives of The Murrough SPA**

Special Conservation Interests	Conservation Objective(s)
<p><b>The Murrough SPA [004186]</b>                      A001 Red-throated Diver <i>Gavia stellata</i>                      A043 Greylag Goose <i>Anser</i>                      A046 Light Bellied Brent Goose <i>Branta bernicla hrota</i>                      A050 Wigeon <i>Anas penelope</i>                      A052 Teal <i>Anas crecca</i>                      A179 Black-headed Gull <i>Chroicocephalus ridibundus</i>                      A162 Herring Gull <i>Larus argentatus</i>                      A195 Little Tern <i>Sterna albifrons</i>                      A999 Wetlands                      S.I. No. 298/2011 - European Communities (Conservation of Wild Birds (The Murrough Special Protection Area 004186)) Regulations 2011.                      NPWS (2022g) Conservation objectives for The Murrough SPA [004186]. First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p> <p>To maintain or restore to favourable conservation condition of the wetland habitat at The Murrough SPA as a resource for the regularly occurring migratory waterbirds that utilise it.</p>

511 In conjunction with considering the generic conservation objective for this SPA “To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.”, the site-specific conservation objectives documents for a number of European sites (identified in **Table 37**) also informed this assessment.

512 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the SCIs within the European site. Affecting the conservation condition of the SCI would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the SCI’s in respect of The Murrough SPA are presented in Section 7.11.3.5

### 7.11.3 Examination and Analysis of Potential Direct and Indirect Impacts

513 The direct and / or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the SCI for The Murrough SPA are:

- Habitat loss and fragmentation;
- Habitat degradation / effects on SCI species as a result of hydrological impacts;
- Disturbance and displacement impacts; and,
- Direct injury / mortality impacts.

#### 7.11.3.1 Habitat loss and fragmentation

##### Estuarine Land Reclamation

514 The proposed DPTOB will require the construction of piers downstream of the tidal confluence of the River Dodder with the Liffey Estuary Lower, and the reclamation of a small piece of land adjacent to the Tom Clarke East Link Bridge. SCI species for which The Murrough SPA have been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and loafing habitat for an SCI species associated The Murrough SPA, namely light-bellied brent goose, black-headed gull and herring gull. However, no significant effects will occur on any SCI bird species population of The Murrough SPA, in light of their conservation objectives, as a consequence of loss or fragmentation of foraging / loafing aquatic habitat due to the following reasons:

- The availability of large areas of suitable marine foraging and / or loafing habitat for SCI species in the wider locality of the Proposed Scheme, including those in closer proximity to The Murrough SPA;
- Relatively low peak flocks recorded on lands during vantage point surveys, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis; and,
- There are extensive areas of suitable foraging and loafing habitat in the Liffey Estuary Lower and along the Dublin and Wicklow coastlines. The area of proposed land reclamation (3,950m<sup>2</sup>) will only result in the loss of a small area of suitable foraging / loafing habitat relative to the surrounding environment and is not anticipated to significantly reduce the habitat available to SCI bird species.

##### Removal of potential *ex-situ* amenity grassland inland feeding sites

515 Wintering SCI bird species for which The Murrough SPA is designated were recorded on *ex-situ* inland feeding sites during transect surveys. These species include brent goose, herring gull and black-headed gull (See **Table 9**).

516 Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and roosting habitat for SCI species associated with The Murrough SPA. However, no significant effects will occur on any SCI bird species population of The Murrough SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to loss or fragmentation of habitat due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and /or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;

- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9** with reference to the thresholds); and,
- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, Clontarf Golf Club and Royal Dublin and St. Anne's golf courses on the Bull Island.

#### 7.11.3.2 Habitat degradation / effects on QI / SCI species as a result of hydrological impacts

517 SCI species for which The Murrough SPA has been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during Construction, or Operation phases, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and the accidental spillage and / or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, Liffey Estuary Lower, and Ringsend WWTP.

518 Therefore, this reduction in water quality (either alone or in combination with other pressures on water quality) could affect SCI bird species through direct contact with pollutants and the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that they result in significant effects which could have implications for the conservation objectives of The Murrough SPA.

#### 7.11.3.3 Disturbance and Displacement impacts

519 A temporary and / or permanent increase in noise, vibration and/or human activity levels during the Construction and / or Operation phases of the Proposed Scheme could result in the disturbance to and / or displacement of SCI bird species present within footprint and / or the vicinity of the Proposed Scheme. Such disturbance effects would not be expected to extend beyond a distance of approximately 300m for the majority of the Proposed Scheme, as noise levels associated with general construction activities would attenuate to close to background levels at that distance and beyond. General construction activities will have a less pronounced affect than piling, in terms of its Zol, but will be on-going for the duration of the construction phase, including breeding seasons.

520 In terms of construction noise, levels below 50dB would not be expected to result in any response from foraging or roosting birds. Noise levels between 50dB and 70dB would provoke a moderate effect / level of response from birds (i.e. birds becoming alert and some behavioural changes (e.g. reduced feeding activity)) (Cutts *et al.*, 2013). However, birds would be expected to habituate to noise levels within this range. Noise levels above 70dB would likely result in birds moving out of the affected zone or leaving the site altogether. This is supported by the findings of Wright *et al.* (2010) which found that average noise levels above 60dB resulted in behavioural responses, with birds abandoning the site in response to noise levels above 70dB.

521 **Table 21** and **Table 22** in Section 7.4.4.3 provide the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features,



vegetation cover or buildings between the construction site and bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the ZoI of disturbance effects arising from construction activities listed in **Table 21**.

522 At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold (see **Table 22** for indicative construction noise calculations). At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance is estimated to reach 250m from the Proposed Scheme.

523 The Murrough SPA is designated for light-bellied Brent goose, black-headed gull and herring gull, which are known to forage and / or roost at inland sites across Dublin, such as amenity grassland playing pitches. These species include light-bellied brent goose, golden plover oystercatcher, curlew, black-headed gull and black-tailed godwit. There are three areas of suitable foraging, and / or roosting habitat for these species within the footprint of the Proposed Scheme: CBC0016WB001 (Small grass area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge), CBC0016WB002 (Gaelic pitch and grass area within Ringsend Park) and CBC0016WB003 (Grassy verge within Irishtown Stadium and grass area with scattered trees between the stadium and Bremen Avenue). Additionally, there are four known wintering bird sites within the disturbance ZoI of the Proposed Scheme which were returned from the desk study<sup>63</sup> as follows:

- Irishtown / Ringsend Park immediately adjacent to the Proposed Scheme (major importance);
- Irishtown Stadium approximately 19.7m from the Proposed Scheme (high importance);
- Irishtown / Sean Moore Park approximately 76.7m from the Proposed Scheme (high importance); and,
- Shelbourne Park Dog Track approximately 284m from the Proposed Scheme (high importance).

524 Records of SCI bird species that are known to forage and / or roost at inland sites across Dublin have been returned from the desk study in the vicinity of the Proposed Scheme (i.e. light-bellied brent goose, herring gull and black-headed gull), and SCI bird species were recorded during wintering bird surveys carried out. It is therefore possible that SCI bird species associated with The Murrough SPA currently utilise these and other suitable lands in the wider area. However, there is no potential for impacts to occur on inland feeding SCI populations associated with The Murrough SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and/or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9**);
- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month

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<sup>63</sup> Major importance site 401+ geese; high importance site 51-400 geese; and, moderate importance site 1-50 geese as defined by Benson's study in 2009.

Benson (2009) *Use of Inland Feeding Sites by Light-bellied Brent Geese in Dublin 2008-2009: A New Conservation Concern?* Irish Birds 8: 563-570.

periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb SCI bird species until such a time that they become habituated to the new levels of noise and human activity; and,

- The availability of large areas of suitable foraging and/or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, the Red Arches and Seagrang Park, the Baldoyle Bird Quiet Zone and agricultural lands to the north of the Proposed Scheme.

525 Vantage point surveys have confirmed the use of the Proposed Scheme for foraging, commuting and loafing SCI birds within the Construction Phase disturbance Zol. However, no significant effects will occur on any SCI bird species population, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding/roosting sites due to increased levels of disturbance due to the following reasons:

- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre.
- Relatively low peak flocks recorded foraging and loafing within the footprint of the Proposed Scheme, when compared to 1% of both their international flyway and national populations (See **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- There are extensive areas of suitable foraging and loafing habitat for light-bellied Brent goose, black-headed gull, and herring gull in the Liffey Estuary Lower and wider Dublin Bay area, including areas in closer proximity to the Murrough SPA; and,
- SCI bird species present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The Operational Phase of the development may temporarily disturb foraging and loafing SCI bird species until such a time that they become habituated to the new levels of noise and human activity. The proposed DPTOB will not be lifted regularly, and the Dodder channel itself does not regularly accommodate large boats.

#### 7.11.3.4 Direct injury / Mortality impacts

526 SCI bird species for which the Murrough SPA is designated, have been recorded foraging and loafing in the vicinity of the proposed DPTOB during surveys, namely light-bellied brent goose, herring gull and black-headed gull. Considering the location of the Proposed Scheme on the Liffey Estuary Lower and the presence of light-bellied Brent goose, herring gull and black-headed gull in the vicinity of the Proposed Scheme, there is potential for mortality of small numbers of SCI bird species as a result of collision arising from the Construction and Operation of the proposed DPTOB. The main causes of bird collisions with man-made structures are considered to be invisibility, particularly at night; deception caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist<sup>64</sup>.

527 During the Construction phase a collision risk may arise from the presence of construction machinery required for the construction of the proposed DPTOB such as mobile cranes and cherry pickers, representing a new obstacle for SCI birds which forage and loaf in this area. Black-headed gull and herring

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<sup>64</sup>Jaroslow, B. (1979). A review of factors involved in bird-tower kills, and mitigative procedures. P 469-473 in: G.A. Swanson, *tech. coord. The mitigation symposium: a national workshop on mitigation losses of fish and wildlife habitats*. U.S. Forest Service General Technical Report R<-65.

gull have documented high avoidance rates (a minimum micro-avoidance rate of 99.94% for black-headed gull and 99.93% for herring gull at offshore wind farms<sup>65</sup>). In collision risk modelling for offshore windfarms, an avoidance rate of 99.8% is applied for goose species, including light-bellied brent goose (SNH, 2018). Additionally, black-headed gull, herring gull and light-bellied brent goose are likely to be habituated to a degree of construction activity as they are species that regularly navigate Dublin City Centre. However, given the lattice structures and mobility of cranes and cherry pickers, it is considered that they may pose a collision risk to birds, particularly at night and in adverse weather conditions. Given that these species are habituated to the urban environment, it is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with the Murrough SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of birds with construction machinery.

528 During the Operational phase, the proposed DPTOB represents a collision risk to SCI bird species. Literature available on bridges over wetlands (Oresund Bridge and Sabo Bridge cable-stay and bowstring structures, respectively) suggest that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect<sup>66,67</sup>. To put these studies into context, approximately 10 million migrant birds pass the Oresund Bridge during autumn migration and 27,000 bird movements (approximately 83% aquatic birds) were recorded crossing the Sabo Bridge during 400 hours of observation, suggesting that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect. In addition, both of the Oresund Bridge and Sabo Bridge are cable-stay and bowstring structures and pose a greater collision risk than the proposed clear span bridge downstream of the Dodder\_050 and Liffey Estuary Lower confluence in Dublin City Centre.

529 Birds present in the vicinity of the Proposed Scheme successfully navigate around cranes/container lifting machinery present in Dublin Port and bridges present in the Liffey Estuary Lower daily. There have been no known reports of bird species colliding with the Tom Clarke East Link Bridge, an opening bridge which is adjacent to the Proposed Scheme or machinery associated with Dublin Port. Additionally, the proposed DPTOB has been designed to be highly visible and avoid the use of features that are a potential hazard to birds. The main crossing spans and the handrails will be horizontal and comprised of steel. No structures generally considered hazardous to birds, such as pylons and cables, are included in the design of this bridge. Therefore, there will be no significant injury / mortality risk to SCI bird species as a result of the Proposed Scheme.

#### 7.11.3.5 Summary

530 **Table 37** presents a summary of the potential impacts of the Proposed Scheme on SCIs of The Murrough SPA, and how these impacts relate to affecting the site's conservation objectives.

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<sup>65</sup> Smart Wind (2013). Review of Avoidance Rates in Seabirds at Offshore Wind Farms and Applicability of Use in the Band Collision Risk Model.

<sup>66</sup> FEBI (2013). *Fehmarnbelt Fixed Link EIA. Fauna and Flora – Birds. Birds of the Fehmarnbelt Area – Impact Assessment. Report No. E3TR0015*

<sup>67</sup> Godinho C., Marques, J.T., Salgueiro, P., Catarino, L., Osório de Castro, C., Mira, A., and Beja, P. (2017) *Bird Collisions in a Railway Crossing a Wetland of International Importance (Sado Estuary, Portugal)*. In: Borda-de-Água L., Barrientos R., Beja P., Pereira H. (eds) *Railway Ecology*. Springer, Cham

**Table 37 Potential Impacts / Effects on the Conservation Objectives of The Murrough SPA**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>The Murrough SPA</b>			
<b>Red-throated Diver [A001]</b> There is no site-specific conservation objectives document <sup>68</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for red-throated diver in The Raven SPA [004019] (NPWS, 2012a)			
Population trend / % change / Long term population trend stable or increasing	No There is no potential for impacts to occur on this SCI bird species population at The Murrough SPA, in light of its conservation objectives.	No	No
Distribution / Number and range of areas used by waterbirds / There should be no significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation			
<b>Greylag Goose [A043]</b> There is no site-specific conservation objectives document <sup>68</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for Greylag Goose in Rogerstown Estuary SPA [004015] (NPWS, 2013)			
Population trend / Percentage change / Long term population trend stable or increasing	No There is no potential for impacts to occur on this SCI bird species population at The Murrough SPA, in light of its conservation objectives.	No	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation			

<sup>68</sup> NPWS have published "First Order Site-specific Conservation Objectives" for this SPA, but have yet to provide detailed site-specific conservation objectives with specific attributes and targets for this European site.

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<p><b>Light-Bellied Brent Goose [A046]</b></p> <p>There is no site-specific conservation objectives document<sup>68</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for Light-bellied Brent Goose in South Dublin Bay and River Tolka Estuary SPA [004024] (NPWS, 2015)</p>			
<p>Population trend / Percentage change / Long term population trend stable or increasing</p> <p>Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation</p>	<p>Yes</p> <p>An accidental pollution event during construction or operation could affect surface water. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>Yes</p> <p>The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>No</p>
<p><b>Wigeon [A050]</b></p>			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
There is no site-specific conservation objectives document <sup>68</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for Wigeon in Wexford Harbour and Slobs SPA [004076] (NPWS, 2012b)			
Population trend / Percentage change / Long term population trend stable or increasing	No There is no potential for impacts to occur on this SCI bird species population at The Murrough SPA, in light of its conservation objectives.	No	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation			
<b>Teal [A052]</b> There is no site-specific conservation objectives document <sup>68</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for Teal in North Bull Island SPA [004006] (NPWS, 2015)			
Population trend / Percentage change / Long term population trend stable or increasing	No There is no potential for impacts to occur on this SCI bird species population at The Murrough SPA, in light of its conservation objectives.	No	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation			
<b>Black-Headed Gull [179]</b> There is no site-specific conservation objectives document <sup>68</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for Black-headed Gull in South Dublin Bay and River Tolka Estuary SPA [004024] (NPWS, 2015)			
Population trend / Percentage change / Long term population trend stable or increasing	Yes An accidental pollution event during construction or operation could affect surface water. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation			

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>construction and operation of the Proposed Scheme.</p> <p>The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p>	
<p><b>Herring Gull [184]</b></p> <p>There is no site-specific conservation objectives document<sup>68</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for Herring Gull in River Nanny Estuary and Shore SPA [004158] (NPWS, 2012c)</p>			
Population trend / Percentage change / Long term population trend stable or increasing	Yes	Yes	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation	An accidental pollution event during construction or operation could affect surface water. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA. This could potentially affect the use	The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	



Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	<p>of habitat areas by birds and have long-term effects on the SPA populations.</p> <p>It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.</p>	<p>The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.</p>	
<p><b>Little Tern [195]</b></p> <p>There is no site-specific conservation objectives document<sup>68</sup> available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for Little Tern in Boyne Estuary SPA [004080] (NPWS, 2013b)</p>			
Breeding population abundance: apparently occupied nests (AONs) / Number / No significant decline	<p>No</p> <p>There is no potential for impacts to occur on this SCI bird species population at The Murrough SPA, in light of its conservation objectives.</p>	<p>No</p>	<p>No</p>
Productivity rate: fledged young per breeding pair / Mean number / No significant decline			
Distribution: breeding colonies / Number; location; area (ha) / No significant decline			
Prey biomass available / Kg's / No significant decline			
Barriers to connectivity / Number; location; shape; area (ha) / No significant decline			
Disturbance at the breeding site / Level of impact / Human activities should occur at levels that do not adversely affect the breeding little tern population			

#### 7.11.4 Mitigation Measures

531 This section presents the mitigation measures that will be implemented during Construction and Operation phase to avoid or reduce the potential impacts of the Proposed Scheme on The Murrough SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

##### 7.11.4.1 Measures to Protect Surface Water Quality

###### Measures to Protect Surface Water Quality during Construction

532 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

###### Measures to Protect Surface Water Quality during Operation

533 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

##### 7.11.4.2 Measures to Reduce Direct Injury / Mortality Impacts during Construction

534 The mitigation measures presented above in Section 7.4.4.3 will reduce the risk of direct injury / mortality of SCI bird species during the construction of the Proposed Scheme.

#### 7.11.5 Residual Impacts

535 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the SCIs of the Murrough SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of The Murrough SPA. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

##### 7.11.6 Conclusion of Assessment for The Murrough SPA

536 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the SCIs of the Murrough SPA, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of The Murrough SPA.

## **7.12 Ireland's Eye SPA [004117] and Lambay Island SPA [004069]**

### 7.12.1 Ecological Baseline Description for Ireland's Eye SPA

537 According to the Natura 2000 Standard Data Form (NPWS, 2020m), this SPA is a small uninhabited island located c. 1.5km north of Howth Head. The main habitat on the island is a mix of dry grassland and bracken. There are impressive cliff formations along the northern and eastern sides of the island. This SPA has a large seabird colony, with 11 species breeding regularly. It is designated for breeding populations of cormorant, herring gull, kittiwake, guillemot and razorbill. Major threats to the site include walking, horse riding and non-motorised vehicles and leisure fishing.

7.12.2 Ecological Baseline Description for Lambay Island SPA

538 The Natura 2000 Standard Data Form (NPWS, 2020n), states this SPA is an island located c. 4km off the north Dublin coastline. Habitats present on the island include rocky shorelines, low tide sandflats and fertile grassland. The northern, eastern and southern shorelines consist of steep cliffs. The predominant land use of the island is cattle grazing. This SPA has one of the most important seabird colonies in Ireland, with 12 species breeding regularly. It has been designated for breeding populations of fulmar, cormorant, shag, greylag goose, lesser black-backed gull, herring gull, kittiwake, guillemot, razorbill and puffin.

7.12.3 Special Conservation Interests and Conservation Objectives of Ireland’s Eye SPA and Lambay Island SPA

539 The SCIs of Ireland’s Eye SPA and Lambay Island SPA, and the overall conservation objectives, are listed in **Table 38**.

**Table 38 Special Conservation Interests and Conservation Objectives of Ireland’s Eye SPA and Lambay Island SPA**

Special Conservation Interest(s)	Conservation Objective(s)
<p><b>Ireland’s Eye SPA [004117]</b>                      A017 Cormorant <i>Phalacrocorax carbo</i>                      A184 Herring Gull <i>Larus argentatus</i>                      A188 Kittiwake <i>Rissa tridactyla</i>                      A199 Guillemot <i>Uria aalge</i>                      A200 Razorbill <i>Alca torda</i>                      NPWS (2022b) <i>Conservation objectives for Ireland’s Eye SPA [004117]</i>. First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p>
<p><b>Lambay Island SPA [004069]</b>                      A009 Fulmar <i>Fulmarus glacialis</i>                      A017 Cormorant <i>Phalacrocorax carbo</i>                      A018 Shag <i>Phalacrocorax aristotelis</i>                      A043 Greylag Goose <i>Anser</i>                      A183 Lesser Black-backed Gull <i>Larus fuscus</i>                      A184 Herring Gull <i>Larus argentatus</i>                      A188 Kittiwake <i>Rissa tridactyla</i>                      A199 Guillemot <i>Uria aalge</i>                      A200 Razorbill <i>Alca torda</i>                      A204 Puffin <i>Fratercula arctica</i>                      NPWS (2022e) <i>Conservation objectives for Lambay Island SPA [004069]</i>. First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p>

540 In conjunction with considering the generic conservation objective for this SPA “*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*”, the site-specific conservation objectives documents for Ireland’s Eye SPA and Lambay Island SPA also informed this assessment. These European sites are identified in Table 38.

541 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the SCIs within the European site. Affecting the conservation condition of the SCI would constitute an adverse effect on the integrity of a European site.

The specific attributes and targets used to define the conservation objectives of the SCIs of Ireland's Eye SPA and Lambay Island SPA are presented in Section 7.12.4.5.

#### 7.12.4 Examination and Analysis of Potential Direct and Indirect Impacts

542 The direct and/or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of Ireland's Eye SPA and Lambay Island SPA, are:

- Habitat loss and fragmentation;
- Habitat degradation / effects on QI / SCI species as a result of hydrological impacts;
- Disturbance and displacement impacts; and,
- Direct injury / mortality impacts.

##### 7.12.4.1 Habitat loss and fragmentation

###### Estuarine Land Reclamation

543 The proposed DPTOB will require the construction of piers across the tidal confluence of the River Dodder with the Liffey Estuary Lower, and the reclamation of a 3,950m<sup>2</sup> of land adjacent to the Tom Clarke East Link Bridge. SCI species for which Ireland's Eye SPA and Lambay Island SPA have been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and loafing habitat for an SCI species associated Ireland's Eye SPA and Lambay Island SPA, namely cormorant, lesser black-backed gull and herring gull. However, no significant effects will occur on any SCI bird species population of Ireland's Eye SPA or Lambay Island SPA, in light of their conservation objectives, as a consequence of loss or fragmentation of foraging/loafing aquatic habitat due to the following reasons:

- The availability of large areas of suitable marine foraging and / or loafing habitat for SCI species in the wider locality of the Proposed Scheme, including those in closer proximity to Ireland's Eye SPA and Lambay Island SPA;
- Relatively low peak flocks recorded on lands during vantage point surveys, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA (see **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis; and,
- There are extensive areas of suitable foraging and loafing habitat in the Liffey Estuary Lower and along the Dublin coastline. The area of proposed land reclamation (3,950m<sup>2</sup>) will only result in the loss of a small area of suitable foraging / loafing habitat relative to the surrounding environment and is not anticipated to significantly reduce the habitat available to SCI bird species.

###### Removal of potential *ex-situ* amenity grassland inland feeding sites

544 Wintering SCI bird species for which Ireland's Eye SPA and Lambay Island SPA are designated were recorded on *ex-situ* inland feeding sites during transect surveys. These species include herring gull and lesser black-backed gull (See **Table 9**). Therefore, there is potential for the Proposed Scheme to result in the loss / fragmentation of some suitable foraging and roosting habitat for SCI species associated with Ireland's Eye SPA and Lambay Island SPA. However, no significant effects will occur on any SCI bird species population of Ireland's Eye SPA and Lambay Island SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to loss or fragmentation of habitat due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely

upon these lands as foraging and / or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;

- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9** with reference to the thresholds); and,
- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, Clontarf Golf Club and Royal Dublin and St. Anne's golf courses on the Bull Island.

#### 7.12.4.2 Habitat degradation / effects on QI /SCI species as a result of hydrological impacts

545 SCI species for which Ireland's Eye SPA and Lambay Island SPA have been designated have been recorded in the vicinity of the proposed DPTOB, during vantage point surveys. The release of contaminated surface water runoff and/or an accidental spillage or pollution event into any surface water features during Construction, or Operation, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and, the accidental spillage and/or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the location of the accidental pollution event or the discharge. The Proposed Scheme is hydrologically connected to Dublin Bay via the Royal Canal, the Dodder\_050, the Liffey Estuary Lower, and Ringsend WWTP.

546 Therefore, this reduction in water quality (either alone or in combination with other pressures on water quality) could affect SCI bird species through direct contact with pollutants and the quantity and quality of prey available to SCI bird species. These potential impacts could occur to such a degree that they result in significant effects which could have implications for the conservation objectives of Ireland's Eye SPA and Lambay Island SPA.

#### 7.12.4.3 Disturbance and displacement impacts

547 A temporary and / or permanent increase in noise, vibration and / or human activity levels during the Construction and / or Operation phases of the Proposed Scheme could result in the disturbance to and / or displacement of SCI bird species present within footprint and/or the vicinity of the Proposed Scheme. Such disturbance effects would not be expected to extend beyond a distance of approximately 300m for the majority of the Proposed Scheme, as noise levels associated with general construction activities would attenuate to close to background levels at that distance and beyond. General construction activities will have a less pronounced affect than piling, in terms of its Zol, but will be on-going for the duration of the construction phase, including multiple breeding seasons.

548 In terms of construction noise, levels below 50dB would not be expected to result in any response from foraging or roosting birds. Noise levels between 50dB and 70dB would provoke a moderate effect / level of response from birds (i.e. birds becoming alert and some behavioural changes (e.g. reduced feeding activity)) (Cutts *et al.*, 2013). However, birds would be expected to habituate to noise levels within this range. Noise levels above 70dB would likely result in birds moving out of the affected zone or leaving the site altogether. This is supported by the findings of Wright *et al.* (2010) which found that average noise levels above 60dB resulted in behavioural responses, with birds abandoning the site in response to noise levels above 70dB.

549 **Table 21** and **Table 22** in Section 7.4.4.3 provide the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise

modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the ZoI of disturbance effects arising from construction activities listed in **Table 21**.

550 At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold (see **Table 22** for indicative construction noise calculations). At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance is estimated to reach 250m from the Proposed Scheme.

551 Ireland's Eye SPA and Lambay Island SPA are designated for waterbirds such as lesser black-backed gull and herring gull, which are known to forage and / or roost at inland sites across Dublin, such as amenity grassland playing pitches. There are three areas of suitable foraging, and / or roosting habitat for these species within the footprint of the Proposed Scheme: CBC0016WB001 (Small grass area next to St. Patricks Rowing Club and Tom Clarke East Link Bridge), CBC0016WB002 (Gaelic pitch and grass area within Ringsend Park) and CBC0016WB003 (Grassy verge within Irishtown Stadium and grass area with scattered trees between the stadium and Bremen Avenue). Additionally, there are four known wintering bird sites within the disturbance ZoI of the Proposed Scheme which were returned from the desk study<sup>69</sup> as follows:

- Irishtown / Ringsend Park immediately adjacent to the Proposed Scheme (major importance);
- Irishtown Stadium approximately 19.7m from the Proposed Scheme (high importance);
- Irishtown / Sean Moore Park approximately 76.7m from the Proposed Scheme (high importance); and,
- Shelbourne Park Dog Track approximately 284m from the Proposed Scheme (high importance).

552 Records of SCI bird species that are known to forage and / or roost at inland sites across Dublin have been returned from the desk study in the vicinity of the Proposed Scheme (i.e. herring gull and lesser black-backed gull), and SCI bird species were recorded during wintering bird surveys carried out. It is therefore possible that SCI bird species associated with Ireland's Eye SPA and Lambay Island SPA currently utilise these and other suitable lands in the wider area. However, there is no potential for impacts to occur on inland feeding SCI populations associated with Ireland's Eye SPA and Lambay Island SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:

- Relatively low frequency of occurrence of these SCI bird species on lands located within the footprint of the Proposed Scheme, suggesting that these species do not regularly use or rely upon these lands as foraging and / or roosting habitat, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- Relatively low peak flocks recorded on lands located within the footprint of the Proposed Scheme, especially when compared to 1% of both their international flyway and national populations and the mean peak flock of each respective SCI species recorded in the nearest SPA, suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis (See **Table 9**);

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<sup>69</sup> Major importance site 401+ geese; high importance site 51-400 geese; and, moderate importance site 1-50 geese as defined by Benson's study in 2009.

Benson (2009) *Use of Inland Feeding Sites by Light-bellied Brent Geese in Dublin 2008-2009: A New Conservation Concern?* Irish Birds 8: 563-570.



- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb SCI bird species until such a time that they become habituated to the new levels of noise and human activity; and,
- The availability of large areas of suitable foraging and / or roosting habitat for these SCI bird species in the wider locality of the Proposed Scheme, including those in closer proximity to nearby SPAs. These include other similar public amenity grassland parks and sports pitches such as St. Anne's Park, the Red Arches and Seagrang Park, the Baldoyle Bird Quiet Zone and agricultural lands to the north of the Proposed Scheme.

553 Vantage point surveys have confirmed the use of the Proposed Scheme for foraging, commuting and loafing SCI birds within the Construction Phase disturbance Zol. However, no significant effects will occur on any SCI bird species population, in light of their conservation objectives, as a consequence of the disturbance and/or displacement from inland feeding / roosting sites due to increased levels of disturbance due to the following reasons:

- Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Birds present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre.
- Relatively low peak flocks recorded foraging and loafing within the footprint of the Proposed Scheme, when compared to 1% of both their international flyway and national populations (See **Table 10** and **Table 11**), suggesting that these sites are not significantly important to the overall SPA population of each respective SCI bird species, and are likely to use other suitable sites available in the wider area on a similar or more regular basis;
- There are extensive areas of suitable foraging and loafing habitat for cormorant and herring in the Liffey Estuary Lower and wider Dublin Bay area, including areas in closer proximity to Irelands SPA and Lambay Island; and,
- SCI bird species present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The operational phase of the development may temporarily disturb foraging and loafing SCI bird species until such a time that they become habituated to the new levels of noise and human activity. The proposed DPTOB will not be lifted regularly, and the Dodder channel itself does not regularly accommodate large boats.

#### 7.12.4.4 Direct injury / Mortality impacts

554 SCI bird species for which Ireland's Eye SPA and Lambay Island SPA are designated, have been recorded foraging and loafing in the vicinity of the proposed DPTOB during surveys, namely cormorant, lesser black-backed gull and herring gull. Considering the location of the Proposed Scheme on the Liffey Estuary Lower and the presence of SCI bird species in the vicinity of the Proposed Scheme, there is potential for mortality of small numbers of these bird species as a result of collision arising from the construction and operation of the proposed DPTOB. The main causes of bird collisions with man-made structures are considered to be invisibility, particularly at night; deception caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist<sup>70</sup>.

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<sup>70</sup>Jaroslow, B. (1979). A review of factors involved in bird-tower kills, and mitigative procedures. P 469-473 in: G.A. Swanson, *tech. coord. The mitigation symposium: a national workshop on mitigation losses of fish and wildlife habitats*. U.S. Forest Service General Technical Report R<-65.



- 555 During the Construction phase a collision risk may arise from the presence of construction machinery required for the construction of the proposed DPTOB such as mobile cranes and cherry pickers, representing a new obstacle for SCI birds which forage and loaf in this area. Herring gull and lesser black-backed gull have documented high avoidance rates (a micro-avoidance rate of 99.93% for herring gull at offshore wind farms and 100% for lesser black-backed gull<sup>71</sup>). Additionally, herring gull and lesser black-backed gull are common urban gull species and are likely to be habituated to a degree of construction activity as they are species that regularly navigate Dublin City Centre. Cormorants are an adaptable aquatic bird species and are known to occur on rivers inland. Cormorant present in the vicinity of the Proposed Scheme are likely to be habituated to a degree of vessel and construction activity.
- 556 However, given the lattice structures and mobility of cranes and cherry pickers, it is considered that they may pose a collision risk to birds, particularly at night and in adverse weather conditions. Given that these species are habituated to the urban environment, it is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with the Ireland's Eye SPA and Lambay Island SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of birds with construction machinery.
- 557 During the Operational phase, the proposed DPTOB represents a collision risk to SCI bird species. Literature available on bridges over wetlands (Oresund Bridge and Sabo Bridge cable-stay and bowstring structures, respectively) suggest that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect<sup>72,73</sup>. To put these studies into context, approximately 10 million migrant birds pass the Oresund Bridge during autumn migration and 27,000 bird movements (approximately 83% aquatic birds) were recorded crossing the Sabo Bridge during 400 hours of observation, suggesting that bridges over wetlands present a relatively low collision risk to waterbirds and that in these studies mortality occurred at such low numbers that it did not represent more than a minor effect. In addition, both of the Oresund Bridge and Sabo Bridge are cable-stay and bowstring structures and pose a greater collision risk than the proposed clear span bridge downstream of the Dodder\_050 and Liffey Estuary Lower confluence Dublin City Centre.
- 558 Birds present in the vicinity of the Proposed Scheme successfully navigate around cranes/container lifting machinery present in Dublin Port and bridges present in the Liffey Estuary Lower daily. There have been no known reports of bird species colliding with the Tom Clarke East Link Bridge, an opening bridge which is adjacent to the Proposed Scheme or machinery associated with Dublin Port. Additionally, the proposed DPTOB has been designed to be highly visible and avoid the use of features that are a potential hazard to birds. The main crossing spans and the handrails will be horizontal and comprised of steel. No structures generally considered hazardous to birds, such as pylons and cables, are included in the design of this bridge. Therefore, there will be no significant injury / mortality risk to SCI bird species as a result of the Proposed Scheme.

#### 7.12.4.5 Summary

- 559 **Table 39** presents a summary of the potential impacts and effects of the Proposed Scheme on the SCIs of Ireland's Eye SPA and Lambay Island SPA, and how these impacts relate to affecting the site's conservation objectives.

<sup>71</sup> Smart Wind (2013). Review of Avoidance Rates in Seabirds at Offshore Wind Farms and Applicability of Use in the Band Collision Risk Model.

<sup>72</sup> FEBI (2013). *Fehmarnbelt Fixed Link EIA. Fauna and Flora – Birds. Birds of the Fehmarnbelt Area – Impact Assessment. Report No. E3TR0015*

<sup>73</sup> Godinho C., Marques, J.T., Salgueiro, P., Catarino, L., Osório de Castro, C., Mira, A., and Beja, P. (2017) *Bird Collisions in a Railway Crossing a Wetland of International Importance (Sado Estuary, Portugal)*. In: Borda-de-Água L., Barrientos R., Beja P., Pereira H. (eds) *Railway Ecology*. Springer, Cham

**Table 39 Potential Impacts / Effects on the Conservation Objectives of Ireland’s Eye SPA and Lambay Island SPA**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Ireland’s Eye SPA</b>			
<b>Cormorant (<i>Phalacrocorax carbo</i>) [A017], Herring Gull (<i>Larus argentatus</i>) [A184], Kittiwake (<i>Rissa tridactyla</i>) [A188], Guillemot (<i>Uria aalga</i>) [A199], Razorbill (<i>Alca torda</i>) [A200]</b>			
There is no site-specific conservation objectives document available for this SPA. Therefore, the attributes, measures and targets below have been developed based on the specific conservation objectives available for Rogerstown Estuary SPA [004015]			
Population trend / Percentage change / Long term population trend stable or increasing	Yes An accidental pollution event during construction or operation could affect surface water. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA.	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation	This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.  It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any potential impacts, mitigation	The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.	

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.		
<b>Lambay Island SPA</b>			
<b>Fulmar (<i>Fulmaris glacialis</i>) [A009], Cormorant (<i>Phalacrocorax carbo</i>) [A017], Shag (<i>Phalacrocorax aristotelis</i>) [A018], Greylag Goose (<i>Anser anser</i>) [A043], Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183], Herring Gull (<i>Larus argentatus</i>) [A184], Kittiwake (<i>Rissa tridactyla</i>) [A188], Guillemot (<i>Uria aalga</i>) [A199], Razorbill (<i>Alca torda</i>) [A200], Puffin (<i>Fratercula arctica</i>) [A204]</b>			
Population trend / Percentage change / Long term population trend stable or increasing	Yes An accidental pollution event during construction or operation could affect surface water. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the quality the of intertidal / coastal habitats that support the special conservation interest bird species of the SPA.	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in Dublin Bay is protected during construction and operation of the Proposed Scheme.	No
Distribution / Range, timing and intensity of use of areas / No significant decrease in the range, timing and intensity of use of areas by all of the above-named species, other than that occurring from natural patterns of variation	This could potentially affect the use of habitat areas by birds and have long-term effects on the SPA populations.  It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with this SPA. However, to minimise any	The mitigation measures described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.	

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	potential impacts, mitigation measures have been proposed to avoid any potential collision risk of SCI bird species with construction machinery.		

#### 7.12.5 *Mitigation Measures*

560 This section presents the mitigation measures that will be implemented during Construction and Operation phase to avoid or reduce the potential impacts of the Proposed Scheme on Ireland's Eye SPA and Lambay Island SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

##### 7.12.5.1 *Measures to Protect Surface Water Quality*

###### Measures to Protect Surface Water Quality during Construction

561 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

###### Measures to Protect Surface Water Quality during Operation

562 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

##### 7.12.5.2 *Measures to Reduce Direct Injury / Mortality Impacts during Construction*

563 The mitigation measures presented above in Section 7.4.4.3 will reduce the risk of direct injury / mortality of SCI bird species during the construction of the Proposed Scheme.

#### 7.12.6 *Residual Impacts*

564 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the SCIs of Ireland's Eye SPA or Lambay Island SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of Ireland's Eye SPA or Lambay Island SPA. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

##### 7.12.7 *Conclusion of Assessment for Ireland's Eye SPA or Lambay Island SPA*

565 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the SCIs of Ireland's Eye SPA or Lambay Island SPA, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of Ireland's Eye SPA or Lambay Island SPA.

### **7.13 Wicklow Mountains SPA [004040]**

#### 7.13.1 *Ecological Baseline Description for Wicklow Mountains SPA*

566 The Natura Standard Data Form (NPWS, 2018a) lists the Wicklow Mountains SPA as an extensive upland site, comprising a substantial part of the Wicklow Mountains. This area was subject to glaciation and features fine examples of glacial lakes, deep valleys and moraines. The dominant habitats present are blanket bog, heaths and upland grassland. The site supports good examples of upland and woodland bird

communities. It has breeding Merlin *Falco columbarius* and Peregrine *Falco peregrinus*, as well as Ring Ouzel *Turdus torquatus* and Red Grouse *Lagopus lagopus*, both of the latter being Red-listed in Ireland<sup>74</sup>.

7.13.2 *Special Conservation Interests and Conservation Objectives of Wicklow Mountains SPA*

567 The SCIs of Wicklow Mountains SPA, and the overall conservation objective, are listed in **Table 40**.

**Table 40 Special Conservation Interests and Conservation Objectives of Wicklow Mountains SPA**

Special Conservation Interest(s)	Conservation Objective(s)
<p><b>Wicklow Mountains SPA [004040]</b></p> <p>A098 Merlin <i>Falco columbarius</i><sup>75</sup></p> <p>A103 Peregrine <i>Falco peregrinus</i></p> <p><i>S.I. No. 586/2012 - European Communities (Conservation of Wild Birds (Wicklow Mountains Special Protection Area 004040)) Regulations 2012</i></p> <p>NPWS (2022g) <i>Conservation objectives for Wicklow Mountains SPA [004040]</i>. First Order Site-specific Conservation Objectives. Version 1. Department of Housing, Local Government and Heritage.</p>	<p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p>

568 In conjunction with considering the generic conservation objective for this SPA “*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*”, the site-specific conservation objectives document for Wicklow Mountains SPA also informed this assessment.

569 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the SCIs within the European site. Affecting the conservation condition of the SCIs would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the SCIs of Wicklow Mountains SPA are presented in Section 7.13.3.3.

7.13.3 *Examination and Analysis of Potential Direct and Indirect Impacts*

570 The direct and / or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the SCIs of Wicklow Mountains SPA, are:

- Disturbance and displacement impacts; and,
- Direct injury / mortality impacts

7.13.3.1 *Disturbance and displacement impacts*

571 Wicklow Mountains SPA is designated for peregrine falcon *Falco peregrinus* and merlin *Falco columbarius*. Peregrine are known to hunt in Dublin City Centre and have been recorded during vantage point surveys carried out for the Proposed Scheme. This species is known to overwinter on the coast and feed on the high concentrations of waterbirds present on the estuaries, and pigeons in the city centre<sup>76</sup>. A temporary and / or permanent increase in noise, vibration and / or human activity levels during the Construction

<sup>74</sup> Gilbert, G., Stanbury A., & Lewis L.. (2021). *Birds of Conservation Concern in Ireland 2020-2026*. Irish Birds 43: 1-22

<sup>75</sup> Merlin are scoped out from further assessment owing to the fact that 1) they are upland species unlikely to occur in metropolitan areas and 2) they were not recorded during VP surveys.

<sup>76</sup> Birdwatch Ireland. *Peregrine webpage*. Available from: <https://birdwatchireland.ie/birds/peregrine/>

and/or Operation phase of the Proposed Scheme could result in the disturbance to and / or displacement of SCI bird species present within footprint and / or the vicinity of the Proposed Scheme. Such disturbance effects would not be expected to extend beyond a distance of approximately 300m for the majority of the Proposed Scheme, as noise levels associated with general construction activities would attenuate to close to background levels at that distance and beyond. Noisy works associated with the construction of the Proposed Scheme include piling associated with the proposed boardwalks and the proposed DPTOB, removal and reinstallation of the Scherzer Bridges, and the demolition of the existing SPRC building.

- 572 **Table 21** and **Table 22** in Section 7.4.4.3 provide the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the ZoI of disturbance effects arising from construction activities listed in **Table 21**.
- 573 At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold (see **Table 22** for indicative construction noise calculations). At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance is estimated to reach 250m from the Proposed Scheme.
- 574 The Operational Phase is not considered to result in significant changes to existing noise levels due to the urban locality of the Proposed Scheme as an existing transport route.
- 575 Research on the effects of aircraft noise on nesting peregrine carried out by Palmer *et al.*, (2003) found no evidence to suggest that noise events arising from aircraft overflights significantly altered their behaviour. Nestling provisioning rates were not found to be affected by increased noise disturbance which implies that noisy events do not inhibit peregrine falcons from hunting or delivering prey to young. Additionally, the peregrine population present in the vicinity of the Proposed Scheme are habituated to an urban environment, it is likely that they are tolerant to human disturbance and construction works. It is possible that noise associated with the construction of the Proposed Scheme could temporarily reduce the availability of prey in the vicinity, however, peregrine are documented to have a foraging range of up to 18km (SNH, 2016). Therefore, disturbance associated with the Proposed Scheme will not have a significant effect on prey availability.
- 576 Construction of the Proposed Scheme will result in short-term disturbance impacts only. During the construction phase, individual sections will be completed within nine to 30 month periods. Peregrine falcon present in the vicinity of the Proposed Scheme are habituated to existing disturbance levels associated with Dublin City Centre. The Operational phase of the development may temporarily disturb peregrine falcon until such a time that they become habituated to the new levels of noise and human activity. The proposed DPTOB will not be lifted regularly.

#### 7.13.3.2 Direct injury / mortality impacts

- 577 A single peregrine falcon, an SCI bird species for which Wicklow Mountains SPA is designated, was recorded during vantage point surveys carried out for the Proposed Scheme, over the 3 Arena building. Considering the location of the Proposed Scheme on the Liffey Estuary Lower and the presence of potential prey species in the vicinity of the proposed DPTOB, there is potential, albeit limited, for mortality of small numbers of peregrine falcon as a result of collision arising from the construction and operation of the proposed DPTOB. The main causes of bird collisions with man-made structures are considered to be invisibility, particularly



at night; deception caused by glazing in buildings; and confusion, caused by light refracted or reflected by mist<sup>77</sup>.

578 During the construction phase a collision risk may arise from the presence of construction machinery required for the construction of the proposed DPTOB such as mobile cranes and cherry pickers, representing a new obstacle for SCI birds which forage and loaf in this area. In collision risk modelling for onshore windfarms, an avoidance rate of 98% is applied as a default avoidance rate (SNH, 2018) which means that an estimated 98% of peregrine flights will avoid collision with a moving turbine. Additionally, peregrine falcon present in Dublin City Centre are likely to be further habituated to a degree of construction activity by virtue of developing built landscape. However, given the lattice structures and mobility of cranes and cherry pickers, it is considered that they may pose a collision risk to birds, particularly at night and in adverse weather conditions. Given that a single peregrine falcon was recorded during vantage point surveys and that individuals present in the area are habituated to the urban environment, it is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI bird populations associated with the Wicklow Mountains SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of birds with construction machinery.

579 During the operational phase, the proposed DPTOB represents a collision risk to SCI bird species. However, peregrine falcon present in the vicinity of the Proposed Scheme successfully navigate around cranes / container lifting machinery present in Dublin Port and bridges present in the Liffey Estuary Lower daily. There have been no known reports of bird species colliding with the Tom Clarke East Link Bridge, an opening bridge which is adjacent to the Proposed Scheme or machinery associated with Dublin Port. Additionally, the proposed DPTOB has been designed to be highly visible and avoid the use of features that are a potential hazard to birds. The main crossing spans and the handrails will be horizontal and comprised of steel. No structures generally considered hazardous to birds, such as pylons and cables, are included in the design of this bridge. It is also important to note that a single peregrine falcon was recorded during surveys carried out for the Proposed Scheme and was approximately 200m away from the proposed DPTOB. Therefore, there will be no significant injury / mortality risk to SCI bird species as a result of the Proposed Scheme.

#### 7.13.3.3 Summary

580 **Table 41** presents a summary of the potential impacts of the Proposed Scheme on the SCIs of Wicklow Mountains SPA, and how these impacts relate to affecting the site's conservation objectives.

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<sup>77</sup>Jaroslow, B. (1979). A review of factors involved in bird-tower kills, and mitigative procedures. P 469-473 in: G.A. Swanson, tech. coord. *The mitigation symposium: a national workshop on mitigation losses of fish and wildlife habitats*. U.S. Forest Service General Technical Report R<-65.

**Table 41 Potential Impacts / Effects on the Conservation Objectives of Wicklow Mountains SPA**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Wicklow Mountains SPA</b>			
<b>Peregrine [A103], Merlin [A0980]</b> There is no site-specific conservation objectives document <sup>78</sup> available for this SPA nor for the two species which are listed as SCI for other SPA's across Ireland. Therefore, the attributes, measures and targets below have been developed based on the general conservation objectives available for Wicklow Mountains SPA			
Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats	No	No	No
The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future	There is no potential for impacts to occur on any SCI bird species population of Wicklow Mountains SPA, in light of their conservation objectives, as a consequence of the disturbance and / or displacement due to increased levels of disturbance arising from the Proposed Scheme.	However precautionary mitigation measures are described in Section 7.4.4.3 to avoid any potential collision risk of SCI bird species with construction machinery.	
There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis	It is not considered that the collision risk associated with construction machinery will cause a significant effect on SCI populations associated with this SPA. However, to minimise any potential impacts, mitigation measures have been proposed to avoid any potential collision risk of		

<sup>78</sup> NPWS have published "First Order Site-specific Conservation Objectives" for this SPA, but have yet to provide detailed site-specific conservation objectives with specific attributes and targets for this European site.

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
	SCI bird species with construction machinery.		

#### 7.13.4 Mitigation Measures

581 This section presents the mitigation measures that will be implemented during construction and operation to avoid or reduce the potential impacts of the Proposed Scheme on Wicklow Mountains SPA. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

##### 7.13.4.1 Measures to Reduce Direct Injury / Mortality Impacts during Construction

582 The mitigation measures presented above in Section 7.4.4.3 will reduce the risk of direct injury / mortality of SCI bird species during the construction of the Proposed Scheme.

#### 7.13.5 Residual Impacts

583 Although no specific mitigation are required in respect of potential impacts, with the effective implementation of appropriate precautionary mitigation measures identified in this NIS, the Proposed Scheme poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the SCIs of Wicklow Mountains SPA, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of Wicklow Mountains SPA.

#### 7.13.6 Conclusion of Assessment for Wicklow Mountains SPA

584 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the SCIs of Wicklow Mountains SPA, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the SCIs, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of Wicklow Mountains SPA.

### 7.14 Wicklow Mountains SAC [002122]

#### 7.14.1 Ecological Baseline Description for Wicklow Mountains SAC

585 According to the Natura 2000 Standard Data Form (NPWS, 2020o). This SAC is an extensive upland site comprising much of the Wicklow Mountains. Most of the site is over 300m and includes the source of many rivers including the Liffey, the Dargle and the Slaney. The dominant habitats of the site include blanket bog, heath and upland grassland. Seven Red Data Book plant species occur, and it supports significant breeding populations of merlin *Falco columbarius* and peregrine *Falco peregrinus*. The SAC is designated for otter, which occurs on several of the riverine systems. Major threats to the site include urbanised areas / human habitation, walking, horse-riding and non-motorised vehicles, paths, tracks and cycling tracks, hunting and collection of wild animals, invasive non-native species, military manoeuvres and grazing.

#### 7.14.2 Qualifying Interests and Conservation Objectives of Wicklow Mountains SAC

586 The QIs of Wicklow Mountains SAC, and the overall conservation objectives, are listed in **Table 42**.

**Table 42 Qualifying Interests and Conservation Objectives of Wicklow Mountains SAC**

Qualifying Interest(s)	Conservation Objective(s)
<p><b>Wicklow Mountains SAC [002122]<sup>79</sup></b>                      1355 Otter <i>Lutra lutra</i>                      3110 Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)                      3130 Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i>                      3160 Natural dystrophic lakes and ponds                      4010 Northern Atlantic wet heaths with <i>Erica tetralix</i>                      4030 European dry heaths                      4060 Alpine and Boreal heaths                      6130 Calaminarian grasslands of the <i>Violetalia calaminariae</i>                      6230 Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)*                      7130 Blanket bogs (* if active bog)                      8110 Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)                      8210 Calcareous rocky slopes with chasmophytic vegetation                      8220 Siliceous rocky slopes with chasmophytic vegetation                      91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p>NPWS (2017b) <i>Conservation Objectives: Wicklow Mountains SAC 002122</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.</p>	<p>To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected</p>

587 In conjunction with considering the generic conservation objective for this SAC “*To maintain the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected*”, the site-specific conservation objectives documents for Wicklow Mountains SAC also informed this assessment.

588 The site-specific conservation objectives document sets out the attributes, measures and targets that define the favourable conservation condition of the QIs within the European site. Affecting the conservation condition of the QI would constitute an adverse effect on the integrity of a European site. The specific attributes and targets used to define the conservation objectives of the QIs of Wicklow Mountains SAC are presented in Section 7.14.3.5.

<sup>79</sup> Wicklow Mountains SAC has been included due to potential effects on the otter population (a mobile species). Qualifying Interest habitats for which this SAC has been designated are not at risk of effects arising from the Proposed Scheme as the SAC is located upstream of the Proposed Scheme. Therefore, habitats associated with the Wicklow Mountains SAC are not considered further in this report.

### 7.14.3 Examination and Analysis of Potential Direct and Indirect Impacts

589 The direct and / or indirect impacts by which the Proposed Scheme could (in the absence of mitigation measures) potentially affect the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of Wicklow Mountains SAC, are:

- Habitat loss and fragmentation;
- Habitat degradation as a result of hydrological impacts;
- Disturbance and displacement impacts; and
- Direct injury / Mortality impacts.

#### 7.14.3.1 Habitat loss and fragmentation

590 There are no known holts nor long-term habitation features known from the ZOI of various elements of the Proposed Scheme along the Liffey Estuary Lower and Dodder\_050. However, an active holt was recorded (Macklin *et al.*, 2019) beneath an existing mooring pontoon along the north quays. Surveys for the Proposed Scheme noted evidence of otter activity in a number of areas including sections of watercourse intersected by the Proposed Scheme, although the recorded holt on the north quays was not active at the time of surveys for the Proposed Scheme. A number of holts and artificial holts are known from further upstream along the River Dodder.

591 It is considered that the Proposed Scheme is within the potential home range of male otter associated with the Wicklow Mountains SAC. Given that otter are generally nocturnal in nature and works will typically be carried out during normal daylight working hours with the following exceptions: pumping out excavations, security and emergency works. Excavation activities are proposed for the DPTOB (two months) and the Scherzer Bridges (one month per bridge), affected otters would be expected to habituate to the altered landscape and any resulting barrier effect would be short-term in nature (anticipated 30 month programme for completion of the proposed DPTOB). The severance / barrier effect of construction works on otter is not likely to affect the local population, even over the short-term, and is not likely to result in any long-term significant effects on QI otter populations.

592 There will be no direct habitat of SAC territory associated with QI otter from Wicklow Mountains SAC, nor any likely destruction of habitat (natural or man-made) suitable to support habitation. There will however be a loss of estuarine habitat (approximately 3950m<sup>2</sup>) from alongside Tom Clarke East Link Bridge. This will result in the potential loss of forage territory and / or boulder lined foreshore that might be used temporarily by otter that form part of the upstream SAC population. The area of land reclamation is relatively small in comparison to the area of suitable habitat present in the vicinity of the Proposed Scheme. Given the nature of the setting and the considerable fisheries resource known from the Liffey Estuary Lower as well as the less developed bankside areas along secluded areas of the River Dodder are such that it is not predicted that the potential impacts could occur to such a degree that the conservation objectives of the Wicklow Mountains SAC QI species would be undermined. Therefore, it is not likely that the reclamation of land to facilitate the construction of the Proposed Scheme will result in significant loss of otter foraging habitat.

#### 7.14.3.2 Habitat degradation as a result of hydrological impacts

593 As the Wicklow Mountains SAC is located upstream of the Proposed Scheme, there is no potential for a pollution event of any magnitude to affect any QI habitats or associated plant species for which this European site is designated. However, as the Proposed Scheme is hydrologically connected to the Dodder\_050, there is potential for impacts to occur on otter populations (a mobile species) associated with the Wicklow Mountains SAC. The release of contaminated surface water runoff and / or an accidental spillage or pollution event into any surface water features during the Construction, or Operation phases, has the potential to affect water quality in the receiving aquatic environment. Such a pollution event may include: the release of sediment into receiving waters and the subsequent increase in mobilised suspended solids; and, the accidental spillage and / or leaks of contaminants into receiving waters. The associated effects of a reduction of surface water quality which could in turn negatively affect the otter population

through direct contact with pollutants or a decline in fish prey. These potential impacts could occur to such a degree that the conservation objectives of the Wicklow Mountains SAC are undermined.

594 Therefore, there is potential for the Proposed Scheme to result in significant effects which could have implications for the conservation objectives of Wicklow Mountains SAC as a result of hydrological impacts.

#### 7.14.3.3 Disturbance and Displacement impacts

595 A temporary and / or permanent increase in noise, vibration and / or human activity levels during the construction and / or operation of the Proposed Scheme could result in the disturbance to and / or displacement of QI otter populations present in the vicinity of the Proposed Scheme. An inactive otter holt is present within the quay wall at MV Cill Airne Boat Restaurant immediately adjacent to the Proposed Scheme. Increased human presence and / or noise and vibration associated with construction works may affect the MV Cill Airne holt and temporarily displace commuting or foraging otter. Construction activities in the vicinity of the Liffey Estuary Lower will include general road works, site compounds, hydraulic hammer piling works and retaining walls. Noise levels produced by these general construction works will be a maximum of 81dB (for hydraulic hammer piling works and retaining walls) at 10m away (Table 10 and 11 for indicative noise levels).

596 **Table 21** and **Table 22** in Section 7.4.4.3 provide the indicative construction noise calculation associated with different construction activities of the Proposed Scheme at varying distances. The results of the noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for general construction activities will be 60dB or less. Therefore, construction activities would not be expected to result in any more than a moderate disturbance at distances beyond 150m. Any landscape features, vegetation cover or buildings between the construction site and breeding bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 150m is considered to be a precautionary buffer in defining the ZoI of disturbance effects arising from construction activities listed in **Table 21**.

597 At 100m from the Proposed Scheme, the majority of noise produced as a result of the construction of the proposed DPTOB will be below the 70dB threshold (see **Table 22** for indicative construction noise calculations). At 250m, all predicted noise levels will be below the 60dB threshold, with the exception of Sheet Piling Rigs and Breakers During Demolition and Approach Structure Works, which will be 62dB. As such, the majority of disturbance is predicted to occur within 150m of the Proposed Scheme, and moderate disturbance is estimated to reach 250m from the Proposed Scheme. These potential impacts could occur to such a degree that the conservation objectives of the Wicklow Mountains SAC are undermined.

598 However, construction activities associated with the Scherzer bridges are within 150m of the holt. Although currently inactive, there is potential for otter populations to re-establish territory here prior to the Construction Phase of the Proposed Scheme. Abandonment of otter holts as a result of displacement effects arising from the Proposed Scheme has the potential to result in a significant effect at the international ecological scale. Any increased level of disturbance associated with the operation of the Proposed Scheme is extremely unlikely to result in any perceptible disturbance / displacement of otter.

599 Therefore, there is potential for the Proposed Scheme to result in significant effects which could have implications for the conservation objectives of Wicklow Mountains SAC as a result of disturbance / displacement impacts.

600 The Operational Phase is not considered to result in significant changes to existing noise levels due to the urban locality of the Proposed Scheme is an existing transport route.

#### 7.14.3.4 Direct Injury / Mortality impacts

601 As otter, in the vicinity of the Proposed Scheme, are habituated to normal traffic levels associated with Dublin City Centre it is unlikely that an increase in construction related vehicles and machinery during construction would present a significant injury / mortality risk. However, given that a proposed Construction Compound will be located adjacent to the Dodder\_050 and Liffey Estuary Lower, and that



there will be in-stream disturbance associated with the Construction of the proposed DPTOB and reclamation of estuarine territory, there is potential for injury / mortality of otter during the Construction phase of the Proposed Scheme. The Proposed Scheme will not result in any increase in terms of mortality risk to otter during operation.

602 Therefore, there is potential for the Proposed Scheme to result in significant effects which could have implications for the conservation objectives of Wicklow Mountains SAC as a result of disturbance / displacement impacts.

#### 7.14.3.5 Summary

603 **Table 43** presents a summary of the potential impacts of the Proposed Scheme on the QIs of Wicklow Mountains SAC, and how these impacts relate to affecting the site's conservation objectives.

**Table 43 Potential Impacts / Effects on the Conservation Objectives of Wicklow Mountains SAC**

Conservation Objectives Attribute/Measure/Target	Potential Impacts Requiring Mitigation?	Are mitigation measures required?	Residual Impacts?
<b>Wicklow Mountains SAC<sup>80</sup></b>			
To maintain the favourable conservation condition of Otter in Wicklow Mountains SAC, which is defined as follows:			
Distribution / Percentage positive survey sites / No significant decline	Yes An accidental pollution event during construction or operation could affect surface water downstream. An accidental pollution event of a sufficient magnitude, either alone or cumulatively with other pollution sources, could potentially affect the otter population through direct contact with pollutants or a decline in fish prey.  Construction disturbance in the vicinity of the River Dodder and Liffey Estuary result in disturbance to and potentially displacement of otter, particularly if works are undertaken at night-time.	Yes The mitigation measures described in Section 7.1.4.1 to protect water quality in the receiving environment will ensure that surface water quality in the downstream environment is protected during construction and operation of the Proposed Scheme.  The mitigation measures described in Section 7.14.3.4 to ensure that local QI otter population are protected during the Construction of the Proposed Scheme.	No
Extent of terrestrial habitat / Hectares / No significant decline.			
Extent of freshwater (river) habitat / Kilometres / No significant decline.			
Extent of freshwater (lake) habitat / Hectares / No significant decline			
Couching sites and holts/ Number / No significant decline			
Fish biomass available / Kilograms / No significant decline			
Barriers to connectivity / Number / No significant increase			

<sup>8</sup> As QI habitats for which this SAC has been designated are not at risk of effects arising from the Proposed Scheme, they have not been included in this summary table.

#### 7.14.4 Mitigation Measures

604 This section presents the mitigation measures that will be implemented during Construction and Operation phases to avoid or reduce the potential impacts of the Proposed Scheme on Wicklow Mountains SAC. All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment.

##### 7.14.4.1 Measures to Protect Surface Water Quality

###### Measures to Protect Surface Water Quality during Construction

605 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during construction of the Proposed Scheme.

###### Measures to Protect Surface Water Quality during Operation

606 The mitigation measures presented above in Section 7.1.4.1 will protect surface water quality during operation of the Proposed Scheme.

##### 7.14.4.2 Measures to Protect Otter from Disturbance / Displacement Impacts and Injury / Mortality Impacts

607 This section presents the mitigation measures that will be implemented during construction to avoid the potential impacts of the Proposed Scheme on QI otter populations associated with the Wicklow Mountains SAC. All of the mitigation measures will be implemented in full. They are in accordance with best practice, and tried and tested, effective control measures to protect otter.

###### Measures to Reduce the Loss of Breeding / Resting sites

608 The NTA will ensure that a confirmatory pre-construction check of all suitable otter habitat will be completed within 12 months prior to any construction works commencing. The presence of any new holt / couch or activity at the previously established holt site at MV Cill Airne will be treated and / or protected in accordance with the Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes (NRA, 2006b).

###### Measures to Prevent / Reduce Disturbance and Displacement

- Night working within / directly adjacent to watercourses where otter are known to commute will preferably not be undertaken. Where night-working adjacent to watercourses known to support otter, is required, owing to practical considerations of traffic restrictions etc., the advice of a suitably qualified ecologist must be sought and a derogation licence if necessary will be sought from the NPWS permitting such works.
- Security lighting at the Construction Compounds or in active works areas in close proximity to watercourses with known otter activity will be designed in conjunction with a suitably qualified ecologist to minimise light spill. Similarly, where any new or amended lighting design is required at a watercourse crossing, it should be cognisant of downward light-spill onto watercourses. Measures to reduce light spill may include the following:
  - The the use of sensor/timer triggered lighting;
  - LED luminaires where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability;
  - column heights to minimise light spill; and,
  - accessories such as baffles, hoods or louvres to reduce light spill and direct it only where needed.

#### *Measures to Prevent Injury / Mortality Impacts*

- 609 To protect otters from indirect harm during construction, where practicable open excavations will be covered when not in use and backfilled as soon as practicable by the appointed contractor.
- 610 Excavations will also be covered at night, where practicable, and any deep excavations which must be left open will have appropriate egress ramps in place to allow mammals to safely exit should they fall in.
- 611 Fencing requirements as per the Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes (NRA, 2006) will be erected around the Construction Compound and other working areas which are in close proximity to significant watercourses and have suitable roaming territory for otter.

#### *7.14.5 Residual Impacts*

- 612 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme poses no risk of affecting the conservation objectives, or the favourable conservation condition, of the QI species of Wicklow Mountains SAC, and there are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of Wicklow Mountains SAC. As is confirmed by the Water Framework Directive Assessment for the Proposed Scheme (refer to Appendix IX), the proposed Scheme will not cause a deterioration in status in any water body, will not prevent any water body from achieving good ecological status or good ecological potential, and it can be concluded that the Proposed Scheme complies with all requirements of the WFD.

#### *7.14.6 Conclusion of Assessment for Wicklow Mountains SAC*

- 613 Following an examination, analysis and evaluation in light of best scientific knowledge, of all relevant information in respect of the QI of Wicklow Mountains SAC, the potential impacts and mitigation measures, and whether or not the predicted impacts would affect the conservation objectives that support the conservation condition of the QI species, it has been concluded that the Proposed Scheme does not pose a risk of adversely affecting (either directly or indirectly) the integrity of Wicklow Mountains SAC.

## **8 Summary of Mitigation Measures and Residual Impacts**

### **8.1 Summary of Mitigation Measures**

- 614 This section summarises the construction and operational mitigation measures that will be implemented to avoid or reduce the potential impacts of the Proposed Scheme on the European sites as already set out throughout Section 7. A matrix of mitigation measures is provided in **Table 44**, identifying the specific mitigation measures required for each relevant European site.
- 615 All of the mitigation measures will be implemented in full and are best practice, and tried and tested, effective control measures to protect the receiving environment. Mitigation measures and associated Management Plans are included as appendices to the Construction Environmental Management Plan (CEMP) provided in Appendix VIII, all of which shall, at a minimum, be implemented during the construction phase of the Proposed Scheme.

**Table 44 Matrix of Mitigation Measures and Residual Impacts**

European site	Potential Impacts							Any adverse effect on the integrity of European sites (post mitigation)
	Habitat Loss and Fragmentation	Hydrology	Hydrogeology	Invasive Species	Air Quality	Disturbance / Displacement	Direct Injury / Mortality	
<i>North Dublin Bay SAC</i>	X	✓ Section 7.1.4.1 Section 5.4 in CEMP	X	✓ Section 7.1.4.2 Section 5.3 in CEMP	X	X	X	No
<i>South Dublin Bay SAC</i>	X	✓ Section 7.1.4.1 Section 5.4 in CEMP	X	✓ Section 7.1.4.2 Section 5.3 in CEMP	X	X	X	No
<i>Howth Head SAC</i>	X	✓ Section 7.2.5.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	X	X	No
<i>Rockabill to Dalkey Island SAC</i>	X	✓ Section 7.3.5.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	✓ Section 7.3.5.2	X	No
<i>Lambay Island SAC</i>	X	✓ Section 7.3.5.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	✓ Section 7.3.5.2	X	No

European site	Potential Impacts							Any adverse effect on the integrity of European sites (post mitigation)
	Habitat Loss and Fragmentation	Hydrology	Hydrogeology	Invasive Species	Air Quality	Disturbance / Displacement	Direct Injury / Mortality	
<i>Wicklow Mountains SAC</i>	X	✓ Section 7.1.4.1 / 7.14.4.1 Section 5.4 in CEMP	X	X	X	✓ Section 7.14.4.2	✓ Section 7.14.4.2	No
<i>Howth Head Coast SPA</i>	X	✓ Section 7.2.5.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	X		No
<i>South Dublin Bay and River Tolka Estuary SPA</i>	X	✓ Section 7.4.4.1 / 7.1.4.1 Section 5.4 in CEMP	X	✓ Section 7.4.4.2 Section 5.3 in CEMP	X	✓ Section 7.4.4.4	✓ Section 7.4.4.3	No
<i>Rockabill SPA</i>	X	✓ Section 7.5.5.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	✓ Section 7.5.5.3 / 7.4.4.4	✓ Section 7.5.5.2 / 7.4.4.3	No
<i>North Bull Island SPA</i>	X	✓ Section 7.5.4.1 / 7.1.4.1 Section 5.4 in CEMP	X	✓ Section 7.5.4.2 / 7.1.4.2 Section 5.3 in CEMP	X	X	✓ Section 7.5.4.3 / 7.4.5.2	No

European site	Potential Impacts							Any adverse effect on the integrity of European sites (post mitigation)
	Habitat Loss and Fragmentation	Hydrology	Hydrogeology	Invasive Species	Air Quality	Disturbance / Displacement	Direct Injury / Mortality	
<i>Dalkey Islands SPA</i>	X	✓ Section 7.5.5.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	✓ Section 7.5.5.3 / 7.4.4.4	✓ Section 7.5.5.2 / 7.4.4.3	No
<i>Malahide Estuary SPA</i>	X	✓ Section 7.7.3.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	X	✓ Section 7.7.3.2 / 7.4.5.2	No
<i>Baldoyle Bay SPA</i>	X	✓ Section 7.8.4.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	X	✓ Section 7.8.4.2 / 7.4.5.2	No
<i>Rogerstown Estuary SPA</i>	X	✓ Section 7.9.4.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	X	✓ Section 7.9.4.2 / 7.4.5.2	No
<i>Skerries Islands SPA</i>	X	✓ Section 7.10.4.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	X	✓ Section 7.10.4.2 / 7.4.5.2	No



European site	Potential Impacts							Any adverse effect on the integrity of European sites (post mitigation)
	Habitat Loss and Fragmentation	Hydrology	Hydrogeology	Invasive Species	Air Quality	Disturbance / Displacement	Direct Injury / Mortality	
<i>The Murrough SPA</i>	X	✓ Section 7.11.4.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	X	✓ Section 7.11.4.2 / 7.4.5.2	No
<i>Ireland's Eye SPA</i>	X	✓ Section 7.12.5.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	X	✓ Section 7.12.5.2 / 7.4.5.2	No
<i>Lambay Island SPA</i>	X	✓ Section 7.12.5.1 / 7.1.4.1 Section 5.4 in CEMP	X	X	X	X	✓ Section 7.12.5.2 / 7.4.5.2	No
<i>Wicklow Mountains SPA</i>	X	X	X	X	X	X	✓ Section 7.13.4.1 / 7.4.5.2	No

## 8.2 Summary of Residual Impacts

616 With the effective implementation of appropriate mitigation measures identified in this NIS, the Proposed Scheme will not have any adverse effect on the conservation objectives, or the favourable conservation condition, of the qualifying interest habitats and species and / or SCI species of the European sites assessed in Section 7. There are therefore, no residual direct or indirect impacts associated with the Proposed Scheme that could adversely affect the integrity of such European sites..

617 A matrix identifying those aspects which will be subject to mitigation measures and the residual impacts post mitigation is provided in **Table 44** for the relevant European sites.

## 9 In-Combination Assessment

618 This section of the NIS presents the assessment carried out to examine whether any other plans or projects have the potential to act in combination with the Proposed Scheme to have a significant effect on any of the European sites including those within its zone of influence (Zol).

619 There are nineteen (19) European sites within the Zol of the Proposed Scheme are:

- North Dublin Bay SAC;
- South Dublin Bay SAC;
- Howth Head SAC;
- Rockabill to Dalkey Island SAC;
- Lambay Island SAC;
- Wicklow Mountains SAC;
- Howth Head Coast SPA;
- Dalkey Islands SPA;
- Rockabill SPA;
- North Bull Island SPA;
- South Dublin Bay and River Tolka Estuary SPA;
- Ireland's Eye SPA;
- Malahide Estuary SPA;
- Baldoyle Bay SPA;
- Rogerstown Estuary SPA;
- Wicklow Mountains SPA;
- Skerries Islands SPA;
- Lambay Island SPA; and,
- The Murrough SPA.

620 All other European sites fall beyond the Zol of the Proposed Scheme. Therefore, there is no potential for any other plans or projects to act in combination with the Proposed Scheme to adversely affect the integrity of any other European sites. The protective policies and objectives from the land use plans referred to in this section are included in Section 9.2.

### 9.1 Analysis of Potential In Combination Effects

621 The in combination assessment involved first identifying those plans and projects which have the potential to impact on those European sites within the Zol of the Proposed Scheme.

622 Those plans or projects with the potential to impact upon these European sites are any national, regional and local land use plans or any existing or proposed projects that could potentially affect the ecological environment within the Zol of the Proposed Scheme. These are presented in **Table 45**.

623 The potential cumulative impacts on those European sites within the Zol of the Proposed Scheme from the Proposed Scheme in combination with the plans and projects listed in **Table 45** were identified and assessed. This assessment is presented below in **Table 46** and **Table 47**.

**Table 45 Land Use Plans and Programmes Considered for the In Combination Assessment**

<b>National Plans</b>
National Energy & Climate Plan 2021-2030
Climate Action Plan 2023
National Spatial Strategy for Ireland 2002-2020;
Project Ireland 2040 – Building Ireland’s Future <sup>81</sup>
National Transport Authority Integrated Implementation Plan 2019-2024
Smarter Travel a Sustainable Transport Future 2009-2020
National Biodiversity Action Plan 2017-2021
River Basin Management Plan 2018-2021
National Air Pollution Control Programme (NAPCP) 2021
National Marine Planning Framework 2018
Water Services Strategic Plan 2015
<b>Regional Plans</b>
Regional Planning Guidelines for the Greater Dublin Area Vol I & II 2010-2022;
Regional Spatial & Economic Strategy for the Eastern and Midland Region 2019-2031
2022 Greater Dublin Area Cycle Network (Supersedes Greater Dublin Area Cycle Network Plan 2013)
Greater Dublin Area Transport Strategy 2022-2042
Eastern Catchment Flood Risk Assessment and Management (CFRAM) study 2011-2016
<b>County/Local Plans</b>
<b>Fingal Development Plan 2023-2029</b>
Fingal Biodiversity Action Plan 2010-2015; Draft Fingal Biodiversity Action Plan 2022-2030 (Draft for public consultation)
Fingal County Council Climate Action Plan 2019-2024
<ul style="list-style-type: none"> <li>• Donabate Local Area Plan 2016</li> <li>• Rivermeade Local Area Plan 2018</li> <li>• Barnhill Local Area Plan 2019</li> <li>• Kinsaley Local Area Plan 2019</li> <li>• Dublin Airport Local Area Plan 2020</li> </ul>
<b>Dublin City Development Plan 2022 – 2028</b>
Dublin City Biodiversity Action Plan 2021-2025
Dublin City Council Climate Action Plan 2019-2024
<ul style="list-style-type: none"> <li>• Clongriffin-Belmayne Local Area Plan 2012-2018 (extended to 2022)</li> <li>• Ballymun Local Area Plan 2017 (extended to 2027)</li> <li>• Naas Road Local Area Plan 2013-2023</li> <li>• Park West- Cherry Orchard Local Area Plan 2019</li> </ul>
<b>South Dublin County Development Plan 2022-2028</b>
Biodiversity Action Plan for South Dublin County (2020-2026)
South Dublin County Council Climate Change Action Plan 2019-2024
<ul style="list-style-type: none"> <li>• Tallaght Town Centre Local Area Plan 2020</li> </ul>

<sup>81</sup> Together the National Development Plan and the National Framework are referred to as Project Ireland 2040: Building Ireland’s Future

**Dún Laoghaire- Rathdown County Development Plan (2022-2028)**

Dún Laoghaire- Rathdown County Biodiversity Action Plan 2021-2025

Dún Laoghaire-Rathdown County Council Climate Change Action Plan 2019-2024

- Stillorgan Local Area Plan 2018-2024
- Blackrock Local Area Plan 2015-2021 (extended to 2025)
- Woodbrook-Shanganagh Local Area Plan 2017-2023

**Wicklow County Development Plan 2022-2028**

Wicklow Biodiversity Plan 2010-2015

Wicklow County Council Climate Change Adaptation Strategy 2019

- Bray Municipal District Local Area Plan 2018-2024
- Bray & Environs Transport Study 2019

**Projects**

- Southern Port Access Route (SPAR)
- Widening of the M7 between Junction 9 (Naas North) and Junction 11 (M7/M9) to provide an additional lane in each direction
- Enhancements of the N2/M2 national route inclusive of a bypass of Slane
- N3 Castaheany Interchange Upgrade.
- Reconfiguration of the N7 from its junction with the M50 to Naas
- N3–N4: Barnhill to Leixlip Interchange
- Reconfiguration of the N4 from its junction with the M50 to Leixlip
- Clonburrish SDZ roads development
- DART+ Programme West
- Porterstown Distributor Link Road
- Widening of the N3 between Junction 1 (M50) and Junction 4 (Clonee)
- Lucan LUAS
- DART+ Programme South West
- Junction upgrades and other capacity improvements on the M1 motorway
- Finglas LUAS (Green Line extension Broombridge to Finglas)
- DART+ Tunnel Element (Kildare Line to Northern Line)
- Potential Metro South alignment: SW option
- LUAS Cross City incorporating LUAS Green Line Capacity Enhancement - Phase 1
- Oldtown-Mooretown Western Distributor Link Road
- Potential Metro South alignment: Charlemont to Sandyford
- Poolbeg LUAS
- Leopardstown Link Road Phase 2
- Development of a road link connecting from the southern end of the Dublin Port Tunnel to the South Port area
- Poolbeg SDZ roads development
- Glenamuck District Distributor Road
- DART+ Programme Coastal North
- Widening of the M50 between Junction 14 (Sandyford) and Junction 17 (M11)
- Cherrywood SDZ roads development
- DART+ Programme Coastal South
- R126 Donabate Relief Road: R132 to Portrane Demesne
- Extension of LUAS Green Line to Bray
- Capacity enhancement and reconfiguration of the M11/N11 from Junction 4 (M50) to Junction 14 (Ashford)
- MetroLink
- Greater Dublin Drainage (GDD)
- Cycling: Greater Dublin Area Cycle Network Plan (excluding Radial Core Bus Corridor elements)
- Dublin Array - offshore windfarm
- Air insulated switchgear 110kV transmission substation. Platin, Duleek

- Construction of a new distributor road and junction to the southwest of Kells town centre.
- Dublin Mountain Visitors Centre and all associated works. Killakee and Jamestown.
- FCC/12/0001 Broadmeadow Way. Greenway between Malahide Demesne and Newbridge Demesne
- Alternations to a permitted double circuit 110kV electricity transmission line development between substations. Darndale / Belcamp
- 110kV onsite electrical substation. Timahoe East
- 15-year permission for development at Dublin Port Oil Berth 3 and Oil Berth 4, Eastern Oil Jetty and at Berths 50A, 50N, 50S, 51, 51A, 49, 52, 53 and associated terminal yards
- A residential development with ancillary commercial uses partially comprising a "Build to Rent" scheme on the townlands of Shanganagh, Cork Little and Shankill, Co. Dublin.
- Proposed development for Brexit Infrastructure consisting of - Installation of porta-cabin structures. Resurfacing and amalgamation of existing yards. Parking for heavy good vehicles, cars and bicycles. Gates, signage and all ancillary site works. Dublin Port.
- Provision of a double circuit 220kV transmission line and a 220kV gas insulated switchgear (GIS) substation along with associated and ancillary works. Townlands of Cruiserath, Goddamendy and Bay, Co. Dublin.
- Construction of a 2 storey 110kV Gas Insulated Switchgear (GIS) substation, underground cable and all associated and ancillary site works. Former Clyde House, IDA Blanchardstown Business and Technology Park, Snugborough Road, Blanchardstown, Dublin 15
- Flood alleviation works along and adjacent to the River Poddle
- Aviation fuel pipeline. Location: Inlet Station: Team CV, Bond Drive, Dublin Port, Dublin 1 to Dublin Airport, Co. Dublin
- Park development project at the Racecourse Park
- 2 no. 110kV transmission lines and a 110kV Gas Insulated Switchgear (GIS) substation
- Increase the capacity of the Dublin Waste to Energy Facility from 600,000 tonnes per annum to 690,000 tonnes per annum
- Clutterland 110kV GIS Substation building and 2 underground single circuit transmission lines
- Provision of two 110kV transmission lines. Connecting Coolderrig 110kV GIS Substation to Grange Castle - Kilmahud circuits.
- Redevelopment of former Clerys' Warehouses, Dublin.
- Construction of Commercial office block and ancillary works – at junction of Sheriff Street Upper and East Road.
- Redevelopment of Harbourmaster Pub, a protected structure.
- Redevelopment of site bounded by Sackville Place/ Marlborough Street.
- Demolition of buildings and development of a 24 storey building at Moss Street.
- Development of a 7-storey Build to rent Complex, Dublin.
- Phase 2 development at Former Irish Glass Bottle Works, Poolbeg West.
- Development of a 12-storey Build to rent Complex, 17-21 Foley Street.
- Retention Permission for 9-storey emergency extension block at Mater Misericordiae University Hospital.
- Development of 2-4 storey apartment blocks at Graymount, Dun Griffin Road, Dublin
- Advance infrastructure works on 2.5ha site at Hackettstown, Skerries.
- Advance infrastructure works on 1.57ha site at Castelands, Balbriggan.
- Office development bounded by Protected structures around ST Stephens Green/Harcourt Street.
- 43no residential dwellings in 3 apartment blocks.
- Residential development to replace former car wash at Braemor Road.
- Dublin BusConnects: CBC01 Clongriffin to City Centre
- Dublin BusConnects: CBC02 Swords to City Centre Core Bus Corridor Scheme
- Dublin BusConnects: CBC0304 Ballymun / Finglas to City Centre Core Bus Corridor Scheme
- Dublin BusConnects: CBC05 Blanchardstown to City Centre Core Bus Corridor Scheme
- Dublin BusConnects: CBC06 Lucan to City Centre Core Bus Corridor Scheme
- Dublin BusConnects: CBC07 Liffey Valley to City Centre Core Bus Corridor Scheme
- Dublin BusConnects: CBC0809 Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme
- Dublin BusConnects: CBC0012 Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme

- Dublin BusConnects: CBC11 Kimmage to City Centre Core Bus Corridor Scheme
- Dublin BusConnects: CBC13 Bray to City Centre Core Bus Corridor Scheme
- Dublin BusConnects: CBC1415 Belfield / Blackrock to City Centre Core Bus Corridor Scheme
- A range of Strategic Housing Developments (SHDs)
- A range of Large Scale Residential Developments (LRDs)
- A range of Irish Water Projects
- GDA Transport Strategy Park and Ride Schemes (all included owing to potential hydrological connectivity)
- Demolition of all the structures on the site, 702 no. Build to Rent residential units, creche and associated site works

**Table 46 In Combination Assessment of Plans and Programmes**

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
<p><b>National Energy &amp; Climate Plan 2021-2030</b></p> <p>This National Energy and Climate Plan builds on previous national strategies and sets out in detail objectives regarding the five energy dimensions together with planned policies and measures to ensure that these objectives are achieved. It aims as a fundamental national objective to pursue a trajectory of emissions reduction which is in line with reaching net zero in Ireland by 2050.</p> <p>In relation to transport the plan aims to:</p> <ul style="list-style-type: none"> <li>• make growth less transport intensive through better planning, remote and home-working and modal shift to public transport</li> <li>• Increase the renewable biofuel content of motor fuels</li> <li>• Set targets for the conversion of public transport fleets to zero carbon alternatives.</li> </ul>	<p>No potential impact pathways to European sites.</p> <p>There are no specific spatial references in this policy document and therefore, no specific link (in terms of potential impact pathways) between it and European sites within the Zone of Influence (Zoi) of the proposed scheme.</p>	<p>No in combination impact</p> <p>Key to considering the on-going evolution of national climate policy included are the obligations of the State under EU law (e.g. the EU Habitats Directive), and the promotion of sustainable development. Considering that, this policy position poses no identifiable risk of resulting in adverse effects on the integrity of any European sites.</p>
<p><b>Climate Action Plan 2023 – Changing Ireland for Better</b></p> <p>The Plan, which was not subject to AA, provides the Governments’ second update to the Climate Action Plan 2019, outlines the actions required to 2035 and beyond, to guide the Governments’ joint efforts over the coming years at reducing greenhouse gas emissions. The plan implements the carbon budgets and sectoral emissions ceilings and sets a roadmap for taking decisive action to halve our emissions by 2030 and reach net zero no later than 2050. It will be updated annually and will be improved and strengthened when required, allowing us to learn from our experiences in what is a very significant and complex undertaking.</p>	<p>There is the potential that actions and or developments implemented under the Climate Action Plan 2023 could affect European sites within the Zoi of the Proposed Scheme. The potential impact pathways cannot yet be defined and while the Plan includes a considerable number of actions, the detailed implementation steps are not yet available as a supplementary <i>Annex of Actions</i> is to be published in 2023.</p>	<p>No in combination impact.</p> <p>Although lacking full implementation detail, the bulk of the actions require the development of guidance, standards and plans, to positively reduce the greenhouse gas emissions. Any sectoral plans developed on foot of this will themselves be subject to AA and Strategic Environmental Assessment</p> <p>Any projects arising out of the Plan or the Sectoral plans required to achieve the objectives of the Plan must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of the relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the Zoi of the Proposed Scheme, the overarching land use plans are Fingal DP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022 - 2028).</p>



Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
		<p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the Climate Action Plan 2023 Plan poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.</p>
<p><b>National Development Plan Ireland 2021-2030</b></p> <p>As part of Project Ireland 2040 the National Development Plan sets out the Government’s over-arching investment strategy and budget for the period 2021-2030. The plan that aims to balance demand for public investment across all sectors and regions of Ireland with a major focus on the delivery of infrastructure projects.</p>	<p>There is the potential that developments implemented under the National Development Plan could affect European sites within the Zol of the Proposed Scheme. The potential impact pathways cannot be defined based on the level of detail included in the plan. However, future developments implemented through the National Development Plan have the potential to lie either within those European sites or be situated in a location where they may be within the Zol of those European sites.</p>	<p>No in combination impact.</p> <p>Any projects required to achieve the objectives of the National Development Plan must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of the relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the Zol of the Proposed Scheme, the overarching land use plans are Fingal CDP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028).</p> <p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
		adversely affect the integrity of any European sites, the National Development Plan poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.
<p><b>Project Ireland 2040 – National Planning Framework</b></p> <p>The National Planning Framework is a high-level strategic plan to guide future growth and development in Ireland. The NPF makes reference to delivering projects in Dublin; here Dublin refers to the Greater Dublin Area (GDA). This area includes Dublin City and the following surrounding lands and counties: Dun Laoghaire/Rathdown, Fingal, Kildare, Meath, South Dublin and Wicklow. Projects such as the DART expansion programme, Bus Connects Scheme, and investment at Dublin Port, amongst others are referenced. Key objectives of the plan include:</p> <ul style="list-style-type: none"> <li>• Managing sustainable growth of cities, towns and villages;</li> <li>• Providing accessibility between key urban centres; and,</li> <li>• Enhance public transport in a sustainable manner</li> </ul>	<p>There is the potential that developments implemented under Project Ireland 2040 could affect European sites within the Zol of the Proposed Scheme. The potential impact pathways cannot be defined based on the level of detail included in the plan. However, future developments implemented through Project Ireland 2040 have the potential to lie either within those European sites or be situated in a location where they may be within the Zol of those European sites.</p>	<p>No in combination impact.</p> <p>Any projects required to achieve the objectives of Project Ireland 2040 Plan must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of the relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the Zol of the Proposed Scheme, the overarching land use plans are Fingal CDP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028).</p> <p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, Project Ireland 2040 poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.</p>
<p><b>National Transport Authority Integrated Implementation Plan 2019-2024</b></p> <p>An Infrastructure investment programme forms the core of this plan. There are four key investment areas: bus, light rail, heavy rail, and</p>	<p>There is the potential that developments implemented under this plan could affect European sites within the Zol of the Proposed Scheme. The potential impact pathways cannot be defined based on the level of detail included in the plan. However, future developments implemented through this plan have the potential to</p>	<p>No in combination impact.</p> <p>Any projects required to achieve the objectives of this plan must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of the relevant land</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
<p>integration measures and sustainable transport. The NTA Integrated Implementation Plan refers to the delivery of projects in Dublin, such as the DART expansion program and GDA Cycle Network Plan, amongst others.</p>	<p>lie either within those European sites or be situated in a location where they may be within the ZoI of those European sites.</p>	<p>use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the ZoI of the Proposed Scheme, the overarching land use plans are Fingal CDP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028).</p> <p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this plan poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.</p>
<p><b>Smarter Travel a Sustainable Transport Future 2009-2020</b></p> <p>Smarter Travel is a government policy document outlining a strategy related to sustainable transport. It sets out actions to reduce overall travel demand, to maximise the efficiency of the transport network, to reduce reliance on fossil fuels, to reduce transport emissions, and to improve accessibility to transport.</p>	<p>There is the potential that developments implemented under Smarter Travel could affect European sites within the ZoI of the Proposed Scheme. Smarter Travel does not propose or support any specific development proposals in identified locations and the potential impact pathways cannot be defined. However, future developments implemented through Smarter Travel have the potential to lie either within those European sites or be situated in a location where they may be within the ZoI of those European sites.</p>	<p>No in combination impact.</p> <p>Any projects required to achieve the objectives of smarter travel must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of the relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the ZoI of the Proposed Scheme, the overarching land use plans are Fingal CDP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028).</p> <p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
		<p>European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, Smarter Travel poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.</p>
<p><b>National Biodiversity Action Plan 2017-2021</b></p> <p>The National Biodiversity Action Plan sets out 119 targeted actions, underpinned by seven strategic objectives aimed at ensuring that Irelands’ biodiversity and ecosystems are conserved and restored, delivering benefits essential for all sectors of society and that Ireland contributes to efforts to halt the loss of biodiversity and the degradation of ecosystems in the EU and globally. The strategic objectives lay out a clear framework for Ireland’s national approach to biodiversity.</p>	<p>The purpose of this action plan is to halt the loss of biodiversity and the degradation of ecosystems therefore, it will contribute towards maintaining or restoring the conservation condition of the European sites within their Zol. Consequently, there are no potential impact pathways by which it could adversely affect the integrity of any European sites</p>	<p>No in combination impact</p> <p>As the National Biodiversity Action Plan aims to halt biodiversity loss, no likely significant in combination effects are predicted.</p>
<p><b>River Basin Management Plan 2018-2021</b></p> <p>The River Basin Management Plan outlines the measures the State and other sectors will take to improve water quality in Ireland’s groundwater, rivers, lakes, estuarine and coastal waters.</p>	<p>The purpose of this plan is to improve water quality in Ireland’s groundwater, rivers, lakes, estuarine and coastal waters therefore, it will contribute towards maintaining or restoring the conservation condition of the European sites within their Zol. Consequently, there are no potential impact pathways by which it could adversely affect the integrity of any European sites.</p>	<p>No in combination impact</p> <p>No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the ecological environment within its Zol.</p>
<p><b>National Air Pollution Control Programme (NAPCP) 2021</b></p> <p>The National Air Pollution Control Programme (Article 6 of Directive (EU) 2016/2284 – ‘the NEC Directive’) is the main governance instrument by which EU Member States must ensure that the emission reduction commitments for 2020-2029 and 2030 onwards are met.</p>	<p>The purpose of this programme is to reduce emissions and improve air quality in Ireland therefore, it will contribute towards maintaining or restoring the conservation condition of the European sites within its Zol. Consequently, there are no potential impact pathways by which it could adversely affect the integrity of any European sites.</p>	<p>No in combination impact</p> <p>No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the ecological environment within its Zol.</p>
<p><b>National Marine Planning Framework 2018</b></p>	<p>There is the potential that developments implemented under the National Marine Planning Framework could affect European sites</p>	<p>No in combination impact.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
<p>This framework is the first formal step towards the preparation of a marine spatial plan for Ireland which will contribute to the effective management of marine activities e.g. fishing, shipping, leisure, aquaculture and renewable energy, and a more sustainable use of our marine resources.</p>	<p>within the Zol of the Proposed Scheme. The National Marine Planning Framework does not propose or support any specific development proposals in identified locations and the potential impact pathways cannot be defined. However, future developments implemented through the National Marine Planning Framework have the potential to lie either within those European sites or be situated in a location where they may be within the Zol of those European sites.</p>	<p>Any projects required to achieve the objectives of the National Marine Planning Framework must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of any relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the Zol of the Proposed Scheme, the overarching land use plans are Fingal CDP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028).</p> <p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the National Marine Planning Framework poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.</p>
<p><b>Water Services Strategic Plan 2015</b></p> <p>Water Services Strategic Plan (WSSP) sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. Its six strategic objectives include: meeting customer expectations; ensuring a safe and reliable water supply; providing effective management of wastewater; protecting and enhancing the environment; supporting social and economic growth; and investing in our future.</p>	<p>There is the potential that developments implemented under the Water Services Strategic Plan could affect European sites within the Zol of the Proposed Scheme. The Water Services Strategic Plan does not propose or support any specific development proposals in identified locations and the potential impact pathways cannot be defined. However, future developments implemented through the Water Services Strategic Plan have the potential to lie either within those European sites or be situated in a location where they may be within the Zol of those European sites.</p>	<p>No in combination impact.</p> <p>Any projects required to achieve the objectives of the Water Services Strategic Plan must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of the relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the Zol of the Proposed Scheme, the overarching land use plans are Fingal CDP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028).</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
		<p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, Water Services Strategic Plan poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.</p>
<p><b>Regional Spatial &amp; Economic Strategy for the Eastern and Midland Region 2019-2031</b></p> <p>A RSES is a strategic plan which identifies regional assets, opportunities and pressures and provides appropriate policy responses in the form of Regional Policy Objectives. One of its main aims is to provide a framework to better manage spatial planning and economic development throughout the Region.</p>	<p>There is the potential that developments implemented under the Regional Spatial &amp; Economic Strategy for the Eastern and Midland Region could affect European sites within the Zol of the Proposed Scheme. The Regional Spatial &amp; Economic Strategy for the Eastern and Midland Region does not propose or support any specific development proposals in identified locations and the potential impact pathways cannot be defined. However, future developments implemented through the Regional Spatial &amp; Economic Strategy for the Eastern and Midland Region have the potential to lie either within those European sites or be situated in a location where they may be within the Zol of those European sites.</p>	<p>No in combination impact.</p> <p>Any projects required to achieve the objectives of the Regional Spatial &amp; Economic Strategy for the Eastern and Midland Region will be implemented locally by the relevant local authority and must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of the relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the Zol of the Proposed Scheme, the overarching land use plans are the overarching land use plans are Fingal CDP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028).</p> <p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
		<p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the Regional Spatial &amp; Economic Strategy for the Eastern and Midland Region poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.</p>
<p><b>2022 Greater Dublin Area Cycle Network Plan</b>  <b>(Supersedes the Greater Dublin Area Cycle Network Plan 2013)</b></p> <p>The 2022 Greater Dublin Area Cycle Network Plan substantially updated the 2013 plan to strengthen access and local permeability within Dublin and GDA towns, and cycling connectivity between them to accompany the GDA Transport Strategy.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 and many of the objectives and policies of the Greater Dublin Area Cycle Network Plan 2013, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of ex-situ habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA,</li> </ul>	<p>No in combination impact.</p> <p>Any projects required to achieve the objectives of the 2022 Greater Dublin Area Cycle Network Plan will be implemented locally by the relevant local authority and must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of the relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the ZoI of the Proposed Scheme, the overarching land use plans are Fingal CDP (2017-2023), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2012-2028), and Wicklow CDP (2022-2028).</p> <p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the 2022 Greater Dublin Area Cycle Network Plan poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.</p>



Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example ex-situ inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>• Direct injury/mortality impacts (for example in ex-situ sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>The 2022 Greater Dublin Area Cycle Network Plan has undergone AA and therefore, subject to the mitigation proposed in the NIR being incorporated, there would be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The 2022 Greater Dublin Area Cycle Network Plan contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>Considering the protective environmental policies contained within the 2022 Greater Dublin Area Cycle Network Plan, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p> <p>Any projects required to achieve the objectives of the 2022 Greater Dublin Area Cycle Network Plan will be implemented locally by the relevant local authority and must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of the relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the ZOI of the Proposed Scheme, the overarching land use plans are Fingal CDP (2023-2029), Dublin City CDP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028).</p>
<p><b>Greater Dublin Area Transport Strategy 2022- 2042</b></p> <p>The Strategy, which replaces the 2016-2035 strategy, sets out the framework for investment in transport infrastructure and services over the next two decades to 2042. It has been developed to be consistent with National Planning framework and spatial planning policies and objectives.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028, and many of the objectives and policies of the Greater Dublin Area Transport Strategy 2022-2042, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites. As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the</p>	<p>No in combination impact.</p> <p>The Greater Dublin Area Transport Strategy 2020-2042 has undergone AA and therefore, subject to the mitigation proposed in the NIS being incorporated, there would be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Greater Dublin Area Transport Strategy 2020-2042 contains objectives and policies to ensure the protection of European sites,</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of ex-situ habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example ex-situ inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island</li> </ul>	<p>including surface water quality, from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>Considering the protective environmental policies contained within the Greater Dublin Area Transport Strategy 2020-2042, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p> <p>Any projects required to achieve the objectives of the Greater Dublin Area Transport Strategy 20020-2042 will be implemented locally by the relevant local authority and must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of the relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the ZoI of the Proposed Scheme, the overarching land use plans are Fingal DP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028).</p> <p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the Greater Dublin Area Transport Strategy 2020-2042 poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Eastern Catchment Flood Risk Assessment and Management (CFRAM) study 2011-2016</b></p> <p>This study includes the following main elements within the Eastern catchment:</p> <ol style="list-style-type: none"> <li>1. Flood Risk Assessments</li> <li>2. Flood Risk Mapping</li> <li>3. Flood Risk Management Plans</li> </ol>	<p>The Eastern Catchment Flood Risk Assessment and Management (CFRAM) Study will ultimately result in the development of catchment- based flood risk management plans. These may propose flood risk management measures which, through various potential impact pathways, could affect the conservation objectives supporting QI/SCI habitats and species of spatially relevant European sites.</p> <p>Potential impacts include:</p> <ul style="list-style-type: none"> <li>• Hydrological impacts e.g. reduction in water quality or changes to water flow</li> <li>• Habitat loss / fragmentation</li> </ul>	<p>No in combination impact.</p> <p>CFRAM Studies and their product Flood Risk Management Plans have undergone AA. The AA of the CFRAMs considered the potential for impacts from hard engineering solutions and how they might affect hydrological connectivity and hydromorphological supporting conditions for protected habitats and species.</p> <p>Any projects required to achieve the objectives of CFRAM must comply with the requirements and obligations of EU and Irish planning and environmental law, including those of any relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the ZOI of the Proposed Scheme, the overarching land use plans are Fingal CDP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028). All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, CFRAM poses no</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
		identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.
<p><b>Fingal Development Plan 2023-2029</b></p> <p>The Fingal CDP makes reference to residential development, zoning and infrastructure targets / obligations.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028, however many of the objectives and policies of the Fingal Development Plan 2023-2029, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European</li> </ul>	<p>No in combination impact.</p> <p>The Fingal Development Plan 2023-2029 was subject to AA screening, and AA, prior to its adoption and therefore, subject to any mitigation identified as being required, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Fingal Development Plan 2023-2029 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>Considering the protective environmental policies contained within the Fingal Development Plan 2023-2029, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</p> <ul style="list-style-type: none"> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Fingal Biodiversity Action Plan 2010-2015</b></p> <p>The purpose of this action plan is to halt the loss of biodiversity and the degradation of ecosystems.</p>	<p>No, there are no potential impact pathways to European sites.</p> <p>This plan will contribute towards maintaining or restoring the conservation condition of the European sites within their ZOI. Consequently, there are no potential impact pathways by which it could adversely affect the integrity of any European sites.</p>	<p>No in combination impact</p> <p>No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the ecological environment within its ZOI.</p>
<p><b>Fingal County Council Climate Action Plan 2019-2024</b></p> <p>The purpose of this action plan is to improve the council’s energy efficiency, reduce their greenhouse emissions and create a climate resilient Dublin.</p>	<p>No, there are no potential impact pathways to European sites.</p> <p>This plan will contribute towards improving the climate change resilience of the European sites within their ZOI. Consequently, there are no potential impact pathways by which it could adversely affect the integrity of any European sites.</p>	<p>No in combination impact</p> <p>No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the environment within its ZOI.</p>
<p><b>Donabate Local Area Plan 2016</b></p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 and some of the objectives and</p>	<p>No in combination impact.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
<p>The LAP makes reference to phased housing development targets / obligations.</p>	<p>policies of the Donabate Local Area Plan 2016, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the</li> </ul>	<p>The Donabate Local Area Plan 2016 was subject to AA screening, and AA, prior to its adoption and therefore, subject to any mitigation identified as being required, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Donabate Local Area Plan 2016 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Donabate Local Area Plan 2016, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Rivermeade Local Area Plan 2018</b></p> <p>The LAP makes reference to 11 development area targets / obligations and the creation of a link road to connect Rivermeade to Swords.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 and some of the objectives and policies of the Rivermeade Local Area Plan 2018, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality</li> </ul>	<p>No in combination impact.</p> <p>The Rivermeade Local Area Plan 2018 was subject to AA screening prior to its adoption. The AA screening confirmed that the plan did not have the potential to result in likely significant effects on European sites, therefore an NIS was not required. Therefore there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Rivermeade Local Area Plan 2018 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Rivermeade Local Area Plan 2018, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>



Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZoI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Barnhill Local Area Plan 2019</b></p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028, however some of the objectives and policies of the Barnhill Local Area Plan 2019, have the potential</p>	<p>No in combination impact. The Barnhill Local Area Plan 2019 was subject to AA screening prior to its adoption. The AA screening confirmed that the plan did not</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
<p>The LAP makes reference to residential development targets / obligations.</p>	<p>to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species an QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow</li> </ul>	<p>have the potential to result in likely significant effects on European sites, therefore an NIS was not required. Therefore, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Barnhill Local Area Plan 2019 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Barnhill Local Area Plan 2019, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>• Direct injury/mortality impacts (for example in ex-situ sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Kinsaley Local Area Plan 2019</b></p> <p>The LAP makes reference to commercial and residential development targets / obligations.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 and some of the objectives and policies of the Kinsaley Local Area Plan 2019, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the</li> </ul>	<p>No in combination impact.</p> <p>The Kinsaley Local Area Plan 2019 was subject to AA screening prior to its adoption. The AA screening confirmed that the plan did not have the potential to result in likely significant effects on European sites, therefore an NIS was not required. Therefore, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Kinsaley Local Area Plan 2019 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Kinsaley Local Area Plan 2019, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZoI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Dublin Airport Local Area Plan 2020</b></p> <p>The LAP makes reference to airside and landside infrastructure targets / obligations.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 and some of the objectives and policies of the Dublin Airport Local Area Plan 2020, have the potential</p>	<p>No in combination impact.</p> <p>The Dublin Airport Local Area Plan 2020 was subject to AA screening prior to its adoption. The AA screening confirmed that the plan did not have the potential to result in likely significant effects on</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCL species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCL bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow</li> </ul>	<p>European sites, therefore an NIS was not required. Therefore, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Dublin Airport Local Area Plan 2020 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Dublin Airport Local Area Plan 2020, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Dublin City Development Plan 2022 – 2028</b></p> <p>The Dublin City DP makes reference to improvement of the public transport network and facilities for pedestrians and cyclists and targets / obligations to create strategic development and regeneration areas.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 and many of the objectives and policies therein, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the</li> </ul>	<p>No in combination impact.</p> <p>The Dublin City Development Plan 2022 – 2028 was subject to AA screening, and AA, prior to its adoption and therefore, subject to any mitigation identified as being required, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Dublin City Development Plan 2022 – 2028 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Dublin City Development Plan 2022 – 2028, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Dublin City Biodiversity Action Plan 2021-2025</b></p> <p>The purpose of this action plan is to halt the loss of biodiversity and the degradation of ecosystems.</p>	<p>No, there are no potential impact pathways to European sites.</p> <p>This plan will contribute towards maintaining or restoring the conservation condition of the European sites within their ZOI.</p>	<p>No in combination impact</p>



Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	Consequently, there are no potential impact pathways by which it could adversely affect the integrity of any European sites.	No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the ecological environment within its Zol.
<p><b>Dublin City Council Climate Action Plan 2019-2024</b></p> <p>The purpose of this action plan is to improve the council’s energy efficiency, reduce their greenhouse emissions and create a climate resilient Dublin.</p>	<p>This plan will contribute towards improving the climate change resilience of the European sites within their Zol. While by and large the majority of the measures proposed in the plan will have a positive or supportive function for European sites, some of the proposals, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay</li> </ul>	<p>No in combination impact</p> <p>The plan is intended to improve the quality of the environment within its Zol.</p> <p>Any projects required to achieve the objectives of plan will be implemented by the relevant local or other consenting authorities and must comply with the statutory planning or other legislative requirements, including those of any relevant land use plans (Development Plans, Local Area Plans etc.). In the context of European sites within the Zol of the Proposed Scheme, the overarching land use plans are Fingal CDP (2023-2029), Dublin City DP (2022-2028), South Dublin CDP (2022-2028), Dún Laoghaire-Rathdown CDP (2022-2028), and Wicklow CDP (2022-2028).</p> <p>All of these land use plans contain objectives and policies to ensure the protection of European sites from any projects proposed within the plan area. These are presented in Section 9.2.</p> <p>This assessment has identified those land use plans that have the potential to act in combination with the Proposed Scheme to affect European sites, given their spatial jurisdiction (see discussions on the relevant land use plans in the sections below).</p> <p>Considering the environmental protection policies included within those land use plans, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the Dublin City Council Climate Action Plan 2019-2024 poses no identifiable risk of resulting in adverse effects on the integrity of any European sites in combination with the Proposed Scheme.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example ex-situ inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZoI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Clongriffin-Belmayne Local Area Plan 2012-2018 (extended to 2022)</b></p> <p>The LAP makes reference to commercial and residential development targets / obligations, and targets associated with interconnecting walking, cycling and public transport routes.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 and some of the objectives and policies of the Clongriffin-Belmayne Local Area Plan 2012-2018, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment</p>	<p>No in combination impact.</p> <p>The Clongriffin-Belmayne Local Area Plan 2012-2018 was subject to AA screening, and AA, prior to its adoption and therefore, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Clongriffin-Belmayne Local Area Plan 2012-2018 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species an QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> </ul>	<p>Considering the protective environmental policies contained within the Clongriffin-Belmayne Local Area Plan 2012-2018, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<ul style="list-style-type: none"> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential Zol for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Ballymun Local Area Plan 2017 (extended to 2027)</b></p> <p>The LAP makes reference to residential development targets / obligations, and targets associated with the development of M50 lands and construction of outstanding road infrastructure e.g. Metro North.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 and some of the objectives and policies of the Ballymun Local Area Plan 2017, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA,</li> </ul>	<p>No in combination impact.</p> <p>The Ballymun Local Area Plan 2017 was subject to AA screening prior to its adoption. The AA screening confirmed that the plan did not have the potential to result in likely significant effects on European sites, therefore an NIS was not required. Therefore,, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Ballymun Local Area Plan 2017 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Ballymun Local Area Plan 2017, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> </ul>	
<p><b>Naas Road Local Area Plan 2013-2023</b></p> <p>This LAP makes reference to the creation of four strategic development regeneration areas and targets / obligations associated making improvements to pedestrian, cycling and public transport infrastructure.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 and some of the objectives and policies of the Naas Road Local Area Plan 2013-2023, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA,</li> </ul>	<p>No in combination impact.</p> <p>The Naas Road Local Area Plan 2013-2023 was subject to AA screening prior to its adoption thereby finding the plan did not have the potential to result in likely significant effects on European sites, and that an NIS was not required. Therefore, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Naas Road Local Area Plan 2013-2023 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Naas Road Local Area Plan 2013-2023, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> </ul>	
<p><b>Park West- Cherry Orchard Local Area Plan 2019</b></p> <p>This LAP makes reference to residential and mixed-use development targets / obligations, and targets associated with the improvement of infrastructure connecting pedestrians, cycling and public transport.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 and some of the objectives and policies of the Park West- Cherry Orchard Local Area Plan 2019, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA,</li> </ul>	<p>No in combination impact.</p> <p>The Park West- Cherry Orchard Local Area Plan 2019 was subject to AA screening prior to its adoption. The AA screening confirmed that the plan did not have the potential to result in likely significant effects on European sites, therefore an NIS was not required. Therefore, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Park West- Cherry Orchard Local Area Plan 2019 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Park West- Cherry Orchard Local Area Plan 2019, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> </ul>	
<p><b>South Dublin County Development Plan 2022-2028</b></p> <p>The South Dublin CDP makes reference to commercial and residential development, and infrastructure targets / obligations aimed at increasing connectivity between pedestrian and cycle routes and public transport.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022-2028, however some of the objectives and policies of the South Dublin County Council Development Plan 2022-2028, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull</li> </ul>	<p>No in combination impact.</p> <p>The South Dublin County Council Development Plan 2022-2028 was subject to AA screening, and AA, prior to its adoption and therefore, subject to any mitigation identified as being required, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The South Dublin County Council Development Plan 2022-2028 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the South Dublin County Council Development Plan 2016-2022, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>



Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance Zol of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential Zol for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Biodiversity Action Plan for South Dublin County (2020-2026)</b></p> <p>The purpose of this action plan is to halt the loss of biodiversity and the degradation of ecosystems.</p>	<p>No, there are no potential impact pathways to European sites.</p> <p>This plan will contribute towards maintaining or restoring the conservation condition of the European sites within their Zol. Consequently, there are no potential impact pathways by which it could adversely affect the integrity of any European sites.</p>	<p>No in combination impact</p> <p>No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the ecological environment within its Zol.</p>
<p><b>South Dublin County Council Climate Change Action Plan 2019-2024</b></p>	<p>No, there are no potential impact pathways to European sites.</p>	<p>No in combination impact</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
<p>The purpose of this action plan is to improve the council’s energy efficiency, reduce their greenhouse emissions and create a climate resilient Dublin.</p>	<p>This plan will contribute towards improving the climate change resilience. There are no potential impact pathways by which it could adversely affect the integrity of any European sites within the Zol of the Proposed Scheme.</p>	<p>No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the environment within its Zol.</p>
<p><b>Tallaght Town Centre Local Area Plan 2020</b></p> <p>This LAP makes reference to residential and mixed-use development targets / obligations, and targets associated with the improvement of infrastructure connecting pedestrians, cycling and public transport.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028, however some of the objectives and policies of the Tallaght Town Centre Local Area Plan 2020, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA,</li> </ul>	<p>No in combination impact.</p> <p>The Tallaght Town Centre Local Area Plan 2020 was subject to AA screening, and AA, prior to its adoption and therefore, subject to any mitigation identified, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Tallaght Town Centre Local Area Plan 2020 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Tallaght Town Centre Local Area Plan 2020, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Dún Laoghaire- Rathdown County Development Plan (2022-2028)</b></p> <p>The Dún Laoghaire- Rathdown CDP makes reference to commercial and residential development (including Cherrywood SDZ) targets / obligations, and targets associated with providing suitable community infrastructure.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028, however some of the objectives and policies of the Dún Laoghaire- Rathdown Development Plan 2022-2028, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment</p>	<p>No in combination impact.</p> <p>The Dún Laoghaire- Rathdown Development Plan 2022- 2028 was subject to AA screening, and AA, prior to its adoption and therefore, subject to any mitigation identified, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Dún Laoghaire- Rathdown Development Plan 2022- 2028 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> </ul>	<p>Considering the protective environmental policies contained within the Dún Laoghaire- Rathdown Development Plan 2022- 2028, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<ul style="list-style-type: none"> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential Zol for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Dún Laoghaire- Rathdown County Biodiversity Action Plan 2021-2025</b></p> <p>The purpose of this action plan is to halt the loss of biodiversity and the degradation of ecosystems.</p>	<p>No, there are no potential impact pathways to European sites.</p> <p>This plan will contribute towards maintaining or restoring the conservation condition of the European sites within their Zol. Consequently, there are no potential impact pathways by which it could adversely affect the integrity of any European sites.</p>	<p>No in combination impact</p> <p>No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the ecological environment within its Zol.</p>
<p><b>Dún Laoghaire-Rathdown County Council Climate Change Action Plan 2019-2024</b></p> <p>The purpose of this action plan is to improve the council’s energy efficiency, reduce their greenhouse emissions and create a climate resilient Dublin.</p>	<p>No, there are no potential impact pathways to European sites.</p> <p>This plan will contribute towards improving the climate change resilience. There are no potential impact pathways by which it could adversely affect the integrity of any European sites within the Zol of the Proposed Scheme.</p>	<p>No in combination impact</p> <p>No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the environment within its Zol.</p>
<p><b>Stillorgan Local Area Plan 2018-2024</b></p> <p>This LAP makes reference to the redevelopment of five key sites, commercial and residential development targets / obligations, and targets associated with the improvement of infrastructure connecting pedestrians, cycling and public transport.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028, however some of the objectives and policies of the Stillorgan Local Area Plan 2018-2024, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North</li> </ul>	<p>No in combination impact.</p> <p>The Stillorgan Local Area Plan 2018-2024 was subject to AA screening prior to its adoption. The AA screening confirmed that the plan did not have the potential to result in likely significant effects on European sites, therefore an NIS was not required. Therefore, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Stillorgan Local Area Plan 2018-2024 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Stillorgan Local Area Plan 2018-2024, and that alone the Proposed Scheme will not adversely affect the integrity of any</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</p> <ul style="list-style-type: none"> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZoI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide</li> </ul>	<p>European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</p>	
<p><b>Blackrock Local Area Plan 2015-2021 (extended to 2025)</b></p> <p>This LAP makes reference to redevelopment of Frascati and Blackrock shopping centres, residential development targets / obligations, and targets associated with the improvement of infrastructure connecting pedestrians, cycling and public transport.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028, however some of the objectives and policies of the Blackrock Local Area Plan 2015-2021, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> </ul>	<p>No in combination impact.</p> <p>The Blackrock Local Area Plan 2015-2021 was subject to AA screening prior to its adoption. The AA screening confirmed that the plan did not have the potential to result in likely significant effects on European sites, therefore an NIS was not required. Therefore, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Blackrock Local Area Plan 2015-2021 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Blackrock Local Area Plan 2015-2021, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>



Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZoI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Woodbrook-Shanganagh Local Area Plan 2017-2023</b></p> <p>This LAP makes reference to residential development targets / obligations, and targets associated with the improvement of infrastructure connecting pedestrians, cycling and public transport.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 - 2028, however some of the objectives and policies of the Woodbrook-Shanganagh Local Area Plan 2017-2023, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p>	<p>No in combination impact.</p> <p>The Woodbrook-Shanganagh Local Area Plan 2017-2023 was subject to AA screening prior to its adoption. The AA screening confirmed that the plan did not have the potential to result in likely significant effects on European sites, therefore an NIS was not required. Therefore, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Woodbrook-Shanganagh Local Area Plan 2017-2023 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the</li> </ul>	<p>Considering the protective environmental policies contained within the Woodbrook-Shanganagh Local Area Plan 2017-2023, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>potential Zol for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</p>	
<p><b>Wicklow County Development Plan 2022-2028</b></p> <p>The Wicklow CDP makes reference to commercial and residential development targets / obligations, and targets associated with facilitating an extension of the LUAS and rail services and facilitating the development of cycleways and walkways throughout the county.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028 , however some of the objectives and policies of the Wicklow County Development Plan 2022 – 2028, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay</li> </ul>	<p>No in combination impact.</p> <p>The Wicklow County Development Plan 2022-2028 was subject to AA screening, and AA , prior to its adoption and therefore, subject to any mitigation identified, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Wicklow County Development Plan 2022-2028 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Wicklow County Development Plan 2022-2028, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<p>Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
<p><b>Wicklow Biodiversity Plan 2010-2015</b></p> <p>The purpose of this action plan is to halt the loss of biodiversity and the degradation of ecosystems.</p>	<p>No, there are no potential impact pathways to European sites.</p> <p>This plan will contribute towards maintaining or restoring the conservation condition of the European sites within their ZOI. Consequently, there are no potential impact pathways by which it could adversely affect the integrity of any European sites.</p>	<p>No in combination impact</p> <p>No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the ecological environment within its ZOI.</p>
<p><b>Wicklow County Council Climate Change Adaptation Strategy 2019</b></p> <p>The purpose of this action plan is to improve the council’s energy efficiency, reduce their greenhouse emissions and create a climate resilient Wicklow.</p>	<p>No, there are no potential impact pathways to European sites.</p> <p>This plan will contribute towards improving the climate change resilience. There are no potential impact pathways by which it could</p>	<p>No in combination impact</p> <p>No potential for in combination impacts with the proposed scheme as such a plan is intended to improve the quality of the environment within its ZOI.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	adversely affect the integrity of any European sites within the Zol of the Proposed Scheme.	
<p><b>Bray Municipal District Local Area Plan 2018-2024</b></p> <p>This LAP makes reference to commercial and residential development targets / obligations, including the two key development areas of Fassaroe and the former Bray Golf Club, and targets associated with improving roads and transport infrastructure, and providing pedestrian, cycling and public transport routes.</p>	<p>The Proposed Scheme lies within the functional area of the Dublin City Development Plan 2022 – 2028, however some of the objectives and policies of the Bray Municipal District Local Area Plan 2018-2024, have the potential to act in combination with the Proposed Scheme, through a variety of potential impact pathways, to affect European sites.</p> <p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites including:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> </ul>	<p>No in combination impact.</p> <p>The Bray Municipal District Local Area Plan 2018-2024 was subject to AA screening, and AA, prior to its adoption and therefore, subject to any mitigation identified, there will be no adverse effects on any European sites as a result of implementation of the plan.</p> <p>The Bray Municipal District Local Area Plan 2018-2024 contains objectives and policies to ensure the protection of European sites, including surface water quality, from any projects proposed within the plan area.</p> <p>Considering the protective environmental policies contained within the Bray Municipal District Local Area Plan 2018-2024, and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, this land use plan will not act in combination with the Proposed Scheme to adversely affect the integrity of any European sites.</p>

Plan Description	Are there potential impact pathways by which the Plan / Programme could act in combination with the Proposed Scheme to adversely impact European sites	Will the Plan/Programme act in combination with the Proposed Scheme to adversely affect the integrity of European sites
	<ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example ex-situ inland which are utilised by QI mammals within the potential disturbance Zol of the Proposed Scheme for Wicklow Mountains SAC and Wicklow Mountains SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by QI mammals within the potential Zol for Wicklow Mountains SPA, Wicklow Mountains SAC.)</li> </ul>	

**Table 47 In Combination Assessment of Major Projects**

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
MP01	Widening of the M7 between Junction 9 (Naas North) and Junction 11 (M7/M9) to provide an additional lane in each direction	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>As these works are completed and there is no physical overlap between the Proposed Scheme and this project, there is limited potential for in-combination effects to arise.</p> <p>The main potential for in combination effects is habitat degradation/effects on QI/SCI species as a result of hydrological impacts; for example reduction in water quality in catchments draining to The Liffey Estuary Lower and Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in</p>	<p>No in combination effect.</p> <p>The proposed M7 widening works were subject to consent, which was required to comply with requirements of the EIA and Habitats Directive as relevant. In granting consent it was necessary to determine that the project would not adversely affect any European sites, including arising from any impacts on water quality. Considering that alone, neither the Proposed Scheme nor the M7 widening works, will adversely affect the integrity of any European sites, the lack of any overlap either physically or in terms of the time of construction works, and the range of mitigation measures included in the Proposed Scheme to avoid significant impacts on water quality which is the only pathway with potential for in combination effects, the two projects will not generate any in combination effects</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA.</p>	<p>which could adversely affect the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right nor in combination with other projects, including the proposed M7 widening works and has included mitigation in that regard to prevent any such adverse effects.</p>
MP02	<p>Enhancements of the N2/M2 national route inclusive of a bypass of Slane, to provide for additional capacity on the non-motorway sections of this route, and to address safety issues in Slane village associated with in particular, heavy goods vehicles</p>	<p>There is no physical overlap between the Proposed Scheme and this project and there are no potential impact pathways by which this project could adversely affect the integrity of any European sites within the Zol of the Proposed Scheme.</p>	<p>No in combination effect.</p>
MP03	<p>N3 Castaheany Interchange Upgrade</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>There is no physical overlap between the Proposed Scheme and this project and the only potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to the Liffey Estuary Lower and Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay</li> </ul>	<p>No in combination effect.</p> <p>The proposed N3 Castaheany Interchange Upgrade project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant development Plan. This land use plan contains objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIA and AA Screening Report/Natura Impact Statement, if required. In granting permission for the proposed project, it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme. Considering the lack of physical overlap between the Proposed Scheme and the N3 Castaheany Interchange Upgrade project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts</p>



Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA); and <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.  The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed N3 Castaheany Interchange Upgrade and has included mitigation in that regard to prevent any such adverse effects.
MP04	Reconfiguration of the N7 from its junction with the M50 to Naas, to rationalise junctions and accesses in order to provide a higher level of service for strategic traffic travelling on the mainline	As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.  There is no physical overlap between the Proposed Scheme and this project and the only potential for in combination effects could be as a result of: <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to the Liffey Estuary Lower and Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA); and</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	No in combination effect.  The proposed Reconfiguration of the N7 from its junction with the M50 to Naas project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant Development Plan. This land use plan contains objectives and policies to ensure the protection of European sites.  The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.  In granting permission for the proposed project, it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.  Considering the lack of physical overlap between the Proposed Scheme and the proposed Reconfiguration of the N7 from its junction with the M50 to Naas, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
			The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Reconfiguration of the N7 from its junction with the M50 to Naas and has included mitigation in that regard to prevent any such adverse effects.
MP05	N3–N4: Barnhill to Leixlip Interchange	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to the Liffey Estuary Lower and Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA); and</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed N3-N4 Barnhill to Leixlip Interchange project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed reconfiguration works will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the reconfiguration works it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and proposed N3-N4 Barnhill to Leixlip Interchange project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites. The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed N30N4 Barnhill to Leixlip Interchange and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
MP06	Reconfiguration of the N4 from its junction with the M50 to Leixlip to rationalise accesses and to provide additional capacity at the Quarryvale junction	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to the Liffey Estuary Lower and Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA); and</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed the Reconfiguration of the N4 from its junction with the M50 to Leixlip must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed reconfiguration works will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the reconfiguration works it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the Reconfiguration of the N4 from its junction with the M50 to Leixlip, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Reconfiguration of the N4 from its junction with the M50 to Leixlip and has included mitigation in that regard to prevent any such adverse effects.</p>
MP07	Clonburris SDZ roads development	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment</p>	<p>No in combination effect.</p> <p>The proposed Clonburris SDZ roads development project must comply with all applicable planning and environmental approval requirements and be in accordance with the</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>There is no physical overlap between the Proposed Scheme and this project and the only potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to the Liffey Estuary Lower and Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>objectives and policies of the relevant Development Plan. This land use plan contains objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project, it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Clonburris SDZ roads development, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Clonburris SDZ roads development and has included mitigation in that regard to prevent any such adverse effects.</p>
MP08	DART+ Programme West	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide</li> </ul>	<p>No in combination effect.</p> <p>The proposed DART + Programme West project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed DART + Programme West will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA,</li> </ul>	<p>In granting permission for the DART + Programme West it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the DART+ Programme West and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.	
MP09	Porterstown Distributor Link Road	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI</li> </ul>	<p>No in combination effect.</p> <p>The proposed Porterstown Distributor Link Road project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed link road will be subject to planning consent, including preparation of an EIA and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the Porterstown Distributor link road it will be necessary to demonstrate that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Porterstown Distributor Link Road, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Porterstown Distributor Link Road and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>mammals within the potential disturbance Zol of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential Zol for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
MP10	Widening of the N3 between Junction 1 (M50) and Junction 4 (Clonee), plus related junction and necessary changes to the existing national road network	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> </ul>	<p>No in combination effect.</p> <p>The proposed N3 widening project between Junction 1 (M50) and Junction 4 (Clonee) must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed N3 widening will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the N3 widening it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed N3 widening project between Junction 1 (M50) and Junction 4 (Clonee), the environmental protection policies included within the relevant land use plans,</p>



Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA)</li> </ul>	<p>the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the widening of the N3 between Junction 1 (M50) and Junction 4 (Clonee) and has included mitigation in that regard to prevent any such adverse effects.</p>
MP11	Lucan LUAS	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA)</li> </ul>	<p>No in combination effect.</p> <p>The proposed Lucan LUAS project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Lucan LUAS will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the Lucan LUAS, it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Lucan LUAS project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
			The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Lucan LUAS project and has included mitigation in that regard to prevent any such adverse effects.
MP12	DART+ Programme South West	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> </ul>	<p>No in combination effect.</p> <p>The proposed DART + South West project must comply with statutory licencing and planning requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed DART + South West must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant development Plan. This land use plan contains objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIA and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the DART + South West it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed DART+ Programme South West project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<ul style="list-style-type: none"> <li>Disturbance and displacement impacts (for example ex-situ inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>Direct injury/mortality impacts (for example in ex-situ sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the DART+ Programme South West and has included mitigation in that regard to prevent any such adverse effects.</p>
MP13	Junction upgrades and other capacity improvements on the M1 motorway, including additional lanes south of Drogheda, where required	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed M1 motorway upgrades project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites and surface water quality from any projects proposed within the plan area.</p> <p>The proposed M1 motorway upgrades will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the M1 motorway upgrades it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and,</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> </ul>	<p>Considering the lack of physical overlap between the Proposed Scheme and the proposed M1 motorway upgrades project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Junction upgrades and other capacity improvements on the M1 motorway and has included mitigation in that regard to prevent any such adverse effects.</p>
MP14	Finglas LUAS (Green Line extension Broombridge to Finglas)	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed Finglas LUAS (Green Line extension Broombridge to Finglas) project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Finglas LUAS extension will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the Finglas LUAS extension project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Finglas LUAS project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example ex-situ inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>Direct injury/mortality impacts (for example in ex-situ sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Finglas LUAS extension and has included mitigation in that regard to prevent any such adverse effects.</p>
MP15	DART+ Tunnel Element (Kildare Line to Northern Line)	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of ex-situ habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull</li> </ul>	<p>No in combination effect.</p> <p>The proposed DART + Tunnel element (Kildare Line to Northern Line) project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example ex-situ inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in ex-situ sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA,</li> </ul>	<p>The proposed DART + Tunnel element will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the DART + Tunnel element (Kildare Line to Northern Line) project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and proposed DART + Tunnel element (Kildare Line to Northern Line) project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed DART+ Tunnel Element (Kildare Line to Northern Line) project and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.	
MP16	Potential Metro South alignment: SW option	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species an QI</li> </ul>	<p>No in combination effect.</p> <p>The proposed Metro South alignment SW option must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Metro South alignment will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the Metro South alignment it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the potential Metro South alignment: SW option , the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Potential Metro South alignment: SW option and has included mitigation in that regard to prevent any such adverse effects.</p>



Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>mammals within the potential disturbance Zol of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential Zol for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
MP17	LUAS Cross City incorporating LUAS Green Line Capacity Enhancement - Phase 1	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>As these works are completed and there is no physical overlap between the Proposed Scheme and this project, there is limited potential for in combination effects to arise.</p> <p>The only potential for in combination effects is habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p>	<p>No in combination effect.</p> <p>The proposed LUAS Cross City incorporating LUAS Green Line Capacity Enhancement - Phase 1 enhancements works were subject to consent, which was required to comply with requirements of the EIA and Habitats Directive as relevant. In granting consent it was necessary to determine that the project would not adversely affect any European sites, including arising from any impacts on water quality. Considering that alone, neither the Proposed Scheme nor the LUAS enhancements works, will adversely affect the integrity of any European sites, the lack of any overlap either physically or in terms of the time of construction works, and the range of mitigation measures included in the Proposed Scheme to avoid significant impacts on water quality which is the only pathway with potential for in combination effects, the two projects will not generate any in combination effects which could adversely affect the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the LUAS Cross City incorporating</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
			LUAS Green Line Capacity Enhancement - Phase 1 project and has included mitigation in that regard to prevent any such adverse effects
MP18	Oldtown-Mooretown Western Distributor Link Road	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species a QI</li> </ul>	<p>No in combination effect.</p> <p>The proposed Oldtown-Mooretown Western Distributor Link Road project must comply with all planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites .</p> <p>The proposed link road will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the link road it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Oldtown-Mooretown Western Distributor Link Road, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Oldtown-Mooretown Western Distributor Link Road and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>mammals within the potential disturbance Zol of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential Zol for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
MP19	Potential Metro South alignment: Charlemont to Sandyford	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed Metro South alignment - Charlemont to Sandyford project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Metro South alignment will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the potential Metro South alignment it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Metro South alignment - Charlemont to Sandyford project, the environmental protection policies included within the relevant land use plans,</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example ex-situ inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>Direct injury/mortality impacts (for example in ex-situ sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Metro South alignment: Charlemont to Sandyford and has included mitigation in that regard to prevent any such adverse effects</p>
MP20	Poolbeg LUAS	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of ex-situ habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull</li> </ul>	<p>No in combination effect.</p> <p>The proposed Poolbeg LUAS project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA,</li> </ul>	<p>The proposed LUAS will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the LUAS it will be necessary to demonstrate that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Poolbeg LUAS and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.	
MP21	Leopardstown Link Road Phase 2	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and,</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed link road project must comply with all planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed link road will be subject to planning consent, including preparation of an EIA and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the link road it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Leopardstown Link Road Phase 2 project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Leopardstown Link Road Phase 2 and has included mitigation in that regard to prevent any such adverse effects.</p>
MP22	Development of a road link connecting from the southern end of the Dublin Port Tunnel to the South Port area, which will serve the South Port and adjoining development areas	As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment	<p>No in combination effect.</p> <p>The proposed development of a road link connecting the southern end of the Dublin Port Tunnel to the South Port area, project must comply with all applicable planning and</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> </ul>	<p>environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed link road will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the link road it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed development of a road link connecting from the southern end of the Dublin Port Tunnel to the South Port area, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the development of a road link connecting the southern end of the Dublin Port Tunnel to the South Port area and has included mitigation in that regard to prevent any such adverse effects.</p>



Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<ul style="list-style-type: none"> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
MP23	Poolbeg SDZ roads development	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European</li> </ul>	<p>No in combination effect.</p> <p>The proposed Poolbeg SDZ roads development project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed SDZ roads development will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the SDZ roads development it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Poolbeg SDZ roads development project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Poolbeg SDZ roads</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</p> <ul style="list-style-type: none"> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>development project and has included mitigation in that regard to prevent any such adverse effects.</p>
MP24	Glenamuck District Distributor Road	<p>There is no physical overlap between the Proposed Scheme and this project and there are no potential impact pathways by which this project could adversely affect the integrity of any European sites within the ZOI of the Proposed Scheme.</p>	<p>No in combination effect.</p>
MP25	DART+ Programme Coastal North	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed DART+ Programme Coastal North project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed DART+ Programme Coastal North will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZoI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>In granting permission for DART+ Programme Coastal North it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the DART+ Programme Coastal North and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
MP26	Widening of the M50 to three lanes in each direction between Junction 14 (Sandyford) and Junction 17 (M11) plus related junction and other changes	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and,</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed Widening of the M50 to three lanes in each direction between Junction 14 (Sandyford) and Junction 17 (M11) project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed M50 widening will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the M50 widening it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed widening of the M50 to three lanes in each direction between Junction 14 (Sandyford) and Junction 17 (M11), the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the widening of the M50 to three lanes in each direction between Junction 14 (Sandyford) and Junction 17 (M11) and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
MP27	Cherrywood SDZ roads development	There is no physical overlap between the Proposed Scheme and this project and there are no potential impact pathways by which this project could adversely affect the integrity of any European sites within the Zol of the Proposed Scheme.	No in combination effect.
MP28	DART+ Programme Coastal South	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> </ul>	<p>No in combination effect.</p> <p>The proposed DART+ Programme Coastal South project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed DART+ Programme Coastal South will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for DART+ Programme Coastal South it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the DART+ Programme Coastal South project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites. The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed DART+ Programme Coastal South and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<ul style="list-style-type: none"> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
MP29	R126 Donabate Relief Road: R132 to Portrane Demesne	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC,</li> </ul>	<p>No in combination effect.</p> <p>The proposed relief road project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed relief road will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the relief road it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the R126 Donabate Relief Road: R132 to Portrane Demesne project, the environmental protection policies</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the R126 Donabate Relief Road: R132 to Portrane Demesne and has included mitigation in that regard to prevent any such adverse effects.</p>
MP30	Extension of LUAS Green Line to Bray	There is no physical overlap between the Proposed Scheme and this project and there are no potential impact pathways by which this project could adversely affect the integrity of any European sites within the ZOI of the Proposed Scheme.	No in combination effect.
MP31	Capacity enhancement and reconfiguration of the M11/N11 from Junction 4 (M50) to Junction 14 (Ashford) inclusive of ancillary and associated road	There is no physical overlap between the Proposed Scheme and this project and there are no potential impact pathways by which this	No in combination effect.



Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
	schemes, to provide additional lanes and upgraded junctions, plus service roads and linkages to cater for lo	project could adversely affect the integrity of any European sites within the ZOI of the Proposed Scheme.	
MP32	MetroLink	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species an QI</li> </ul>	<p>No in combination effect.</p> <p>The proposed MetroLink project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed MetroLink will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for MetroLink it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the MetroLink project and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>mammals within the potential disturbance Zol of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential Zol for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
MP33	Greater Dublin Drainage (GDD)	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed Greater Dublin Drainage project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant Development Plan. This land use plan contains objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to demonstrate that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Greater Dublin Drainage project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Greater Dublin Drainage Project and has included mitigation in that regard to prevent any such adverse effects.</p>
MP34 (TBC)	Cycling: Greater Dublin Area Cycle Network Plan (excluding Radial Core Bus Corridor elements)	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull</li> </ul>	<p>No in combination effect.</p> <p>Proposals arising out of the cycle network plan must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZoI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA,</li> </ul>	<p>Proposals arising out of the cycle network plan will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for proposals arising out of the cycle network plan it will be necessary to determine that they will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Greater Dublin Area Cycle Network Plan elements and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.	
MP35 (TBC)	Dublin Array - offshore windfarm	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species an QI</li> </ul>	<p>No in combination effect.</p> <p>The proposed Dublin Array - offshore windfarm project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Dublin Array - offshore windfarm project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the Dublin Array - offshore windfarm project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Dublin Array - offshore windfarm project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Dublin Array - offshore windfarm and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>mammals within the potential disturbance Zol of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential Zol for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	
TBC	<p>Southern Port Access Route (SPAR): proposed 1.6km (SPAR) includes an opening bridge across the Liffey east of the existing Tom Clarke East Link Bridge. It will be a private road which will take HGV traffic destined to/from the port off the local public road network. It will also allow access for other HGV traffic such as to the Covanta Waste-to-Energy plant. The SPAR will include an active travel corridor open to the public.</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed Southern Port Access Route (SPAR) project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed SPAR will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for SPAR it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed SPAR project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Southern Port Access Route (SPAR) and has included mitigation in that regard to prevent any such adverse effects.</p>
303678	Air insulated switchgear 110kV transmission substation. Platin, Duleek	There is no physical overlap between the Proposed Scheme and this project and there are no potential impact pathways by which this project could adversely affect the integrity of any European sites within the ZOI of the Proposed Scheme either via habitat fragmentation or habitat degradation impacts (either hydrological, invasive species, air quality or disturbance/displacement to SCI species).	No in combination effect.



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304799	Construction of a new distributor road and junction to the southwest of Kells town centre. Kells	There is no physical overlap between the Proposed Scheme and this project and there are no potential impact pathways by which this project could adversely affect the integrity of any European sites within the Zol of the Proposed Scheme either via habitat fragmentation or habitat degradation impacts (either hydrological, invasive species, air quality or disturbance/displacement to SCI species).	No in combination effect.
JA0040	Dublin Mountain Visitors Centre and all associated works. Killakee and Jamestown	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and,</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed Dublin Mountain Visitors Centre project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the Dublin Mountain Visitors Centre it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Dublin Mountain Visitors Centre project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Dublin Mountain</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
			Visitors Centre and has included mitigation in that regard to prevent any such adverse effects.
304624	FCC/12/0001 Broadmeadow Way. Greenway between Malahide Demesne and Newbridge Demesne to be known as 'Broadmeadow Way'. Malahide	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in-combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and,</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed Broadmeadow Way Greenway must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project has been subject to planning consent, including preparation of an EIAR and Natura Impact Statement.</p> <p>In granting permission for the project it was necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the consented Broadmeadow Way Greenway project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the consented Broadmeadow Way Greenway and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
307073	Alterations to a permitted double circuit 110kV electricity transmission line development between substations. Darndale / Belcamp	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and,</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed alterations to a permitted double circuit 110kV electricity transmission line development between substations must comply with all applicable planning and environmental approval requirement and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIA and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed alterations to a permitted double circuit 110kV electricity transmission line development between substations project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed alterations to a permitted double circuit 110kV electricity transmission line development between substations and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
303249	110kV onsite electrical substation with associated electrical plant, electrical equipment, welfare facilities and wastewater holding tank and security fencing. 110kV overhead line grid connection cabling, upgrade of existing tracks and provision of new site access roads with all associated site development and ancillary works. Timahoe East.	There is no physical overlap between the Proposed Scheme and this project and there are no potential impact pathways by which this project could adversely affect the integrity of any European sites within the ZoI of the Proposed Scheme either via habitat fragmentation or habitat degradation impacts (either hydrological, invasive species, air quality or disturbance/displacement to SCI species).	No in combination effect.
304888	15-year permission for development at Oil Berth 3 and Oil Berth 4, Eastern Oil Jetty and at Berths 50A, 50N, 50S, 51, 51A, 49, 52, 53 and associated terminal yards to provide for various elements including new Ro-Ro jetty and consolidation of passenger terminal buildings. Dublin Port.	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European</li> </ul>	<p>No in combination effect.</p> <p>The proposed project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to demonstrate that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and this project at Dublin Port, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed developments around</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</p> <ul style="list-style-type: none"> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>Dublin Port and has included mitigation in that regard to prevent any such adverse effects.</p>
306583	<p>A residential development with ancillary commercial uses (retail unit, café and crèche) partially comprising a "Build to Rent" scheme on circa 9.69 hectares. The townlands of Shanganagh, Cork Little and Shankill, Co. Dublin.</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and,</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>Considering the lack of physical overlap between the Proposed Scheme and the proposed residential in named townlands around Shankill project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed residential development in named townlands around Shankill and has included mitigation in that regard to prevent any such adverse effects.</p>
307352	<p>The proposed development for Brexit Infrastructure will consist of - Installation of porta-cabin structures. Resurfacing and amalgamation of existing yards. Parking for heavy good vehicles, cars and bicycles. Gates, signage and all ancillary site works. Dublin Port.</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to</li> </ul>	<p>No in combination effect.</p> <p>The proposed project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed development for Brexit Infrastructure at Dublin Port, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed development for Brexit Infrastructure at Dublin Port and has included mitigation in that regard to prevent any such adverse effects.</p>
306834	Provision of a double circuit 220kV transmission line and a 220kV gas insulated switchgear (GIS) substation along with associated and ancillary works. Townlands of Cruiserath, Goddamendy and Bay, Co. Dublin.	There is no physical overlap between the Proposed Scheme and this project and there are no potential impact pathways by which this project could adversely affect the integrity of any European sites within the ZOI of the Proposed Scheme either via habitat fragmentation or habitat degradation impacts (either hydrological, invasive species, air quality or disturbance/displacement to SCI species).	No in combination effect.



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307296	Construction of a 2 storey 110kV Gas Insulated Switchgear (GIS) substation, underground cable and all associated and ancillary site works. Former Clyde House, IDA Blanchardstown Business and Technology Park, Snugborough Road, Blanchardstown, Dublin 15	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and,</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed 110kV Gas Insulated Switchgear (GIS) substation and underground cable project, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed 110kV Gas Insulated Switchgear (GIS) substation and underground cable and has included mitigation in that regard to prevent any such adverse effects.</p>
306725	Flood alleviation works along and adjacent to the River Poddle extending from the upper reaches of the river. Tymon North, Tallaght to Merchant's Quay, Dublin.	As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment	<p>No in combination effect.</p> <p>The proposed River Poddle flood alleviation works must comply with all applicable planning and environmental approval requirements and be in accordance with the</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> </ul>	<p>objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed River Poddle flood alleviation works, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed River Poddle flood alleviation works and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<ul style="list-style-type: none"> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by QI mammals within the potential ZOI for Wicklow Mountains SAC.</li> </ul>	
245738 (DCC ref: 2552/15)	Aviation Fuel Pipeline. Location: Inlet Station: Bond Drive, Dublin Port, Dublin 1 to Dublin Airport, Co. Dublin	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species an QI</li> </ul>	<p>No in combination effect.</p> <p>The proposed Aviation Fuel Pipeline project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed SID will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Aviation Fuel Pipeline and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>mammals within the potential disturbance Zol of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>• Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential Zol for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, and Lambay Island SPA.)</li> </ul>	
311315	Park development project at the Racecourse Park Located between Baldoyle and Portmarnock, Co. Dublin	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands</li> </ul>	<p>No in combination effect.</p> <p>The proposed Park Development project at Racecourse Park must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed Park Development project at Racecourse Park, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by SCI bird species and QI mammals within the potential ZOI for Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA, Wicklow Mountains SAC.</li> </ul>	<p>avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Park development project at Racepark Course and has included mitigation in that regard to prevent any such adverse effects.</p>
309146, 309773	2 no. 110kV transmission lines and a 110kV Gas Insulated Switchgear (GIS) substation	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation</li> </ul>	<p>No in combination effect.</p> <p>The proposed project to install 2 no. 110kV transmission lines and a 110kV Gas Insulated Switchgear (GIS) substation must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> </ul>	<p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed project to install 2 no. 110kV transmission lines and a 110kV Gas Insulated Switchgear (GIS) substation, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the development of 2 no. 110kV transmission lines and a 110kV Gas Insulated Switchgear (GIS) substation and has included mitigation in that regard to prevent any such adverse effects.</p>
308827	Demolition of all the structures on the site, 702 no. Build to Rent residential units, creche and associated site works	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation</li> </ul>	<p>No in combination effect.</p> <p>The proposed project to demolish all structures and erect 702 no. residential units and creche must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA); and,</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>The proposed project has been subject to planning consent, including preparation of an EIA and AA Screening Report/Natura Impact Statement,</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed residential Development project at Castleforbes Business Park, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed residential development project at Castleforbes Business Park and has included mitigation in that regard to prevent any such adverse effects.</p>
309812	Increase the capacity of the Dublin Waste to Energy Facility from 600,000 tonnes per annum to 690,000 tonnes per annum	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North</li> </ul>	<p>No in combination effect.</p> <p>The proposed project to increase the capacity of the Dublin Waste to Energy Facility must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIA and AA Screening Report/Natura Impact Statement, if required.</p>



Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA); and,</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed project to increase the capacity of the Dublin Waste to Energy Facility, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the increase in capacity of the Dublin Waste to Energy Facility and has included mitigation in that regard to prevent any such adverse effects.</p>
308585	Clutterland 110kV GIS Substation building and 2 underground single circuit transmission lines	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands</li> </ul>	<p>No I-combination effect.</p> <p>The proposed project to install a 110kV GIS Substation building and 2 underground single circuit transmission lines must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA).</p>	<p>previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed project to install a 110kV GIS Substation building and 2 underground single circuit transmission lines, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposal to install a 110kV GIS Substation building and 2 underground single circuit transmission lines and has included mitigation in that regard to prevent any such adverse effects.</p>
309951	<p>Provision of two 110kV transmission lines. Connecting Coolderrig 110kV GIS Substation to Grange Castle - Kilmahud circuits.</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed project to install two 110kV transmission lines must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p>	<p>Considering the lack of physical overlap between the Proposed Scheme and the proposed project to install two 110kV transmission lines, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposal to install two 110kV transmission lines and has included mitigation in that regard to prevent any such adverse effects.</p>
54729/22	Redevelopment of former Clerys Warehouses, Dublin.	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> </ul>	<p>No in combination effect.</p> <p>The proposed project to redevelop the former Clerys' Warehouse must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed project to redevelop the former Clerys' Warehouse, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
			<p>avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including proposed project to redevelop the former Clerys' Warehouse and has included mitigation in that regard to prevent any such adverse effects.</p>
5464/22	Construction of Commercial office block and ancillary works – at junction of Sheriff Street Upper and East Road.	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> </ul>	<p>No in combination effect.</p> <p>The proposed project to construct a Commercial office block must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed project to construct a Commercial office block, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
			<p>to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed project to construct a Commercial office block and has included mitigation in that regard to prevent any such adverse effects.</p>
5399/22	<p>Redevelopment of Harbourmaster Pub a protected structure.</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species an QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's</li> </ul>	<p>No in combination effect.</p> <p>The proposed project redevelop the Harbourmaster Pub must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of immediate physical overlap between the Proposed Scheme and the proposed project to construct a Commercial office block, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA); and</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>other projects, including the proposed project redevelop the Harbourmaster Pub and has included mitigation in that regard to prevent any such adverse effects.</p>
3546/22	Redevelopment of site bounded by Sackville Place/Marlborough Street.	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> </ul>	<p>No in combination effect.</p> <p>The proposed redevelopment project at Sackville Place/Marlborough Street must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed redevelopment project at Sackville Place/Marlborough Street, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed redevelopment project</p>

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			at Sackville Place/Marlborough Street and has included mitigation in that regard to prevent any such adverse effects.
4674/22	Demolition of buildings and development of a 24 storey building at Moss Street.	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species within the potential disturbance Zol of the Proposed Scheme for, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed redevelopment project at Moss Street must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed redevelopment project at Moss Street, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed redevelopment project at Moss Street and has included mitigation in that regard to prevent any such adverse effects.</p>
4544/22	Development of a 7-storey Build to rent Complex , Dublin.	As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those	No in combination effect.



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		<p>effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA).</li> </ul>	<p>The proposed development of a 7-storey BTR complex must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed development of a 7-storey BTR complex, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed development of a 7-storey BTR complex and has included mitigation in that regard to prevent any such adverse effects.</p>
PWSDZ4058/22	Phase 2 development at Former Irish Glass Bottle Works, Poolbeg West	As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.	<p>No in combination effect.</p> <p>The proposed Phase 2 development at the former Irish Glass Bottle Works must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA); and</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Notwithstanding the proximity between the Proposed Scheme and the proposed development of a 7-storey BTR complex proposed Phase 2 development at the former Irish Glass Bottle Works policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Phase 2 development at the former Irish Glass Bottle Works and has included mitigation in that regard to prevent any such adverse effects.</p>
3966/20	Development of a 12-storey Build to rent Complex, 17-21 Foley Street.	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p>	<p>No in combination effect.</p> <p>The proposed development of a 12-storey BTR complex at Foley Street must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p>

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		<ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> </ul>	<p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed development of a 12-storey BTR complex at Foley Street, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed development of a 12-storey BTR complex at Foley Street and has included mitigation in that regard to prevent any such adverse effects.</p>
3400/21	Retention Permission for 9-storey emergency extension block at Mater Misericordiae University Hospital.	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC,</li> </ul>	<p>No in combination effect.</p> <p>The proposed retention permission for the development at the Mater Hospital site must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li></li> </ul>	<p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed retention permission for the development at the Mater Hospital site, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed retention permission for the development at the Mater Hospital site and has included mitigation in that regard to prevent any such adverse effects.</p>
F21A/0386	Development of 2-4 storey apartment blocks at Graymount, Dun Griffin Road, Dublin	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed development at Dun Griffin Road must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the</p>

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		<p>South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA); and,</p> <ul style="list-style-type: none"> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species within the potential disturbance Zol of the Proposed Scheme for, Wicklow Mountains SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> </ul>	<p>previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed development at Dun Griffin Road, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed development at Dun Griffin Road and has included mitigation in that regard to prevent any such adverse effects.</p>
F21A/0287	Advance infrastructure works on 2.5ha site at Hackettstown, Skerries.	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA); and</li> </ul>	<p>No in combination effect.</p> <p>The proposed advance infrastructure development at Hackettstown Skerries must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed advance infrastructure development at Hackettstown Skerries, the environmental</p>

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		<ul style="list-style-type: none"> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species within the potential disturbance Zol of the Proposed Scheme for, Wicklow Mountains SPA, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> </ul>	<p>protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed advance infrastructure development at Hackettstown Skerries and has included mitigation in that regard to prevent any such adverse effects.</p>
F21A/0576	Advance infrastructure works on 1.57ha site at Castlelands, Balbriggan.	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);and,</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species within the potential disturbance Zol of the Proposed Scheme for, Wicklow Mountains SPA, Dalkey Islands SPA, Rockabill SPA, Malahide</li> </ul>	<p>No in combination effect.</p> <p>The proposed advance infrastructure development at Castlelands, Balbriggan must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed advance infrastructure development at Castlelands, Balbriggan the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);	Proposed Scheme to have an adverse effect on the integrity of any European sites.  The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed advance infrastructure development at Castlelands, Balbriggan and has included mitigation in that regard to prevent any such adverse effects.
2062/21	Office development bounded by Protected structures around ST Stephens Green/Harcourt Street.	As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.  The potential for in combination effects could be as a result of: <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> </ul>	No in combination effect.  The proposed office development in the vicinity of St Stephens Green must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.  The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.  In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.  Considering the lack of physical overlap between the Proposed Scheme and the proposed office development in the vicinity of St Stephens Green the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.  The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with



Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
			other projects, including the proposed office development in the vicinity of St Stephens Green and has included mitigation in that regard to prevent any such adverse effects.
D20A/0746	43no residential dwellings in 3 apartment blocks.	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed residential development must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed residential development the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed residential development and has included mitigation in that regard to prevent any such adverse effects.</p>
PWSDZ4058/22	Residential development to replace former car wash at Braemor Road.	As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those	<p>No in combination effect.</p> <p>The proposed residential development at Braemor Road must comply with all applicable planning and environmental</p>

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		<p>effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> </ul>	<p>approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed project will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for the proposed project it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the proposed residential development at Breamor Road the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed residential development at Breamor Road and has included mitigation in that regard to prevent any such adverse effects.</p>
	<p>BusConnects CBC01 Clongriffin to City Centre Core Bus Corridor Scheme</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p>	<p>No in combination effect.</p> <p>The proposed Clongriffin to City Centre Core Bus Corridor Scheme project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Rockabill to Dalkey Island SAC, Lambay Island SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);</li> </ul>	<p>plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Swords to City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>

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-	BusConnects CBC02 Swords to City Centre Core Bus Corridor Scheme	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrough SPA);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Rockabill to Dalkey Island SAC, Lambay Island SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed Swords to City Centre Core Bus Corridor Scheme project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Swords to City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA);	
-	BusConnects CBC0304 Ballymun / Finglas to City Centre Core Bus Corridor Scheme	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of ex-situ habitat losses; North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA); and,</li> </ul>	<p>No in combination effect.</p> <p>The proposed Ballymun / Finglas to City Centre Core Bus Corridor Scheme project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the Ballymun / Finglas to City Centre Core Bus Corridor Scheme , the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Ballymun / Finglas to</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<ul style="list-style-type: none"> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Rockabill to Dalkey Island SAC, Lambay Island SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA).</li> </ul>	<p>City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>
-	<p>BusConnects CBC05 Blanchardstown to City Centre Core Bus Corridor Scheme</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrough SPA);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European</li> </ul>	<p>No in combination effect.</p> <p>The proposed Blanchardstown to City Centre Core Bus Corridor Scheme project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the Blanchardstown to City Centre Core Bus Corridor Scheme, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA); and,</p> <ul style="list-style-type: none"> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Rockabill to Dalkey Island SAC, Lambay Island SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA).</li> </ul>	<p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Blanchardstown to City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>
-	<p>BusConnects CBC06 Lucan to City Centre Core Bus Corridor Scheme</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed Lucan to City Centre Core Bus Corridor Scheme project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the Lucan to City Centre Core Bus Corridor Scheme, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme</p>



Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA); and,</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Rockabill to Dalkey Island SAC, Lambay Island SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA).</li> </ul>	<p>to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Lucan to City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>
-	BusConnects CBC07 Liffey Valley to City Centre Core Bus Corridor Scheme	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrrough SPA);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed Liffey Valley to City Centre Core Bus Corridor Scheme project must comply with all applicable planning and environmental requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the Liffey Valley to City Centre Core Bus Corridor Scheme, the environmental protection policies included</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA); and,</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Rockabill to Dalkey Island SAC, Lambay Island SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA).</li> </ul>	<p>within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed Liffey Valley to City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>
-	BusConnects CBC0809 Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation</li> </ul>	<p>No in combination effect.</p> <p>The proposed Bus Corridor Scheme project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA); and,</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by QI mammals within the potential ZOI for Wicklow Mountains SAC.</li> </ul>	<p>Considering the lack of physical overlap between the Proposed Scheme and the Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>
-	BusConnects CBC1012 Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA,</li> </ul>	<p>No in combination effect.</p> <p>The proposed Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Rockabill to Dalkey Island SAC, Lambay Island SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA); and,</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by QI mammals within the potential ZOI for Wicklow Mountains SAC.</li> </ul>	<p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIA and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
-	BusConnects CBC11 Kimmage to City Centre Core Bus Corridor Scheme	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA); and,</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA).</li> </ul>	<p>No in combination effect.</p> <p>The proposed Kimmage to City Centre Core Bus Corridor Scheme project must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites .</p> <p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the Kimmage to City Centre Core Bus Corridor Scheme, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Kimmage to City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
-	BusConnects CBC13 Bray to City Centre Core Bus Corridor Scheme	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SAC, Wicklow Mountains SPA, Malahide</li> </ul>	<p>No in combination effect.</p> <p>The proposed Bray to City Centre Core Bus Corridor Scheme must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the Bray to City Centre Core Bus Corridor Scheme, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the Bray to City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA); and,</p> <ul style="list-style-type: none"> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by QI mammals within the potential ZOI for Wicklow Mountains SAC.</li> </ul>	
-	<p>BusConnects CBC1415 Belfield / Blackrock to City Centre Core Bus Corridor Scheme</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European</li> </ul>	<p>No in combination effect.</p> <p>The proposed Belfield / Blackrock to City Centre Core Bus Corridor Scheme must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>The proposed Bus Corridor Scheme will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for Bus Corridor Scheme it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the lack of physical overlap between the Proposed Scheme and the Belfield / Blackrock to City Centre Core Bus Corridor Scheme, the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with</p>



Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA);</p> <ul style="list-style-type: none"> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA);</li> <li>Direct injury/mortality impacts (for example in <i>ex-situ</i> sites utilised by QI mammals within the potential ZoI for Wicklow Mountains SAC.</li> </ul>	<p>other projects, including the Belfield / Blackrock to City Centre Core Bus Corridor Scheme and has included mitigation in that regard to prevent any such adverse effects.</p>
	<p>Strategic Housing Developments (SHDs) <i>(Impact dependent on proximity to Proposed Scheme)</i></p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands</li> </ul>	<p>No in combination effect.</p> <p>Proposed SHD projects must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>Proposed SHD projects will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for proposed SHD projects it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA); and,</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA).</li> </ul>	<p>to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed SHD Schemes will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed SHD schemes and has included mitigation in that regard to prevent any such adverse effects.</p>
	<p>Large Scale Residential Developments (LRDs) (Impact dependent on proximity to Proposed Scheme)</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</li> <li>Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation</li> </ul>	<p>No in combination effect.</p> <p>Proposed LRD projects must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>Proposed LRD projects will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p> <p>In granting permission for proposed LRD projects it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</p> <ul style="list-style-type: none"> <li>Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA); and,</li> <li>Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZOI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA).</li> </ul>	<p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed LRD Schemes will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including the proposed LRD schemes and has included mitigation in that regard to prevent any such adverse effects.</p>
	<p>Irish Water Projects (<i>Impact dependent on proximity to Proposed Scheme</i>) Larger scale Irish Water infrastructure projects are described separately under major projects</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p> <p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA,</li> </ul>	<p>No in combination effect.</p> <p>Proposed Irish Water projects must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use plans contain objectives and policies to ensure the protection of European sites.</p> <p>Proposed Irish Water projects will be subject to planning consent, including preparation of an EIAR and AA Screening Report/Natura Impact Statement, if required.</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, The Murrrough SPA, and Wicklow Mountains SAC);</p> <ul style="list-style-type: none"> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA); and,</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species and QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland’s Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrrough SPA).</li> </ul>	<p>In granting permission for proposed Irish Water projects it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including Irish Water Projects and has included mitigation in that regard to prevent any such adverse effects.</p>
	<p>GDA Transport Strategy Park and Ride (All Included despite distance as hydrological connectivity cannot be ruled out to downstream European sites in Dublin Bay</p>	<p>As assessed in Section 7, the Proposed Scheme will not adversely affect the integrity of any European site in isolation. Therefore, the potential for in combination effects to arise are limited to those effects the Proposed Scheme will have on the receiving environment that are measurable in some way, but themselves will not affect the conservation objectives of European sites.</p>	<p>No in combination effect.</p> <p>The Proposed GDA Transport Strategy Park and Ride projects must comply with all applicable planning and environmental approval requirements and be in accordance with the objectives and policies of the relevant land use plans (Development Plans, Local Area Plans etc.). These land use</p>

Application Reference	Applicant for 'Other Development' and Brief Description	Potential for In combination effect	Conclusion regarding In combination effect Will the project act in combination with the Proposed Scheme to adversely affect the integrity of European sites?
		<p>The potential for in combination effects could be as a result of:</p> <ul style="list-style-type: none"> <li>• Habitat fragmentation (for example European sites at risk of <i>ex-situ</i> habitat losses; Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA, The Murrough SPA, and Wicklow Mountains SAC);</li> <li>• Habitat degradation/effects on QI/SCI species as a result of hydrological impacts (for example reduction in water quality in catchments draining to Dublin Bay affecting the conservation objectives supporting aquatic habitats and species in North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, Baldoyle Bay SAC, Baldoyle Bay SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, and The Murrough SPA);</li> <li>• Habitat degradation as a result of introducing/spreading non-native invasive species (for example to downstream European sites North Dublin Bay SAC, South Dublin Bay SAC, North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA); and,</li> <li>• Disturbance and displacement impacts (for example <i>ex-situ</i> inland sites which are utilised by SCI bird species an QI mammals within the potential disturbance ZoI of the Proposed Scheme for Wicklow Mountains SAC, Wicklow Mountains SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA and The Murrough SPA).</li> </ul>	<p>plans contain objectives and policies to ensure the protection of European sites.</p> <p>Proposed GDA Transport Strategy Park and Ride projects will be subject to planning consent, including preparation of an EIAR and AA Screening Report / Natura Impact Statement, if required.</p> <p>In granting permission for proposed Irish Water projects it will be necessary to determine that the project will not result in adverse effects on the integrity of any European sites, including from any of the impact pathways listed in the previous column in this table, either alone or in combination with the Proposed Scheme.</p> <p>Considering the environmental protection policies included within the relevant land use plans, the range of mitigation measures included in the Proposed Scheme to avoid significant impacts and that alone the Proposed Scheme will not adversely affect the integrity of any European sites, the project will not act in combination with the Proposed Scheme to have an adverse effect on the integrity of any European sites.</p> <p>The Proposed Scheme will not adversely affect the integrity of any European sites, in its own right, nor in combination with other projects, including GDA Transport Strategy Park and Ride projects and has included mitigation in that regard to prevent any such adverse effects.</p>

## 9.2 Plan Level Environmental Protection Policies and Objectives

624 This section lists the overarching plan level environmental protection policies from the following plans Fingal County Development Plan 2023 – 2029, Dublin City Development Plan 2022 – 2028, South Dublin County Development Plan 2022 – 2028, Wicklow County Development Plan 2022 – 2028 and Dun Laoghaire-Rathdown County Development Plan 2022 – 2028.

625 The Proposed Scheme is compliant with all of the plan level biodiversity protection policies and objectives described above, including those within the Fingal County Development Plan 2023 – 2029, the Dublin City Development Plan 2022 – 2028, the South Dublin County Development Plan 2022 – 2028, the Wicklow County Development Plan 2022 – 2028 and the Dun Laoghaire-Rathdown County Development Plan 2022 – 2028. Furthermore the Proposed Scheme will not prevent the achievement of any of these plan level biodiversity protection policies and objectives across the identified potential impact pathways.

### Fingal County Development Plan 2023 – 2029

626 **GINHO3 – Biodiversity in Open Space** - *Make provision for biodiversity within public open space and include water sensitive design and management measures (including SuDS) as part of a sustainable approach to open space design and management.*

627 **GINHO15 – SuD** - *Limit surface water run-off from new developments through the use of appropriate Sustainable Urban Drainage Systems (SuDS) using nature-based solutions and ensure that SuDS is integrated into all new development in the County.*

628 **GINHP17 – Protection of European and National Sites** - *Strictly protect areas designated or proposed to be designated as Natura 2000 sites (i.e. Special Areas of Conservation (SACs) and Special Protection Areas (SPAs); also known as European sites) including any areas that may be proposed for designation or designated during the lifetime of this Plan.*

629 **GINHO33 – Annex I and Annex II** - *Ensure that development does not have a significant adverse impact on proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna, Habitat Directive Annex I sites and Annex II species contained therein, and on rare and threatened species including those protected by law and their habitats.*

630 **GINHO28 – Protection of Natural Heritage Area** - *Ensure that development does not have a significant adverse impact on proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna, Habitat Directive Annex I sites and Annex II species contained therein, and on rare and threatened species including those protected by law and their habitats.*

631 **Objective GINHO35- Appropriate Assessment** - *In accordance with Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities (2010), any plans or projects that are likely to have a significant effect on a Natura 2000 site, either individually or in combination with other plans or projects, are subject to a screening for Appropriate Assessment unless they are directly connected with or necessary to the management of a Natura 2000 site.*

### Dublin City Development Plan 2022 – 2028

632 **GI9:** *To conserve, manage, protect and restore the favourable conservation condition of all qualifying interest/special conservation interests of all European sites designated, or proposed to be designated, under the EU Birds and Habitats Directives, as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) (European / Natura 2000 sites).*

633 **Policy GI10:** *To adequately protect flora and fauna (under the EU Habitats and Birds Directives, the Wildlife Acts 1976 (as amended), the Fisheries Acts 1959 (as amended) and the Flora (Protection) Order 2022 S.I No. 235 of 2022), wherever they occur within Dublin City, or have been identified as supporting the favourable conservation condition of any European sites.*

634 **Policy GI13:** *To ensure the protection, conservation and enhancement of all areas of ecological importance for protected species, and especially those listed in the EU Birds and Habitats Directives, including those*



identified as supporting the favourable conservation condition of any European sites, in accordance with development standards set out in this plan.

- 635 **Policy GI31:** To support the improvement of the ecological status of all rivers / waterbodies within the administrative area of Dublin City Council and those rivers identified in accordance with the River Basin Management Plan 2018 – 2021 and the next management plan to be produced under the 3rd river basin planning cycle (2022-2027), as required under the EU WFD (see Chapter 9, Section 9.5.2 Urban Watercourses and Water Quality).

#### **South Dublin County Development Plan 2022 - 2028**

- 636 **Policy NCBH3 Natura 2000 Sites:** Conserve and protect Natura 2000 sites and achieve and maintain favourable conservation status for habitats and species that are considered to be at risk through the protection of the Natura 2000 network from any plans or projects that are likely to have a significant effect on their coherence or integrity
- 637 **NCBH3 Objective 1:** To prevent development and activities that would adversely affect the integrity of any Natura 2000 site located within or adjacent to the County and promote the favourable conservation status of the habitats and species integral to these sites.
- 638 **NCBH3 Objective 3:** To ensure that planning permission will only be granted for a development proposal that, either individually or in combination with existing and / or proposed plans or projects, will not have a significant adverse effect on a European Site, or where such a development proposal is likely or might have such a significant adverse effect (either alone or in combination), the planning authority will, as required by law, carry out an appropriate assessment as per requirements of Article 6(3) of the Habitats Directive 92 / 43 / EEC of the 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, as transposed into Irish legislation. Only after having ascertained that the development proposal will not adversely affect the integrity of any European site, will the planning authority agree to the development and impose appropriate mitigation measures in the form of planning conditions. A development proposal which could adversely affect the integrity of a European site may only be permitted in exceptional circumstances, as provided for in Article 6(4) of the Habitats Directive as transposed into Irish legislation

#### **Wicklow County Development Plan 2022-2028**

- 639 **CPO 17.4:** To contribute, as appropriate, towards the protection of designated ecological sites including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs); Wildlife Sites (including proposed Natural Heritage Areas); Salmonid Waters; Flora Protection Order sites; Wildfowl Sanctuaries (see S.I. 192 of 1979); Freshwater Pearl Mussel catchments; and Tree Preservation Orders (TPOs). To contribute towards compliance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines, including but not limited to the following and any updated/superseding documents: 333 Chapter 17 | Natural Heritage & Biodiversity Draft Wicklow County Development Plan 2021-2027
- EU Directives, including the Habitats Directive (92/43/EEC, as amended)<sup>6</sup>, the Birds Directive (2009/147/EC)<sup>7</sup>, the Environmental Liability Directive (2004/35/EC)<sup>8</sup>, the Environmental Impact Assessment Directive (2011/92/EU, as amended), the Water Framework Directive (2000/60/EC), EU Groundwater Directive (2006/118/EC) and the Strategic Environmental Assessment Directive (2001/42/EC); EU 'Guidance on integrating ecosystems and their services into decision-making' (European Commission 2019)
  - National legislation, including the Wildlife Acts 1976 and 2010 (as amended)<sup>9</sup>, European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development Act 2000 (as amended), the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011), the European Communities (Environmental Liability) Regulations 2008 (as amended)<sup>10</sup> and the Flora Protection order 2015.



- National policy guidelines (including any clarifying circulars or superseding versions of same), including ‘Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment’ (2018), ‘Guidance for Consent Authorities regarding Sub-Threshold Development’ (2003), ‘Tree Preservation Guidelines’, ‘Landscape and Landscape Assessment’ (draft 2000), ‘Appropriate Assessment Guidance’ (2010);
- Catchment and water resource management plans, including the National River Basin Management Plan 2018-2021 (including any superseding versions of same),
- Biodiversity plans and guidelines, including National Biodiversity Action Plan 2017-2021 (including any superseding versions of same) and the County Wicklow Biodiversity Action Plan;
- Ireland’s Environment – An Integrated Assessment 2020 (EPA), including any superseding versions of same), and to make provision where appropriate to address the report’s goals and challenges

640 **CPO 17.5:** Projects giving rise to adverse effects on the integrity of European sites (cumulatively, directly or indirectly) arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall not be permitted on the basis of this plan

641 **CPO 17.6:** Ensure that development proposals, contribute as appropriate towards the protection and where possible enhancement of the ecological coherence of the European Site network and encourage the retention and management of landscape features that are of major importance for wild fauna and flora as per Article 10 of the EU Habitats directive. All projects and plans arising from this Plan will be screened for the need to undertake Appropriate Assessment under Article 6 of the Habitats Directive.

642 **CPO 17.7:** To maintain the conservation value of all proposed and future Natural Heritage Areas (NHAs) and to protect other designated ecological sites in Wicklow.

#### **Dun Laoghaire-Rathdown County Development Plan 2022-2028**

643 **Policy Objective GIB18:** It is a Policy Objective to protect and conserve the environment including, in particular, the natural heritage of the County and to conserve and manage Nationally and Internationally important and EU designated sites - such as Special Protection Areas (SPAs), Special Areas of Conservations (SACs), proposed Natural Heritage Areas (pNHAs) and Ramsar sites (wetlands) - as well as non-designated areas of high nature conservation value known as locally important areas which also serve as ‘Stepping Stones’ for the purposes of Article 10 of the Habitats Directive

644 **Policy Objective GIB19:** It is a Policy Objective to ensure the protection of natural heritage and biodiversity, including European Sites that form part of the Natura 2000 network, in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines.

645 **Policy Objective GIB21:** It is a Policy Objective to protect and preserve areas designated as proposed Natural Heritage Areas, Special Areas of Conservation, and Special Protection Areas. It is Council policy to promote the maintenance and as appropriate, delivery of ‘favourable’ conservation status of habitats and species within these areas.

### **9.3 Conclusion of In Combination Assessment**

646 The Proposed Scheme will not affect the integrity of any European sites including those within its ZoI. It will not result in the loss or fragmentation of any QI habitats, or habitats supporting populations of QI / SCI species, in (or associated with) any European sites, nor will it degrade any such habitats or affect QI / SCI species as a result of hydrological or hydrogeological impacts (quality or quantity), air quality impacts or introducing/spreading non-native invasive plant species.

647 The in combination assessment has concluded that there is no potential for adverse effects on the integrity of any European sites including those within its ZoI, to arise as a consequence of the Proposed Scheme in combination with any other plans or projects, as in consideration of the mitigation measures detailed in

Section 7 of this NIS, no adverse effects on European site integrity will arise from the implementation of the Proposed Scheme.

- 648 The implementation of, and adherence to, the policies and objectives set out in Section 9.2 will ensure the protection of European sites across all identified potential impact pathways and will include the requirement for any future project to undergo Screening for Appropriate Assessment and / or Appropriate Assessment, as appropriate.
- 649 As the Proposed Scheme will not affect the integrity of European sites within the Zol of the Proposed Scheme, and given the protection afforded to European sites under the overarching land use plans, it has been concluded that there will be no adverse effects on the integrity of any European sites to arise as a consequence of the Proposed Scheme acting in-combination with any other plans or projects.
- 650 **Table 46** and **Table 47** present the results of a pairwise assessment of the Proposed Scheme in combination with all of those projects and plans. This assessment found that there will be no adverse effects on the integrity of any European sites as a consequence of the Proposed Scheme acting in combination with each of these plans and projects.
- 651 Furthermore, for the same reasons, there will be no adverse effects on the integrity of any European sites as a consequence of the Proposed Scheme acting in-combination with any, some or indeed all taken together, of these plans or projects.
- 652 Therefore, the Proposed Scheme will not adversely affect the integrity of any European sites, either alone or in combination with any other plans or projects. No additional mitigation measures are necessary or required following this update assessment.

## 10 NIS Conclusion

- 653 This NIS has examined and analysed, in light of the best scientific knowledge, with respect to those European sites within the zone of influence of the Proposed Scheme, the potential impact sources and pathways, the manner in which these could potentially impact on the European sites' Qualifying Interest habitats and species, and Special Conservation Interest species and whether the predicted impacts would adversely affect the integrity of North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Dalkey Islands SPA, Rockabill SPA, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, The Murrrough SPA, Ireland's Eye SPA, Lambay Island SPA, Wicklow Mountains SPA or Wicklow Mountains SAC. There are no other European sites at risk of effects from the Proposed Scheme.
- 654 Avoidance, design requirements and mitigation measures are set out within this NIS (and its appendices) and the effective implementation of these mitigation measures will ensure that any impacts on the conservation objectives of European sites will be avoided during the Construction and Operation Phases of the Proposed Scheme such that there will be no adverse effects on any European sites.
- 655 It has been objectively concluded by Scott Cawley Ltd., following an examination, analysis and evaluation of the relevant information, including in particular the nature of the predicted impacts from the Proposed Scheme, and the effective implementation of the mitigation measures proposed, that the Proposed Scheme will not adversely affect (either directly or indirectly) the integrity of any European site, either alone or in combination with other plans or projects.

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