

**Templeogue/Rathfarnham
to City Centre Core Bus
Corridor Scheme**

Appropriate Assessment Report

**Screening
Report**

**BUS
CONNECTS**

SUSTAINABLE TRANSPORT FOR A BETTER CITY.

Table of Contents

1	Introduction	1
2	Methodology	1
2.1	Guidance	1
2.2	Assessment Methodology	2
2.3	Desktop Study	4
2.4	Consultations	4
2.5	Baseline Surveys.....	6
3	Provision of Information for Screening for Appropriate Assessment	9
3.1	Description of the Proposed Scheme.....	9
3.2	Overview of the Receiving Environment.....	15
3.3	Assessment of Potential Effects on European Sites	25
3.4	In-Combination Effects.....	32
4	Conclusions of the Screening Assessment Process.....	37
5	References	39

List of Images:

Image 1 – Stage One Screening Process for Appropriate Assessment

Image 2 Location and Extent of Construction Compound TR1

Image 2 Location and Extent of Construction Compound TR2

Image 2 Location and Extent of Construction Compound TR3

Image 2 Location and Extent of Construction Compound TR4

Image 2 Location and Extent of Construction Compound TR5

List of Figures

Figure 1 European sites in the vicinity of the Proposed Scheme

List of Appendices

Appendix I The Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the European sites in the vicinity of the proposed development site

1 Introduction

- 1 This Report, which contains information required to assist the competent authority to undertake a screening for Appropriate Assessment (AA) in respect of the Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme (hereinafter referred to as the Proposed Scheme), has been prepared by Scott Cawley Ltd. on behalf of the National Transport Authority. It provides information on, and assesses 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 the Natura 2000 network (hereafter referred to as European sites)¹. The Proposed Scheme aims to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor between Tallaght and Rathfarnham to the City Centre.
- 2 Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna (as amended) (the “**Habitats Directive**”) requires that, any plan or project not directly connected with or necessary to the management of European sites, but likely to have significant effects thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the European sites in view of their conservation objectives. The requirements of Article 6(3) of the Habitats Directive, have been transposed into Irish law by part XAB of the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) (the “**2011 Birds and Habitats Regulations**”).

For the reasons set out in detail in this AA Screening Report, a Stage Two **Appropriate Assessment of the Proposed Scheme is required in this instance** as it cannot be concluded, in view of best scientific knowledge and on the basis of objective information, that the Proposed Scheme, either individually or in combination with other plans or projects, will not have a significant effect on the following European site(s): **North Dublin Bay SAC, South Dublin Bay SAC, Rockabill to Dalkey Islands SAC, Wicklow Mountains SAC, Lambay Island SAC, South Dublin Bay and River Tolka Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA, North Bull Island SPA, Dalkey Islands SPA, Baldoyle Bay SPA, Howth Head Coast SPA, Malahide Estuary SPA, Rogerstown Estuary SPA Rockabill SPA and The Murrough SPA.**

2 Methodology

2.1 Guidance

- 3 This Appropriate Assessment Screening Report has been prepared with regard to the following guidance documents, as relevant:
 - OPR Practice Note PN01. Appropriate Assessment Screening for Development Management (Office of the Planning Regulator, 2021);

¹ The Natura 2000 network is a European network of important ecological sites, as defined under Article 3 of the Habitats Directive 92/43/EEC, which comprises both special areas of conservation and special protection areas. Special conservation areas are sites hosting the natural habitat types listed in Annex I, and habitats of the species listed in Annex II, of the Habitats Directive, and are established under the Habitats Directive itself. Special protection areas are established under Article 4 of the Birds Directive 2009/147/EC for the protection of endangered species of wild birds. The aim of the network is to aid the long-term survival of Europe’s most valuable and threatened species and habitats.

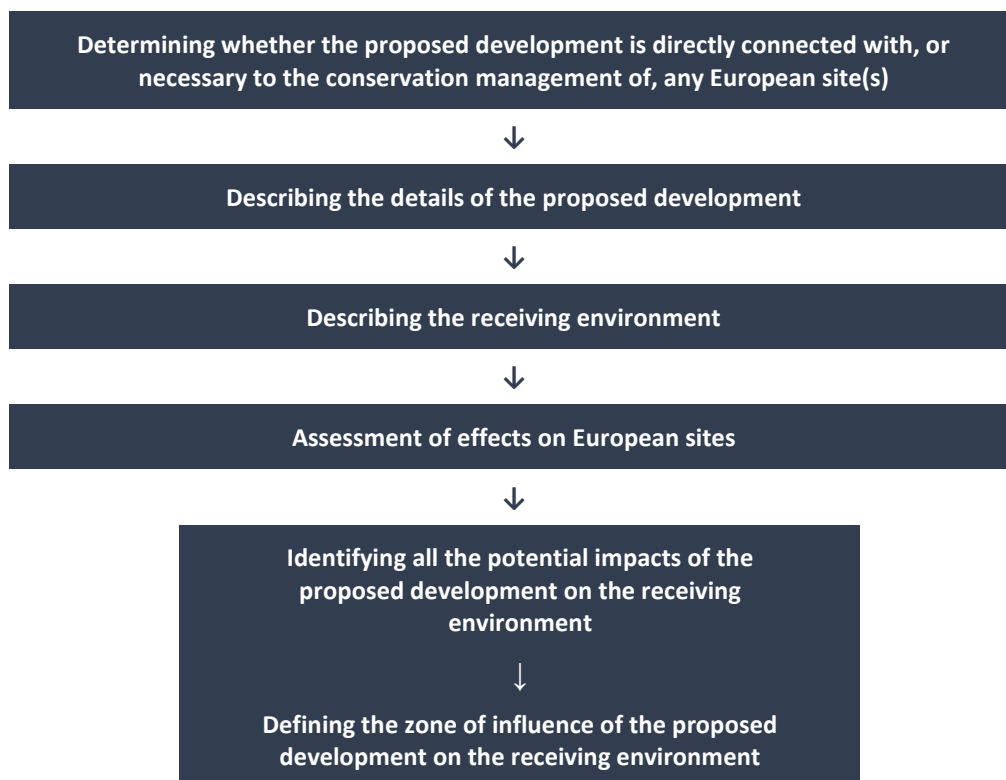
In Ireland these sites are designated as *European sites* - defined under section 177R of the Planning and Development Act 2001 (as amended) Regulations as (a) a candidate site of Community importance, (b) a site of Community importance, (c) a candidate special area of conservation, (d) a special area of conservation, (e) a candidate special protection area, or (f) a special protection area. They are commonly referred to in Ireland as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

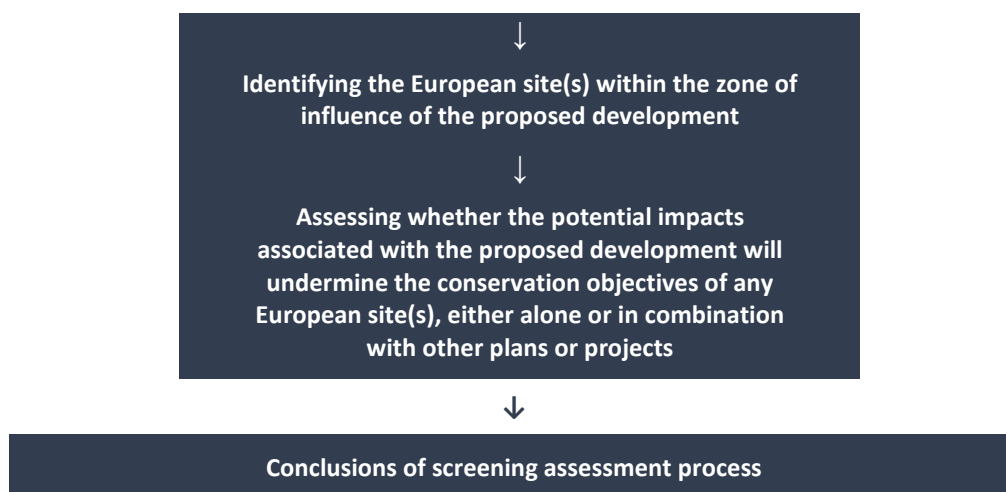
- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision)
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPW 1/10 & PSSP 2/10
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2021)
- *Communication from the Commission on the precautionary principle* (European Commission, 2000);
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019); and,
- *Interpretation Manual of European Union Habitats.* Version EUR 28. (European Commission, 2013).

2.2 Assessment Methodology

- 4 The above referenced guidance sets out a staged process for carrying out Appropriate Assessment. To determine if an Appropriate Assessment is required, documented screening is required. Screening identifies the potential for effects on the conservation objectives of European sites, if any, which would arise from a proposed plan or project, either alone or in combination with other plans and projects (i.e. likely significant effects).
- 5 Significant effects on a European site are those that would undermine the conservation objectives supporting the favourable conservation condition of the Qualifying Interest (QI) habitats and / or the QI / Special Conservation Interest (SCI) species of a European site(s).
- 6 Image 1 describes the steps involved in Stage One Screening for Appropriate Assessment

Image 1: Stage One Screening Process for Appropriate Assessment





- 7 If the conclusions at the end of screening are that there is no likelihood of significant effects occurring on any European sites as a result of the proposed plan or project, either alone or in combination with other plans and projects, then there is no requirement to undertake a Stage Two Appropriate Assessment.
- 8 In establishing which European sites are potentially at risk (in the absence of mitigation) from the Proposed Scheme, a source-pathway-receptor approach was 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 QI(s) or SCI(s)²), and a pathway between the source and the receptor (e.g. by air for airborne 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.
- 9 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 (Zol) of the Proposed Scheme, and therefore potentially at risk of significant effects. The Zol is the area over 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 objectives³.
- 10 The identification of a source-pathway-receptor link does not mean that significant effects will arise. Rather, the likelihood for 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 airborne pollution) and the characteristics of the receptor (e.g. the sensitivities of the European site and its QIs / SCIs). Where uncertainty exists, the precautionary principle is applied⁴

² The term Qualifying Interest (QI) is used when referring to the habitats or species for which an SAC is designated; the term Special Conservation Interest (SCI) is used when referring to the bird species (or wetland habitats) for which an SPA is designated.

³ As defined in the *Guidelines for Ecological Impact Assessment in the UK and Ireland* (CIEEM, 2018)

⁴ 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).

The guidance document *Communication from the Commission on the Precautionary Principle* (European Commission, 2000) 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 possible and AA must be carried out.

2.3 Desktop Study

11 The desktop data sources used to inform the assessment presented in this report are as follows (accessed in February 2022 and updated in August 2022):

- Online data available on European sites and on Natural Heritage Areas (NHAs) or proposed Natural Heritage Areas (pNHAs) from www.npws.ie⁵, including conservation objectives documents;
- Online data records available on National Biodiversity Data Centre Database (NBDC, 2022);
- Online data records made available via an NPWS data request (NPWS, 2022);
- Information on the status of EU protected habitats and species in Ireland (National Parks & Wildlife Service, 2019a, 2019b and 2019c);
- Ordnance Survey Ireland (OSI) orthophotography (from 1995 to 2012) for the Proposed Scheme study area;
- Habitat and species GIS datasets provided by the NPWS, including Article 12 and Article 17 data⁶;
- Records from the Botanical Society of Britain and Ireland (BSBI, 2022);
- Information contained within the Flora of County Dublin (Doogue *et al.*, 1998)⁷;
- Environmental information/data for the area available from the EPA website www.epa.ie;
- Information on the status of EU protected habitats and species in Ireland (NPWS, 2019)⁸;
- Information on light-bellied Brent goose inland feeding sites from the Natura Impact Statement prepared for a Proposed Residential Development, St. Paul's College, Sybill Hill, Raheny, Dublin (Scott Cawley Ltd., 2017)⁹;
- The results of ecological surveys undertaken as part of the Environmental Impact Assessment (EIA) studies for the Proposed Scheme (see Section 2.5 below for details);
- Information on the location, nature and design of the Proposed Scheme; and
- Bus Connects Drone Imagery, surveyed November 2020.

2.4 Consultations

12 Table 1 outlines the Appropriate Assessment issues raised during consultation.

⁵ The following SAC and SPA GIS boundary datasets are the most recently available at the time of writing: SAC_ITM_2022_08 and SPA_ITM_2021_10.

⁶ 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 .

⁷ Doogue, D., Nash, D., Parnell, J., Reynolds, S. & Wyse Jackson, P. (eds) (1998). *Flora of County Dublin*. The Dublin Naturalists' Field Club, Dublin

⁸ NPWS (2019). *The Status of EU Protected Habitats and Species in Ireland*. Volume 1: Summary Overview. Unpublished NPWS report.

⁹ 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*.

Table 1: Principal AA issues Raised during Consultation

Consultee	Phase / Date of Consultation	Issues Raised	Relevant Section of the AA where this is addressed
<p>Department of Housing, Local Government and Heritage (formerly Department of Culture, Heritage and the Gaeltacht)</p>	<p>30 July 2019 Ref. G Pre00165/2019</p>	<p>The Department recommend identification, description, and assessment of direct and indirect impacts of the Proposed Scheme on the following features:</p> <ul style="list-style-type: none"> • Biodiversity in general and with specific attention to Natura 2000 sites. • 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). • species and / or habitats listed in the Habitats Directive inside or outside of Natura 2000 sites be recorded. • Species protected under the Wildlife Act, including protected flora. • Important bird areas such as those identified by Birdwatch Ireland. • Features of the landscape which are of major importance as biodiversity corridors to wild flora or fauna, as referenced in Article 10 of the Habitats Directive. 	<p>Section 2.5 Baseline Surveys, Section 3.2 Overview of Receiving Environment Section 3.2.1 European Sites, Section 3.3 Assessment of Potential Effects on European sites</p>
		<p>Detailed bird surveys should be undertaken at all times of the year to establish areas of the Proposed Scheme used by birds should be included in the AA.</p>	<p>Section 2.5 Baseline Surveys, Section 3.2 Overview of Receiving Environment Section 3.3 Assessment of Effects on European sites</p>
		<p>Appropriate Assessment addresses the issue of invasive alien plant and animal species and include detailed methods to ensure accidental introduction or spreading does not occur. The Department recommended that an Invasive Species Action Plan should form part of the planning application.</p>	<p>Section 3.2.3, Section 3.3.4. A non-native Invasive Species Management Plan has been prepared in respect of the Proposed Scheme as an appendix to the CEMP. It is not considered during the AA Screening</p>
		<p>Cumulative impacts of the Proposed Scheme be considered, to include interaction between different and /</p>	<p>Section 3.4 In-Combination Effects</p>

		<p>or approved plans and projects in the same area as the Proposed Scheme.</p> <p>The Proposed Scheme be subject to Appropriate Assessment in respect of potential to impact Natura 2000 sites either alone or in combination with other plans or projects, and must contain complete (contain 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>To assess mitigations, the following tasks must be completed:</p> <ul style="list-style-type: none"> List each of the measures to be introduced (e.g., noise bunds, tree planting). Explain how the measures will avoid the adverse impacts on the site. Explain how the measures will reduce the adverse impacts on the site. <p>Then, for each of the listed mitigation measures:</p> <ul style="list-style-type: none"> Provide evidence of how they will be secured and implemented and by whom. Provide evidence of the degree of confidence in their likely success. Provide a timescale, relative to the project or plan, when they will be implemented. <p>Where residual impacts remain, further mitigation measures may be required:</p> <ul style="list-style-type: none"> Evidence should be provided of how mitigation measures will be monitored. Monitoring should take place immediately down-stream of the Proposed Scheme. The applicant should not use any proposed post construction monitoring as mitigation to supplement inadequate information in the assessment. 	<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 3.3 Potential Impacts, Zone of Influence and Identifying European sites at Risk of Effects</p> <p>Section 3.3 Assessment of Potential Effects</p>
Inland Fisheries Ireland (IFI)	3 November 2020 (letter received from IFI)	No specific AA concerns raised, although the fisheries importance of the River Dodder and Grand Canal were noted and requirements for consideration including IFI <u>Guidelines on protection of fisheries during construction works in and adjacent to waters” (2016)</u>	N/A

2.5 Baseline Surveys

- 13 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.

2.5.1 Habitats and Flora Survey

- 14 Habitat surveys were carried out by Scott Cawley Ltd. between June and August 2018. Confirmatory surveys were subsequently undertaken again in August and October 2020 to check and update the presence and extent of habitats found in the 2018 habitat surveys. Additional habitat surveys were carried out to capture any changes to the proposed design since 2018 and include more recent surveys in May 2022 and August 2022. 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 Fossitt¹⁰ and in accordance with *Best Practice Guidance for Habitat Survey and Mapping*¹¹. 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 4th Edition*¹².

- 15 A desk study was carried out to identify all hydrological crossing points within the footprint of the Proposed Scheme. However, construction methodologies for the Proposed Scheme do not involve in-stream works, modifications to banks or significant disturbance as a result of the Proposed Scheme. Aquatic habitat surveys were carried out in earlier survey phases and the results of these are presented in order to contextualise the potential ecological receptors. However, it should be noted that no in-stream works are proposed as part of the Proposed Scheme and the desk study identified no sites where water bodies may be subject to significant disturbance.

2.5.2 Fauna Surveys

- 16 Ecological surveys relevant to the Proposed Scheme include habitat surveys, surveys for the presence or signs of terrestrial, mobile Annex II species (i.e. otter *Lutra lutra*), and surveys for Special Conservation Interest bird species. Dedicated fisheries or aquatic surveys were not required for this assessment as the Proposed Scheme is not hydrologically connected to any European site designated for Annex II fish species or white-clawed crayfish *Austropotamobius pallipes*. The nearest known European site designated for Atlantic salmon *Salmo salar*, river lamprey *Lampetra fluviatilis* and brook lamprey *L. planeri* is the River Boyne and River Blackwater SAC, located approximately 39km 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 54km south-west of the Proposed Scheme in the River Barrow catchment, River Nore catchment and River Ballyteigue-Bannow river catchment.

2.5.2.1 Otter

- 17 The footprint of the Proposed Scheme and suitable lands immediately adjacent were surveyed for otter activity as part of the multi-disciplinary walkover survey, undertaken between June and August 2018, and in August 2020, as well as follow on surveys in February 2021 and March 2022. The areas where otters were surveyed from included 150 metres up and downstream (where safely accessible) for watercourse crossings for which evidence of otter activity was known. 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.
- 18 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 were deemed to require otter surveys.
- 19 Given the known sensitivity of watercourses in proximity to the Proposed Scheme, dedicated otter surveys were carried out at three sites. Surveys were undertaken at the River Dodder and along the Owenadoher River. A corridor of approximately 150m upstream and downstream of the Proposed Scheme was surveyed

¹⁰ Fossitt, J.A. (2000). *A Guide to Habitats in Ireland*. Heritage Council, Kilkenny.

¹¹ Smith, G.F., O'Donoghue, P., O'Hara, K. & Delaney, E. (2011). *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council Church Lane, Kilkenny, Ireland

¹² Stace, C. (2019). *New Flora of the British Isles. 4th Edition*. C&M Floristics

to identify the presence of otter holts in September 2020. The Proposed Scheme, which is the subject of this assessment, does not involve any in-stream works, and the results of otter surveys are provided within this report in the context of the baseline environment.

- 20 Additional otter surveys (150m upstream and downstream of the Proposed Scheme) at the proposed crossing point at the Dodder_040, and Grand Canal were completed in February 2021 and March 2022.

2.5.2.2 Kingfisher

- 21 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 were deemed to require habitat suitability assessments for nesting kingfisher *Alcedo atthis*. During early iterations 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. One of these sites is located at the proposed crossing point on the River Dodder, connecting Dodder View Road to Rathdown Park. The other survey locations are at the proposed crossing points of the Owenadoher River, in the vicinity of Butterfield Avenue, Rathfarnham, at Woodview Cottages and Saint Mary's Avenue. As such, kingfisher habitat suitability assessment surveys were undertaken approximately 500m upstream and downstream from these locations to identify kingfisher potential in September 2020 as well as follow on surveys in March / April 2022 which captured changes in the Proposed Scheme design including the removal of all in-stream works.
- 22 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 during follow on surveys in March / April 2022. Where suitable habitat existed, surveys extended approximately 500m upstream and downstream of the proposed crossing point. Evidence of kingfisher activity at any potential nest holes was recorded.

2.5.2.3 Other Birds

- 23 The results of the desk study have informed the assessment of likely significant effects on breeding bird species arising from the Proposed Scheme.
- 24 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* (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.
- 25 There are three potentially suitable grassland sites which have the potential to host wintering bird species and for some which will be subject to habitat loss, or disturbance at the very least by the Proposed Scheme. Field surveys were carried out to confirm the suitability or presence of wintering birds at Bushy Park, Dodder View Road / Church Lane and Dodder View Road, adjacent to Rathdown Park. which were deemed suitable for wintering birds and were surveyed twice a month, between the months February and March 2020 and again between October 2020 to March 2021 (CBC1012WB001 and CBC1012WB002). Additional surveys were carried out at CBC1012WB003 and CBC1012WB001) twice monthly between the months October 2021 and March 2022. Additional transects (CBC1012WB003) were commissioned to capture subsequent design iteration changes of the Proposed Scheme. The results of the desk study and field surveys have informed the assessment of likely significant effects on wintering bird species arising from the Proposed Scheme.
- 26 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.

2.5.2.4 Aquatic Survey

- 27 Following on from Inland Fisheries Ireland (IFI) consultation response and the known ecological sensitivity of the River Dodder and (its tributaries), aquatic habitat surveys were carried out in earlier survey phases at a number of locations, namely CBC1012 AR001 along the River Dodder at Rathdown Park, along the Owenadoher River at Rathfarnham Mill CBC1012AR002 as well as upstream survey sites on the Owenadoher River at CBC1012AR004 and CBC1012AR003 (Triturus Environmental Ltd., 2020).
- 28 No surveys were undertaken in 2022 in respect of the Proposed Scheme as no watercourses are being intersected or interfered with, but the results of the 2020 surveys are presented in order to contextualise the receiving environment.

3 Provision of Information for Screening for Appropriate Assessment

- 29 The following sections provide information to facilitate the Appropriate Assessment screening of the Proposed Scheme to be undertaken by the competent authority.
- 30 A description of the Proposed Scheme and the receiving environment is provided to identify the potential ecological impacts. The environmental baseline conditions are described, 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.).
- 31 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 has the potential to 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 Description of the Proposed Scheme

- 32 The following sections provide information to facilitate the Appropriate Assessment of the Proposed Scheme to be undertaken by the competent authority. A description of the Proposed Scheme is provided to identify the potential ecological impacts.

3.1.1 Overview

- 33 The Proposed Scheme has an overall length of approximately 10km from end to end online with additional offline upgrades and quiet street treatment of approximately 2km and 1.5km respectively. The Proposed Scheme will be comprised of two main alignments, namely from Templeogue to Terenure (3.7km), and from Rathfarnham to the City Centre (6.3km).
- 34 The Templeogue to Terenure section will commence on the R137 Tallaght Road, east of the M50 junction 11 interchange. From here, the Proposed Scheme is routed via the R137 along Tallaght Road and Templeogue Road, through Templeogue Village, to Terenure Cross, where it joins the Rathfarnham to City Centre section.
- 35 The Rathfarnham to City Centre section will commence on the R821 Grange Road at the junction with Nutgrove Avenue, and is routed along the R821 Grange Road, the R115 Rathfarnham Road, the R114 Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower, Richmond Street South, Camden Street Upper and Lower and Wexford Street as far as the junction with the R110 at Kevin Street Lower and Cuffe Street where priority bus lanes end. From Cuffe Street to Dame Street along Redmond's Hill, Aungier Street, and South Great George's Street the route will involve a traffic lane and a cycle track in both directions where it will join the prevailing traffic management regime in the city centre.
- 36 In addition to the above, an alternative cycle facility will be provided along Harold's Cross Road / Terenure Road North between Terenure Cross and Parkview Avenue, as well as along Bushy Park Road, Wasdale Park, Wasdale Grove, Zion Road and Orwell Road.

- 37 For the purposes of describing the Proposed Scheme it has been split into four main sections which have also been divided as follows:
- Section 1: Tallaght Road to Rathfarnham Road;
 - Section 2: Nutgrove Avenue to Terenure Road North – Grange Road, Rathfarnham Road;
 - Section 3: Terenure Road North to Charleville Road – Terenure Road East, Rathgar Road; and,
 - Section 4: Charleville Road to Dame Street.
- 38 The Proposed Scheme includes an upgrade of the existing bus priority and cycle facilities. The scheme includes a substantial increase in the level of bus priority provided along the corridor, including the provision of additional lengths of bus lane resulting in improved journey time reliability. Throughout the Proposed Scheme bus stops will be enhanced to improve the overall journey experience for bus passengers and cycle facilities will be substantially improved with segregated cycle tracks provided along the links and protected junctions with enhanced signalling for cyclists provided at junctions.
- 39 Moreover, pedestrian facilities will be upgraded, and additional signalised crossings will be provided. In addition, urban realm works will be undertaken at key locations with higher quality materials, planting and street furniture provided to enhance the pedestrians experience, an example of this can be seen in Terenure, particularly at Terenure Cross.
- 40 The main characteristics of the Construction Phase of the Proposed Scheme that have potential for ecological impact are:
- 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;
 - Reconfiguration of traffic lanes throughout;
 - Permanent land take at a number of areas across the Proposed Scheme including:
 - 79 residential properties; and
 - 32 non-residential properties or land, including commercial, healthcare and educational institutes.
 - Temporary land take at a number of areas across the Proposed Scheme, in particular
 - Rathfarnham Castle boundary Wall; and,
 - Bushy Park along the Templeogue Road
 - Installation of new bus stops and junction / roundabout modification;
 - Property boundary reinstatement, signage replacement; relocation of and/or installation of lighting columns; and
 - Landscaping and tree planting, and reinstatement of temporary land acquisitions.

3.1.2 Structural Works

3.1.2.1 Retaining walls

There are no retaining walls greater than 1.5m (classified as principal structures) being impacted. All walls with a height of less than 1.5m are classified as minor retaining walls and as such not predicted to interfere with ecological receptors, as there is only one such wall (structure RW01 adjacent to access / service road at 252 – 256 Templeogue Road, a length of approximately 15m).

3.1.2.2 Templeogue Archway

The existing free standing stone arch adjacent to the R137 Templeogue Road will be cleared of the overgrown vegetation which currently covers it and conserved in its existing location. The existing fencing around the arch will be removed and the arch opened up to the public realm. It is proposed to install high quality stone paving, decorative lighting and soft landscaping elements around the arch as well as to construct a new footpath running behind the arch.

3.1.3 Surface Water Drainage Infrastructure

41 The surface water drainage system for the Proposed Scheme will discharge to 18 catchment areas based on topography to following surface water receptors: Owenadoher River (Owenadoher_010), River Dodder (Dodder_040), Grand Canal, Liffey Estuary Upper and London Bridge Pumping house and Ringsend WwTP, which then discharges to Liffey Estuary Lower, before ultimately draining to Dublin Bay. All drainage outfall discharges to surface waters represent point discharges. For the Proposed Scheme, there will be a net increase of 7,435 m² in the impermeable area ultimately discharging to Dublin Bay. The drainage design principles ensure that all runoff from increases in impermeable areas will be attenuated and there will be no net increase in the surface water flow discharged to these receptors.

42 The proposed Sustainable Urban Drainage Systems (SuDS) solutions are summarised in Table 2.

Table 2: Proposed SuDS and Impermeable Area Changes

Waterbody	Approximate Impermeable Surface Area			SuDS measures Proposed
	Existing (m ²)	Additional (m ²)	Percentage change (%)	
Dodder_040	12,773	3,504	27	Filter drain, Rain garden , Surface water channel
Dodder_050	4,996	1,069	21	Tree pit, Filter drain, Sealed drain, Rain garden
Owenadoher_010	1,822	1,405	77	Tree pit, Filter drain, Over-sized pipe, Sealed drain
Ringsend	11,904	2,015	17	Tree pit, Rain garden, Filter drain, Oversized pipe

3.1.4 Construction Compounds

43 The locations of the Construction Compounds in relation to the Proposed Scheme have been selected due to the amount of available space, its location near the majority of the Proposed Scheme major works and its access to the National and Regional Road network. There will be five Construction Compounds for the Proposed Scheme. They will be located in the following locations:

- TR1 – Located at south of the Spawell roundabout, at the Tallaght Road / Spawell Link Road junction;
- TR2 – Located at north-west of Terenure Road North, between Eaton Road and Eagle Hill Avenue;
- TR3 – located at Dodder View Road, across the road from Bushy Park, in the greenfield area between Dodder View Road, Woodview Cottages and Church Lane;
- TR4 – Located on Military Road, perpendicular to Rathmines Road Lower, south of St Marys College; and,
- TR5 – Located on Richmond Street South, on the slip road between Richmond Street South and Harcourt Road.

44 The locations of the Construction Compounds are shown in Images 2 to 6. These Construction Compounds will contain a site office, and welfare facilities for NTA personnel and contractor personnel. Limited car parking will be allowed at the Construction Compounds. Materials such as topsoil, subsoil, concrete, rock etc., will be stored at the Construction Compounds for reuse as necessary. Items of plant and equipment

will also be stored within the Construction Compounds. The Construction Compounds will be in place for the duration of the Construction Phase of the Proposed Scheme, estimated at approximately 24 months.

- 45 The Construction Compounds will be engineered with appropriate services. Water, wastewater, power, and communications connections will be organised by the appointed contractor. At work areas along the Proposed Scheme, where permanent provisions (for the duration of the construction programme) are not practicable, appropriate temporary provisions will be made including the use of generators if required. Temporary welfare facilities will need to be used, for example, portable toilets in the vicinity of works. Wastewater from temporary welfare facilities will be collected and disposed of to a suitably licenced facility.
- 46 Following completion of the Construction Phase, the Construction Compounds will be cleared and reinstated to match pre-existing conditions

Image 2: Location and Extent of Construction Compound TR1

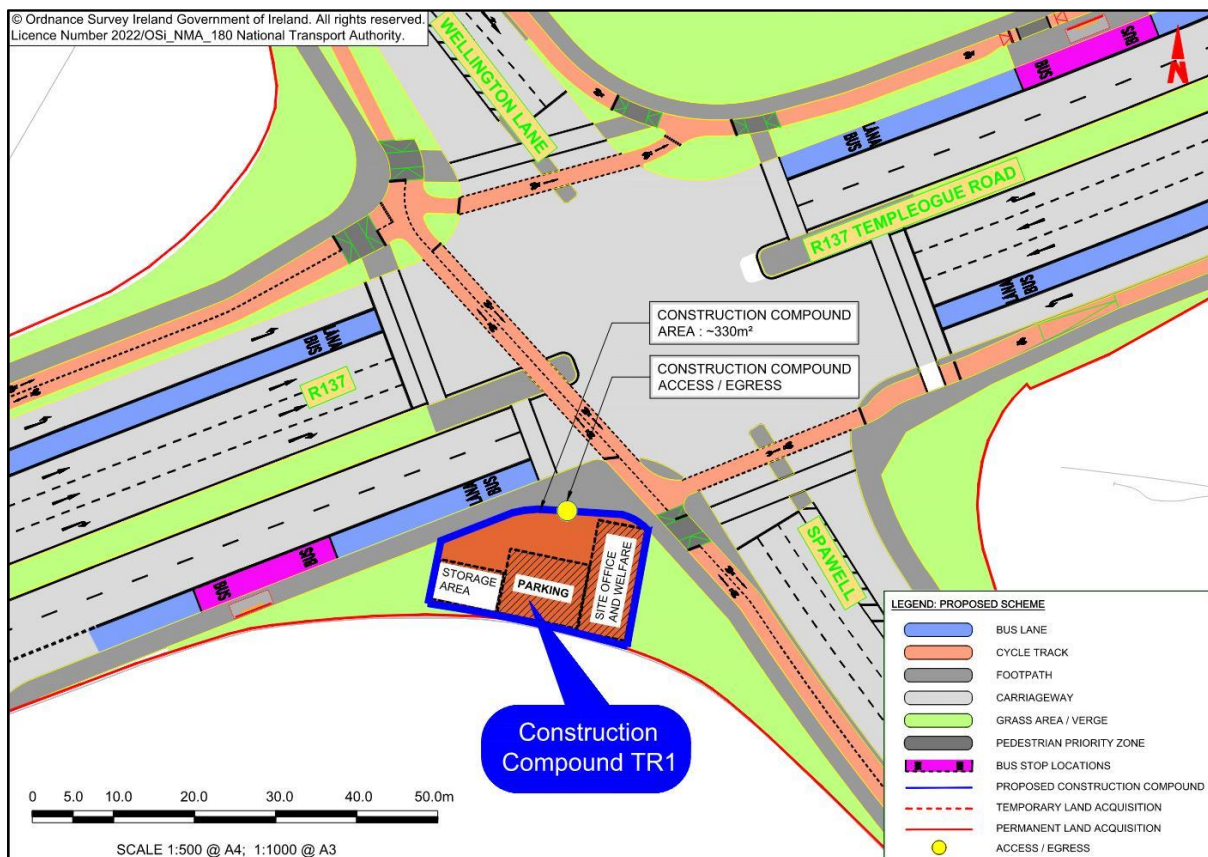


Image 3: Location and Extent of Construction Compound TR2

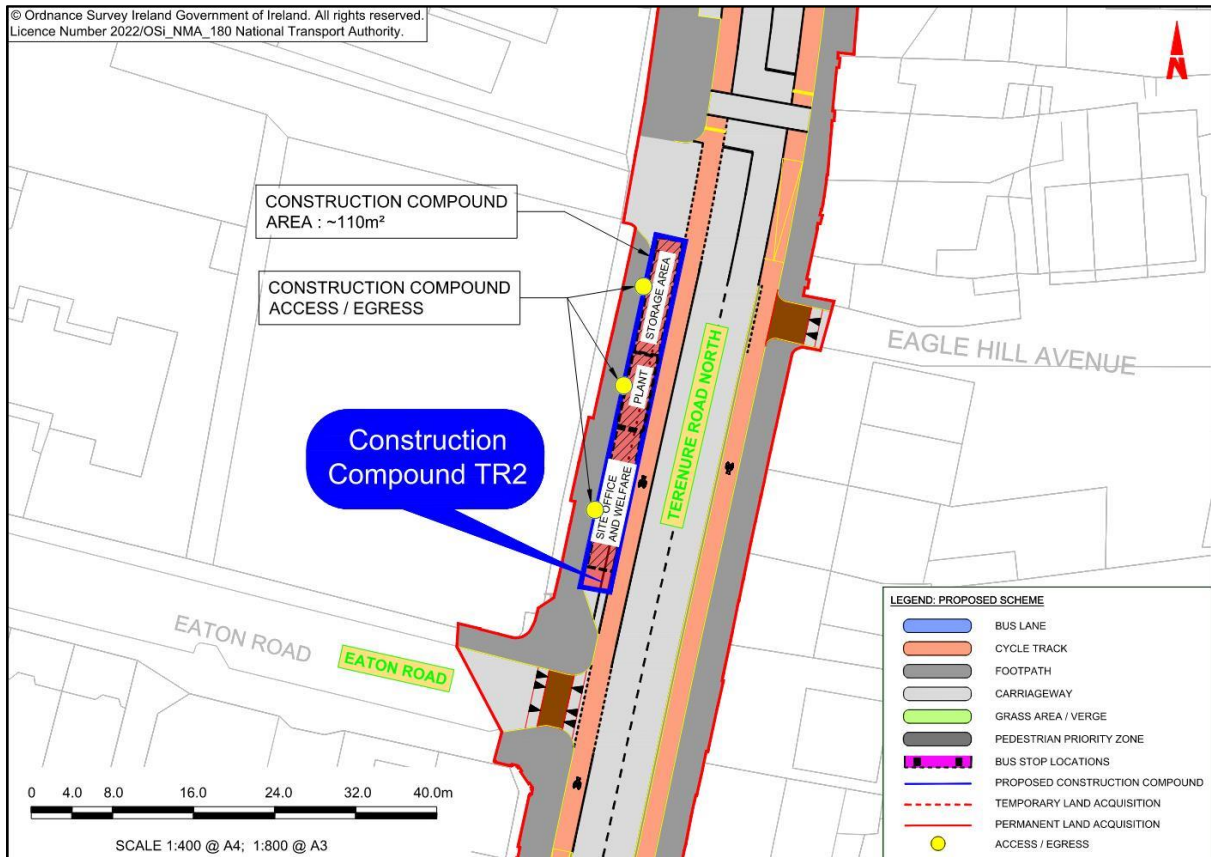


Image 4: Location and Extent of Construction Compound TR3

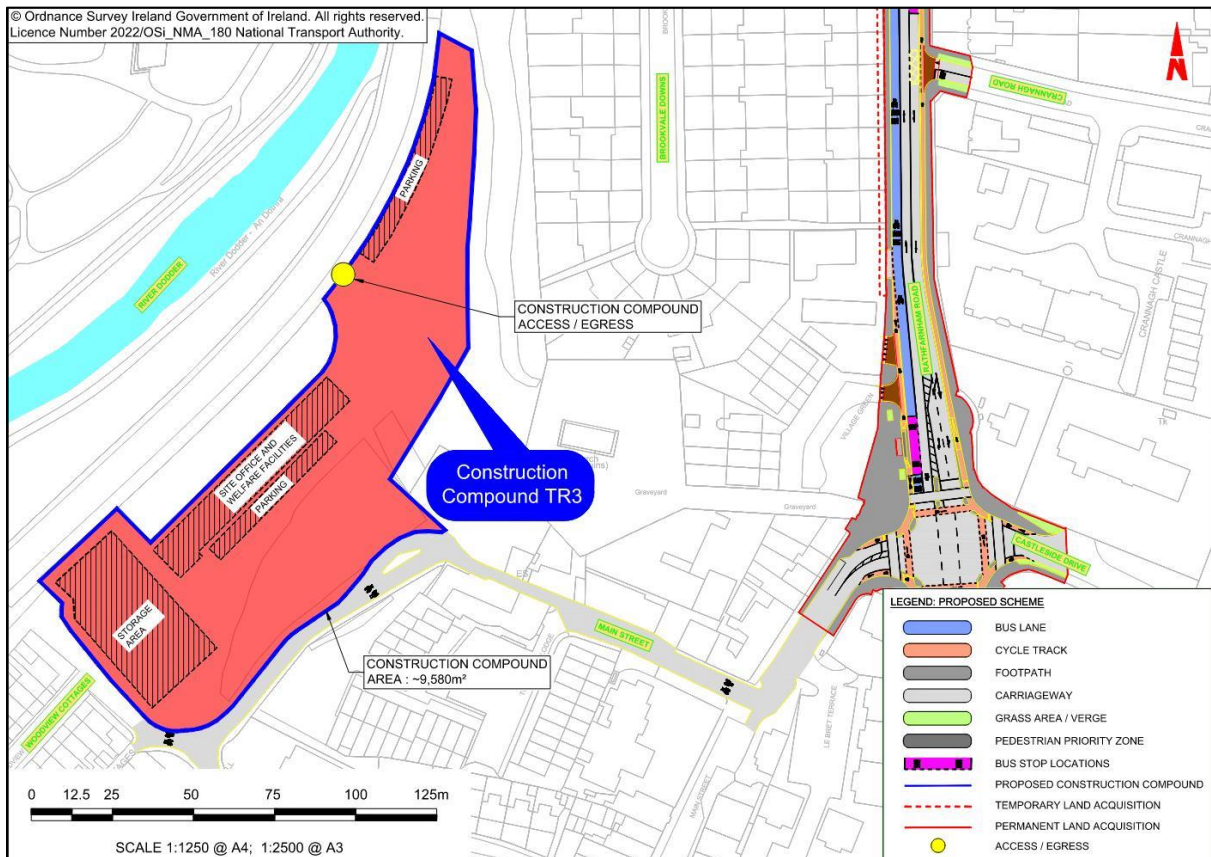


Image 5: Location and Extent of Construction Compound TR4

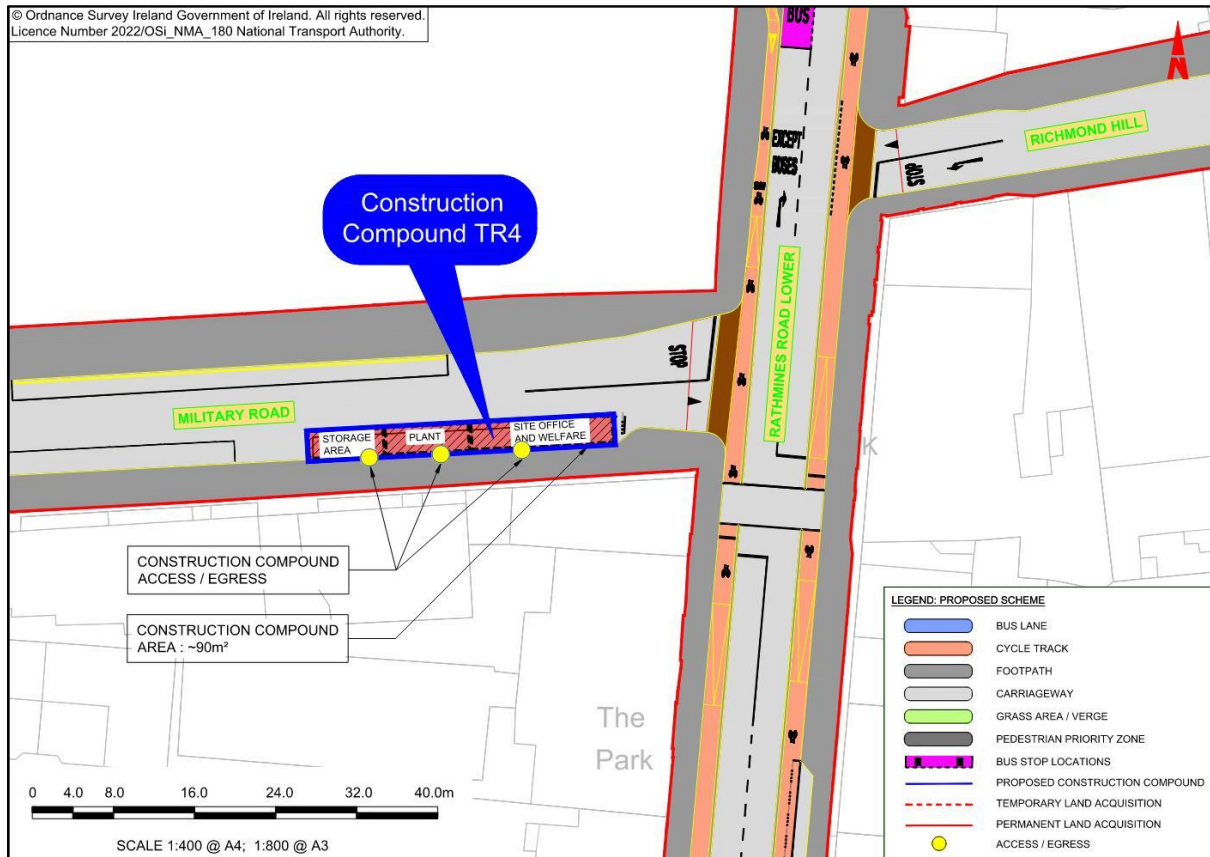
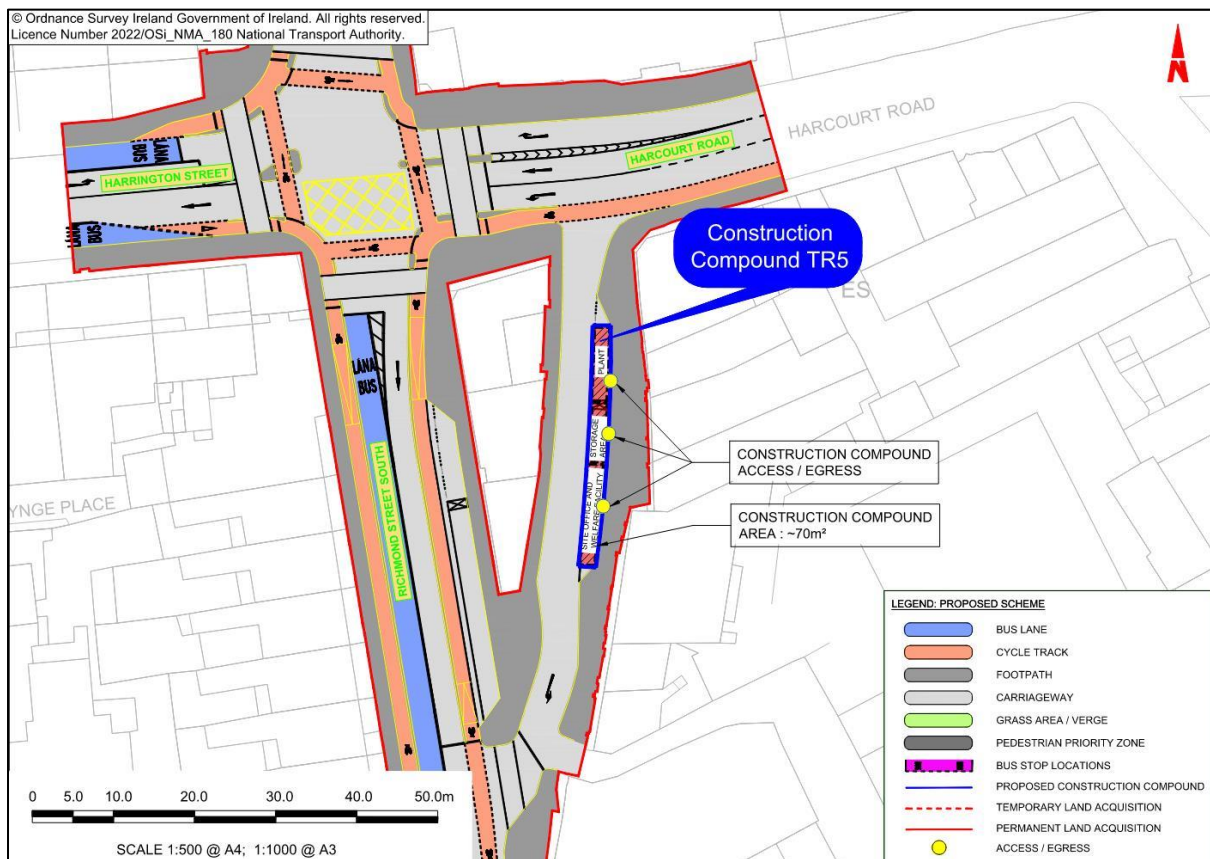


Image 6: Location and Extent of Construction Compound TR5



3.1.5 Estimated Construction Phase Duration

47 The duration of the Construction Phase is estimated to be 24 months.

3.1.6 Operational Phase

48 The main characteristics of the Operational Phase of the Proposed Scheme that have potential for likely significant effects on European sites and their QI / SCI include:

- The presence and operation (traffic) of the road;
- The presence of additional lighting; and,
- Routine maintenance

3.2 Overview of the Receiving Environment

3.2.1 European sites

- 49 The Proposed Scheme does not overlap with any European site. The Proposed Scheme is hydrologically connected to Dublin Bay via the receiving surface water network. The nearest European sites in Dublin Bay are South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC, which are located approximately 2.7km downstream of the closest point of the Proposed Scheme to the Liffey Estuary Upper. The Proposed Scheme is also hydrologically connected to the Wicklow Mountains SAC (via the River Dodder and the Owenadoher River), located approximately 6.1km upstream from the Proposed Scheme.
- 50 There are eight European sites located in Dublin Bay which are downstream of the Proposed Scheme. These sites include 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 Islands SPA. European sites are hydrologically connected to the Proposed Scheme via the River Dodder, the Owenadoher River, the Grand Canal, the Liffey Estuary Upper and Lower and Ringsend Wastewater Treatment Plant. In addition, Wicklow Mountains SAC is located upstream of the Proposed Scheme and is hydrologically connected to the Proposed Scheme via the Dodder_050.
- 51 There are nine SPAs designated for SCI species that are known to forage and / or roost at inland sites across Dublin City and / or utilise Dublin Bay. These include South Dublin Bay and River Tolka SPA, North Bull Island SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Malahide Estuary SPA, and The Murrough SPA.
- 52 In addition, Rockabill to Dalkey Island SAC and Lambay Island SAC are designated for mobile QI species known to utilise the Dublin Bay and the Liffey Estuary Lower.
- 53 All of the European sites present in the vicinity of the Proposed Scheme are shown on Figure 1 at the end of this report. The QIs / SCIs of the European sites in the vicinity of the Proposed Scheme are provided in Appendix I.

3.2.2 Habitats

- 54 The Proposed Scheme is located in a highly urbanised environment. Habitats present in the footprint of the Proposed Scheme include the following:
- Flower beds and borders (BC4);
 - Stone walls and other stonework (BL1);
 - Buildings and artificial surfaces (BL3);
 - Exposed sand, gravel or till (ED1);
 - Spoil and bare ground (ED2);
 - Depositing lowland rivers (FW2);

- Canals (FW3);
- Amenity Grassland (Improved) (GA2);
- Dry meadows and grassy verges (GS2);
- Wet grassland (GS4);
- Residential;
- (Mixed) broadleaved woodland (WD1);
- Scattered trees and parkland (WD5);
- Hedgerows (WL1);
- Treelines (WL2);
- Scrub (WS1);
- Immature woodland (WS2); and,
- Ornamental/ non-native shrub (WS3).

55 None of these habitats corresponds to Annex I or Qualifying Interest habitats. This includes Dry meadows and grassy verges habitat GS2, which in certain situation corresponds to Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*) (6510). The species and management of the habitat along the Proposed Scheme is not analogous to the Annex I hay meadow habitat.

3.2.3 Flora and Fauna Species

- 56 No records of any Annex II plant species were recorded within the footprint of the Proposed Scheme during field surveys.
- 57 There were three non-native invasive plant species listed on the Third Schedule of the Birds and Habitats Regulations, 2011 which were identified along the Proposed Scheme; Japanese knotweed *Reynoutria japonica*, Himalayan balsam *Impatiens glandulifera* and three-cornered garlic *Allium triquetrum*.
- 58 The desk study returned records of a total of 18 species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations across the wider study area (i.e., grid Squares O12 and O13). There were 10 listed species recorded within 1km of the Proposed Scheme (NBDC 2022); include several records of Himalayan balsam, Japanese knotweed and Nuttall's waterweed *Elodea nuttallii* along the Grand Canal within the 2km grid Square O13R, and water fern *Azolla filiculoides* by Grand Canal adjacent to Leeson street O1632. Bohemian knotweed *Reynoutria japonica x sachalinensis = R. x bohémica* (O142294) along the Dodder at Springfield avenue, Rathfarnham. There are also records for three-cornered garlic throughout the wider survey area, giant-rhubarb *Gunnera tinctoria* along the River Dodder at Milltown, American skunk-cabbage *Lysichiton americanus* along the River Dodder at Sean Moore Park Tallaght and giant hogweed *Heracleum mantegazzianum* along the River Dodder at Milltown and at Dodder Park, Firhouse, and Himalayan knotweed *Persicaria wallichii* within the 2km grid Square O12J at Bushy Park.
- 59 Canadian waterweed *Elodea canadensis*, which was also documented from along the Grand Canal, was delisted as a third schedule species, with the introduction of the European Communities (Birds and Natural Habitats) (Amendment) Regulations 2015, S.I. No. 355/2015. These species were not present within the footprint of the Proposed Scheme.
- 60 There were ten areas on non-native invasive plant species (Japanese knotweed, Himalayan balsam and three-cornered garlic) listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 identified along or adjacent to the Proposed Scheme. These locations are summarised in Table 3.

Table 3 Non-native Invasive Plant Species Listed in the Third Schedule of the Birds and Habitats Regulations 2011 recorded along or adjacent to the Proposed Scheme

<u>Reference</u>	<u>Species</u>	<u>Location</u>	<u>Inside / Outside Red Line Boundary</u>
CBC1012IAPS001	Japanese knotweed <i>Reynoutria japonica</i>	Small stand on northern bank of River Dodder	Outside
CBC1012IAPS002	Japanese knotweed <i>Reynoutria japonica</i>	Small stand on northern bank of Owenadoher River	Outside
CBC1012IAPS003	Himalayan balsam <i>Impatiens glandulifera</i>	Along River Dodder edge at Austin Clarke Bridge	Outside
CBC1012IAPS004	Three-cornered leek <i>Allium triquetrum</i>	Aquatic specialist survey 2020 "was present locally" along the banks of the Owenadoher River	Outside
CBC1012IAPS005	Japanese knotweed <i>Reynoutria japonica</i>	Aquatic survey 2020 (Triturus Environmental Ltd.) noted it "was common throughout the site" along the banks of the Owenadoher River	Outside
CBC1012IAPS006	Japanese knotweed <i>Reynoutria japonica</i>	Aquatic survey 2020 (Triturus Environmental Ltd.) noted it was scattered throughout the site (but more prevalent upstream)" along the banks of the Owenadoher River	Outside
CBC1012IAPS007	Japanese knotweed <i>Reynoutria japonica</i>	Along the River Dodder beside Bushy Park pond	Outside
CBC1012IAPS008	Himalayan balsam <i>Impatiens glandulifera</i>	Four stands on southern bank of River Dodder, adjacent western side of Pearse Bridge	Outside but adjacent
CBC1012IAPS009	Himalayan balsam <i>Impatiens glandulifera</i>	Large strand with extensive cover on southern bank of River Dodder, adjacent eastern side of Pearse Bridge	Outside but adjacent
CBC1012IAPS010	Himalayan balsam <i>Impatiens glandulifera</i>	Sparse single strands on northern and southern banks of River Dodder	Outside but adjacent

3.2.3.1 Otter

- 61 Evidence of otter was identified at two river water bodies hydrologically connected to the Proposed Scheme, namely the Dodder_040, and the Owenadoher River. Evidence of a holt CBC1012M003 within the roots of a sycamore tree was identified along the Owenadoher River, 90m west of the Proposed Scheme, at Butterfield Avenue (and 145m south west of Construction Compound TR3) during multidisciplinary surveys and during aquatic surveys conducted by Triturus Environmental Ltd. in 2020. This holt site was subsequently monitored under NPWS licence issued to Scott Cawley Ltd. using a camera trap for a period of two months with no otter activity observed at that time.
- 62 Evidence of otter in the form of spraints and potential slides were recorded throughout the Owenadoher and Dodder_040 river water bodies in 2020, 2021 and 2022 field surveys. The Proposed Scheme crosses the Dodder_040 at the existing Pearse Bridge. Spraints were observed along prominent abutments of the existing Bridge and on boulders near the riverbanks. In addition, mammal tracks and slides were also recorded. Evidence of otter was not recorded at the proposed Grand Canal crossing point.

- 63 Desk study records include nine live sightings along the River Dodder including one record at Firhouse in 2012 approximately 1km upstream of the Proposed Scheme, one record at Dodder Valley Park in 2016 adjacent to the Proposed Scheme, one record at Bushy Park in 2017 adjacent to the Proposed Scheme, and four records adjacent to the Proposed Scheme at Rathfarnham; two in 2011 and two in 2017. There was one record returned along the Grand Canal at Charlemont Mall in 2016 approximately 100m from the Proposed Scheme (NBDC Online Database, 2022).
- 64 The River Dodder is known to support a large otter population. During the Dublin City Otter Survey¹³, three holts were recorded along the River Dodder between M50 and Tempelogue. The Proposed Scheme crosses the River Dodder approximately 2km downstream of two holts which were recorded in separate study) at Dodder Valley Park and approximately 1km upstream of a holt at The High School Rathfarnham, during the Dublin City Otter Survey (Macklin *et al.*, 2019). Macklin *et al.* (2019) also recorded otter signs e.g. tracks, slides etc., distributed along the course of the River Dodder between the M50 junction and the Liffey Estuary Lower (Macklin *et al.*, 2019).
- 65 The Owenadoher River, is located 90m west of the Proposed Scheme at Butterfield Avenue. The river water body discharges into the Dodder_040 at Bushy Park and is known for its high otter activity in the context of Dublin City. The desk study identified 30 signs along its 3.8km length. Holts and spraints were recorded within 1km of the Proposed Scheme at Rathfarnham Village. High otter activity was recorded along Whitechurch Stream, a tributary of the Owenadoher River where a holt was recorded within 2km of Rathfarnham Village (Macklin *et al.*, 2019). This holt was observed again during the 2020 surveys and monitored.
- 66 Although not recorded during the field surveys, otter are considered to be present throughout the Grand Canal within Dublin City. The NBDC holds records for otter within 1km of the Proposed Scheme along the Grand Canal at Dolphins Barn from 2014, and at Portobello from 2016 (NBDC Online Database, 2022).
- 67 In an Irish context, the conservation status of otter is 'Least Concern' (Marnell *et al.*, 2019) due to population recoveries since 2009. However, otter remains 'Near Threatened' at a European and Global context (Roos *et al.*, 2015) and is listed on Annex II and Annex IV of the Habitats Directive.
- 68 Wicklow Mountains SAC, the closest European site designated for otter, is located approximately 8.6km upstream of the Proposed Scheme (from the Dodder_040 proposed crossing point). The Proposed Scheme interacts with the following watercourses: the River Dodder, Owenadoher River, and Liffey Estuary Upper and Lower; of which River Dodder and Owenadoher River hydrologically connect the Proposed Scheme to the Wicklow Mountains SAC. The Proposed Scheme falls within the WFD sub-catchment; Dodder_SC_010, within which the Wicklow mountains SAC is also located in. Otter territories are known to be within the range of 7.5km for females and 21km for males (Ó' Neill *et al.*, 2008). Therefore, Wicklow Mountains SAC may fall within the SCI otter, and as such otter populations within the footprint of the Proposed Scheme could potentially be connected to the SAC population.

3.2.3.2 Marine mammals

- 69 The Proposed Scheme is hydrologically connected to Dublin Bay via the River Dodder (Dodder_040 and 050), Owenadoher River (Owenadoher_010), Grand Canal and Liffey Estuary Upper and Liffey Estuary Lower as well as Ringsend WwTP including London Bridge pumping Station. Harbour seal *Phoca vitulina*, grey seal *Halichoerus grypus*, and harbour porpoise *Phocoena phocoena* are known to be present in Dublin Bay and all are listed on Annex II of the Habitats Directive. The nearest European site for which harbour seal and grey seal have been designated is Lambay Island SAC located approximately 22.1km from the Proposed Scheme. The nearest European site for which harbour porpoise has been designated is Rockabill to Dalkey Island SAC located approximately 10.5km from the Proposed Scheme.

¹³ 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.

3.2.3.3 Kingfisher

- 70 The desk study found that kingfisher, an Annex I bird species, are known to occur within 1km of the Proposed Scheme and across the wider study area, particularly along larger, sylvan watercourse corridors. The desk study returned multiple records from River Dodder, the Owenadoher River as well as the Grand Canal. The River Dodder is adjacent to the Proposed Scheme and is hydrologically connected to the scheme via Storm water overflows. Likewise, the Proposed Scheme crosses the River Dodder and the Grand Canal, although no instream works are planned. In particular, populations of kingfisher are reported to be present along the River Dodder¹⁴ and Owenadoher River¹⁵. There are also records of kingfisher on the Grand Canal, upstream of the Proposed Scheme¹⁶.
- 71 Habitat suitability assessment surveys carried out in September 2020 recorded suitable habitat for nesting kingfisher within 500m of the proposed crossing point of the Owenadoher River, between Butterfield Avenue and Woodview Cottages, and along the River Dodder, in the vicinity of the proposed crossing point which will link the Dodder View Road and Rathdown Park. At the Owenadoher survey site, vertical banks represent potential suitable habitat for nesting kingfisher. Limited kingfisher habitat suitability surveys were undertaken in March / April 2022 to capture changes to the Proposed Scheme. The River Dodder survey site is considered to have limited suitability in parts for nesting kingfisher, often due to high levels of disturbance from humans and dogs, as well as alteration of the river bank, e.g. downstream Dodder flood defence schemes. Overhanging trees along the River Dodder and Owenadoher River are considered to have roosting / fishing potential for kingfisher. Kingfisher were recorded on one occasion within the footprint of the Proposed Scheme (west of Pearse Bridge on the Rathfarnham road crossing of the River Dodder), during the multi-disciplinary surveys carried out in 2018.
- 72 The nearest European site for which this species is designated is River Boyne and River Blackwater SPA, which is located approximately 38.7km from the Proposed Scheme. Kingfisher populations within close proximity to the Proposed Scheme are not deemed to be SCI species.

3.2.3.4 Other Birds

- 73 The desk study returned records of three breeding gull species within 300m of the Proposed Scheme which may use inland amenity grassland feeding sites including black-headed gull *Chroicocephalus ridibundus*, herring gull *Larus argentatus* and lesser black-backed gull *Larus fuscus*.
- 74 The desk study returned records of a total of 47 regularly occurring wintering bird species in the wider study area (i.e., grid Squares O12 and O13). Records included seven species listed under Annex I of the Birds Directive, 34 SCI species, and an additional four Red listed and two Amber listed species. The majority of wintering birds identified in the desk study are typically found in coastal, estuarine and intertidal habitats including the Tolka Estuary, North Bull Island transitional water body, and Dublin Bay. A desk-based review of lands within 300m of the Proposed Scheme returned records of eight SCI wintering bird species which may use inland amenity grassland feeding sites, including light-bellied Brent goose, black-headed gull, redshank, golden plover, oystercatcher, herring gull, lesser-black-backed gull and common gull.
- 75 A review of a study into light-bellied Brent goose inland feeding sites⁸ has identified no known inland wintering bird feeding sites within the footprint of the Proposed Scheme. There is one known inland wintering bird feeding site within 300 metres of the Proposed Scheme i.e. the disturbance ZoI. Tymon Park (Major Importance,)¹⁷ is immediately adjacent to the Proposed Scheme at its western edge at the M50 / N81 interchange.

¹⁴ DCC (2022). *Dublin City Biodiversity Action Plan 2021-2025*.

¹⁵ SDCC (2010). *South Dublin County Heritage Plan 2010-2015*.

¹⁶ FERS Ltd. (2018). *Ecological survey of Clonburris Strategic Development Zone, Clondalkin, Co. Dublin*.

¹⁷ 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.

- 76 Wintering bird surveys were carried out for the Proposed Scheme at three transects, namely CBC1012WB001, CBC1012WB002 and CBC1012WB003 as discussed in Section 2.5.2.3. Table 4 provides a summary of the findings of the winter bird surveys with respect to these species which are of highest conservation concern and were recorded within winter bird survey sites.
- 77 Wintering bird surveys were carried out for the Proposed Scheme at three locations;
- CBC1012WB001: Green space located between Church Lane and Dodder View Road, adjacent to Bushy Park Carpark. The area is maintained through regular cutting. Grass cover was low / moderate across the survey period, with a high herbaceous cover during spring months when daffodils *Narcissus* spp. come to flower, which covers the entire transect. Disturbance was noted as low, except during the 2020 / 2021 survey period there was a construction yard present for ongoing works at the River Dodder. Black-headed gulls were observed in this transect area, and an occurrence of grey heron *Ardea cinerea* during the 2019 / 2020 survey period.
 - CBC1012WB002: Green space located between River Dodder and Dodder View Road, adjacent to Pearse Bridge. The area is maintained through regular cutting by the local authority. Grass cover was moderate across the survey period. Disturbance was noted as low within the site but is actively used by the public for recreational activities, mainly for walking through into Bushy Park. Black-headed gull was the only wintering bird species recorded on this grassland during the surveys.
 - CBC1012WB003: Recreational green space located in Bushy Park, Terenure, adjacent to the Templeogue Road. The area is maintained regularly through cutting by the local authority. Grass cover was low / moderate across the survey period. Disturbance was noted as high within the site including dogs off the leash and public recreational activities (rugby, running, walking, cycling). Treelines within Bushy Park are tall and located between each green field area (i.e. pitches). No birds were recorded using this transect area during the 2020 / 2021 survey period, while only one black-headed gull was recorded during the 2021 / 2022 survey season.
- 78 CBC1012WB001 and CBC1012WB002 were surveyed over seven consecutive weeks across February and March 2020, and additionally twice a month, between the months of November 2020 and March 2021. While all three transects were surveyed again twice a month, between the months of October 2021 and March 2022. Species recorded included herring gull, black-headed gull and grey heron (Table 4).

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.

Table 4: Wintering birds of Conservation Concern recorded at sites CBC1012WB001 to CBC1012WB003 during the wintering bird surveys

Common Name / Scientific Name / BTO Code	Site: Peak Count and Activity in the Study Area (2020/2021)	Conservation Importance			Nearest SPA Designated for SCI Species
		BoCCI (B – Breeding / W - Wintering)	Annex I	SCI	
Grey heron <i>Ardea cinerea</i> (H.)	CBC1012WB001: Single individual on ground (04/03/2020)	Green (B/W)	-	Y	Wexford Harbour and Slobs SPA approximately 91km
Black-headed gull <i>Chroicocephalus ridibundus</i> (BH)	CBC1012WB001: 21 birds feeding within transect (28/02/2020); CBC1012WB002: Two birds feeding within transect (24/11/2020) CBC1012WB003: 21 birds feeding within transect (01/02/2022);	Amber (B/W)	-	Y	South Dublin Bay and River Tolka Estuary SPA approximately 2.6km
Herring gull <i>Larus argentatus</i> (HG)	CBC1012WB001: Single individual foraging within transect (11/01/2022)	Amber (B/W)	-	y	Ireland's Eye SPA approximately 14.5km

79 Wintering bird activity was low across all visits. Table 5 compares peak counts identified across surveys to their national and international populations.

Table 5: Wintering bird species recorded during wintering bird surveys in comparison to the 1% of its International and National Populations

Common Name / Scientific Name / BTO Code	Peak Count	Associated European sites within the ZOI	1% of International Population	1% of National Population
Black-headed gull <i>Chroicocephalus ridibundus</i> (BH)	21	South Dublin Bay and River Tolka Estuary SPA North Bull Island SPA The Murrough SPA	31,000	n/a
Herring gull <i>Larus argentatus</i> (HG)	1	Ireland's Eye SPA Lambay Island SPA Skerries Islands SPA	14,400	n/a

80 A review of a study into light-bellied Brent goose inland feeding sites⁸ has identified one *ex-situ* wintering bird feeding site in the footprint of the Proposed Scheme, namely Tymon Park. There are no inland

wintering bird feeding sites within approximately 300m of the Proposed Scheme i.e. the disturbance Zoi¹⁸. However, there are at least three that are within 1km of the Proposed Scheme as follows:

- Eamon Ceant Park;
- St Mary's College RFC; and
- Templeogue College.

81 A number of SPAs have been included on a precautionary basis for assessment as it cannot with certainty be confirmed that their SCI species do not use areas in the vicinity of the Proposed Scheme as *ex-situ* habitat.

3.2.4 Fish

82 The Proposed Scheme does not entail any in stream works. However, the results of the 2020 surveys are provided here for context as Atlantic salmon, river lamprey and the brook lamprey are listed on Annex II of the EU Habitats Directive. There will be no direct interference with them and as they are not associated with any European sites within the zone of influence of the Proposed Scheme, they are discussed in the EIAR Chapter 12 (Biodiversity) for the Proposed Scheme.

83 In respect of salmonids – Atlantic salmon and brown Trout *Salmo trutta*, the results of aquatic surveys along the River Dodder at Rathdown Park CBC1012AR001 indicated excellent salmonid habitat overall, particularly in terms of spawning. Nursery and holding habitats were of good quality and Atlantic salmon have previously been recorded from the River Dodder. Four sites were electro-fished in the Dodder River catchment as part of the 2011 WFD surveillance monitoring programme in rivers. The Mount Carmel Hospital sampling site located approximately 1.2km downstream of the Proposed Scheme recorded a total of five fish species; brown trout was the most abundant species, followed by three-spined stickleback *Gasterosteus aculeatus*, stone loach *Barbatula barbatula*, eels *Anguilla anguilla* and minnow *Phoxinus phoxinus*. Atlantic salmon were recorded at the Beaver Row sampling site approximately 4.5km downstream of the Proposed Scheme (Kelly *et al.*, 2011). Inland Fisheries Ireland surveyed nine sites along the course of the River Dodder in September 2018. Five fish species were recorded with brown trout the most abundant. Other species recorded comprise; stone loach, three-spined stickleback, minnow and European eel (Matson *et al.*, 2019).

84 The results of the aquatic surveys along the Owenadoher River at Rathfarnham Mill CBC1012AR002 indicated good salmonid habitat, although spawning and holding habitat was superior upstream at sites CBC1012AR004 and CBC1012AR003. Nursery was good overall and brown trout were evidently plentiful.

85 In respect of lamprey (brook lamprey and river lamprey), survey site CBC1012AR001 indicated that lamprey habitat was limited to spawning substrata, with no suitable silt accumulations for ammocoetes present. While the three other survey sites on the Owenadoher River offered some good physical suitability for lamprey spawning, the swift flows and general eroding/spate nature precluded fine sediment deposition and larval habitat was largely absent (Triturus Environmental Ltd., 2020). Lamprey are not considered further in this Appropriate Assessment and the European sites for which they are a QI species including the River Boyne and River Blackwater SAC and the River Barrow and River Nore SAC are both a considerable distance away in different catchments with no hydrological connectivity with the Proposed Scheme.

86 In respect of European eel noted that the four sampling sites on the River Dodder and Owenadoher River offered 'Moderate' suitability overall. The river is likely to support European eel as it offers greater

¹⁸ 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.

frequency of instream refugia, better prey resources, greater proportion of deeper glide / pools etc. Eel are not considered further in the Appropriate Assessment.

3.2.5 Invertebrates

- 87 White-clawed crayfish were not recorded during the aquatic surveys conducted on the River Dodder (Triturus Environmental Ltd., 2020). The desk study (see Appendix IV in Volume 4 of this EIAR) did not return records for white-clawed crayfish within the footprint of the Proposed Scheme. As such, white-clawed crayfish are not considered further in the assessment and the nearest European site designated for white-clawed crayfish is the River Barrow and River Nore SAC, which is located approximately 51km south-west of the Proposed Scheme in the River Barrow catchment, River Nore catchment and River Ballyteigue-Bannow catchment.
- 88 The desk study (see Appendix IV) did not return records for marsh fritillary *Euphydryas aurinia* within the footprint of the Proposed Scheme. Desk study records in the wider area were largely historical (pre-1980s). Recent records for marsh fritillary were identified 3.8km south of the Proposed Scheme at Killakee Rathfarnham (NBDC Online Database, 2022). As such, marsh fritillary is not considered further in this Appropriate Assessment.

3.2.6 Hydrology

- 89 The Proposed Scheme crosses a total of three watercourses: the Grand Canal, and the River Dodder twice, although it will not require any instream works within them. The Proposed Scheme is also hydrologically connected to Dublin Bay via the River Dodder (Dodder_040 and 050), Terenure Stream (Dodder_040), Owenadoher River (Owenadoher_010), Grand Canal and Liffey Estuary Upper, Liffey Estuary Lower as well as Ringsend WwTP including London Bridge pumping station.
- 90 The Proposed Scheme lies within the Dodder_SC_010 WFD sub-catchment. The River Dodder flows in a north-easterly direction through south Co. Dublin, discharging to the River Liffey at Grand Canal Dock in Dublin city (Matson *et al.*, 2019). The WFD sub-catchment Dodder_SC_010 was assigned an Ecological fish status of 'Good' in 2018 in the upper reaches and deemed 'Not at Risk' of failing to meet the WFD objectives. At Dodder Valley Park the River Dodder [Dodder_40] was assigned an ecological fish status of 'Poor' and deemed to be 'At Risk' of failing to meet its WFD objectives (EPA, 2018). At Bushy Park the River Dodder [Dodder_50] was assigned an ecological fish status of 'Moderate' and deemed to be 'At Risk' of failing to meet its WFD objectives (EPA, 2018).
- 91 Terenure College Stream [Dodder_50], which discharges to the River Dodder at Bushy Park, was assigned an ecological fish status of 'Moderate' and deemed to be 'At Risk' of failing to meet its WFD objectives (EPA, 2018).
- 92 The Owenadoher River, which discharges to the River Dodder at Rathfarnham Mill, was assigned an Ecological fish status of 'Good' in 2018 and deemed to be 'At Risk' of failing to meet its WFD objectives (EPA, 2018).
- 93 The Grand Canal runs from Dublin port on a westerly course via Tullamore to join the River Shannon near Banagher. Due to its nature, it is classed as an artificial water body. The Grand Canal achieved good ecological potential (GEP) in the 2010-2012 period (EPA, 2012).
- 94 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 6.

Table 6: 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	Name of and Distance to Downstream Waterbodies along with their associated Water Quality
River Dodder (Dodder_040)	Edge of Red Line Boundary and Hydrological Connectivity at Tallaght Templeogue and Spawell Link Road adjacent to Construction Compound TR1 Proximal to Austen Clarke Bridge	Q Value Dodder- Templeogue Bridge, 3 -Poor Austen Clarke Bridge 3 -poor WFD Status 2013-2018 at both locations 'poor' WFD waterbodies risk - 'At risk' at both locations	The main channel of the River Dodder flows parallel to part of the scheme until reaches 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 existing crossing point on Rathfarnham Road at Pierse Bridge	Q-Value– 2-3 Poor Dodder- Dodder Road d/s Weir) Q3-4 WFD status 2013-2018 "– Moderate "WFD waterbodies risk - 'at risk'	It flows for approximately 7.7km from the existing crossing point at Rathfarnham Road until it reaches the Liffey Estuary Lower transitional waterbody (classified as "Unpolluted") at Grand Canal Dock, which ultimately drains to Dublin Bay coastal waterbody (classified as "Unpolluted").
Owenadoher River (Owenadoher_010)	Not intersected by the Proposed Scheme, but hydrologically connected to the Proposed Scheme via the surface water system	Q-Value Score – 3-4 (Bridge u/s Dodder River confluence) WFD status 2013-2018 'Good' WFD waterbodies risk – 'At risk'	It is not intersected by the Proposed scheme It flows in a northerly direction until it reaches the River Dodder. The River Dodder 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").
Grand Canal (Grand Canal Main Line (Liffey and Dublin Bay)	One existing crossing point on the Rathmines Road Lower/Richmond Street South (R114) in Rathmines	Q-Value Score not applicable WFD status 2013-2018 "Goo Ecological Potential" WFD waterbodies risk - 'Not at risk'	It flows for approximately . 6km from the existing crossing point at Rathmines until it reaches 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	Not intersected by the Proposed Scheme but may have hydrological connectivity from stormwater drainage	Q-Value Score not applicable WFD status 2013-2018 " Good, although 2018-2020 suggest "eutrophic" WFD waterbodies risk – 'At risk (although currently under review	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").
Liffey Estuary Lower	Hydrologically connected to the Proposed Scheme via the Liffey Estuary Lower and the outfall at Grand Canal Dock and River Dodder.	Q-Value Score not applicable WFD status 2013-2018 " Good " WFD waterbodies risk – '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").
Dublin Bay	Hydrologically connected to the Proposed Scheme via the Grand Canal, River Dodder and Liffey Estuary Lower.	Q-Value Score not applicable WFD status 2013-2018 " Good " WFD waterbodies risk – 'At risk'	The Dublin Bay coastal waterbody is classified as "Unpolluted".

3.2.7 Hydrogeology

95 The Geological Survey of Ireland (GSI) data indicates that the bedrock formation 1:500k in the Proposed Scheme is "Dark-grey argillaceous & cherty limestone and shale (Calp)". The underlying aquifers are either

Locally Important Bedrock Aquifer, Moderately Productive only in Local Zones or Poor Bedrock Aquifer, Moderately Productive only in Local Zones.

96 The Proposed Scheme transverses one ground waterbody, namely Dublin. Environmental data sourced from the EPA for this ground waterbody is presented below:

Dublin Groundwater Body

- The groundwater body it is ranked as being of “Good” Ground Waterbody WFD Status (2013-2018) and “not at risk” of failing the WFD groundwater quality objectives for the majority of its area;
- The aquifers located within this ground waterbody and where the Proposed Scheme transverses are classified as “locally important aquifer - moderately productive only in local zones”.

97 The vulnerability of the Dublin ground waterbody to human activities largely ranges from “Rock at or Near Surface”, “Extreme”, “High”, “Moderate” to “Low” within the footprint of the Proposed Scheme.

3.2.8 Soils & Geology

98 The 1:100,000 GSI bedrock geology map of the area indicates that the underlying bedrock along the Proposed Scheme is predominantly underlain by Carboniferous Limestones. The majority of the Dublin City area was a deep marine basin known as the Dublin Basin where these sedimentary rocks were deposited.

99 To the south of the region, stretching from Dún Laoghaire on the coast in a south to south-west direction and located beneath much of the Dublin and Wicklow mountains, are the older Caledonian granites known as the Leinster Granite. This is a large intrusion of igneous rock which occurred during the Devonian Period mountain building event known as the Caledonian Orogeny.

100 Additionally, there are areas of made ground (Urban). The majority of the soils expected to be encountered within the study area are made ground comprising varying forms of hard standing materials including road pavements and footpaths. However, there are topsoil and other soils present within the study area.

3.3 Assessment of Potential Effects on European Sites

101 This section identifies all the potential impacts associated with the Proposed Scheme, examines whether there are any European sites within the ZoI of effects from the Proposed Scheme, and assesses whether there is any potential for the Proposed Scheme to result in a likely significant effect on any European site, either alone or in combination with other plans or projects.

102 In assessing the potential for the Proposed Scheme to result in a significant effect on any European sites, any measures intended to avoid or reduce the harmful effects of the project on European sites (i.e. mitigation measures) are not taken into account as part of this Stage One Screening appraisal.

103 Considering on the baseline ecological environment and the extent 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;
- Habitat degradation as a result of air quality impacts; and
- Disturbance and displacement impacts.

3.3.1 Habitat loss and fragmentation

104 The Proposed Scheme does not overlap with any European sites, and the nearest European site, with a hydrological connection to the Proposed Scheme includes South Dublin Bay and River Tolka Estuary SPA and North Dublin Bay SAC, located approximately 2.7km from the Proposed Scheme. Therefore, there is

no potential for direct habitat loss and fragmentation to occur. Habitat loss occur indirectly as a consequence of habitat degradation arising from a reduction in water quality and / or a change to the hydrological regime, as described in the section 3.3.2 below.

105 Special Conservation Interest (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. Malahide Estuary SPA, Baldoyle Bay SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, and potentially The Murrrough SPA). While there is one documented wintering bird site at the western end of the Proposed Scheme, namely Tymon Park, a major site (Scott Cawley Ltd 2017), that is mapped as occupying a corner of Tymon park and adjacent open ground associated with the Spawell complex, no habitat loss will occur as there is no landtake required along the existing N81 Tallaght to Templeogue Road at this section. As the Proposed Scheme will not result in the loss of sites suitable to support breeding gull and wintering bird species. Therefore, there is no potential for impacts on SCI species associated with SPAs to occur as a result of habitat loss / fragmentation and there is no potential for in combination effects to occur.

106 A number of potential inland feeding sites within the footprint of the Proposed Scheme were surveyed to inform this assessment, these were located at land in close proximity to Bushy Park, namely CBC1012WB001 which overlaps with proposed Construction Compound TR3 along the R112 Springfield avenue, CBC1012WB002 which is in amenity grassland to the immediate west of the Rathfarnham Road Dodder River Crossing and CBC1012WB003 which is located in Bushy park alongside the Templeogue Road.

107 The Proposed Scheme will result in the loss of sites suitable to support breeding gull and wintering bird species at CBC1012WB001 for the duration of the Construction Phase, therefore, there is potential for impacts on SCI species associated with SPAs to occur as a result of habitat loss / fragmentation. Therefore, there is potential for in combination effects to occur.

108 In respect of otter, there were no otter breeding or resting places, holt or couch sites present within the Proposed Scheme boundary. Therefore, there will not be any loss of holt or couch sites as a result of construction works.

109 There will be no loss of Annex I habitats and or habitat supporting Annex II species for which European sites are designated for within the Zol of the Proposed Scheme will not result in any direct loss or fragmentation of habitat by virtue of the location of the Proposed Scheme and its construction. In terms of otter, while the Proposed Scheme does cross the Dodder River and the Grand Canal, it does so at existing transport bridges and as such will not be subject to any instream works nor alteration to the territory currently occupied by otter. This includes Construction Compound TR1 which is located at the intersection of Wellington Land / Spawell crossing of the R137 Templeogue Road.

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

110 The Proposed Scheme is hydrologically connected to Dublin Bay via the River Dodder (Dodder_040 and 050), Owenadoher River (Owenadoher_010), Grand Canal and Liffey Estuary Upper, Liffey Estuary Lower as well as a network of interconnecting and established surface or combined sewer / surface water pipes that drain via London Bridge pumping Station to Ringsend WwTP before ultimately discharge into Dublin Bay. 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. It should be noted that a highly substantial event / events would be required to generate such quantities, which is not deemed likely. Such a potential 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. This occurrence could happen at any time during construction but could potentially be exacerbated by the removal of vegetation. In the absence of mitigation, the associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the discharge point or location of the accidental pollution event. Such an occurrence, of a sufficient magnitude, either alone or in combination with other pressures on water quality, could undermine the conservation objectives of the European sites

downstream in Dublin Bay (i.e. North Dublin Bay SAC, South Dublin Bay SAC, Rockabill to Dalkey Island SAC, North Bull Island SPA, South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA).

- 111 The QI habitats for which Howth Head SAC is designated (i.e. vegetated sea cliffs [1230] and European dry heaths [4030]) lie above the high-water mark. Pollution is not regarded to be a threat or pressure which could potentially impact these SAC sites (NPWS 2016) and is not regarded to be a significant threat / pressure to this habitat at a national level (Barron *et al.*, 2011). Therefore, the QI habitats of Howth Head SAC will be unaffected by a degradation in the surface water quality of the coastal waters of Dublin Bay and significant effects in that regard can be excluded.
- 112 The Proposed Scheme is hydrologically connected to the River Dodder, via the drainage network as well as crossing it directly at two locations The R137 Tallaght Templeogue road intersection with Spawell and further downstream at Piers Bridge along the Rathfarnham Road. The source of the River Dodder is in the Wicklow Mountains SAC which is located approximately 6.2km south (upstream). The proposed Scheme is also hydrologically connected to the Owenadoher Stream and Grand Canal and it crosses over the Grand Canal. Otter territories are within the range of 7.5km for females and 21km for males (Ó'Neill *et al.*, 2009). Therefore, there is potential for otter associated with the Wicklow Mountains SAC to move downstream and to come within the ZOI of the Proposed Scheme. The remaining QIs for the SAC, namely Oligotrophic water containing very few minerals of sandy plains (Littorelletalia); Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and / or Isoteo-Nanojuncetea; Natural dystrophic lakes and ponds; Northern Atlantic wet heaths with *Erica tetralix*; European dry heaths; Alpine and Boreal heaths; Calaminarian grasslands of the Violetalia calaminariae; Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)*; Blanket Bogs (*if active bog); Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani); Calcareous rocky slopes with chasmophytic vegetation; and Old sessile oak Woods with *Ilex* and *Blechnum* in the British Isles do not occur within the ZOI of the Proposed Scheme. These habitats are located upstream of the Proposed Scheme and will not be subject to any hydrological impacts as a result of the Proposed Scheme.
- 113 A reduction in water quality as a result of an accidental pollution event (either alone or in combination with other pressures on water quality) however could result in the degradation of the local aquatic environment, which could in turn negatively affect the otter population through direct contact with pollutants or a decline in fish prey.
- 114 In a potential worst case scenario, 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 loaf Dublin Bay i.e. birds associated with Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Ireland's Eye SPA, North Dublin Bay SPA, South Dublin Bay and River Tolka Estuary SPA, Baldoyle Bay SPA, Malahide Estuary SPA, Rogerstown SPA, Dalkey Islands SPA and Murrough SPA, and marine mammals associated with Rockabill to Dalkey Island SAC and Lambay Island 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 downstream, which in turn could 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. In a worst-case scenario these potential impacts could occur to such a degree that the conservation objectives of the Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Ireland's Eye SPA, North Dublin Bay SPA, South Dublin Bay and River Tolka Estuary SPA, Baldoyle Bay SPA, Malahide Estuary SPA, Rogerstown SPA, Dalkey Islands SPA, Murrough SPA, Rockabill to Dalkey Island SAC and Lambay Island SAC are undermined.
- 115 As the Proposed Scheme has the potential to result in habitat degradation and effects on the Qualifying Interest mammal (otter) and marine mammals / Special Conservation Interest species of European sites as the result of hydrological impacts, there is the potential for in combination effects to occur.

3.3.3 *Habitat degradation as a result of hydrogeological impacts*

- 116 Groundwater levels in groundwater dependant habitats may be impacted by the removal of a proportion of an aquifer or dewatering activities associated with excavations which can lead to a temporary change in groundwater levels and flow within the aquifer. Likewise, the mobilisation of contaminants into the aquifer either through accidental spillage or disturbance of contaminated ground during excavation may reduce the quality of the groundwater within the aquifer, also resulting in the degradation of groundwater dependent terrestrial ecosystem and any species that they may support.
- 117 The potential for hydrogeological impacts are 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 hydrogeology specialists.
- 118 In summary therefore, 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 hydrogeological impacts.

3.3.4 *Habitat degradation as a result of introducing/spreading non-native invasive species*

- 119 Ten areas of Japanese knotweed, Himalayan balsam and three-cornered garlic, species listed on the Third Schedule of the (Birds and Natural Habitats) Regulations 2011, are present in close proximity to, the Proposed Scheme (See Section 2.5.1). 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 and 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, in particular those habitats not permanently or regularly inundated by seawater, potentially outcompeting other native species and affecting species composition and physical structure of the habitat. Therefore, it is possible that the spread / introduction of non-native invasive species could undermine the conservation objectives of these European sites.
- 120 It is not considered possible that the listed non-native invasive species could spread to European sites that are located a considerable distance downstream from the outfall locations of the Owenadoher River, River Dodder, Grand Canal and Liffey Estuary Upper, Liffey Estuary Lower and separated by a large marine waterbody (i.e. Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, Irelands Eye SPA, The Murrough SPA and Dalkey Islands SPA).
- 121 As 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.

3.3.5 *Habitat degradation as a result of air quality impacts*

- 122 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 may lead to a 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_x, NO₂), volatile organic compounds (VOCs), particulate matter (PM), heavy metals (HM) and ammonia (NH₄) 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.
- 123 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 from the Proposed Scheme boundary during the Operational Phase. There are no European sites present within these distances.

124 As such the Proposed Scheme does not have the potential to result in habitat degradation of the Qualifying / Special Conservation Interest species / habitats of any European sites, as a result of air quality impacts, during either the Construction or Operational Phase of the Proposed Scheme. There is, therefore, no potential for in combination effects to occur in that regard.

3.3.6 Disturbance and displacement impacts

125 A temporary and / or permanent increase in noise, vibration and / or human activity levels during the Construction Phase of the Proposed Scheme could result in the disturbance to and / or displacement of fauna species present within the vicinity of the Proposed Scheme. For mammal species such as otter, disturbance effects would not be expected to extend beyond 150m¹⁹. For wintering birds, disturbance effects would not be expected to extend beyond a distance of approximately 300m²⁰, 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 Zol of the Proposed Scheme.

126 There are a number of coastal 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, South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA and Lambay Island SPA, as well as The Murrough SPA (a distal site outside the typical 20km range but nonetheless supporting light-bellied Brent geese and a number of other SCI species that are recorded from Dublin Bay). Suitable inland foraging / roosting sites, which these bird species utilise, are located within the potential Zol of the Proposed Scheme (See Section 2.5.2.3). Therefore, there is potential for the Proposed Scheme to result in disturbance / displacement impacts on SCI populations associated with European sites.

127 Regarding the raptor species, for which Wicklow Mountains SPA are designated (e.g. merlin *Falco columbarius* and peregrine *Falco peregrinus*), a study by Ruddock and Whitfield²¹, which included a review of previous studies in this area, offers no definitive distance after which disturbance to merlin is not significant but indicates that an upper limit of 300-500m may be sufficient in the case of breeding or nesting merlin. Likewise a distance of 500-750m is likely to be sufficient for breeding peregrines. Adopting a precautionary approach, based on the available data regarding disturbance distances for merlin and peregrine, it can be concluded that disturbance to these bird species would be most likely to occur within 1km (i.e. the disturbance Zol is 1km). There are no European sites within the disturbance Zol; the next nearest European site designated for merlin and peregrine to the Proposed Scheme, Wicklow Mountains SPA, is 4.3km away. Although both species are known from suitable territory outside the Wicklow Mountains SPA, there are no typical breeding habitat areas (similar to those from the SPA) within the disturbance Zol of the Proposed Scheme that support populations of the SCI species for which Wicklow Mountains SPA is designated. Considering the above, there is no potential for the Proposed Scheme to

¹⁹ This is consistent with Transport Infrastructure Ireland (TII) guidance (Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes (NRA 2006) and Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes) (NRA 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 Zol of construction related disturbance likely to be much less in reality.

²⁰ 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.

²¹ Ruddock, M. & Whitfield, D.P. (2007). *A Review of Disturbance Distances in Selected Bird Species*. A report from Natural Research Projects) Ltd. to Scottish Natural Heritage. Available at: <https://www.nature.scot/sites/default/files/2018-05/A%20Review%20of%20Disturbance%20Distances%20in%20Selected%20Bird%20Species%20-%20Natural%20Research%20Ltd%20-%202007.pdf> [Accessed 24/05/2022]

result in disturbance / displacement impacts on the SCI species for which Wicklow Mountains SPA is designated.²²

128 Although no signs of kingfisher were recorded during field surveys of the Proposed Scheme, kingfisher, an Annex I bird species, is known to be present in the wider study area, in particular, along the River Dodder and the Grand Canal. Any kingfisher populations which are present in the vicinity of the Proposed Scheme are not considered to be associated with the SCI populations of any European site. Kingfisher territories can extend over approximately 3-5km of a river catchment.²³ The nearest SPA for which kingfisher has been designated is the River Boyne and Blackwater SPA, which is located approximately 38.7km away. Therefore, kingfisher present in the vicinity of the Proposed Scheme are not associated with a SPA population.

129 Signs of otter, an Annex II and IV mammal species, were recorded during multi-disciplinary field surveys of the Proposed Scheme, on the River Dodder and the Owenadoher River (where a confirmed holt was identified). Further surveys at likely watercourses supporting otter activity (based on desktop research and assessment of watercourse condition (culverted, supporting habitat, feed potential) returned a number of records for otter activity. The nearest SAC to the Proposed Scheme for which otter has been designated is Wicklow Mountains SAC which is located approximately 6.2km upstream, within the same WFD sub-catchment.

130 Research carried out by Ó'Néill *et al.* (2009) on ranging behaviours of otter on river systems in Ireland found that female otter ranges averaged 7.5km while male otter home ranges varied up to 21km. The Proposed Scheme crosses over the River Dodder at two location and the Grand Canal at one location on existing road bridges, and interacts with the following watercourses via the surface water drainage network: Owenadoher River, River Dodder, Grand Canal, and Liffey Estuary Upper, Liffey Estuary Lower. Whilst these watercourses lie within the typical territorial ranges of otters, only the River Dodder and the Owenadoher River (as a tributary) shares a hydrological connection to the Wicklow Mountains SAC. The Tallaght section of the Proposed Scheme also lies within the same subcatchment as Wicklow Mountains SAC (Dodder_SC_010 subcatchment). Notwithstanding the limited interaction between Construction Compound TR1 and the River Dodder, and the Proposed Scheme's proximity to the Owenadoher River at Butterfield Avenue and potential noise disturbance associated with the construction of the Proposed Scheme, it cannot be excluded that the otter population in the vicinity of the Templeogue section of Proposed Scheme is associated with the Wicklow Mountains SAC population. Therefore, disturbance and displacement impacts on the QI otter population for Wicklow Mountains SAC, as a result of the Proposed Scheme, cannot be excluded.

131 However, no significant impacts e.g. habitat severance or barrier effects on otter are predicted as a result of disturbance / displacement from the Proposed Scheme for the following reasons:

- Notwithstanding the fact that the Proposed Scheme crosses two watercourses (the River Dodder and Grand Canal for which otter are known to inhabit, the adjacent Owenadoher River flows into the Dodder and is hydrologically connects to the Proposed Scheme via surface water drainage network. However, the corridor is a pre-existing national road into Dublin City. Otter are known to commute and reside nearby these areas and as such are likely to be tolerant to traffic noise and other human related noise and disturbance.
- The nature of the works proposed in the vicinity of the Dodder crossing and Grand Canal- the main works required in these areas include new road markings and signage, traffic signal installation construction of a bus interchange building, construction of a public realm plaza, carriageway and

²² There is a need to consider use of habitat areas outside of an SPA by SCI bird species where they support the SCI populations and the site's conservation objectives. These habitat areas can comprise alternative roosting sites, foraging areas, staging grounds or migration routes and can, but not necessarily exclusively, be situated within the immediate hinterland of the SPA, or in areas ecologically connected to it.

²³ RSPB. *Kingfisher breeding, feeding and territory webpage*. Available from: <https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/bird-a-z/kingfisher/breeding-feeding-territory/>

pavement resurfacing, kerb build outs and traffic island construction/removal, landscaping and utility diversions, all of which should not impede otter along the aquatic corridors running under the existing road bridges.

132 However, owing to the proximity of the holt, within approximately 140m of the Proposed Scheme is within the potential zone of influence in respect of potential significant effects to maternal holt. Thus, likely significant impacts cannot be ruled out by virtue of the Proposed Scheme if undertaken during the breeding season

133 Although marine mammals associated with European sites may commute and forage within the Liffey Estuary (to which both the Dodder River and the Grand Canal discharge downstream of the Proposed Scheme) and Dublin Bay, it is not considered to be likely that there will be any impacts on these species as a result of the Proposed Scheme as it terminates inland in a highly urbanised environment at Lord Edward Street, which is upstream of Dublin Bay, in a highly urbanised environment. The scale of upstream works proposed are considered to be minor. that there will be no disturbance / displacement impacts on marine mammals as a result of the Proposed Scheme.

134 As 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.

3.3.7 Summary

135 The *ex-situ* habitat loss, hydrological, non-native invasive species and disturbance and displacement impacts associated with the Proposed Scheme have the potential to affect the receiving environment and, consequently, have the potential to affect the conservation objectives supporting the QI / SCI of a European site(s). Therefore, the Proposed Scheme is likely to have significant effects on a European site(s) cannot be excluded.

136 The potential impacts of the Proposed Scheme on the receiving environment, their Zol, and the European sites for which likely significant effects cannot be excluded are summarised in Table 7. In assessing the potential for the Proposed Scheme to result in a significant effect on any European sites, any measures intended to avoid or reduce the harmful effects of the project on European sites are not taken into account.

Table 7: Summary of Analysis of Likely Significant Effects on European sites

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?
Habitat loss No European sites are at risk of direct habitat loss impacts There is potential for loss of <i>ex situ</i> inland feeding sites used by SCI wintering bird species.	Yes There are European sites at risk of <i>ex-situ</i> habitat losses: Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, North Bull Island SPA, South Dublin Bay and River Tolka SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA and The Murrough SPA
Habitat degradation/ effects on QI / SCI species as a result of hydrological impacts Habitats and species downstream of the Proposed Scheme and the associated surface water drainage discharge points, and downstream of offsite wastewater treatment plants.	Yes. There are European sites at risk of hydrological effects associated with the Proposed Scheme, namely: Wicklow Mountains SAC, North Dublin Bay SAC, South Dublin Bay 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, Baldoyle Bay

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?
	SPA, Ireland's Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, Dalkey Islands SPA and The Murrrough SPA
Habitat degradation as a result of hydrogeological impacts Groundwater-dependant habitats, and the species those habitats support, in the local area that lie downgradient of the Proposed Scheme.	No There are no European sites at risk of hydrogeological effects associated with the Proposed Scheme
Habitat degradation as a result of introducing / spreading non-native invasive species Habitat areas within, adjacent to, and potentially downstream of the Proposed Scheme.	Yes. There are non-native invasive species present within or adjacent to the Proposed Scheme and in the surrounding area, therefore there is a risk associated with the Proposed Scheme to downstream European sites from the spread / introduction of non-native invasive species: South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC, North Dublin Bay SAC, and North Bull Island SPA.
Air Quality impacts Potentially up to 50m from the Proposed Scheme boundary and 500m from the Construction Compound at Construction phase, and up to 200 metres at Operation Phase.	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 3 <i>ex situ</i> inland feeding sites which are utilised by SCI wintering bird species within the potential disturbance Zol of the Proposed Scheme. In addition, otter in the vicinity of the Dodder River and Owenadoher River in proximity to the Proposed Scheme may be associated with the QI population associated with Wicklow Mountains SAC and impacts on the QI population cannot be excluded as a result. Wicklow Mountains SAC, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, North Bull Island SPA and South Dublin Bay and River Tolka SPA, Skerries Islands SPA, Lambay Island SPA, Ireland's Eye SPA and The Murrrough SPA.

3.4 In-Combination Effects

137

This section presents the assessment carried out to examine whether other plans or projects have the potential to act in combination with the Proposed Scheme to have a significant effect on European sites.

- 138 There are 17 European sites within the Zol of the Proposed Scheme as outlined above in Section 3.2.1. These are South Dublin Bay SAC, North Dublin Bay SAC, Rockabill to Dalkey Island SAC, Lambay Island SAC, Wicklow Mountains SAC, Howth Head Coast SPA, Rockabill SPA, South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA, Malahide Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Lambay Island SPA, Dalkey Islands SPA and The Murrrough SPA.
- 139 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.
- 140 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.
- 141 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 8: and Table 9:.

Table 8: Land Use Plans and Programmes Considered for the In-Combination Assessment

National Plans
National Energy & Climate Plan 2021-2030
National Spatial Strategy for Ireland 2002-2020
Project Ireland 2040 – Building Ireland’s Future ²⁴
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) 2019
National Marine Planning Framework 2018
Water Services Strategic Plan 2015
Regional Plans
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
Greater Dublin Area Cycle Network Plan 2013
Eastern Catchment Flood Risk Assessment and Management (CFRAM) study 2011-2016
County/Local Plans
Fingal Development Plan 2017-2023
Fingal Biodiversity Action Plan 2010-2015
Fingal County Council Climate Action Plan 2019-2024
<ul style="list-style-type: none"> • Donabate Local Area Plan 2016 • Rivermeade Local Area Plan 2018 • Barnhill Local Area Plan 2019 • Kinsealey Local Area Plan 2019 • Dublin Airport Local Area Plan 2020
Dublin City Development Plan 2016-2022
Dublin City Biodiversity Action Plan 2021-2025
Dublin City Council Climate Action Plan 2019-2024
<ul style="list-style-type: none"> • Clongriffin-Belmayne Local Area Plan 2012-2018 • George’s Quay Local Area Plan 2012-2022 • Ballymun Local Area Plan 2017 • The Liberties Local Area Plan 2009-2020 • Naas Road Local Area Plan 2013-2023 • Park West- Cherry Orchard Local Area Plan 2019
South Dublin County Development Plan 2022-2028
Biodiversity Action Plan for South Dublin County (2020-2026)- Draft for public consultation
South Dublin County Council Climate Change Action Plan 2019-2024
<ul style="list-style-type: none"> • Tallaght Town Centre Local Area Plan 2020 • Liffey Valley Town Centre Local Area Plan 2008
Dún Laoghaire- Rathdown Development Plan 2022-2028

²⁴ Together the National Development Plan and the National Framework are referred to as Project Ireland 2040: Building Ireland’s Future

Dún Laoghaire- Rathdown Biodiversity Plan (2021-2025)

Dún Laoghaire-Rathdown County Council Climate Change Action Plan 2019-2024

- Deansgrange Local Area Plan 2010-2020
- Stillorgan Local Area Plan 2018-2024
- Blackrock Local Area Plan 2015-2021
- Woodbrook-Shanganagh Local Area Plan 2017-2024

Wicklow County Development Plan 2016-2022

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
- Bray Town Development Plan 2011-2017

Table 9: Projects Considered for the In Combination Assessment

- 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, 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
- N3 Castleheany Interchange Upgrade: refer to “Details” link
- 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
- N3–N4: Barnhill to Leixlip Interchange
- Reconfiguration of the N4 from its junction with the M50 to Leixlip to rationalise accesses and to provide additional capacity at the Quarryvale junction
- Clonburris SDZ roads development: refer to “Details” link
- DART+ Programme West
- Porterstown Distributor Link Road
- Widening of the N3 between Junction 1 (M50) and Junction 4 (Clonee), plus related junction and necessary changes to the existing national road network
- Lucan LUAS
- DART+ Programme South West
- Junction upgrades and other capacity improvements on the M1 motorway, including additional lanes south of Drogheda, where required
- 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, which will serve the South Port and adjoining development areas
- Poolbeg SDZ roads development: refer to “Details” link
- Glenamuck District Distributor Road
- DART+ Programme Coastal North
- Widening of the M50 to three lanes in each direction between Junction 14 (Sandyford) and Junction 17 (M11) plus related junction and other changes
- Cherrywood SDZ roads development: refer to “Details” link
- 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) inclusive of ancillary and associated road schemes, to provide additional lanes and upgraded junctions, plus service roads and linkages to cater for local traffic movements
- MetroLink
- Greater Dublin Drainage (GDD)
- Cycling: Greater Dublin Area Cycle Network Plan (excluding Radial Core Bus Corridor elements)
- Dublin Array - offshore windfarm
- Southern Port Access Route (SPAR)
- Snugborough Interchange Upgrade
- Air insulated switchgear 110kV transmission substation. Platin, Duleek
- Construction of a new distributor road and junction to the southwest of Kells town centre. Kells
- Dublin Mountain Visitors Centre and all associated works. Killakee and Jamestown.
- FCC/12/0001 Broadmeadow Way. Greenway between Malahide Demesne and Newbridge Demesne to be known as 'Broadmeadow Way'. Malahide.
- Alterations to a permitted double circuit 110kV electricity transmission line development between substations. Darndale / Belcamp
- 110kV onsite electrical substation with associated electrical plant, electrical equipment, welfare facilities and waste water 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
- 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.
- 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.
- 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.
- 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 extending from the upper reaches of the river. Tymon North, Tallaght to Merchant's Quay, Dublin.
- Camac Flood Alleviation Scheme involving extension of a culvert and relocation of an existing upstream headwall.
- Whitechurch Flood Alleviation Scheme involving various works between St Enda's Park and the confluence with the Owenadoher River
- Baldoye Airport Aviation Fuel Line
- 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.
- Clongriffin to City Centre Core Bus Corridor Scheme
- Swords to City Centre Core Bus Corridor Scheme
- Ballymun / Finglas to City Centre Core Bus Corridor Scheme
- Blanchardstown to City Centre Core Bus Corridor Scheme
- Lucan to City Centre Core Bus Corridor Scheme

- Liffey Valley to City Centre Core Bus Corridor Scheme
- Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme
- Kimmage to City Centre Core Bus Corridor Scheme
- Bray to City Centre Core Bus Corridor Scheme
- Blackrock / Belfield to City Centre Core Bus Corridor Scheme
- Ringsend to City Centre Core Bus Corridor Scheme
- A range of Strategic Housing Developments
- NTA GDA park and Ride
- A range of Irish Water Projects

142 There is the potential for developments listed in Table 8;, or those implemented under a range of land use and other plans listed in Table 9:, to lie either within European sites, or be situated in a location where they may be within the ZoI of the European sites which also fall within the ZoI of the Proposed Scheme.

143 Key development projects with potential for in-combination effects due to their size, nature and / or location include other Core Bus Corridor Schemes, MetroLink, upgrades to or new rail infrastructure, utility infrastructure including proposed or consented water utility improvement.

144 The potential for in combination effects between these plans and projects and the Proposed Scheme arises via the same pathways for potential effects as identified above in Table 7 for the Proposed Scheme (i.e. Habitat fragmentation, hydrological, invasive species, and disturbance and displacement effects) which could act in combination with similar effects and pathways arising from the various plans.

145 Therefore, the potential for the following in combination effects arising from plans cannot be ruled out:

- Habitat fragmentation (for example European sites at risk of *ex-situ* habitat losses; South Dublin Bay and River Tolka SPA, North Bull Island SPA, Baldoyle Bay SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Lambay Island SPA, Ireland’s Eye SPA and The Murrough SPA);
- 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 Wicklow Mountains SAC, North Dublin Bay SAC, South Dublin Bay SAC, Howth Head SAC, Howth Head Coast SPA, Rockabill to Dalkey Island SAC, Lambay Island SAC, South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA, Dalkey Islands SPA, Baldoyle Bay SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, Ireland’s Eye SPA, Skerries Islands SPA, Rockabill SPA, Lambay Island SPA and The Murrough SPA);
- Habitat degradation as a result of introducing / spreading non-native invasive species for South Dublin Bay SAC, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA; and
- Disturbance and displacement impacts (for example *ex-situ* inland feeding sites which are utilised by SCI wintering bird species within the potential disturbance ZoI of the Proposed Scheme for South Dublin Bay and River Tolka Estuary 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) and potential noise disturbance affecting the QI otter population associated with Wicklow Mountains SAC.

4 Conclusions of the Screening Assessment Process

146 Following an examination, analysis and evaluation of all relevant information, in view of best scientific knowledge, and applying the precautionary principle, it can be 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 / fragmentation, hydrological impacts, non-native invasive species, and disturbance and displacement impacts: South Dublin Bay SAC, North Dublin Bay SAC, Rockabill to Dalkey Island SAC, Wicklow Mountains SAC, Lambay Island SAC, Howth Head Coast SPA, South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA, Malahide

Estuary SPA, Baldoyle Bay SPA, Rogerstown Estuary SPA, Skerries Islands SPA, Ireland's Eye SPA, Rockabill SPA, Lambay Island SPA, Dalkey Islands SPA and The Murrrough SPA.

147 In reaching this conclusion, the nature of the project and its potential relationship with all European sites within the zone of influence, and their conservation objectives, have been fully considered.

148 Therefore, it is the professional opinion of the authors of this report that the application for approval for the Proposed Scheme does require a Stage Two Appropriate Assessment in respect of the above-listed 17 no. European sites (5 no. SACs and 12no. SPAs) and, consequently, the preparation of a Natura Impact Statement (NIS).

5 References

- Barron, S.J., Delaney, A., Perrin, P.M., Martin, J.R. & O'Neill, F.H. (2011).** *National survey and assessment of the conservation status of Irish sea cliffs. Irish Wildlife Manuals No. 53.* National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin Ireland.
- BSBI (2021)** *Botanical Society of Britain and Ireland Maps* [Online] Available from bsbi.org/maps
- Chartered Institute of Ecology and Environmental Management (2018)** *Guidelines for Ecological Impact Assessment in the UK and Ireland.*
- Cutts, N., Phelps, A., Burdon, D. (2009)** *Construction and Waterfowl: Defining Sensitivity, Response, Impact and Guidance.* Report prepared by the Institute of Estuarine and Coastal Studies University of Hull and Humber INCA.
- Doogue, D., Nash, D., Parnell, J., Reynolds, S. & Wyse Jackson, P. (1998)** *Flora of County Dublin.* The Dublin Naturalists' Field Club, Dublin.
- EPA (2018).** WFD Cycle 2 Catchment Liffey and Dublin Bay, Subcatchment Dodder_SC_010. Available at: https://www.catchments.ie/wp-content/files/subcatchmentassessments/09_16%20Dodder_SC_010%20Subcatchment%20Assessment%20WFD%20Cycle%202.pdf
- EPA (2022)** *EPA Maps* [Online] Available from gis.epa.ie/EPAMaps/
- European Commission (2000)** *Communication from the Commission on the Precautionary Principle.*
- European Commission (2013)** *Interpretation Manual of European Union Habitats.* Version EUR 28.
- Fossitt, J.A. (2000)** *A Guide to Habitats in Ireland.* Heritage Council, Kilkenny.
- GSI (2016)** Quaternary geology of Ireland – Sediments Map. [Online] Available from <https://secure.dccae.gov.ie/arcgis/rest/services/Quaternary/QuaternarySediments16/MapServer>
- Jacobs (2022)** *BusConnects Dublin – Core Bus Corridor Infrastructure Works. Environmental Impact Assessment Report (EIAR). Belfield/Blackrock to City Centre Core Bus Corridor Scheme.*
- 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.
- Matson, R., Delanty, K., Gordon, P., O'Briain, R., McCarthy, E., Cierpal, D., Connor, L., Corcoran, W., Coyne, J., McLoone, P., Morrissey-McCaffrey, E., Brett, T., Gavin, A & Kelly, F.L., (2019).** *Sampling Fish in Rivers 2018 - Dodder, Factsheet No. 2.* National Research Survey Programme. Inland Fisheries Ireland.
- McCorry, M.J., Ryle, T. (2009)** *Saltmarsh Monitoring Project 2007-2008: Final report.* Report to National Parks and Wildlife Service, Dublin, Ireland.
- NBDC (2022)** *National Biodiversity Data Centre Database* [Online] Available from maps.biodiversityireland.ie/Map
- NPWS (2012)** *Conservation Objectives: Baldoyle Bay SAC 000199.* Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2013a)** *Conservation Objectives: South Dublin Bay SAC 000210.* Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013b) *Conservation Objectives: North Dublin Bay SAC 000206*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013c) *Conservation Objectives: Rockabill to Dalkey Island SAC 003000*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

NPWS (2013d) *Conservation Objectives: Malahide Estuary SAC 000205*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013e) *Conservation Objectives: Lambay Island SAC 000204*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013f) *Conservation Objectives: Baldoye Bay SPA 004016*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013g) *Conservation Objectives: Malahide Estuary SPA 004025*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013h) *Conservation Objectives: Rogerstown Estuary SPA 004015*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013i) *Conservation objectives for Rockabill SPA [004114]*. Generic Version 1.0. Department of Arts, Heritage and the Gaeltacht.

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.

NPWS (2015b) *Conservation Objectives: North Bull Island SPA 004006*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2016) *Conservation Objectives: Howth Head SAC 000202*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

NPWS (2017a) *Conservation Objectives: Wicklow Mountains SAC 002122*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

NPWS (2017b) *Conservation objectives: Ireland's Eye SAC [002193]*. Version 1.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

NPWS (2019) *Conservation objectives: Ballyman Glen SAC [000713]*. Version 1.0. Department of Housing, Local Government and Heritage.

NPWS (2021a) *Conservation Objectives: Knocksink Wood SAC 000725*. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

NPWS (2021b) *Conservation objectives for Glenasmole Valley SAC [001209]*. Generic Version 1.0. Department of Housing, Local Government and Heritage.

NPWS (2021c) Conservation objectives for Rye Water Valley/Carton SAC [001398]. Generic Version 8.0. Department of Housing, Local Government and Heritage²⁵

NPWS (2022a) *Conservation objectives for Dalkey Islands SPA [004172]*. Generic Version 9.0. Department of Housing, Local Government and Heritage.

NPWS (2022b) *Conservation objectives for Wicklow Mountains SPA [004040]*. Generic Version 9.0. Department of Housing, Local Government and Heritage.

NPWS (2022c) *Conservation objectives for Howth Head Coast SPA [004113]*. Generic Version 9.0. Department of Housing, Local Government and Heritage.

NPWS (2022d) *Conservation objectives for Ireland's Eye SPA [004117]*. Generic Version 9.0. Department of Housing, Local Government and Heritage

NPWS (2022e) *Conservation objectives for Lambay Island SPA [004069]*. Generic Version 9.0. Department of Housing, Local Government and Heritage.

NPWS (2022f) Conservation objectives for The Murrough SPA [004186]. Generic Version 8.0. Department of Housing, Local Government and Heritage.

NPWS (2022g) *Conservation objectives for Skerries Islands SPA [004122]*. Generic Version 9.0. Department of Housing, Local Government and Heritage.

NRA (2005) *Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes.*

NRA (2006) *Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes.*

Office of the Planning Regulator (2021). *OPR Practice Note PN01. Appropriate Assessment Screening for Development Management.*

Ó'Neill, L., Veldhuizen, T., de Jongh, A., Rochford, J. (2009) *Ranging behaviour and socio-biology of Eurasian otters (Lutra lutra) on lowland mesotrophic river systems.* European Journal of Wildlife Research. 55:363-370.

Ruddock, M. & Whitfield, D.P. (2007) *A Review of Disturbance Distances in Selected Bird Species.* A report from Natural Research Projects) Ltd. to Scottish Natural Heritage.

RSPB *Kingfisher breeding, feeding and territory webpage.* Available from: <https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/bird-a-z/kingfisher/breeding-feeding-territory/>

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.*

Scottish Natural Heritage (SNH) (2016) *Assessing Connectivity with Special Protection Areas (SPAs).* June 2016 Version 3

²⁵ The versions of the conservation objectives documents referenced in this table are the most recent published versions at the time of writing

Svensson, L., Mullarney, K. & Zetterstrom, D. (2009) *Collins Bird Guide* 2nd Edition Harper Collins Publishers Ltd., London

Smith, G.F., O'Donoghue, P., O'Hara, K., Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council Church Lane, Kilkenny, Ireland.

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

Triturus Environmental Ltd. (2020) *Aquatic baseline report for the BusConnects Dublin – Core Bus Corridor Infrastructure Works*. Prepared by Triturus Environmental Ltd. for Scott Cawley. December 2020

Wright, M., Goodman, P., Cameron, T. (2010) *Exploring Behavioural Responses of Shorebirds to Impulse Noise*. *Wildfowl* (2010) 60: 150-167.

Directives and Legislation

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (The Habitats Directive).

Council Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (The Birds Directive).

Planning and Development Acts 2000 (as amended).

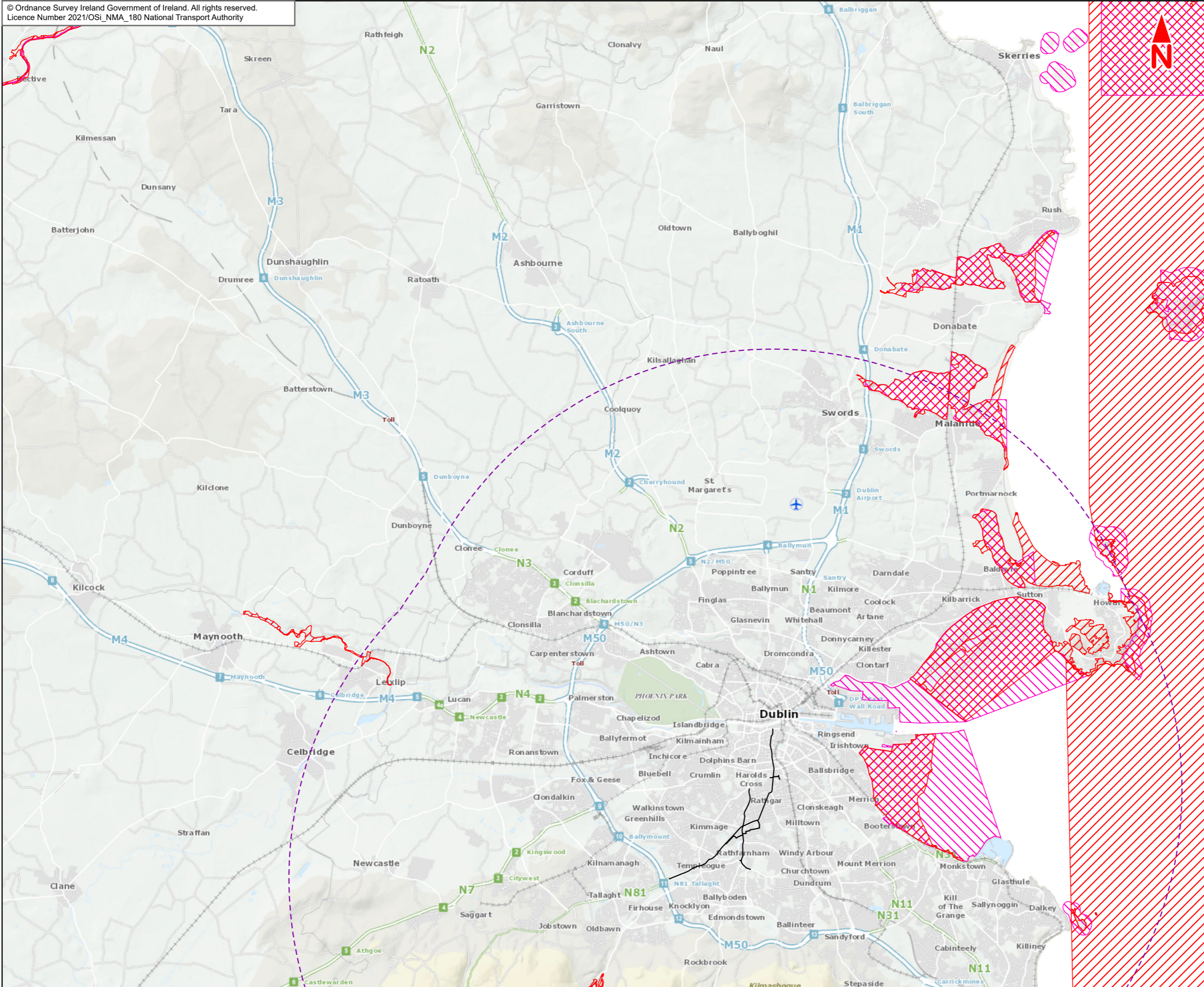
S.I. No. 477/2011 – European Communities (Birds and Natural Habitats) Regulations 2011.

S.I. No 355/2015 – European Communities (Birds and Natural Habitats) (Amendment) Regulations 2015.

S.I. No. 235/2022 – Flora (Protection) Order, 2022.

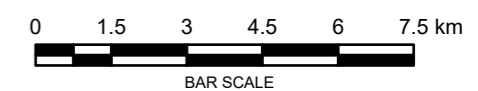


Figure 1
European Sites
in the Vicinity
of the Proposed
Scheme



- Legend :**
- Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme
 - 15km from Proposed Scheme
 - Special Protection Areas (SPA)
 - Special Area of Conservation (SAC)

Contains Irish Public Sector Data licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0) licence.



Disclaimer

a. © National Transport Authority (NTA) 2021. This drawing is confidential and the copyright in it is owned by NTA. This drawing must not be either loaned, copied or otherwise reproduced in whole or in part or used for any purpose without the prior permission of NTA.

b. This drawing is to be used for the design element identified in the titleblock. Other information shown is to be considered indicative only. The drawing is to be read in conjunction with all other relevant design drawings.

c. O.S. data used for plans are printed under © Ordnance Survey Ireland Government of Ireland. All rights reserved. Licence Number 2021/OSI_NMA_180 National Transport Authority. All elevations are in metres and relate to OSI Geoid Model (OSGM15) Mean Head. All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSI active local GPS station.

d. Information concerning the position of apparatus shown on this drawing is based on drawings supplied by the utility owners and/or the utility works contractor, whilst every care has been taken in the preparation of this drawing, positions should be taken as approximate and are intended for general guidance only and no representation is made by the NTA as to the accuracy, completeness, sufficiency or otherwise of this drawing and the position of the apparatus. The information contained herein does not purport to be comprehensive or final as the apparatus is subject to being altered and/or superseded. Recipients should not rely on this information. Any liabilities are hereby expressly disclaimed.

e. The information contained herein has been provided by the NTA but does not purport to be comprehensive or final. Recipients should not rely on the information. Neither the NTA nor any of its directors, officers, employees, agents, stakeholders or advisers make any representation or warranty as to, or accept any liability or responsibility in relation to, the adequacy, accuracy, reasonableness or completeness of the information provided as part of this document or any matter on which the information is based (including but not limited to loss or damage arising as a result of reliance by recipients on the information or any part of it. Any liabilities are hereby expressly disclaimed.



Rev	Date	Drn	Chk'd	App'd	Description
M01	Aug 2022	EK	PW	DK	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Consultant: **JACOBS ARUP SYSTRA**

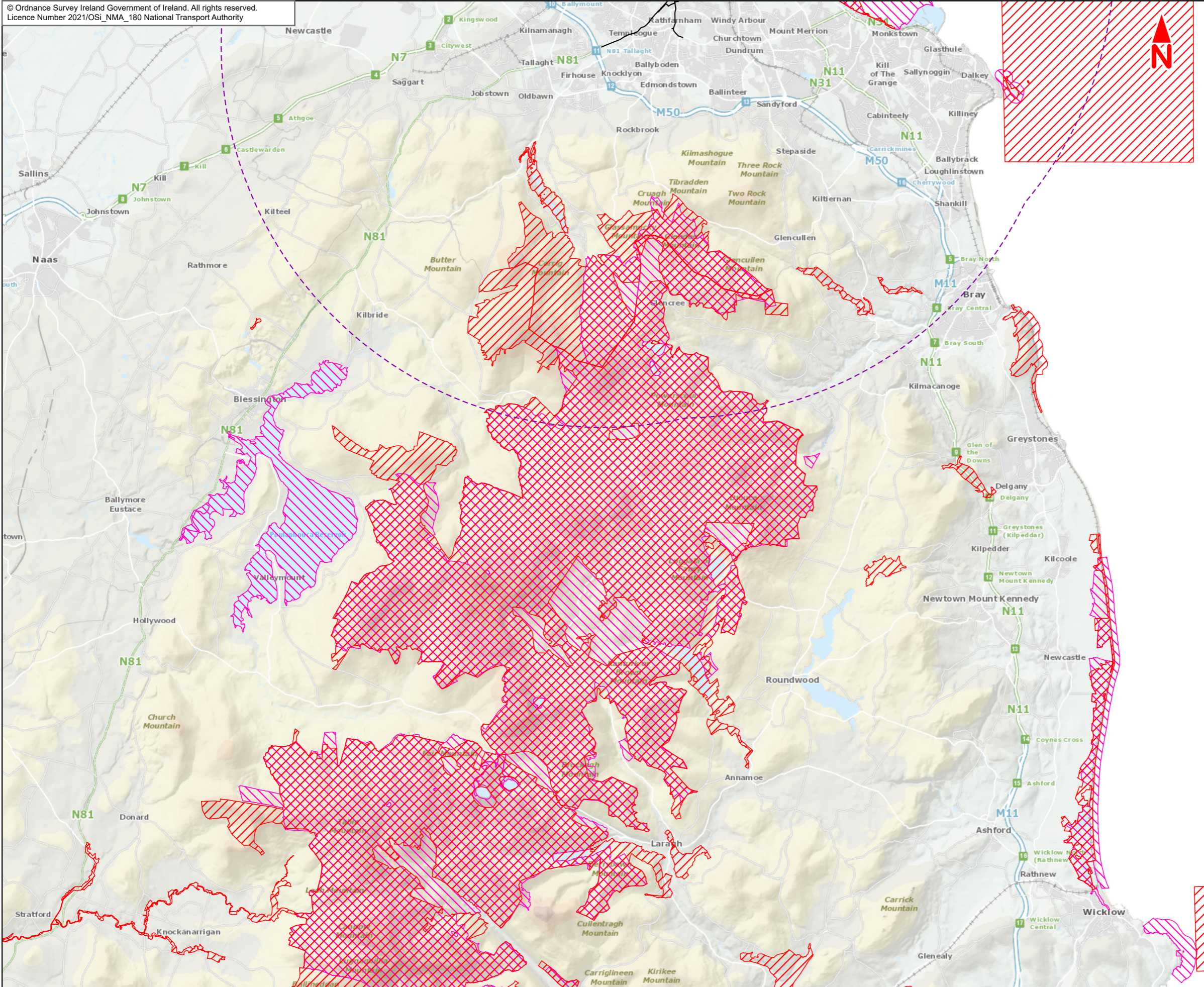
Date: 8/26/2022 | Scale @ A3: 1:150 000

Project Code: BCIDE | Originator Code: JAC

Drawn: EK | Checked: PW | Approved: DK

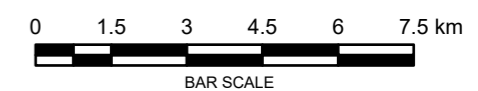
QMS Code: _____

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: Templeogue / Rathfarnham to City Centre Scheme Figure 1 European sites in the Vicinity of the Proposed Scheme			
Drawing File Name: BCIDE-JAC-ENV BD-1012_XX_00-DR-GG-2090	Sheet Number: 1 of 2	Status: A	Rev: M01



- Legend :**
- Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme
 - 15km from Proposed Scheme
 - Special Protection Areas (SPA)
 - Special Area of Conservation (SAC)

Contains Irish Public Sector Data licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0) licence.



Disclaimer
a. © National Transport Authority (NTA) 2021. This drawing is confidential and the copyright in it is owned by NTA. This drawing must not be either loaned, copied or otherwise reproduced in whole or in part or used for any purpose without the prior permission of NTA.
b. This drawing is to be used for the design element identified in the titleblock. Other information shown is to be considered indicative only. The drawing is to be read in conjunction with all other relevant design drawings.
c. O.S. data used for plans are printed under © Ordnance Survey Ireland Government of Ireland. All rights reserved. Licence Number 2021/OSI_NMA_180 National Transport Authority. All elevations are in metres and relate to OSI Geoid Model (OSGM15) Mean Head. All Co-ordinates are in Irish

Transverse Mercator Grid (ITM) as defined by OSI active local GPS station.
d. Information concerning the position of apparatus shown on this drawing is based on drawings supplied by the utility owners and/or the utility works contractor, whilst every care has been taken in the preparation of this drawing, positions should be taken as approximate and are intended for general guidance only and no representation is made by the NTA as to the accuracy, completeness, sufficiency or otherwise of this drawing and the position of the apparatus. The information contained herein does not purport to be comprehensive or final as the apparatus is subject to being altered and/or superceded. Recipients should not rely on this information. Any liabilities are hereby expressly disclaimed.

e. The information contained herein has been provided by the NTA but does not purport to be comprehensive or final. Recipients should not rely on the information. Neither the NTA nor any of its directors, officers, employees, agents, stakeholders or advisers make any representation or warranty as to, or accept any liability or responsibility in relation to, the adequacy, accuracy, reasonableness or completeness of the information provided as part of this document or any matter on which the information is based (including but not limited to loss or damage arising as a result of reliance by recipients on the information or any part of it. Any liabilities are hereby expressly disclaimed.



Rev	Date	Drn	Chk'd	App'd	Description
M01	Aug 2022	EK	PW	DK	ISSUE FOR PHASE 4: PLANNING

Client NTA Udarás Náisiúnta Iompair National Transport Authority		Consultant JACOBS ARUP SYSTRA		
Date 8/26/2022	Scale @ A3 1:150 000	Drawn EK	Checked PW	Approved DK
Project Code BCIDE	Originator Code JAC	QMS Code		

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS				
Drawing Title Templeogue / Rathfarnham to City Centre Scheme Figure 1 European sites in the Vicinity of the Proposed Scheme				
Drawing File Name BCIDE-JAC-ENV_BD-1012_XX_00-DR-GG-2091	Sheet Number 2 of 2	Status A	Rev M01	



Appendix I

The Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the European sites in the Vicinity of the Proposed Development Scheme

Appendix I

The Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the European sites in the vicinity of the Proposed Scheme²⁶

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)
Special Area of Conservation (SAC)	
<p>South Dublin Bay SAC [000210] 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>	<p>Approximately 2.6km from the Proposed Scheme</p>
<p>North Dublin Bay SAC [000206] 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>	<p>Approximately 5.7km from the Proposed Scheme</p>
<p>Rockabill to Dalkey Island SAC [003000] 1170 Reefs 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>Approximately 10.5km from the Proposed Scheme</p>

²⁶ The versions of the conservation objectives documents referenced in this table are the most recent published versions at the time of writing.

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>NPWS (2013c) <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>Howth Head SAC [000202] 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts 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 (2016) <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>Approximately 11.3km from the Proposed Scheme</p>
<p>Wicklow Mountains SAC [002122] 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 Violetalia calaminariae 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 (Androsacetalia alpinae and Galeopsietalia ladani) 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 (2017a) <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>Approximately 6.1km from the Proposed Scheme</p>
<p>Knocksink Wood SAC [000725] 7220 Petrifying Springs with Tufa formation (Cratonuerion)* 91A0 Old Sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles 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></p> <p>NPWS (2021a) <i>Conservation objectives for Knocksink Wood SAC [000725]</i>. Version 1.0. Department of Housing, Local Government and Heritage.</p>	<p>Approximately 10.1km from the Proposed Scheme</p>
<p>Ballyman Glen SAC [000713] 7220 Petrifying springs with tufa formation (Cratoneurion)* 7230 Alkaline fens</p>	<p>Approximately 12.2km 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><i>S.I. No. 92/2019- European Union Habitats (Ballyman Glen Special Area of Conservation 000713) Regulations 2019</i></p> <p>NPWS (2019) <i>Conservation objectives: Ballyman Glen SAC [000713]</i>. Version 1.0. Department of Housing, Local Government and Heritage.</p>	
<p>Baldoyle Bay SAC [000199]</p> <p>1140 Mudflats and sandflats not covered by seawater at low tide</p> <p>1310 <i>Salicornia</i> and other annuals colonizing mud and sand</p> <p>1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</p> <p>1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p><i>S.I. No. 472/2021 – European Union Habitats (Baldoyle Bay Special Area of Conservation 000199) Regulations 2021</i></p> <p>NPWS (2012) <i>Conservation Objectives: Baldoyle Bay SAC 000199</i>. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>Approximately 10.7km from the Proposed Scheme</p>
<p>Glenasmole Valley SAC [001209]</p> <p>6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)</p> <p>6410 <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)</p> <p>7220 Petrifying springs with tufa formation (<i>Cratoneurion</i>)*</p> <p><i>S.I. No. 345/2021 – European Union Habitats (Glenasmole Valley Special Area of Conservation 001209) Regulations 2021</i></p> <p>NPWS (2021b) <i>Conservation objectives for Glenasmole Valley SAC [001209]</i>. Generic Version 1.0. Department of Housing, Local Government and Heritage.</p>	<p>Approximately 4.5km from the Proposed Scheme</p>
<p>Rye Water Valley / Carton SAC</p> <p>7220 Petrifying springs with tufa formation (<i>Cratoneurion</i>)*</p> <p>1014 Narrow-mouthed Whorl Snail <i>Vertigo angustior</i></p> <p>1016 Desmoulin's Whorl Snail <i>Vertigo moulinsiana</i></p> <p><i>S.I. No. 494/2018 - European Union Habitats (Rye Water Valley/Carton Special Area of Conservation 001398) Regulations 2018</i></p> <p>NPWS (2021c) <i>Conservation objectives for Rye Water Valley/Carton SAC [001398]</i>. Generic Version 8.0. Department of Housing, Local Government and Heritage²⁷</p>	<p>Approximately 13.3km from the Proposed Scheme</p>
<p>Ireland's Eye SAC [002193]</p> <p>1220 Perennial vegetation of stony banks</p> <p>1230 Vegetated sea cliffs of the Atlantic and Baltic coasts</p>	<p>Approximately 14.6km from the Proposed Scheme</p>

²⁷ The versions of the conservation objectives documents referenced in this table are the most recent published versions at the time of writing

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><i>S.I. No. 501/2017 - European Union Habitats (Ireland's Eye Special Area of Conservation 002193) Regulations 2017</i></p> <p>NPWS (2017b) <i>Conservation objectives: Ireland's Eye SAC [002193]</i>. Version 1.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.</p>	
<p>Malahide Estuary SAC [000205]</p> <p>1140 Mudflats and sandflats not covered by seawater at low tide</p> <p>1310 <i>Salicornia</i> and other annuals colonising mud and sand</p> <p>1320 <i>Spartina</i> swards (<i>Spartinion maritimae</i>)²⁸</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 (2013d) <i>Conservation Objectives: Malahide Estuary SAC 000205</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>Approximately 13.5km from the Proposed Scheme</p>
<p>Lambay Island SAC [000204]</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>Approximately 22.1km from the Proposed Scheme</p>
<p>Special Protection Area (SPA)</p>	
<p>South Dublin Bay and River Tolka Estuary SPA [004024]</p> <p>A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i></p> <p>A130 Oystercatcher <i>Haematopus ostralegus</i></p> <p>A137 Ringed Plover <i>Charadrius hiaticula</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>Approximately 2.7km from the Proposed Scheme</p>

²⁸ 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 and as such NPWs have not set a conservation target for it, nor is there a requirement to assess the habitat as a QI.

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>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>North Bull Island SPA [004006] 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 & 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</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>Approximately 5.8km from the Proposed Scheme</p>
<p>Dalkey Islands SPA [004172] 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></p>	<p>Approximately 11.2km 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 (2022a) <i>Conservation objectives for Dalkey Islands SPA [004172].</i> Generic Version 9.0. Department of Housing, Local Government and Heritage.	
<p>Wicklow Mountains SPA [004040] 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 (2022c) <i>Conservation objectives for Wicklow Mountains SPA [004040].</i> Generic Version 9.0. Department of Housing, Local Government and Heritage.</p>	Approximately 6.2km from the Proposed Scheme
<p>Baldoyle Bay SPA [004016] 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 (2013c) <i>Conservation Objectives: Baldoyle Bay SPA 004016. Version 1.</i> National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	Approximately 10.9km from the Proposed Scheme
<p>Howth Head Coast SPA [004113] 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> Generic Version 9.0. Department of Housing, Local Government and Heritage.</p>	Approximately 13.6km from the Proposed Scheme
<p>Ireland's Eye SPA [004117] 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 (2022d) <i>Conservation objectives for Ireland's Eye SPA [004117].</i> Generic Version 9.0. Department of Housing, Local Government and Heritage</p>	Approximately 14.5km from the Proposed Scheme
<p>Malahide Estuary SPA [004025] A005 Great Crested Grebe <i>Podiceps cristatus</i> A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i></p>	Approximately 13.5km 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>A048 Shelduck <i>Tadorna tadorna</i> 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 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>Rogerstown Estuary SPA [004015] A043 Greylag Goose <i>Anser anser</i> A046 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</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>Approximately 18.1km from the Proposed Scheme</p>
<p>Lambay Island SPA [004069] A009 Fulmar <i>Fulmarus glacialis</i> A017 Cormorant <i>Phalacrocorax carbo</i> A018 Shag <i>Phalacrocorax aristotelis</i> A043 Greylag Goose <i>Anser anser</i> A183 Lesser Black-backed Gull <i>Larus fuscus</i> A184 Herring Gull <i>Larus argentatus</i></p>	<p>Approximately 21.9km 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>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> Generic Version 9.0. Department of Housing, Local Government and Heritage.</p>	
<p>The Murrough SPA [004186] A001 Red-throated Diver <i>Gavia stellata</i> 13.5km A043 Greylag Goose <i>Anser anser</i> 15-20km A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i> 15-20km 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> NPWS (2022f) <i>Conservation objectives for The Murrough SPA [004186].</i> Generic Version 9.0. Department of Housing, Local Government and Heritage.</p>	<p>Approximately 26.2km from the Proposed Scheme</p>
<p>Skerries Islands SPA [004122] A017 Cormorant <i>Phalacrocorax carbo</i> A018 Shag <i>Phalacrocorax aristotelis</i> A046 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 (2022g) <i>Conservation objectives for Skerries Islands SPA [004122].</i> Generic Version 9.0. Department of Housing, Local Government and Heritage.</p>	<p>Approximately 27.5km from the Proposed Scheme</p>
<p>Rockabill SPA [004114] 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 004114)) Regulations 2012.</i></p>	<p>approximately 28.1km 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 (2013i) <i>Conservation objectives for Rockabill SPA [004114]</i> . Generic Version 1.0. Department of Arts, Heritage and the Gaeltacht.	



Údarás Náisiúnta Iompair
National Transport Authority

National Transport Authority
Dún Scéine
Harcourt Lane
Dublin 2
D02 WT20



Project Ireland 2040
Building Ireland's Future