



Appropriate Assessment Screening Report
Cherrywood Green Routes Network
Cherrywood SDZ Lands, Cherrywood, Dublin 18

prepared for Aecom

on behalf of Dún Laoghaire-Rathdown County Council

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1 Introduction

This report, which contains information required for the competent authority (in this instance Dún Laoghaire-Rathdown County Council) to undertake a screening for Appropriate Assessment (AA), has been prepared by Scott Cawley Ltd. on behalf of the applicant. It provides information on, and assesses the potential for, the proposed development to impact on the Natura 2000 network (hereafter referred to as European sites)¹. The proposed development consists of a Green Routes Network for the Cherrywood strategic development zone (SDZ) (herein referred to as “the proposed route”).

An AA is required if significant effects on European sites arising from a proposed development cannot be ruled out at the screening stage, either alone or in combination with other plans or projects. It is the responsibility of the competent authority to make a decision as to whether or not the proposed development is likely to have significant effects on European sites, either individually or in combination with other plans or projects.

For the reasons set out in detail in this AA Screening Report, an **Appropriate Assessment of the proposed route is not required in this instance** as it can be concluded, on the basis of objective information, that the proposed route, either individually or in combination with other plans or projects, will not have a significant effect on any European sites.

2 Methodology

2.1 Author Statement

This AA Screening report was authored by Colm Clarke of Scott Cawley. Field surveys were conducted by ecologists Colm Clarke, Alexis FitzGerald, Aoife O'Rourke, Shane Brien, Niall McHugh, and Síofra Quigley of Scott Cawley, and by independent ornithologist Hugh Delaney, and independent ecologist Kevin Delahunty. Surveys were designed and supervised by Colm Clarke of Scott Cawley. This report has been reviewed for quality assurance purposes by Niamh Burke of Coiscéim Consulting and Ashling Cronin of Scott Cawley Ltd. All personnel that have contributed to this report are qualified and experienced ecologists. The professional profiles of all contributing ecologists for this project are listed in Appendix I of this report.

2.2 Guidance

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)
- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*. (Department of Environment, Heritage and Local Government, 2010 revision)

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 designed as *European sites* - defined under the Planning Acts and/or the Birds and Habitats 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 under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular NPW 1/10 & PSSP 2/10
- *Assessment of Plans and Projects in Relation to Natura 2000 sites: Methodological Guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2021)
- *Communication from the Commission on the precautionary principle* (European Commission, 2000), and
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019)

2.3 Assessment Methodology

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).

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).

Screening for Appropriate Assessment involves the following steps:

Determining whether the proposed route is directly connected with, or necessary to the conservation management of, any European site(s)

Describing the details of the proposed route

Describing the receiving environment

Assessment of effects on European sites

Identifying all the potential impacts of the proposed development on the receiving environment



Defining the zone of influence of the proposed route on the receiving environment



Identifying the European site(s) within the zone of influence of the proposed route



Assessing whether the potential impacts associated with the proposed route will undermine the conservation objectives of any European site(s), either alone or in combination with other plans or projects

Conclusions of screening assessment process

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 an Appropriate Assessment.

In establishing which European sites are potentially at risk (in the absence of mitigation) from the proposed route, 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. pathway 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.

The identification of source-pathway-receptor connection(s) between the proposed route and European sites essentially is the process of identifying which European sites are within the Zone of Influence (Zol) of the proposed route, and therefore potentially at risk of significant effects. The Zol is the area over which the proposed route 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.

The identification of a source-pathway-receptor link does not automatically mean that significant effects will arise. 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 principle⁴ is applied.

² The term qualifying interest is used when referring to the habitats or species for which an SAC is designated; the term special conservation interest 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.

2.4 Desktop Data Review

A desk study was initially undertaken in May 2019 to inform this report. The desk study has been continuously updated between May 2019 and March 2022, in order to collect any available information on the local ecological environment. The following resources assisted in the production of this report:

- Online data available from the National Parks and Wildlife Service (NPWS) on European sites⁵ and other designated sites protected at the national level (*i.e.*, Natural Heritage Areas, or NHAs, and proposed Natural Heritage Areas, or pNHAs)⁶
- National Biodiversity Data Centre (NBDC) Search of Online Database for 10km Grid Squares O22⁷
- Habitat GIS datasets available to download from the NPWS website specifically the following datasets:
 - Ancient and Long-Established Woodland (updated 2012)⁸
 - National Survey of Native Woodlands 2003 - 2008 (updated 2012)
 - Article 17 Data for Annex I habitats (2012)⁹, and
 - 2019 Article 17 Data for Annex I habitats¹⁰
- Information on the surface water network and surface water quality in the area available from www.epa.ie and spatial data relating to watercourses, downloaded from the Environmental Protection Agency's (EPA) online Geo Portal, specifically the following dataset:
 - WFD River Water Bodies-27/04/2017¹¹
- Other available sources of habitat information, specifically the following publications:
 - Online map of Irish wetlands¹²
 - *National Survey of Native Woodlands 2003 – 2008* (Perrin *et al.*, 2008)¹³;

⁵ European sites, are defined under the Habitats Directive (Article 3) as a European ecological network of Special Areas of Conservation and Special Protection Areas, composed of sites which host the natural habitat types listed in Annex I and habitats of the protected species listed in Annex II. The aim of the network is to aid the long-term survival of Europe's most vulnerable and threatened species and habitats. In Ireland these sites are designated as European sites – defined under the Planning Acts and/or Birds and Habitats 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).

⁶ NPWS (2019) *Protected Sites in Ireland*. Available from: www.npws.ie/protectedsites/ and <http://webgis.npws.ie/npwsviewer/>

⁷ NBDC (2019) Online Database. Available from: <https://maps.biodiversityireland.ie/Map> [Accessed 07/01/2021]

⁸ NPWS (2019) GIS Datasets for Ancient and Long-Established Woodland and National Survey of Native Woodland 2003-2008 Available at <https://www.npws.ie/maps-and-data/habitat-and-species-data> [Accessed 31/08/2020, rechecked May 2021]

⁹ NPWS (2019) Article 17 Data for Annex I habitats. Available from: <https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17> [Accessed 31/08/2020, rechecked May 2021]

¹⁰ NPWS (2019) Article 17 Data for Annex I habitats. Available at: <https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17/2019/habitats> [Accessed 31/08/2020, rechecked May 2021]

¹¹ EPA (2019) WFD River Water Bodies Dataset. Available from: <http://gis.epa.ie/GetData/Download> [Accessed 31/08/2020]

¹² Available from: <http://www.wetlandsurveysireland.com/wetlands/map-of-irish-wetlands--/map-of-irish-wetlands---map/index.html>

¹³ Perrin, P., Martin, J., Barron, S., O'Neill, F., McNutt, K. and Delaney, A. (2008). *National Survey of Native Woodlands 2003-2008. Volume 1: Main Report*. Available from: <http://www.botanicalenvironmental.com/wp-content/uploads/2011/03/Volume-1.pdf>

- *A Provisional Inventory of Ancient and Long-Established Woodland in Ireland* (Perrin & Daly, 2010)¹⁴;
- Ecological data pertaining to the *Cherrywood Planning Scheme Biodiversity Plan* (Dún Laoghaire-Rathdown County Council 2014)¹⁵;
- *Otter Survey of Selected Rivers in the Dún Laoghaire-Rathdown County Council District, Dublin* (Macklin & Brazier, 2019)¹⁶, including spatial data on otter distribution along the Shanganagh River and its tributaries as provided by Dún Laoghaire-Rathdown County Council.
- *A Giant Hogweed Invasive Alien Species Survey* (Envirico, 2020)¹⁷ commissioned by Dún Laoghaire-Rathdown, relating to the Ballyogan Stream, Carrickmines Stream, Golf Stream, and Loughlinstown South Stream and associated tributaries.
- A Tufa Catchment Study (JBA Consulting, 2020)¹⁸ or springs located north of the Tully Vale Residential Development, Cherrywood, completed by JBA Consulting on behalf of Dún Laoghaire-Rathdown County Council.
- A hydrogeological and hydrological risk assessment of the proposed route completed by Aecom in order to assess the relationship between the proposed route and the receiving surface water network (Aecom, 2020)¹⁹;
- Information on the location, nature and design of the proposed route supplied by the applicant's design team.

2.5 Baseline Surveys

This section describes the ecological surveys carried out to inform the assessment of likely significant effects on European sites.

2.5.1 Habitats and Flora Survey

Habitat and flora surveys were conducted along the proposed route, and within its vicinity where accessible, by Colm Clarke and Alexis FitzGerald of Scott Cawley. Surveys were conducted on 29th August 2019, and between 12th and 13th September 2019 in bright, dry weather. Additional mop-up surveys of the southern section of the route were completed by Colm Clarke on 25th August 2020. Survey methodologies broadly followed those of *Best Practice Guidance for Habitat Survey and Mapping* (Smith *et al.*, 2011)²⁰, and involved a walkover of the lands noting the habitats and species within. Habitats were assigned to categories outlined within *A Guide to Habitats in Ireland* (Fossitt, 2000)²¹, and where present, habitats

¹⁴ Perrin, P.M. & Daly, O.H. (2010). *A Provisional Inventory of Ancient and Long-Established Woodland in Ireland*. *Irish Wildlife Manuals No. 46*. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland. Available from: <https://www.npws.ie/sites/default/files/publications/pdf/IWM46.pdf>

¹⁵ Dún Laoghaire-Rathdown County Council (2014). *Cherrywood Planning Scheme Biodiversity Plan*. Prepared by Scott Cawley on behalf of Dún Laoghaire-Rathdown County Council.

¹⁶ Macklin, R. & Brazier, B. (2019). *Otter survey of selected rivers in Dún Laoghaire-Rathdown County Council district with management recommendations*. Prepared by Triturus Environmental Ltd. for Dún Laoghaire-Rathdown County Council

¹⁷ Envirico (2020). *Giant Hogweed Invasive Alien Species Survey*. Prepared for Dún Laoghaire-Rathdown County Council. September 2020.

¹⁸ JBA Consulting (2020). *Tully Park Tufa Spring Assessment*. Produced on behalf of Dún Laoghaire-Rathdown County Council.

¹⁹ Aecom (2020). *Cherrywood Green Routes Network Hydrogeological and Hydrological Risk Assessment*. Produced by Aecom on behalf of Dún Laoghaire-Rathdown County Council.

²⁰ Smith, G.F., O'Donoghue, P., O'Hora, K. & Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council Church Lane, Kilkenny, Ireland.

²¹ Fossitt, J.A. (2000) *A Guide to Habitats in Ireland*. Heritage Council, Kilkenny.

listed on Annex I of the EU Habitats Directive were assigned according to relevant classification criteria in Ireland²². Plant nomenclature follows the *BSBI's List of Accepted Plant Names*²³.

Surveys were conducted with the aid of habitat maps prepared for the *Cherrywood Biodiversity Plan* (Dún Laoghaire-Rathdown County Council, 2014)¹⁵, and surveyors verified whether habitats along the route remain the same. Professional opinion was used to update habitat area and/or classification as necessary along the route. Surveyors made note of the locations of any species listed on the *Flora (Protection) Order 2015*, included within the threatened categories²⁴ of the *Ireland Red Data List No. 10: Vascular Plants* (Wyse Jackson *et al.*, 2016)²⁵, or listed on the third schedule of the *Birds and Habitats Regulations 2011*. Habitats were mapped in the field and field data was uploaded to a geographical information systems (GIS) database.

2.5.2 Fauna Surveys

2.5.2.1 Terrestrial Mammals

A terrestrial fauna survey was undertaken on the 29th August 2019, 24th September 2019, and 3rd March 2020 by Colm Clarke. The presence/absence of terrestrial fauna species were surveyed through the detection of field signs such as tracks, markings, feeding signs, and droppings, as well as by direct observation. The habitats along the proposed route and immediate vicinity of the route (to 50m either side of the route, where landowner access was granted) on site were assessed for signs of usage by protected/red-listed fauna species, and their potential to support these species. Surveys to check for the presence of badger setts and otter holts within the study area, and to record any evidence of use, were undertaken on the aforementioned dates. An additional investigation of a potential otter holt identified in Macklin & Brazier (2019)¹⁵, was undertaken by Colm Clarke and Síofra Quigley of Scott Cawley on 8th January 2021.

The proposed route is located outside of the natural range of the lesser horseshoe bat *Rhinolophus hipposideros* [1303], the only native Irish bat species that is listed on Annex II of the EU Habitats Directive. For this reason, bats fall outside of the scope of this report. For further details of the assessment of effects on bats, refer to the Ecological Impact Assessment (EclA) report that accompanies this AA Screening report.

2.5.2.2 Birds

Breeding bird surveys were undertaken on the 18th June 2019, and 1st and 4th July 2019 by Colm Clarke and Aoife O'Rourke of Scott Cawley and by Independent Ornithologist Hugh Delaney. Surveys were completed using a methodology adapted from the *Bird Monitoring Methods - A Manual of Techniques for Key UK Species*²⁶. The surveys comprised the completion of two separate walked transects on each of the survey dates. Lands within the study area were slowly walked in a manner allowing the surveyor to come within

²² Habitats listed on Annex I of the EU Habitats Directive are summarised into their broad classifications within the European Commission document *Interpretation Manual of European Union Habitats* (European Commission, 2013). However as these habitat types vary somewhat over their European range, it is the responsibility of national experts to provide a description of the habitats as they occur at a national level. Reference materials for the classification of EU Annex I Habitats as they are described in Ireland are included within *The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments* (NPWS, 2019).

²³ BSBI (2007). *BSBI's List of Accepted Plant Names*. Available online at www.bsbi.org

²⁴ The threatened categories are: Critically Endangered; Endangered; and, Vulnerable (Wyse Jackson *et al.*, 2016).

²⁵ Wyse Jackson, M., FitzPatrick, Ú., Cole, E., Jebb, M., McFerran, D., Sheehy Skeffington, M. & Wright, M. (2016). *Ireland Red List No. 10: Vascular Plants*. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Dublin, Ireland

²⁶ Gilbert, G., Gibbons, D.W. & Evans, J. (1998) *Bird Monitoring Methods - A Manual of Techniques for Key UK Species*. RSPB: Sandy

50m of all habitat features. Birds were identified by sight and song, and general location and activity were recorded using the British Trust for Ornithology (BTO) species and activity codes.

Observations of wintering birds within the lands were noted on 3rd March 2020 concurrent with the completion of a walkover survey of the site by Colm Clarke. The habitats within the lands were assessed for their suitability for wintering wetland bird species associated with European sites in the vicinity of the proposed route. The walkover of the proposed route include checks for evidence of usage by wildfowl such as swans or geese (e.g. droppings). Birds were identified by sight and general location and activity were recorded using the British Trust for Ornithology (BTO) species and activity codes.

3 Provision of Information for Screening for Appropriate Assessment

The following sections provide information to facilitate the Appropriate Assessment screening of the proposed route to be undertaken by the competent authority.

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

The potential impacts are examined in order to define the potential zone of influence of the proposed route on the receiving environment. This then informs the assessment of whether the proposed route will result in significant effects on any European sites, i.e., affect the conservation objectives supporting the favourable conservation condition of the European site's QIs or SCIs.

3.1 Description of the Proposed Development

The proposed Cherrywood Green Routes Network provides a cycle and pedestrian network, for the area within the Cherrywood SDZ. The Green Routes Network is based on the preliminary routing indicated in the Cherrywood SDZ, extending for 3.0km from Brides Glen Road in the south to Lehaunstown Road and Brennanstown in the north. The Green Routes Network provides links to improve the pedestrian and cycle connections to key external desire lines, including links to the N11, Wyattville Link Road, and Brides Glen / Cherrywood Road in the south. The Green Routes Network provides links to improve the pedestrian and cycle connections to key external desire lines, including links to the N11, Wyattville Link Road, and Brides Glen / Cherrywood Road in the south. The proposed Green Routes Network will be 4.0m wide, designed in accordance with TII Publication 'DN-GEO-03047-02 – Rural Cycleway Design (Offline), with the exception of a section through Druids Glen Woodland. In the Druids Glen Woodland, an 800m long pedestrian walking route is proposed, which will comprise resurfacing of existing pathways through the woodland through the existing Druids Glen Woodland.

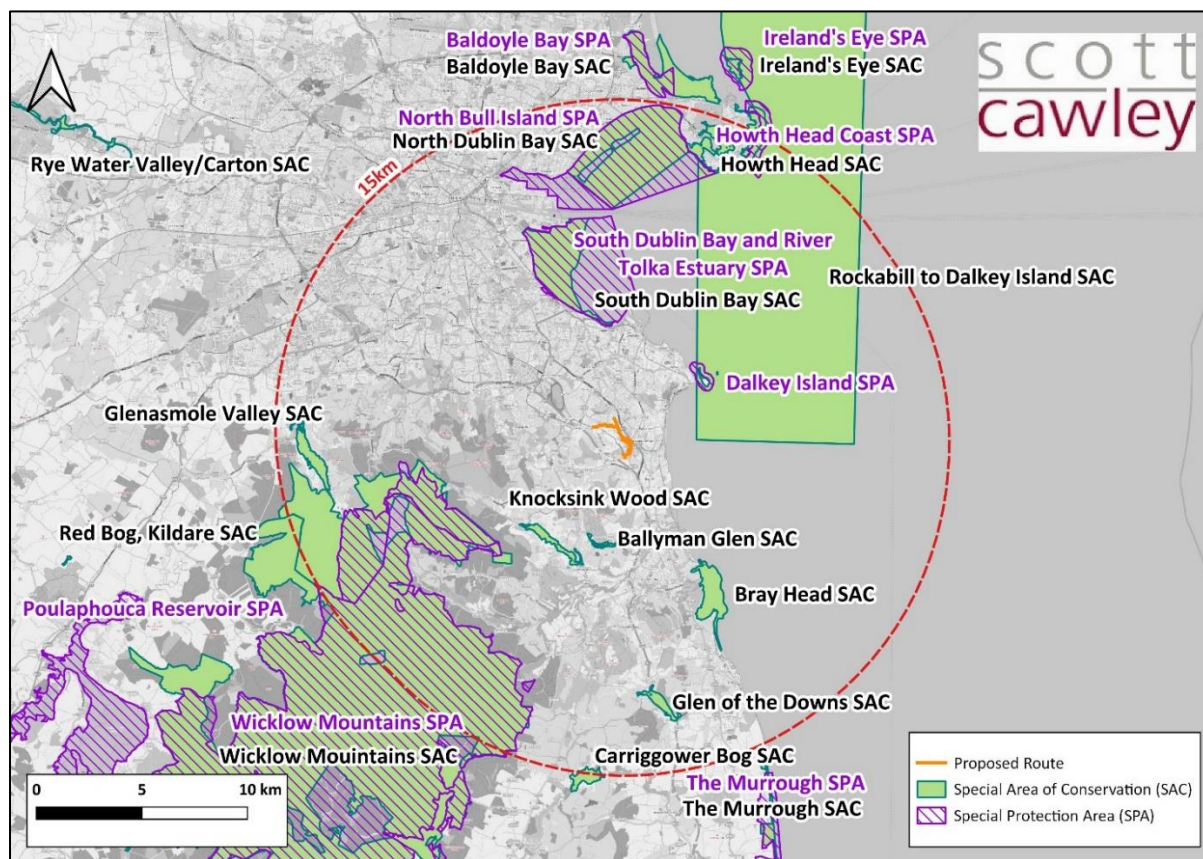
3.2 Overview of the Receiving Environment

3.2.1 European sites

The proposed route is not located within or adjacent to any European sites. The closest European site is Rockabill to Dalkey Island SAC (003000), which is located in Killiney Bay, c 3km east of the proposed route and has been designated for its example of reef habitat, and its population of harbour porpoise *Phocoena phocoena*. The proposed route is hydrologically connected to Killiney Bay via the surface water network, which discharges to the Bay north of the Shanganagh Wastewater Treatment Plant (WWTP).

All of the European sites present in the vicinity of the proposed route are shown on Figure 1 overleaf. The QIs/SCIs of the European sites in the vicinity of the proposed route are provided in Appendix II.

Figure 1 European sites in the vicinity of the proposed route



3.2.2 Habitats

The lands through which the proposed route runs are largely undeveloped. The proposed route runs through Druid's Glen, Bride's Glen, and the Cabinteely River/Tully Valley. Each valley contains relatively distinct ecology.

The Druids Glen is a steep-sided valley running roughly east-west. West of Lehaunstown Lane, it is almost entirely dominated by mixed broadleaved woodland (WD1). East of Lehaunstown Lane, the Druid's Glen is covered in a mixture of mixed broadleaved woodland (WD1), wetlands and semi-natural grassland habitats.

The Cabinteely River/Tully Valley is relatively steep-sided, but the valley floor is wider than that of Druid's Glen. The vegetation is also more variable, and contains areas of woodland, scrub, wetland, and grassland habitat. While grasslands may in the past have been managed for agricultural purposes, only small areas remain grazed by livestock. The result is that grassland habitats are transitioning towards scrub and woodland habitat types. The valley contains examples of calcareous springs, corresponding to the EU Annex I priority habitat [7220] petrifying springs with tufa formation (*Cratoneurion*), as well as the wetland habitat type tall herb swamps, which corresponds to the EU Annex I habitat [6430] hydrophilous tall herb fringe communities of plains and of the montane to alpine levels.

The section of the Bride's Glen through which the route traverses has been heavily modified and is composed largely of amenity grassland (GA2), scattered trees (WD5), and patches of mixed broadleaved woodland (WD1) of recent origin (planted within last 20 years or so). It largely consists of a suburban park containing immature woodland and amenity grassland.

3.2.3 Flora and Fauna Species

Several species of plant listed on the Third Schedule of the Birds and Habitats Regulations, and therefore subject to restrictions in Ireland, have been recorded within the Druids Glen and Carrickmines River Valleys (Dún Laoghaire-Rathdown County Council, 2014) and were identified during surveys along the proposed route. These include giant hogweed *Heracleum mantegazzianum*, which occurs along the majority of the route downstream of the middle part of Druid's Glen, and *Rhododendron ponticum* which is restricted to the northern side of the Druid's Glen (e.g. outside of the proposed area of works). Cherry laurel *Prunus laurocerasus*, although not listed on the Third Schedule of the Birds and Habitats Regulations, occurs along the proposed route (generally in the Druids Glen) and is invasive in woodland habitats. The extents of giant hogweed in particular has expanded since the original surveys undertaken to inform the *Cherrywood Planning Scheme Biodiversity Plan* (Dún Laoghaire-Rathdown County Council, 2014)¹⁵ were undertaken.

Two species of bird, which are SCIs of European sites, breed in the Cherrywood Town Centre area. These species are lapwing *Vanellus vanellus*, and ringed plover *Charadrius hiaticula*. With regard to lapwing, two pairs bred south of the Wyattville Link Road in TC3 lands immediately east the Brides Glen Luas Stop in 2017 and 2018 (Author, pers. Obs), and one pair bred in the vicinity of the joint venture construction compound north of Wyattville Link Road. All breeding sites were located within relatively quiet areas outside of existing construction sites, which have retained some, although sparse, vegetation cover. The closest SPA for which lapwing is an SCI species is the Boyne Estuary SPA (004080), c. 5.3km to the north. A pair of ringed plover bred in the vicinity of the joint venture compound in 2017 (Author, pers. Obs). Ringed plover are an SCI species for South Dublin Bay and River Tolka Estuary SPA (004024), which is located c. 5.5km north of the route.

3.2.4 Hydrology

The proposed route is located within the Carrickmines Stream and Shanganagh River Sub-basins of the Ovoca-Vartry catchment. The lands currently drain to the Shanganagh River²⁷ and its tributaries, and will continue to do so following construction of the proposed route. There are four river crossing points along the route as described in Section 3.1, page 7 of this report. The Shanganagh River flows in an easterly direction before entering the Southwestern Irish Sea - Killiney Bay (HA10) c. 2km east of the proposed route.

The EPA collects data on water quality of river, transitional and coastal waterbodies in Ireland and hosts this data on the EPA web database²⁸. The following water quality data is available for waterbodies in the vicinity of the proposed route:

- Downstream: There are two operational EPA water monitoring stations downstream of the proposed route: Station code RS10C040350 (u/s Overpass), located near the Wyattville Link Road junction with the Bray Road) and, Station Code RS10S010600 (at Commons Road), located off Commons Road, at the eastern end of Loughlinstown Woods, c. 1km east of the proposed route. Both stations have a q-value of 3-4, indicating that water quality is of 'Moderate' status. Latest records for the Southwestern Irish Sea – Killiney Bay (HA1) coastal waterbody indicates that it is 'unpolluted'.
- Upstream: There are no operational EPA water monitoring stations upstream of the proposed route.

Separately, the EPA also undertakes monitoring and reporting of the Water Framework Directive (WFD) status of Irish waterbodies. Good ecological status (good status) is defined in Annex V of the WFD, in terms of quality of the biological community, the hydrological characteristics and the chemical characteristics of

²⁷ The Shanganagh River is also frequently referred to as the Loughlinstown River. The nomenclature for rivers in this report follows that of the EPA

²⁸ EPA Water Quality Data gathered from the EPA online mapping service at www.epa.ie

a waterbody²⁹ The WFD classification scheme in Ireland includes five status classes: high, good, moderate, poor, and bad³⁰. The WFD status of a waterbody reflects the biological, chemical and morphological conditions associated with it, and these elements together make up the ecological status of a waterbody. The WFD status of the Carrickmines Stream, Shanganagh River, and Cabinteely Stream is 'moderate', while the WFD status of Southwestern Irish Sea – Killiney Bay (HA10) is 'High'. In addition to monitoring WFD status, the EPA characterises whether waterbodies are at risk of failing to meet their environmental objectives. The Shanganagh River upstream of the Wyatville Link Road Junction with the Bray Road, the Cabinteely Stream and Carrickmines Stream are all listed as 'at risk'. While the Shanganagh River downstream of the Wyatville Link Road Junction with the Bray Road, and the Southwestern Irish Sea – Killiney Bay (HA1) are listed as "not at risk".

3.2.5 Hydrogeology

According to information on soil and geological conditions in the GSI Mapviewer database³¹, the proposed route is located over Caledonian Granite. The granite bedrock is listed as a "Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones". The proposed route is located in the Wicklow WFD Groundwater body. Groundwater risk for the proposed route is mapped as review³¹, while the WFD status of the groundwater body is "Good"²⁸.

3.3 Assessment of Effects on European Sites

This section identifies all the potential impacts associated with the proposed route, examines whether there are any European sites within the ZoI of effects from the proposed route, and assesses whether there is any risk of the proposed route resulting in a significant effect on any European site, either alone or in combination with other plans or projects.

In assessing the potential for the proposed route 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.

3.3.1 Habitat loss and fragmentation

The proposed route does not overlap with the boundary of any European site. Therefore, there are no European sites at risk of direct habitat loss impacts.

As the proposed route does not traverse any European sites there is no potential for habitat fragmentation to occur.

While the Shanganagh River and its tributaries is known to support otter, a species listed on Annex II of the EU Habitats Directive, the population in the river does not form part of the QI population of any European sites. The closest European site for which Otter is a QI is the Wicklow Mountains SAC, south of the proposed route c. 6.5km as the crow flies. No part of the Shanganagh river or its tributaries is located within the Wicklow Mountains SAC, and there is therefore no direct link between the otter population at Cherrywood, and that of the Wicklow Mountains SAC. No other fauna species which are QIs/SCIs of European sites were recorded along the proposed route. Therefore, the proposed route does not support any populations of any fauna species linked with the QI/SCI populations of any European site(s).

As the proposed route will not result in habitat loss or habitat fragmentation within any European site, there is no potential for any in combination effects to occur in that regard.

²⁹ [Introduction to the EU Water Framework Directive - Environment - European Commission \(europa.eu\)](#) Accessed 28th January 2021.

³⁰ Information on WFD classification categories and characterisation from the EPA website www.epa.ie/water/watmg/wfd/

³¹ GSI (2020). *Geological Survey Ireland Spatial Resources*. Geological Survey Ireland, Department of Communications, Climate Action and Environment. Available online at www.gsi.ie.

3.3.2 Disturbance and displacement impacts

Construction or operation-related disturbance and displacement of fauna species could potentially occur within the vicinity of the proposed route. For mammal species such as otter, construction-phase disturbance effects from noise would not be expected to extend beyond 150m (Cutts *et al.*, 2009)³². As discussed under Section 3.3.1, the population of otter in the Shanganagh River is not part of any SAC population. Therefore, disturbance from the construction or operation of the proposal will not affect any mammalian QIs of any European sites.

For birds, construction-phase disturbance effects would not be expected to extend beyond a distance of c. 300m, 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; the next nearest European site to the proposed route is c. 3km away. While it is acknowledged that there are records of SCI species of European sites occurring in close proximity to the route (*i.e.* breeding lapwing and ringed plover which are known from the Cherrywood Town Centre site), no European sites have been designated for breeding populations of these species. Even if these species are displaced or disturbed by construction of the proposed route, this will not undermine the conservation objectives of any SCIs for any European sites in light of the small proportion of the population of the species that would be affected.

3.3.3 Habitat degradation as a result of introducing/spreading non-native species

Dense stands of giant hogweed, which is listed on the Third Schedule of the *European Communities (Birds and Natural Habitats) Regulation 2011* (as amended), are located along the proposed route. This species spreads largely by seed, with key vectors of dispersal including in watercourses and via transport of soils by construction vehicles³³. The seeds of the species are small and papery and will not survive extended immersion in saltwater. Therefore, there is no risk of spread of the species via hydrological pathways from the proposed route to any European sites due to the saltwater buffer between the proposed route and any European sites.

In its alien range, giant hogweed tends to occur close to streams and in marshy land, on waste ground and along roadsides³³. The spread of giant hogweed from the proposed route could theoretically occur via soils transported in wheel treads of construction machinery. However, in this instance there is no possibility of spread to European sites for the following reasons:

- The large distance of separation (>4km as the crow flies) between the proposed route and European sites that have been designated for terrestrial features, means that any materials transported in wheel threads will be release before reaching any European sites; and,
- European sites in the vicinity are not located along major roads, and therefore unlikely to be traversed by site traffic.

Stands of cherry laurel occur in the Druid's Glen section of the route. This species is invasive in woodland habitats, where it outcompetes native understorey species and suppresses tree canopy replacement³⁴ The vectors of spread of this species are largely asexual by layering and suckering with most stands being of

³² This is consistent with Transport Infrastructure Ireland (TII) guidance (*Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes* and *Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes*) documents. This is a precautionary distance, and likely to be moderated by the screening effect provided by surrounding vegetation and buildings, with the actual zone of influence of construction related disturbance likely to be much less in reality.

³³ Klingenstein, F. (2007). *NOBANIS – Invasive Alien Species Fact Sheet – Heracleum mantegazzianum*. – From: Online Database of the North European and Baltic Network on Invasive Alien Species - NOBANIS www.nobanis.org, Date of access 18/08/2020

³⁴ Invasive Species Ireland Profile for Cherry Laurel on the National Biodiversity Data Centre website: <https://species.biodiversityireland.ie/profile.php?taxonId=28940&taxonDesignationGroupId=25>. Accessed 18/08/2020

planted origin dating to Victorian times³⁵, although animals may also aid dispersal by ingesting berries. As the proposal does not include the deliberate planting of this species, there is no possibility of construction or operation of the proposed route facilitating the spread of the species to any European sites.

While *Rhododendron* occurs in the northern side of the Druids Glen, the proposed route does not traverse stands of this species, and there is no possibility of construction or operation of the proposal facilitating spread of the species to any European sites.

As the development or operation of the proposed route will not result in habitat degradation through the spread/introduction of invasive species within any European site, there is no potential for any in combination effects to occur in that regard.

3.3.4 Habitat degradation as a result of hydrological and hydrogeological impacts

Surface Waters

The proposed route is located 2km upstream of Killiney Bay. European sites in Killiney Bay have been designated for QIs and SCIs which occur in or utilise estuarine and coastal habitats, e.g. harbour porpoise *Phocoena phocoena*, and three species of Tern *Sterna* spp. Additionally, the coastal waters of Killiney Bay may host *ex situ* populations of SCI species of European sites in the broader vicinity: Birds are mobile species, and some wintering birds can travel up to 20km between roosting and feeding sites (Scottish Natural Heritage, 2016)³⁶, while some breeding marine birds routinely travel up to 50km between roosting/nesting sites and marine feeding grounds (Chivers *et al.*, 2012)³⁷. It is therefore possible that bird SCI species of sites within 50km of Killiney Bay could utilise waters within the Bay.

A hydrogeological and hydrological risk assessment report was prepared for the proposed route by Aecom (Aecom, 2020)¹⁹. The assessment was carried out using a conceptual site model (CSM) which was based on a good understanding of the hydrogeological and hydrological environment, plausible sources of impact and knowledge of receptor requirements. This allows possible source-pathway-receptor linkages to be identified. Potential sources of impacts during construction and operation are considered in the CSM and all potential sources of contamination are considered without taking account of any measures intended to avoid or reduce harmful effects of the proposed route (mitigation measures) *i.e.*, a worst-case scenario.

Results of the CSM carried out by Aecom and which inform this report, indicate that although water quality in the immediate downstream environment may be affected by surface run-off from the proposed route during both construction and operational phases respectively, there will be no perceptible impact on water quality in downstream receiving waters in Killiney Bay. Therefore, there will be no impact on the European sites within Killiney Bay or any *ex-situ* SCIs of European sites which utilise Killiney Bay. This is due to the small anticipated volume of material that could potentially be discharged to the surface water network during any event, and the attenuation and dilution capacities of the surface waters downstream of the proposed development site.

In-Combination

The CSM also considered in-combination effects arising from plans or projects that could occur within the Cherrywood SDZ and concluded that there would be no risk of impact on water quality in Killiney Bay as a

³⁵ Cherry Laurel Webpage of Invasive Species in Northern Ireland. <http://www.habitas.org.uk/invasive/species.asp?item=3420>. Accessed 18/08/2020

³⁶ Scottish Natural Heritage (2016). *Assessing Connectivity with Special Protection Areas (SPAs): Guidance*. Available online at [Assessing connectivity with special protection areas.pdf](#) (nature.scot)

³⁷ Chivers, L.S., Lundy, M.G., Colhoun, K., Newton, S.F., Houghton, J.D.R., and Reid, N. (2012). *Foraging trip time-activity budgets and reproductive success in the black-legged kittiwake*. *Marin Ecology Progress Series* 456:269-277.

result of the proposed route in-combination with surface water arisings from other developments (Aecom, 2020).

There is potential for “in-combination” effects on water quality in Killiney Bay from any other projects carried out within the functional areas of the *Dún Laoghaire-Rathdown County Development Plan 2022-2028* (Dún Laoghaire-Rathdown County Council, 2022)³⁸, the *Wicklow County Development Plan 2016-2022* (Wicklow County Council, 2016)³⁹, or any other land use plans which could influence conditions in Killiney Bay via rivers and other surface water features. Several flood relief schemes are proposed for rivers in the area including the Kill-O-The-Grange Stream, Loughlinstown River and Shanganagh River. At the time of writing (January 2021), the Deansgrange Flood Relief Scheme (for the Kill-O-The-Grange Stream) was on display for initial public engagement⁴⁰. As with all plans or projects, the aforementioned flood relief schemes will be required to undergo their own Appropriate Assessment Screening/Appropriate Assessment prior to commencement of works.

The Eastern & Midland Regional Assembly, *Regional Spatial & Economic Strategy 2019-2031* (Eastern & Midland Regional Assembly, 2019)⁴¹ includes a range of policy objectives relevant to the protection of European sites and the protection of water quality in Dublin Bay, to which the relevant planning authorities must have regard to in the preparation and adoption of their development plans (included in Appendix III).

The planning authority for the proposed route is Dún Laoghaire-Rathdown County Council (DLRCC). Plans and developments within Dún Laoghaire-Rathdown must comply with the following policy objectives of the *Dún Laoghaire-Rathdown County Development Plan 2022-2028*³⁸ relevant to the protection of European sites and the protection of water quality in Dublin Bay:

- **Policy Objective GIB18: Protection of Natural Heritage and the Environment** - It is a Policy Objective to protect and conserve the environment including, in particular, the natural heritage of the County and to conserve and manage Nationally and Internationally important and EU designated sites - such as Special Protection Areas (SPAs), Special Areas of Conservations (SACs), proposed Natural Heritage Areas (pNHAs) and Ramsar sites (wetlands) - as well as non-designated areas of high nature conservation value known as locally important areas which also serve as ‘Stepping Stones’ for the purposes of Article 10 of the Habitats Directive
- **Policy Objective GIB19: Habitats Directive** - It is a Policy Objective to ensure the protection of natural heritage and biodiversity, including European Sites that form part of the Natura 2000 network, in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines.
- **Policy Objective GIB21: Designated Sites** - It is a Policy Objective to protect and preserve areas designated as proposed Natural Heritage Areas, Special Areas of Conservation, and Special Protection Areas. It is Council policy to promote the maintenance and as appropriate, delivery of ‘favourable’ conservation status of habitats and species within these areas.
- **Policy Objective GIB22: Non-Designated Areas of Biodiversity Importance** - It is a Policy Objective to protect and promote the conservation of biodiversity in areas of natural heritage importance outside Designated Areas and to ensure that notable sites, habitats and features of biodiversity importance - including species protected under the Wildlife Acts 1976 and 2000, the Birds Directive 1979, the Habitats Directive 1992, Flora (Protection) Order, 2015, Annex I habitats, local important areas, wildlife corridors and rare species - are adequately protected. Ecological assessments will be carried out for all developments in areas that support, or have potential to support, features of biodiversity importance or rare and protected species and appropriate mitigation/ avoidance

³⁸ Dún Laoghaire-Rathdown County Council (2022). *Dún Laoghaire-Rathdown County Development Plan 2022-2028*.

³⁹ Wicklow County Council (2016). *Wicklow County Development Plan 2016-2022*.

⁴⁰ Deansgrange Flood Relief Scheme website [Initial Public Engagement Event - DeansgrangeFRS](#), Accessed 28th January 2021.

⁴¹ Eastern & Midland Regional Assembly (2019) *Regional Spatial & Economic Strategy 2019-2031*

measures will be implemented. In implementing this policy, regard shall be had to the Ecological Network, including the forthcoming DLR Wildlife Corridor Plan, and the recommendations and objectives of the Green City Guidelines (2008) and 'Ecological Guidance Notes for Local Authorities and Developers' (Dún Laoghaire-Rathdown Version 2014)

- **Policy Objective GIB23: County-Wide Ecological Network** - It is a Policy Objective to protect the Ecological Network which will be integrated into the updated Green Infrastructure Strategy and will align with the DLR County Biodiversity Action Plan. Creating this network throughout the County will also improve the ecological coherence of the Natura 2000 network in accordance with Article 10 of the Habitats Directive. The network will also include non-designated sites.
- **Policy Objective EI7: Water Supply and Wastewater treatment and Appropriate Assessment** - It is a Policy Objective to require that all developments relating to water supply and wastewater treatment are subject to screening for Appropriate Assessment to ensure there are no likely significant effects on the integrity, defined by the structure and function, of any European sites and that the requirements of Article 6 of the EU Habitats Directive are met. (Consistent with RPO 10.7 of the RSES).
- **Policy Objective EI8: Groundwater Protection and Appropriate Assessment** - It is a Policy Objective to ensure the protection of the groundwater resources in and around the County and associated habitats and species in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010. In this regard, the Council will support the implementation of Irish Water's Water Safety Plans to protect sources of public water supply and their contributing catchment.
- **Policy Objective EI2: Irish Water Enabling Policies Irish Water's Plans and Programmes** - It is a Policy Objective - in conjunction with the Eastern and Midland Regional Authority, where appropriate - to work with and support Irish Water in the delivery of the strategic objectives and strategic water and wastewater projects and infrastructure as set out in the 'Water Services Strategic Plan' (2015), any subsequent plan, Irish Water's Capital Investment Plan 2020 – 2024, any subsequent Capital Investment Plans and the forthcoming National Water Resources Plan, so as to ensure provision of infrastructure to service settlements in accordance with the Core Strategy of this Plan, and the settlement strategy of the RSES. (Consistent with RPO 10.2, 10.3, 10.11, 10.16 of the RSES).
- **Policy Objective EI5: River Basin Management Plans (RMBPs)** - It is a Policy Objective: To ensure the delivery of the relevant policies and objectives of the River Basin Management Plan for Ireland 2018 – 2021 and any subsequent plan, including those relating to protection of water status, improvement of water status, prevention of deterioration and meeting objectives for designated protected sites. To support Irish Water in its implementation of Water Quality Management Plans for ground, surface, coastal and estuarine waters as part of the implementation of the EU Water Framework Directive. To support Irish Water in the development of Drinking Water Protection Plans.
- **Policy Objective EI6: Sustainable Drainage Systems** - It is a Policy Objective to ensure that all development proposals incorporate Sustainable Drainage Systems (SuDS).
- **Policy Objective EI17: Water Pollution** - It is a Policy Objective to implement the provisions of water pollution abatement measures in accordance with national and EU Directives and other legislative requirements in conjunction with other agencies as appropriate.

Plans and developments within the other local authority areas which could influence conditions in Killiney Bay via rivers and other surface water features, also must comply with the policies and objectives relevant to the protection of European sites and water quality. This includes the *Wicklow County Development Plan 2016-2022* (Wicklow County Council, 2016)³⁹. The relevant policies and objectives in that plan for the protection of European sites and water quality are included in Appendix III.

In conclusion, Killiney Bay is currently unpolluted, and the proposed route will not result in any measurable effect on water quality in Killiney Bay. There are also protective policies and objectives in place at a strategic planning level to protect water quality in Killiney Bay.

Therefore, and having regard to the policies and objectives referred to under the relevant development plans, it is concluded that the possibility of any other plans or projects acting in combination with the proposed route to give rise to significant effects on any European site in, or associated with, Killiney Bay can be excluded.

3.3.5 Mortality of QI/SCI species arising from hydrological impacts

As outlined in Section 3.3.4 above, there is no possibility of the proposed route negatively affecting water quality in Killiney Bay - either on its own or in-combination with other plans or projects. For this reason, there is also no possibility of mortality of QI or SCI species of any European sites arising from hydrological / hydrogeological impacts of the proposed route on its own or in combination with other plans or projects.

3.3.6 Summary

The potential impacts associated with the proposed route do not have the potential to affect the receiving environment and, consequently, do not have the potential to affect the conservation objectives supporting the qualifying interest/special conservation interests of any European sites. Therefore, the proposed route is not likely to have significant effects on any European sites.

As the proposed route itself will not have any effects on the QIs/SCIs or conservation objectives of any European sites, and taking into account the policies and objectives of the statutory plans which relate to projects or plans that discharge to Killiney Bay e.g., the *Dún Laoghaire-Rathdown County Development Plan 2022-2028* (Dún Laoghaire-Rathdown County Council, 2022)³⁸; the *Wicklow County Development Plan 2016-2022* (Wicklow County Council, 2016)³⁹, it is concluded that there is no potential for any other plan or project to act in combination with it to result in significant effects on any European sites.

The potential impacts of the proposed route on the receiving environment, their Zol, and the European sites at risk of significant effects are summarised in Table 1 below. In assessing the potential for the proposed route 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 1: 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 route?
<p>Habitat loss and fragmentation Habitat loss will be confined to the lands within the proposed route boundary.</p>	<p>No There are no European sites within or adjacent to the proposed route</p>
<p>Disturbance and displacement impacts Potentially up to several hundred metres from the proposed route boundary, dependent upon the predicted levels of noise, vibration and visual disturbance associated with the proposed route, taking into account the sensitivity of the qualifying interest species to disturbance effects.</p>	<p>No There are/are no European sites within the potential zone of influence of disturbance effects associated with the construction or operation of the proposed route</p>
<p>Habitat degradation as a result of introducing/spreading non-native invasive species. Habitat areas within, adjacent to, and potentially downstream of the proposed route.</p>	<p>No There is no risk associated with the proposed route to any European sites from the spread/introduction of non-native invasive species</p>

Potential Direct, Indirect in Combination Effects and the Zol of the Potential Effects	Are there any European sites within the Zol of the proposed route?
<p>Habitat degradation as a result of hydrological and hydrogeological impacts</p> <p>Habitats and species downstream of the proposed route and the associated surface water drainage discharge points.</p>	<p>No</p> <p>There are no European sites at risk of hydrological and hydrogeological effects associated with the proposed route</p>
<p>Mortality of QI/SCI species arising from hydrological impacts</p> <p>Species occurring in Killiney Bay which are QIs/SCIs for European sites located in the bay.</p>	<p>No</p> <p>There are no European sites at risk of mortality effects associated with the proposed route</p>

4 Conclusions of Screening Assessment Process

Following an examination, analysis and evaluation of the best available information, and applying the precautionary principle, it can be concluded that the possibility of any significant effects on any European sites, whether arising from the project alone or in combination with other plans and projects, can be excluded, for the reasons set out in Section 3.3 above. 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.

Therefore, it is the professional opinion of the authors of this report that the application for consent for the proposed route does not require an Appropriate Assessment or the preparation of a Natura Impact Statement (NIS).

Appendix I

Author and Contributor Qualifications and Experience

Colm Clarke ACIEEM, Senior Ecologist

Colm Clarke is a Senior Ecologist with Scott Cawley and has over five years' experience in ecological consultancy. He obtained an honours degree in Natural Sciences, with a specialisation in Botany, from Trinity College Dublin, and a Masters in Biodiversity and Conservation from the same institution. Colm is an Associate Member of the Chartered Institute of Ecology and Environmental Management (CIEEM), a member of the Irish Environmental Law Association (IELA), and chairperson of the Dublin Bat Group (an associated group of Bat Conservation Ireland (BCI)). Colm also organises field excursions for the Botanical Society of Britain and Ireland (BSBI) Dublin/East Coast Local Group. Colm has been project manager and lead author on a large number of Ecological Assessments for Scott Cawley, and regularly undertakes both field work and report writing as part of his role. Colm undertook field surveys for a proposed route in 2019 and 2020, and is the principal author of this report.

Alexis FitzGerald, Consultant Ecologist

Alexis FitzGerald is a Consultant Ecologist at Scott Cawley. He holds an honours degree in Natural Sciences, with a specialisation in Botany, from Trinity College Dublin and obtained a distinction in his Masters in Biodiversity and Conservation from the same institution. Alexis has expertise in vascular plant, charophyte and bryophyte identification and habitat surveying, developed from his experience in university, professional ecological surveying and with natural history groups such as the BSBI and the Dublin Naturalists' Field Club (DNFC). He has been the BSBI County Recorder for Co. Monaghan since 2015. Alexis' professional experience includes vegetation and habitat classification and mapping (including EU Habitats Directive and Fossitt classification and statistical vegetation analysis), as well as rare, protected and invasive plant species surveying and monitoring. Alexis contributed to habitat surveys of the proposed route.

Aoife O'Rourke, Consultant Ecologist

Aoife O'Rourke is a Consultant Ecologist with Scott Cawley. She holds an honours degree in Environmental Biology from University College Dublin, specialising in zoology and botany and obtained a distinction in her Masters in Biodiversity and Conservation from Trinity College Dublin. She subsequently completed a Research Masters in Trinity College Dublin which focused on investigating the forage and landscape requirements of pollinators on fixed dune ecosystems in Ireland. Aoife is an experienced ecologist with extensive experience in the areas of species, habitat and land management and monitoring for conservation, having worked within the NGO, research, and ecological consultancy sectors in the UK and Ireland. Aoife has undertaken ecological assessments for a range of projects including tourism, industrial, residential and renewable energy developments. She has a specialist interest in invertebrates and plants, particularly pollinating insects and their host plants, however, is also competent in a range of other fauna surveys (e.g., birds, mammals, and amphibians).

Shane Brien, Consultant Ecologist

Shane Brien is a Consultant Ecologist with Scott Cawley. He holds an honours degree in Environmental Science from NUI Galway and completed his Masters in Ecological Assessment from University College Cork. Shane has professional experience working in Spain and different parts of Ireland for the last four years. His work has included conducting habitat surveys, floral species lists, bird surveys, mammal surveys (e.g., bats, otters, and badgers), and invertebrate surveys. He has a great interest and enthusiasm in ecology, with a special interest in botany, and continues to further his skills with training courses and volunteering with various environmental NGOs in Ireland. Since joining Scott Cawley his work has been assisting with senior ecologists on the collection of ecological data, data analysis, desktop work and preparation of Appropriate Assessment Screening reports.

Niall McHugh, Field Ecologist

Niall McHugh is a Field Ecologist with Scott Cawley. He obtained an honours degree in Freshwater and Marine Biology from the Galway-Mayo Institute of Technology. He has been actively involved in numerous ecological surveys with Scott Cawley and completed wintering bird surveys for the proposed development under the supervision of Colm Clarke. He is also a member of BirdWatch Ireland and has regularly undertaken volunteer bird surveys over the past 3 years including IWeBS, Garden Bird surveys and Hen Harrier surveys

Síofra Quigley, Consultant Ecologist

Síofra Quigley is a Consultant Ecologist with Scott Cawley. She obtained an honours degree in Undenominated Science, specialising in Zoology, from National University of Ireland Galway, and a master's in wildlife biology and Conservation from Edinburgh Napier University. She has three years' professional experience working in the UK on large to small scale infrastructure projects, with governmental and private clients. Síofra is experienced in carrying out field surveys in several protected species, including bat, otter, badger, red squirrel, reptile, pine marten and mountain hare. She has also been involved in radio tracking mountain hares and bats, bat call analysis, badger bait marking, acting as an Ecological Clerk of Works, Phase 1 habitat surveys and reports, and desk top studies. Since joining Scott Cawley, Síofra's work involves the preparation of reports, including Ecological Impact Assessment and Appropriate Assessment reports for residential, commercial, and infrastructural projects across Ireland.

Hugh Delaney, Independent Ornithologist

Hugh Delaney is an Independent Ornithologist with over 12 years' experience in bird surveying, he has worked on a broad range of sites across Ireland primarily associated with wind farm projects and has very extensive knowledge of bird distribution, ecology and Identification and has contributed to bird surveys and record gathering for over 20 years. He has worked with Scott-Cawley on a range of projects including the Dun Laoghaire Harbour Deep Port proposal, Brent Geese surveys in North Dublin in 2015/16 and 2016/17, and the Sutton To Sandycove Promenade and Cycleway (S2S) project

Kevin Delahunty, Independent Ecologist

Kevin Delahunty is an independent ecologist with extensive experience in mammal surveys including bat, otter and badger as well as breeding bird and wintering bird surveys but also has experience in cetacean identification and fish stock surveys, including electrofishing surveys. He completed his Bachelor of Science degree in Zoology at University College Dublin and then a Master of Science in Biodiversity and Conservation at Trinity College Dublin. Kevin is the Education Officer of the Dublin Bat Group, an associate group of Bat Conservation Ireland. He has undertaken multiple surveys over the past three years in Ireland working with clients at the private and government level. Kevin has conducted mammal and bird surveys for residential developments and linear infrastructure and completed Appropriate Assessment reports and Biodiversity Chapters of Environmental Impact Assessment Reports.

Niamh Burke CEnv, MCIEEM, Principal Ecologist, Coiscéim Ecology

Niamh Burke is Principal Ecologist with Coiscéim Ecology. She holds a BSc in Natural Sciences with Environmental Science and a PhD in salmonid ecology. She is a Chartered Environmentalist (CEnv) with the Society for the Environment (Soc Env) and a Full Member of the CIEEM. Niamh is a senior scientist with academic research and consulting experience in terrestrial ecology, aquatic ecology and fluvial geomorphology. She is an experienced project manager with a full working knowledge of EIA, the planning process and relevant environmental legislation, both national and European. With a specialism in aquatic habitats, she also has experience of terrestrial species' surveys and mitigation approaches. In her extensive consultancy roles, she has acted as reviewer for all ecological reporting and ensured consistency of standards and approach.

Ashling Cronin, Technical Director

Ashling Cronin is Technical Director at Scott Cawley. She holds a Masters in Ecological Assessment, an honours degree in Applied Ecology from University College Cork and an Advanced Diploma in Planning and Environmental Law from Kings Inns. She has over ten years' experience in environmental management and environmental / ecological assessment across both the private and public sector. Ashling has provided environmental and ecological support on a variety of planning applications. Ashling has a keen interest in both national and international environmental legislation and has extensive experience in the Appropriate Assessment (AA) process. She has been the lead ecologist for the preparation of a number of Natura Impact Statements for a range of development types and national plans, and Natura Impact Reports for a range of land use plans. Ashling also provides technical review and due diligence of Appropriate Assessment documentation for public and local authorities to aid their decision-making process as well as peer review of AA documentation prior to lodgement of planning applications.

Appendix II

The Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the European sites in the vicinity of the proposed route (see Figure 1)

European Site Name [Code] and its Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Development Site
Special Area of Conservation (SAC)	
<p>Ballyman Glen SAC (000713) [7220] Petrifying springs with tufa formation (Cratoneurion)* [7230] Alkaline fens</p> <p><i>S.I. No. 92/2019 - European Union Habitats (Ballyman Glen Special Area Of Conservation 000713) Regulations 2019</i></p> <p>NPWS (2019) Conservation Objectives: Ballyman Glen SAC 000713. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.⁴³</p>	<p>Located c. 4km south of the proposed route.</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>NPWS (2013) Conservation Objectives: Rockabill to Dalkey Island SAC 003000. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>Located c.4.2km east of the proposed route. The European site is located in Killiney Bay to which surface waters from the proposed development will be directed.</p>
<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></p> <p>NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>Located c. 4.4km north of the proposed route.</p>

⁴³ The versions of the conservation objectives documents referenced in this table are the most recent published versions at the time of writing

<p>Knocksink Wood SAC [000725]</p> <p>[7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>)*</p> <p>[91A0] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p>[91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)*</p> <p><i>S.I. No. 93/2019 - European Union Habitats (Knocksink Wood Special Area Of Conservation 000725) Regulations 2019</i></p> <p>NPWS (2021) <i>Conservation Objectives: Knocksink Wood SAC 000725. Version 1.</i> National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	<p>Located c. 4.9km south-west of the proposed route.</p>
<p>Bray Head SAC (000714)</p> <p>[1230] Vegetated sea cliffs of the Atlantic and Baltic coasts</p> <p>[4030] European dry heaths</p> <p><i>S.I. No. 620/2017 - European Union Habitats (Bray Head Special Area of Conservation 000714) Regulations 2017</i></p> <p>NPWS (2017) <i>Conservation Objectives: Bray Head SAC 000714. Version 1.</i> National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.</p>	<p>Located c. 6km south-east of the proposed route.</p>
<p>Wicklow Mountains SAC (002122)</p> <p>[3110] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)</p> <p>[3160] Natural dystrophic lakes and ponds</p> <p>[4010] Northern Atlantic wet heaths with <i>Erica tetralix</i></p> <p>[4030] European dry heaths</p> <p>[4060] Alpine and Boreal heaths</p> <p>[6130] <i>Calaminarian</i> grasslands of the <i>Violetalia calaminariae</i></p> <p>[6230] Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)</p> <p>[7130] Blanket bogs (* if active bog)</p> <p>[8110] Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)</p> <p>[8210] Calcareous rocky slopes with chasmophytic vegetation</p> <p>[8220] Siliceous rocky slopes with chasmophytic vegetation</p> <p>[91A0] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p>[1355] Otter <i>Lutra lutra</i></p> <p>NPWS (2017) <i>Conservation Objectives: Wicklow Mountains SAC 002122. Version 1.</i> National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.</p>	<p>Located c. 7km south-west of the proposed route.</p>

<p>North Dublin Bay SAC (000206)</p> <p>[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></p> <p>NPWS (2013) <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>Located c. 10km north of the proposed route.</p>
<p>Glen of the Downs SAC (000719)</p> <p>[91A0] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p><i>S.I. No. 526/2019 - European Union Habitats (Glen of the Downs Special Area of Conservation 000719) Regulations 2019</i></p> <p>NPWS (2020). <i>Conservation Objectives: Glen of the Downs SAC 000719</i>. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	<p>Located c. 11km south of the proposed development site.</p>
<p>Howth Head SAC (000202)</p> <p>[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>Located c. 12.5km north-east of the proposed route.</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) [6410] <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [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>Located c. 12.7km west of the proposed route</p>

<p>NPWS (2021) <i>Conservation Objectives: Glenasmole Valley SAC 001209. Version 1.</i> National Parks and Wildlife Service, Department of Housing, Local Government and Heritage</p>	
<p>Carrigower Bog SAC (000716) [7140] Transition mires and quaking bogs</p> <p><i>S.I. No. 293/2018 - European Union Habitats (Carrigower Bog Special Area of Conservation 000716) Regulations 2018</i></p> <p>NPWS (2019) <i>Conservation Objectives: Carrigower Bog SAC 000716. Version 1.</i> National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.</p>	<p>Located c. 14.5km south of the proposed route.</p>
<p>Baldoyle Bay SAC (000199) [1140] Mudflats and sandflats not covered by seawater at low tide [1310] <i>Salicornia</i> and other annuals colonising mud and sand [1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>NPWS (2012) <i>Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0.</i> National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht</p>	<p>Located c. 15km north of the proposed route.</p>
<p>The Murrough Wetlands SAC (002249) [1210] Annual vegetation of drift lines [1220] Perennial vegetation of stony banks [1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [7210] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>* [7230] Alkaline fens</p> <p><i>S.I. No. 622/2017 - European Union Habitats (The Murrough Wetlands Special Area of Conservation 002249) Regulations 2017</i></p> <p>NPWS (2021) <i>Conservation Objectives: The Murrough Wetlands SAC 002249. Version 1.</i> National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	<p>Located c. 15.5km south-east of the proposed route.</p>
<p>Ireland's Eye SAC (002193) [1220] Perennial vegetation of stony banks [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts</p> <p><i>S.I. No. 501/2017 - European Union Habitats (Ireland's Eye Special Area of Conservation 002193) Regulations 2017</i></p> <p>NPWS (2017) <i>Conservation Objectives: Ireland's Eye SAC 002193. Version 1.</i> National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.</p>	<p>Located c. 17km north-east of the proposed route.</p>
<p>Rye Water Valley / Carton SAC (001398) [1014] Narrow-mouthed whorl snail <i>Vertigo angustior</i> [1016] Desmoulin's whorl-snail <i>Vertigo moulinsiana</i> [7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>)*</p>	<p>Located c 25km north-west of the proposed route.</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 (2021) <i>Conservation Objectives: Rye Water Valley/Carton SAC 001398. Version 1.</i> National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	
<p>Red Bog, Kildare SAC (000397) [7140] Transition mires and quaking bogs</p> <p><i>S.I. No. 76/2018 - European Union Habitats (Red Bog, Kildare Special Area of Conservation 000397) Regulations 2018</i></p> <p>NPWS (2019) <i>Conservation Objectives: Red Bog, Kildare SAC 000397. Version 1.</i> National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.</p>	<p>Located c. 25.5km west of the proposed route.</p>
Special Protection Area (SPA)	
<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>NPWS (2022) <i>Conservation objectives for Dalkey Islands SPA [004172].</i> Generic Version 9.0. Department of Housing, Local Government and Heritage.</p>	<p>Located c. 4km north-east of the proposed route. The European site is partially located within Killiney Bay, to which the proposed route is hydrologically connected.</p>
<p>South Dublin Bay and River Tolka Estuary SPA (004024) [A046] Light-bellied Brent Goose <i>Branta bernicla hrota</i> [A130] Oystercatcher <i>Haematopus ostralegus</i> [A137] Ringed Plover <i>Charadrius hiaticula</i> [A141] Grey Plover <i>Pluvialis squatarola</i> [A143] Knot <i>Calidris canutus</i> [A144] Sanderling <i>Calidris alba</i> [A149] Dunlin <i>Calidris alpina</i> [A157] Bar-tailed Godwit <i>Limosa lapponica</i> [A162] Redshank <i>Tringa totanus</i> [A179] Black-headed Gull <i>Croicocephalus ridibundus</i> [A192] Roseate Tern <i>Sterna dougallii</i> [A193] Common Tern <i>Sterna hirundo</i> [A194] Arctic Tern <i>Sterna paradisaea</i> [A999] Wetland and Waterbirds</p> <p><i>S.I. No. 212/2010 - European Communities (Conservation of Wild Birds (South Dublin Bay and River Tolka Estuary Special Protection Area 004024)) Regulations 2010.</i></p>	<p>Located c. 4.5km north of the proposed route.</p>

<p>NPWS (2015) <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>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></p> <p>NPWS (2022) <i>Conservation objectives for Wicklow Mountains SPA [004040]</i>. Generic Version 9.0. Department of Housing, Local Government and Heritage.</p>	<p>Located c. 7km east of the proposed route.</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>Croicocephalus 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></p> <p>NPWS (2015) <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>Located c. 10km north of the proposed route.</p>
<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></p> <p>NPWS (2022) <i>Conservation objectives for Howth Head Coast SPA [004113]</i>. Generic Version 9.0. Department of Housing, Local Government and Heritage.</p>	<p>Located c. 13km north-east of the proposed route.</p>
<p>Baldoye Bay SPA (004016) [A046] Light-bellied Brent Goose <i>Branta bernicla hrota</i></p>	<p>Located c. 15km north of the proposed route.</p>

<p>[A048] Shelduck <i>Tadorna tadorna</i> [A137] Ringed Plover <i>Charadrius hiaticula</i> [A140] Golden Plover <i>Pluvialis apricaria</i> [A141] Grey Plover <i>Pluvialis squatarola</i> [A157] Bar-tailed Godwit <i>Limosa lapponica</i> [A999] Wetland and Waterbirds</p> <p><i>S.I. No. 275/2010 - European Communities (Conservation of Wild Birds (Baldoyle Bay Special Protection Area 004016)) Regulations 2010.</i></p> <p>NPWS (2013) <i>Conservation Objectives: Baldoyle Bay SPA 004016. Version 1.</i> National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	
<p>The Murrough SPA (004186) [A001] Red-throated Diver <i>Gavia stellata</i> [A043] Greylag Goose <i>Anser anser</i> [A046] Light-bellied Brent Goose <i>Branta bernicla hrota</i> [A050] Wigeon <i>Anas penelope</i> [A052] Teal <i>Anas crecca</i> [A179] Black-headed Gull <i>Chroicocephalus ridibundus</i> [A184] Herring Gull <i>Larus argentatus</i> [A195] Little Tern <i>Sterna albifrons</i></p> <p><i>S.I. No. 439/2009 - European Communities (Conservation of Wild Birds) (the Murrough (Part of) Special Protection Area 004186) Regulations 2009.</i></p> <p>NPWS (2022) Conservation objectives for The Murrough SPA [004186]. Generic Version 9.0. Department of Housing, Local Government and Heritage</p>	<p>Located c. 16km south of the proposed route.</p>
<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></p> <p>NPWS (2022) <i>Conservation objectives for Ireland's Eye SPA [004117].</i> Generic Version 9.0. Department of Housing, Local Government and Heritage.</p>	<p>Located c. 16.5km north-east of the proposed route.</p>

Appendix III

Planning polices/objectives relating to the protection of European sites and water quality

Eastern & Midland Regional Assembly, Regional Spatial & Economic Strategy 2019-2031

Regional Policy Objective 3.4

Ensure that all plans, projects and activities requiring consent arising from the Regional Spatial and Economic Strategy are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate. In addition the future strategic development of settlements throughout the Region will have full cognisance of the legal requirements pertaining to sites of International Nature Conservation Interest.

Regional Policy Objective 7.2

To achieve and maintain 'Good Environmental Status' for marine waters and to ensure the sustainable use of shared marine resources in the Region, and to promote the development of a cross-boundary and cross-border strategic management and stakeholder engagement framework to protect the marine environment.

Regional Policy Objective 7.10

Support the implementation of the Water Framework Directive in achieving and maintaining at least good environmental status for all water bodies in the Region and to ensure alignment between the core objectives of the Water Framework Directive and other relevant Directives, River Basin Management plans and local authority land use plans.

Regional Policy Objective 7.11

For water bodies with 'high ecological status' objectives in the Region, local authorities shall incorporate measures for both their continued protection and to restore those water bodies that have fallen below high ecological status and areas 'At Risk' into the development of local planning policy and decision making any measures for the continued protection of areas with high ecological status in the Region and for mitigation of threats to waterbodies identified as 'At Risk' as part of a catchment based approach in consultation with the relevant agencies. This shall include recognition of the need to deliver efficient wastewater facilities with sufficient capacity and thus contribute to improved water quality in the Region.

Regional Policy Objective 7.12

Future statutory land use plans shall include Strategic Flood Risk Assessment (SFRA) and seek to avoid inappropriate land use zonings and development in areas at risk of flooding and to integrate sustainable water management solutions (such as SuDS, nonporous surfacing and green roofs) to create safe places in accordance with the Planning System and Flood Risk Assessment Guidelines for Local Authorities.

Regional Policy Objective 7.15

Local authorities shall take opportunities to enhance biodiversity and amenities and to ensure the protection of environmentally sensitive sites and habitats, including where flood risk management measures are planned.

Regional Policy Objective 7.16

Support the implementation of the Habitats Directives in achieving an improvement in the conservation status of protected species and habitats in the Region and to ensure alignment between the core objectives of the EU Birds and Habitats Directives and local authority development plans.

Regional Policy Objective 7.22

Local authority development plan and local area plans, shall identify, protect, enhance, provide and manage Green Infrastructure in an integrated and coherent manner and should also have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks and protected species.

Regional Policy Objective 10.6

Delivery and phasing of services shall be subject to the required appraisal, planning and environmental assessment processes and shall avoid adverse impacts on the integrity of the Natura 2000 network.

Regional Policy Objective 10.7

Local authority core strategies shall demonstrate compliance with DHPLG Water Services Guidelines for local authorities and demonstrate phased infrastructure – led growth that is commensurate with the carrying

capacity of water services and prevent adverse impacts on the integrity of water dependent habitats and species within the Natura 2000 network.

Regional Policy Objective 10.10

Support Irish Water and the relevant local authorities in the Region to eliminate untreated discharges from settlements in the short term, while planning strategically for long term growth in tandem with Project Ireland 2040 and in increasing compliance with the requirements of the Urban Waste Water Treatment Directive from 39% today to 90% by the end of 2021, to 99% by 2027 and to 100% by 2040.

Regional Policy Objective 10.11

EMRA supports the delivery of the waste water infrastructure set out in Table 10.2, subject to appropriate environmental assessment and the planning process.⁴⁴

Regional Policy Objective 10.12

Development plans shall support strategic wastewater treatment infrastructure investment and provide for the separation of foul and surface water networks to accommodate the future growth of the Region.

Regional Policy Objective 10.15

Support the relevant local authorities (and Irish Water where relevant) in the Region to improve storm water infrastructure to improve sustainable drainage and reduce the risk of flooding in the urban environment and in the development and provision at a local level of Sustainable Urban Drainage solutions.

Regional Policy Objective 10.16

Implement policies contained in the Greater Dublin Strategic Drainage Study (GSDSDS), including SuDS.

Regional Policy Objective 10.18

Local authorities shall ensure adequate surface water drainage systems are in place which meet the requirements of the Water Framework Directive and the associated River Basin Management Plans.

Dún Laoghaire-Rathdown County Development Plan 2022-2028

Policy Objective GIB18: Protection of Natural Heritage and the Environment

It is a Policy Objective to protect and conserve the environment including, in particular, the natural heritage of the County and to conserve and manage Nationally and Internationally important and EU designated sites - such as Special Protection Areas (SPAs), Special Areas of Conservations (SACs), proposed Natural Heritage Areas (pNHAs) and Ramsar sites (wetlands) - as well as non-designated areas of high nature conservation value known as locally important areas which also serve as 'Stepping Stones' for the purposes of Article 10 of the Habitats Directive

Policy Objective GIB19: Habitats Directive

It is a Policy Objective to ensure the protection of natural heritage and biodiversity, including European Sites that form part of the Natura 2000 network, in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines.

Policy Objective GIB21: Designated Sites

It is a Policy Objective to protect and preserve areas designated as proposed Natural Heritage Areas, Special Areas of Conservation, and Special Protection Areas. It is Council policy to promote the maintenance and as appropriate, delivery of 'favourable' conservation status of habitats and species within these areas.

Policy Objective GIB22: Non-Designated Areas of Biodiversity Importance

It is a Policy Objective to protect and promote the conservation of biodiversity in areas of natural heritage importance outside Designated Areas and to ensure that notable sites, habitats and features of biodiversity importance - including species protected under the Wildlife Acts 1976 and 2000, the Birds Directive 1979, the Habitats Directive 1992, Flora (Protection) Order, 2015, Annex I habitats, local important areas, wildlife corridors and rare species - are adequately protected. Ecological assessments will be carried out for all developments in areas that support, or have potential to support, features of biodiversity importance or rare

⁴⁴ The Greater Dublin Drainage Project, the Ringsend Wastewater Treatment Plant Project, the Athlone Main Drainage Project and the Upper Liffey Valley Sewerage Scheme

and protected species and appropriate mitigation/ avoidance measures will be implemented. In implementing this policy, regard shall be had to the Ecological Network, including the forthcoming DLR Wildlife Corridor Plan, and the recommendations and objectives of the Green City Guidelines (2008) and 'Ecological Guidance Notes for Local Authorities and Developers' (Dún Laoghaire-Rathdown Version 2014)

Policy Objective GIB23: County-Wide Ecological Network

It is a Policy Objective to protect the Ecological Network which will be integrated into the updated Green Infrastructure Strategy and will align with the DLR County Biodiversity Action Plan. Creating this network throughout the County will also improve the ecological coherence of the Natura 2000 network in accordance with Article 10 of the Habitats Directive. The network will also include non-designated sites.

Policy Objective EI7: Water Supply and Wastewater treatment and Appropriate Assessment

It is a Policy Objective to require that all developments relating to water supply and wastewater treatment are subject to screening for Appropriate Assessment to ensure there are no likely significant effects on the integrity, defined by the structure and function, of any European sites and that the requirements of Article 6 of the EU Habitats Directive are met. (Consistent with RPO 10.7 of the RSES).

Policy Objective EI8: Groundwater Protection and Appropriate Assessment

It is a Policy Objective to ensure the protection of the groundwater resources in and around the County and associated habitats and species in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010. In this regard, the Council will support the implementation of Irish Water's Water Safety Plans to protect sources of public water supply and their contributing catchment.

Policy Objective EI2: Irish Water Enabling Policies Irish Water's Plans and Programmes

It is a Policy Objective - in conjunction with the Eastern and Midland Regional Authority, where appropriate - to work with and support Irish Water in the delivery of the strategic objectives and strategic water and wastewater projects and infrastructure as set out in the 'Water Services Strategic Plan' (2015), any subsequent plan, Irish Water's Capital Investment Plan 2020 – 2024, any subsequent Capital Investment Plans and the forthcoming National Water Resources Plan, so as to ensure provision of infrastructure to service settlements in accordance with the Core Strategy of this Plan, and the settlement strategy of the RSES. (Consistent with RPO 10.2, 10.3, 10.11, 10.16 of the RSES).

Policy Objective EI5: River Basin Management Plans (RMBPs)

It is a Policy Objective: To ensure the delivery of the relevant policies and objectives of the River Basin Management Plan for Ireland 2018 – 2021 and any subsequent plan, including those relating to protection of water status, improvement of water status, prevention of deterioration and meeting objectives for designated protected sites. To support Irish Water in its implementation of Water Quality Management Plans for ground, surface, coastal and estuarine waters as part of the implementation of the EU Water Framework Directive. To support Irish Water in the development of Drinking Water Protection Plans.

Policy Objective EI6: Sustainable Drainage Systems

It is a Policy Objective to ensure that all development proposals incorporate Sustainable Drainage Systems (SuDS).

Policy Objective EI17: Water Pollution

It is a Policy Objective to implement the provisions of water pollution abatement measures in accordance with national and EU Directives and other legislative requirements in conjunction with other agencies as appropriate.

Dún Laoghaire-Rathdown County Development Plan 2016-2022

Policy LHB19: Protection of Natural Heritage and the Environment

It is Council policy to protect and conserve the environment including, in particular, the natural heritage of the County and to conserve and manage Nationally and Internationally important and EU designated sites - such as Special Protection Areas, candidate Special Areas of Conservation, proposed Natural Heritage Areas and Ramsar sites - as well as non-designated areas of high nature conservation value which serve as 'Stepping Stones' for the purposes of Article 10 of the Habitats Directive.

Policy LHB20: Habitats Directive

It is Council policy to ensure the protection of natural heritage and biodiversity, including European sites that form part of the Natura 2000 network, in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines.

Policy LHB22: Designated Sites

It is Council policy to protect and preserve areas designated as proposed Natural Heritage Areas, candidate Special Areas of Conservation, and Special Protection Areas. It is Council policy to promote the maintenance and as appropriate, delivery of 'favourable' conservation status of habitats and species within these areas.

Policy EI2: Wastewater Treatment and Appropriate Assessment

It is Council policy to provide adequate wastewater treatment facilities to serve the existing and future population of the County, subject to complying with the Water Framework Directive and the associated River Basin Management Plan or any updated version of this document, 'Water Quality in Ireland 2007-2009' (EPA 2011) or any updated version of the document, Pollution Reduction Programmes for Designated Shellfish Areas, the Urban Waste Water Treatment Directive and the Habitats Directive.

Policy EI3: Surface Water Drainage and Appropriate Assessment

It is Council policy to require that a Sustainable Drainage System (SuDS) is applied to any development and that site specific solutions to surface water drainage systems are developed, which meet the requirements of the Water Framework Directive and the associated River Basin Management Plans and 'Water Quality in Ireland 2007-2009' (EPA 2011) or any updated version of the document.

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NH2

No projects giving rise to significant cumulative, direct, indirect or secondary impacts on Natura 2000 sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this plan (either individually or in combination with other plans or projects).

Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be: a) no alternative solution available, b) imperative reasons of overriding public interest for the project to proceed; and c) Adequate compensatory measures in place.

NH3

To contribute, as appropriate, towards the protection of designated ecological sites including candidate Special Areas of Conservation (cSACs) and Special Protection Areas (SPAs); Wildlife Sites (including proposed Natural Heritage Areas); Salmonid Waters; Flora Protection Order sites; Wildfowl Sanctuaries (see S.I. 192 of 1979); Freshwater Pearl Mussel catchments; and Tree Preservation Orders (TPOs). To contribute towards compliance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines, including the following and any updated/superseding documents:

- EU Directives, including the Habitats Directive (92/43/EEC, as amended)⁷, the Birds Directive (2009/147/EC)⁸, the Environmental Liability Directive (2004/35/EC)⁹, the Environmental Impact Assessment Directive (85/337/EEC, as amended), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC).
- National legislation, including the Wildlife Act 1976¹⁰, the European Communities (Environmental Impact Assessment) Regulations 1989 (SI No. 349 of 1989) (as amended), the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development Act 2000 (as amended), the European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011) and the European Communities (Environmental Liability) Regulations 2008¹¹.
- National policy guidelines (including any clarifying Circulars or superseding versions of same), including the Landscape and Landscape Assessment Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidance 2010.

- Catchment and water resource management Plans, including Eastern and South Eastern River Basin Management Plan 2009-2015 (including any superseding versions of same).
- Biodiversity Plans and guidelines, including Actions for Biodiversity 2011-2016: Ireland's 2nd National Biodiversity Plan (including any superseding version of same).
- Ireland's Environment 2014 (EPA, 2014, including any superseding versions of same), and to make provision where appropriate to address the report's goals and challenges.

NH4

All projects and plans arising from this plan¹² (including any associated improvement works or associated infrastructure) will be screened for the need to undertake Appropriate Assessment under Article 6 of the Habitats Directive. A plan or project will only be authorised after the competent authority has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and a Stage 2 Appropriate Assessment where necessary, that:

- 1) The Plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European site (either individually or in combination with other plans or projects); or
- 2) The Plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type and / or a priority species) but there are no alternative solutions, and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or
- 3) The Plan or project will have a significant adverse effect on the integrity of any European site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.

NH5

To maintain the conservation value of all proposed and future Natural Heritage Areas (NHAs) and to protect other designated ecological sites in Wicklow.

Along with cSACs, SPAs and pNHA these include Salmonid Waters; Flora Protection Order sites; Wildfowl Sanctuaries (see S.I. 192 of 1979); Freshwater Pearl Mussel catchments; and Tree Preservation Orders (TPOs).

WI2

To protect existing and potential water resources of the County, in accordance with the EU Water Framework Directive, the River Basin Management Plans, the Groundwater Protection Scheme and source protection plans for public water supplies.

WI12

Ensure the implementation of Sustainable Urban Drainage Systems (SUDS) and in particular, to ensure that all surface water generated in a new development is disposed of on-site or is attenuated and treated prior to discharge to an approved surface water system.

WI6

In order to fulfil the objectives of the Core Strategy, Wicklow County Council will work alongside and facilitate the delivery of Irish Water's Water Services Investment Programme, to ensure that all lands zoned for development are serviced by an adequate wastewater collection and treatment system and in particular, to endeavour to secure the delivery of regional and strategic wastewater schemes. In particular, to support and facilitate the development of a WWTP in Arklow, at an optimal location following detailed technical and environmental assessment and public consultation.

WI7

Permission will be considered for private wastewater treatment plants for single rural houses where:

- the specific ground conditions have been shown to be suitable for the construction of a treatment plant and any associated percolation area;
- the system will not give rise to unacceptable adverse impacts on ground waters / aquifers and the type of treatment proposed has been drawn up in accordance with the appropriate groundwater protection response set out in the Wicklow Groundwater Protection Scheme (2003);
- the proposed method of treatment and disposal complies with Wicklow County Council's Policy for Wastewater Treatment & Disposal Systems for Single Houses (PE ≤ 10) and the Environmental Protection Agency "Waste Water Treatment Manuals"; and
- in all cases the protection of ground and surface water quality shall remain the overriding priority and proposals must definitively demonstrate that the proposed development will not have an adverse impact on water quality standards and requirements set out in EU and national legislation and guidance documents.

WI9

Private wastewater treatment plants for commercial / employment generating development will only be considered where:

- Irish Water has confirmed the site is due to be connected to a future public system in the area or Irish Water have confirmed there are no plans for a public system in the area;
- it can clearly demonstrate that the proposed system can meet all EPA / Local Authority environmental criteria; and
- an annually renewed contract for the management and maintenance of the system is contracted with a reputable company / person, details of which shall be provided to the Local Authority.