7.0 BIODIVERSITY; FLORA & FAUNA

7.1 INTRODUCTION

This chapter provides an assessment of the impacts of the proposed development on the ecological environment, i.e. biodiversity; flora and fauna.

7.2 METHODOLOGY

This chapter of the EIA Report concentrates on ecological features within the development area of particular significance, primarily designated habitats and species. This includes habitats/species listed in Annex I, II and IV of the EU Habitats Directive, rare plants listed in the Flora Protection Order and other semi-natural habitats of conservation value.

The European Habitats Directive 92/43/EEC (Article 6) indicates the need for plans and projects to be subject to Habitats Directive Assessment (also known as Appropriate Assessment) if the plan or project not directly connected with or necessary to the management of a Natura 2000 site (which includes SACs and SPAs) but which has the potential to have implications on a sites' conservation objectives. These implications can be significant effects either individually or in combination with other plans or projects.

A Report for the purposes of Appropriate Assessment Screening and Natura Impact Statement was undertaken by Moore Group for the proposed development which is presented as Appendix 7.1 to this chapter.

7.2.1 Policy & Guidance

7.2.1.1 EU Habitats Directive

The "Habitats Directive" (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna) is the main legislative instrument for the protection and conservation of biodiversity within the European Union and lists certain habitats and species that must be protected within wildlife conservation areas, considered to be important at a European as well as at a national level. A "Special Conservation Area" or SAC is a designation under the Habitats Directive. The Habitats Directive sets out the protocol for the protection and management of SACs.

The Directive sets out key elements of the system of protection including the requirement for "Appropriate Assessment" of plans and projects. The requirements for an Appropriate Assessment are set out in the EU Habitats Directive. Articles 6(3) and 6(4) of the Directive.

7.2.1.2 Birds Directive

The "Birds Directive" (Council Directive 79/409/EEC as codified by Directive 2009/147/EC) provides for a network of sites in all member states to protect birds at their breeding, feeding, roosting and wintering areas. This directive identifies species that are rare, in danger of extinction or vulnerable to changes in habitat and which need protection (Annex I species). Appendix I indicates Annex I bird species as listed on the Birds Directive. A "Special Protection Area" or SPA, is a designation under The Birds Directive.

Special Areas of Conservation and Special Protection Areas form a pan-European network of protected sites known as Natura 2000 sites and any plan or project that has the potential to impact upon a Natura 2000 site requires appropriate assessment.

7.2.1.3 Wildlife Acts (1976 - 2012)

The primary domestic legislation providing for the protection of wildlife in general, and the control of some activities adversely impacting upon wildlife is the Wildlife Act of 1976. The aims of the wildlife act according to the National Parks and Wildlife Service are "... to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims." All bird species are protected under the act. The Wildlife (Amendment) Act of 2000 amended the original Act to improve the effectiveness of the Act to achieve its aims.

7.2.2 Habitat Survey

The habitat survey was carried out, in three stages, firstly through desktop research to determine existing records in relation to habitats and species present in the study areas. This included research on the NPWS metadata website, the National Biodiversity Data Centre (NBDC) database and a literature review of published information on flora and fauna occurring in the development area.

The following resources assisted in the production of this chapter of the report:

- The following mapping and GIS data sources, as required:
    - NPWS protected site boundary data;
    - Ordnance Survey of Ireland mapping and aerial photography;
    - OSI/EPA rivers and streams, and catchments;
    - Open Street Maps;
    - Digital Elevation Model over Europe (EU-DEM);
    - Google Earth and Bing aerial photography 1995-2018;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including: the Natura 2000 network Data Form; Site Synopsis; Generic Conservation Objective data;
    - Online database of rare, threatened and protected species;
    - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2013); and
- Relevant Development Plans and Local Area Plans in neighbouring areas.

Other environmental information for the area was reviewed, e.g. in relation to soils, geology, hydrogeology and hydrology. Interactions in terms of the chapters on these topics presented in this EIA Report were important in the determination of source vector pathways and links with potentially hydrologically connected areas outside the proposed development site.

The second phase of the survey involved a site visit to establish the existing environment in the footprint of the proposed development area. Areas which were highlighted during desktop assessment were investigated in closer detail according to the Heritage Council Best Practice Guidance for Habitat Survey and Mapping (Smith *et al*., 2011). Habitats in the proposed development area were classified according to the Heritage Council publication "A Guide to Habitats in Ireland" (Fossitt, 2000). This publication sets out a standard scheme for identifying, describing and classifying wildlife habitats in Ireland. This form of classification uses codes to classify different habitats based on the plant species present. Species recorded in this report are given in both their Latin and English names. Latin names for plant species follow the nomenclature of "An Irish Flora" (Parnell & Curtis, 2012).

Habitats were surveyed on the 11th April 2018 and 10th November 2018 by conducting a study area walkover covering the main ecological areas identified in the desktop assessment. The survey dates are within the optimal survey periods for botanical species and otters. A photographic record was made of features of interest.

Signs of mammals such as badgers and otters were searched for while surveying the study area noting any sights, signs or any activity in the vicinity especially along adjacent boundaries.

Birds were surveyed using standard transect methodology and signs were recorded where encountered during the field walkover surveys.

Following desktop assessment and fieldwork, an evaluation of the development area and determination of the potential impacts on the flora and fauna of the area is based on the following guidelines and publications:

- Assessment of plans and projects significantly affecting Natura 2000 sites (EC, 2002);
- Managing Natura 2000 Sites (EC, 2000);
- Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC (EC, 2007);
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG, December 2009, Rev 2010);
- EPA Draft Guidelines on Information to be contained in an EIAR (EPA, 2017);
- Best Practice Guidance for Habitat Survey and Mapping (Heritage Council, 2011);
- Ecological Surveying Techniques for Protected Flora & Fauna (NRA, 2008)
- Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009)
- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2016).

7.3 RECEIVING ENVIRONMENT

The subject site is located to the north of the Clonshaugh Business & Technology Park, along the R139 'Northern Cross Road' and lands at Belcamp in North Dublin approximately 7km from Dublin Airport, 7km from Dublin City Centre commencing adjacent to the M1-M50 interchange along the R139 to the existing Belcamp Substation.

The site commencing from Darndale substation (which is permitted) is light industrial/technological in nature and is presently occupied by a data storage facility (which is operational) and a data storage facility which is currently under construction (but construction is well advanced). It is proposed to locate a new data storage facility at the southern portion of the site which is currently primarily a construction site.

The portion of land to the north of the Darndale substation is a redundant farm with once open grassland fields having been left to recolonise with scrub. Internal drainage ditches are overgrown and stagnant. The route of the proposed transmission cable connection follows the R139 before turning north into the existing recently commissioned Belcamp substation. The following is a description of the flora and fauna of the existing environment in the study area.

7.3.1 Designated Conservation Areas

Departmental guidance suggests an assessment of European sites within a zone of impact of 15 km. This distance is a guidance only and the zone of impact has been identified taking consideration of the nature and location of the proposed Project to

ensure all European sites with connectivity to it are considered in terms of a catchment-based assessment.

The zone of impact may be determined by connectivity to the proposed Project in terms of:

- Nature, scale, timing and duration of works and possible impacts, nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Sensitivity and location of ecological features.

European sites that are located within the potential zone of impact of the Project are listed in Table 7.1. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website on the 6th of November 2018.

The project is located within the suburban environment of Belcamp-Clonshaugh along the R139 which runs to the north of Belcamp Park and Clonshaugh Business & Technology Park in North Dublin. The lands in which the proposed development is located have no formal designations. The nearest European sites are located at Baldoyle Bay and North Dublin Bay, see Figures 7.1 & 7.2.

Site Code	Site name	Distance (km)
000199	Baldoyle Bay SAC	4.23
003000	Rockabill to Dalkey Island SAC	8.94
000202	Howth Head SAC	8.35
000204	Lambay Island SAC	14.25
002193	Ireland's Eye SAC	9.06
000205	Malahide Estuary SAC	5.11
000208	Rogerstown Estuary SAC	9.56
000206	North Dublin Bay SAC	4.79
000210	South Dublin Bay SAC	7.84
004117	Ireland's Eye SPA	8.84
004113	Howth Head Coast SPA	10.27
004024	South Dublin Bay and River Tolka Estuary SPA	5.23
004069	Lambay Island SPA	14.25
004015	Rogerstown Estuary SPA	9.8
004016	Baldoyle Bay SPA	4.31
004006	North Bull Island SPA	4.79
004025	Malahide Estuary SPA	5.11

Table 7.1 Details of European sites within the potential zone of influence of the project.

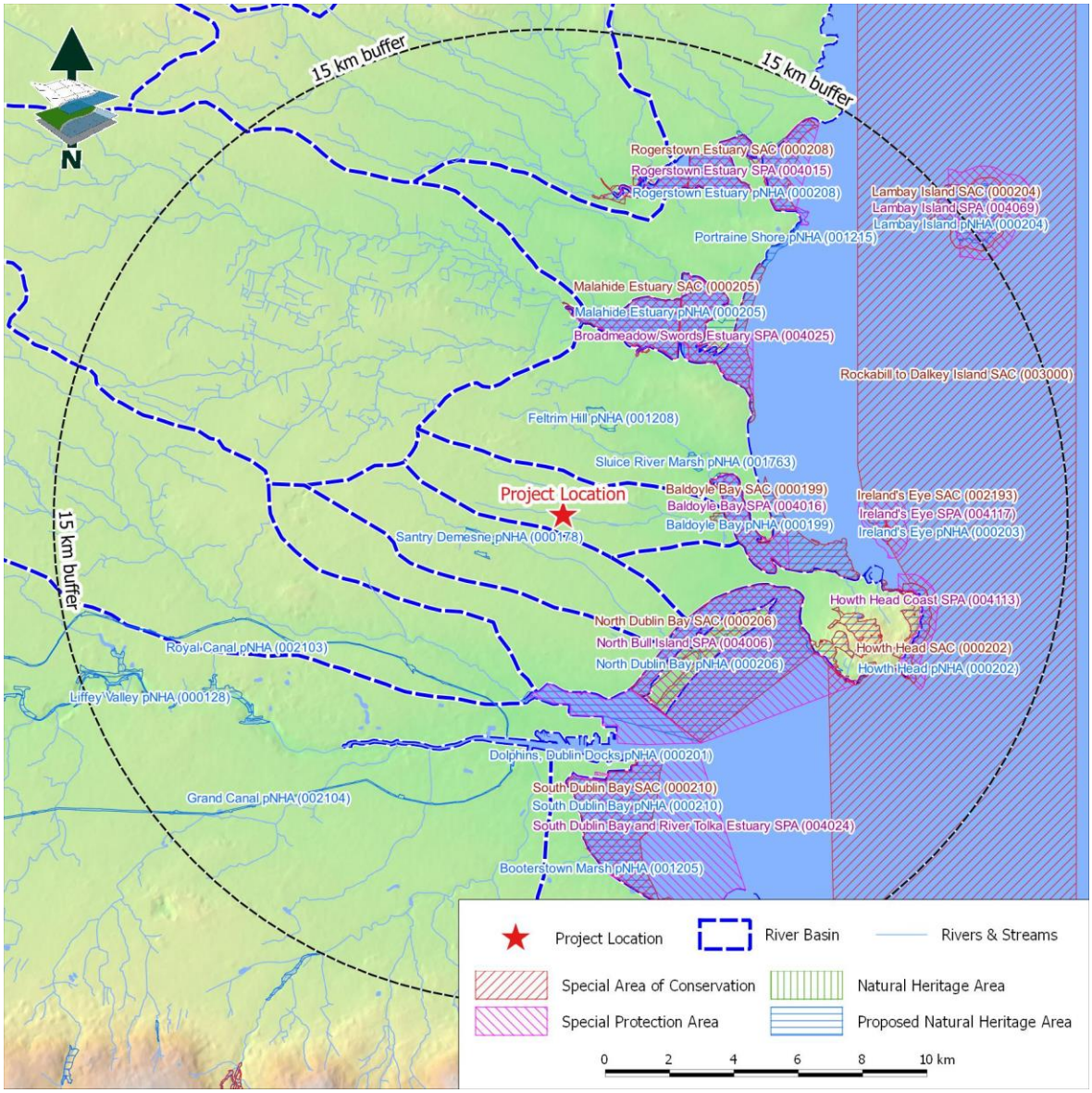

Figure 7.1 Site Location in relation to nearby European sites.

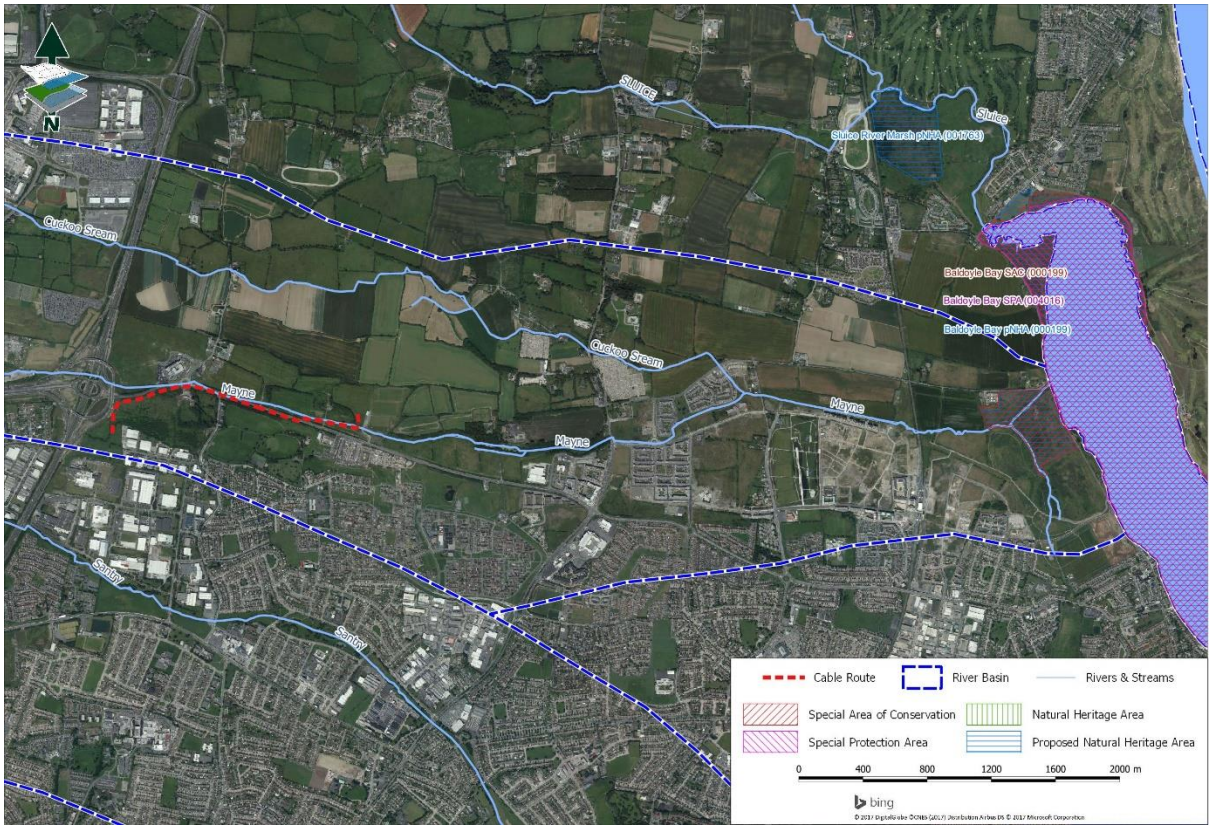

Figure 7.2 Site Location in relation to adjacent conservation sites.

7.3.2 Non-Designated Habitats

In general, there are few natural habitats remaining in the development area. They have either been modified or are artificial in nature. This proposed development area may be considered in three sections; the redundant farmland to the north of the data storage facility and Darndale substation; the route of the R139 and the access to Belcamp substation.

The redundant farmland comprises old fields which were once improved grassland and have not been tended and therefore have become overgrown with Rosebay willowherb, bramble, blackthorn and willow scrub. There are short sections of stagnant drainage ditches surrounded by remnant overgrown Hedgerows (WL1) which are in poor condition with large gaps and overgrown trees.

The R139 is predominantly suburban in nature having been landscaped with treelines after various road improvements.

The access area to the existing Belcamp substation comprises grazed semi-improved grassland and will require a crossing of the River Mayne.

The main habitats are presented on the recent aerial photography in Figure 7.3. A list of habitats recorded and their corresponding Fossitt codes is presented in Table 7.2.

Habitat	Habitat Category	Habitat Type
(F) Freshwater	(FW) Watercourses	(FW1) Eroding/ upland river
		(FW4) Drainage ditches
(G) Grassland	(GA) Improved grassland	(Si-GA1) Semi-improved grassland
(W) Woodland	(WD) Modified Woodland	(WD1) Mixed woodland
	(WS) Scrub/Transitional Woodland	(WS1) Scrub

	(WL) Linear woodland	(WL1) Hedgerows
(B) Cultivated and built land	(BL) Built land	(BL3) Buildings & artificial surfaces

Table 7.2 Details of habitats recorded and their corresponding Fossitt codes.

7.3.2.1 Eroding Rivers – River Mayne (FW1)

The River Mayne rises in Dardistown and is culverted under the M50-M1 interchange and part of the adjacent hotel and filling station site and roundabout. It emerges in Belcamp and runs roughly parallel to the R139 passing through Belcamp Hall where it is partially diverted to a pond before passing through Balgriffin Park and on to Baldoyle Bay.

7.3.2.2 Drainage Ditches (FW4)

There are two remnant overgrown drainage ditches in the redundant farmland immediately north of the Darndale substation. The ditches are stagnant and the adjacent hedgerows have grown out to shade and in some parts completely cover the ditches which contain relatively sparse macrophyte growth with occasional Watercress (*Rorippa nasturtium-aquaticum*) being the predominant species present.

7.3.2.3 Semi-improved grassland (SiGA1)

The majority of the site to the north of the Darndale substation is composed of Semi-improved grassland (Si-GA1). However, the grassland has been abandoned and is rank with large patches of Blackthorn, Rosebay willow herb and Bramble scrub which is comprised of tall grasses, predominantly Cocksfoot (*Dactylis glomerata*) and False oat-grass (*Arrhenatherum elatius*), Great willowherb (*Epilobium hirsutum*) and Thistles (*Cirsium vulgare* and *C. arvense*). The site was grazed up to recently and the grass forb is low and species poor in the more open areas.

The grassland area along the northern boundary of the field system adjacent to the M50/M1 interchange showed signs of having been disturbed and recolonised with tufts of grass and a carpet of Ivy (*Hedera helix*). The disturbance is likely to be a result of the development of the interchange and adjacent R139 landscaping.

7.3.2.4 Scrub (WS1)

There are large patches of scrub which are comprised of Blackthorn (*Prunus spinosa*), Rosebay willowherb (*Chamerion angustifolium*), Willow (*Salix* spp.), Dogwood (*Cornus sanguinea*) and Bramble (*Rubus fruticosus* agg.).

7.3.2.5 Hedgerows/Woodland (WL1/WD1)

As mentioned, the drainage ditches are lined with remnant Hedgerows (WL1) which have become overgrown and merge with scrub areas and where the proposed development crosses onto the R139 the remnant entrance hedgerows of the adjacent former 'Woodlands' residence have grown out to form a Woodland type habitat (WD1).

Species include Sycamore (*Acer pseudoplatanus*), Hawthorn (*Crataegus monogyna*), Elder (*Sambucus nigra*), Ash (Fraxinus excelsior) and abundant Bramble (*Rubus fruticosus* agg.) and Ivy (*Hedera helix*). There are scattered immature tress including Beech (*Fagus sylvatica*), Alder (*Alnus glutinosa*) and a single large specimen of Cotoneaster tree (*Cotoneaster cornubia*).

The understorey of denser pockets is populated with grass (*Dactylis glomerata*), Cleavers (*Galium aparine*), Cow parsley (*Anthriscus sylvestris*) along with Bush vetch (*Vicia sepium*) and Lesser celandine (*Ranunculus ficaria*).

7.3.3 Fauna

7.3.3.1 Badgers

There were no badger setts along field boundaries which would be disturbed and no signs of badgers in the study area. The nearest NBDC record is a roadkill record on the airport exit of the M1. Other records relate to St. Anne's Park to the south.

7.3.3.2 Otters

There were no signs of otters in the study area. The nearest NBDC records refer to a roadkill record at Mayne Bridge from 2011 and a dead animal c. 1 km south along the shore in Baldoyle Bay. There is an old record for the Cuckoo stream to the north from 1982, which is probably more attractive to otters in terms of having a higher degree of naturalness than the Mayne River.

The Local NPWS Wildlife Ranger has records of otter from Mayne Bridge c. 4 km downstream of the site (pers. comm. N. Harmey).

There were no signs of otters in the open section of the River Mayne in the proposed development area.

7.3.3.3 Bats

There is limited potential for bats and bat habitats in the footprint of the proposed development.

It is possible that mature trees along remnant drainage ditches would support summer bat roosts.

7.3.3.4 Birds

All birds are protected under the Wildlife Acts. Species recorded included regular passerines such as Great Tit (*Parus major*), Chaffinch (*Fringilla coelebs*), Blackbird (*Turdus merula*), Wren (*Troglodytes troglodytes*). A list of breeding bird species recorded during fieldwork in April 2018 is presented in Table 7.3.

Birds	Scientific Name	BWI	Habitat Type
Blackbird	*Turdus merula*	Green	Dense woodland to open moorland, common in gardens
Chaffinch	*Fringilla coelebs*	Green	Hedgerows, gardens and farmland
Great Tit	*Parus major*	Green	Woods, hedges, gardens
Goldfinch	*Carduelis carduelis*	Green	Open woodland, gardens and farmland
Woodpigeon	*Columba palumbus*	Green	Gardens, woods, hedges
Wren	*Troglodytes troglodytes*	Green	Low cover anywhere, especially woodlands
Buzzard	*Buteo buteo*	Green	Nest in trees and sometimes on cliffs, usually with access to open land including farmland, moorland and wetland.

Table 7.3 Details of birds encountered during fieldwork in April 2018.

7.3.3.5 Other mammals

There are numerous burrows throughout the site and signs of fox were recorded along with rabbits. These species are of low ecological concern and are not protected.

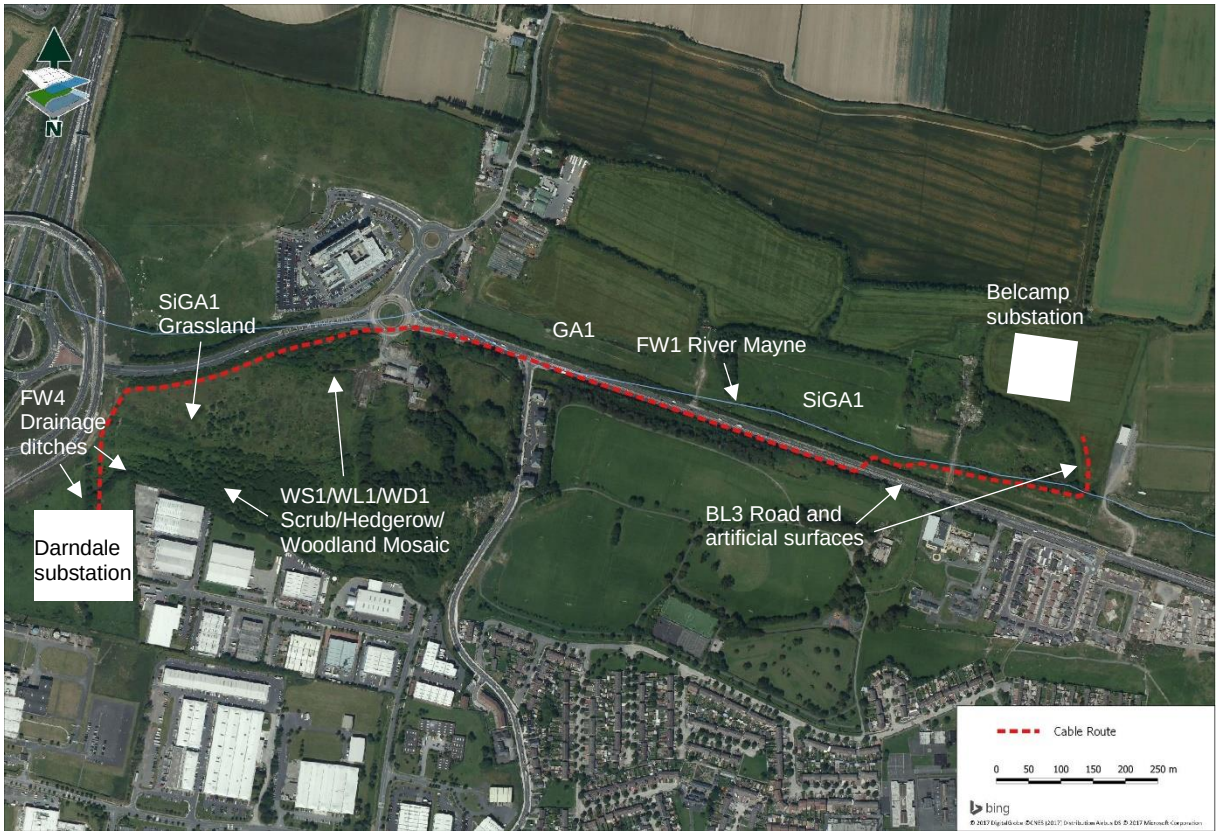

Figure 7.3 Habitats recorded along the route of the proposed grid connection.

7.3.4 Habitat Evaluation

The ecological value of the site was assessed following the guidelines set out in the Institute of Ecology and Environmental Management's Guidelines for Ecological Impact Assessment (2016) and according to the Natura Scheme for evaluating ecological sites (after Nairn & Fossitt, 2004). Judgements on the evaluation were made using geographic frames of reference, e.g. European, National, Regional or Local.

There are no rare or protected habitats recorded in the study area inside the site boundary. The development area may be considered of Low Local Ecological Value.

The nearest European sites are located at Baldoyle Bay and North Dublin Bay.

The potential impacts on Baldoyle Bay are considered in terms of hydrological connectivity with the River Mayne which is joined by the Cuckoo Stream downstream at Balgriffin Park before discharging to Baldoyle Bay c. 4.2 river km downstream.

There would be no direct impacts on the Baldoyle Bay European sites and there would be no habitat loss or fragmentation as a result of the proposed development. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source pathway vectors.

Considering a worst-case scenario whereby the project may result in a significant detrimental change in water quality in Baldoyle Bay either alone or in combination with other projects or plans as a result of indirect pollution, the effect would have to be considered in terms of changes in water quality which would significantly affect the habitats or food sources for which the Baldoyle Bay SAC & SPA are designated. However, such a scenario is unlikely given the distance in downstream hydrological connectivity and the employment of best practice construction methods to avoid local pollution of the River Mayne. These practices will be included in a Construction

Environmental Management Plan and further detail is provided in the section on mitigation below.

There are no predicted significant impacts on local ecology.

7.4 CHARACTERISTICS OF THE DEVELOPMENT

The proposed development comprises the provision an underground double circuit 110kV transmission cable installation, linking 2 no. substations; the permitted Darndale 110kV Substation located at the former Diamond Innovations site (Unit 1C), Clonshaugh Business & Technology Park, and adjacent lands, Dublin 17., and the recently constructed Belcamp 220kV and 110kV Substation which is located to the north of the R139. The approximate distance between the two Substations is c. 2.1 km.

The likelihood of impacts on hydrologically connected environmental sites is extremely low and will be avoided by best practice construction management.

Accidental spillages and contaminated runoff will be avoided by construction management measures which are set out in a Constriction Environmental Management Plan (CEMP). Management measures will include appropriate site-specific measures from the CIRIA Report C532 Control of Water Pollution from Construction Sites.

A full description of the proposed development is provided in Chapter 2 (Description of the Proposed Development).

7.5 POTENTIAL IMPACTS OF THE DEVELOPMENT

7.5.1 Impacts on Habitats

There will be a minor loss of scrub and modified grassland habitats. The potential effects on local ecology are ***neutral*** and ***imperceptible*** for the construction and operational phases.

Local impacts on habitats will be controlled by the employment of a Construction Environmental Management Plan which will include construction management measures to avoid Accidental spillages and contaminated runoff.

7.5.2 Impacts on Fauna

None of the qualifying habitats or species of the European sites occur under the footprint of the proposed works areas.

Potential impacts on bats and birds will be avoided by cutting of vegetation outside the bird nesting season March 1st to August 31st.

Buzzards were observed flying over the site and have been recorded by the author in the farmland to the north of the Clayton Hotel. There are unlikely to be affected by the proposed development.

Any trees to be removed will be Mature trees, which shall be felled in the period late August to late October, or early November, in order to avoid the disturbance of any roosting bats as per Transport Infrastructure Ireland (TII and formerly the National Roads Authority) guidelines (NRA 2006a and 2006b).

7.5.3 Do Nothing Scenario

Given the site for development is located in an area of low ecological value and currently under construction, the do nothing scenario would have a neutral impact on biodiversity.

7.6 REMEDIAL AND MITIGATION MEASURES

Accidental spillages and contaminated runoff will be avoided by construction management measures which are set out in a Construction Environmental Management Plan (CEMP). Management measures will include appropriate site-specific measures from the CIRIA Report C532 Control of Water Pollution from Construction Sites.

The CEMP will include a reference to this Biodiversity Chapter which establishes the connectivity of the River Mayne and Baldoyle Bay and the requirement for avoidance in terms of both direct and indirect construction activity.

In order to reduce the risk of contamination arising as a result of spills or leakages, measures including, but not limited to, the following will be employed:

- All re-fuelling of plant, equipment and vehicles will be carried out at the construction compound at the former Diamond Innovations site (Unit 1C), Clonshaugh Business & Technology Park, and adjacent lands, Dublin 17. All fuels, chemicals, liquid and solid waste will be stored in areas bunded in accordance with established best practice guidelines at the construction compound also;
- Provision of spill kits; and
- Provision of a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains. This will include a set back for construction works in the field adjacent to the Mayne.
- At the Mayne River Crossing, the site contractor will provide a method statement which will address damming upstream and over pumping of water

Potential impacts on birds will be avoided by cutting of vegetation outside the bird nesting season March 1st to August 31st.

Mature trees, which are to be removed, shall be felled in the period late August to late October, or early November, in order to avoid the disturbance of any roosting bats as per Transport Infrastructure Ireland (TII and formerly the National Roads Authority) guidelines (NRA 2006a and 2006b). Tree felling shall be completed by Mid-November at the latest because bats roosting in trees are vulnerable to disturbance during their hibernation period (November – April). Ivy-covered trees, once felled, shall be left intact on-site for 24 hours prior to disposal to allow any bats beneath the foliage to escape overnight.

A bat specialist will survey the trees to be felled for roosting bats prior to felling and will provide detailed measures for any roosts found at that time.

The mature trees that are to be removed, should, due to the passage of time, again be surveyed for bat presence by a suitably experienced specialist on the day of felling. If several bats are found within any one tree, that specific tree should be left in-situ while an application for a derogation licence is made to the *National Parks and Wildlife Service* to allow its legal removal.

The trees identified as having potential for use by bats should be felled carefully to avoid hard shocks which may injure any bats within. Large mature trees with bat

roosting potential such as those onsite should essentially be felled by gradual dismantling by tree surgeons. Care should be taken when removing larger branches as removal of loads may cause cracks or crevices to close, crushing any animals within. Such cracks should be wedged open prior to load removal. If single bats are found during tree felling operations, they should be transferred to the previously erected bat boxes onsite (see below).

To offset the loss of any tree roost a bat box scheme should be provided onsite. '*Schwegler*' woodcrete bat boxes have been proven to be acceptable alternatives for bats and these are readily occupied. Boxes could be mounted on any large, retained tree. Erecting four to six boxes of the 2F design is recommended and these should be erected prior to tree felling to provide a site for relocation of any bats found during tree removal. These boxes require annual monitoring to ensure effectiveness and need cleaning occasionally if regularly used. Such monitoring is a licensed activity.

7.7 PREDICTED IMPACTS OF THE DEVELOPMENT

The proposed development will have a neutral imperceptible effect on designated sites within the zone of influence of the development site.

7.8 RESIDUAL IMPACTS

The development is located in an area of low ecological value and as such predicted to have a ***neutral imperceptible*** effect on biodiversity There is no requirement for monitoring with regard to Biodiversity.

The cumulative impact assessment is addressed Chapter 15 of this EIA Report.

Interactions are addressed in Chapter 16 of this EIA Report.

7.9 REFERENCES

- CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland. Institute of Ecology and Environmental Management.
- Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).
- EC (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.
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APPENDIX 7.1

APPROPRIATE ASSESSMENT SCREENING

MOORE GROUP – ENVIRONMENTAL SERVICES (2018)

Report for the purposes of Appropriate Assessment Screening

as required under Article 6(3) of the Habitats Directive
(Council Directive 92/43/EEC)

DUB74 Grid Connection

Prepared by: Moore Group – Environmental Services

3rd December 2018

On behalf of An Bord Pleanála

Client	ADSIL
Project	DUB74 Grid Connection
Title	Report for the purposes of Appropriate Assessment Screening DUB74 Grid Connection

Project Number	18084	**Document Ref**	18084 DUB74 Grid Connection AAS1 Rev1	
Revision	**Description**	**Author**		**Date**
Rev0	Issued for client review	G. O'Donohoe		26th April 2018
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Rev2	Issued for client review	G. O'Donohoe		3rd December 2018
Moore Archaeological and Environmental Services Limited				

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1. Introduction

1.1. General Introduction

This report contains information required for the competent authority to undertake an Appropriate Assessment (AA) screening process on the effects of a proposed project consisting of the construction of an underground double circuit 110 kilovolt (kV) transmission line between the existing Belcamp 220kV and 110kV Substation, to the permitted Darndale 110kV Substation located at the former Diamond Innovations Site, Clonshaugh Business and Technology Park, Dublin 17.

Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3) of the Habitats Directive:

i) whether a plan or project is directly connected to or necessary for the management of the site, and
ii) whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, or the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). Screening should be undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan or project.

When screening the project, there are two possible outcomes:

- the project poses no risk of a significant effect and as such requires no further assessment; or
- the project has potential to have a significant effect (or this is uncertain) and AA of the project is necessary.

This desktop report has been prepared by Moore Group - Environmental Services for the applicant and An Bord Pleanála and assesses the potential for the proposed development to impact on sites of European-scale ecological importance in accordance with Articles 6(3) and 6(4) of the Habitats Directive. The report was compiled by Ger O'Donohoe (B.Sc. Applied Aquatic Sciences (GMIT, 1993) & M.Sc. Environmental Sciences (TCD, 1999)) who has over 20 years' experience in environmental impact assessment and has completed numerous Appropriate Assessment Screening Reports and Natura Impact Statements in terrestrial and aquatic habitats.

1.2. Legislative Background - The Habitats and Birds Directives

The report assesses the potential for the proposed development to impact on sites of European-scale ecological importance. It is necessary that the Project has regard to Article 6 of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (referred to as the Habitats

Directive). This is transposed into Irish Law by the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477) (referred to as the Habitats Regulations). Also having regard to the provisions of the Planning and Development Act 2000 (section 177U and 177V) which govern the requirement to carry out an AA.

The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the EU. Under the Directive Member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a European Union context.

The Birds Directive (Council Directive 79/409/EEC on the conservation of wild birds and Council Directive 2009/147/EC on the conservation of wild birds), is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs.

Both the Habitats Directive and the Birds Directive have been transposed into Irish law by one set of regulations (i.e. The European Communities (Birds and Natural Habitats) Regulations 2011 to 2015.

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to affect Natura 2000 sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out a further assessment if required (Appropriate Assessment (AA)):

> **Article 6(3):** *"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*
>
> **Article 6(4):** *"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of the Natura 2000*

is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to the beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

2. Methodology

The European Commission's methodological guidance (EC, 2002) promotes a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1-2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

Stage 1 Screening: This stage examines the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that there are not likely to be significant effects on a Natura 2000 site. Mitigation measures (i.e., measures intended to avoid or reduce the harmful effects of the project on the site concerned) cannot be taken into account at this stage.

Stage 2 Appropriate Assessment: In this stage, there is a consideration of the impact of the project with a view to ascertain whether there will be any adverse effect on the integrity of the Natura 2000 site either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are predicted impacts, an assessment of the potential mitigation of those impacts.

Stage 3 Assessment of Alternative Solutions: This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

To ensure that the proposed Project complies fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation, Moore Group compiled this report to inform the screening for AA of the proposed Project to be undertaken by the competent authority, to determine if the next stage (Stage 2) of AA is required.

2.1. Guidance

This Report for AA screening has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission Environment Directorate-General, 2001); hereafter referred to as the EC Article Guidance Document.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC Environment Directorate-General, 2000); hereafter referred to as MN2000.

2.2. Data Sources

Sources of information that were used to collect data on the Natura 2000 network of sites, and the environment within which they are located, are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
    - National Parks & Wildlife (NPWS) protected site boundary data;
    - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
    - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
    - Open Street Maps;
    - Digital Elevation Model over Europe (EU-DEM);
    - Google Earth and Bing aerial photography 1995-2018;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including: the Natura 2000 network Data Form; Site Synopsis; Generic Conservation Objective data;
    - Online database of rare, threatened and protected species;
    - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2013); and
- Relevant Development Plans and Local Area Plans in neighbouring areas;
    - Fingal County Development Plan2017-2023.

3. Description of the Project

It is proposed to construct an underground double circuit 110 kilovolt (kV) transmission line between the existing Belcamp 220kV and 110kV Substation, to the permitted Darndale 110kV Substation located at the former Diamond Innovations Site, Clonshaugh Business and Technology Park, Dublin 17.

The proposed development comprises the provision an underground double circuit 110kV transmission line, linking 2 no. substations; the permitted Darndale 110kV Substation located at the former Diamond Innovations Site, Clonshaugh Business and Technology Park, Dublin 17, and the recently constructed Belcamp 220kV and 110kV Substation which is located to the north of the R139. The approximate distance between the two Substations is c. 2.1km.

Accidental spillages and contaminated runoff and will be avoided by construction management measures which are set out in a Constriction Environmental Management Plan (CEMP). Management measures will include appropriate site-specific measures from the Construction Industry Research and Information Association CIRIA Report C532 Control of Water Pollution from Construction Sites.

- The CEMP will include a reference to the Biodiversity Chapter (7) of the proposed project Environmental Impact Assessment Report EIAR which establishes the connectivity of the River Mayne and Baldoyle Bay and the requirement for avoidance in terms of both direct and indirect construction activity. At the Mayne River crossing, the site contractor will provide a method statement which will address damming upstream and over pumping of water during temporary works (estimated one week)

In order to reduce the risk of contamination arising as a result of spills or leakages, measures including, but not limited to, the following will be employed:

- Storing fuels, chemicals, liquid and solid waste on impermeable surfaces in bunded areas;
- Undertaking refueling of plant, equipment and vehicles on impermeable surfaces;
- Ensuring all tanks and drums are bunded in accordance with established best practice guidelines;
- Provision of spill kits.
- Provision of a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains.
- At the Mayne River Crossing, the site contractor will provide a method statement which will address damming upstream and over pumping of water

The location and layout of the proposed development are presented in Figures 1, 2 and 3 below.

Figure 1. Showing the Project location at Clonshaugh-Belcamp, Dublin 17.

Figure 2. Detailed view of the development areas and proposed application route.

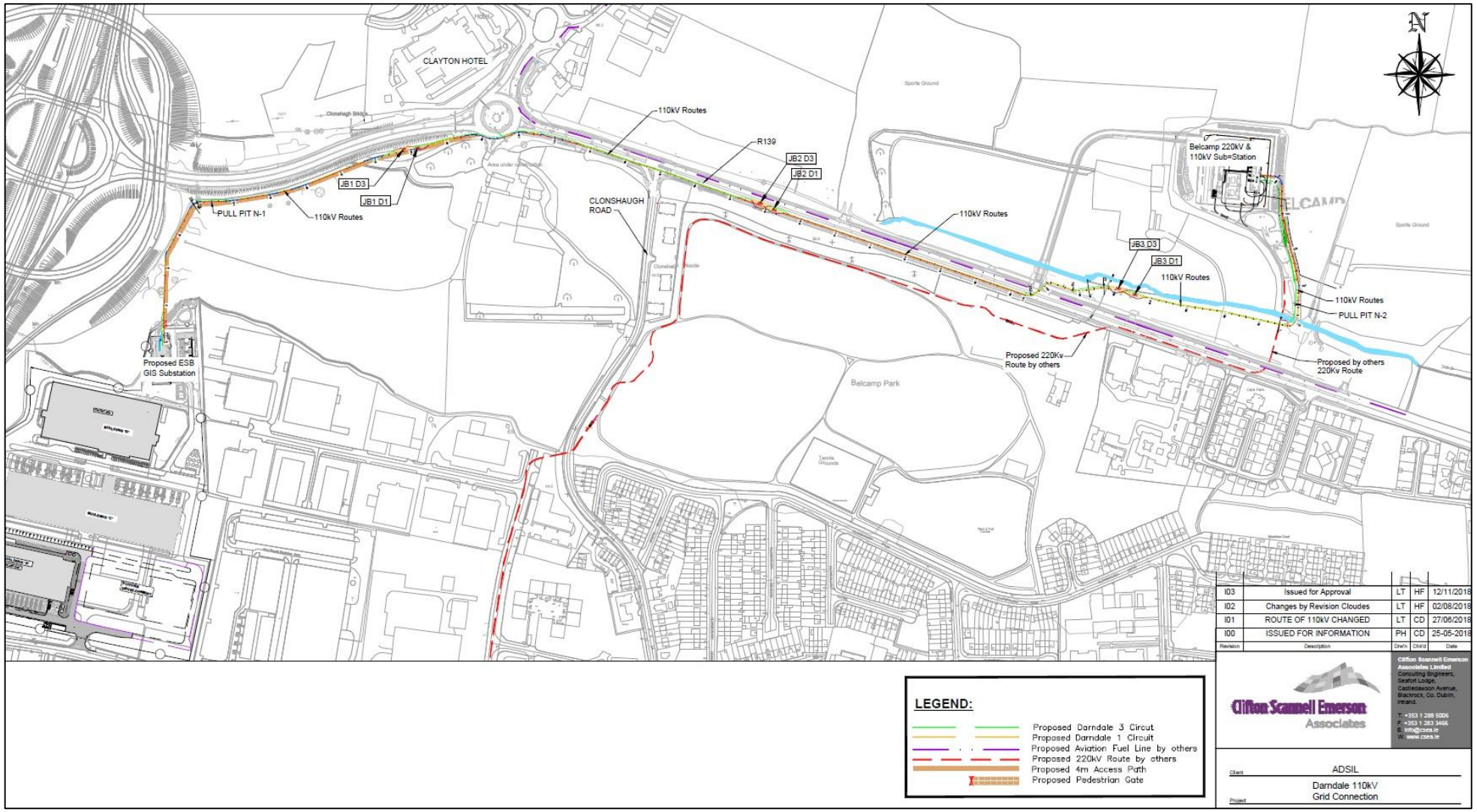

Figure 3. Site plan showing the proposed route of the grid connection along the R139 and through green field areas leading to the Darndale substation.

4. Identification of Natura 2000 Sites

4.1. Description of European Sites Potentially Affected

DoEHLG (2009) Guidance on Appropriate Assessment recommends' an assessment of European sites within a zone of impact of 15 km which can be revised depending on the nature and location of the proposed development and the connectivity with European sites and in terms of catchment-based assessment.

The guidance provides that, at the screening stage, it is necessary to identify the sites and compile information on their qualifying interests and conservation objectives.

The proposed project is located within suburban environment of Belcamp-Clonshaugh along the R139 which runs to the north of Belcamp Park and Clonshaugh Business & Technology Park in North Dublin. The grid connection will cross the River Mayne at the entrance to Belcamp substation before travelling along the verge of the R139 before crossing into disused farmland to the north of the permitted Darndale substation. The lands in which the proposed development is located have no formal designations. The nearest European sites are located at Baldoyle Bay and North Dublin Bay.

European sites that are located within the potential zone of impact the Project are listed in Table 1.

Table 1 European Sites located within 15km of the Project.

Site Code	Site name	Distance (km)
000199	Baldoyle Bay SAC	3.88
000202	Howth Head SAC	7.89
000204	Lambay Island SAC	14.15
000205	Malahide Estuary SAC	5.24
000206	North Dublin Bay SAC	4.34
000208	Rogerstown Estuary SAC	9.77
000210	South Dublin Bay SAC	7.54
002193	Ireland's Eye SAC	8.71
003000	Rockabill to Dalkey Island SAC	8.64
004006	North Bull Island SPA	4.34
004015	Rogerstown Estuary SPA	10.02
004016	Baldoyle Bay SPA	4.04
004024	South Dublin Bay and River Tolka Estuary SPA	5.06
004025	Broadmeadow/Swords Estuary SPA	5.23
004069	Lambay Island SPA	14.15
004113	Howth Head Coast SPA	9.86
004117	Ireland's Eye SPA	8.49

There is limited biological or no relevant connectivity to the majority of these sites and all, but the Baldoyle Bay sites are excluded at this pre-screening stage.

The potential impacts on Baldoyle Bay are considered in terms of hydrological connectivity with the River Mayne which is joined by the Cuckoo Stream downstream at Balgriffin Park before discharging to Baldoyle Bay c. 4.2 river km downstream. Details of the qualifying interests of the Baldoyle Bay sites are listed in Table 2 and Table 3 below and Site Synopses are available on the NPWS metadata site. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website on the 6th of November 2018.

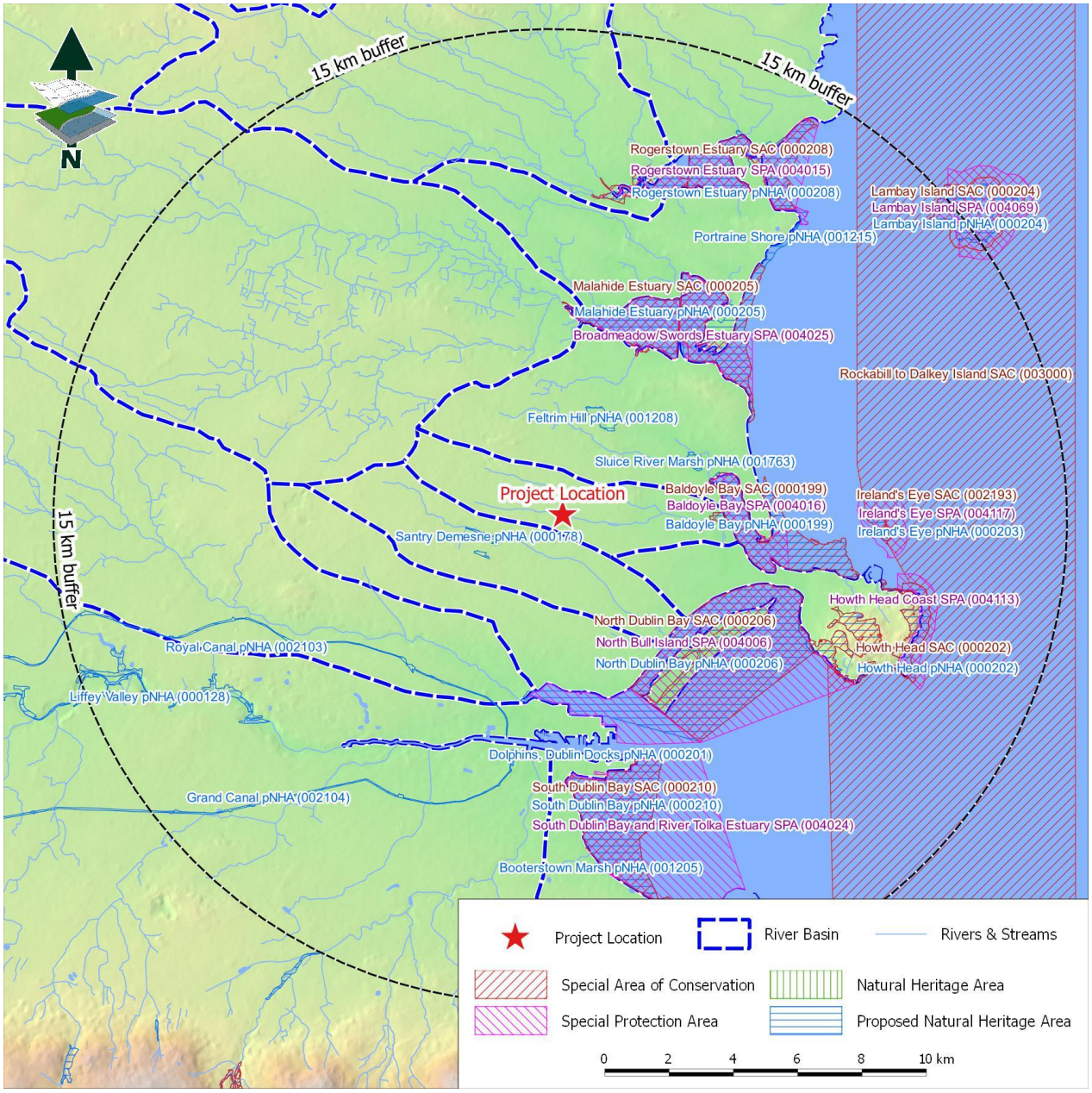

Figure 4. Showing European sites and NHAs/pNHAs in the vicinity of the Project.

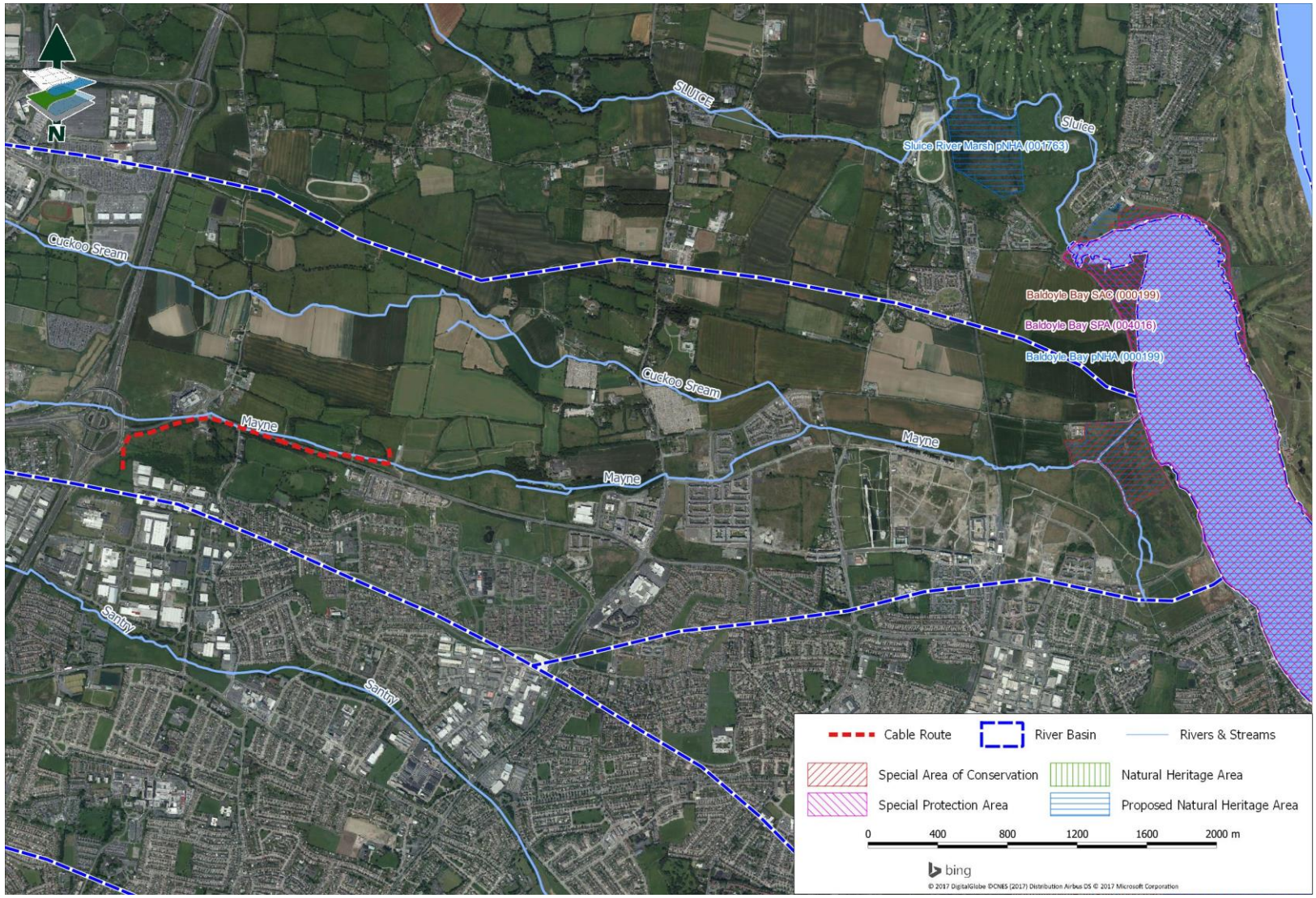

Figure 5. Detail of receiving conservation sites in the vicinity of the Project.

*Table 2 SACs located within the potential zone of impact of the Project (*indicates priority habitat).*

Site Code	Site Name	Qualifying Interests
000199	Baldoyle Bay SAC	**Habitats:** [1140] Mudflats and sandflats not covered by seawater at low tide [1310] *Salicornia* and other annuals colonising mud and sand [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1410] Mediterranean salt meadows (*Juncetalia maritimi*)

Table 3 SPAs located within the potential zone of impact of the Project

Site Code	Site Name	Qualifying Interests
004016	Baldoyle Bay SPA	**Species:** [A046] Brent Goose *Branta bernicla hrota* [A048] Shelduck *Tadorna tadorna* [A137] Ringed Plover *Charadrius hiaticula* [A140] Golden Plover *Pluvialis apricaria* [A141] Grey Plover *Pluvialis squatarola* [A157] Bar-tailed Godwit *Limosa lapponica* **Habitats:** Wetlands [A999]

4.2. Conservation Objectives of the Natura 2000 Sites

4.2.1. Baldoyle Bay SAC [000199] - Version 1. 19th November 2012

The following Conservation Objectives are set out for the Baldoyle Bay SAC. Specific attributes, measures and targets are presented in the relevant Conservation Objectives documents and will be addressed in more detail if required after potential impacts have been determined.

1140 Mudflats and sandflats not covered by seawater at low tide

To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes.

Attribute	Measure	Target
Community distribution	Hectares	Conserve the following community types in a natural condition: Fine sand dominated by *Angulus tenuis* community complex; and Estuarine sandy mud with *Pygospio elegans* and *Tubificoides benedii* community complex.

1310 Salicornia and other annuals colonizing mud and sand

To maintain the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 0.383ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and sub-communities	Percentage cover	Maintain the presence of species-poor communities with typical species listed in the Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

To maintain the favourable conservation condition of Atlantic salt meadows (*Glauco- Puccinellietalia maritimae*) in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 11.98ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain/restore creek and pan structure to develop, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of subcommunities with typical species listed in the Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

1410 Mediterranean salt meadows (Juncetalia maritimi)

To maintain the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 2.64ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions

Attribute	Measure	Target
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within the sward
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species	Percentage cover	Maintain range of subcommunities with characteristic species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

(NB note that this SAC overlaps with Baldoyle Bay SPA (004016). The conservation objectives for this site should be used in conjunction with those for the overlapping SPA as appropriate.)

4.2.2. Baldoyle Bay SPA [004016] - Version 1. 27th February 2013

Generic Conservation Objectives

In the absence of specific conservation objectives, the following generic conservation objectives can be applied to each qualifying species listed.

To maintain the favourable conservation condition of [each qualifying bird species] in Baldoyle Bay SPA, which is defined by the following list of attributes and targets:

Qualifying Bird Species

Attribute	Measure	Target
Population trend	Percentage change	Long term population trend stable or increasing
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by redshank, other than

	that occurring from natural patterns of variation

A99 Wetlands

To maintain the favourable conservation condition of the wetland habitat in Baldoyle Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,192 hectares, other than that occurring from natural patterns of variation.

Table 4 Qualifying Interests and key environmental conditions supporting site integrity.

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests
Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion.	Overgrazing; erosion; invasive species, particularly common cordgrass (Spartina anglica); infilling and reclamation.
Mediterranean salt meadows (*Juncetalia maritimi*)	Marine and groundwater dependent. Sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion	Overgrazing; erosion; invasive species, particularly common cordgrass (Spartina anglica); infilling and reclamation.
Mudflats and sandflats not covered by seawater at low tide	Surface and marine water dependent. Low sensitivity to hydrological changes. Aquaculture, fishing and pollution.	Aquaculture, fishing, dumping of wastes and water pollution.
Salicornia and other annuals colonizing mud and sand	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species.	Invasive Species; erosion and accretion.
Wetlands & Waterbirds	Highly sensitive to hydrological changes and loss of wetland habitat. Sensitive to disturbance.	A number of pressures have been identified by Crowe (2005). These pressures include: the modification of wetland sites, particularly for industry or housing and increased levels of disturbance, largely related to recreational activity. Eutrophication at a number of wetland sites as a result of nutrient inputs from a range of polluting activities were also identified as a potential pressure. However, this latter pressure is now being alleviated through stricter control of

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests
		activities associated with water discharge/runoff etc. Climate change was also noted as a significant factor underlying changes in trends of wintering waterbirds in Ireland.

4.3. Ecological Network Supporting European Sites

An analysis of the proposed Natural Heritage Areas and designated Natural Heritage Areas in terms of their role in supporting the species using Natura 2000 sites was undertaken. It was assumed that these supporting roles mainly related to mobile fauna such as mammals and birds which may use pNHAs and NHAs as "stepping stones" between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account during the rest of the AA process.

There are no other conservation sites or semi-natural habitats with biological connectivity to the proposed site that would be affected by the proposed project.

5. Identification of Potential Impacts & Assessment of Significance

5.1. Potential Impacts

This section uses the information collected on the sensitivity of each European site and describes any likely significant effects of implementation of the proposed Project.

The likely significant effects of the project are presented in Table 5 below, both in isolation and potentially in combination with other plans and projects.

There would be no direct impacts on the Baldoyle Bay European sites and there would be no habitat loss or fragmentation as a result of the proposed Project. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source pathway vectors.

Considering a worst-case scenario whereby the project may result in a significant detrimental change in water quality in Baldoyle Bay either alone or in combination with other projects or plans as a result of indirect pollution, the effect would have to be considered in terms of changes in water quality which would significantly affect the habitats or food sources for which the Baldoyle Bay SAC & SPA are designated. However, such a scenario is

unlikely given the distance in downstream hydrological connectivity and the employment of best practice construction methods to avoid local pollution of the River Mayne.

Thus, in line with NPWS Departmental Guidance and having regard to ECJ case law and the 'Precautionary Principle', Stage 2 Appropriate Assessment is required.

5.2. Assessment of Potential Cumulative Effects

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

As part of the Screening for an Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination or cumulative effects / impacts of the proposed development with other such plans and projects on the European sites.

A search of the Fingal County and Dublin City Planning databases were undertaken for the Belcamp area for applications that have been granted planning permission within the last three years. These are listed as follows.

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Dublin City Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** ***[Most recent first]***
4019/17 – Butlers Chocolates	Permission is being sought for alterations and additions to existing manufacturing facility.	Butlers Chocolates, Clonshaugh Business and Technology Park, Dublin 17.	24-Jan-2018
3798/17 – Forest Laboratories (IRL) Ltd.	Forest Laboratories Ireland Limited intends to apply for permission for the installation of 1 NO. extract unit along with supporting structure…	Building 2, Clonshaugh Business and Technology Park, Dublin 17.	11-Dec-2017
3328/17 – Irish Commercials (Sales) Ltd.	Retention: for revisions to existing workshop previously granted under planning ref 6311/05.	35 & 36 Block 3, Port Tunnel Business Park, Clonshaugh, Dublin 17.	09-Oct-2017
2822/17 – Forest Laboratories (IRL) Ltd.	Permission for the removal of 2 no. Existing air handling units (with associated works) and electrical control panel. Installation of 1 no. Air supply & extract unit & 1 no. Air extract unit.	Clonshaugh Business and Technology Park, Dublin 17.	04-Aug-2017
2238/17 – Allman Equities Ltd.	The development will consist of extending the existing offices internally.	Vanderbilt, Clonshaugh Business & Technology Park, Dublin 17.	22-May-2017

Dublin City Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** ***[Most recent first]***
2244/17 – Amazon Data Services Ltd.	The development will consist of the upgrade of existing boundary railings and palisade fence.	DUB 10-51, Clonshaugh Business & Technology Park, Dublin 17.	22-May-2017
3925/16 – Telent Technology Services Limited	Retention: 1sq.m roof light, 1.8 m wide approach path at front entrance, dropped kerb.	Unit 9, Willsborough Cluster, Clonshaugh Industrial Estate, Dublin 17.	16-Jan-2017
2989/16 – ESB Telecoms Ltd.	The continued use of the existing 24m high lattice communications structure carrying antennae and dishes shared with third party operators within a secure compound (previously granted permission LA ref. 2370/11).	ESB's Clonshaugh 38kV Substation site, Clonshaugh Industrial Estate, Coolock, Dublin 17	26-Sep-2016
3007/16 – Butlers Chocolates	Retention: Full permission for an extension to the rear of existing manufacturing facility.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	02-Sep-2016
2552/15 – Fingleton White	Permission for development of an aviation fuel pipeline from Dublin Port, Dublin 1 to Dublin Airport, Co Dublin. The route of the pipeline is R139 (formerly N32). (It enters Fingal Co. Council administrative area at Clonshaugh Rd. and routes via AUL/FAI sports ground, under the M1 motorway via the DAA Long Term Red Carpark.	Inlet Station; Team CV, Bond Drive, Dublin Port, Dublin 1 to Dublin Airport, Co. Dublin	26-Apr-2016
4008/15 – Butlers Chocolates	Permission is being sought for the installation of a rooftop solar photovoltaic array.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	23-Feb-2016
3933/15 – Hibernia Express (Ireland) limited	Planning permission to install 4 no. telecommunications equipment containers.	Hibernia Network Office, International Exchange Centre, Clonshaugh Business and Technology Park, Dublin 17	16-Feb-2016
2228/15 – Forest Laboratories (IRL) Ltd.	The development will consist of the formation of 4 no. openings and the provision of aluminium windows/exit doors on the east elevation of the existing facility, together with a galvanised steel external stairs.	Forest Laboratories (IRL) Ltd., (Building No. 1), Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	30-Mar-2015
2044/15 – Butlers Chocolates	Alterations & additions to existing manufacturing facility.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	17-Apr-2015

Fingal County Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
F18A/0058	Amendments to permitted development Reg. Ref. F15A/0609, PL06F.248052, at Belcamp, a protected structure (RPS No. 463), to replace 9 no. three storey bedroom houses with 8 no. two storey three bedroom houses.	Belcamp, Malahide Road, Dublin 17	05-Apr-2018
F17A/0632 – Airways Investments Ltd.	Demolition of 2 No. single storey buildings that links two warehouses as well as ancillary recladding of original gables and restoration of internal circulation roadway.	Unit 11-12, Airways Industrial Estate, Santry, Dublin 17.	23-Jan-2018
F17A/0422 – Topaz Energy Ltd.	The removal of condition no. 4 of An Bord Pleanála appeal case reference PL06F.245112 (Application Register Reference F15a/0182) and to allow for the continued 24-hour opening of the service station on a permanent basis.	Topaz Service Station, Clonshaugh Road, Clonshaugh, Co. Dublin	19-Oct-2017
F15A/0609	The proposed development comprises a development of houses, apartments and shops and the change of use of Belcamp Hall, a Protected Structure (RPS No. 463), Significant Further Information (including Environmental Impact Statement) received on 23/11/2016.	Belcamp, Malahide Road, Dublin 17	28-Jun-2017
F17A/0190 – Essentra Packaging Ireland Ltd.	Retention of a 45m² ground floor extension to the rear of the premises.	Unit 8, Constellation Road, Airways Industrial Estate, Swords Road, Santry, Dublin 17.	27-Jun-2017
F16A/0437 – Songdale Ltd.	The proposed development will consist of the redevelopment of the existing hotel. A total of 141 no. bedrooms are proposed.	The Clayton Hotel Dublin Airport, Stockhole Lane, Clonshaugh Road, Clonshaugh, Co. Dublin	11-Jan-2017
F16A/0397	The proposed development is comprised of three 5-storey office blocks, which will provide a total of 23,970 sq.m. of office floorspace, together with undercroft areas providing a further 5,048 sq.m	Stockhole Lane, Clonshaugh, Co. Dublin	12-Sep-2016

Fingal County Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
F16A/0150 – OCS One Complete Solutions Ltd.	Continued use of the existing building structure as a transfer waste facility.	Unit 39, Airways Industrial Estate, Dublin 17.	14-Nov-2016
F16A/0241 – Hugh Jordan & Co.	Circa 256 sq.m. of additional two storey office space within the existing building.	Unit 4, Constellation Road, Airways Industrial Estate, Swords Road, Santry, Dublin 17.	29-Aug-2016
F16A/0082 – George Watters	a) The demolition of 1,619sq.m. of existing warehouse (b) the construction of a two storey extension to the east elevation (c) change of use to a heavy and light commercial vehicle workshop, warehouse and test centre.	Unit 13, Airways Industrial Estate, Boeing Road, Santry, Dublin 17.	08-Aug-2016
F15A/0478 – Hewlett Packard Enterprise Ireland Ltd.	The installation of two traffic barriers.	29 Airways Industrial Estate, Viscount Road, Santry, Dublin 17.	19-Jan-2016
F14A/0465 – Newlands Cross Hotels t/s Bewleys Hotel	Development including new buildings and alterations to Bewleys Hotel Dublin Airport, which was granted permission under previous Register References F03A/0660, F05A/0972, F05A/1489, F05A/1592 and F06A/0231.	Bewleys Hotel Dubin Airport, Stockhole Lane, Co. Dublin	23-Dec-2015
F15A/0182 – Topaz Energy Ltd.	An extension to the opening hours permitted under application Reg. Ref. F13A/0221.	Topaz Service Station, Clonshaugh Road, Clonshaugh, Co. Dublin.	14-Oct-2015
F15A/0141 – Fingleton White	Aviation fuel pipeline from Dublin Port to Dublin Airport. An Environmental Impact Statement and Natura Impact Statement have been prepared in respect of the application and will be submitted with the planning application.	From Dublin Port, Dublin 1 to Dublin Airport, Co. Dublin	7-Jul-2015
F15A/0085 – Federal Express Europe Inc.	1) The realignment of existing car parking area; 2) The provision of 1 no. pedestrian access gateway and supplementary planting.	Unit 3a/b, Airways Industrial Estate, Constellation Road, Cloghran, Dublin 17.	02-Jun-2015

The majority of these cases refer to alterations to existing developments, e.g. building extensions, with no potential for cumulative effects. The following specific projects are considered further due to their scale and/or the inclusion of an EIS/AA.

F15A/0609 refers to an application for the proposed development of houses, apartments and shops and the change of use of Belcamp Hall, Belcamp, Malahide Road, Dublin 17.

The case was referred to An Bord Pleanála and granted permission with conditions. The Bord completed an AA Screening and concluded that considering the information presented that, by itself or in combination with other development in the vicinity, the proposed development would not be likely to have a significant effect on any European site.

F18A/0058 refers to an application for amendments to permitted development Reg. Ref. F15A/0609, PL06F.248052, at Belcamp, a protected structure (RPS No. 463), to replace 9 no. three storey bedroom houses with 8 no. two storey three-bedroom houses, on a 0.19ha portion of the lands, with access from Malahide Road. The development includes 16 no. on-curtilage car parking spaces and all associated and ancillary site works. The application was granted permission from FCC with conditions including those outlined for the original application.

F15A/0141 refers to an application to provide an aviation fuel supply line from Dublin Port to Dublin Airport with a section along the R139 in the same area of the proposed project.

The Heritage Officer of Fingal CC reviewed the information presented by the applicants in the Natura Impact Statement (NIS) and was satisfied that full consideration was given to the impacts with the potential to affect Natura 2000 sites in this case. The view was expressed, that with full implementation of the proposed mitigation measures, the proposed development will not have significant adverse impacts on Natura 2000 sites either alone or in combination with other plans and projects. He was also satisfied that with full implementation of the proposed mitigation measures set out in the EIS there will be no significant adverse impacts to biodiversity as a result of the project. The project was granted permission with conditions in July 2015.

F16A/0397 refers to an application for the proposed development of a complex comprised of three 5-storey office blocks, which will provide a total of 23,970 sq.m. of office floorspace, together with undercroft areas providing a further 5,048 sq.m. Moore Group also contributed to the EIS and compiled an AA Screening Report which found that there would be no significant effects on any European sites if the project were to proceed.

The data storage facility site in which the permitted Darndale Station is located is presently occupied by a data storage facility which is operational and another data storage facility which is currently under construction (being well advanced). It is proposed to locate a new data storage facility at the southern portion of the site, which is currently primarily a construction site.

An SID application by Eirgrid to ABP (VA0014) for a 220 kV powerline from Belcamp substation through Belcamp Park and south to Clonshaugh was considered by the board and a finding by the Fingal Heritage Officer was included in that he was satisfied with the conclusions reached that significant impacts to Natura 2000 sites as a result of this development are highly unlikely and that a full AA is not required. The project was granted permission in 2012 with conditions relating to *inter alia* the control of pollution of surface waters.

These adjacent developments will have no predicted impacts on European sites and the proposed project will have no predicted impacts on European sites therefore in-combination impacts can be ruled out.

The Dublin City Development Plan and Fingal County Development Plan in complying with the requirements of the Habitats Directive requires that all projects and plans that could affect the Natura 2000 sites in the same zone of impact of the project site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with Plans or Projects for the development area and surrounding townlands in which the development site is located, would be avoided.

Any new applications for the project area will initially be assessed on a case by case basis by Dublin City Council and Fingal County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

Table 5 Outlining the potential impacts in the absence of mitigation of the Project.

Site	Potential Direct Impacts e.g. Habitat Loss	Potential Indirect Impacts e.g. alteration to hydrological regime	Surface or Groundwater Contamination	Disturbance to Protected Species (Habitats Directive Annex II & IV)	Stage 2 AA Required
Baldoyle Bay SAC 000199	No	No	CEMP required	No	Yes
Baldoyle Bay SPA 004016	No	No	CEMP required	No	Yes

6. Screening Statement

There would be no direct impacts on the Baldoyle Bay European sites and there would be no habitat loss or fragmentation as a result of the proposed development. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source pathway vectors.

Considering a worst-case scenario whereby the Project may result in a significant detrimental change in water quality in Baldoyle Bay either alone or in combination with other projects or plans as a result of indirect pollution, the effect would have to be considered in terms of changes in water quality which would significantly affect the habitats or food sources for which the Baldoyle Bay SAC & SPA are designated. However, such a scenario is unlikely given the distance of the main working areas from the River Mayne open channel and management of temporary works for crossing the river (expected less than one week). As a precaution, best practice construction methods will be employed to avoid local pollution of the River Mayne.

Accidental spillages and contaminated runoff and will be avoided by construction management measures which are set out in a Constriction Environmental Management Plan (CEMP). Management measures will include appropriate site-specific measures from the Construction Industry Research and Information Association CIRIA Report C532 Control of Water Pollution from Construction Sites.

The CEMP will include a reference to the Biodiversity Chapter (7) of the proposed project Environmental Impact Assessment Report EIAR which establishes the connectivity of the River Mayne and Baldoyle Bay and the requirement for avoidance in terms of both direct and indirect construction activity, e.g. machinery will not enter the river and construction management will avoid indirect pollution of the water course.

In order to reduce the risk of contamination arising as a result of spills or leakages, measures including, but not limited to, the following will be employed:

- Storing fuels, chemicals, liquid and solid waste on impermeable surfaces in bunded areas;
- Undertaking refueling of plant, equipment and vehicles on impermeable surfaces;
- Ensuring all tanks and drums are bunded in accordance with established best practice guidelines;
- Provision of spill kits.
- Provision of a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains.

As it cannot be excluded, on the basis of objective information, that the development, individually or in combination with other plans or projects, will have a significant effect on a European site, Stage 2 AA is necessary.

Thus, in line with NPWS Departmental Guidance and having regard to ECJ case law and the 'Precautionary Principle', Stage 2 Appropriate Assessment and a Natura Impact Statement is required.

7. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

European Commission (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission Environment DG (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43EEC. European Commission, Brussels.

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive '92/43/EEC: Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interests, compensatory measures, overall coherence and opinion of the Commission. European Commission, Brussels.

NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

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

APPENDIX 7.2

NATURA IMPACT STATEMENT (NIS)

MOORE GROUP – ENVIRONMENTAL SERVICES (2018)

Natura Impact Statement

Appropriate Assessment

Darndale Grid Connection

Prepared by: Moore Group – Environmental Services

3rd December 2018

On behalf of An Bord Pleanála

Client	ADSIL
Project	Darndale Grid Connection
Title	Natura Impact Statement Appropriate Assessment of Darndale Grid Connection

Project Number	18084	**Document Ref**	18084 Darndale Grid Connection NIS Rev1
Revision	**Description**	**Author**	**Date**
Rev0	Issued for client review	G. O'Donohoe	15th November 2018
Rev1	Issued for client review	G. O'Donohoe	3rd December 2018
Moore Archaeological and Environmental Services Limited			

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1. Introduction

1.1. General Introduction

This Natura Impact Statement (NIS) has been prepared by Moore Group – Environmental Services on behalf of the Project proponent. This NIS report contains information to enable the competent authority carry out an Appropriate Assessment (AA) on the effects of a proposed Project consisting of the construction of an underground double circuit 110 kilovolt (kV) transmission line between the existing Belcamp 220kV and 110kV Substation, to the permitted Darndale 110kV Substation located at the former Diamond Innovations Site, Clonshaugh Business and Technology Park, Dublin 17 on European sites, to ascertain whether or not the Project would *individually or in combination with other plans or projects adversely affect the integrity of a European site*.

1.2. Legislative Background - The Habitats and Birds Directives

This NIS informs the Appropriate Assessment process in the determination of the significance of potential impacts on the conservation objectives of European sites. It is necessary that the Project has regard to Article 6 of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (referred to as the Habitats Directive). This is transposed into Irish Law by Part XAB of the Planning and Development Act 2000 as amended and the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477) (referred to as the Habitats Regulations). Also having regard to the provisions of the Planning and Development Act 2000 (section 177U and 177V) which govern the requirement to carry out an AA.

The focus of the assessment is on objectively assessing by reference to the best scientific knowledge in the field as to whether the Project will adversely affect the integrity of the European sites in light of their conservation objectives

Both the Habitats Directive and the Birds Directive have been transposed into Irish law by one set of regulations (i.e. The European Communities (Birds and Natural Habitats) Regulations 2011 to 2015.
The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the EU. Under the Directive Member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a European Union context.

The Birds Directive (Council Directive 79/409/EEC on the conservation of wild birds and Council Directive 2009/147/EC on the conservation of wild birds), is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

SACs designated under the Habitats Directive and SPAs, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs.
Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to affect Natura 2000 sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out a further assessment if required (Appropriate Assessment (AA)):

> Article 6(3): *"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*

> Article 6(4): *"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of the Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to the beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."*

1.3. Methodology

The European Commission's methodological guidance (EC, 2002) promotes a four-stage process to complete the AA, and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1-2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

Stage 1 Screening: This stage examines the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant.

Stage 2 Appropriate Assessment: In this stage, there is a consideration of the impact of the project with a view to ascertain whether there will be any adverse effect on the integrity of the Natura 2000 site either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are predicted impacts, an assessment of the potential mitigation of those impacts.

Stage 3 Assessment of Alternative Solutions: This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

1.4. Guidance

The NIS has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC

(European Commission Environment Directorate-General, 2001); hereafter referred to as the EC Article Guidance Document.

- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC (EC Environment Directorate-General, 2000); hereafter referred to as MN2000.

1.5. Data Sources

Sources of information that were used to collect data on the Natura 2000 network of sites, and the environment within which they are located, are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
    - National Parks & Wildlife (NPWS) protected site boundary data;
    - Ordnance Survey of Ireland mapping and aerial photography;
    - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
    - Open Street Maps;
    - Digital Elevation Model over Europe (EU-DEM);
    - Google Earth and Bing aerial photography 1995-2018;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including: the Natura 2000 network Data Form; Site Synopsis; Generic Conservation Objective data;
    - Online database of rare, threatened and protected species;
    - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2013); and
- Relevant Development Plans and Local Area Plans in neighbouring areas;
    - Fingal County Development Plan2017-2023.

1.6. Statement of Authority

This report was compiled by Ger O'Donohoe (B.Sc. Applied Aquatic Sciences (GMIT, 1993) & M.Sc. Environmental Sciences (TCD, 1999)) who has 25 years' experience in environmental impact assessment and has completed numerous reports for Appropriate Assessment Screening and Natura Impact Statements in terrestrial and aquatic habitats.

Engineering and technical data was supplied by AWN Consulting for the Project.

1.7. Description of the Project

The proposed development comprises the provision an underground double circuit 110kV transmission line, linking 2 no. substations; the permitted Darndale 110kV Substation located at the former Diamond Innovations Site, Clonshaugh Business and Technology Park, Dublin 17, and the recently constructed Belcamp 220kV and 110kV Substation which is located to the north of the R139. The approximate distance between the two Substations is c. 2.1km.

Accidental spillages and contaminated runoff and will be avoided by construction management measures which are set out in a Constriction Environmental Management Plan (CEMP). Management measures will include appropriate site-specific measures from the Construction Industry Research and Information Association CIRIA Report C532 Control of Water Pollution from Construction Sites.

The CEMP will include a reference to the Biodiversity Chapter (7) of the project EIAR which establishes the connectivity of the River Mayne and Baldoyle Bay and the requirement for avoidance where possible, in terms of both direct and indirect construction activity.

In order to reduce the risk of contamination arising as a result of spills or leakages, measures including, but not limited to, the following will be employed:

- Storing fuels, chemicals, liquid and solid waste on impermeable surfaces in bunded areas;
- Undertaking refueling of plant, equipment and vehicles on impermeable surfaces;
- Ensuring all tanks and drums are bunded in accordance with established best practice guidelines;
- Provision of spill kits.
- At the Mayne River crossing, the site contractor will provide a method statement which will address damming upstream and over pumping of water during temporary works (estimated one week)
- Provision of a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains.

Figure 1 shows the location of the proposed development at Clonshaugh-Belcamp, Dublin 17, and Figure 2 shows a detailed view of the existing site on Bing aerial photography with a site layout presented in Figure 3.

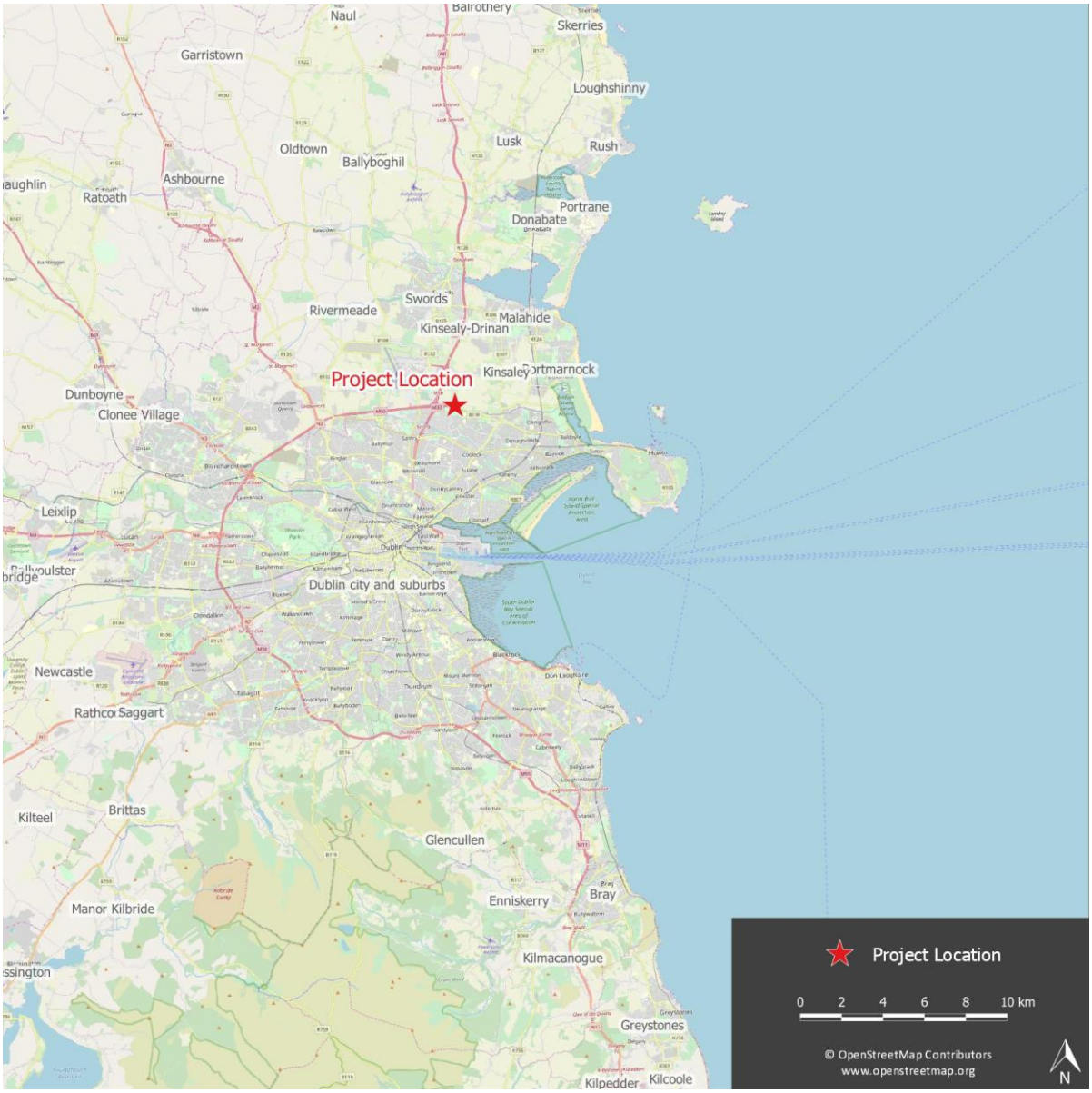

Figure 1. Showing the Project location at Clonshaugh-Belcamp, Dublin 17.

Figure 2. Showing the Project site on aerial photography.

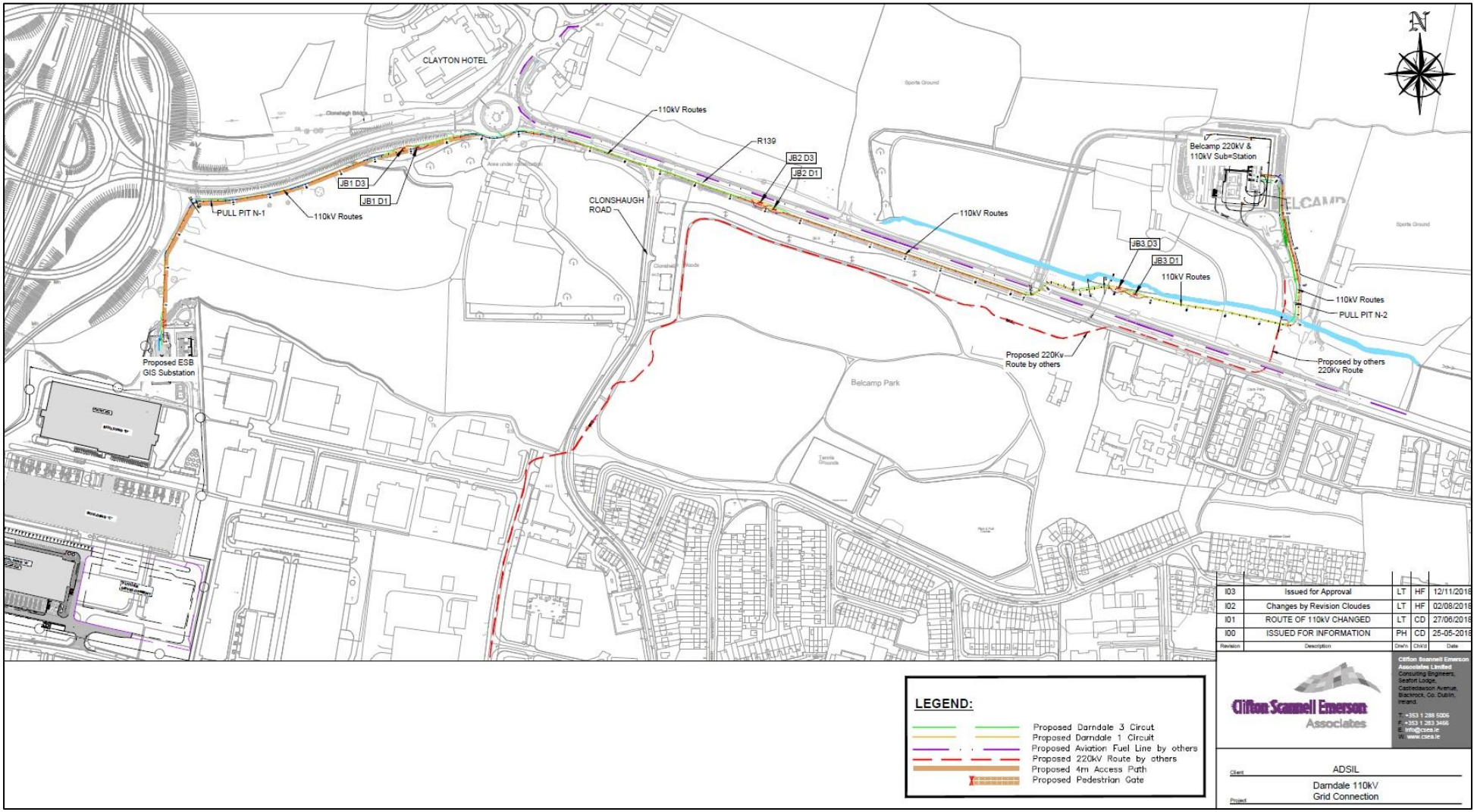

Figure 3. Site plan showing the site layout and proposed route of the grid connection..

2. Stage 1 – Screening for Appropriate Assessment

Screening determines whether appropriate assessment is necessary by examining:

1) Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of the site, and;

2) The potential effects of a project or plan, either alone or in combination with other projects or plans, on a Natura 2000 site in view of its conservation objectives and considering whether these effects will be significant.

If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process in certain circumstances, becomes overly complicated, then the process must proceed to Stage 2 (AA).

DoEHLG (2009) Guidance on Appropriate Assessment recommends' an assessment of European sites within a zone of impact of 15 km which can be revised depending on the nature and location of the proposed development and the connectivity with European sites in terms of catchment-based assessment.

A zone of impact may be determined by connectivity to the Project in terms of:

- Nature, scale, timing and duration of works and possible impacts, nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of pathways (dilution and dispersion; intervening 'buffer' lands, roads etc); and
- Sensitivity and location of ecological features

European sites that are located within 15 km of the Project are listed in Table 1.

Table 1 European Sites located within 15km of the Project.

Site Code	Site name	Distance (km)
000199	Baldoyle Bay SAC	3.88
000202	Howth Head SAC	7.89
000204	Lambay Island SAC	14.15
000205	Malahide Estuary SAC	5.24
000206	North Dublin Bay SAC	4.34
000208	Rogerstown Estuary SAC	9.77
000210	South Dublin Bay SAC	7.54

002193	Ireland's Eye SAC	8.71
003000	Rockabill to Dalkey Island SAC	8.64
004006	North Bull Island SPA	4.34
004015	Rogerstown Estuary SPA	10.02
004016	Baldoyle Bay SPA	4.04
004024	South Dublin Bay and River Tolka Estuary SPA	5.06
004025	Broadmeadow/Swords Estuary SPA	5.23
004069	Lambay Island SPA	14.15
004113	Howth Head Coast SPA	9.86
004117	Ireland's Eye SPA	8.49

The Project is located within the rural environment of Clonshaugh-Belcamp along the R139. The lands in which the proposed Project is located have no formal designations. The nearest European sites are located at Baldoyle Bay and North Dublin Bay.

There is limited biological or no relevant connectivity to the majority of these sites and all, but the Baldoyle Bay sites were excluded at a preliminary screening stage.

The potential impacts on Baldoyle Bay are considered in terms of hydrological connectivity with the River Mayne which is joined by the Cuckoo Stream downstream at Balgriffin Park before discharging to Baldoyle Bay c. 4.2 river km downstream. Details of the qualifying interests of the Baldoyle Bay sites are listed in Table 2 and Table 3 below and Site Synopses are available on the NPWS metadata site. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website on the 6th of November 2018. The following verbatim excerpts are taken from the site synopses.

Baldoyle Bay SAC is a fine example of an estuarine system. It contains four habitats listed on Annex I of the Habitats Directive and supports two legally protected plant species. The site is also an important bird area and part of it is a Special Protection Area under the Birds Directive, as well as being a Statutory Nature Reserve. It supports internationally important numbers of Brent Goose and nationally important numbers of six other bird species, including two Annex I Birds Directive species.

Baldoyle Bay SPA is of high conservation importance, for supporting internationally important numbers of Light-bellied Brent Goose as well as nationally important populations of a further five species, including Golden Plover and Bar-tailed Godwit, both species that are listed on Annex I of the Birds Directive. The inner part of the site is a Statutory Nature Reserve and also designated as a wetland of international importance under the Ramsar Convention.

A Report for AA Screening was prepared by Moore Group and the following determination was made.

There would be no direct impacts on the Baldoyle Bay European sites and there would be no habitat loss or fragmentation as a result of the proposed development. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source pathway vectors.

Considering a worst-case scenario whereby the Project may result in a significant detrimental change in water quality in Baldoyle Bay either alone or in combination with other projects or plans as a result of indirect pollution, the effect would have to be considered in terms of changes in water quality which would significantly affect the habitats or food sources for which the Baldoyle Bay SAC & SPA are designated.

However, such a scenario is unlikely given the distance in downstream hydrological connectivity and the employment of best practice construction methods to avoid local pollution of the River Mayne. These measures will be contained in a CEMP as outlined in Section 1.7 which as an additional measure contributes to the overall unlikelihood of the described worst-case scenario transpiring.

Thus, in line with NPWS Departmental Guidance and having regard to ECJ case law and the 'Precautionary Principle', Stage 2 Appropriate Assessment is required. Adopting the precautionary approach, in line with current guidance, a Stage 2 Appropriate Assessment of the Project has been prepared as follows.

3. Stage 2 – Appropriate Assessment

This stage considers whether the Project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a European site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects. The Stage 2 Appropriate Assessment comprises a scientific examination of the plan / project and the relevant European site; to identify and characterise any possible implications for the site in view of the site's conservation objectives, structure and function; taking account of in combination effects.

3.1. Description of European Sites Potentially Affected

Potential impacts on the following European sites have been identified**:**

- ***Baldoyle Bay SAC (Site code 000199)***

Baldoyle Bay SAC extends from just below Portmarnock village to the west pier at Howth in Co. Dublin. It is a tidal estuarine bay protected from the open sea by a large sand-dune system. Two small rivers, the Mayne and the Sluice, flow into the bay.

The site is a SAC selected for the following habitats and/or species listed on Annex I / II of the Habitats Directive:
[1140] Tidal Mudflats and Sandflats
[1310] *Salicornia* Mud
[1330] Atlantic Salt Meadows
[1410] Mediterranean Salt Meadows

Large areas of intertidal flats are exposed at low tide at this site. These are mostly sands but grade to muds in the inner sheltered parts of the estuary. Extensive areas of Common Cord-grass (*Spartina anglica*) occur in the inner estuary. Both the Narrow-leaved Eelgrass (*Zostera angustifolia*) and the Dwarf Eelgrass (*Z. noltii*) are also found here. During summer, the sandflats of the sheltered areas are covered by mats of green algae (*Enteromorpha* spp. and *Ulva lactuca*).

The sediments have a typical macrofauna, with Lugworm (*Arenicola marina*) dominating the sandy flats. The tubeworm *Lanice conchilega* is present in high densities at the low tide mark and the small gastropod *Hydrobia ulvae* occurs in the muddy areas, along with the crustacean *Corophium volutator*.

Areas of saltmarsh occur near Portmarnock Bridge and at Portmarnock Point, with narrow strips along other parts of the estuary. Species such as glassworts (*Salicornia* spp.), Sea-purslane (*Halimione portulacoides*), Sea Plantain (*Plantago maritima*) and Sea Rush (*Juncus maritimus*) are found here. Portmarnock Spit formerly had a well-developed sand dune system but this has been largely replaced by golf courses and is mostly excluded from the site. A few dune hills are still intact at Portmarnock Point, and there are small dune hills east of Cush Point and below the Claremont Hotel. These are mostly dominated by Marram (*Ammophila arenaria*), though Lyme-grass (*Leymus arenarius*) is also found.

The site includes a brackish marsh along the Mayne River. Soils here have a high organic content and are poorly drained, and some pools occur. Rushes (*Juncus* spp.) and salt tolerant species such as Common Scurvygrass (*Cochleria officinalis*) and Greater Sea-spurrey (*Spergularia media*) are typical of this area. Knotted Hedge-parsley (*Torilis nodosa*), a scarce plant in eastern Ireland, has been recorded here, along with Brackish Water-crowfoot (*Ranunculus baudotti*), a species of brackish pools and ditches which has declined in most places due to habitat loss. Two plant species legally protected under the Flora (Protection) Order, 1999, occur in the Mayne marsh, Borrer's Saltmarsh-grass (*Puccinellia fasciculata*) and Meadow Barley (*Hordeum secalinum*).

Baldoyle Bay is an important bird site for wintering waterfowl and the inner part of the estuary is a SPA under the Birds Directive as well as being a Statutory Nature Reserve. Internationally important numbers of Pale-bellied Brent Goose (418) and nationally important numbers of two Annex I Birds Directive species - Golden Plover (1,900) and Bar-tailed Godwit (283) - have been recorded. Four other species also reached nationally important numbers: Shelduck (147), Pintail (26), Grey Plover (148) and Ringed Plover (218) - all figures are average peaks for four winters 1994/95 to 1997/1998. Breeding wetland birds at the site include Shelduck, Mallard and Ringed Plover. Small numbers of Little Tern, a species listed on Annex I of the Birds Directive, have bred on a few occasions at Portmarnock Point but not since 1991.

The area surrounding Baldoyle Bay is densely populated and so the main threats to the site include visitor pressure, disturbance to wildfowl and dumping. In particular, the dumping of spoil onto the foreshore presents a threat to the value of the site.

- ***Baldoyle Bay SPA (Site code 004016)***

Baldoyle Bay, located to the north and east of Baldoyle and to the south of Portmarnock, Co. Dublin, is a relatively small, narrow estuary separated from the open sea by a large sand dune system. Two small rivers, the Mayne River and the Sluice River, flow into the inner part of the estuary.

Large areas of intertidal flats are exposed at low tide. These are mostly sands but grade to muds in the inner sheltered parts of the estuary. Extensive areas of Common Cord-grass (*Spartina anglica*) occur in the inner estuary. Both the Narrow-leaved Eelgrass (*Zostera angustifolia*) and the Dwarf Eelgrass (*Z. noltii*) are also found here. During summer, the sandflats of the sheltered areas are covered by mats of green algae (*Ulva* spp.). The sediments have a typical macrofauna, with Lugworm (*Arenicola marina*) dominating the sandy flats. Areas of saltmarsh occur near Portmarnock Bridge and at Portmarnock Point, with narrow strips found along other parts of the estuary. Species such as Glasswort (*Salicornia* spp.), Sea-purslane (*Halimione portulacoides*), Sea Plantain (*Plantago maritima*) and Sea Rush (*Juncus maritimus*) are found here.

The site is a SPA under the Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Shelduck, Ringed Plover, Golden Plover, Grey Plover and Bar-tailed Godwit. The Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Baldoyle Bay is an important site for wintering waterfowl, providing good quality feeding areas and roost sites for an excellent diversity of waterfowl species. It supports an internationally important population of Light-bellied Brent Goose (726) and has a further five species with nationally important

populations (all figures are mean peaks for the five winters 1995/96 to 1999/2000): Shelduck (147), Ringed Plover (223), Golden Plover (2,120), Grey Plover (200) and Bar-tailed Godwit (353). Other species which occur include Great Crested Grebe (42), Pintail (35), Teal (138), Mallard (46), Common Scoter (61), Oystercatcher (531), Lapwing (524), Knot (189), Dunlin (879), Black-tailed Godwit (113), Curlew (98), Redshank (224), Greenshank (11) and Turnstone (43). The inner part of the site is a Statutory Nature Reserve and also designated as a wetland of international importance under the Ramsar Convention.

Regular breeding birds include Shelduck, Mallard and Ringed Plover. In autumn, passage migrants such as Curlew Sandpiper, Spotted Redshank and Green Sandpiper are regular in small numbers. Little Egret, a species which has recently colonised Ireland, also occurs at this site.

The location of the current development in relation to the European site is presented in Figures 4 and 5. *The qualifying interests for Baldoyle Bay SAC are listed in Table 1 and the qualifying interests for the SPA are listed in Table 2. The most up to date site synopses are available on the NPWS metadata site*. Spatial boundary data on the Natura 2000 network were extracted from the NPWS website on 6th November 2018.

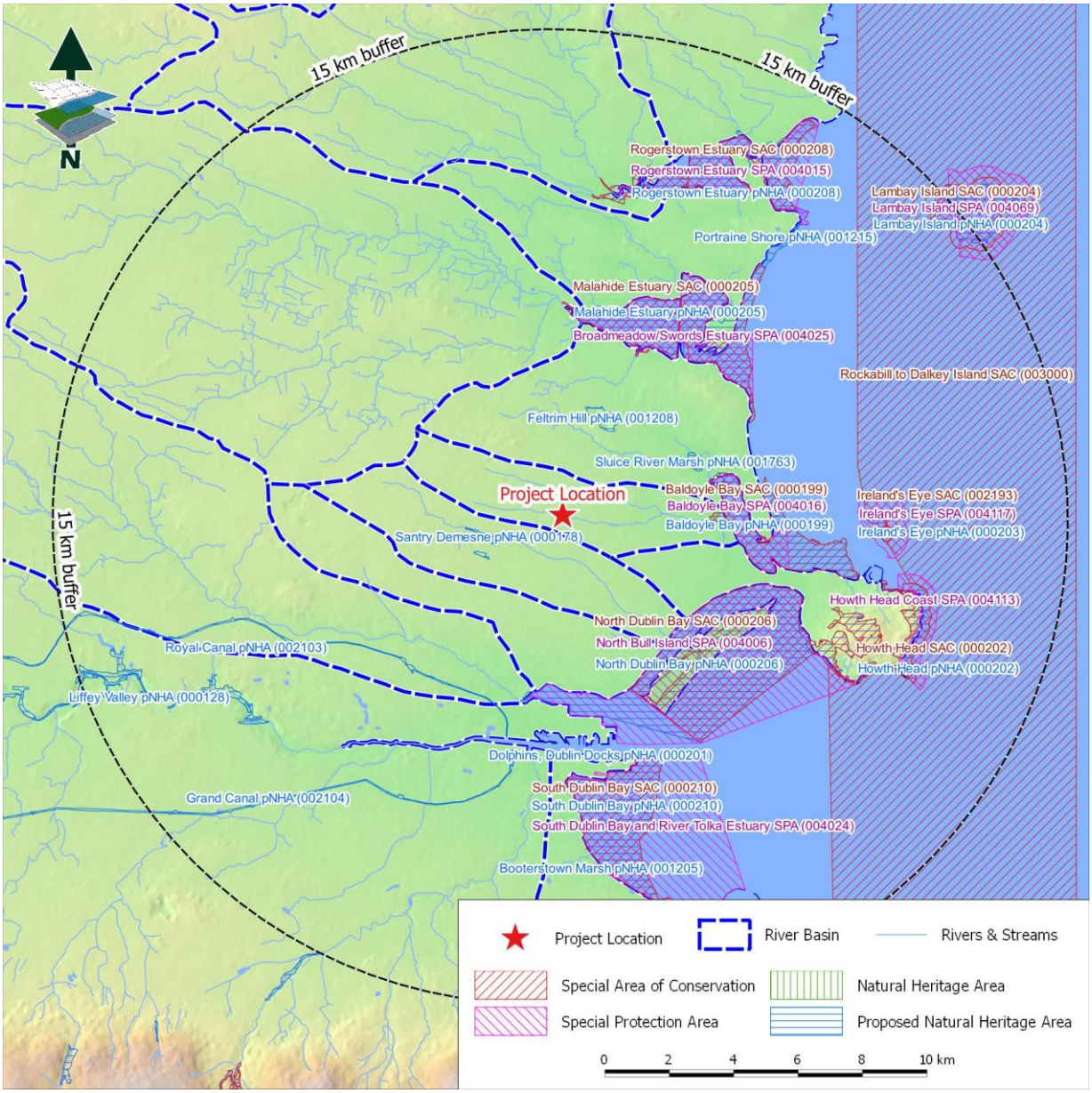

Figure 4. Showing the Project site in relation to surrounding European Sites.

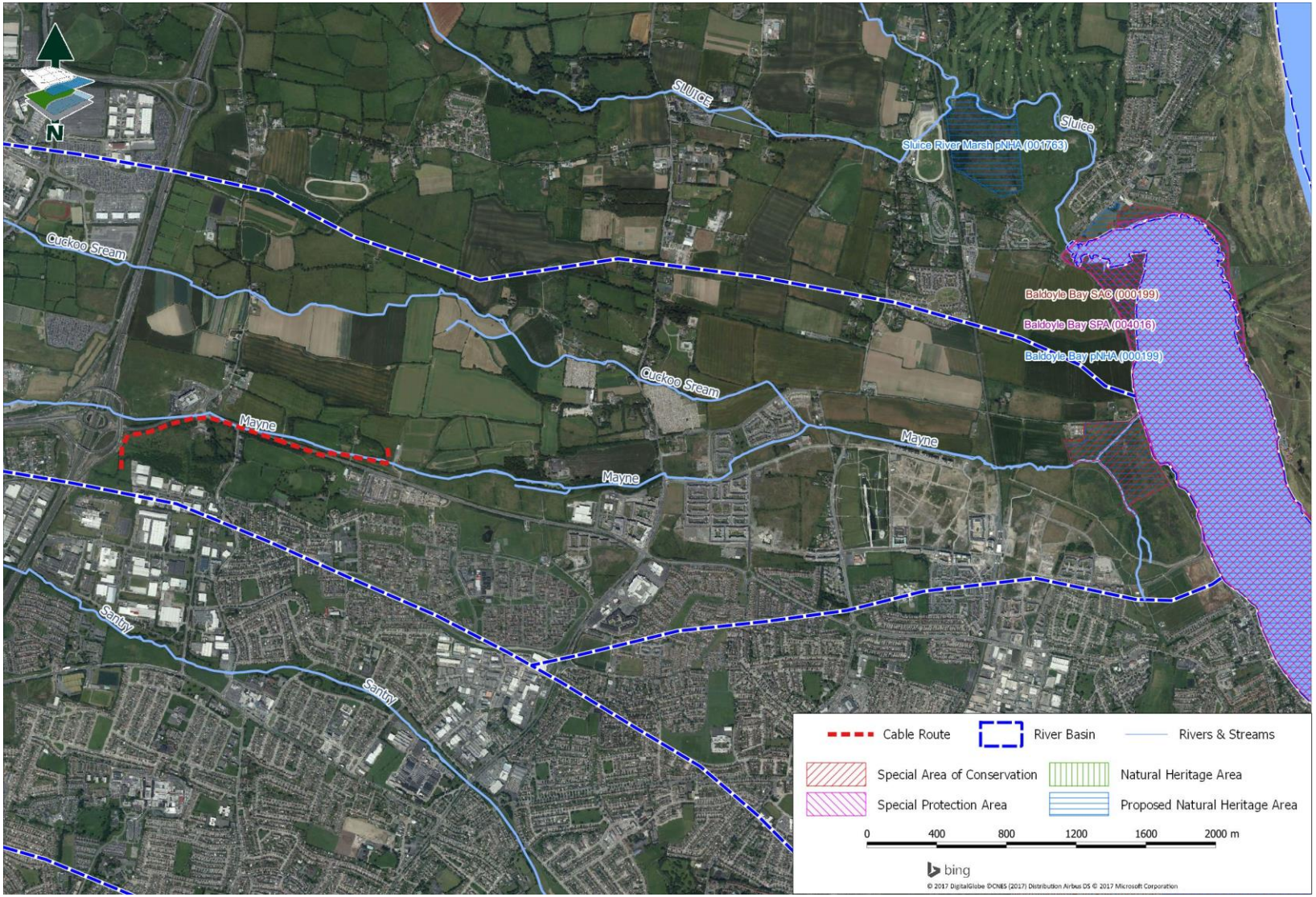

Figure 5. Detail of the Project site in relation to the Baldoyle Bay SAC & SPA.

Table 1. Qualifying Interests of the Baldoyle Bay SAC (*denotes a priority habitat).

Site Code	Site Name	Qualifying Interests
000199	Baldoyle Bay SAC	**Habitats:** [1140] Mudflats and sandflats not covered by seawater at low tide [1310] *Salicornia* and other annuals colonising mud and sand [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1410] Mediterranean salt meadows (*Juncetalia maritimi*)

Table 2. Special Conservation Interests of the Baldoyle Bay SPA.

Site Code	Site Name	Qualifying Interests
004016	Baldoyle Bay SPA	**Species:** [A046] Brent Goose *Branta bernicla hrota* [A048] Shelduck *Tadorna tadorna* [A137] Ringed Plover *Charadrius hiaticula* [A140] Golden Plover *Pluvialis apricaria* [A141] Grey Plover *Pluvialis squatarola* [A157] Bar-tailed Godwit *Limosa lapponica* **Habitats:** Wetlands [A999]

3.2. Conservation Objectives of European Sites

3.2.1. Baldoyle Bay SAC [000199] - Version 1. 19th November 2012

The following Conservation Objectives are set out for the Baldoyle Bay SAC.

1140 Mudflats and sandflats not covered by seawater at low tide

To maintain the favourable conservation condition of mudflats and sandflats not covered by seawater at low tide in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes.
Community distribution	Hectares	Conserve the following community types in a natural condition: Fine sand dominated by *Angulus tenuis* community complex; and Estuarine sandy mud with *Pygospio elegans*

Attribute	Measure	Target
		and *Tubificoides benedii* community complex.

1310 Salicornia and other annuals colonizing mud and sand

To maintain the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 0.383ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and sub-communities	Percentage cover	Maintain the presence of species-poor communities with typical species listed in the

		Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

To maintain the favourable conservation condition of Atlantic salt meadows (*Glauco- Puccinellietalia maritimae*) in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 11.98ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain/restore creek and pan structure to develop, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated

Attribute	Measure	Target
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of subcommunities with typical species listed in the Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

1410 Mediterranean salt meadows (Juncetalia maritimi)

To maintain the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 2.64ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within the sward

Attribute	Measure	Target
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species	Percentage cover	Maintain range of subcommunities with characteristic species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

(NB note that this SAC overlaps with Baldoyle Bay SPA (004016). The conservation objectives for this site should be used in conjunction with those for the overlapping SPA as appropriate.)

3.2.2. Baldoyle Bay SPA [004016] - Version 1. 27th February 2013

The following Conservation Objectives are set out for the Baldoyle Bay SPA.

Generic Conservation Objectives

In the absence of specific conservation objectives, the following generic conservation objectives can be applied to each qualifying species listed.

To maintain the favourable conservation condition of each qualifying bird species in Baldoyle Bay SPA, which is defined by the following list of attributes and targets:

Qualifying Bird Species

Attribute	Measure	Target
Population trend	Percentage change	Long term population trend stable or increasing
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by redshank, other than that occurring from natural patterns of variation

A99 Wetlands

To maintain the favourable conservation condition of the wetland habitat in Baldoyle Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,192 hectares, other than that occurring from natural patterns of variation.

3.3. Consideration of Impacts on European Sites

3.3.1. Habitats Directive Annex I Habitats

There are no Annex I habitats in the receiving environment of the Project works areas. There would be no direct impacts on the Baldoyle Bay European sites and there would be no habitat loss or fragmentation as a result of the proposed development. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source pathway vectors.

Considering a worst-case scenario whereby the Project may result in a significant detrimental change in water quality in Baldoyle Bay either alone or in combination with other projects or plans as a result of indirect pollution, the effect would have to be considered in terms of changes in water quality which would significantly affect the habitats or food sources for which the Baldoyle Bay SAC & SPA are designated. These include the salt meadows, mudflats and sandflats that make up the wetland habitats which are listed as qualifying interests for the SAC and SPA and which support the food sources, such as invertebrates, for the SPA qualifying bird species.

However, such a scenario is unlikely given the distance in downstream hydrological connectivity and the employment of best practice construction methods to avoid local pollution of the River Mayne. These measures will be contained in a CEMP as outlined in Section 1.7 which as an additional measure contributes to the overall unlikelihood of the described worst-case scenario transpiring.

3.3.2. Habitats Directive Annex II Species

While not a qualifying interest of the Baldoyle Bay European sites, otters have been recorded downstream on the River Mayne and in the Mayne Marsh area (pers. comm. NPWS Local Ranger).
The otter (*Lutra lutra)* is listed under Annex II of the Habitats Directive and under Annex II of the Berne Convention; it is also a legally protected species under the Wildlife Acts, 1976 2012). Otters are found

throughout Ireland and tend to occupy linear territories along watercourses and are rarely found far away from water. There would be no direct impacts on otters and so the main concern is with regard to water quality and indirect impacts on water quality and prey species.

3.3.3. Birds Directive Annex I Species

Baldoyle Bay SPA is of high conservation importance, for supporting internationally important numbers of Light-bellied Brent Goose as well as nationally important populations of a further five species, including Golden Plover and Bar-tailed Godwit, both species that are listed on Annex I of the Birds Directive. The inner part of the site is a Statutory Nature Reserve and also designated as a wetland of international importance under the Ramsar Convention.

It supports an internationally important population of Light-bellied Brent Goose (726) and has a further five species with nationally important populations (all figures are mean peaks for the five winters 1995/96 to 1999/2000): Shelduck (147), Ringed Plover (223), Golden Plover (2,120), Grey Plover (200) and Bar-tailed Godwit (353). Other species which occur include Great Crested Grebe (42), Pintail (35), Teal (138), Mallard (46), Common Scoter (61), Oystercatcher (531), Lapwing (524), Knot (189), Dunlin (879), Black-tailed Godwit (113), Curlew (98), Redshank (224), Greenshank (11) and Turnstone (43).

The main concern for wintering birds and their supporting wetland habitats is with regard to water quality and indirect impacts on water quality and prey species which inhabit the sand and mudflats.

3.3.4. Ecological Network Supporting Natura 2000 Sites

An analysis of the proposed Natural Heritage Areas and designated Natural Heritage Areas in terms of their role in supporting the species using Natura 2000 sites was undertaken. These supporting roles mainly relate to mobile fauna such as mammals and birds which may use pNHAs and NHAs as “stepping stones” between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account during the AA process.

The Dublin Bay European sites are located to the south and east of the Project site and with limited or no relevant connectivity are unlikely to be affected by the Project.

There are no other designated or proposed designated sites or areas of semi-natural habitat that would be affected by the proposed development.

3.3.5. Potential Impacts on European Sites

The Project is not directly connected with or necessary to the management of the European sites considered in the assessment and therefore potential downstream impacts must be identified and considered.

There will be no direct impacts on the SAC or SPA designated habitats as a result of the proposed development. Direct impact refers to physical impacts defined in the NPWS Departmental Guidance as 'Loss of habitat area' and/or 'Habitat Fragmentation'. Having established this, the assessment emphasis is placed on potential indirect and cumulative impacts.

The potential for impact is considered whereby the Project would result in a significant detrimental change in water quality either alone or in combination with other projects or plans as a result of indirect pollution of surface water. The effect would have to be considered in terms of changes in water quality or changes in hydrology which would affect the habitats or species for which the Baldoyle Bay European sites are designated. This is assessed by firstly establishing the pathways by which impacts could occur and then reviewing the design measures included which will avoid these impacts and then by also looking at the potential in-combination effects which will be assessed in Section 3.6 later in this report.

3.4. Description of the Existing Environment

The subject site is located to the north of the Clonshaugh Business & Technology Park, along the R139 'Northern Cross Road' and lands at Belcamp in North Dublin approximately 7km from Dublin Airport, 7km from Dublin City Centre commencing adjacent to the M1-M50 interchange along the R139 to the existing Belcamp Substation.

The site commencing from Darndale substation (which is permitted) is light industrial/technological in nature and is presently occupied by a data storage facility (which is operational) and a data storage facility which is currently under construction (but construction is well advanced). It is proposed to locate a new data storage facility at the southern portion of the site which is currently primarily a construction site.

The portion of land to the north of the permitted Darndale substation is a redundant farm with once open grassland fields having been left to recolonise with scrub. Internal drainage ditches are overgrown and stagnant. The proposed route of the transmission cable connection follows the R139 before turning north into the existing recently commissioned Belcamp substation.

Access to the Belcamp substation will require crossing the River Mayne which discharges to Baldoyle Bay c. 4.2 river km downstream.

The lands in which the proposed development is located have no formal designations. The nearest European sites are located at Baldoyle Bay and North Dublin Bay.

There are no rare or protected habitats recorded in the study area inside the site boundary. The site may be considered of Low Ecological Value.

3.5. Impacts on the Qualifying Interests of European Sites

3.5.1. Direct Impacts

There will be no direct impacts on the SAC or SPA as a result of the implementation of the proposed Project. Direct impact refers to physical impacts defined in the Departmental Guidance as 'Loss of habitat area' and/or 'Habitat Fragmentation'. There are no direct impacts identified which may affect the Annexed habitats or species of the SAC or SPA. The remediation works will have **no impacts** upon the integrity or the site structure of the Baldoyle Bay SAC or SPA. There is an adequate distance between the proposed development site and designated areas to ensure that no direct impacts will occur.

3.5.2. Indirect Impacts

Having established this, the assessment emphasis is placed on potential indirect and cumulative impacts.

The primary consideration in terms of source-vector-pathways for indirect impacts relates to surface water and potential indirect impacts on hydrologically linked habitats and aquatic species.
The potential for impact is considered whereby the Project would result in a significant detrimental change in water quality either alone or in combination with other projects or plans as a result of indirect pollution of surface water. The effect would have to be considered in terms of changes in water quality which would affect the habitats or species for which the Baldoyle Bay SAC and SPA are designated.

Consideration of impacts on Surface Water

The likelihood of impacts on hydrologically connected environmental sites is extremely low and will be avoided by best practice construction management.

Accidental spillages and contaminated runoff and will be avoided by construction management measures which are set out in a Constriction Environmental Management Plan (CEMP). Management measures will include appropriate site-specific measures from the CIRIA Report C532 Control of Water Pollution from Construction Sites.

The CEMP will include a reference to the Biodiversity Chapter (7) of the Project EIAR which establishes the connectivity of the River Mayne and Baldoyle Bay and the requirement for avoidance where possible, in terms of both direct and indirect construction activity.

3.6. Mitigation Measures

The CEMP will include a reference to the Biodiversity Chapter (7) of the Project EIAR which establishes the connectivity of the River Mayne and Baldoyle Bay.

In order to reduce the risk of contamination arising as a result of spills or leakages, measures including, but not limited to, the following will be employed:

- Storing fuels, chemicals, liquid and solid waste on impermeable surfaces in bunded areas;
- Undertaking refueling of plant, equipment and vehicles on impermeable surfaces;
- Ensuring all tanks and drums are bunded in accordance with established best practice guidelines;
- Provision of spill kits.
- Provision of a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains.

3.7. Assessment of In-Combination Effects

The European Commission interpretation document 'Managing Natura 2000 sites' referred to as MN2000, makes clear that the phrase 'in combination with other plans or projects' in Article 3(3) refers to cumulative effects caused by the projects or plans that are currently under consideration together with the effects of any existing or proposed projects or plans. When impacts are assessed in combination in this way, it can be established whether or not there may be, overall, an impact which may have significant effects on a Natura 2000 site or which may adversely affect the integrity of a site.

As part of the Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region must also be considered at this stage. This step aims to identify at this early stage

any possible significant in-combination or cumulative effects / impacts of the proposed development with other such plans and projects on the Natura 2000 site.

A search of the Fingal County and Dublin City Planning databases were undertaken for the Belcamp area for applications that have been granted planning permission within the last three years. These are listed as follows.

Dublin City Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
4019/17 – Butlers Chocolates	Permission is being sought for alterations and additions to existing manufacturing facility.	Butlers Chocolates, Clonshaugh Business and Technology Park, Dublin 17.	24-Jan-2018
3798/17 – Forest Laboratories (IRL) Ltd.	Forest Laboratories Ireland Limited intends to apply for permission for the installation of 1 NO. extract unit along with supporting structure…	Building 2, Clonshaugh Business and Technology Park, Dublin 17.	11-Dec-2017
3328/17 – Irish Commercials (Sales) Ltd.	Retention: for revisions to existing workshop previously granted under planning ref 6311/05.	35 & 36 Block 3, Port Tunnel Business Park, Clonshaugh, Dublin 17.	09-Oct-2017
2822/17 – Forest Laboratories (IRL) Ltd.	Permission for the removal of 2 no. Existing air handling units (with associated works) and electrical control panel. Installation of 1 no. Air supply & extract unit & 1 no. Air extract unit.	Clonshaugh Business and Technology Park, Dublin 17.	04-Aug-2017
2238/17 – Allman Equities Ltd.	The development will consist of extending the existing offices internally.	Vanderbilt, Clonshaugh Business & Technology Park, Dublin 17.	22-May-2017
2244/17 – Amazon Data Services Ltd.	The development will consist of the upgrade of existing boundary railings and palisade fence.	DUB 10-51, Clonshaugh Business & Technology Park, Dublin 17.	22-May-2017
3925/16 – Telent Technology Services Limited	Retention: 1sq.m roof light, 1.8 m wide approach path at front entrance, dropped kerb.	Unit 9, Willsborough Cluster, Clonshaugh Industrial Estate, Dublin 17.	16-Jan-2017

Dublin City Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
2989/16 – ESB Telecoms Ltd.	The continued use of the existing 24m high lattice communications structure carrying antennae and dishes shared with third party operators within a secure compound (previously granted permission LA ref. 2370/11).	ESB's Clonshaugh 38kV Substation site, Clonshaugh Industrial Estate, Coolock, Dublin 17	26-Sep-2016
3007/16 – Butlers Chocolates	Retention: Full permission for an extension to the rear of existing manufacturing facility.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	02-Sep-2016
2552/15 – Fingleton White	Permission for development of an aviation fuel pipeline from Dublin Port, Dublin 1 to Dublin Airport, Co Dublin. The route of the pipeline is R139 (formerly N32). (It enters Fingal Co. Council administrative area at Clonshaugh Rd. and routes via AUL/FAI sports ground, under the M1 motorway via the DAA Long Term Red Carpark.	Inlet Station; Team CV, Bond Drive, Dublin Port, Dublin 1 to Dublin Airport, Co. Dublin	26-Apr-2016
4008/15 – Butlers Chocolates	Permission is being sought for the installation of a rooftop solar photovoltaic array.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	23-Feb-2016
3933/15 – Hibernia Express (Ireland) limited	Planning permission to install 4 no. telecommunications equipment containers.	Hibernia Network Office, International Exchange Centre, Clonshaugh Business and Technology Park, Dublin 17	16-Feb-2016
2228/15 – Forest Laboratories (IRL) Ltd.	The development will consist of the formation of 4 no. openings and the provision of aluminium windows/exit doors on the east elevation of the existing facility, together with a galvanised steel external stairs.	Forest Laboratories (IRL) Ltd., (Building No. 1), Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	30-Mar-2015
2044/15 – Butlers Chocolates	Alterations & additions to existing manufacturing facility.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	17-Apr-2015

Fingal County Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
F18A/0058	Amendments to permitted development Reg. Ref. F15A/0609, PL06F.248052, at Belcamp, a protected structure (RPS No. 463), to replace 9 no. three storey bedroom houses with 8 no. two storey three bedroom houses.	Belcamp, Malahide Road, Dublin 17	05-Apr-2018
F17A/0632 – Airways Investments Ltd.	Demolition of 2 No. single storey buildings that links two warehouses as well as ancillary recladding of original gables and restoration of internal circulation roadway.	Unit 11-12, Airways Industrial Estate, Santry, Dublin 17.	23-Jan-2018
F17A/0422 – Topaz Energy Ltd.	The removal of condition no. 4 of An Bord Pleanála appeal case reference PL06F.245112 (Application Register Reference F15a/0182) and to allow for the continued 24-hour opening of the service station on a permanent basis.	Topaz Service Station, Clonshaugh Road, Clonshaugh, Co. Dublin	19-Oct-2017
F15A/0609	The proposed development comprises a development of houses, apartments and shops and the change of use of Belcamp Hall, a Protected Structure (RPS No. 463), Significant Further Information (including Environmental Impact Statement) received on 23/11/2016.	Belcamp, Malahide Road, Dublin 17	28-Jun-2017
F17A/0190 – Essentra Packaging Ireland Ltd.	Retention of a 45m² ground floor extension to the rear of the premises.	Unit 8, Constellation Road, Airways Industrial Estate, Swords Road, Santry, Dublin 17.	27-Jun-2017
F16A/0437 – Songdale Ltd.	The proposed development will consist of the redevelopment of the existing hotel. A total of 141 no. bedrooms are proposed.	The Clayton Hotel Dublin Airport, Stockhole Lane, Clonshaugh Road, Clonshaugh, Co. Dublin	11-Jan-2017
F16A/0397	The proposed development is comprised of three 5-storey office blocks, which will provide a total of 23,970 sq.m. of office floorspace, together with undercroft areas providing a further 5,048 sq.m	Stockhole Lane, Clonshaugh, Co. Dublin	12-Sep-2016

Fingal County Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
F16A/0150 – OCS One Complete Solutions Ltd.	Continued use of the existing building structure as a transfer waste facility.	Unit 39, Airways Industrial Estate, Dublin 17.	14-Nov-2016
F16A/0241 – Hugh Jordan & Co.	Circa 256 sq.m. of additional two storey office space within the existing building.	Unit 4, Constellation Road, Airways Industrial Estate, Swords Road, Santry, Dublin 17.	29-Aug-2016
F16A/0082 – George Watters	a) The demolition of 1,619sq.m. of existing warehouse (b) the construction of a two storey extension to the east elevation (c) change of use to a heavy and light commercial vehicle workshop, warehouse and test centre.	Unit 13, Airways Industrial Estate, Boeing Road, Santry, Dublin 17.	08-Aug-2016
F15A/0478 – Hewlett Packard Enterprise Ireland Ltd.	The installation of two traffic barriers.	29 Airways Industrial Estate, Viscount Road, Santry, Dublin 17.	19-Jan-2016
F14A/0465 – Newlands Cross Hotels t/s Bewleys Hotel	Development including new buildings and alterations to Bewleys Hotel Dublin Airport, which was granted permission under previous Register References F03A/0660, F05A/0972, F05A/1489, F05A/1592 and F06A/0231.	Bewleys Hotel Dubin Airport, Stockhole Lane, Co. Dublin	23-Dec-2015
F15A/0182 – Topaz Energy Ltd.	An extension to the opening hours permitted under application Reg. Ref. F13A/0221.	Topaz Service Station, Clonshaugh Road, Clonshaugh, Co. Dublin.	14-Oct-2015
F15A/0141 – Fingleton White	Aviation fuel pipeline from Dublin Port to Dublin Airport. An Environmental Impact Statement and Natura Impact Statement have been prepared in respect of the application and will be submitted with the planning application.	From Dublin Port, Dublin 1 to Dublin Airport, Co. Dublin	7-Jul-2015
F15A/0085 – Federal Express Europe Inc.	1) The realignment of existing car parking area; 2) The provision of 1 no. pedestrian access gateway and supplementary planting.	Unit 3a/b, Airways Industrial Estate, Constellation Road, Cloghran, Dublin 17.	02-Jun-2015

The majority of these cases refer to alterations to existing developments , e.g. building extensions, with no potential for cumulative effects. The following specific projects are considered further due to their scale and/or the inclusion of an EIS/AA.

F15A/0609 refers to an application for the proposed development of houses, apartments and shops and the change of use of Belcamp Hall, Belcamp, Malahide Road, Dublin 17.

The case was referred to An Bord Pleanála and granted permission with conditions. The Bord completed an AA Screening and concluded that considering the information presented that, by itself or in combination with other development in the vicinity, the proposed development would not be likely to have a significant effect on any European site.

F18A/0058 refers to an application for amendments to permitted development Reg. Ref. F15A/0609, PL06F.248052, at Belcamp, a protected structure (RPS No. 463), to replace 9 no. three storey bedroom houses with 8 no. two storey three-bedroom houses, on a 0.19ha portion of the lands, with access from Malahide Road. The development includes 16 no. on-curtilage car parking spaces and all associated and ancillary site works. The application was granted permission from FCC with conditions including those outlined for the original application.

F15A/0141 refers to an application to provide an aviation fuel supply line from Dublin Port to Dublin Airport with a section along the R139 in the same area of the proposed project.

The Heritage Officer of Fingal CC reviewed the information presented by the applicants in the Natura Impact Statement (NIS) and was satisfied that full consideration was given to the impacts with the potential to affect Natura 2000 sites in this case. The view was expressed, that with full implementation of the proposed mitigation measures, the proposed development will not have significant adverse impacts on Natura 2000 sites either alone or in combination with other plans and projects. He was also satisfied that with full implementation of the proposed mitigation measures set out in the EIS there will be no significant adverse impacts to biodiversity as a result of the project. The project was granted permission with conditions in July 2015.

F16A/0397 refers to an application for the proposed development of a complex comprised of three 5-storey office blocks, which will provide a total of 23,970 sq.m. of office floorspace, together with undercroft areas providing a further 5,048 sq.m. Moore Group also contributed to the EIS and compiled an AA Screening Report which found that there would be no significant effects on any European sites if the project were to proceed.

The data storage facility site in which permitted the Darndale Station is located is presently occupied by a data storage facility which is operational and another data storage facility which is currently under

construction. It is proposed to locate a new data storage facility at the southern portion of the site, which is currently primarily a construction site.

An SID application by Eirgrid to ABP (VA0014) for a 220 kV powerline from Belcamp substation through Belcamp Park and south to Clonshaugh was considered by the board and a finding by the Fingal Heritage Officer was included in that he was satisfied with the conclusions reached that significant impacts to Natura 2000 sites as a result of this development are highly unlikely and that a full AA is not required. The project was granted permission in 2012 with conditions relating to inter alia the control of pollution of surface waters.

3.7.1. Conclusion of In-combination Effects

These adjacent developments will have no predicted impacts on European sites and the proposed Project will have no predicted impacts on European sites therefore in-combination impacts can be ruled out.

The Dublin City Development Plan and Fingal County Development Plan in complying with the requirements of the Habitats Directive requires that all projects and plans that could affect the Natura 2000 sites in the same zone of influence of the Project site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with plans or projects for the development area and surrounding townlands in which the development site is located, would be avoided.

Any new applications for the Project area will initially be assessed on a case by case basis by Dublin City Council and Fingal County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

4. Natura Impact Statement & Conclusion

This NIS has reviewed the predicted impacts arising from the proposed Project and found that with the implementation of appropriate mitigation measures specifically with regard to surface water, no significant effects on the integrity of the Baldoyle Bay SAC and the Baldoyle Bay SPA are likely to arise.

It is the conclusion of this NIS that neither the implementation or the operation of the Project under the conditions of appropriate planning will adversely affect the conservation objectives or integrity of the Baldoyle Bay SAC and the Baldoyle Bay SPA, or any other European Site, either alone or in combination with other plans or projects.

5. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of plans and projects in Ireland (as amended February 2010).

European Commission (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission Environment DG (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43EEC. European Commission, Brussels.

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive '92/43/EEC: Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interests, compensatory measures, overall coherence and opinion of the Commission. European Commission, Brussels.

NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

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

Report for the purposes of Appropriate Assessment Screening

as required under Article 6(3) of the Habitats Directive
(Council Directive 92/43/EEC)

DUB74 Grid Connection

Prepared by: Moore Group – Environmental Services

3rd December 2018

On behalf of An Bord Pleanála

Client	ADSIL
Project	DUB74 Grid Connection
Title	Report for the purposes of Appropriate Assessment Screening DUB74 Grid Connection

Project Number	18084	**Document Ref**	18084 DUB74 Grid Connection AAS1 Rev1	
Revision	**Description**	**Author**		**Date**
Rev0	Issued for client review	G. O'Donohoe		26th April 2018
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Rev2	Issued for client review	G. O'Donohoe		3rd December 2018
Moore Archaeological and Environmental Services Limited				

Table of Contents

1. Introduction

1.1. General Introduction

This report contains information required for the competent authority to undertake an Appropriate Assessment (AA) screening process on the effects of a proposed project consisting of the construction of an underground double circuit 110 kilovolt (kV) transmission line between the existing Belcamp 220kV and 110kV Substation, to the permitted Darndale 110kV Substation located at the former Diamond Innovations Site, Clonshaugh Business and Technology Park, Dublin 17.

Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3) of the Habitats Directive:

i) whether a plan or project is directly connected to or necessary for the management of the site, and
ii) whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, or the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). Screening should be undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan or project.

When screening the project, there are two possible outcomes:

- the project poses no risk of a significant effect and as such requires no further assessment; or
- the project has potential to have a significant effect (or this is uncertain) and AA of the project is necessary.

This desktop report has been prepared by Moore Group - Environmental Services for the applicant and An Bord Pleanála and assesses the potential for the proposed development to impact on sites of European-scale ecological importance in accordance with Articles 6(3) and 6(4) of the Habitats Directive. The report was compiled by Ger O'Donohoe (B.Sc. Applied Aquatic Sciences (GMIT, 1993) & M.Sc. Environmental Sciences (TCD, 1999)) who has over 20 years' experience in environmental impact assessment and has completed numerous Appropriate Assessment Screening Reports and Natura Impact Statements in terrestrial and aquatic habitats.

1.2. Legislative Background - The Habitats and Birds Directives

The report assesses the potential for the proposed development to impact on sites of European-scale ecological importance. It is necessary that the Project has regard to Article 6 of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (referred to as the Habitats

Directive). This is transposed into Irish Law by the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477) (referred to as the Habitats Regulations). Also having regard to the provisions of the Planning and Development Act 2000 (section 177U and 177V) which govern the requirement to carry out an AA.

The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the EU. Under the Directive Member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a European Union context.

The Birds Directive (Council Directive 79/409/EEC on the conservation of wild birds and Council Directive 2009/147/EC on the conservation of wild birds), is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs.

Both the Habitats Directive and the Birds Directive have been transposed into Irish law by one set of regulations (i.e. The European Communities (Birds and Natural Habitats) Regulations 2011 to 2015.

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to affect Natura 2000 sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out a further assessment if required (Appropriate Assessment (AA)):

> **Article 6(3):** *"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*
>
> **Article 6(4):** *"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of the Natura 2000*

is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to the beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

2. Methodology

The European Commission's methodological guidance (EC, 2002) promotes a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1-2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

Stage 1 Screening: This stage examines the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that there are not likely to be significant effects on a Natura 2000 site. Mitigation measures (i.e., measures intended to avoid or reduce the harmful effects of the project on the site concerned) cannot be taken into account at this stage.

Stage 2 Appropriate Assessment: In this stage, there is a consideration of the impact of the project with a view to ascertain whether there will be any adverse effect on the integrity of the Natura 2000 site either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are predicted impacts, an assessment of the potential mitigation of those impacts.

Stage 3 Assessment of Alternative Solutions: This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

To ensure that the proposed Project complies fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation, Moore Group compiled this report to inform the screening for AA of the proposed Project to be undertaken by the competent authority, to determine if the next stage (Stage 2) of AA is required.

2.1. Guidance

This Report for AA screening has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission Environment Directorate-General, 2001); hereafter referred to as the EC Article Guidance Document.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC Environment Directorate-General, 2000); hereafter referred to as MN2000.

2.2. Data Sources

Sources of information that were used to collect data on the Natura 2000 network of sites, and the environment within which they are located, are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
    - National Parks & Wildlife (NPWS) protected site boundary data;
    - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
    - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
    - Open Street Maps;
    - Digital Elevation Model over Europe (EU-DEM);
    - Google Earth and Bing aerial photography 1995-2018;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including: the Natura 2000 network Data Form; Site Synopsis; Generic Conservation Objective data;
    - Online database of rare, threatened and protected species;
    - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2013); and
- Relevant Development Plans and Local Area Plans in neighbouring areas;
    - Fingal County Development Plan2017-2023.

3. Description of the Project

It is proposed to construct an underground double circuit 110 kilovolt (kV) transmission line between the existing Belcamp 220kV and 110kV Substation, to the permitted Darndale 110kV Substation located at the former Diamond Innovations Site, Clonshaugh Business and Technology Park, Dublin 17.

The proposed development comprises the provision an underground double circuit 110kV transmission line, linking 2 no. substations; the permitted Darndale 110kV Substation located at the former Diamond Innovations Site, Clonshaugh Business and Technology Park, Dublin 17, and the recently constructed Belcamp 220kV and 110kV Substation which is located to the north of the R139. The approximate distance between the two Substations is c. 2.1km.

Accidental spillages and contaminated runoff and will be avoided by construction management measures which are set out in a Constriction Environmental Management Plan (CEMP). Management measures will include appropriate site-specific measures from the Construction Industry Research and Information Association CIRIA Report C532 Control of Water Pollution from Construction Sites.

- The CEMP will include a reference to the Biodiversity Chapter (7) of the proposed project Environmental Impact Assessment Report EIAR which establishes the connectivity of the River Mayne and Baldoyle Bay and the requirement for avoidance in terms of both direct and indirect construction activity. At the Mayne River crossing, the site contractor will provide a method statement which will address damming upstream and over pumping of water during temporary works (estimated one week)

In order to reduce the risk of contamination arising as a result of spills or leakages, measures including, but not limited to, the following will be employed:

- Storing fuels, chemicals, liquid and solid waste on impermeable surfaces in bunded areas;
- Undertaking refueling of plant, equipment and vehicles on impermeable surfaces;
- Ensuring all tanks and drums are bunded in accordance with established best practice guidelines;
- Provision of spill kits.
- Provision of a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains.
- At the Mayne River Crossing, the site contractor will provide a method statement which will address damming upstream and over pumping of water

The location and layout of the proposed development are presented in Figures 1, 2 and 3 below.

Figure 1. Showing the Project location at Clonshaugh-Belcamp, Dublin 17.

Figure 2. Detailed view of the development areas and proposed application route.

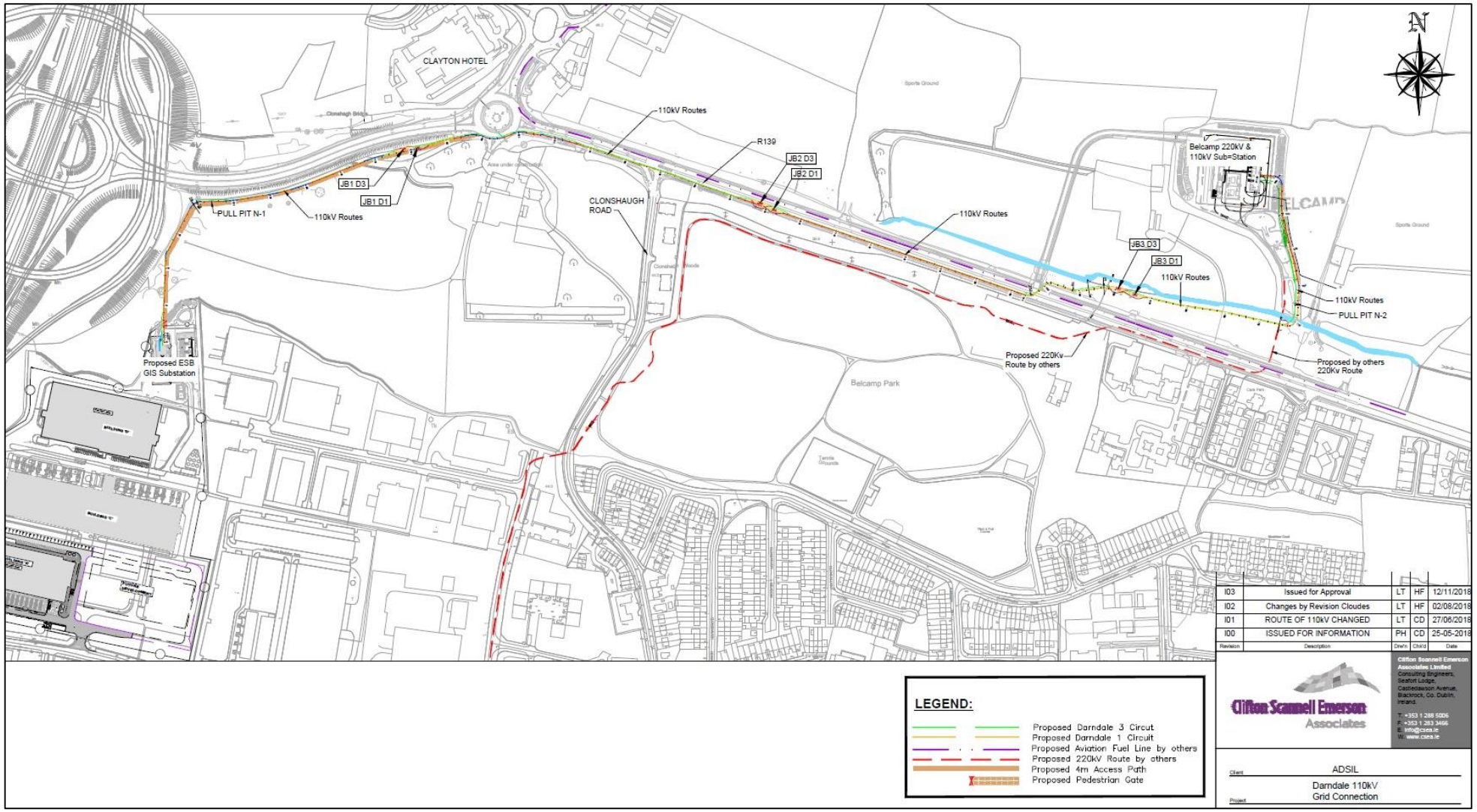

Figure 3. Site plan showing the proposed route of the grid connection along the R139 and through green field areas leading to the Darndale substation.

4. Identification of Natura 2000 Sites

4.1. Description of European Sites Potentially Affected

DoEHLG (2009) Guidance on Appropriate Assessment recommends' an assessment of European sites within a zone of impact of 15 km which can be revised depending on the nature and location of the proposed development and the connectivity with European sites and in terms of catchment-based assessment.

The guidance provides that, at the screening stage, it is necessary to identify the sites and compile information on their qualifying interests and conservation objectives.

The proposed project is located within suburban environment of Belcamp-Clonshaugh along the R139 which runs to the north of Belcamp Park and Clonshaugh Business & Technology Park in North Dublin. The grid connection will cross the River Mayne at the entrance to Belcamp substation before travelling along the verge of the R139 before crossing into disused farmland to the north of the permitted Darndale substation. The lands in which the proposed development is located have no formal designations. The nearest European sites are located at Baldoyle Bay and North Dublin Bay.

European sites that are located within the potential zone of impact the Project are listed in Table 1.

Table 1 European Sites located within 15km of the Project.

Site Code	Site name	Distance (km)
000199	Baldoyle Bay SAC	3.88
000202	Howth Head SAC	7.89
000204	Lambay Island SAC	14.15
000205	Malahide Estuary SAC	5.24
000206	North Dublin Bay SAC	4.34
000208	Rogerstown Estuary SAC	9.77
000210	South Dublin Bay SAC	7.54
002193	Ireland's Eye SAC	8.71
003000	Rockabill to Dalkey Island SAC	8.64
004006	North Bull Island SPA	4.34
004015	Rogerstown Estuary SPA	10.02
004016	Baldoyle Bay SPA	4.04
004024	South Dublin Bay and River Tolka Estuary SPA	5.06
004025	Broadmeadow/Swords Estuary SPA	5.23
004069	Lambay Island SPA	14.15
004113	Howth Head Coast SPA	9.86
004117	Ireland's Eye SPA	8.49

There is limited biological or no relevant connectivity to the majority of these sites and all, but the Baldoyle Bay sites are excluded at this pre-screening stage.

The potential impacts on Baldoyle Bay are considered in terms of hydrological connectivity with the River Mayne which is joined by the Cuckoo Stream downstream at Balgriffin Park before discharging to Baldoyle Bay c. 4.2 river km downstream. Details of the qualifying interests of the Baldoyle Bay sites are listed in Table 2 and Table 3 below and Site Synopses are available on the NPWS metadata site. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website on the 6th of November 2018.

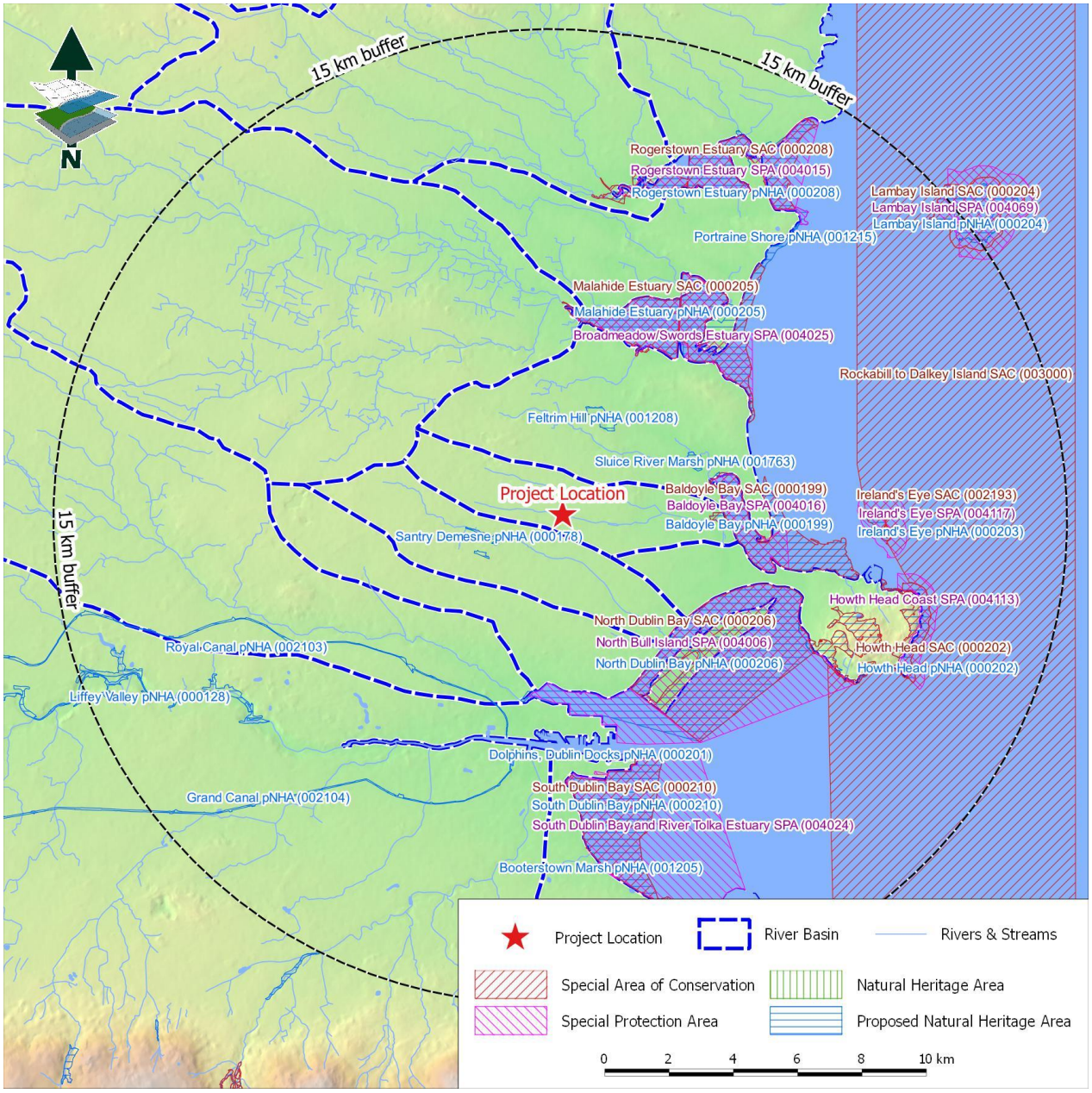

Figure 4. Showing European sites and NHAs/pNHAs in the vicinity of the Project.

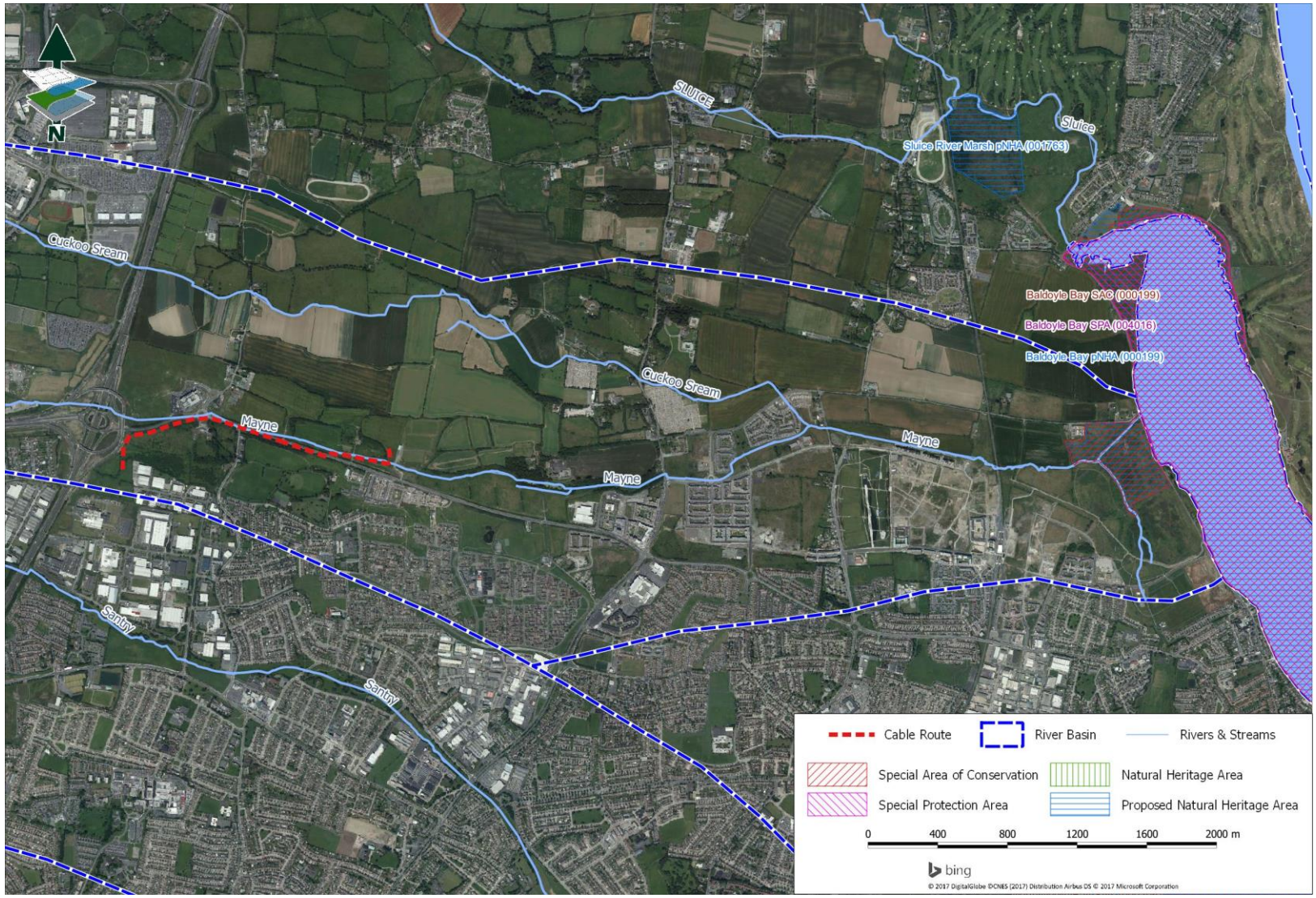

Figure 5. Detail of receiving conservation sites in the vicinity of the Project.

*Table 2 SACs located within the potential zone of impact of the Project (*indicates priority habitat).*

Site Code	Site Name	Qualifying Interests
000199	Baldoyle Bay SAC	**Habitats:** [1140] Mudflats and sandflats not covered by seawater at low tide [1310] *Salicornia* and other annuals colonising mud and sand [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1410] Mediterranean salt meadows (*Juncetalia maritimi*)

Table 3 SPAs located within the potential zone of impact of the Project

Site Code	Site Name	Qualifying Interests
004016	Baldoyle Bay SPA	**Species:** [A046] Brent Goose *Branta bernicla hrota* [A048] Shelduck *Tadorna tadorna* [A137] Ringed Plover *Charadrius hiaticula* [A140] Golden Plover *Pluvialis apricaria* [A141] Grey Plover *Pluvialis squatarola* [A157] Bar-tailed Godwit *Limosa lapponica* **Habitats:** Wetlands [A999]

4.2. Conservation Objectives of the Natura 2000 Sites

4.2.1. Baldoyle Bay SAC [000199] - Version 1. 19th November 2012

The following Conservation Objectives are set out for the Baldoyle Bay SAC. Specific attributes, measures and targets are presented in the relevant Conservation Objectives documents and will be addressed in more detail if required after potential impacts have been determined.

1140 Mudflats and sandflats not covered by seawater at low tide

To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes.

Attribute	Measure	Target
Community distribution	Hectares	Conserve the following community types in a natural condition: Fine sand dominated by *Angulus tenuis* community complex; and Estuarine sandy mud with *Pygospio elegans* and *Tubificoides benedii* community complex.

1310 Salicornia and other annuals colonizing mud and sand

To maintain the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 0.383ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and sub-communities	Percentage cover	Maintain the presence of species-poor communities with typical species listed in the Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

To maintain the favourable conservation condition of Atlantic salt meadows (*Glauco- Puccinellietalia maritimae*) in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 11.98ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain/restore creek and pan structure to develop, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of subcommunities with typical species listed in the Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

1410 Mediterranean salt meadows (Juncetalia maritimi)

To maintain the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 2.64ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions

Attribute	Measure	Target
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within the sward
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species	Percentage cover	Maintain range of subcommunities with characteristic species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

(NB note that this SAC overlaps with Baldoyle Bay SPA (004016). The conservation objectives for this site should be used in conjunction with those for the overlapping SPA as appropriate.)

4.2.2. Baldoyle Bay SPA [004016] - Version 1. 27th February 2013

Generic Conservation Objectives

In the absence of specific conservation objectives, the following generic conservation objectives can be applied to each qualifying species listed.

To maintain the favourable conservation condition of [each qualifying bird species] in Baldoyle Bay SPA, which is defined by the following list of attributes and targets:

Qualifying Bird Species

Attribute	Measure	Target
Population trend	Percentage change	Long term population trend stable or increasing
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by redshank, other than

	that occurring from natural patterns of variation

A99 Wetlands

To maintain the favourable conservation condition of the wetland habitat in Baldoyle Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,192 hectares, other than that occurring from natural patterns of variation.

Table 4 Qualifying Interests and key environmental conditions supporting site integrity.

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests
Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion.	Overgrazing; erosion; invasive species, particularly common cordgrass (Spartina anglica); infilling and reclamation.
Mediterranean salt meadows (*Juncetalia maritimi*)	Marine and groundwater dependent. Sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion	Overgrazing; erosion; invasive species, particularly common cordgrass (Spartina anglica); infilling and reclamation.
Mudflats and sandflats not covered by seawater at low tide	Surface and marine water dependent. Low sensitivity to hydrological changes. Aquaculture, fishing and pollution.	Aquaculture, fishing, dumping of wastes and water pollution.
Salicornia and other annuals colonizing mud and sand	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species.	Invasive Species; erosion and accretion.
Wetlands & Waterbirds	Highly sensitive to hydrological changes and loss of wetland habitat. Sensitive to disturbance.	A number of pressures have been identified by Crowe (2005). These pressures include: the modification of wetland sites, particularly for industry or housing and increased levels of disturbance, largely related to recreational activity. Eutrophication at a number of wetland sites as a result of nutrient inputs from a range of polluting activities were also identified as a potential pressure. However, this latter pressure is now being alleviated through stricter control of

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests
		activities associated with water discharge/runoff etc. Climate change was also noted as a significant factor underlying changes in trends of wintering waterbirds in Ireland.

4.3. Ecological Network Supporting European Sites

An analysis of the proposed Natural Heritage Areas and designated Natural Heritage Areas in terms of their role in supporting the species using Natura 2000 sites was undertaken. It was assumed that these supporting roles mainly related to mobile fauna such as mammals and birds which may use pNHAs and NHAs as "stepping stones" between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account during the rest of the AA process.

There are no other conservation sites or semi-natural habitats with biological connectivity to the proposed site that would be affected by the proposed project.

5. Identification of Potential Impacts & Assessment of Significance

5.1. Potential Impacts

This section uses the information collected on the sensitivity of each European site and describes any likely significant effects of implementation of the proposed Project.

The likely significant effects of the project are presented in Table 5 below, both in isolation and potentially in combination with other plans and projects.

There would be no direct impacts on the Baldoyle Bay European sites and there would be no habitat loss or fragmentation as a result of the proposed Project. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source pathway vectors.

Considering a worst-case scenario whereby the project may result in a significant detrimental change in water quality in Baldoyle Bay either alone or in combination with other projects or plans as a result of indirect pollution, the effect would have to be considered in terms of changes in water quality which would significantly affect the habitats or food sources for which the Baldoyle Bay SAC & SPA are designated. However, such a scenario is

unlikely given the distance in downstream hydrological connectivity and the employment of best practice construction methods to avoid local pollution of the River Mayne.

Thus, in line with NPWS Departmental Guidance and having regard to ECJ case law and the 'Precautionary Principle', Stage 2 Appropriate Assessment is required.

5.2. Assessment of Potential Cumulative Effects

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

As part of the Screening for an Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination or cumulative effects / impacts of the proposed development with other such plans and projects on the European sites.

A search of the Fingal County and Dublin City Planning databases were undertaken for the Belcamp area for applications that have been granted planning permission within the last three years. These are listed as follows.

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Dublin City Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** ***[Most recent first]***
4019/17 – Butlers Chocolates	Permission is being sought for alterations and additions to existing manufacturing facility.	Butlers Chocolates, Clonshaugh Business and Technology Park, Dublin 17.	24-Jan-2018
3798/17 – Forest Laboratories (IRL) Ltd.	Forest Laboratories Ireland Limited intends to apply for permission for the installation of 1 NO. extract unit along with supporting structure…	Building 2, Clonshaugh Business and Technology Park, Dublin 17.	11-Dec-2017
3328/17 – Irish Commercials (Sales) Ltd.	Retention: for revisions to existing workshop previously granted under planning ref 6311/05.	35 & 36 Block 3, Port Tunnel Business Park, Clonshaugh, Dublin 17.	09-Oct-2017
2822/17 – Forest Laboratories (IRL) Ltd.	Permission for the removal of 2 no. Existing air handling units (with associated works) and electrical control panel. Installation of 1 no. Air supply & extract unit & 1 no. Air extract unit.	Clonshaugh Business and Technology Park, Dublin 17.	04-Aug-2017
2238/17 – Allman Equities Ltd.	The development will consist of extending the existing offices internally.	Vanderbilt, Clonshaugh Business & Technology Park, Dublin 17.	22-May-2017

Dublin City Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** ***[Most recent first]***
2244/17 – Amazon Data Services Ltd.	The development will consist of the upgrade of existing boundary railings and palisade fence.	DUB 10-51, Clonshaugh Business & Technology Park, Dublin 17.	22-May-2017
3925/16 – Telent Technology Services Limited	Retention: 1sq.m roof light, 1.8 m wide approach path at front entrance, dropped kerb.	Unit 9, Willsborough Cluster, Clonshaugh Industrial Estate, Dublin 17.	16-Jan-2017
2989/16 – ESB Telecoms Ltd.	The continued use of the existing 24m high lattice communications structure carrying antennae and dishes shared with third party operators within a secure compound (previously granted permission LA ref. 2370/11).	ESB's Clonshaugh 38kV Substation site, Clonshaugh Industrial Estate, Coolock, Dublin 17	26-Sep-2016
3007/16 – Butlers Chocolates	Retention: Full permission for an extension to the rear of existing manufacturing facility.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	02-Sep-2016
2552/15 – Fingleton White	Permission for development of an aviation fuel pipeline from Dublin Port, Dublin 1 to Dublin Airport, Co Dublin. The route of the pipeline is R139 (formerly N32). (It enters Fingal Co. Council administrative area at Clonshaugh Rd. and routes via AUL/FAI sports ground, under the M1 motorway via the DAA Long Term Red Carpark.	Inlet Station; Team CV, Bond Drive, Dublin Port, Dublin 1 to Dublin Airport, Co. Dublin	26-Apr-2016
4008/15 – Butlers Chocolates	Permission is being sought for the installation of a rooftop solar photovoltaic array.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	23-Feb-2016
3933/15 – Hibernia Express (Ireland) limited	Planning permission to install 4 no. telecommunications equipment containers.	Hibernia Network Office, International Exchange Centre, Clonshaugh Business and Technology Park, Dublin 17	16-Feb-2016
2228/15 – Forest Laboratories (IRL) Ltd.	The development will consist of the formation of 4 no. openings and the provision of aluminium windows/exit doors on the east elevation of the existing facility, together with a galvanised steel external stairs.	Forest Laboratories (IRL) Ltd., (Building No. 1), Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	30-Mar-2015
2044/15 – Butlers Chocolates	Alterations & additions to existing manufacturing facility.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	17-Apr-2015

Fingal County Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
F18A/0058	Amendments to permitted development Reg. Ref. F15A/0609, PL06F.248052, at Belcamp, a protected structure (RPS No. 463), to replace 9 no. three storey bedroom houses with 8 no. two storey three bedroom houses.	Belcamp, Malahide Road, Dublin 17	05-Apr-2018
F17A/0632 – Airways Investments Ltd.	Demolition of 2 No. single storey buildings that links two warehouses as well as ancillary recladding of original gables and restoration of internal circulation roadway.	Unit 11-12, Airways Industrial Estate, Santry, Dublin 17.	23-Jan-2018
F17A/0422 – Topaz Energy Ltd.	The removal of condition no. 4 of An Bord Pleanála appeal case reference PL06F.245112 (Application Register Reference F15a/0182) and to allow for the continued 24-hour opening of the service station on a permanent basis.	Topaz Service Station, Clonshaugh Road, Clonshaugh, Co. Dublin	19-Oct-2017
F15A/0609	The proposed development comprises a development of houses, apartments and shops and the change of use of Belcamp Hall, a Protected Structure (RPS No. 463), Significant Further Information (including Environmental Impact Statement) received on 23/11/2016.	Belcamp, Malahide Road, Dublin 17	28-Jun-2017
F17A/0190 – Essentra Packaging Ireland Ltd.	Retention of a 45m² ground floor extension to the rear of the premises.	Unit 8, Constellation Road, Airways Industrial Estate, Swords Road, Santry, Dublin 17.	27-Jun-2017
F16A/0437 – Songdale Ltd.	The proposed development will consist of the redevelopment of the existing hotel. A total of 141 no. bedrooms are proposed.	The Clayton Hotel Dublin Airport, Stockhole Lane, Clonshaugh Road, Clonshaugh, Co. Dublin	11-Jan-2017
F16A/0397	The proposed development is comprised of three 5-storey office blocks, which will provide a total of 23,970 sq.m. of office floorspace, together with undercroft areas providing a further 5,048 sq.m	Stockhole Lane, Clonshaugh, Co. Dublin	12-Sep-2016

Fingal County Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
F16A/0150 – OCS One Complete Solutions Ltd.	Continued use of the existing building structure as a transfer waste facility.	Unit 39, Airways Industrial Estate, Dublin 17.	14-Nov-2016
F16A/0241 – Hugh Jordan & Co.	Circa 256 sq.m. of additional two storey office space within the existing building.	Unit 4, Constellation Road, Airways Industrial Estate, Swords Road, Santry, Dublin 17.	29-Aug-2016
F16A/0082 – George Watters	a) The demolition of 1,619sq.m. of existing warehouse (b) the construction of a two storey extension to the east elevation (c) change of use to a heavy and light commercial vehicle workshop, warehouse and test centre.	Unit 13, Airways Industrial Estate, Boeing Road, Santry, Dublin 17.	08-Aug-2016
F15A/0478 – Hewlett Packard Enterprise Ireland Ltd.	The installation of two traffic barriers.	29 Airways Industrial Estate, Viscount Road, Santry, Dublin 17.	19-Jan-2016
F14A/0465 – Newlands Cross Hotels t/s Bewleys Hotel	Development including new buildings and alterations to Bewleys Hotel Dublin Airport, which was granted permission under previous Register References F03A/0660, F05A/0972, F05A/1489, F05A/1592 and F06A/0231.	Bewleys Hotel Dubin Airport, Stockhole Lane, Co. Dublin	23-Dec-2015
F15A/0182 – Topaz Energy Ltd.	An extension to the opening hours permitted under application Reg. Ref. F13A/0221.	Topaz Service Station, Clonshaugh Road, Clonshaugh, Co. Dublin.	14-Oct-2015
F15A/0141 – Fingleton White	Aviation fuel pipeline from Dublin Port to Dublin Airport. An Environmental Impact Statement and Natura Impact Statement have been prepared in respect of the application and will be submitted with the planning application.	From Dublin Port, Dublin 1 to Dublin Airport, Co. Dublin	7-Jul-2015
F15A/0085 – Federal Express Europe Inc.	1) The realignment of existing car parking area; 2) The provision of 1 no. pedestrian access gateway and supplementary planting.	Unit 3a/b, Airways Industrial Estate, Constellation Road, Cloghran, Dublin 17.	02-Jun-2015

The majority of these cases refer to alterations to existing developments, e.g. building extensions, with no potential for cumulative effects. The following specific projects are considered further due to their scale and/or the inclusion of an EIS/AA.

F15A/0609 refers to an application for the proposed development of houses, apartments and shops and the change of use of Belcamp Hall, Belcamp, Malahide Road, Dublin 17.

The case was referred to An Bord Pleanála and granted permission with conditions. The Bord completed an AA Screening and concluded that considering the information presented that, by itself or in combination with other development in the vicinity, the proposed development would not be likely to have a significant effect on any European site.

F18A/0058 refers to an application for amendments to permitted development Reg. Ref. F15A/0609, PL06F.248052, at Belcamp, a protected structure (RPS No. 463), to replace 9 no. three storey bedroom houses with 8 no. two storey three-bedroom houses, on a 0.19ha portion of the lands, with access from Malahide Road. The development includes 16 no. on-curtilage car parking spaces and all associated and ancillary site works. The application was granted permission from FCC with conditions including those outlined for the original application.

F15A/0141 refers to an application to provide an aviation fuel supply line from Dublin Port to Dublin Airport with a section along the R139 in the same area of the proposed project.

The Heritage Officer of Fingal CC reviewed the information presented by the applicants in the Natura Impact Statement (NIS) and was satisfied that full consideration was given to the impacts with the potential to affect Natura 2000 sites in this case. The view was expressed, that with full implementation of the proposed mitigation measures, the proposed development will not have significant adverse impacts on Natura 2000 sites either alone or in combination with other plans and projects. He was also satisfied that with full implementation of the proposed mitigation measures set out in the EIS there will be no significant adverse impacts to biodiversity as a result of the project. The project was granted permission with conditions in July 2015.

F16A/0397 refers to an application for the proposed development of a complex comprised of three 5-storey office blocks, which will provide a total of 23,970 sq.m. of office floorspace, together with undercroft areas providing a further 5,048 sq.m. Moore Group also contributed to the EIS and compiled an AA Screening Report which found that there would be no significant effects on any European sites if the project were to proceed.

The data storage facility site in which the permitted Darndale Station is located is presently occupied by a data storage facility which is operational and another data storage facility which is currently under construction (being well advanced). It is proposed to locate a new data storage facility at the southern portion of the site, which is currently primarily a construction site.

An SID application by Eirgrid to ABP (VA0014) for a 220 kV powerline from Belcamp substation through Belcamp Park and south to Clonshaugh was considered by the board and a finding by the Fingal Heritage Officer was included in that he was satisfied with the conclusions reached that significant impacts to Natura 2000 sites as a result of this development are highly unlikely and that a full AA is not required. The project was granted permission in 2012 with conditions relating to *inter alia* the control of pollution of surface waters.

These adjacent developments will have no predicted impacts on European sites and the proposed project will have no predicted impacts on European sites therefore in-combination impacts can be ruled out.

The Dublin City Development Plan and Fingal County Development Plan in complying with the requirements of the Habitats Directive requires that all projects and plans that could affect the Natura 2000 sites in the same zone of impact of the project site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with Plans or Projects for the development area and surrounding townlands in which the development site is located, would be avoided.

Any new applications for the project area will initially be assessed on a case by case basis by Dublin City Council and Fingal County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

Table 5 Outlining the potential impacts in the absence of mitigation of the Project.

Site	Potential Direct Impacts e.g. Habitat Loss	Potential Indirect Impacts e.g. alteration to hydrological regime	Surface or Groundwater Contamination	Disturbance to Protected Species (Habitats Directive Annex II & IV)	Stage 2 AA Required
Baldoyle Bay SAC 000199	No	No	CEMP required	No	Yes
Baldoyle Bay SPA 004016	No	No	CEMP required	No	Yes

6. Screening Statement

There would be no direct impacts on the Baldoyle Bay European sites and there would be no habitat loss or fragmentation as a result of the proposed development. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source pathway vectors.

Considering a worst-case scenario whereby the Project may result in a significant detrimental change in water quality in Baldoyle Bay either alone or in combination with other projects or plans as a result of indirect pollution, the effect would have to be considered in terms of changes in water quality which would significantly affect the habitats or food sources for which the Baldoyle Bay SAC & SPA are designated. However, such a scenario is unlikely given the distance of the main working areas from the River Mayne open channel and management of temporary works for crossing the river (expected less than one week). As a precaution, best practice construction methods will be employed to avoid local pollution of the River Mayne.

Accidental spillages and contaminated runoff and will be avoided by construction management measures which are set out in a Constriction Environmental Management Plan (CEMP). Management measures will include appropriate site-specific measures from the Construction Industry Research and Information Association CIRIA Report C532 Control of Water Pollution from Construction Sites.

The CEMP will include a reference to the Biodiversity Chapter (7) of the proposed project Environmental Impact Assessment Report EIAR which establishes the connectivity of the River Mayne and Baldoyle Bay and the requirement for avoidance in terms of both direct and indirect construction activity, e.g. machinery will not enter the river and construction management will avoid indirect pollution of the water course.

In order to reduce the risk of contamination arising as a result of spills or leakages, measures including, but not limited to, the following will be employed:

- Storing fuels, chemicals, liquid and solid waste on impermeable surfaces in bunded areas;
- Undertaking refueling of plant, equipment and vehicles on impermeable surfaces;
- Ensuring all tanks and drums are bunded in accordance with established best practice guidelines;
- Provision of spill kits.
- Provision of a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains.

As it cannot be excluded, on the basis of objective information, that the development, individually or in combination with other plans or projects, will have a significant effect on a European site, Stage 2 AA is necessary.

Thus, in line with NPWS Departmental Guidance and having regard to ECJ case law and the 'Precautionary Principle', Stage 2 Appropriate Assessment and a Natura Impact Statement is required.

7. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

European Commission (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission Environment DG (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43EEC. European Commission, Brussels.

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive '92/43/EEC: Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interests, compensatory measures, overall coherence and opinion of the Commission. European Commission, Brussels.

NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

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

Natura Impact Statement

Appropriate Assessment

Darndale Grid Connection

Prepared by: Moore Group – Environmental Services

3rd December 2018

On behalf of An Bord Pleanála

Client	ADSIL
Project	Darndale Grid Connection
Title	Natura Impact Statement Appropriate Assessment of Darndale Grid Connection

Project Number	18084	**Document Ref**	18084 Darndale Grid Connection NIS Rev1	
Revision	**Description**	**Author**		**Date**
Rev0	Issued for client review	G. O'Donohoe		15th November 2018
Rev1	Issued for client review	G. O'Donohoe		3rd December 2018
Moore Archaeological and Environmental Services Limited				

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1. Introduction

1.1. General Introduction

This Natura Impact Statement (NIS) has been prepared by Moore Group – Environmental Services on behalf of the Project proponent. This NIS report contains information to enable the competent authority carry out an Appropriate Assessment (AA) on the effects of a proposed Project consisting of the construction of an underground double circuit 110 kilovolt (kV) transmission line between the existing Belcamp 220kV and 110kV Substation, to the permitted Darndale 110kV Substation located at the former Diamond Innovations Site, Clonshaugh Business and Technology Park, Dublin 17 on European sites, to ascertain whether or not the Project would *individually or in combination with other plans or projects adversely affect the integrity of a European site*.

1.2. Legislative Background - The Habitats and Birds Directives

This NIS informs the Appropriate Assessment process in the determination of the significance of potential impacts on the conservation objectives of European sites. It is necessary that the Project has regard to Article 6 of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (referred to as the Habitats Directive). This is transposed into Irish Law by Part XAB of the Planning and Development Act 2000 as amended and the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477) (referred to as the Habitats Regulations). Also having regard to the provisions of the Planning and Development Act 2000 (section 177U and 177V) which govern the requirement to carry out an AA.

The focus of the assessment is on objectively assessing by reference to the best scientific knowledge in the field as to whether the Project will adversely affect the integrity of the European sites in light of their conservation objectives

Both the Habitats Directive and the Birds Directive have been transposed into Irish law by one set of regulations (i.e. The European Communities (Birds and Natural Habitats) Regulations 2011 to 2015.
The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the EU. Under the Directive Member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a European Union context.

The Birds Directive (Council Directive 79/409/EEC on the conservation of wild birds and Council Directive 2009/147/EC on the conservation of wild birds), is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

SACs designated under the Habitats Directive and SPAs, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs.
Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to affect Natura 2000 sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out a further assessment if required (Appropriate Assessment (AA)):

> Article 6(3): *"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*

> Article 6(4): *"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of the Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to the beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."*

1.3. Methodology

The European Commission's methodological guidance (EC, 2002) promotes a four-stage process to complete the AA, and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1-2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

Stage 1 Screening: This stage examines the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant.

Stage 2 Appropriate Assessment: In this stage, there is a consideration of the impact of the project with a view to ascertain whether there will be any adverse effect on the integrity of the Natura 2000 site either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are predicted impacts, an assessment of the potential mitigation of those impacts.

Stage 3 Assessment of Alternative Solutions: This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

1.4. Guidance

The NIS has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC

(European Commission Environment Directorate-General, 2001); hereafter referred to as the EC Article Guidance Document.

- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC (EC Environment Directorate-General, 2000); hereafter referred to as MN2000.

1.5. Data Sources

Sources of information that were used to collect data on the Natura 2000 network of sites, and the environment within which they are located, are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
    - National Parks & Wildlife (NPWS) protected site boundary data;
    - Ordnance Survey of Ireland mapping and aerial photography;
    - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
    - Open Street Maps;
    - Digital Elevation Model over Europe (EU-DEM);
    - Google Earth and Bing aerial photography 1995-2018;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including: the Natura 2000 network Data Form; Site Synopsis; Generic Conservation Objective data;
    - Online database of rare, threatened and protected species;
    - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2013); and
- Relevant Development Plans and Local Area Plans in neighbouring areas;
    - Fingal County Development Plan2017-2023.

1.6. Statement of Authority

This report was compiled by Ger O'Donohoe (B.Sc. Applied Aquatic Sciences (GMIT, 1993) & M.Sc. Environmental Sciences (TCD, 1999)) who has 25 years' experience in environmental impact assessment and has completed numerous reports for Appropriate Assessment Screening and Natura Impact Statements in terrestrial and aquatic habitats.

Engineering and technical data was supplied by AWN Consulting for the Project.

1.7. Description of the Project

The proposed development comprises the provision an underground double circuit 110kV transmission line, linking 2 no. substations; the permitted Darndale 110kV Substation located at the former Diamond Innovations Site, Clonshaugh Business and Technology Park, Dublin 17, and the recently constructed Belcamp 220kV and 110kV Substation which is located to the north of the R139. The approximate distance between the two Substations is c. 2 km.

Accidental spillages and contaminated runoff and will be avoided by construction management measures which are set out in a Constriction Environmental Management Plan (CEMP). Management measures will include appropriate site-specific measures from the Construction Industry Research and Information Association CIRIA Report C532 Control of Water Pollution from Construction Sites.

The CEMP will include a reference to the Biodiversity Chapter (7) of the project EIAR which establishes the connectivity of the River Mayne and Baldoyle Bay and the requirement for avoidance where possible, in terms of both direct and indirect construction activity.

In order to reduce the risk of contamination arising as a result of spills or leakages, measures including, but not limited to, the following will be employed:

- Storing fuels, chemicals, liquid and solid waste on impermeable surfaces in bunded areas;
- Undertaking refueling of plant, equipment and vehicles on impermeable surfaces;
- Ensuring all tanks and drums are bunded in accordance with established best practice guidelines;
- Provision of spill kits.
- At the Mayne River crossing, the site contractor will provide a method statement which will address damming upstream and over pumping of water during temporary works (estimated one week)
- Provision of a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains.

Figure 1 shows the location of the proposed development at Clonshaugh-Belcamp, Dublin 17, and Figure 2 shows a detailed view of the existing site on Bing aerial photography with a site layout presented in Figure 3.

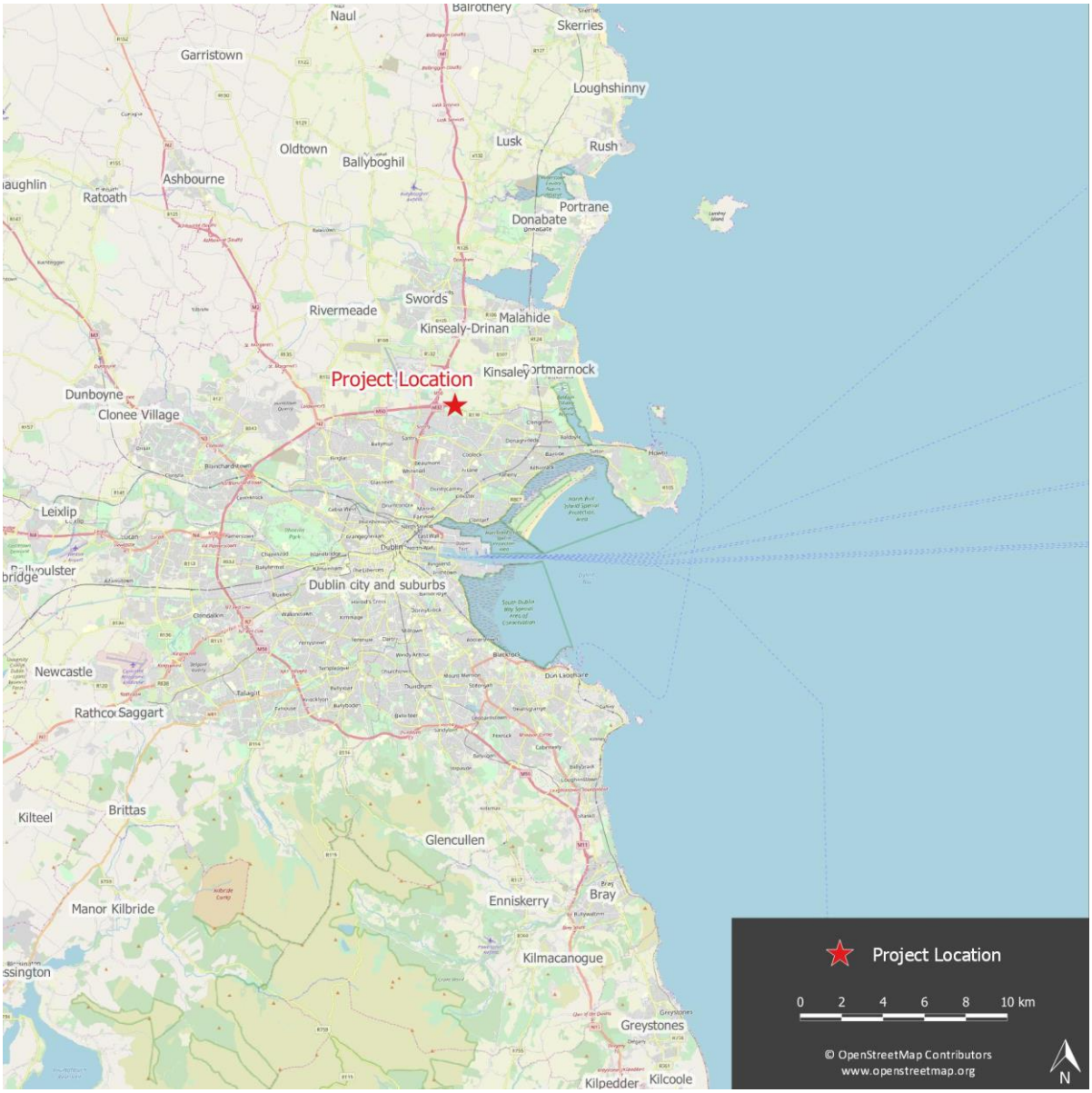

Figure 1. Showing the Project location at Clonshaugh-Belcamp, Dublin 17.

Figure 2. Showing the Project site on aerial photography.

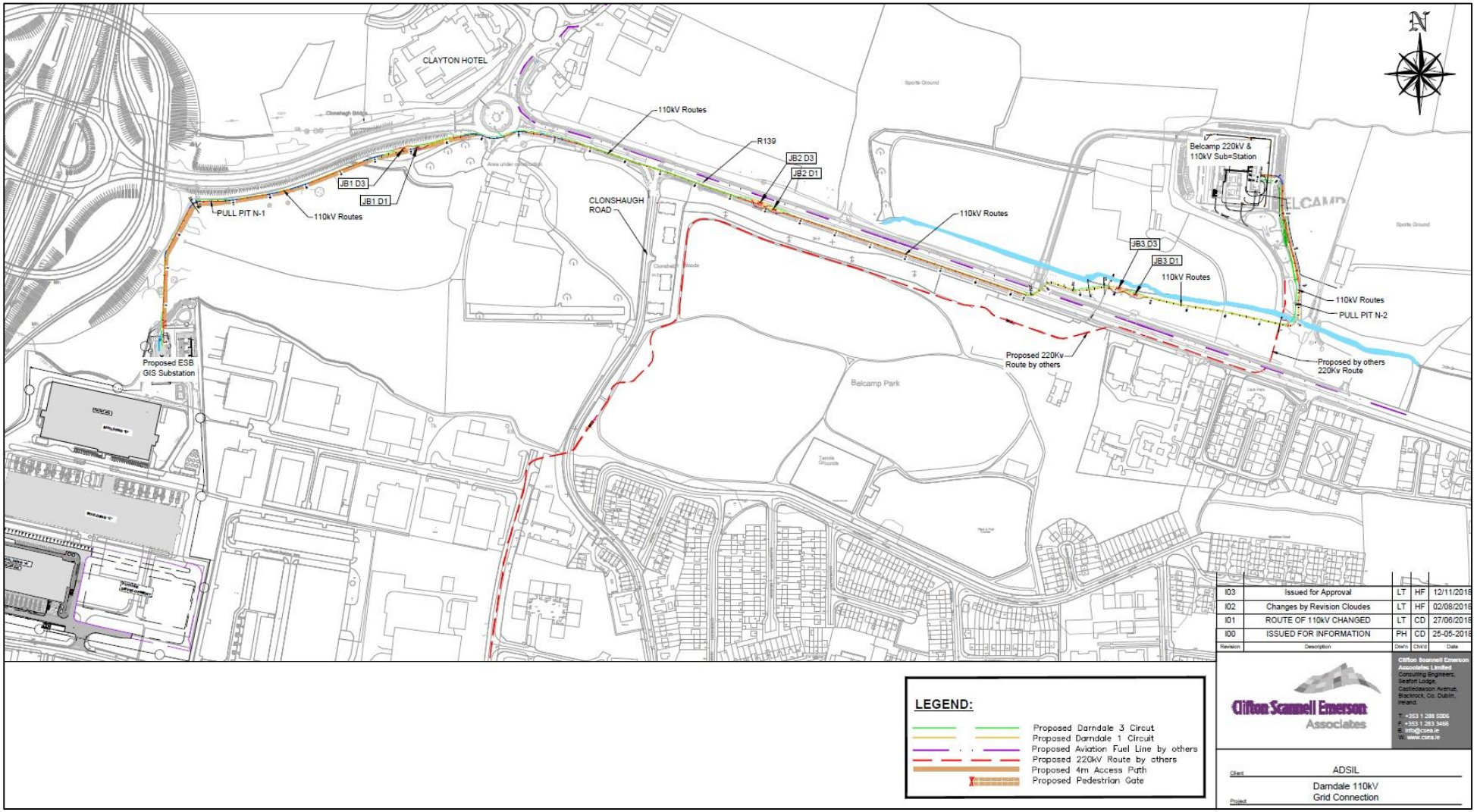

Figure 3. Site plan showing the site layout and proposed route of the grid connection..

2. Stage 1 – Screening for Appropriate Assessment

Screening determines whether appropriate assessment is necessary by examining:

1) Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of the site, and;

2) The potential effects of a project or plan, either alone or in combination with other projects or plans, on a Natura 2000 site in view of its conservation objectives and considering whether these effects will be significant.

If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process in certain circumstances, becomes overly complicated, then the process must proceed to Stage 2 (AA).

DoEHLG (2009) Guidance on Appropriate Assessment recommends' an assessment of European sites within a zone of impact of 15 km which can be revised depending on the nature and location of the proposed development and the connectivity with European sites in terms of catchment-based assessment.

A zone of impact may be determined by connectivity to the Project in terms of:

- Nature, scale, timing and duration of works and possible impacts, nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of pathways (dilution and dispersion; intervening 'buffer' lands, roads etc); and
- Sensitivity and location of ecological features

European sites that are located within 15 km of the Project are listed in Table 1.

Table 1 European Sites located within 15km of the Project.

Site Code	Site name	Distance (km)
000199	Baldoyle Bay SAC	3.88
000202	Howth Head SAC	7.89
000204	Lambay Island SAC	14.15
000205	Malahide Estuary SAC	5.24
000206	North Dublin Bay SAC	4.34
000208	Rogerstown Estuary SAC	9.77
000210	South Dublin Bay SAC	7.54

002193	Ireland's Eye SAC	8.71
003000	Rockabill to Dalkey Island SAC	8.64
004006	North Bull Island SPA	4.34
004015	Rogerstown Estuary SPA	10.02
004016	Baldoyle Bay SPA	4.04
004024	South Dublin Bay and River Tolka Estuary SPA	5.06
004025	Broadmeadow/Swords Estuary SPA	5.23
004069	Lambay Island SPA	14.15
004113	Howth Head Coast SPA	9.86
004117	Ireland's Eye SPA	8.49

The Project is located within the rural environment of Clonshaugh-Belcamp along the R139. The lands in which the proposed Project is located have no formal designations. The nearest European sites are located at Baldoyle Bay and North Dublin Bay.

There is limited biological or no relevant connectivity to the majority of these sites and all, but the Baldoyle Bay sites were excluded at a preliminary screening stage.

The potential impacts on Baldoyle Bay are considered in terms of hydrological connectivity with the River Mayne which is joined by the Cuckoo Stream downstream at Balgriffin Park before discharging to Baldoyle Bay c. 4.2 river km downstream. Details of the qualifying interests of the Baldoyle Bay sites are listed in Table 2 and Table 3 below and Site Synopses are available on the NPWS metadata site. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website on the 6th of November 2018. The following verbatim excerpts are taken from the site synopses.

Baldoyle Bay SAC is a fine example of an estuarine system. It contains four habitats listed on Annex I of the Habitats Directive and supports two legally protected plant species. The site is also an important bird area and part of it is a Special Protection Area under the Birds Directive, as well as being a Statutory Nature Reserve. It supports internationally important numbers of Brent Goose and nationally important numbers of six other bird species, including two Annex I Birds Directive species.

Baldoyle Bay SPA is of high conservation importance, for supporting internationally important numbers of Light-bellied Brent Goose as well as nationally important populations of a further five species, including Golden Plover and Bar-tailed Godwit, both species that are listed on Annex I of the Birds Directive. The inner part of the site is a Statutory Nature Reserve and also designated as a wetland of international importance under the Ramsar Convention.

A Report for AA Screening was prepared by Moore Group and the following determination was made.

There would be no direct impacts on the Baldoyle Bay European sites and there would be no habitat loss or fragmentation as a result of the proposed development. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source pathway vectors.

Considering a worst-case scenario whereby the Project may result in a significant detrimental change in water quality in Baldoyle Bay either alone or in combination with other projects or plans as a result of indirect pollution, the effect would have to be considered in terms of changes in water quality which would significantly affect the habitats or food sources for which the Baldoyle Bay SAC & SPA are designated.

However, such a scenario is unlikely given the distance in downstream hydrological connectivity and the employment of best practice construction methods to avoid local pollution of the River Mayne. These measures will be contained in a CEMP as outlined in Section 1.7 which as an additional measure contributes to the overall unlikelihood of the described worst-case scenario transpiring.

Thus, in line with NPWS Departmental Guidance and having regard to ECJ case law and the 'Precautionary Principle', Stage 2 Appropriate Assessment is required. Adopting the precautionary approach, in line with current guidance, a Stage 2 Appropriate Assessment of the Project has been prepared as follows.

3. Stage 2 – Appropriate Assessment

This stage considers whether the Project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a European site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects. The Stage 2 Appropriate Assessment comprises a scientific examination of the plan / project and the relevant European site; to identify and characterise any possible implications for the site in view of the site's conservation objectives, structure and function; taking account of in combination effects.

3.1. Description of European Sites Potentially Affected

Potential impacts on the following European sites have been identified**:**

- ***Baldoyle Bay SAC (Site code 000199)***

Baldoyle Bay SAC extends from just below Portmarnock village to the west pier at Howth in Co. Dublin. It is a tidal estuarine bay protected from the open sea by a large sand-dune system. Two small rivers, the Mayne and the Sluice, flow into the bay.

The site is a SAC selected for the following habitats and/or species listed on Annex I / II of the Habitats Directive:
[1140] Tidal Mudflats and Sandflats
[1310] *Salicornia* Mud
[1330] Atlantic Salt Meadows
[1410] Mediterranean Salt Meadows

Large areas of intertidal flats are exposed at low tide at this site. These are mostly sands but grade to muds in the inner sheltered parts of the estuary. Extensive areas of Common Cord-grass (*Spartina anglica*) occur in the inner estuary. Both the Narrow-leaved Eelgrass (*Zostera angustifolia*) and the Dwarf Eelgrass (*Z. noltii*) are also found here. During summer, the sandflats of the sheltered areas are covered by mats of green algae (*Enteromorpha* spp. and *Ulva lactuca*).

The sediments have a typical macrofauna, with Lugworm (*Arenicola marina*) dominating the sandy flats. The tubeworm *Lanice conchilega* is present in high densities at the low tide mark and the small gastropod *Hydrobia ulvae* occurs in the muddy areas, along with the crustacean *Corophium volutator*.

Areas of saltmarsh occur near Portmarnock Bridge and at Portmarnock Point, with narrow strips along other parts of the estuary. Species such as glassworts (*Salicornia* spp.), Sea-purslane (*Halimione portulacoides*), Sea Plantain (*Plantago maritima*) and Sea Rush (*Juncus maritimus*) are found here. Portmarnock Spit formerly had a well-developed sand dune system but this has been largely replaced by golf courses and is mostly excluded from the site. A few dune hills are still intact at Portmarnock Point, and there are small dune hills east of Cush Point and below the Claremont Hotel. These are mostly dominated by Marram (*Ammophila arenaria*), though Lyme-grass (*Leymus arenarius*) is also found.

The site includes a brackish marsh along the Mayne River. Soils here have a high organic content and are poorly drained, and some pools occur. Rushes (*Juncus* spp.) and salt tolerant species such as Common Scurvygrass (*Cochleria officinalis*) and Greater Sea-spurrey (*Spergularia media*) are typical of this area. Knotted Hedge-parsley (*Torilis nodosa*), a scarce plant in eastern Ireland, has been recorded here, along with Brackish Water-crowfoot (*Ranunculus baudotti*), a species of brackish pools and ditches which has declined in most places due to habitat loss. Two plant species legally protected under the Flora (Protection) Order, 1999, occur in the Mayne marsh, Borrer's Saltmarsh-grass (*Puccinellia fasciculata*) and Meadow Barley (*Hordeum secalinum*).

Baldoyle Bay is an important bird site for wintering waterfowl and the inner part of the estuary is a SPA under the Birds Directive as well as being a Statutory Nature Reserve. Internationally important numbers of Pale-bellied Brent Goose (418) and nationally important numbers of two Annex I Birds Directive species - Golden Plover (1,900) and Bar-tailed Godwit (283) - have been recorded. Four other species also reached nationally important numbers: Shelduck (147), Pintail (26), Grey Plover (148) and Ringed Plover (218) - all figures are average peaks for four winters 1994/95 to 1997/1998. Breeding wetland birds at the site include Shelduck, Mallard and Ringed Plover. Small numbers of Little Tern, a species listed on Annex I of the Birds Directive, have bred on a few occasions at Portmarnock Point but not since 1991.

The area surrounding Baldoyle Bay is densely populated and so the main threats to the site include visitor pressure, disturbance to wildfowl and dumping. In particular, the dumping of spoil onto the foreshore presents a threat to the value of the site.

- ***Baldoyle Bay SPA (Site code 004016)***

Baldoyle Bay, located to the north and east of Baldoyle and to the south of Portmarnock, Co. Dublin, is a relatively small, narrow estuary separated from the open sea by a large sand dune system. Two small rivers, the Mayne River and the Sluice River, flow into the inner part of the estuary.

Large areas of intertidal flats are exposed at low tide. These are mostly sands but grade to muds in the inner sheltered parts of the estuary. Extensive areas of Common Cord-grass (*Spartina anglica*) occur in the inner estuary. Both the Narrow-leaved Eelgrass (*Zostera angustifolia*) and the Dwarf Eelgrass (*Z. noltii*) are also found here. During summer, the sandflats of the sheltered areas are covered by mats of green algae (*Ulva* spp.). The sediments have a typical macrofauna, with Lugworm (*Arenicola marina*) dominating the sandy flats. Areas of saltmarsh occur near Portmarnock Bridge and at Portmarnock Point, with narrow strips found along other parts of the estuary. Species such as Glasswort (*Salicornia* spp.), Sea-purslane (*Halimione portulacoides*), Sea Plantain (*Plantago maritima*) and Sea Rush (*Juncus maritimus*) are found here.

The site is a SPA under the Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Shelduck, Ringed Plover, Golden Plover, Grey Plover and Bar-tailed Godwit. The Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Baldoyle Bay is an important site for wintering waterfowl, providing good quality feeding areas and roost sites for an excellent diversity of waterfowl species. It supports an internationally important population of Light-bellied Brent Goose (726) and has a further five species with nationally important

populations (all figures are mean peaks for the five winters 1995/96 to 1999/2000): Shelduck (147), Ringed Plover (223), Golden Plover (2,120), Grey Plover (200) and Bar-tailed Godwit (353). Other species which occur include Great Crested Grebe (42), Pintail (35), Teal (138), Mallard (46), Common Scoter (61), Oystercatcher (531), Lapwing (524), Knot (189), Dunlin (879), Black-tailed Godwit (113), Curlew (98), Redshank (224), Greenshank (11) and Turnstone (43). The inner part of the site is a Statutory Nature Reserve and also designated as a wetland of international importance under the Ramsar Convention.

Regular breeding birds include Shelduck, Mallard and Ringed Plover. In autumn, passage migrants such as Curlew Sandpiper, Spotted Redshank and Green Sandpiper are regular in small numbers. Little Egret, a species which has recently colonised Ireland, also occurs at this site.

The location of the current development in relation to the European site is presented in Figures 4 and 5. *The qualifying interests for Baldoyle Bay SAC are listed in Table 1 and the qualifying interests for the SPA are listed in Table 2. The most up to date site synopses are available on the NPWS metadata site*. Spatial boundary data on the Natura 2000 network were extracted from the NPWS website on 6th November 2018.

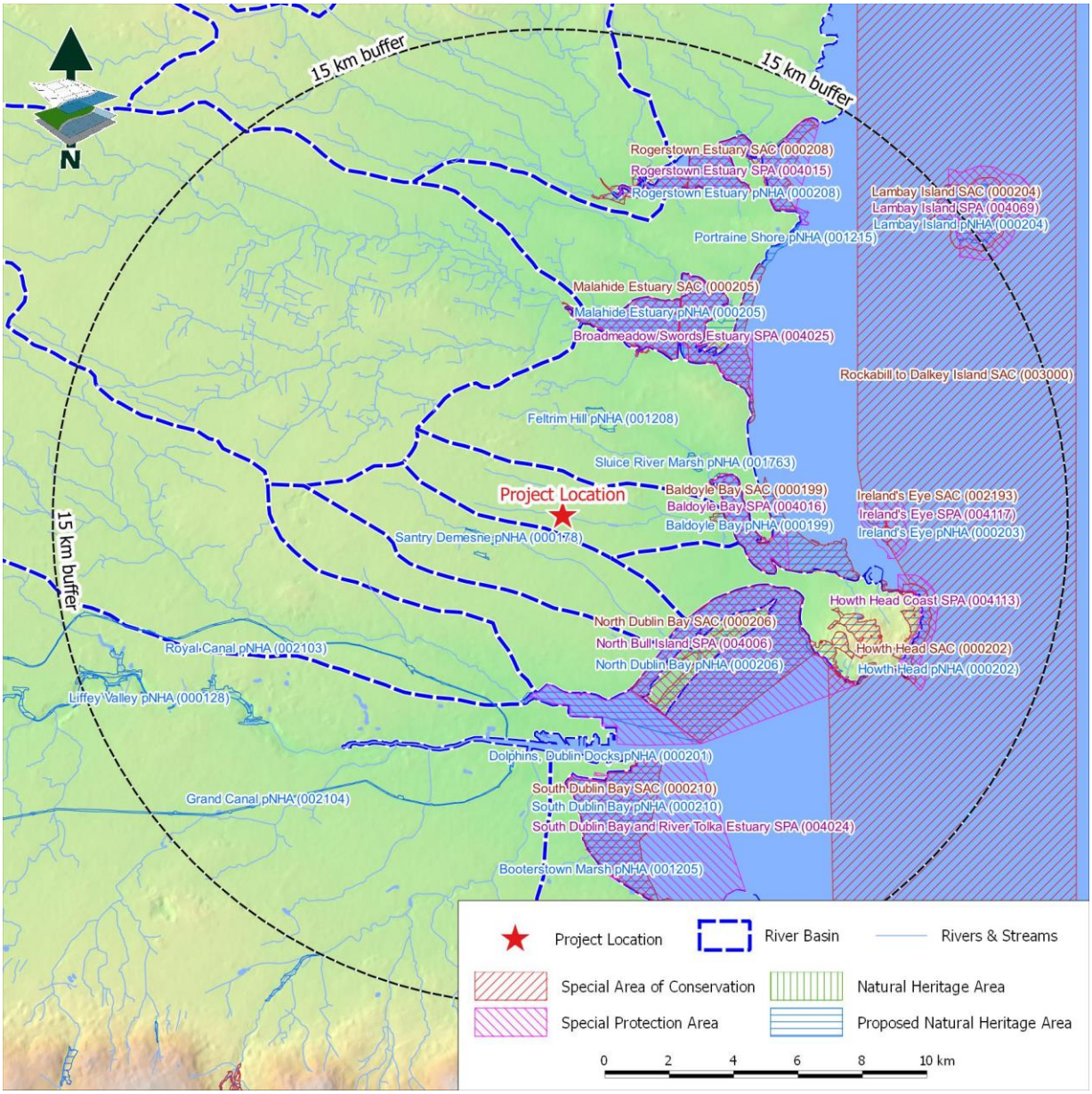

Figure 4. Showing the Project site in relation to surrounding European Sites.

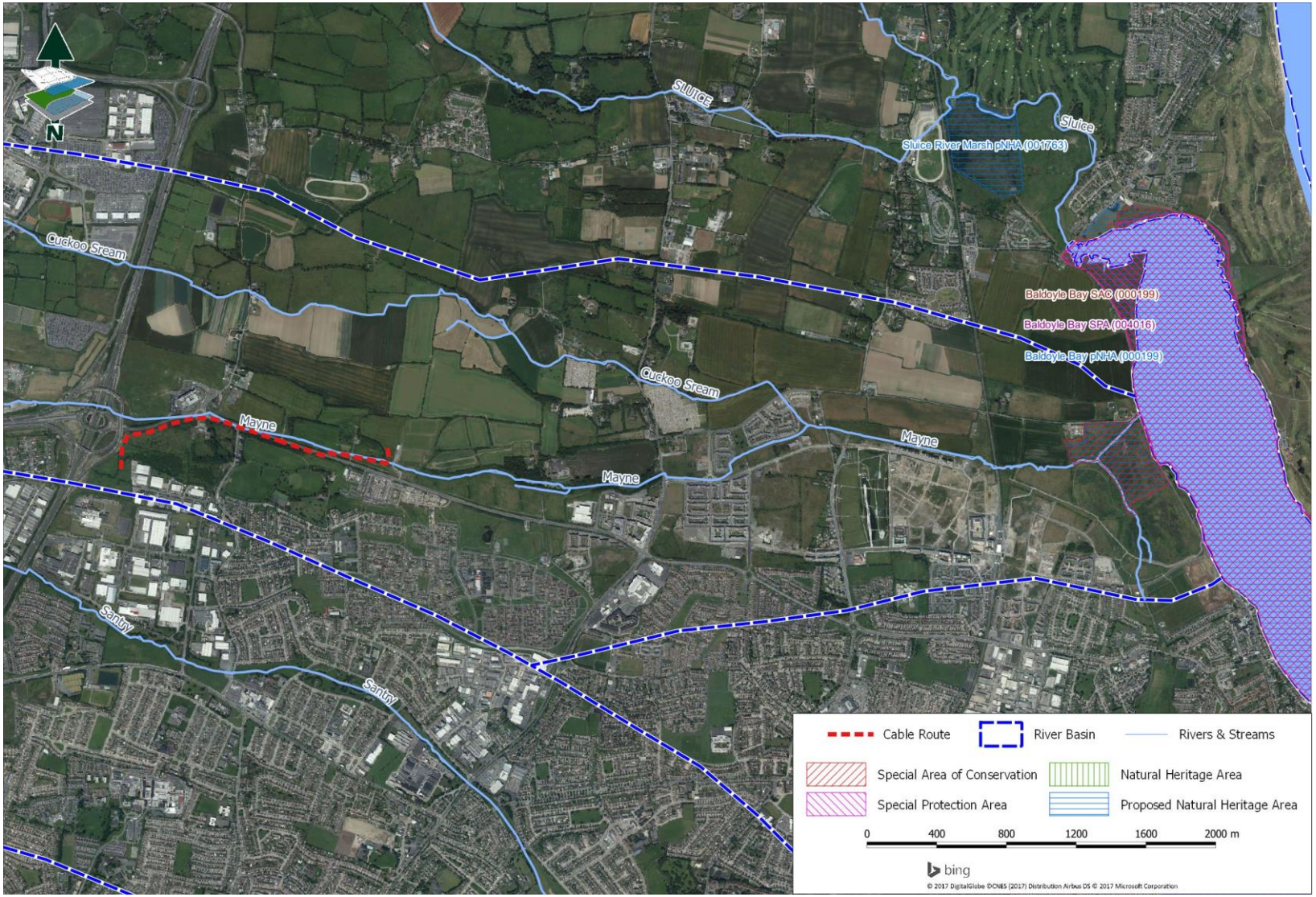

Figure 5. Detail of the Project site in relation to the Baldoyle Bay SAC & SPA.

Table 1. Qualifying Interests of the Baldoyle Bay SAC (*denotes a priority habitat).

Site Code	Site Name	Qualifying Interests
000199	Baldoyle Bay SAC	**Habitats:** [1140] Mudflats and sandflats not covered by seawater at low tide [1310] *Salicornia* and other annuals colonising mud and sand [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1410] Mediterranean salt meadows (*Juncetalia maritimi*)

Table 2. Special Conservation Interests of the Baldoyle Bay SPA.

Site Code	Site Name	Qualifying Interests
004016	Baldoyle Bay SPA	**Species:** [A046] Brent Goose *Branta bernicla hrota* [A048] Shelduck *Tadorna tadorna* [A137] Ringed Plover *Charadrius hiaticula* [A140] Golden Plover *Pluvialis apricaria* [A141] Grey Plover *Pluvialis squatarola* [A157] Bar-tailed Godwit *Limosa lapponica* **Habitats:** Wetlands [A999]

3.2. Conservation Objectives of European Sites

3.2.1. Baldoyle Bay SAC [000199] - Version 1. 19th November 2012

The following Conservation Objectives are set out for the Baldoyle Bay SAC.

1140 Mudflats and sandflats not covered by seawater at low tide

To maintain the favourable conservation condition of mudflats and sandflats not covered by seawater at low tide in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes.
Community distribution	Hectares	Conserve the following community types in a natural condition: Fine sand dominated by *Angulus tenuis* community complex; and Estuarine sandy mud with *Pygospio elegans*

Attribute	Measure	Target
		and *Tubificoides benedii* community complex.

1310 Salicornia and other annuals colonizing mud and sand

To maintain the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 0.383ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species and sub-communities	Percentage cover	Maintain the presence of species-poor communities with typical species listed in the

		Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

To maintain the favourable conservation condition of Atlantic salt meadows (*Glauco- Puccinellietalia maritimae*) in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 11.98ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain/restore creek and pan structure to develop, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated

Attribute	Measure	Target
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of subcommunities with typical species listed in the Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

1410 Mediterranean salt meadows (Juncetalia maritimi)

To maintain the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Baldoyle Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-site mapped: Baldoyle - 2.64ha.
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes.
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within the sward

Attribute	Measure	Target
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated
Vegetation composition: typical species	Percentage cover	Maintain range of subcommunities with characteristic species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009)
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%

(NB note that this SAC overlaps with Baldoyle Bay SPA (004016). The conservation objectives for this site should be used in conjunction with those for the overlapping SPA as appropriate.)

3.2.2. Baldoyle Bay SPA [004016] - Version 1. 27th February 2013

The following Conservation Objectives are set out for the Baldoyle Bay SPA.

Generic Conservation Objectives

In the absence of specific conservation objectives, the following generic conservation objectives can be applied to each qualifying species listed.

To maintain the favourable conservation condition of each qualifying bird species in Baldoyle Bay SPA, which is defined by the following list of attributes and targets:

Qualifying Bird Species

Attribute	Measure	Target
Population trend	Percentage change	Long term population trend stable or increasing
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by redshank, other than that occurring from natural patterns of variation

A99 Wetlands

To maintain the favourable conservation condition of the wetland habitat in Baldoyle Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,192 hectares, other than that occurring from natural patterns of variation.

3.3. Consideration of Impacts on European Sites

3.3.1. Habitats Directive Annex I Habitats

There are no Annex I habitats in the receiving environment of the Project works areas. There would be no direct impacts on the Baldoyle Bay European sites and there would be no habitat loss or fragmentation as a result of the proposed development. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source pathway vectors.

Considering a worst-case scenario whereby the Project may result in a significant detrimental change in water quality in Baldoyle Bay either alone or in combination with other projects or plans as a result of indirect pollution, the effect would have to be considered in terms of changes in water quality which would significantly affect the habitats or food sources for which the Baldoyle Bay SAC & SPA are designated. These include the salt meadows, mudflats and sandflats that make up the wetland habitats which are listed as qualifying interests for the SAC and SPA and which support the food sources, such as invertebrates, for the SPA qualifying bird species.

However, such a scenario is unlikely given the distance in downstream hydrological connectivity and the employment of best practice construction methods to avoid local pollution of the River Mayne. These measures will be contained in a CEMP as outlined in Section 1.7 which as an additional measure contributes to the overall unlikelihood of the described worst-case scenario transpiring.

3.3.2. Habitats Directive Annex II Species

While not a qualifying interest of the Baldoyle Bay European sites, otters have been recorded downstream on the River Mayne and in the Mayne Marsh area (pers. comm. NPWS Local Ranger).
The otter (*Lutra lutra)* is listed under Annex II of the Habitats Directive and under Annex II of the Berne Convention; it is also a legally protected species under the Wildlife Acts, 1976 2012). Otters are found

throughout Ireland and tend to occupy linear territories along watercourses and are rarely found far away from water. There would be no direct impacts on otters and so the main concern is with regard to water quality and indirect impacts on water quality and prey species.

3.3.3. Birds Directive Annex I Species

Baldoyle Bay SPA is of high conservation importance, for supporting internationally important numbers of Light-bellied Brent Goose as well as nationally important populations of a further five species, including Golden Plover and Bar-tailed Godwit, both species that are listed on Annex I of the Birds Directive. The inner part of the site is a Statutory Nature Reserve and also designated as a wetland of international importance under the Ramsar Convention.

It supports an internationally important population of Light-bellied Brent Goose (726) and has a further five species with nationally important populations (all figures are mean peaks for the five winters 1995/96 to 1999/2000): Shelduck (147), Ringed Plover (223), Golden Plover (2,120), Grey Plover (200) and Bar-tailed Godwit (353). Other species which occur include Great Crested Grebe (42), Pintail (35), Teal (138), Mallard (46), Common Scoter (61), Oystercatcher (531), Lapwing (524), Knot (189), Dunlin (879), Black-tailed Godwit (113), Curlew (98), Redshank (224), Greenshank (11) and Turnstone (43).

The main concern for wintering birds and their supporting wetland habitats is with regard to water quality and indirect impacts on water quality and prey species which inhabit the sand and mudflats.

3.3.4. Ecological Network Supporting Natura 2000 Sites

An analysis of the proposed Natural Heritage Areas and designated Natural Heritage Areas in terms of their role in supporting the species using Natura 2000 sites was undertaken. These supporting roles mainly relate to mobile fauna such as mammals and birds which may use pNHAs and NHAs as “stepping stones” between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account during the AA process.

The Dublin Bay European sites are located to the south and east of the Project site and with limited or no relevant connectivity are unlikely to be affected by the Project.

There are no other designated or proposed designated sites or areas of semi-natural habitat that would be affected by the proposed development.

3.3.5. Potential Impacts on European Sites

The Project is not directly connected with or necessary to the management of the European sites considered in the assessment and therefore potential downstream impacts must be identified and considered.

There will be no direct impacts on the SAC or SPA designated habitats as a result of the proposed development. Direct impact refers to physical impacts defined in the NPWS Departmental Guidance as 'Loss of habitat area' and/or 'Habitat Fragmentation'. Having established this, the assessment emphasis is placed on potential indirect and cumulative impacts.

The potential for impact is considered whereby the Project would result in a significant detrimental change in water quality either alone or in combination with other projects or plans as a result of indirect pollution of surface water. The effect would have to be considered in terms of changes in water quality or changes in hydrology which would affect the habitats or species for which the Baldoyle Bay European sites are designated. This is assessed by firstly establishing the pathways by which impacts could occur and then reviewing the design measures included which will avoid these impacts and then by also looking at the potential in-combination effects which will be assessed in Section 3.6 later in this report.

3.4. Description of the Existing Environment

The subject site is located to the north of the Clonshaugh Business & Technology Park, along the R139 'Northern Cross Road' and lands at Belcamp in North Dublin approximately 7km from Dublin Airport, 7km from Dublin City Centre commencing adjacent to the M1-M50 interchange along the R139 to the existing Belcamp Substation.

The site commencing from Darndale substation (which is permitted) is light industrial/technological in nature and is presently occupied by a data storage facility (which is operational) and a data storage facility which is currently under construction (but construction is well advanced). It is proposed to locate a new data storage facility at the southern portion of the site which is currently primarily a construction site.

The portion of land to the north of the permitted Darndale substation is a redundant farm with once open grassland fields having been left to recolonise with scrub. Internal drainage ditches are overgrown and stagnant. The proposed route of the transmission cable connection follows the R139 before turning north into the existing recently commissioned Belcamp substation.

Access to the Belcamp substation will require crossing the River Mayne which discharges to Baldoyle Bay c. 4.2 river km downstream.

The lands in which the proposed development is located have no formal designations. The nearest European sites are located at Baldoyle Bay and North Dublin Bay.

There are no rare or protected habitats recorded in the study area inside the site boundary. The site may be considered of Low Ecological Value.

3.5. Impacts on the Qualifying Interests of European Sites

3.5.1. Direct Impacts

There will be no direct impacts on the SAC or SPA as a result of the implementation of the proposed Project. Direct impact refers to physical impacts defined in the Departmental Guidance as 'Loss of habitat area' and/or 'Habitat Fragmentation'. There are no direct impacts identified which may affect the Annexed habitats or species of the SAC or SPA. The remediation works will have **no impacts** upon the integrity or the site structure of the Baldoyle Bay SAC or SPA. There is an adequate distance between the proposed development site and designated areas to ensure that no direct impacts will occur.

3.5.2. Indirect Impacts

Having established this, the assessment emphasis is placed on potential indirect and cumulative impacts.

The primary consideration in terms of source-vector-pathways for indirect impacts relates to surface water and potential indirect impacts on hydrologically linked habitats and aquatic species.
The potential for impact is considered whereby the Project would result in a significant detrimental change in water quality either alone or in combination with other projects or plans as a result of indirect pollution of surface water. The effect would have to be considered in terms of changes in water quality which would affect the habitats or species for which the Baldoyle Bay SAC and SPA are designated.

Consideration of impacts on Surface Water

The likelihood of impacts on hydrologically connected environmental sites is extremely low and will be avoided by best practice construction management.

Accidental spillages and contaminated runoff and will be avoided by construction management measures which are set out in a Constriction Environmental Management Plan (CEMP). Management measures will include appropriate site-specific measures from the CIRIA Report C532 Control of Water Pollution from Construction Sites.

The CEMP will include a reference to the Biodiversity Chapter (7) of the Project EIAR which establishes the connectivity of the River Mayne and Baldoyle Bay and the requirement for avoidance where possible, in terms of both direct and indirect construction activity.

3.6. Mitigation Measures

The CEMP will include a reference to the Biodiversity Chapter (7) of the Project EIAR which establishes the connectivity of the River Mayne and Baldoyle Bay.

In order to reduce the risk of contamination arising as a result of spills or leakages, measures including, but not limited to, the following will be employed:

- Storing fuels, chemicals, liquid and solid waste on impermeable surfaces in bunded areas;
- Undertaking refueling of plant, equipment and vehicles on impermeable surfaces;
- Ensuring all tanks and drums are bunded in accordance with established best practice guidelines;
- Provision of spill kits.
- Provision of a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains.

3.7. Assessment of In-Combination Effects

The European Commission interpretation document 'Managing Natura 2000 sites' referred to as MN2000, makes clear that the phrase 'in combination with other plans or projects' in Article 3(3) refers to cumulative effects caused by the projects or plans that are currently under consideration together with the effects of any existing or proposed projects or plans. When impacts are assessed in combination in this way, it can be established whether or not there may be, overall, an impact which may have significant effects on a Natura 2000 site or which may adversely affect the integrity of a site.

As part of the Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region must also be considered at this stage. This step aims to identify at this early stage

any possible significant in-combination or cumulative effects / impacts of the proposed development with other such plans and projects on the Natura 2000 site.

A search of the Fingal County and Dublin City Planning databases were undertaken for the Belcamp area for applications that have been granted planning permission within the last three years. These are listed as follows.

Dublin City Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
4019/17 – Butlers Chocolates	Permission is being sought for alterations and additions to existing manufacturing facility.	Butlers Chocolates, Clonshaugh Business and Technology Park, Dublin 17.	24-Jan-2018
3798/17 – Forest Laboratories (IRL) Ltd.	Forest Laboratories Ireland Limited intends to apply for permission for the installation of 1 NO. extract unit along with supporting structure…	Building 2, Clonshaugh Business and Technology Park, Dublin 17.	11-Dec-2017
3328/17 – Irish Commercials (Sales) Ltd.	Retention: for revisions to existing workshop previously granted under planning ref 6311/05.	35 & 36 Block 3, Port Tunnel Business Park, Clonshaugh, Dublin 17.	09-Oct-2017
2822/17 – Forest Laboratories (IRL) Ltd.	Permission for the removal of 2 no. Existing air handling units (with associated works) and electrical control panel. Installation of 1 no. Air supply & extract unit & 1 no. Air extract unit.	Clonshaugh Business and Technology Park, Dublin 17.	04-Aug-2017
2238/17 – Allman Equities Ltd.	The development will consist of extending the existing offices internally.	Vanderbilt, Clonshaugh Business & Technology Park, Dublin 17.	22-May-2017
2244/17 – Amazon Data Services Ltd.	The development will consist of the upgrade of existing boundary railings and palisade fence.	DUB 10-51, Clonshaugh Business & Technology Park, Dublin 17.	22-May-2017
3925/16 – Telent Technology Services Limited	Retention: 1sq.m roof light, 1.8 m wide approach path at front entrance, dropped kerb.	Unit 9, Willsborough Cluster, Clonshaugh Industrial Estate, Dublin 17.	16-Jan-2017

Dublin City Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
2989/16 – ESB Telecoms Ltd.	The continued use of the existing 24m high lattice communications structure carrying antennae and dishes shared with third party operators within a secure compound (previously granted permission LA ref. 2370/11).	ESB's Clonshaugh 38kV Substation site, Clonshaugh Industrial Estate, Coolock, Dublin 17	26-Sep-2016
3007/16 – Butlers Chocolates	Retention: Full permission for an extension to the rear of existing manufacturing facility.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	02-Sep-2016
2552/15 – Fingleton White	Permission for development of an aviation fuel pipeline from Dublin Port, Dublin 1 to Dublin Airport, Co Dublin. The route of the pipeline is R139 (formerly N32). (It enters Fingal Co. Council administrative area at Clonshaugh Rd. and routes via AUL/FAI sports ground, under the M1 motorway via the DAA Long Term Red Carpark.	Inlet Station; Team CV, Bond Drive, Dublin Port, Dublin 1 to Dublin Airport, Co. Dublin	26-Apr-2016
4008/15 – Butlers Chocolates	Permission is being sought for the installation of a rooftop solar photovoltaic array.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	23-Feb-2016
3933/15 – Hibernia Express (Ireland) limited	Planning permission to install 4 no. telecommunications equipment containers.	Hibernia Network Office, International Exchange Centre, Clonshaugh Business and Technology Park, Dublin 17	16-Feb-2016
2228/15 – Forest Laboratories (IRL) Ltd.	The development will consist of the formation of 4 no. openings and the provision of aluminium windows/exit doors on the east elevation of the existing facility, together with a galvanised steel external stairs.	Forest Laboratories (IRL) Ltd., (Building No. 1), Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	30-Mar-2015
2044/15 – Butlers Chocolates	Alterations & additions to existing manufacturing facility.	Butlers Chocolates, Clonshaugh Industrial Estate, Clonshaugh, Dublin 17	17-Apr-2015

Fingal County Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
F18A/0058	Amendments to permitted development Reg. Ref. F15A/0609, PL06F.248052, at Belcamp, a protected structure (RPS No. 463), to replace 9 no. three storey bedroom houses with 8 no. two storey three bedroom houses.	Belcamp, Malahide Road, Dublin 17	05-Apr-2018
F17A/0632 – Airways Investments Ltd.	Demolition of 2 No. single storey buildings that links two warehouses as well as ancillary recladding of original gables and restoration of internal circulation roadway.	Unit 11-12, Airways Industrial Estate, Santry, Dublin 17.	23-Jan-2018
F17A/0422 – Topaz Energy Ltd.	The removal of condition no. 4 of An Bord Pleanála appeal case reference PL06F.245112 (Application Register Reference F15a/0182) and to allow for the continued 24-hour opening of the service station on a permanent basis.	Topaz Service Station, Clonshaugh Road, Clonshaugh, Co. Dublin	19-Oct-2017
F15A/0609	The proposed development comprises a development of houses, apartments and shops and the change of use of Belcamp Hall, a Protected Structure (RPS No. 463), Significant Further Information (including Environmental Impact Statement) received on 23/11/2016.	Belcamp, Malahide Road, Dublin 17	28-Jun-2017
F17A/0190 – Essentra Packaging Ireland Ltd.	Retention of a 45m² ground floor extension to the rear of the premises.	Unit 8, Constellation Road, Airways Industrial Estate, Swords Road, Santry, Dublin 17.	27-Jun-2017
F16A/0437 – Songdale Ltd.	The proposed development will consist of the redevelopment of the existing hotel. A total of 141 no. bedrooms are proposed.	The Clayton Hotel Dublin Airport, Stockhole Lane, Clonshaugh Road, Clonshaugh, Co. Dublin	11-Jan-2017
F16A/0397	The proposed development is comprised of three 5-storey office blocks, which will provide a total of 23,970 sq.m. of office floorspace, together with undercroft areas providing a further 5,048 sq.m	Stockhole Lane, Clonshaugh, Co. Dublin	12-Sep-2016

Fingal County Planning Application Reference No. & Applicant	**Summary Description of Development**	**Location of Development**	**Date Granted** *[Most recent first]*
F16A/0150 – OCS One Complete Solutions Ltd.	Continued use of the existing building structure as a transfer waste facility.	Unit 39, Airways Industrial Estate, Dublin 17.	14-Nov-2016
F16A/0241 – Hugh Jordan & Co.	Circa 256 sq.m. of additional two storey office space within the existing building.	Unit 4, Constellation Road, Airways Industrial Estate, Swords Road, Santry, Dublin 17.	29-Aug-2016
F16A/0082 – George Watters	a) The demolition of 1,619sq.m. of existing warehouse (b) the construction of a two storey extension to the east elevation (c) change of use to a heavy and light commercial vehicle workshop, warehouse and test centre.	Unit 13, Airways Industrial Estate, Boeing Road, Santry, Dublin 17.	08-Aug-2016
F15A/0478 – Hewlett Packard Enterprise Ireland Ltd.	The installation of two traffic barriers.	29 Airways Industrial Estate, Viscount Road, Santry, Dublin 17.	19-Jan-2016
F14A/0465 – Newlands Cross Hotels t/s Bewleys Hotel	Development including new buildings and alterations to Bewleys Hotel Dublin Airport, which was granted permission under previous Register References F03A/0660, F05A/0972, F05A/1489, F05A/1592 and F06A/0231.	Bewleys Hotel Dubin Airport, Stockhole Lane, Co. Dublin	23-Dec-2015
F15A/0182 – Topaz Energy Ltd.	An extension to the opening hours permitted under application Reg. Ref. F13A/0221.	Topaz Service Station, Clonshaugh Road, Clonshaugh, Co. Dublin.	14-Oct-2015
F15A/0141 – Fingleton White	Aviation fuel pipeline from Dublin Port to Dublin Airport. An Environmental Impact Statement and Natura Impact Statement have been prepared in respect of the application and will be submitted with the planning application.	From Dublin Port, Dublin 1 to Dublin Airport, Co. Dublin	7-Jul-2015
F15A/0085 – Federal Express Europe Inc.	1) The realignment of existing car parking area; 2) The provision of 1 no. pedestrian access gateway and supplementary planting.	Unit 3a/b, Airways Industrial Estate, Constellation Road, Cloghran, Dublin 17.	02-Jun-2015

The majority of these cases refer to alterations to existing developments , e.g. building extensions, with no potential for cumulative effects. The following specific projects are considered further due to their scale and/or the inclusion of an EIS/AA.

F15A/0609 refers to an application for the proposed development of houses, apartments and shops and the change of use of Belcamp Hall, Belcamp, Malahide Road, Dublin 17.

The case was referred to An Bord Pleanála and granted permission with conditions. The Bord completed an AA Screening and concluded that considering the information presented that, by itself or in combination with other development in the vicinity, the proposed development would not be likely to have a significant effect on any European site.

F18A/0058 refers to an application for amendments to permitted development Reg. Ref. F15A/0609, PL06F.248052, at Belcamp, a protected structure (RPS No. 463), to replace 9 no. three storey bedroom houses with 8 no. two storey three-bedroom houses, on a 0.19ha portion of the lands, with access from Malahide Road. The development includes 16 no. on-curtilage car parking spaces and all associated and ancillary site works. The application was granted permission from FCC with conditions including those outlined for the original application.

F15A/0141 refers to an application to provide an aviation fuel supply line from Dublin Port to Dublin Airport with a section along the R139 in the same area of the proposed project.

The Heritage Officer of Fingal CC reviewed the information presented by the applicants in the Natura Impact Statement (NIS) and was satisfied that full consideration was given to the impacts with the potential to affect Natura 2000 sites in this case. The view was expressed, that with full implementation of the proposed mitigation measures, the proposed development will not have significant adverse impacts on Natura 2000 sites either alone or in combination with other plans and projects. He was also satisfied that with full implementation of the proposed mitigation measures set out in the EIS there will be no significant adverse impacts to biodiversity as a result of the project. The project was granted permission with conditions in July 2015.

F16A/0397 refers to an application for the proposed development of a complex comprised of three 5-storey office blocks, which will provide a total of 23,970 sq.m. of office floorspace, together with undercroft areas providing a further 5,048 sq.m. Moore Group also contributed to the EIS and compiled an AA Screening Report which found that there would be no significant effects on any European sites if the project were to proceed.

The data storage facility site in which permitted the Darndale Station is located is presently occupied by a data storage facility which is operational and another data storage facility which is currently under

construction. It is proposed to locate a new data storage facility at the southern portion of the site, which is currently primarily a construction site.

An SID application by Eirgrid to ABP (VA0014) for a 220 kV powerline from Belcamp substation through Belcamp Park and south to Clonshaugh was considered by the board and a finding by the Fingal Heritage Officer was included in that he was satisfied with the conclusions reached that significant impacts to Natura 2000 sites as a result of this development are highly unlikely and that a full AA is not required. The project was granted permission in 2012 with conditions relating to inter alia the control of pollution of surface waters.

3.7.1. Conclusion of In-combination Effects

These adjacent developments will have no predicted impacts on European sites and the proposed Project will have no predicted impacts on European sites therefore in-combination impacts can be ruled out.

The Dublin City Development Plan and Fingal County Development Plan in complying with the requirements of the Habitats Directive requires that all projects and plans that could affect the Natura 2000 sites in the same zone of influence of the Project site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with plans or projects for the development area and surrounding townlands in which the development site is located, would be avoided.

Any new applications for the Project area will initially be assessed on a case by case basis by Dublin City Council and Fingal County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

4. Natura Impact Statement & Conclusion

This NIS has reviewed the predicted impacts arising from the proposed Project and found that with the implementation of appropriate mitigation measures specifically with regard to surface water, no significant effects on the integrity of the Baldoyle Bay SAC and the Baldoyle Bay SPA are likely to arise.

It is the conclusion of this NIS that neither the implementation or the operation of the Project under the conditions of appropriate planning will adversely affect the conservation objectives or integrity of the Baldoyle Bay SAC and the Baldoyle Bay SPA, or any other European Site, either alone or in combination with other plans or projects.

5. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of plans and projects in Ireland (as amended February 2010).

European Commission (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission Environment DG (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43EEC. European Commission, Brussels.

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive '92/43/EEC: Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interests, compensatory measures, overall coherence and opinion of the Commission. European Commission, Brussels.

NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

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