



MERC Consultants
environmental and conservation services

Technical Report:

Screening for Appropriate Assessment

FS006915: Celtix Connect – Havhingsten Telecommunication
Cable. Foreshore Application

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Document control				
Rev	Date	Originated by	Checked by	Approved by
0.1	24.2.2021			
0.2	9.3.2021			
0.3	12.3.2021			

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1. Introduction

1.1 Project Overview

Celtix Connect Ltd has submitted a Foreshore Licence application for the installation and maintenance of a Fibre-optic telecommunication cable including a landing site at Loughshinny, Co. Dublin (the proposed project). The proposed project forms part of a larger project linking Ireland, Isle of Man, UK and Denmark which aims to deliver boost to bandwidth between the respective countries. The foreshore application is supported by a Screening for Appropriate Assessment (AA) which covers the Irish marine components of the Havhingsten cable from mean high-water springs (MHWS) at the Irish landfall at Loughshinny seaward.

Within Irish waters the Havhingsten submarine cable has a total length of approximately 55.7km, of which 29.8km is within Irish territorial waters. From the MHWS seaward the 40mm diameter cable will be buried to a target depth of 1.5m below the seabed. The cable will be buried using various industry standard burial tools including water jetting and ploughing together with open trenching and burial in the intertidal area. The fibre optic cable will occupy up to 40mm width of the seabed following installation.

1.2 Application Documents

Celtix Connect Ltd has submitted the following documents as part of the application:

- Application Form
- Foreshore Licence map
- Foreshore Licence map: Landfall
- Installation Corridor
- Planning report
- Appendix A - Environmental Assessment Methodology
- Appendix B - Application Corridor Coordinates
- Appendix C - Cable Burial Assessment
- Appendix D - Fisheries Activities Report
- Appendix E1 - Marine Archaeology Desk Based Assessment
- Appendix E2 - Marine Archaeology Foreshore Surveys
- Appendix E3 - Marine Archaeology Geophysical Survey
- Appendix F - Appropriate Assessment Stage 1 Screening
- Appendix G - Underwater Sound Modelling
- Appendix H - Sediment Suspension and cable installation
- Appendix L1 - Marine Survey report – BU Port Erin to BMH Loughshinny
- Appendix L2 - Intertidal Habitat report
- Appendix L3 - Benthic Characterisation report
- Appendix J - Pre-Application Consultation

All of the reports listed above were considered as part of this technical review, in addition to observations from prescribed bodies and public consultation (Appendix 1) and the applicants' responses to these to these observations.

It is noted that the Foreshore application (Part 1.1) states that *A planning report including a description of the works, shipping and navigational safety assessment, marine archaeology assessment, marine and intertidal ecological assessment including a Natura Impact Assessment is attached.* It is not clear what a Natura Impact Assessment refers to. Section 5.2 of the applicants Foreshore licence application indicates that a Natura Impact Statement is required under Environmental legislative requirements. However, the text indicates that an Appropriate Assessment Screening has been undertaken and identified that a Natura Impact Statement is not required for the proposed works.

1.3 Relevant legislation

All EU Member States are obliged to establish a network of sites of conservation importance known as the Natura 2000 network. The network is made up of Special Areas of Conservation (SAC's) established under the EU Habitats Directive (92/43/EEC) and Special Protection Areas (SPA's) established under Directive (2009/147/EC). Under Article 6 (3) of the Habitats Directive, Member States are required to consider the potential effects of any project or plan on the conservation objectives of a SAC or SPA before a decision can be made to allow that project or plan to proceed.

Appropriate Assessment (AA) is the process whereby the potential impacts of a project or plan are assessed in view of the site's conservation objectives. The first step in the process is to conduct AA screening to determine, on the basis of a preliminary assessment and objective criteria, whether the project or plan, alone or in combination with other projects or plans could have significant effects on the conservation objectives of a European site. Where significant effects are likely, uncertain or unknown at the screening stage a Natura Impact Statement is required to enable a consent authority to carry out an Appropriate Assessment.

The European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) outlines the requirements for Screening for AA under Part 5 Regulation 42(1) and 42(2), as follows:

42.(1) *A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site.*

(2) *A public authority shall carry out a screening for Appropriate Assessment under paragraph (1) before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken*

This report provides a technical review of the proposed project including an assessment of the AA Screening Report and supporting documents submitted in support of the Foreshore licence application. As such it represents a Screening for Appropriate Assessment as outlined under section 42 (1) of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended).

2. Technical Review

2.1 Methodology

This technical review report presents the findings of MERC's review and assessment of the Celtix Connect Ltd. Appropriate Assessment Stage 1 Screening (Appendix F of the application documentation) for the installation and maintenance of a Fibre-optic telecommunication cable including a landing site at Loughshinny, Co. Dublin.

This report has been prepared with reference to the following European Directives, national legislation and guidance on the appropriate assessment of projects and plans with regard to the implementation of the provisions of Article 6(3) and (4) of the EU Habitats Directive 92/43/EEC.

- *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna.* Official Journal of the European Communities.
- *Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version).*
- *European Communities (Birds and Natural Habitats) Regulations 2011.* SI No. 477 of 2011.
- *Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.* European Commission 2018. 7621 final. Office for Official Publications of the European Communities, Luxembourg.
- *Assessment of plans and projects significantly affecting Natura 2000 sites; Methodological Guidance on the provisions of Articles 6(3) and (4) of the Habits Directive 92/43/EEC.* European Commission, 2002;
- *Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities.* DoEHLG, 2009. Revision 2010.

2.2 Consultation

A public notice concerning this application was published in the Northside People East on 29th January 2020, and due to an error in this notice was re-published on 5th February 2020. A public notice was also published in the Irish Independent newspaper on 30th January 2020. The public notice period was from 29th January 2020 to 29th February 2020. The relevant documentation was available for consultation at Balbriggan Garda Station, Drogheda Street, Tankardstown, Balbriggan and on the website of the Department of Housing, Planning, and Local Government at: <http://www.housing.old.gov.ie/planning/foreshore/applications/celtix-connect-havingsten-telecommunication-cable-dublin>).

Written submissions received from prescribed bodies and public consultation are provided in appendix 1 of this report.

In summary, the prescribed body consultation did not raise any significant queries or provide any significant comments related to appropriate assessment or the protection of European sites.

A total of 205 public observations were made in relation to the proposed project. A number of these observations related to either the application process relative to the implementation of Article 6(3) of the Habitats Directive or other matters relating to the Screening for AA Report. Other comments were unrelated to the appropriate assessment process and have not been considered further in this report.

Each of the observations, related to appropriate assessment, together with the applicant’s response were considered as part of this technical review.

3. Screening for Appropriate Assessment

A screening checklist (European Commission, 2002) has been prepared (table 3.1) which summarises the information required to complete the Screening for AA for the proposed Celtix Connect project to install and maintain a Fibre-optic telecommunication cable and landing site at Loughshinny, Co. Dublin.

3.1 Screening for AA Check list

Table 3.1 Information checklist (after EU 2002)

Are these known or available	Yes/No
Size, scale, area land-take etc.	Yes. The text of the screening report (P2228_R4694_Rev 5-December 2019) and associated planning report (P2228_R4693_Rev 5_December 2019) provides the required information and sufficient detail and context to understand the scale, scope and area of the proposed project.
Physical changes that will flow from the project or plan (From excavation, piling, dredging etc.)	Yes. The likely physical changes that will take place during the construction and operational phase (including potential repair and maintenance activities) are sufficiently detailed in the screening report-(P2228_R4694_Rev 5-December 2019) and associated Appendix H (P2228_R4693_Rev0 App H - July 2019) of the Irish Planning Report.
Resource requirements (water abstraction etc.)	Yes. Resource requirements are adequately described in the screening report (P2228_R4694_Rev 5-December 2019) and further detailed in the associated Irish Planning Report (P2228_R4693_Rev 5_December 2019)
Emissions and wastes (disposal to land, water or air)	Yes. The proposed cable installation is ‘un-repeated’ meaning that there is no power supply to the cable. Therefore, operation of the cable is not expected to emit any electric induced, magnetic fields or heat to the surrounding sediment or seabed and there is no anticipated effect of cable operation on the environment.
Transportation requirements	Yes. Transportation is principally confined to the use of cable main-lay vessel and plant required for the intertidal cable installation. This is fully described in the screening report (P2228_R4694_Rev 5-December 2019) and associated planning report (P2228_R4693_Rev 5_December 2019)
Duration of Construction, Operation, Decommissioning etc.	Yes. The duration of the various activities is documented in the screening report-P2228_R4694_Rev5.
Plan implementation period	No. The timing of the various activities is documented in the screening report (P2228_R4694_Rev 5-December 2019). However, the original timeframe on which this report was based has now lapsed. The year in which the proposed activities are proposed is considered irrelevant. Section 3 of this document states that the likely time of works is quarter 4 (October to December) of 2019. Section

	5 further states that the prevailing weather conditions may dictate when surveys take place and this could be during the spring.
Distance from Natura 2000 Site or key features of the site.	Yes. All Natura 2000 sites within the zone of Influence of the proposed project are documented in the the screening report (P2228_R4694_Rev 5-December 2019). These sites are further considered in table 3.2 below.
Cumulative Impacts with other Projects or Plans	Yes. Plans or projects which have been completed, approved but uncompleted, or proposed (but not yet approved) were documented in the AA Screening report. The rationale for assessing in-combination effects against each project or plan by means of a pressure-receptor pathway was described. A search of the Foreshore licence applications of Department of Housing, Local Government and Heritage and Fingal County Council map-based planning search was also carried out as part of MERC’s technical assessment of the proposed project. This included, but was not limited, to an assessment of an associated project Planning reference: F19A/0169).
Other, as appropriate	N/A

3.2 Management of Natura 2000 site/s

Plans or projects that are directly connected with or necessary to the management of a Natura 2000 site do not require AA. The proposed project is not directly connected with or necessary for the management of a Natura 2000 site.

3.3 Description of the project

Installation of a submarine fibre optic cable on the foreshore extending from Loughshinny in North Dublin to Squires Gate Lane (south of Blackpool in England). Total cable length in Irish waters (territorial and exclusive economic zone) of approximately 55.7km of which 29.8km is within the Irish territorial waters. This section will also include two branches onto the Isle of Mann and the North Sea from the Seaton Sluice (on the east coast of the UK, north of Newcastle), to Houstrup on the west coast of the Jutland peninsular in Denmark.

From the MHWS, at Loughshinny strand, south of the pier, seaward the 40mm diameter cable will be buried to a target depth of 1.5m – 2m below the seabed. The cable will be buried using water jetting and ploughing. The cable will ultimately be linked to a single storey cable landing station at ESB Loughshinny 38kv Substation (under Planning Ref no F19A/0169). The project comprises:

- Installation of one fibre-optic telecommunications cable;
- All associated works required to install, test, commission and complete the aforementioned cable;
- All associated works required to operate, maintain, repair and decommission the aforementioned cable, including repair events over the lifetime of the cable.

3.4 Identification of the European site/s

3.4.1 Approach taken by the applicant

To identify the appropriate European sites to be considered within the applicant's AA Screening Report a source-path-receptor model was described and used to identify the potential Zone of Influence (ZOI). The ZOI was used to establish a search area within which European sites were screened for the relevant Qualifying Interests and Special Conservation Interests. The zone of influence was extended to take into consideration mobile species from more distant Natura 2000 sites using information such as marine mammal management units, seabird foraging distances and expert judgement. Justification for the spatial extent of the search area was provided. The OSPAR Intercessional Correspondence Group on Cumulative Effects (ICG-C) pressure list and descriptions (OSPAR Commission 2011) was used to describe the potential pressures expected from the proposed project. Pathways of connectivity relative to the potential pressures were identified.

This approach is considered appropriate and proportionate to the scale and scope of the project and reflects current best practice in identifying European sites with the potential to be affected by project related impacts. A total of 17 sites were considered to be within the ZOI of the proposed project and are detailed in table 5.3 of the Applicants AA Screening report and are shown in Table 3.2 of this report.

3.4.2 Qualifying interests/ special Conservation interests

The qualifying interests (QIs) for all SACs and the special conservation interests (SCIs) of all SPAs within the ZOI are fully outlined in the applicant's AA Screening Report. The qualifying interests/special conservation interests for these sites are given in table 5.3 of the Applicants AA Screening report and are shown in Table 3.2 of this report.

With the exception of "*Vegetated sea cliffs of the Atlantic and Baltic coasts*" within Lambay Island SAC, all of the current (February 2021) European sites and their associated qualifying interests/Special conservation interests within the ZOI of the proposed project have been included in the applicants AA Screening Report.

European eel (*Anguilla Anguilla*) and Atlantic salmon (*Salmo salar*) listed as a Qualifying interest in the Applicants Screening for AA are not a Qualifying Interest for any European site within the ZOI of the proposed project.

Following the initial assessment of qualifying interests/special conservation interests, those sites where no pressure-receptor-pathway was identified were excluded from further assessment. All sites where a pressure-receptor-pathway was identified were then further assessed relative to their potential for impact as a result of the proposed project. These sites and the relevant qualifying interests/special conservation interests are shown in Table 3.3 of this report. The applicant provided an assessment of the likely significant effects (LSE) of the potential pressures listed in table 3.3 for each of the attributes and targets, as listed in the site-specific conservation objectives, for each of the designated features (section 5.4 of the applicants Screening for AA). This report concurs with the applicant's assessment of the identification of pressure-receptor-pathways and LSE described and the justification provided in the Applicants AA Screening report and further clarification provided within the applicant's response to public observations.

Table 3.2 European sites and Qualifying Interests/Special Conservation Interests within the Zone of Influence of the proposed project.

Site name & code	Distance from study area	Site specific conservation objectives (Yes/No)	Qualifying Interests/Special Conservation Interests	Potential for connectivity	Screened at stage 1 (Yes/No)	Potential source of Impact
Rockabill to Dalkey Island SAC [IE003000]	Within	Yes	Reefs <i>Phocoena phocoena</i> (Harbour Porpoise)	Yes	Yes	Penetration and/or disturbance including abrasion Siltation rate changes
Rockabill SPA [IE004014]	Within	Yes	Roseate tern (<i>Sterna dougallii</i>) Common tern (<i>Sterna hirundo</i>) Arctic tern (<i>Sterna paradisaea</i>) Purple Sandpiper (<i>Calidris maritima</i>)	Yes	Yes	Visual disturbance
Skerries Islands SPA [IE004122]	2.28	No (generic)	Cormorant (<i>Phalacrocorax carbo</i>) Shag (<i>Phalacrocorax aristotelis</i>) Light-bellied Brent goose (<i>Branta bernicla hrota</i>) Purple sandpiper (<i>Calidris maritima</i>) Ruddy turnstone (<i>Arenaria interpres</i>) Herring gull (<i>Larus argentatus</i>)	Yes	Yes	Visual disturbance
Rogerstown Estuary SPA [IE004015]	2.74	No (generic)	Greylag goose (<i>Anser anser</i>) Light-bellied Brent goose (<i>Branta bernicla hrota</i>) Knot (<i>Calidris canutus</i>) Shelduck (<i>Tadorna tadorna</i>) Grey plover (<i>Pluvialis squatarola</i>) Shoveler (<i>Anas clypeata</i>) Oystercatcher (<i>Haematopus ostralegus</i>) Ringed plover (<i>Charadrius hiaticula</i>) Dunlin (<i>Calidris alpina</i>) Black-tailed godwit (<i>Limosa limosa</i>) Redshank (<i>Tringa totanus</i>) Wetlands	Yes	Yes	Visual disturbance
Rogerstown Estuary SAC [IE000208]	2.82	Yes	Estuaries Mudflats and sandflats not covered by seawater at low tide	Yes	Yes	Siltation rate changes

			Salicornia and other annuals colonising mud and sand Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) Mediterranean salt meadows (<i>Juncetalia maritimi</i>) Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) Fixed coastal dunes with herbaceous vegetation (grey dunes)			No pressure-receptor pathway identified
Lambay Island SPA [IE004069]	4.9	No (generic)	Cormorant (<i>Phalacrocorax carbo</i>) Shag (<i>Phalacrocorax aristotelis</i>) Guillemot (<i>Uria aalge</i>) Razorbill (<i>Alca torda</i>) Fulmar (<i>Fulmarus glacialis</i>) Herring gull (<i>Larus argentatus</i>) Lesser black-backed gull (<i>Larus fuscus</i>) Kittiwake (<i>Rissa tridactyla</i>) Puffin (<i>Fratercula arctica</i>) Greylag goose (<i>Anser anser</i>)			Visual disturbance
Lambay Island SAC [IE000204]	5.33	Yes	Reefs	Yes	Yes	No pressure-receptor pathway identified
			Vegetated sea cliffs of the Atlantic and Baltic coasts	Yes	No	This habitat was not screened by the applicant but considered here. Given the fact that this habitat is essentially an extension of the reef habitat it is considered that no pressure-receptor pathway is likely.
			<i>Halichoerus grypus</i> (Grey Seal) [1364] <i>Phoca vitulina</i> (Harbour Seal) [1365]	Yes	Yes	Underwater noise changes
North Anglesey Marine SAC [UK0030398]	7	Yes	<i>Phocoena phocoena</i> (Harbour Porpoise) [1351]			Underwater noise changes

Malahide Estuary SPA [004025]*.	7.56	Yes	Golden plover (<i>Pluvialis apricaria</i>) Bar-tailed godwit (<i>Limosa lapponica</i>) Great crested grebe (<i>Podiceps cristatus</i>) Shelduck (<i>Tadorna tadorna</i>) Pintail (<i>Anas acuta</i>) Goldeneye (<i>Bucephala clangula</i>) Red-breasted merganser (<i>Mergus serrator</i>) Oystercatcher (<i>Haematopus ostralegus</i>) Grey plover (<i>Pluvialis squatarola</i>) Knot (<i>Calidris canutus</i>) Dunlin (<i>Calidris alpina</i>) Black-tailed godwit (<i>Limosa limosa</i>) Redshank (<i>Tringa totanus</i>) Light-bellied Brent goose (<i>Branta bernicla hrota</i>) Wetlands	Yes	Yes	Visual disturbance
Baldoye Bay SPA [IE004016]	14.09	Yes	Bar-tailed godwit (<i>Limosa lapponica</i>) Golden plover (<i>Pluvialis apricaria</i>) Ringed plover (<i>Charadrius hiaticula</i>) Shelduck (<i>Tadorna tadorna</i>) Grey plover (<i>Pluvialis squatarola</i>) Light-bellied Brent goose (<i>Branta bernicla hrota</i>) Wetland and Waterbirds	Yes	Yes	Visual disturbance
Ireland Eye SPA [IE004117]	14.26	No (generic)	Cormorant (<i>Phalacrocorax carbo</i>) Herring gull (<i>Larus argentatus</i>) Kittiwake (<i>Rissa tridactyla</i>) Guillemot (<i>Uria aalge</i>) Razorbill (<i>Alca torda</i>)	Yes	Yes	Visual disturbance
River Nanny Estuary and Shore SPA [IE004158]	14.58	Yes	Oystercatcher (<i>Haematopus ostralegus</i>) Ringed plover (<i>Charadrius hiaticula</i>) Golden plover (<i>Pluvialis apricaria</i>) Knot (<i>Calidris canutus</i>) Sanderling (<i>Calidris alba</i>) Herring gull (<i>Larus argentatus</i>) Wetland and Waterbirds	Yes	Yes	Visual disturbance
West Wales Marine SAC [UK0030397]	99.3	Yes	<i>Phocoena phocoena</i> (Harbour Porpoise)	Yes	Yes	Underwater noise changes

Lyeyn Peninsula and Sarnau SAC [UK0013117]	102.4	Yes	Sandbanks which are slightly covered by sea water all the time Estuaries Coastal lagoons Large shallow inlets and bays Reefs Mudflats and sandflats not covered by seawater at low tide Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) Submerged or partially submerged sea caves Salicornia and other annuals colonising mud and sand Otter (<i>Lutra lutra</i>) Grey seal (<i>Halichoerus grypus</i>)	Yes	Yes	No pressure-receptor pathway identified
			Bottlenose dolphin (<i>Tursiops truncatus</i>)	Yes	Yes	Underwater noise changes
North Channel SAC [UK0030399]	60.9	Yes	Harbour Porpoise (<i>Phocoena phocoena</i>)	Yes	Yes	Underwater noise changes
Cardigan Bay SAC [UK0012712]	160	Yes	Sandbanks which are slightly covered by sea water all the time Reefs Submerged or partially submerged sea caves	Yes	Yes	No pressure-receptor pathway identified
			Grey seal (<i>Halichoerus grypus</i>) Sea lamprey (<i>Petromyzon marinus</i>) River lamprey (<i>Lampetra fluviatilis</i>)	Yes	Yes	No pressure-receptor pathway identified
			Bottlenose dolphin (<i>Tursiops truncatus</i>)	Yes	Yes	Underwater noise changes
Bristol channel SAC [UK0030396]	222	Yes	<i>Phocoena phocoena</i> (Harbour Porpoise)	Yes	Yes	Underwater noise changes

* Note the official designation of Malahide Estuary SPA is provided for in S.I. No. 285/2011 - European Communities (Conservation of Wild Birds (Malahide Estuary Special Protection Area 004025)) Regulations 2011. NPWS data sources (Natura 2000 standard data form) for this site also refer to this site as Broadmeadow/Swords Estuary SPA IE0004025.

Table 3.3. Summary of sites screened for possible likely significant effects.

Site name	Designated feature with potential for impact	Potential pressures from proposed activities	Screening conclusion
Rockabill to Dalkey Island SAC	Harbour porpoise	Underwater noise change	No potential for significant effects
Rockabill SPA	Breeding tern species	Visual disturbance	No potential for significant effects
Skerries Island SPA	Breeding seabird species	Visual disturbance	No potential for significant effects
Baldoyle Bay SPA	Light-bellied Brent goose	Visual disturbance	No potential for significant effects
Malahide Estuary SPA	Light-bellied Brent goose	Visual disturbance	No potential for significant effects
Lambay Island SAC	Grey seal and Harbour seal	Underwater noise change	No potential for significant effects
North Anglesey Marine SAC	Harbour porpoise	Underwater noise change	No potential for significant effects
West Wales Marine SAC	Harbour porpoise	Underwater noise change	No potential for significant effects
Lleyn Peninsula and the Sarnau SAC	Bottlenose dolphin	Underwater noise change	No potential for significant effects
North Channel SAC	Harbour porpoise	Underwater noise change	No potential for significant effects
Cardigan Bay SAC	Bottlenose dolphin	Underwater noise change	No potential for significant effects
Bristol Channel SAC	Harbour porpoise	Underwater noise change	No potential for significant effects

3.5 Impact prediction

Table 3.2 Checklist for impact prediction

Sources consulted	Assessment
Natura 2000 Site boundaries, Conservation objectives and supporting documents	The NPWS current mapping has been used to identify all European sites within the ZOI of the proposed project. Relevant NPWS and UK Conservation objectives and supporting documents (where applicable) have been relied upon by the applicant in their screening report.
Existing and historical maps	<p>Mapping showing the location of the proposed project is shown in the Screening for AA report and appendix B of the associated Irish Planning Report (P2228_R4693_Rev4 App B - November 2019) provides full coordinates of the cable route and landfall site are clearly shown.</p> <p>The Screening for AA report provides an indicative overview showing the location of the relevant European sites within the ZOI of the proposed project. This was confirmed in this Appropriate Assessment Screening by plotting the coordinates for the proposed cable route provided in appendix B of the Irish Planning Report (P2228_R4693_Rev4 App B - November 2019) in ESRI ARCGIS against the most recent NPWS Natura Site boundary mapping.</p>
Land use and other relevant existing plans	A review of planning applications published on Fingal County Councils map based planning search website and foreshore licence applications published on the Department of Housing, Local Government and Heritage foreshore licence applications website was conducted.
Existing site survey material	<p>The Applicant commissioned a number of site-specific surveys as follows:</p> <p>Appendix I3- Benthic Characterisation Report – Ireland. A benthic characterisation survey was conducted to establish the presence of any sensitive habitats or species within the cable route corridor, specifically habitats listed under Annex I of the European Commission (EC) Habitats Directive and habitats or species considered threatened and/or declining under the Oslo-Paris (OSPAR) convention (OSPAR,2008). Grab samples were also collected to establish physico-chemical and biological properties of the sediment.</p> <p>Appendix I2 - Marine Survey - Intertidal Survey report An intertidal habitat survey was conducted to record the distribution of intertidal sediments and associated conspicuous species. A fauna and flora survey of key intertidal species, to assist with the classification and mapping of intertidal biotopes within the survey area was also conducted. A modified Phase I walkover biotope mapping survey was conducted to record conspicuous intertidal fauna and flora and habitats within the survey area (500m wide cable corridor). The entire vertical profile of the shore was investigated, from the supralittoral zone to the low water spring tide level.</p> <p>Appendix G- Underwater sound modelling Sound inputs to the marine environment will be generated by vessel movements, sand wave preparation (pre-sweeping), cable trenching and rock placement. To determine the zone of influence for each activity an assessment was conducted which combined a literature review with underwater sound modelling.</p> <p>Additional available information was revised including but not limited to:</p> <ul style="list-style-type: none"> • Site specific conservation objectives for the relevant European sites. • NPWS Conservation objectives supporting documents. • NPWS unpublished marine surveys. • IWeBS data for the area within the ZOI of the project including sub-site data for the landfall location.

Existing data on hydrology	Tidal current data related to the potential for sediment dispersion is given in Appendix H (Sediment Suspension for the Irish component of Havhingsten: P2228_R4693_Rev0 App H - July 2019) of the Application. No further information on hydrology is considered necessary in the context of the proposed project.
Existing data on key species	Site specific data related to key species (Birds and marine mammals) in addition to other characterising species was provided by reference to published material and project specific commissioned surveys.
Environmental statements of similar projects or plans elsewhere.	No information from similar projects was provided.
State of the Environment reports	Article 17 reporting for Ireland (NPWS, 2019) was not referenced.
Site management plans	Specific and/or generic conservation objectives for the relevant European sites are available and were referenced in the applicants Screening for AA report.
Geographical Information Systems	Coordinates of the cable corridor were plotted in ARC GIS. Published shapefiles for European sites (Ireland and UK) were examined.
Site history files	Files related to historic projects were consulted relative to the potential for in-combination effects
Other, as appropriate	Underwater sound modelling report, Sediment suspension and cable installation report, benthic characterisation report, intertidal habitat report, marine survey report, cable burial assessment.

3.6 Screening for Appropriate Assessment Matrix

Brief description of the Project or Plan
<p>Installation of a submarine fibre optic cable on the foreshore extending from Loughshinny in North Dublin to Squires Gate Lane (south of Blackpool in England). Total cable length in Irish waters (territorial and exclusive economic zone) of approximately 55.7km of which 29.8km is within the Irish territorial waters. This section will also include two branches onto the Isle of Mann and the North Sea from the Seaton Sluice (on the east coast of the UK, north of Newcastle), to Houstrup on the west coast of the Jutland peninsular in Denmark.</p> <p>From the MHWS, at Loughshinny strand, south of the pier, seaward the 40mm diameter cable will be buried to a target depth of 1.5m – 2m below the seabed. The cable will be buried using water jetting and ploughing and open trenching and burial in the intertidal area. The cable will ultimately be linked to a single storey cable landing station at ESB Loughshinny 38kv Substation (under Planning Ref no F19A/0169)</p>
Brief description of the Natura 2000 site
<p>A total of 17 sites (table 3.2 of this assessment) were screened relative to their location within the ZOI of the proposed project.</p> <p>Following this assessment 12 sites were documented as having a qualifying interest within the ZOI of the proposed project and were further assessed for their potential for LSE's. These sites are given in table 3.3 of this assessment.</p>
Assessment criteria
<p>Description of any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of:</p> <p>Size and scale</p> <p>The total cable length is 55.7km in Irish waters. 29.8km will be within Irish territorial waters. The cable route corridor, within which the cable will be laid, is 500meters wide, narrowing to 250 meters wide at Loughshinny beach. The actual Fibre-optic cable is 40mm in diameter.</p> <p>Land take</p> <p>There will be no land take. The cable will be routed 1.5-2m below the seabed or under the beach in the intertidal area.</p> <p>7.06km of the cable will be routed through sediment habitat (as mapped by NPWS Article 17 Reporting 2013-2018) within Rockabill to Dalkey Island SAC (Site code: 003000). A section of the cable route corridor (0.4km) passes through the south eastern boundary of Rockabill SPA (Site code: 004014). Once installed the cable will occupy up to 40mm width within the seabed.</p> <p>Distance from the Natura site or key features of the site</p> <p>7.06km of the cable will lie within Rockabill to Dalkey Island SAC (Site code: 003000). 0.4km of the cable route corridor, occupying approximately 0.69km², is within Rockabill SPA (Site code: 004014).</p> <p>Distances to additional European sites with the ZOI of the proposed project are provided in table 3.2 of this report.</p> <p>Resource requirement (water abstraction etc.)</p> <p>Rock protection over the existing "Interconnector 1" pipeline may be required where the cable passes over this pipeline. If required the total footprint of the rock dumping and/or concrete matressing will be 687.5m². No additional resource requirements have been identified.</p>

Emissions (disposal to land, water or air)

No emissions resulting from the proposed project have been identified. The proposed cable installation is 'un-repeated' meaning that there is no power supply to the cable. Therefore, operation of the cable is not expected to emit any electric induced, magnetic fields or heat to the surrounding sediment or seabed and there are no anticipated effects of cable operation on the environment.

Excavation requirements

Different cable installation and burial techniques will be used to create a trench for the installation of the cable to a depth of 1.5-2m below the seabed. Trenches will either be backfilled following installation or will fill in naturally depending on whether a plough or water jetting are used to facilitate cable installation. At the landfall location a tracked machine will be used to create a trench (to a depth of 2m) in which the cable will be installed. The trench will be backfilled once the cable is in position.

Transportation requirements

Trucks will be required to deliver diggers to the beach at Loughshinny to facilitate cable trenching from the Beach Manhole to the Low Water Mark (LWM). Vessels (small support vessel and cable main-lay vessel) will be used to install the cable from the LWM seaward.

Duration of construction, operation, decommissioning, etc.

Construction will be approximately 14 days.

During operation, maintenance may be required to carry out repairs if required.

The installation will be permanent for the duration of 25 years. It is anticipated that if decommissioned it will be left *in-situ* within the seabed.

Description of any likely changes to the site arising as a result of:

Reduction of habitat area

There will be no reduction in habitat area. The cable will be buried 1.5-2 meters below the seabed within Dalkey Island to Rockabill SAC and potentially within a section of Rockabill SPA (depending on the area of the cable corridor utilised).

Disturbance to key species

Temporary disturbance to bird species associated with European sites within the ZOI may occur. However, this will be of a short duration and not considered sufficient to lead to any significant impacts on the conservation objectives for any bird species associated with a European site/s within the zone of influence of the proposed project.

Noise changes as a result of the cable main-lay vessel operating in the area and its associated works are considered to be below the threshold for permanent (PTS) or temporary (TTS) injury to Marine mammals. No significant underwater sound producing sources are associated with the operation of the cable main-lay vessel or any other works activity. Therefore, no disturbance related significant impacts on the conservation objectives of any cetacean or pinniped species or special conservation interests for any diving bird associated with a European site/s is considered likely.

Habitat or species fragmentation

No potential for habitat or species fragmentation has been identified.

Reduction in species density

No potential for any reduction in species density has been identified.

Changes in key indicators of conservation value

No changes in the key indicators of conservation value of any European site have been identified.

Climate Change

No project related effects on climate change have been identified.

Describe any likely impacts on the Natura 2000 site as a whole in terms of:

Interference with the key relationships that define the structure of the site.

No interference with the key relationships that define the structure of any European site have been identified.

Interference with key relationships that define the function of the site.

No interference with the key relationships that define the function of any European site have been identified.

Provide indicators of significance as a result of the identification of effects set out above in terms of:

Loss

N/A

Fragmentation

N/A

Disruption

N/A

Disturbance

N/A

Change to key elements of the site (e.g., water quality etc.)

N/A

Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.

The scale and magnitude of the project is fully known. No elements of the proposed project, alone or in combination with other projects or plans, is considered likely to result in any significant impacts on the features of interest or Conservation objectives of any European site.

4. Findings of no Significant Effects Report

Finding of no significant effects
<p>Name of project or plan Celtix Connect Havhingsten fibre-optic telecommunication cable landing at Loughshinny, Co. Dublin</p>
<p>Name and Location of Natura 2000 sites See table 3.2 of this report.</p>
<p>Description of the project or plan See section 3.3 of this report.</p>
<p>Is this project or plan directly connected with or necessary to the management of the sites (provide details)? No.</p>
<p>Are there other projects or plans that together with the project or plan being assessed could affect the sites (provide details)? No. Project related effects will be confined to the ZOI of the proposed project. For a cumulative effect to occur between the proposed project and additional projects identified a common pressure-receptor pathway would have to exist. The applicant conducted a screening to assess the common pressure-receptor pathways and the effects of any activities which may overlap spatially or temporally with the proposed project. The Applicants Screening for Appropriate Assessment Report recorded four (4) projects within 10km of the proposed installation plus, following an RFI related to the screening report, an additional application which post-dated the original screening. It assessed these projects and associated maintenance activities and excluded any potential cumulative effects. The proposed project is also associated with a landing station at Loughshinny, Co. Dublin (Fingal Co. Co Planning reference: F19A/0169). This project was subject to separate screening for appropriate assessment which determined that “In view of best scientific knowledge and in view of the conservation objectives of the European sites, the proposed project, individually or in combination with other plans or projects will not have a significant effect on any European site.” As no pressure pathway between the two projects has been identified, or is apparent from a review of both projects, it is considered that cumulative effects have been sufficiently and correctly addressed.</p>
The assessment of significance of effects
<p>Describe how the project of plan (alone or in combination) is likely to affect the Natura 2000 site. Temporary disturbance to birds associated with European sites within the ZOI of the proposed project may occur. However, it is not considered that such temporary disturbance has the potential to lead to any effects of the conservation objectives of these species.</p>
<p>Explain why these effects are not considered significant. The proposed project seeks to install a 40mm Fibre optic cable 1.5-2meters below the seabed, or beneath the beach in the intertidal area of the landfall at Loughshinny beach Co Dublin. With the exception of limited localised rock placement, where the cable crosses the existing “Interconnector 1”, no above ground/above seabed structures will be installed at any point. The cable will remain <i>in-situ</i> for its lifespan (estimated to be 25 years) with the only intervention, post-installation, being repair or maintenance if required. Therefore, the only likely phase of the project that could lead to impacts on European sites within the ZOI of the proposed project is considered to be during the construction and possible maintenance phases. The source-path-receptor model, to identify the ZOI within which European sites with the potential to be impacted lie, was considered appropriate and reflects current best practice. The same source-path-receptor</p>

model was used to identify qualifying interests/special conservation interests likely to be affected by project related impacts within those European sites identified.

The Appropriate Assessment Screening identified the following receptors which could potentially be affected by the proposed installation and maintenance activities and could be the Qualifying Interests of Natura 2000 sites as:

- Intertidal and benthic habitats
- Fish
- Birds
- Marine mammals (cetacean, pinniped and otter)

Intertidal and benthic habitats

Project specific surveys described and assessed the benthic habitats within the footprint of the cable route and environs (subtidal and intertidal) and established that impacts related to sediment mobilisation as a result of trenching would be temporary and localised. Jetting and installation plough will result in a brief, localised sediment plume. Levels of suspended sediments will be within the range of natural variation experienced after winter storm events in the region. Sediments up to fine grain sand will be dispersed within 100m of the trenching activity, with the majority settling back within the trench. While silt may be travel further distances, this will be highly dispersed and have a minimal settling depth and so will not significantly impact the receiving seabed. As reef habitat has not been identified within the installation corridor during site specific marine surveys or following a review of the Conservation Objective site maps, it is considered that penetration and/or disturbance including abrasion pressures on intertidal and subtidal reef habitats or sedimentation rate changes are unlikely.

Reef habitat area within Rockabill to Dalkey Island SAC is estimated as 182ha using 2010 and 2011 intertidal and subtidal reef survey data (MERC, 2010, 2012a,b), InfoMar bathymetry and the Arklow to Skerries Islands Admiralty Chart. Reef habitat, for which favourable conservation condition is to be maintained, is documented by the attributes and targets specified in the conservation objectives for the SAC. This reef habitat is localised around the islands of Rockabill, Lambay, Irelands and Eye and Dalkey Island and Muglins. The primary focus of the wider SAC boundary is to protect the conservation interests of Harbour porpoise. It is highly likely that additional small outcrops of rock and cobble which would constitute reef habitat are present throughout the wider extent of this SAC. However, minor impacts on this habitat, should it be present along the cable corridor, would be insignificant and would not have the potential to lead to any significant impacts on the conservation objectives of reef habitat within Rockabill to Dalkey Island SAC as defined in the conservation objectives for the site.

Fish (Sea lamprey and River lamprey)

These two species are Qualifying Interests for SACs within the ZOI and which may pass through the proposed project area during the migration phase of their life cycle. Fish may experience temporary injury if within 50m of the installation vessel and 110m of rock placement. However, due to the temporary timescale of the works and highly localised ZOI this is considered to be insignificant and highly unlikely to lead to any significant impacts on the conservation objectives of the relevant European sites.

Birds

The following bird species are present within the ZOI of the proposed project and are a special conservation interest for the relevant European sites.

Purple sandpiper: This is a wading bird and is therefore unlikely to be foraging within the marine cable corridor and low tide count data confirms that the cable landing site at Loughshinny is not of primary importance to this species.

Roseate tern: It is anticipated that the works will be within 10km of the tern breeding locations for approximately 24 hours. Therefore, terns will only be briefly disturbed for a small area of their total available foraging range for a very short time duration. Breeding terns will likely be habituated to a low level of shipping activity. The disturbance will be neither prolonged or repetitive. The limited spatial and temporal extent of the installation and maintenance activities will not lead to a significant increase in the number, location, shape or area of barriers to connectivity for the resident tern species.

Cormorant and shag: The installation vessels will be within cormorant and shag foraging range for up to 12 hours. As the installation vessel is slow moving and continually progressing for a short duration, the presence of the installation vessels will not be significant within an area which has existing levels of moderate shipping activity. The installation and maintenance activities are a temporary event and will not significantly reduce the feeding opportunities or natural range of these two species during the installation and maintenance activities.

Light-bellied Brent goose: Loughshinny may provide alternative functional feeding habitat for this species during the month of January. Based on the foraging ranges of light-bellied Brent goose, it is possible that if geese are present during the cable installation or maintenance works, they could be from any of the four SPAs identified to be within the ZOI of the proposed project. Therefore, temporary (up to 3 days) displacement of this species may occur if intertidal works take place during the month of January (when birds are present in low, relative to national averages, numbers). However, as numbers are low, and birds will be able to disperse to alternative feeding locations, it is considered unlikely that the temporary disturbance will significantly affect the distribution and intensity of feeding in alternative areas.

Therefore, significant impacts on the conservation objectives of SPAs associated with any bird species are not anticipated.

Marine mammals (cetacean, pinniped and otter)

Potential impacts resulting from underwater noise changes and disturbance due to vessel movement with the potential to effect marine mammals associated with European sites within the ZOI of the proposed project have been assessed. Marine mammals may experience mild disturbance up to 130m from the installation vessel. Marine mammals are likely to be habituated to a background noise in addition to vessel movement in this area from anthropogenic sound sources. The effects of noise from cable installation are negligible against background levels. Therefore, significant effects on the conservation objectives of SACs associated with any marine mammal are not anticipated.

List of agencies consulted.

Department of Housing, Local Government and Heritage
Marine Institute
Marine Survey Office
Department of Agriculture, Food and the Marine
Department of Culture, Heritage and the Gaeltacht
Inland Fisheries Ireland (IFI)
Sea-Fisheries Protection Authority (SFPA)

Response to consultation

See Appendix 1

Data collected to carry out the assessment

Who carried out this assessment?

MERC Consultants Ltd.

Sources of data.

1. Applicants Screening for Appropriate Assessment and associated documents as listed in section 1.2 of this report.

2. Legislation and guidelines as listed in section 2.1 of this report.

3. NPWS data sources for:

- Conservation Objectives for all European sites within the ZOI
- Natura 2000 data forms for all European sites within the ZOI
- Site Synopsis for all European sites within the ZOI
- Marine supporting documents for all European sites within the ZOI
- Article 17 mapping for habitats and species for all European sites within the ZOI
- NPWS Unpublished reports

All of the aforementioned documents are available at: <https://www.npws.ie/>

4. Additional grey literature and online data sources including but not limited to:

- <https://www.gov.ie/en/collection/f2196-foreshore-applications-and-determinations>
- <https://fingalcoco.maps.arcgis.com/apps/webappviewer/index.html?id=3fa7d9df584c4d93aab202638db9dd1a>
- <https://www.infomar.ie/maps/interactive-maps/data-viewer>
- <https://maps.biodiversityireland.ie/Map>
- MERC (2010). Irish Sea Reef Survey Project Report. Carried out by MERC on behalf of National Parks and Wildlife Service, Department of Environment, Heritage and Local Government.
- MERC (2012a). Intertidal Reef Survey of Lambay Island SAC and SPA, Rockabill Island SPA, Ireland's Eye SAC, Dalkey Islands SPA and Muglins. Carried out by MERC on behalf of the Marine Institute in partnership with National Parks and Wildlife Service, Department of Environment, Heritage and Local Government.
- MERC (2012b). Subtidal Reef Survey of Lambay Island SAC and SPA, Rockabill Island SPA, Ireland's Eye SAC, Dalkey Islands SPA and Muglins. Carried out by MERC on behalf of the Marine Institute in partnership with National Parks and Wildlife Service, Department of Environment, Heritage and Local Government.

Level of assessment completed.

Desk based review

Where can the full results of the assessment be accessed and viewed?

Within sections 1 to 5 of this report.

5. Conclusion

5.1 Article 6(3) Appropriate Assessment Screening Conclusion

Following a review of the proposed project, a screening assessment, following the guidelines of *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 has been conducted. It is concluded that it can be excluded, on the basis of objective information, that the proposed project, individually or in combination with other plans or projects, will have a significant effect on any European site and that Appropriate Assessment is not required.

Appendix 1