Planning and Environmental Consultants

Remedial Natura Impact Statement

Grid Connection Route Remedial Assessment

DOCUMENT DETAILS

The Client	**A & L Goodbody Crory Wind Farm Group**
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Prepared By:	**MKO** **Tuam Road** **Galway** **Ireland** **H91 VW84**

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1. INTRODUCTION

1.1 Background

McCarthy Keville O'Sullivan Ltd. (MKO) has been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Appropriate Assessment of a grid connection route located approximately 3km west of Ferns, Co. Wexford at its nearest point. The grid reference of the approximate start and end points for the site are E298680; N148426 to E298475; N15989. This remedial Natura Impact Statement (rNIS) has been prepared for the purposes of an application to An Bord Pleanála for substitute consent. Leave to apply for substitute consent has already been granted to the ESB.

An Appropriate Assessment Screening Report has been prepared and is provided in **Appendix 1.** This Article 6(3) Appropriate Assessment Screening Report has identified the European Sites upon which the development has the potential to result in significant effects and the pathways by which those effects may occur. It has also identified those qualifying interests/special conservation interests that have the potential to be affected by the grid connection development.

This report has been prepared in accordance with the European Commission guidance document *Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC* (EC, 2001), European Communities (2018) *Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*, Office for Official Publications of the European Communities, Luxembourg. European Commission and the Department of the Environment's Guidance on the Appropriate Assessment of Plans and Projects in Ireland (December 2009, amended February 2010).

In addition to the guidelines referenced above, the following relevant guidance was considered in preparation of this report:

1. *European Communities (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission,*
2. *Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission,*
3. *EC (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 interest, compensatory measures, overall coherence, opinion of the commission. European Commission.*

1.2 Statement of Authority

Baseline ecological surveys were undertaken on the 14th and 15th November 2019 by Laoise Kelly (B. Sc. Env) of McCarthy Keville O'Sullivan (MKO). This report has been prepared by Aoife Joyce (B.Sc., M.Sc.), Claire Stephens (B.Sc. Env.) and Laoise Kelly. The report has been reviewed by John Hynes (BSc, MSc, MCIEEM) who has over 8 years' experience in ecological assessment.

1.3 Structure and Format of this rNIS

This rNIS firstly provides a summary of the findings of the Article 6(3) Appropriate Assessment Screening Report. This clearly identifies the European Sites that have the potential to be significantly affected by the grid connection development and the pathways by which they might be affected. This sets out the scope of the rNIS. Following this, all elements of the project are fully described as is the baseline environment with respect to the relevant QI/SCI of the screened in European Sites.

Section 6 provides an assessment of the potential for adverse effects on the identified European Sites and prescribes mitigation to robustly block any identified pathways for impact. Section 7 provides an assessment of residual effects taking into consideration the mitigation utilised during the project.

In Section 8, the potential in combination effects of the project on European Sites, when considered in combination with other plans and projects was considered. A concluding statement is provided in Section 9.

2. CONCLUSIONS OF ARTICLE 6(3) APPROPRIATE ASSESSMENT SCREENING REPORT

The Article 6(3) Appropriate Assessment Screening report identified the potential for the development to result in significant effects on the following European Sites:

- Slaney River Valley SAC (000781)
- Wexford Harbour and Slobs SPA (004076)

Each of these sites is discussed individually below in terms of the Qualifying Interests/Special Conservation Interests with the potential to be affected and the pathways by which any such effects may occur.

2.1 Slaney River Valley SAC (000781)

The individual pathways for effect that were identified in Table 3.1 of the AA Screening Report (**Appendix 1)** and the QIs with the potential to be affected are described below.

2.1.1 Pathway for Effect

All watercourse crossing present along the grid connection route have hydrological connectivity with Slaney River Valley SAC downstream. Taking a precautionary approach, a potential pathway for indirect effects on the following aquatic QI's of Slaney River Valley SAC was identified in the form of deterioration of water quality resulting from pollution associated with the construction stage of the development:

- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]
- *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]
- *Petromyzon marinus* (Sea Lamprey) [1095]
- *Lampetra planeri* (Brook Lamprey) [1096]
- *Lampetra fluviatilis* (River Lamprey) [1099]
- *Alosa fallax fallax* (Twaite Shad) [1103]
- *Salmo salar (Atlantic Salmon)* (only in fresh water) *[1106]*
- *Lutra lutra* (Otter) [1355]
- *Phoca vitulina* (Harbour Seal) [1365]

The potential effect requires further assessment and will be considered below under the conservation objectives for the above listed QIs.

2.2 Wexford Harbour and Slobs SPA (004076)

The individual pathways for effect that were identified in Table 3.1 of the AA Screening Report (**Appendix 1)** and the SCIs with the potential to be affected are described below.

2.2.1 Pathway for Effect

All watercourse crossings along the grid connection route have hydrological connectivity downstream with Wexford Harbour and Slobs SPA. Taking a precautionary approach, a potential pathway for indirect effects on the following aquatic dependent SCI's of Wexford Harbour and Slobs SPA. was identified in the form of deterioration of water quality resulting from pollution associated with the construction stage of the development:

- Wetland and Waterbirds [A999]

The potential effect requires further assessment and will be considered below under the conservation objectives for the above listed SCIs.

3. DESCRIPTION OF THE DEVELOPMENT

3.1 Site Location

The subject grid connection route is located approximately 3 kilometres west of Ferns, Co. Wexford at its nearest point (Figure 3.1). The route extends from the existing Crory 110 kV substation in the south to the Knocknalour and Ballynancoran windfarms in the north, a straight line distance of approximately 12 kms. A spur to the east extends to the Ballycadden Wind Farm, and a spur to the west extends to the Gibbet Hill Wind Farm.

The entire development is located within the River Slaney and Wexford Harbour Water Framework Directive (WFD) catchment and is included in 3 regional surface water sub-catchments. The majority of the development is located within the Slaney_SC_060 sub-catchment. Two short sections are located in other sub-catchments. These include a small section to the north which is located in the Slaney_SC_040 sub-catchment and a short section to the south which is located within the Bann [Wexford]_SC_010.

The subject grid connection route runs southeast through Knocknalour Wind Farm and emerges onto the existing public road network at Grid ref: E298402 N159504. From here, the underground cable runs south along the L-5114, the L-5143, the L-5141, the L-5133, the L-5132, and the L-6072 crossing the R-745 at Grid Ref: E298499 N149371. The cable route diverges from the public road at Grid Ref: E298662 N148494 and runs west across agricultural fields, finishing at the Crory 110kV substation in Tincurry.

The western spur of the grid connection route that serves the Gibbet Hill Wind Farm exits the wind farm site at the approximate grid reference E294526 N157843 and runs east along the L-1017 before joining the cable from Knocknalour Wind Farm at the L-5143 junction.

The eastern spur that serves the Ballycadden Wind Farm joins the L-1017 at the approximate grid reference E299626 N155319 and runs east along this road before turning south and following the L-5138 southwest to the L-5141 junction at Tombrack. All of the cable route lines continue south in the same trench from this point to the substation.

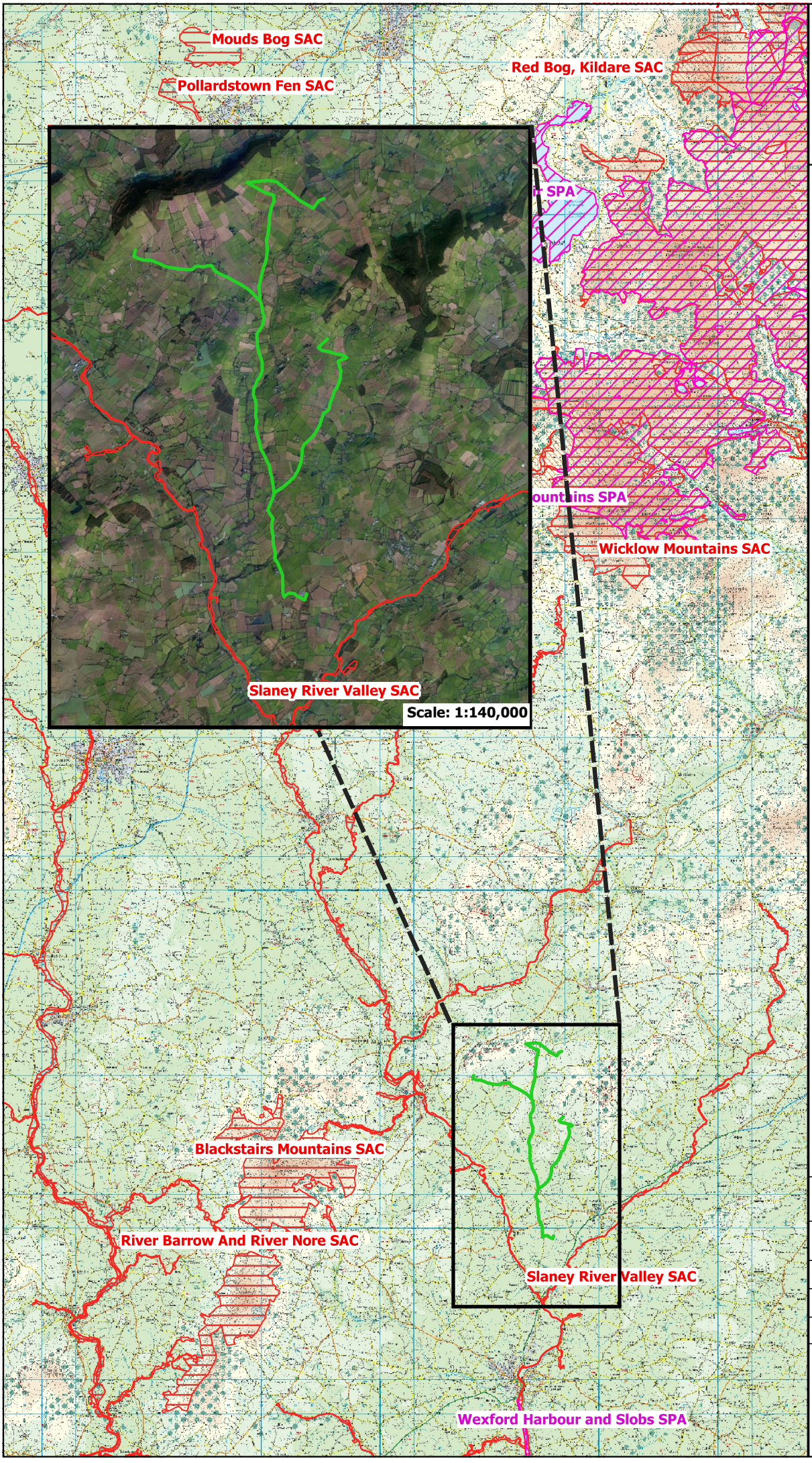
3.2 Characteristics of the Development

3.2.1 Description of the project

The grid connection is a medium voltage 20kV grid connection and comprises c. 26km of 20kV underground cable, c. 2km of 20kV overhead powerline and includes all ancillary works in the townlands of Ballyroebuck, Ballyandrew, Tincurry, Ballaman, Ballynancoran, Corah, Kiltilly, Curralane Oldtown, Knocknalour, Moneydurtlow, Bolinahaney, Bolacaheer, Graigue More, Tombrack, Boris, Ballycarney, Curraduff and Boolnadrum, Co. Wexford.

The underground grid connection was designed to follow the existing public road network which consists of 10 natural watercourses and numerous small storm drainage pipe crossings at various locations along the route. Underground cables were installed using existing bridges/culverts where they crossed the River Slaney tributaries except for two crossings, crossing no. 1 located at Corah Bridge and crossing and no. 6 at Borris Stream as shown on Figure 3.2. These were installed using a Horizontal Directional Drilling (HDD) method which assisted in removing the potential for direct impacts on the watercourses.

A 20kV overhead power line was constructed to connect the Ballynancoran wind farm to the substation at the Knocknalour wind farm. The overhead line is approximately 2 kilometres in length and consists



Map Legend

- Special Area of Conservation
- Special Protection Area
- Grid Connection Route

N

Drawing Title

Site Location

Project Title

A&L Goodbody Crory WF Group

Drawn By	Checked By
CS	LK
Project No.	Drawing No.
190806	Figure 3.1
Scale	Date
1:300000	03.03.2020

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email:info@mkoireland.ie
Website: ww.mkoireland.ie

of three overhead lines supported by standard single wooden poles. The poles measure between 9 and 12.5 metres in height and are spaced approximately every 100 metres.

The construction techniques used to construct the overhead line were in line with international best practice and fully comply with all ESB and health and safety requirements. Pole base excavation and erection was carried out using a rubber wheeled or tracked excavator. One natural watercourse (Crossing 8, Figure 3.2) is crossed by the overhead line, however there were no impacts to this watercourse associated with the construction or operation of the line.

The grid connection is a medium voltage 20kV grid connection and comprises c. 26km of 20kV underground cable, c. 2km of 20kV overhead powerline and includes all ancillary works in the townlands of Ballyroebuck, Ballyandrew, Tincurry, Ballaman, Ballynancoran, Corah, Kiltilly, Curralane Oldtown, Knocknalour, Moneydurtlow, Bolinahaney, Bolacaheer, Graigue More, Tombrack, Boris, Ballycarney, Curraduff and Boolnadrum, Co. Wexford.

The site location in relation to European designated sites is shown in Figure 3.3.

Map Legend

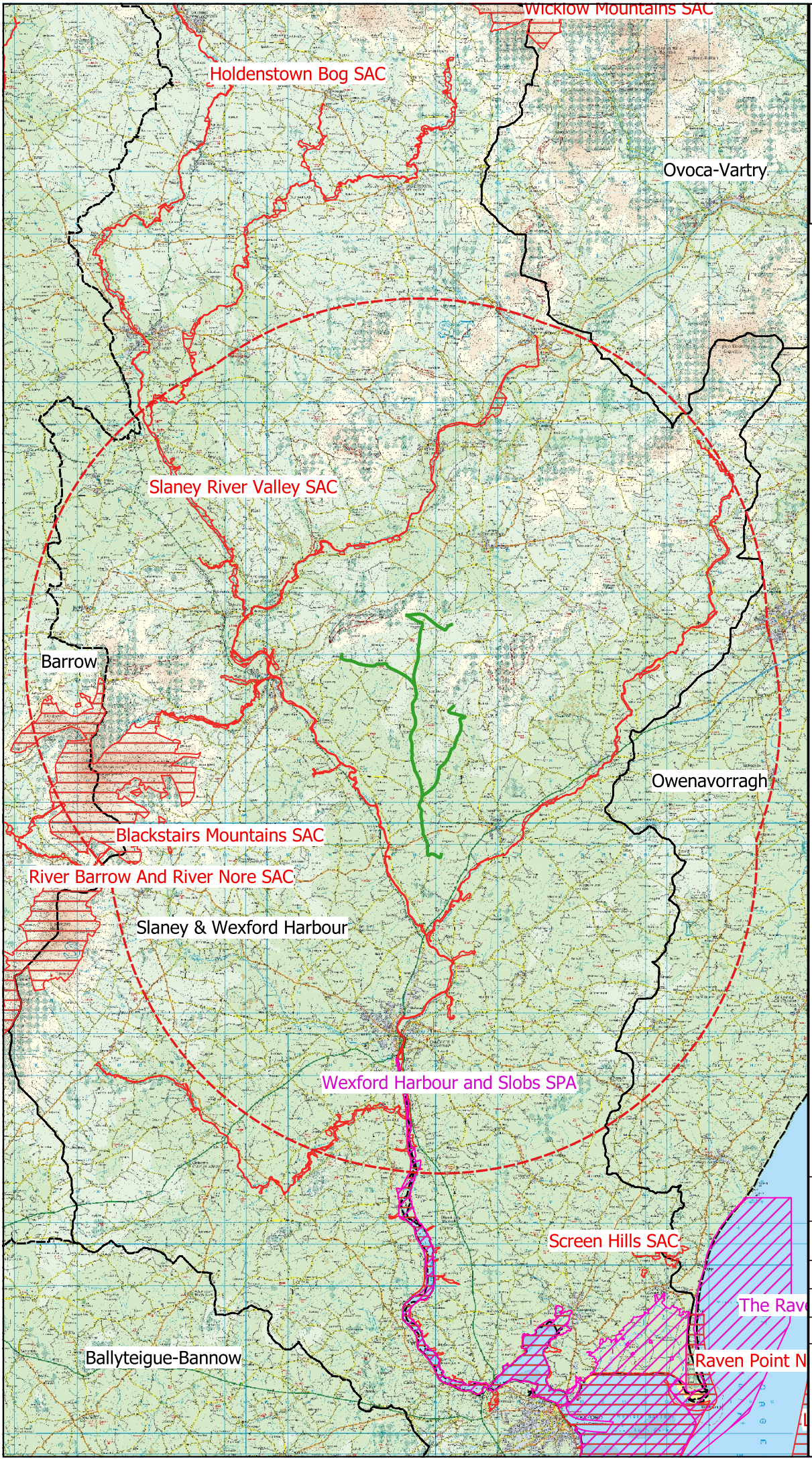
- Grid Connection Route
- Natural Watercourse Crossing

Drawing Title: Watercourse Crossings

Project Title: Crory Wind Farm Group Grid Connection

Drawn By	Checked By
TJB	MH
Project No.	Drawing No.
190806	Figure 3.2
Scale	Date
1:55000	04.01.2020

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email:info@mkoireland.ie
Website: ww.mkoireland.ie



Map Legend

- Special Area of Conservation
- Special Protection Areas
- 15km Buffer
- Grid Connection Route
- Hydrological Catchments

Drawing Title: European Designated Sites within 15km

Project Title: A & L Goodbody Crory WF Group

Drawn By	Checked By
AJ	LK
Project No.	Drawing No.
190806	Figure 3.3
Scale	Date
1:240963	12.02.2020

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email:info@mkoireland.ie
Website: ww.mkoireland.ie

4. CHARACTERISTICS OF THE RECEIVING ENVIRONMENT

The ecological surveys that were undertaken to inform this rNIS are fully described in this section. A general description of the ecology of the site of the grid connection development is provided in the AA Screening Report in **Appendix 1**. The specific surveys that were undertaken to assess the potential effects on the identified European Sites are described below.

4.1 Ecological Survey Methodologies

4.1.1 Desk Study

The desk study undertaken for this assessment included a thorough review of the available ecological data including the following:

- Review of online web-mappers: National Parks and Wildlife Service (NPWS), EPA, Geological Survey of Ireland (GSI),
- Review of the Site-Specific Conservation Objectives (SSCOs) for European Sites identified within the Appropriate Assessment Screening Report (AASR, **Appendix 1**) as being within the Likely Zone of Impact.

4.1.2 Ecological Multidisciplinary Walkover Surveys

Multi-disciplinary ecological walkover surveys were undertaken on 14th and 15th of November 2019 by Laoise Kelly (B.Sc. Env.) of MKO. The surveys were carried out in accordance with NRA *Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna* on National Road Schemes (NRA, 2009). Habitats were identified in accordance with the Heritage Council's *'Guide to Habitats in Ireland'* (Fossitt, 2000). Habitat mapping was undertaken with regard to guidance set out in '*Best Practice Guidance for Habitat Survey and Mapping*' (Smith *et al.*, 2011). Plant nomenclature for vascular plants follows '*New Flora of the British Isles*' (Stace, 2019), while mosses and liverworts nomenclature follows '*Mosses and Liverworts of Britain and Ireland - a field guide'* (British Bryological Society, 2010).

Surveys were undertaken outside of the optimum period for vegetation surveys/habitat mapping, i.e. April to September (Smith et al., 2011), however habitats were common in a local and national context and readily identifiable.

The walkover surveys were designed to detect the presence, or likely presence, of a range of protected species, including Otter, Fish species, Badger, Irish Hare, Pine Marten, Red Squirrel, Pygmy Shrew, Irish Stoat, Hedgehog, Amphibians and Bats.

During the multidisciplinary surveys, a search for Invasive Alien Species (IAS) listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2015) was conducted.

4.1.3 Faunal Surveys

A general walkover faunal survey was undertaken of the entire length of the cable route to take into account any protected fauna present within or adjacent to the development site.

4.1.3.1 Otter

Areas identified as providing potential habitat for Otter were subject to specialist targeted survey. The Otter surveys were conducted as per NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). This involved a search for all Otter signs e.g. spraints, scat, prints, slides, trails, couches and holts. In addition to the width of the rivers/watercourses, a 10m riparian buffer (both banks) was considered to comprise part of the Otter habitat (NPWS 2009. Threat Response Plan: Otter (2009-2011).

5. RESULTS OF ECOLOGICAL SURVEYS

5.1 Desk Study Results

The development is not located within the boundaries of any EU designated sites. The grid connection route is located 1.5km land at its closest point to Slaney River Valley SAC (000781) and approximately 1.9km hydrological distance downstream. Wexford Harbour and Slobs SPA (004076) is located approximately 9.7km south of the grid connection route. At its closest point the SPA is located approximately 15km hydrological distance downstream from the grid connection route. The grid connection route is located within the Slaney & Wexford Harbour Hydrological catchment. The grid connection route falls within three *Margaritifera* Sensitive Areas classed as 'Catchments of other extant populations' Slaney – Derry to the north, Slaney Lower and Slaney – Bann to the south. The site is not located within any *Margaritifera* designated SAC Catchment.

Additional information from the desk study is presented below.

5.1.1 EPA Water Quality Data

The EPA Envision map viewer was consulted on 13th February 2020 regarding the water quality status of the rivers which run across or in close proximity to the subject grid connection. The grid connection consists of 10 natural watercourse crossings of the River Slaney tributaries. These watercourses provide downstream connectivity with Wexford Harbour. The Slaney River and associated tributaries (Ballycarney stream, Ballingale stream and Borris stream) are located in close proximity to the substation. The Biotic Index of Water Quality (BIWQ) was developed in Ireland by the Environmental Protection Agency (EPA). Q-values are assigned using a combination of habitat characteristics and structure of the macro-invertebrate community within the waterbody. Individual macro-invertebrate families are classified according to their sensitivity to organic pollution and the Q-value is assessed based primarily on their relative abundance within a sample.

There are ten sampling stations located along and in close proximity to the grid connection route. The results for each of these sampling stations is provided in Table 5-1 below:

Table 5-1 EPA Water quality sampling stations along the grid connection route

River	Sample Station	Location	Grid Reference	Q-Value	Last Sampled
Ballycarney Stream - Slaney River	RS12B070700	Bridge u/s Slaney R confl – west of grid connection route	E 296872; N148954	3 - Poor	2016
Ballingale Stream – Slaney River	RS12B060900	Bridge u/s Slaney R confl – west of grid connection route	E296759; N149812	4 - Good	2016
Ballycarney Stream - Slaney River	RS12B070500	Ballycarney Stream - Tombrack Bridge – east of grid connection route	E299043; N150384	3 - 4 Moderate	1991
Ballingale Stream – Slaney River	RS12B060700	Ballingale Stream - Ballymorgan Bridge – west of grid connection	E297782; N151543	3 - 4 Moderate	1991

Ballycarney Stream - Slaney River	RS12B070400	Ballycarney Stream - Bridge d/s Tinnashrule Bridge – east of grid connection	E299941; N152244	3 - 4 Moderate	2016
Ballingale Stream – Slaney River	RS12B060600	Ballingale Stream - Bridge SW of Ballaman – west of grid connection	E297735; N152934	3 - 4 Moderate	2016
Ballingale Stream – Slaney River	RS12B060400	Ballingale Stream - Bridge East of Curraduff X-Rds – on grid connection route	E297858; N154140	4 - Good	1998
Ballingale Stream – Slaney River	RS12B060300	Ballycadden Bridge – east of grid connection	E298402; N156354	3 – Poor	2016
Ballycarney Stream - Slaney River	RS12B070300	Ballycarney Stream - Tinnashrule Bridge – east of grid connection	E301070; N152976	4 - Good	1991
Borris Stream – Slaney River	RS12B050200	Borris Stream - Bridge NW of Kilrush – southwest of grid connection	E295827; N155973	4 - Good	1991

River Basin Management Plans (RBMPs) have been published for all River Basin Districts in Ireland in accordance with the requirements of the Water Framework Directive. The online EPA Envision map viewer provides access to water quality information at individual waterbody level and at Water Management Unit level for all the River Basin Districts in Ireland. Waterbodies can relate to surface waters (these include rivers, lakes, estuaries [transitional waters] and coastal waters) or to groundwater. The WFD River Waterbody Status for the Slaney River where the watercourse crossing meets the River Slaney at Kildavin to the north was assigned a status of 'At Risk' as far as Bunclody. The status between Bunclody and Clohamon is for 'Review'. The WFD River Waterbody Status for the Slaney River has been assigned 'Not at risk' from Clohamon as far as Enniscorthy. Watercourse crossings 01 – 10 meet the Slaney within the 'Not at risk' watercourse. The Ground waterbody WFD status 2013-2018 for Ballyglass in which the subject site lies and for the area surrounding the cable route was assessed as 'Good' and the Ground waterbodies risk for Ballyglass is for 'Review'.

5.1.2 Slaney River Valley SAC (000781)

The Conservation Objectives document and Natura 2000 Data Form for this site as available on the NPWS website were reviewed during this assessment. Information in relation to site specific pressures and threats and the QIs of the SAC is detailed in Table 5-2 below.

5.1.2.1.1 Review of the Conservation Objectives

Table 5-2 Qualifying Interests and Conservation Objectives (Version 1, October 2011)

Qualifying Interest	Conservation Objective
[1130] Estuaries	To maintain the favourable conservation condition of Estuaries in the Slaney River Valley 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 the Slaney River Valley SAC
[3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	To maintain the favourable conservation condition of Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation in the Slaney River Valley SAC
* [91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae)*	To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion*) in the Slaney River Valley SAC
[1029] Freshwater Pearl Mussel (*Margaritifera margaritifera)*	The status of the freshwater pearl mussel (*Margaritifera margaritifera*) as a qualifying Annex II species for the Slaney River Valley SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this species
[1095] Sea Lamprey *(Petromyzon marinus)*	To restore the favourable conservation condition of Sea lamprey in the Slaney River Valley SAC
[1096] Brook Lamprey (*Lampetra planeri*)	To restore the favourable conservation condition of Brook lamprey in the Slaney River Valley SAC
[1099] River Lamprey *(Lampetra fluviatilis)*	To restore the favourable conservation condition of River lamprey in the Slaney River Valley SAC
[1103] Twaite Shad *(Alosa fallax)*	To restore the favourable conservation condition of Twaite shad in the Slaney River Valley SAC
[1106] Atlantic Salmon *Salmo salar* (only in fresh water)	To restore the favourable conservation condition of Salmon in the Slaney River Valley SAC,

[1355] Otter (*Lutra lutra*)	To restore the favourable conservation condition of Otter in the Slaney River Valley SA
[1365] Harbour seal (*Phoca vitulina*)	To maintain the favourable conservation condition of Harbour Seal in the Slaney River Valley SAC

5.1.3 Site Specific Pressures and Threats

As per the Natura 2000 Data Form, the site-specific threats, pressures and activities with potential to effect the SAC were reviewed and considered in relation to the grid connection works. These are provided in **Error! Reference source not found.**.

Table 5-3 Site-specific threats, pressures and activities with potential to have effects on the SAC

Negative Impacts			
Rank	Threats and pressures [code]		Inside [i], outside [o] or both [b]
M	F02.03.01	F02.03.01 - bait digging / collection	i
M	J02.05.02	J02.05.02 - modifying structures of inland water courses	i
M	J02.06	J02.06 - Water abstractions from surface waters	i
M	A10.01	A10.01 - removal of hedges and copses or scrub	i
L	D03.01.03	D03.01.03 - fishing harbours	i
M	H01.08	H01.08 - diffuse pollution to surface waters due to household sewage and waste waters	b
H	B02	B02 - Forest and Plantation management & use	b
M	K01.01	K01.01 - Erosion	i
M	D01.05	D01.05 - bridge, viaduct	i
M	J02.06.01	J02.06.01 - surface water abstractions for agriculture	i
H	I01	I01 - invasive non-native species	b
L	E05	E05 - Storage of materials	i
M	D01.01	D01.01 - paths, tracks, cycling tracks	i
M	F03.02.04	F03.02.04 - predator control	i
H	A01	A01 - Cultivation	b
M	E03	E03 - Discharges	i
H	H01.05	H01.05 - diffuse pollution to surface waters due to agricultural and forestry activities	b
M	H01	H01 - Pollution to surface waters (limnic & terrestrial, marine & brackish)	i
M	J02.11	J02.11 - Siltation rate changes, dumping, depositing of dredged deposits	i
M	H01.01	H01.01 - pollution to surface waters by industrial plants	b

M	J02.12.02	J02.12.02 - dykes and flooding defense in inland water systems	i
M	F01.03	F01.03 - bottom culture	i
M	C01.01	C01.01 - Sand and gravel extraction	i
H	A08	A08 - Fertilisation	b
M	A09	A09 - Irrigation	b

Rank: H = high, M = medium, L = low
i = inside, o = outside, b = both

5.1.3.1 Habitats of Slaney River Valley SAC

Estuaries [1130]

Annex I habitat Estuaries [1130]is designated under the Slaney River Valley SAC. This marine habitat area was estimated as 1,905ha using OSi data and the defined Transitional Water Body area under the Water Framework Directive as mapped on Map 3 in the Site Specific Conservation Objectives (SSCO) for the site (Version 1, October 2011). According to the marine habitats and species conservation objectives supporting document; '*The Annex I habitat Estuaries is a large physiographic feature that may wholly or partly incorporate other Annex I habitats including mudflats and sandflats within its area.*'

According to the Natura 2000 data form for the site, the estuary habitat is particularly well represented in this site, with salinity ranging from full freshwater to full seawater. The quality of the habitat is generally good.

Mudflats and sandflats not covered by seawater at low tide [1140]

The Slaney River Valley SAC is designated for, inter alia, the Annex I qualifying interests of Mudflats and sandflats not covered by sea water at low tide. According to the Natura 2000 data form the intertidal sand and mud flats are particularly well represented in this site, with salinity ranging from full freshwater to full seawater. The habitat area for this habitat within the designated site was estimated at 1,027ha using OSi data according to the SSCO (Version 1, October 2011) as shown mapped on map 4 of the SSCOs.

Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]

According to the SSCO (Version 1, October 2011), the full distribution of this habitat and its sub-types in this site is currently unknown. The basis of the selection of the SAC for the habitat is the presence of an excellent example of the vegetation asssemblage associated with tidal reaches of large rivers between Enniscorthy and Polladerg townland. The full extent of this habitat in this site is currently unknown. The Environmental Protection Agency (EPA) do not monitor the tidal stretch of the Slaney. However, the data from upstream of Enniscorthy suggest the water quality for the tidal stretch is at good status (2007-2009). It is likely that the rare species associated with the tidal sub-type are tolerant of some nutrient enrichment, but may be sensitive to severe enrichment (Preston, 2003).

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]

According to the Natura 2000 data form for the site an important area of alluvial forest is found at Macmine. Periodic flooding is essential to maintain alluvial woodlands along river floodplains. Dead wood is a valuable resource and an integral part of a healthy, functioning woodland ecosystem. Mature and veteran trees are important habitats for bryophytes, lichens, saproxylic organisms and some bird species. Their retention is important to ensure continuity of habitats/niches and propagule sources.

5.1.3.1.2 Species of Slaney River Valley SAC

Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]

According to the SSCO (Version 1, October 2011), the status of the freshwater pearl mussel (*Margaritifera margaritifera*) as a qualifying Annex II species for the Slaney River Valley SAC is currently under review. According to the Natura 2000 data form for the site the site is of high importance for the conservation of fish species, with a significant population of *Margaritifera margaritifera* occurs on the Derreen River. This has been recorded in the River Slaney and has potential to occur downstream of the development.

Petromyzon marinus (Sea Lamprey) [1095]

According to the Natura 2000 data form for the site, the site is of high importance for the conservation of fish species, notably *Petromyzon marinus.* According to the SSCO (Version 1, October 2011), artificial barriers can block or cause difficulties to lampreys' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas. In this site, some barrier modification is required (e.g. Clohamon weir) to permit sea lamprey passage (Gargan et al., in press). Lampreys spawn in clean gravels. No significant effect on this species occurred as there were no instream works as part of the gird connection development. This species has potential to occur downstream of the development.

Lampetra planeri (Brook Lamprey) [1096]

According to the SSCO (Version 1, October 2011), artificial barriers can block lampreys' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas. Barrier modification required to facilitate passage of adult fish within channels (Gargan et al., in press). According to the Natura 2000 data form for the site, the site is of high importance for the conservation of fish species, notably *L. planeri.* Lampreys spawn in clean gravels. This species has potential to occur downstream of the development.

Lampetra fluviatilis (River Lamprey) [1099]

According to the Natura 2000 data form for the site, the site is of high importance for the conservation of fish species, notably *Lampetra fluviatilis.* According to the SSCO (Version 1, October 2011), Artificial barriers can block lampreys' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas. Barrier modification required to facilitate passage of adult fish within channels (Gargan et al., in press). Lampreys spawn in clean gravels. This species has potential to occur downstream of the development.

Alosa fallax fallax (Twaite Shad) [1103]

According to the SSCO (Version 1, October 2011), in some catchments, artificial barriers block twaite shads' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas. Barrier modification required to facilitate passage of adult fish within channels (Gargan et al., in press). Regular breeding has not been confirmed in the River Slaney in recent years (King and Roche, 2008). According to the Natura 2000 data form for the site, the site is of high importance for the conservation of a very localised population of *Alosa fallax fallax.* This species has potential to occur downstream of the development.

Salmo salar (Atlantic Salmon) (only in fresh water) [1106]

According to the SSCO (Version 1, October 2011), artificial barriers can block salmons' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas. Smolt abundance can be negatively affected by a number of impacts such as estuarine pollution, hydroelectric schemes, predation and sea lice (*Lepeophtheirus salmonis*). Salmon spawn in clean gravels. According to the Natura 2000 data form for the site the site is of high importance for the conservation of fish species, notably *Salmo salar*. This species has potential to occur downstream of the development.

Lutra lutra (Otter) [1355]

According to the SSCO (Version 1, October 2011), otters will regularly commute across stretches of open water up to 500m e.g. between the mainland and an island; between two islands; across an estuary (De Jongh & O'Neill, 2010). Otters need lying up areas throughout their territory where they are secure from disturbance (Kruuk, 2006; Kruuk and Moorhouse, 1991) It is important that such commuting routes are not obstructed.

The extent of terrestrial habitat was calculated as 64.7ha above high water mark (HWM); 453.4ha along riverbanks/around ponds to include a 10m terrestrial buffer along shoreline (above HWM and along river banks) identified as critical for otters (NPWS, 2007). The extent of marine otter habitat was estimated at 534.7ha based on evidence that otters tend to forage within 80m of the shoreline. The extent of freshwater (river) habitat was calculated as 264.1km, from estuary to headwaters. The extent of freshwater (lake/lagoon) habitat area of 0.4ha was mapped based on evidence that otters tend to forage within 80m of the shoreline (NPWS, 2007). According to the Natura 2000 data form for the site, *Lutra lutra* is well distributed throughout this European site. This species has potential to occur downstream of the development.

Phoca vitulina (Harbour Seal) [1365]

According to the Natura 2000 data form for the site, the site provides year-round haul-out habitat for the Annex II species Phoca vitulina, and includes regionally significant breeding and moulting sites. According to the marine habitats and species conservation objectives supporting document; '*Harbour seals in Slaney River Valley SAC occupy both aquatic habitats and intertidal shorelines that become exposed during the tidal cycle. The species is present at the site throughout the year during all aspects of its annual life cycle which includes breeding (May July approx.), moulting (August-September approx.) and non-breeding foraging and resting phases.'* This species has potential to occur downstream of the development.

5.1.3.2 Wexford Harbour and Slobs SPA [004076]

The Conservation Objectives document and Natura 2000 Data Form for this site as available on the NPWS website were reviewed during this assessment. Information in relation to site specific pressures and threats and the SCIs of the SPA is detailed in Table 5-4 below.

5.1.3.2.1 *Review of the Conservation Objectives*

Table 5-4Qualifying Interests and Conservation Objectives (Version 1, March 2012)

Qualifying Interest	Conservation Objective
[A999] Wetlands and waterbirds	To maintain the favourable conservation condition of the wetland habitat in Wexford Harbour and Slobs SPA as a resource for the regularly-occurring migratory waterbirds that utilise it

5.1.3.2.2 Site Specific Pressures and Threats

As per the Natura 2000 Data Form, the site-specific threats, pressures and activities with potential to effect the SPA were reviewed and considered in relation to the grid connection installation works. These are provided in
Table 5-5.

Table 5-5 Site-specific threats, pressures and activities with potential to have effects on the SPA

Negative Impacts			
Rank	**Threats and pressures [code]**		**Inside [i], outside [o] or both [b]**
M	D01.02	D01.02 - roads, motorways	o
M	G01.02	G01.02 - walking, horseriding and non-motorised vehicles	i
M	B	B - Sylviculture, forestry	o
H	A08	A08 - Fertilisation	i
H	F01	F01 - Marine and Freshwater Aquaculture	i
H	A08	A08 - Fertilisation	o
H	A04	A04 - grazing	i
H	E01	E01 - Urbanised areas, human habitation	o
H	F03.01	F03.01 - Hunting	i
H	A04	A04 - grazing	i

Rank: H = high, M = medium, L = low
i = inside, o = outside, b = both

5.1.3.2.3 Wetlands of Wexford Harbour and Slobs SPA

[A999] Wetlands and waterbirds

According to the SSCOs (Version 1, March 2012) the wetland habitat area was estimated as 4,241ha using OSi data and relevant orthophotographs. According to the Natura 2000 data form, this site is of international importance for several species of waterfowl but also because it regularly supports well in excess of 20,000 waterfowl. It is one of the top three sites in the country for numbers and diversity of wintering birds. Of particular importance is that it is one of the two most important sites in the world for *Anser albifrons flavirostris.* It also has internationally important populations of *Branta bernicla hrota, Cygnus columbarius bewickii* and *Limosa lapponica*, and is now one of the few sites in the country which supports a regular flock of *Cygnus columbarius bewickii*. There is at least a further 22 species of wintering waterfowl which occur in numbers of national importance. Several of these represent substantial proportions of the national totals, especially *Anas penelope* (3.1%), *Anas platyrhynchos* (3.6%), *Anas acuta (*3.3%), *Aythya marila* (4.9%), *Mergus serrator (*4.1%), *Pluvialis apricaria* (3.7%), *Pluvialis squatarola* (11.3%), *Vanellus vanellus* (5.1%) and *Limosa limosa* (3.6%).

5.1.3.3 Results of Consultation

Table 5-6 presents a summary of all scoping responses received. Copies of the scoping responses are included in Appendix 2-1 of this rEIAR. The recommendations of the consultees have informed the rNIS preparation process and the contents of same.

Table 5-6. Scoping Responses

No.	Consultee	Response
1	Department of Culture, Heritage and the Gaeltacht	The Department of Culture, Heritage and the Gaeltacht responded to the Scoping Request on the 12th December 2019 and noted the following in their response: › As part of the cultural heritage assessment, all watercourses (rivers, riverbanks, streams, lakes or associated bridges, etc.) should be archaeologically assessed via Underwater Archaeological Impact Assessment (UAIA); › A suitably qualified and suitably experienced underwater archaeologist to carry out the UAIA; › The UAIA shall include detailed bank and in-water archaeological assessments and supported by detailed desktop study, walkover survey and hand-held metal detection surveys; and › Detailed method statement should accompany the licence application to the National Monuments Service section of the Department of Culture, Heritage and the Gaeltacht
2	Geological Survey of Ireland	The Geological Survey of Ireland responded to the Scoping Request on the 27th November 2019 and noted that that they had no comments on the subject grid connection at this stage.
3	Health Service Executive	No response to date
4	Inland Fisheries Ireland	Inland Fisheries Ireland (IFI) responded to the Scoping Request on the 22nd January 2020 and noted that the subject grid connection runs through the catchment area of 5 no. separate Slaney River tributaries (Mine River, Ballycarnery River, Ballingale River, Ballynabarney Stream and Clohamon Stream). The IFI set out the following in their response: › Salmon spawning is recorded in the Mine, Ballingale and Ballycarney Rivers; › Ballynabarnery and Clohamon Stream represent excellent salmonid nursery habitats and hold populations of brown trout; › All tributary catchments are likely to hold populations of European Eel and Brook Lamprey, with Mine, Ballingale and Ballycarney Rivers having potential as lamprey spawning habitats
5	Irish Water	No response to date
6	National Transport Authority	No response to date
7	Transport Infrastructure Ireland	Transport Infrastructure Ireland (TII) responded to the Scoping Request on the 4th of December 2019 and provided general guidance for the preparation of remedial EIAR, which may affect the national road network.

No.	Consultee	Response
8	Wexford County Council – Roads Section	No response to date
9	Wexford County Council – Environment Section	No response to date
10	Wexford County Council – Water Services	No response to date

5.2 General description of Ecology of the Site

5.2.1 Habitats

The following paragraphs provide a description of the habitats encountered within and adjacent to the grid connection works. A full description of habitats is provided in the AASR provided in **Appendix 1.**

The most southerly section of the grid connection starts at the existing Crory 110kV substation. The cable runs west from the substation through ***Improved Agricultural Grassland (GA1)*** and adjacent to the access road within ***Dry Meadows and Grassy Verge (GS2)*** habitat. The route then joins the local road and progresses north through the townlands of Ballycarney, Corah and Tombrack. On reaching Tombrack the route diverges east towards Ballycadden Wind Farm. The main line of the route progresses north from Tombrack and onwards to the townland of Knocknalour. The western spur of the underground connection diverges from the townland of Ballyroebuck towards Gibbet Hill. Adjacent habitats along the underground grid connection route include ***Dry Meadows and Grassy Verges (GS2), Hedgerows (WL1)***, ***Stone Walls (BL1), Treeline (WL2)*** and ***Scrub (WS1).*** Occasional residential property categorised as ***Buildings and Artificial Surfaces (BL3)*** was also recorded along the grid connection route.

The overhead section of the grid connection is located in the townlands of Knocknalour and Ballynancoran in the northernmost section of the route. The overhead section begins at Knocknalour Wind Farm and heads in an easterly direction towards Ballynancoran Wind Farm for a length of approximately 2km. This section of cable traverses fields categorised as ***Improved Agricultural Grassland (GA1)*** and ***Arable Crops (BC1)*** comprising turnip.

There are 10 no. natural watercourse crossings along the grid connection the locations of which are shown in Figure 3.2 and described in Table 5-7 below. In addition, there are numerous small storm drainage pipe crossings at various locations along the Grid Connection route (see as-built drawings, Appendix 3-1 of the rEIAR). Underground cables were installed using existing bridges/culverts where they crossed the River Slaney tributaries except for two crossings, crossing no. 1 located at Corah Bridge and crossing and no. 6 at Borris Stream as shown on Figure 3.2. These were installed using a Horizontal Directional Drilling (HDD) method which assisted in removing the potential for direct impacts on the watercourses. No instream works were carried out as part of these works.

Third Schedule invasive species, Bohemian Knotweed (*Fallopia bohemica*), was recorded in one area along the grid connection route on both sides of the road in the townland of Boolnadrum (approx. grid ref. E300394; N155108 to E300347; N155089). All works in this area were confined to the existing road and did not impact on this Third Schedule species.

A survey for Otter was carried out at all watercourse crossings. Potential evidence of Otter was recorded in the form of prints at watercourse crossing no. 3 as seen on Figure 3.2 and described in Table 5-7. No other evidence of Annexed species was recorded within or adjacent to the grid connection works.

Table 5-7 Culvert Survey Summary and Crossing Methodology

Crossing No. and Methodology	Photo	Description	Crossing Option (as described in Chapter rEIAR); Notes
1		**Substrate:** Rock, sand **Instream vegetation:** Water Parsnip, Floating Sweet-grass **Adjacent habitat:** Treeline, dry meadows and grassy verge **Width:** 5– 6m **Flow:** Fast flowing glide	Horizontal Directional Drilling
2		**Substrate:** Rock, sand, gravel **Instream vegetation:** Starwort, Fool's Watercress **Adjacent habitat:** Improved agricultural grassland, treeline **Width:** 0.5 – 4m **Flow:** Slow flowing, leaf litter instream	Crossing over bridge/culvert within the deck of the road.
3		**Substrate:** Rock, stone, gravel **Instream vegetation:** Fool's Watercress **Adjacent habitat:** Improved agricultural grassland, treeline **Width:** 5-7m **Flow:** Fast flowing glide	Crossing over bridge/culvert within the deck of the road. Potential Otter print recorded on river bank.
4		**Substrate:** Rock, sand, gravel **Instream vegetation:** Fool's Watercress **Adjacent habitat:** Improved agricultural grassland, treeline, **Width:** 1- 2m	Crossing over bridge/culvert within the deck of the road

		Flow: Fast flowing glide, existing concrete step at base of bridge	
5		**Substrate:** Stone, gravel, sand **Instream vegetation:** Fool's Watercress **Adjacent habitat:** Treeline, dry meadows and grassy verge, scrub **Width:** 2m **Flow:** Fast flowing riffle, glide	Crossing over bridge/culvert within the deck of the road
6		**Substrate:** Sand, gravel, stone **Instream vegetation:** N/A **Adjacent habitat:** Treeline, conifer woodland **Width:** 1-3m **Flow:** Fast flowing riffle, glide	Horizontal Directional Drilling
7		**Substrate:** Stone, gravel, sand **Instream vegetation:** Fool's Watercress, Duckweed **Adjacent habitat:** Improved agricultural grassland, treeline **Width:** 1m **Flow:** Fast flowing glide	Crossing over bridge/culvert within the deck of the road
8		**Substrate:** Rock, sand **Instream vegetation:** N/A **Adjacent habitat:** Stream heavily shaded due to overhanging Willow treeline, other adjacent habitats included improved agricultural grassland and arable crop **Width:** 0.5-1m	Crossing over bridge/culvert within the deck of the road

		Flow: Fast flowing riffle and glide	
9		**Substrate:** Stone, gravel, sand **Instream vegetation:** N/A **Adjacent habitat:** Improved agricultural grassland, treeline **Width:** 1 – 2m **Flow:** Fast flowing riffle, glide	Crossing over bridge/culvert within the deck of the road
10		**Substrate:** Rock, sand, gravel **Instream vegetation:** N/A **Adjacent habitat:** Treeline, dry meadows and grassy verge **Width:** 1- 2m **Flow:** Fast flowing riffle, glide	Crossing over bridge/culvert within the deck of the road

6. ASSESSMENT OF POTENTIAL EFFECTS

The AA Screening Report, included as **Appendix 1** of this document, 'screens in' the potential for significant effects on the following European Sites as a result of potential significant effects on surface water quality during the construction stage:

- Slaney River Valley SAC (000781)
- Wexford Harbour and Slobs SPA (004076)

This Natura Impact Statement presents the data and information on the project and provides an analysis of the potential adverse effects on the aforementioned EU designated sites. Potential adverse effects are assessed in view of best scientific knowledge, on the basis of objective information in relation to the grid connection installation works project including the avoidance, reduction and preventive measures undertaken that are described in Chapter 3 of the rEIAR and detailed in Section 6.2.1.1.1. below.

The following sections provide a review of the potential impact pathways for each of the 'screened-in' EU Designated Sites. Mitigation measures for the avoidance of impact are then provided, followed by an assessment of potential effect, post implementation of the mitigation measures.

6.1 Potential for Direct Effects on the European Sites

There will be no direct effects on the Qualifying Interests (QI's) of Slaney River Valley SAC (000781) or the Special Conservation Interest (SCI) of Wexford Harbour and Slobs SPA (004076). There will be no direct effects as the development is located entirely outside the boundary of any designated sites. The grid connection route was confined to the existing road corridor and agricultural land. There are no Annex I habitats within or adjacent to the works site. The site does not contain suitable supporting habitat for Annex II species or SCI bird species of either site. There was no potential for direct effects on any European Site as a result of the grid connection works.

6.2 Potential for Indirect Effects on European Sites

6.2.1 Deterioration of Surface Water

Taking a precautionary approach, a potential pathway for indirect effects on the aquatic QIs and SCIs of the following European Sites in the form of deterioration of water quality resulting from pollution associated with the construction phase of the development was identified:

- Slaney River Valley SAC (000781)
- Wexford Harbour and Slobs SPA (004076)

6.2.1.1 Construction

The construction stage of the development involved excavations and earth moving which created the potential for pollution in various forms, i.e. the generation of suspended solids and the potential for spillage of fuels associated with the refuelling of excavation machinery.

There is a risk of surface water runoff from bare ground and soil storage areas during construction works. There are 10 watercourse crossings along the grid connection route and a number of small drainage features. In the absence of mitigation, the construction activities could result in the release of suspended solids. Taking a precautionary approach the release of suspended solids could potentially

affect the water quality of downstream water bodies and water dependent habitats of Slaney River Valley SAC (000781) and Wexford Harbour and Slobs SPA (004076).

6.2.1.1.1 *Preventative measures to avoid impact on water quality*

The key mitigation measure during the construction phase was the avoidance of sensitive aquatic areas. The majority of the grid route is located within the paved area of existing roads and therefore resulted in no direct impacts to surface waters. Watercourse crossings were achieved through the placement of cable ducts above culverts and in bridge decks. Two watercourse crossings (no. 1 and no. 6) were achieved using a horizontal directional bore technique as the bridge deck was determined to be unsuitable to accommodate the cable ducts. No in-stream work occurred during the construction of the grid connection.

The following methods and best practice measures ensured that sediment release and potential for pollution during the construction phase was minimised and reduced to insignificance:

- Minimal refuelling or maintenance of construction vehicles or plant took place along the works area.
- The plant used during construction was regularly inspected for leaks and fitness for purpose
- Plant was maintained in good working order.
- No batching of wet-cement products occurred on along the grid route works area. Ready-mixed supply of wet concrete products were used to backfill the trench per ESB specifications.
- Pre-cast elements, such as communication chambers, were used.
- No discharge of cement contaminated waters to the construction phase drainage system or directly to any artificial drain or watercourse was allowed. No chute cleaning occurred on-site.
- Concrete pouring only occurred on dry days.
- No significant dewatering occured during construction.
- All trenching works occured at or very near existing ground levels with minimal ground disturbance.
- No deep foundations were required. As such there was no interruption or blocking of shallow or deep groundwater pathways below the site.
- No in-stream work occurred to facilitate stream crossings along the cable route.

Residual Impact
The implementation of the mitigation measures discussed above prevented the release of any hydrocarbons to the environment. No instream works were carried out at any watercourse crossings. No residual impact on water quality occurred as a result of the grid connection works.

6.2.1.2 Operation

There will be no soil disturbance or use of machinery during the operation phase of the grid connection. Furthermore, since there was no deep excavation associated with the project there is no potential for impacts on groundwater flow during the operation phases Therefore, **No Impacts** are envisaged during the operational phase.

7. ASSESSMENT OF RESIDUAL ADVERSE EFFECTS

The sections provided below detail the site-specific residual impact assessment in relation to the relevant QIs and SCIs of the EU sites in light of their site-specific targets and attributes. The assessment takes into consideration the mitigation measures used to avoid, reduce and block identified pathways for impact.

7.1 Slaney River Valley SAC (000781)

The potential for adverse effects on each of the individual QI's that were identified as being at risk of potential effects in the AA Screening Report is assessed in this section in view of the Conservation Objectives of those habitats and species. A potential pathway for indirect effects on the following aquatic/surface water dependent QIs of the Slaney River Valley SAC was identified in the form of deterioration of water quality resulting from pollution associated with construction activities:

- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]*
- *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]
- *Petromyzon marinus* (Sea Lamprey) [1095]
- *Lampetra planeri* (Brook Lamprey) [1096]
- *Lampetra fluviatilis* (River Lamprey) [1099]
- *Alosa fallax fallax* (Twaite Shad) [1103]
- *Salmo salar* (Atlantic Salmon) (only in fresh water) [1106]
- *Lutra lutra* (Otter) [1355]
- *Phoca vitulina* (Harbour Seal) [1365]

Table 7-1 –Table 7-12 below provides an assessment of the proposal against the nominated attributes and targets for the above listed QIs of Slaney River Valley SAC.

7.1.1 Estuaries [1130]

The attributes and targets for Estuaries [1130]as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC (NPWS Version 1, 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in Table 7-1

Table 7-1 Targets and attributes associated with nominated site-specific conservation objectives for Estuaries [1130]

Attribute	Target	Assessment
Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.	There was no impact on estuarine habitat area associated with the grid connection development. There were no works undertaken in this habitat as all works were confined to the existing road corridor and agricultural land. Pathways including water

		pollution that would allow impacts to occur were considered in the design of the project and a range of measures were in place to avoid all water pollution during the construction phase. Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.
Community distribution	The following community types should be maintained in, or restored to, a natural condition: Mixed sediment community complex; Estuarine muds dominated by polychaetes and crustaceans community complex; and Sand dominated by polychaetes community complex	There was no decline in the community distribution of this habitat associated with the grid connection development. There were no works within this habitat as all works were confined to the existing road corridor and agricultural land. Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.

7.1.2 Mudflats and sandflats not covered by seawater at low tide [1140]

The attributes and targets for Mudflats and sandflats not covered by seawater at low tide [1140]as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC (NPWS Version 1, 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in Table 7-2 below.

Table 7-2 Targets and attributes associated with nominated site-specific conservation objectives for Mudflats and sandflats not covered by seawater at low tide [1140]

Attribute	Target	Assessment
Habitat area	The permanent habitat area is stable or increasing, subject to natural processes.	There was no impact on habitat area associated with the grid connection development. There was no decline in this marine habitat area or distribution associated with the grid connection installation project. There were no works undertaken in this habitat as all works were

		confined to the road corridor and agricultural land. Pathways including water pollution that would allow impacts to occur were considered in the design of the project and a range of measures were in place to avoid all water pollution during all phases. Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.
Community distribution	The following community types should be maintained in a natural condition: Estuarine muds dominated by polychaetes and crustaceans community complex; and Sand dominated by polychaetes community complex.	There was no decline in the community distribution of this habitat associated with the grid connection development. There were no works within this habitat as all works were confined to the existing road corridor, immediate roadside habitat, track and fields. Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.

7.1.3 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]

The attributes and targets for Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC (NPWS Version 1, 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in Table 7-3 below.

Table 7-3 Targets and attributes associated with nominated site-specific conservation objectives for Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]

Attribute	Target	Assessment
Habitat distribution	No decline, subject to natural processes.	There was no impact on habitat area associated with the grid connection development. There was no decline in the habitat area or distribution associated of this QI habitat associated with the grid connection installation project. There were no works undertaken in this habitat as all works were confined to the existing road corridor and agricultural land. Pathways including water pollution that would allow impacts to occur were considered in the design of the project and a range of measures were in place to avoid all water pollution during all phases. Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.
Habitat area	Area stable at 12.6km or increasing, subject to natural processes.	
Hydrological regime: river flow	Maintain appropriate hydrological regimes	There was no alteration to the tidal regime associated with this habitat as a result of the installation of the grid connection route.
Hydrological regime: tidal influence	Maintain natural tidal regime	
Substratum composition: particle size range	For the tidal sub-type, the substratum of the channel must be dominated by particles of sand to gravel, with silt at the river margins	There were no instream works as part of the grid connection development. There were no alterations to the nutrient concentrations of the watercourses during concentration of the grid connection route. Indirect pathways that would allow impacts to occur were considered in the design of the
Water quality: nutrients	The concentration of nutrients in the water column must be sufficiently low to prevent changes in species composition or habitat condition	

		development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.
Vegetation composition: typical species	Typical species of the relevant habitat sub-type reach favourable status	There were no alterations to the vegetation composition of the habitat as a result of the development. Pathways including water pollution that could allow impacts to occur were considered in the design of the project and a range of measures were in place to avoid all water pollution during construction. No introduction of any non-native species occurred as a result of the development. Best practice measures were in place to avoid any such impact occurring.
Floodplain connectivity: area	The area of active floodplain at and upstream of the habitat must be maintained	There was no alteration to the flood zones and natural hydrological regime of the area as a result of the installation of the grid connection route.

7.1.4 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]*

The attributes and targets for Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]*as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC (NPWS Version 1, 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in Table 7-4 below.

*Table 7-4 Targets and attributes associated with nominated site-specific conservation objectives for Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]**

Attribute	Target	Assessment
Habitat area	Area stable or increasing, subject to natural processes, at least 18.7ha for sites surveyed.	There was no decline in the habitat area associated with the grid connection development. There were no works within any alluvial forest habitat and no alterations to woodland size which could change the habitat were not undertaken. No alluvial woodland habitat occurs within
Habitat distribution	No decline.	
Woodland size	Area stable or increasing. Where topographically possible, "large" woods	

Attribute	Target	Assessment
	at least 25ha in size and "small" woods at least 3ha in size	the grid connection project boundary. All works were confined to the existing road corridor and agricultural land.
Woodland structure: cover and height	Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer	There was no alteration to the woodland structure, vegetation composition, typical species, or the natural hydrological regime of the alluvial woodland habitat as no works took place within this habitat. All works were confined to the existing road corridor and agricultural land. Pathways including water pollution that could allow impacts to occur were considered in the design of the project and a range of measures were in place to avoid all water pollution during construction. No non-native species were introduced as a result of the development. Best practice measures were in place to avoid any such impact occurring. Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.
Woodland structure: community diversity and extent	Maintain diversity and extent of community types	
Woodland structure: natural regeneration	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy	
Hydrological regime: Flooding depth/height of water table	Appropriate hydrological regime necessary for maintenance of alluvial vegetation	
Woodland structure: dead wood	At least 30m³/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter in the case of alder)	
Woodland structure: veteran trees	No decline	
Woodland structure: indicators of local distinctiveness	No decline	
Vegetation composition: native tree cover	No decline. Native tree cover not less than 95%	
Vegetation composition: typical species	A variety of typical native species present, depending on woodland type, including alder (*Alnus glutinosa*), willows (*Salix spp*) and, locally, oak (*Quercus robur)* and ash *(Fraxinus excelsior*	
Vegetation composition: negative indicator species	Negative indicator species, particularly non-native invasive species, absent or under control	

7.1.5 *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]

The status of the freshwater pearl mussel (*Margaritifera margaritifera*) as a qualifying Annex II species for the Slaney River Valley SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this species. There are no SSCOs attributes and targets for *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] for Slaney River Valley SAC (NPWS Version 1, 2011).

Extrapolated targets and attributes for *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] from the SSCOs for Lower River Suir SAC [002137] (NPWS, Version 1, March 2017) were used and an assessment of the development against the nominated attributes and targets for the species is provided in Table 7-5 below.

Table 7-5 Extrapolated targets and attributes associated with nominated site-specific conservation objectives for Margaritifera margaritifera (Freshwater Pearl Mussel) [1029

Attribute	Target	Assessment
Distribution	Restore distribution	There was no direct impact on the distribution, population size or structure associated with the grid connection development. All works were confined to the existing road corridor and agricultural land. Pathways including water pollution that could allow impacts to occur were considered in the design of the project and a range of measures were in place to avoid all water pollution during construction which could have negatively impacted on the population of Freshwater Pearl Mussel within this European site.
Population size	Restore population	
Population structure: recruitment	Restore to at least 20% of each population no more than 65mm in length; and at least 5% of each population no more than 30mm in length	
Population structure: adult mortality	No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution	
Suitable habitat: extent	Restore suitable habitat and any additional stretches necessary for salmonid spawning	
Suitable habitat: condition	Restore condition of suitable habitat	
Water quality: macroinvertebrate and phytobenthos (diatoms)	Restore water quality - macroinvertebrates: EQR greater than 0.90 (Q4-5 or Q5); phytobenthos: EQR greater than 0.93	Alterations to the natural hydrological regime could affect the hydrological regime for the macroalgae and macrophytes, salmonid populations and fringing habitats necessary to support the *Margaritifera margaritifera* population. There was no alteration to the water quality of any watercourse as a result of the installation of the grid connection route. No instream
Substratum quality: filamentous algae (macroalgae); macrophytes (rooted higher plants)	Restore substratum quality - filamentous algae: absent or trace (less than 5%); macrophytes: absent or trace (less than 5%)	
Substratum quality: sediment	Restore substratum quality - stable cobble and gravel substrate with very	

Attribute	Target	Assessment
	little fine material; no artificially elevated levels of fine sediment	works occurred as part of this development.
Substratum quality: oxygen availability	Restore to no more than 20% decline from water column to 5cm depth in substrate	Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.
Hydrological regime: flow variability	Maintain appropriate hydrological regime	
Host fish	Maintain sufficient juvenile salmonids to host glochidial larvae	
Fringing habitat: area and condition	Restore the area and condition of fringing habitats necessary to support the population	

7.1.6 *Petromyzon marinus* (Sea Lamprey) [1095]

The attributes and targets for *Petromyzon marinus* (Sea Lamprey) [1095] as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC (NPWS Version 1 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in Table 7-6 below.

Table 7-6 Targets and attributes associated with nominated site-specific conservation objectives for Petromyzon marinus (Sea Lamprey) [1095]

Attribute	Target	Assessment
Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary	Pathways for impacts on water quality were considered in the design of the project and a range of measures were in place to avoid all water pollution during construction which could have negatively impacted on the sea lamprey population within this European site. There were no barriers to connectivity created as a result of the grid connection development. There were no impacts on the population structure of juveniles or juvenile density. There was no impact on the extent and distribution of spawning habitat or the availability of juvenile habitat as no instream works took place as part of this development.
Population structure of juveniles	At least three age/size groups present	
Juvenile density in fine sediment	Juvenile density at least 1/m^2	
Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds. Improved dispersal of spawning beds into areas upstream of barriers	
Availability of juvenile habitat	More than 50% of sample sites positive	

7.1.7 *Lampetra planeri* (Brook Lamprey) [1096]

The attributes and targets for *Lampetra planeri* (Brook Lamprey) [1096]as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC(NPWS Version 1, 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in Table 7-7 below.

Table 7-7 Targets and attributes associated with nominated site-specific conservation objectives for Lampetra planeri (Brook Lamprey) [1096]

Attribute	Target	Assessment
Distribution	Access to all water courses down to first order streams	Pathways for impacts on water quality were considered in the design of the project and a range of measures were in place to avoid all water pollution during construction which could have negatively impacted on lamprey population within this European site. There were no barriers to connectivity created as a result of the grid connection development. There were no impacts on the population structure of juveniles or juvenile density. There was no impact on the extent and distribution of spawning habitat or the availability of juvenile habitat as no instream works took place as part of this development.
Population structure of juveniles	At least three age/size groups of brook/river lamprey present	
Juvenile density in fine sediment	Mean catchment juvenile density of brook/river lamprey at least 2/m²	
Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds	
Availability of juvenile habitat	More than 50% of sample sites positive	

7.1.8 *Lampetra fluviatilis* (River Lamprey) [1099]

The attributes and targets for *Lampetra fluviatilis* (River Lamprey) [1099]as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC(NPWS Version 1 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in Table 7-8 below.

Table 7-8 Targets and attributes associated with nominated site-specific conservation objectives for Lampetra fluviatilis (River Lamprey) [1099]

Attribute	Target	Assessment
Distribution: extent of anadromy	Greater than 75% of main stem and major tributaries down to second order accessible from estuary	Pathways for impacts on water quality were considered in the design of the project and a range of measures were in place to avoid all water pollution during construction which could have negatively impacted on the lamprey population within the Slaney River Valley SAC.
Population structure of juveniles	At least three age/size groups of river/brook lamprey present	
Juvenile density in fine sediment	Mean catchment juvenile density of brook/river lamprey at least 2/m²	

Extent and distribution of spawning habitat	No decline in extent and distribution of spawning beds	There were no barriers to connectivity created as a result of the grid connection development. There were no impacts on the population structure of juveniles or juvenile density. There was no impact on the extent and distribution of spawning habitat or the availability of juvenile habitat as no instream works took place as part of this development.
Availability of juvenile habitat	More than 50% of sample sites positive	

7.1.9 *Alosa fallax fallax* (Twaite Shad) [1103]

The attributes and targets for *Alosa fallax fallax* (Twaite Shad) [1103]as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC (NPWS Version 1 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in Table 7-9 below.

Table 7-9 Targets and attributes associated with nominated site-specific conservation objectives for Alosa fallax fallax (Twaite Shad) [1103]

Attribute	Target	Assessment
Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary	Pathways for impacts on water quality were considered in the design of the project and a range of measures were in place to avoid all water pollution during construction which could have negatively impacted on the twaite shad population within the Slaney River Valley SAC. There were no barriers to rivers accessible from estuary created as a result of the grid connection development. There were no impacts on the population structure. There was no impact on the extent and distribution of spawning habitat as no instream works took place as part of this development.
Population structure-age classes	More than one age class present	
Extent and distribution of spawning habitat	No decline in extent and distribution of spawning habitats	
Water quality-oxygen levels	No lower than 5mg/l	There was no alteration to the water quality of any watercourse as a result of the installation of the grid connection route. Alterations to the natural hydrological regime could affect the hydrological regime for the macroalgae and macrophytes, oxygen levels in the water necessary to support the
Spawning habitat quality: Filamentous algae; macrophytes; sediment	Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth	

		Alosa fallax fallax (Twaite Shad) population. Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.

7.1.10 *Salmo salar* (Atlantic Salmon) (only in fresh water) [1106]

The attributes and targets for *Salmo salar* (Atlantic Salmon) (only in fresh water) [1106] as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC(NPWS Version 1 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in Table 7-10 below.

Table 7-10 Targets and attributes associated with nominated site-specific conservation objectives for Salmo salar (Atlantic Salmon) (only in fresh water) [1106]

Attribute	Target	Assessment
Distribution: extent of anadromy	100% of river channels down to second order accessible from estuary	There will be no reduction in the extent of anadromy for salmon within the SAC. The works are located >1.5km from the SAC and no potential for adverse effects was identified as a result of potential disturbance or deterioration in water quality associated with the development. Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction. There were no impacts on the population structure of adult spawning fish, salmon fry abundance, smolt abundance, number and distribution of redds as a result of the works, which included a suite of best practice to protect water quality and no instream works were undertaken.
Adult spawning fish	Conservation Limit (CL) for each system consistently exceeded	
Salmon fry abundance	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling	
Out-migrating smolt abundance	No significant decline	
Number and distribution of redds	No decline in number and distribution of spawning redds due to anthropogenic causes	

Attribute	Target	Assessment
Water quality	At least Q4 at all sites sampled by EPA	There was no decline in water quality as a result of the grid connection development. Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.

7.1.11 *Lutra lutra* (Otter) [1355]

The attributes and targets for *Lutra lutra* (Otter) [1355]as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC (NPWS Version 1, 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in **Error! Reference source not found.**Table 7-11 below.

Table 7-11 Targets and attributes associated with nominated site-specific conservation objectives for Lutra lutra (Otter) [1355]

Attribute	Target	Assessment
Distribution	No significant decline	There was no reduction in otter distribution as a result of the grid connection works. The works are located >1.5km from the SAC and no potential for adverse effects was identified as a result of potential disturbance or deterioration in water quality associated with the development. Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction.
Extent of terrestrial habitat	No significant decline. Area mapped and calculated as 64.7ha above high water mark (HWM); 453.4ha along river banks/ around ponds	The development did not result in the loss of any habitat anywhere within or outside of the SAC. In addition, there was no loss of supporting habitat for the species within the grid connection route which is located outside the SAC.
Extent of marine habitat	No significant decline. Area mapped and calculated as 534.7ha	
Extent of freshwater (river) habitat	No significant decline. Length mapped and calculated as 264.1km	

Attribute	Target	Assessment
Extent of freshwater (lake/lagoon) habitat	No significant decline. Area mapped and calculated as 0.4ha	Indirect pathways that would allow impacts to occur were considered in the design of the development and a range of measures were in place to avoid all water pollution during construction as described in Section 6.2.1.1.1.
Couching sites and holts	No significant decline	There was no loss of holting or couching sites within the SAC located >1.5km away.
Fish biomass available	No significant decline	There was no decline in availability of fish biomass created associated with the installation of the grid connection route. Pathways including water pollution that would allow impacts to occur were considered in the design of the project and a range of measures were in place during construction to avoid all water pollution during works.
Barriers to connectivity	No significant increase	There were no barriers to movement of otter created as a result of the grid connection route and thus no potential for barrier effects within the SAC were created.

7.1.12 *Phoca vitulina* (Harbour Seal) [1365]

The attributes and targets for *Phoca vitulina* (Harbour Seal) [1365] as per the Site Specific Conservation Objectives (SSCOs) for Slaney River Valley SAC(NPWS Version 1, 2011) and an assessment of the grid connection development against the nominated attributes and targets for the species is provided in Table 7-12 below.

Table 7-12 Targets and attributes associated with nominated site-specific conservation objectives for Phoca vitulina (Harbour Seal) [1365]

Attribute	Target	Assessment
Access to suitable habitat	Species range within the site should not be restricted by artificial barriers to site use.	The works are located >1.5km from the SAC and no potential for adverse effects was identified as a result of potential disturbance or deterioration in water quality associated with the development.

Attribute	Target	Assessment
		There was be no change in access to suitable habitat created as a result of the grid connection development.
Breeding behaviour	The breeding sites should be maintained in a natural condition.	The grid connection development did not affect breeding, moulting or resting sites. Pathways including water pollution that would allow impacts to occur were considered in the design of the project and a range of measures were in place to avoid all water pollution during works.
Moulting behaviour	The moult haul-out sites should be maintained in a natural condition.	
Resting behaviour	The resting haul-out sites should be maintained in a natural condition.	
Disturbance	Human activities should occur at levels that do not adversely affect the harbour seal population at the site.	The development is located >1.5km from the Slaney River Valley SAC (approximately 1.9km hydrological distance) and did not disturbance to this species.

7.2 Wexford Harbour and Slobs SPA [004076]

The potential for adverse effects on the SCI of Wexford Harbour and Slobs SPA, 'Wetland and Waterbirds [A999]' that was identified as being at risk of potential effects in the AA Screening Report is assessed in this section in view of its Conservation Objectives. A potential pathway for indirect effects on the SCI 'Wetlands and Waterbirds' was identified in the form of deterioration of water quality resulting from pollution associated with construction activities:

7.2.1 Wetland and Waterbirds [A999]

The attributes and targets for Wetland and Waterbirds [A999] as per the Site Specific Conservation Objectives (SSCOs) for Wexford Harbour and Slobs SPA [004076] (NPWS Version 1, March 2012) and an assessment of the grid connection development against the nominated attributes and targets for the SCI is provided in Table 7-13 below.

Table 7-13 Targets and attributes associated with nominated site-specific conservation objectives for Wetland and Waterbirds [A999]

Attribute	Target	Assessment
Wetland habitat area	The permanent area occupied by the wetland habitat (see map 3) should be stable and not significantly less than the area of 4,241ha, other than that due to natural patterns of variation	There was no direct impact on the wetland habitat area of this SPA from the cable route as no works took place in this habitat located approximately 15km hydrological distance downstream as all works were

		confined to the existing road corridor and agricultural land. A suite of best practice measures was incorporated into the project design to avoid and minimise potential impacts caused by degradation in water quality. Taking into consideration the preventative measures to avoid impact, it can be concluded that the grid connection development did not result in any impacts which could adversely affect the extent of wetland habitat area.

7.3 Conclusion of Residual Impact Assessment

Based on the above, in view of best scientific knowledge, on the basis of objective information, the grid connection route project did not adversely affect surface or ground water in the area during construction and will not adversely affect surface or ground water in the area during operation of the project. There is no potential for adverse effect on the identified QIs/SCIs and their associated targets and attributes, or on any European Site via this identified pathway, which was robustly blocked through measures to avoid impacts and the incorporation of best practice/mitigation measures into the project design.

Taking cognisance of measures to avoid impacts and best practice/mitigation measures incorporated into the project design which are considered in the preceding section, the project did not have an adverse effect on the integrity of any European site.

The project does not prevent the QIs/SCIs of European Sites from achieving/maintaining favourable conservation status in the future as defined in Article 1 of the EU Habitats Directive. A definition of Favourable Conservation Status is provided below:

> '*conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article* 2;

The conservation status will be taken as 'favourable' when:

> *'Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and*
>
> *The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and*
>
> *There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.'*

Based on the above, it can be concluded in view of best scientific knowledge, on the basis of objective information that the grid connection project does not adversely affect the Qualifying Interests/Special Conservation Interests associated with the following European sites:

- Slaney River Valley SAC (000781)
- Wexford Harbour and Slobs SPA [004076]

8. CUMULATIVE EFFECTS

8.1 Review of other plans and projects

The potential for the grid connection works to contribute to a cumulative impact on European Sites was considered.

A number of other relevant projects have also been considered in this assessment and are provided in Table 8-1 below.

8.1.1 Plans

Table 8-1 Review of plans and policies

Plans	Key Policies/Issues/Objectives Directly Related to European Sites, Biodiversity and Sustainable Development in the Zone of Influence	Assessment of development compliance with policy
Wexford County Development Plan 2013-2019	The Wexford County Development Plan 2013-2019 sets out Wexford County Council's intentions for the future development of land, including measures for the improvement of the natural and physical environment and the provision of infrastructure. The County Council have a number of policies and objectives relating to the protection, conservation and restoration natural heritage sites including specific objectives as described below: › **Objective WQ01** To protect existing and potential water resources for the county, in accordance with the EU Water Framework Directive (2000/60/EC), Bathing Water Directive (2006/7/ EC) the South-East River Basin Management Plan 2009-2015 and any updated version, the Pollution Reduction Programmes for designated shellfish waters, the provisions of Groundwater Protection Scheme for the county any other protection plans for water supply sources, with an aim to improving all water quality › **Objective WQ04** To ensure that developments permitted comply with the requirements of the EU Water Framework Directive, the relevant River Basin Management Plans and the Habitats Directive. › **Objective WQ05** To ensure that development permitted would not have an unacceptable impact on water quality and quantity, including surface water, ground water, designated source protection areas, river corridors and associated wetlands, estuarine waters, coastal and transitional waters. › **Objective AQ01** To have regard to the Air Quality Standards Regulation 2011 (S.I. No. 180 of 2011) when assessing planning applications for	The Development plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the Natura 2000 network, protection of water quality, energy creation, air quality standards. No potential for cumulative impacts were identified in conjunction with the grid connection development.

Plans	Key Policies/Issues/Objectives Directly Related to European Sites, Biodiversity and Sustainable Development in the Zone of Influence	Assessment of development compliance with policy
	development which may have effects on air quality. › **Objective EN01** To facilitate the achievement of a secure and efficient energy supply and storage for County Wexford. › **Objective EN02** To promote County Wexford as a low carbon county by 2019 as a means of attracting inward investment and to facilitate the development of energy sources which will achieve low carbon outputs. › **Objective EN11** To promote and facilitate wind energy development in accordance with Guidelines for Planning Authorities on Wind Energy Development (Department of Environment, Heritage and Local Government, 2006) and the Wind Energy Strategy which forms part of this Plan, subject to compliance with normal planning and environmental criteria and the development management standards contained in Chapter 18. › **Objective NH01** To conserve and protect the integrity of sites designated for their habitat/wildlife or geological/geomorphological importance and prohibit development which would damage or threaten the integrity of these sites, including SACs, cSACs, SPAs, NHAs, pNHAs, Nature Reserves, and Refuges for Fauna.	
County Wexford Biodiversity Action Plan 2013-2018	The overall aim for this Biodiversity Action Plan for County Wexford is; › To protect County Wexford's Biodiversity through actions and raising awareness Relevant key 5 objectives of the Wexford Biodiversity Action Plan include: › **Objective 1** - To identify Biodiversity information and fill data gaps for the County, to prioritise habitats and species for protection and to inform conservation action and decision making	The biodiversity action plan was comprehensively reviewed, with particular reference to Policies and Objectives that relate to the protection of Biodiversity. No potential for cumulative impacts were identified in conjunction with the grid connection development.

Plans	Key Policies/Issues/Objectives Directly Related to European Sites, Biodiversity and Sustainable Development in the Zone of Influence	Assessment of development compliance with policy
	Objective 2 - To make information on biodiversity available **Objective 3** - To raise awareness across all sectors, groups and ages, for the following; (a)Wexford's Biodiversity, (b) its value (c) the issues facing it, and (d) encourage people through using various media, training, and innovative initiatives to support biodiversity conservation. **Objective 4** - To promote and support best practice in biodiversity conservation, taking into account national and local priorities. **Objective 5 -** To incorporate and raise the profile of biodiversity conservation issues in the local authority's actions and policies	

8.2 Wind Farm Developments

This section identifies potential cumulative impacts of the grid connection together with other wind energy projects and local developments as described in Chapter 2 of the rEIAR. The grid connections connects the four separate windfarms Ballycadden, Ballynancoran, Gibbet Hill and Knocknalour Wind Farms (collectively referred to as the Crory Wind Farm Group (CWFG) to the national electricity grid at Crory ESB substation, County Wexford. These wind farms have undergone their own environmental impact assessments and any residual impacts have been taken into account as part of this assessment.

- The 4 no. wind farms that constitute the Crory Wind Farm Group (Ballycadden, Ballynancoran, Gibbet Hill, and Knocknalour) are connected to the national grid via the grid connection as discussed in Chapter 2 of the rEIAR.

8.2.1 Crory 110 kV Substation Site

The Crory 110 kV Substation has been subject to 2 no. planning applications lodged by EirGrid, on behalf of the ESB, and one application lodged by ESB between 2008 and 2010. These applications have been summarised below:

- **Pl Ref. 2008/2620**: Planning application by EirGrid for a variation to a previously approved permission under Pl Ref. 2007/0373 for the proposed Lodgewood 220 kV substation. The alterations consist of the reduction in size of station control building, the inclusion of 1 no. new 110 kV cable bay and associated structures, 4 no. lightning masts of height 20.25m, 9 no. prefabricated units and 1 no. interface kiosk. The application also proposed the relocation of 1 no. 220 kV line bay, 1 no. 220 kV transformer bay and associated portals and equipment. Conditional permission was granted by the Planning Authority on the 20th of February, 2009.
- **Pl Ref. 2010/0469**: Planning application by EirGrid for alterations to Lodgewood 220 kV substation, the alterations consist of new 110 kV cable bay, ipp interface kiosk, 25m high lightning mast, new ipp compound to include new palisade fence and gates, new internal access road and associated site works. Conditional permission was granted by the Planning Authority on the 30th of July, 2010.
- **Pl Ref. 2010/0634**: Planning application by the ESB for the development including a new 110 kV electrical transformer station, as an extension to the existing Lodgewood 220 kV substation site, consisting of control building, 3 no. 110 kV transformers, new internal access road and new palisade compound fence and gates, new bio-cycle unit with raised percolation area and new oil interceptor. The proposal also included alterations to the existing Lodgewood 220 kV electrical transformer station consisting of 3 no. 110 kV cable bays with interface kiosks, one no. 25m high lightning mast and associated site works. Conditional permission was granted by the Planning Authority on the 12th of November, 2010.

There were no further applications attached to the Crory 110 kV substation on record.

8.2.2 Other Wind Farm Sites

Within the wider area of the subject grid connection, there have been a number of planning applications lodged for wind farm developments; specifically, Castledockrell Wind Farm, Ballaman Wind Farm and Ballyduff Wind Farm. The relevant planning history of these wind farm applications is summarised below.

Ballyduff and Ballaman wind farms are connected to the national grid via a separate, single shared underground cable installed within a duct which connects to Crory 110kV substation. It is important to note that although both of these wind farms share portions of the same underground cable route and sections of the same excavated trench used by the CWFG for the subject grid connection, these two wind farms are not part of the wind farm group.

8.2.2.1 Castledockrell Wind Farm

- **Pl. Ref. 2004/1077**: Application by Castledockrell Wind Group Ltd. for the construction of a wind farm comprising of 9 no. wind turbines, with tower heights not exceeding 85m and rotor diameters not exceeding 71.5m., and ancillary buildings, incidental site works, including site roads, in the townlands of Carranroe, e.d. Castledockrell, Ballynelahillan, e.d. Castledockrell, Kilcullen, e.d. Ballindaggan, Sroughmore, e.d. Ballindaggan and Knockduff, e.d. Ballindagan. An EIS was submitted to the Planning Authority with the application. The application was withdrawn on the 25th of June, 2004.
- **Pl Ref. 2004/4702**: Application by Castledockrell Wind Group Ltd. for the construction of a wind farm comprising of 11 no. wind turbines, with tower heights not exceeding 85m and rotor diameters not exceeding 71.5m., and ancillary buildings, incidental site works, including site roads, in the townlands of Carranroe, e.d. Castledockrell, Ballynelahillan, e.d. Castledockrell, Kilcullen, e.d. Ballindaggan, Sroughmore, e.d. Ballindaggan and Knockduff, e.d. Ballindagan. An EIS was submitted to the Planning Authority with the application. Conditional permission was granted by the Authority on the 16th of March, 2005 which was subject to a 1st Party appeal to An Bord Pleanála in order to amend Condition 7 attached to the grant of permission. An Bord Pleanála decided not to amend the condition as per its powers under Section 146A of the Planning and Development Act 2000 (as amended). refused to amend.
- **Pl Ref. 2005/3945**: Application by Castledockrell Wind Group Ltd. for the construction of a 110kv sub-station and perimeter fence and incidental site works (to service Castledockrell Wind Farm). The substation will consist of a compound measuring approximately 39m x 18m, and in addition to electrical equipment, will contain a general purpose building measuring approximately 9.64m x 7.14m. Conditional planning permission was granted by the Planning Authority on the 3rd of March, 2006.
- **Pl Ref. 2007/3077**: Application by Bolamore Wind Farms Ltd. for the erection of a single wind turbine, as an extension to Castledockrell Wind Farm, and ancillary buildings, incidental site works, including site roads. The Planning Authority decided to refuse permission for the proposed development on the 11th of October 2007.
- **Pl Ref. 2008/0335**: Application by Bolamore Wind Farms Ltd. for the erection of a single wind turbine, as an extension to Castledockrell Wind Farm, and ancillary buildings, incidental site works, including site roads. The tower height will not exceed 85m and the rotor diameter will not exceed 72m. The anticipated output from the turbine will be 2.3mw. Conditional planning permission was granted by the Planning Authority for the development on the 9th of May, 2008.

The Castledockrell Wind Farm was commissioned in 2011 and is currently operational.

8.2.2.2 Ballaman Wind Farm

- **Pl Ref. 2002/3959**: Application by K. Rothwell for the erection of a wind farm consisting of 3 wind turbines and service roadways. The developer also proposed to erect an electrical transformer compound, control housing and anemometer on the same site. The Planning Authority decided to refuse permission for the proposed development on the 21st of February, 2003.
- **Pl Ref. 2003/3445**: Application by K. Rothwell for the erection of a wind farm consisting of 3 wind turbines and service roadways at Ballaman, Moneydurtlow and Tombrack townlands. The developer also applied to erect an electrical transformer compound,

control housing and anemometer. Conditional planning permission was granted by the Planning Authority for the development on the 2nd of December, 2003.

- **Pl. Ref. 2010/0733**: Application by K. and M. Rothwell for the construction for a wind farm comprising of up to 2 no. turbines, with a hub height of up to 85m and a blade length of up to 45m, and the construction of an electrical substation, site roads and associated ancillary services at Ballaman and Moneydurtlow, Tombrack. Conditional permission was granted by the Authority on the 5th of November, 2011.

The Ballaman Wind Farm was commissioned in 2013 and is currently operational.

8.2.2.3 Ballyduff Wind Farm

- **Pl. Ref. 2003/4003**: Application by C. Brennan for the construction of a wind farm comprising of 2 no. turbines not exceeding 85 metres hub height with a rotor diameter not exceeding 80 metres, and ancillary buildings and roadways at Ballyduff, Kilcomb. Conditional permission was granted by the Authority on the 16th of April, 2004. The Ballyduff Wind Farm was commissioned in 2017 and is currently operational.

8.3 Other Projects

The potential for the grid connection development to contribute to a cumulative impact on European Sites was considered. The online planning system for Wexford County Council was consulted on the 28/02/2020. Additional projects identified in the townlands listed in **Error! Reference source not found.** f rom the last 5 years were considered and include but are not restricted to those projects listed below.

These comprised general residential, agricultural and infrastructural developments typical of rural areas:

- Permission for retention domestic garages and retention of attic conversion to existing dwelling previously granted under planning reg no. 20071965 and associated site works (Planning Ref.: 20190720),
- Permission to erect an extension to the school including the following; 1. Single classroom extension to the rear of existing school, 2. Extend existing classroom to the rear of existing school, 3. New link corridor with office space along with associated site works (Planning Ref.: 20170169),
- Retention Of (A) Extensions To Dwelling House, (B) Existing Domestic Stores And (C) Extension To Existing Structure (Previously Used As Boarding Kennels) Together With All Ancillary Site Development Works On Site(Planning Ref.: 20170023),
- The construction of anaerobic digestion and organic fertiliser production facility, comprising of 1 no. Digester tank, 1 no. Storage tank, 1 no. Combined heat and power unit, 1 no. Flare, bio filter, agricultural feedstock storage, parking space and all associated site works and services. (Planning Ref.: 20160469),
- Permission for the construction of an anaerobic digestion facility comprising of 1 no. Reception building, 1 no. Digester tank, 3 nos. Pre storage tanks, 1 no. Storage tank, 1 no. Combined heat and power unit, 1 no. Flare, biofilter, office/toilets & control room, weighbridge, wheel wash area, access road, parking spaces, wastewater treatment system and all associated site work. The development also requires a waste facility permit under regulations 2007 (S.I. 821 of 2007 & S.I. 86 of 2008) (Planning Ref.: 20151267),
- Permission to demolish existing fire damaged dwelling house and replace it with a new dwelling and connect to existing services on site (Planning Ref.: 20180555)
- Permission to erect a dwelling with services and domestic garage (Planning Ref.: 20191167),
- Underground MV ducting and cabling linking existing and proposed substations (Planning Ref.: EXD00737),
- Permission for the erection of a dwelling house, domestic garage/ store and associated works (Planning Ref.: 20180933),

- Permission for retention for change of location of waste water treatment system (Planning Ref.: 20180299),
- Permission for retention of (a) alterations to dwelling house (b) erection of a domestic garage and store and all associated site layout alterations, that was previously granted under Pl. Reg. No 20062956 (Planning Ref.: 20171631),
- Permission for the development of a solar PV panel array comprising photovoltaic panels on ground mounted frames within a site area of 7.96 hectares , 4 no. Single storey mv substations, 1 no. Single storey DSO substation, 1 no. Single storey customer substation with 1 no. Communications pole attached , 1 no single storey spares building, boundary security fencing, CCTV, associated, electrical cabling and ducting, alteration to existing entrance to include access gates, access track and all associated ancillary development and landscaping works (Planning Ref.: 20161231),
- Erection of fully serviced dwelling house, septic tank and percolation area, domestic garage and permission to demolish outbuildings and associated site works (Planning Ref.: 20160954),
- Permission for the construction of up to 5mw solar PV farm development within a site area of up to 9.66 ha to include a single storey electrical substation building, electrical transformer/inverter station modules, solar PV panels ground mounted on steel support structures, access roads, fencing and associated electrical cabling, ducting and ancillary infrastructure (Planning Ref.: 20161097),
- Permission for a change of house and garage design from that permitted under 20151001, with services and all associated site and ancillary works (Planning Ref.: 20180631),
- Permission for retention of alterations to our dwelling as a change to that permitted under planning reference 20160249 and permission for retention of revised site boundaries and all associated works (Planning Ref.: 20180394),
- Permission to construct slatted cattle shed, concrete aprons and all associated site works in existing farmyard (Planning Ref.: 20180176),
- Permission for the construction of a fully serviced single storey dwelling incorporating domestic garage, effluent treatment system, and associated site works (Planning Ref.: 20190986),
- Permission for development consisting of one lattice type meteorological mast not exceeding 30 metres in height, underground electrical cables and associated works (Planning Ref.: 20180398),
- Underground mv ducting and cabling linking existing and proposed substations (Planning Ref.: EXD00691),
- (1) retention of (a) the usage of part of the existing building on site as car servicing and valeting garage, (b) the usage of part of an existing outbuilding on site as office accommodation, and (c) retention of the existing septic tank on site, also for (2) permission for (a) the erection of a new commercial building including offices and workshop on site, (b) the erection of a covered bunded storage shed, (c) the extension of the existing yard space for the parking of vehicles with associated surface water drainage, (d) the installation of a car wash down area hardstanding and associated drainage, interceptor and recycled water storage tank, (e) the proposed erection of fencing to boundaries of new yard area, (f) all associated new drainage and new foul percolation area to serve the site and (g) installation of a water attenuation tank to attenuate surface water from existing yard prior to discharge to existing drainage, together with all associated site works and ancillary services on site (Planning Ref.: 20190913).

In the review of the other projects that was undertaken, no connection between the sites, that could potentially result in additional or cumulative impacts was identified. Neither was any potential for different (new) impacts resulting from the combination of the various projects and plans in association with the grid connection cable route.

Taking into consideration the reported residual effects from other plans and projects in the area and the predicted effects with the current proposal, no potential for significant cumulative effects on any European site exists.

8.3.1 Conclusion of Cumulative Assessment

Following the detailed assessment provided in the preceding sections, it is concluded that, the grid connection development has not resulted in any residual adverse effects on any of the European Sites, their integrity or their conservation objectives when considered on its own. There is therefore no potential for the grid connection development to contribute to any cumulative adverse effects on any European Site when considered in-combination with other plans and projects.

In the review of the projects that was undertaken, no connection, that could potentially result in additional or cumulative impacts was identified. Neither was any potential for different (new) impacts resulting from the combination of the various projects and plans in association with the grid connection development.

Taking into consideration the reported residual impacts from other plans and projects in the area and the predicted impacts with this project, no residual cumulative impacts have been identified with regard to any European Site.

9. CONCLUDING STATEMENT

This rNIS has provided an assessment of all potential direct or indirect adverse effects on European Sites

Where the potential for any adverse effect on any European Site was identified, the pathway by which any such effect may have occurred was robustly blocked through the use of avoidance, appropriate design and mitigation measures as set out within this report. The measures implemented as part of the project ensured that the construction and operation of the development did not have any adverse effect on the integrity of any European sites.

Therefore, it can be objectively concluded that the grid connection works, individually or in combination with other plans or projects, did not have an adverse effect on integrity of any European Site.

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APPENDIX 1

APPROPRIATE ASSESSMENT SCREENING REPORT

Planning and Environmental Consultants

Remedial Article 6(3) Appropriate Assessment Screening Report

Grid Connection Route Remedial Assessment

DOCUMENT DETAILS

Client:	**A & L Goodbody Crory Wind Farm Group**
Project Title:	**Grid Connection Route Remedial Assessment**
Project Number:	**190806**
Document Title:	**Remedial Article 6(3) Appropriate Assessment Screening Report**
Document File Name:	**rAASR F – 2020.03.06 - 190806**
Prepared By:	**MKO** **Tuam Road** **Galway** **Ireland** **H91 VW84**

Planning and Environmental Consultants

Rev	Status	Date	Author(s)	Approved By
01	Final	06/03/2020	AJ/CS/LK	JH

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1. INTRODUCTION

1.1 Background

MKO has been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Screening for Appropriate Assessment of a constructed grid connection route and associated works as described below. This remedial Appropriate Assessment Screening Report (rAASR) has been prepared for the purposes of an application to An Bord Pleanála for substitute consent. Leave to apply for substitute consent has already been granted to the ESB.

Screening for Appropriate Assessment is required under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Where it cannot be excluded that a project or plan, either alone or in combination with other projects or plans, would have a significant effect on a European Site then same shall be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives. The current project is not directly connected with, or necessary for, the management of any European Site, consequently the project has been subject to the Appropriate Assessment Screening process.

The assessment in this report is based on a desk study and field surveys undertaken in November 2019 by MKO. It specifically assesses the potential for the development to result in significant effects on European sites in the absence of any best practice, mitigation or preventative measures.

This remedial Appropriate Assessment Screening Report has been prepared in accordance with the European Commission's *Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC* (EC, 2001) and *Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC* (EC, 2018) as well as the Department of the Environment's *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities* (DoEHLG, 2010).

In addition to the guidelines referenced above, the following relevant documents were also considered in the preparation of this report:

1. *Council of the European Commission (1992) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.*
2. *EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.*
3. *EC (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 interest, compensatory measures, overall coherence. Opinion of the commission,*
4. *EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.*

1.2 Appropriate Assessment

1.2.1 Screening for Appropriate Assessment

Screening is the process of determining whether an Appropriate Assessment is required for a plan or project. Under Part XAB of the Planning and Development Act, 2000, as amended, screening must be carried out by the Competent Authority. As per Section 177U of the Planning and Development Act, 2000, as amended '*A screening for appropriate assessment shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site*'. The Competent Authority's determination as to whether an Appropriate Assessment is required must be made on the basis of objective information and should be recorded. The Competent Authority may request information to be supplied to enable it to carry out screening.

Consultants or project proponents may provide for the competent authority, the information necessary for them to determine whether an Appropriate Assessment is required and provide advice to assist them in the Article 6(3) Appropriate Assessment Screening decision.

Where it cannot be excluded beyond reasonable scientific doubt at the Screening stage, that a plan or project, individually or in combination with other plans and projects, would have a significant effect on the conservation objectives of a European site, an Appropriate Assessment is required.

Where an Appropriate Assessment is required, the Competent Authority may require the applicant to prepare a Natura Impact Statement.

The term Natura Impact Statement (NIS) is defined in legislation[1]. An NIS, where required, should present the data, information and analysis necessary to reach a definitive determination as to 1) the implications of the plan or project, alone or in combination with other plans and projects, for a European site in view of its conservation objectives, and 2) whether there will be adverse effects on the integrity of a European site. The NIS should be underpinned by best scientific knowledge, objective information and by the precautionary principle.

This Article 6(3) Appropriate Assessment Screening Report has been prepared in compliance with the provision of section 177U of the Planning & Development Act 2010 as amended.

1.2.2 Statement of Authority

Baseline ecological surveys were undertaken on the 14th and 15th November 2019 by Laoise Kelly (B. Sc. Env) of McCarthy Keville O'Sullivan (MKO). This report has been prepared by Aoife Joyce (B.Sc., M.Sc.), Claire Stephens (B.Sc. Env.) and Laoise Kelly who has over 5 years' experience working in environmental consultancy. The report has been reviewed by John Hynes (B.Sc., M.Sc., MCIEEM) who has over 8 years' experience in ecological assessment.

1 As defined in Section 177T of the Planning and Development Act, 2000 as amended, an NIS means a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own and in combination with other plans and projects, for a European site in view of its conservation objectives. It is required to include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for the European site in view of its conservation objectives

2. DESCRIPTION OF THE DEVELOPMENT

2.1 Site Location

The subject grid connection route is located approximately 3 kilometres west of Ferns, Co. Wexford at its nearest point (Figure 2.1). The route extends from the existing Crory 110 kV substation in the south to the Knocknalour and Ballynancoran windfarms in the north, a straight line distance of approximately 12 kms. A spur to the east extends to the Ballycadden Wind Farm, and a spur to the west extends to the Gibbet Hill Wind Farm.

The entire development is located within the River Slaney and Wexford Harbour Water Framework Directive (WFD) catchment and is included in 3 regional surface water sub-catchments. The majority of the development is located within the Slaney_SC_060 sub-catchment. Two short sections are located in other sub-catchments. These include a small section to the north which is located in the Slaney_SC_040 sub-catchment and a short section to the south which is located within the Bann [Wexford]_SC_010.

The subject grid connection route runs southeast through Knocknalour Wind Farm and emerges onto the existing public road network at Grid ref: E298402 N159504. From here, the underground cable runs south along the L-5114, the L-5143, the L-5141, the L-5133, the L-5132, and the L-6072 crossing the R-745 at Grid Ref: E298499 N149371. The cable route diverges from the public road at Grid Ref: E298662 N148494 and runs west across agricultural fields, finishing at the Crory 110kV substation in Tincurry.

The western spur of the grid connection route that serves the Gibbet Hill Wind Farm exits the wind farm site at the approximate grid reference E294526 N157843 and runs east along the L-1017 before joining the cable from Knocknalour Wind Farm at the L-5143 junction.

The eastern spur that serves the Ballycadden Wind Farm joins the L-1017 at the approximate grid reference E299626 N155319 and runs east along this road before turning south and following the L-5138 southwest to the L-5141 junction at Tombrack. All of the cable route lines continue south in the same trench from this point to the substation.

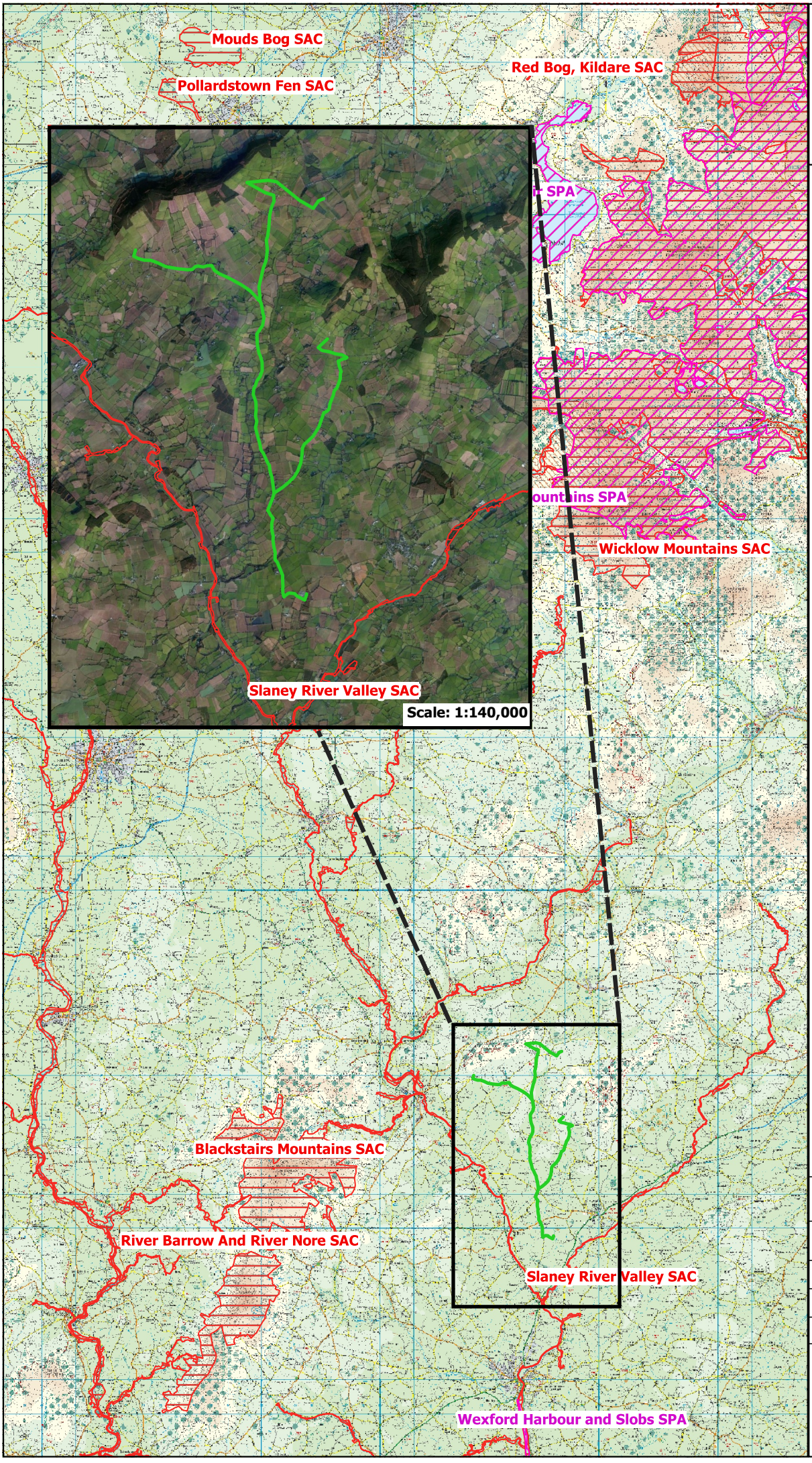
2.2 Characteristics of the Development

2.2.1 Description of the project

The grid connection is a medium voltage 20kV grid connection and comprises c. 26km of 20kV underground cable, c. 2km of 20kV overhead powerline and includes all ancillary works in the townlands of Ballyroebuck, Ballyandrew, Tincurry, Ballaman, Ballynancoran, Corah, Kiltilly, Curralane Oldtown, Knocknalour, Moneydurtlow, Bolinahaney, Bolacaheer, Graigue More, Tombrack, Boris, Ballycarney, Curraduff and Boolnadrum, Co. Wexford.

The underground grid connection was designed to follow the existing public road network which consists of 10 natural watercourses and numerous small storm drainage pipe crossings at various locations along the route. Underground cables were installed using existing bridges/culverts where they crossed the River Slaney tributaries except for two crossings, crossing no. 1 located at Corah Bridge and crossing and no. 6 at Borris Stream (see Figure 3.2 of the rNIS). These were installed using a Horizontal Directional Drilling (HDD) method which assisted in removing the potential for direct impacts on the watercourses.

A 20kV overhead power line was constructed to connect the Ballynancoran wind farm to the substation at the Knocknalour wind farm. The overhead line is approximately 2 kilometres in length and consists



Map Legend

- Special Area of Conservation
- Special Protection Area
- Grid Connection Route

N

Drawing Title

Site Location

Project Title: A&L Goodbody Crory WF Group	
Drawn By: CS	Checked By: LK
Project No.: 190806	Drawing No.: Figure 2.1
Scale: 1:300000	Date: 03.03.2020

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email:info@mkoireland.ie
Website: ww.mkoireland.ie

of three overhead lines supported by standard single wooden poles. The poles measure between 9 and 12.5 metres in height and are spaced approximately every 100 metres.

The construction techniques used to construct the overhead line were in line with international best practice and fully comply with all ESB and health and safety requirements. Pole base excavation and erection was carried out using a rubber wheeled or tracked excavator. One natural watercourse is crossed by the overhead line, however there were no impacts to this watercourse associated with the construction or operation of the line.

2.2.2 Description of the Baseline Ecological Environment

Assessing the impacts of any project and associated activities requires an understanding of the ecological baseline conditions prior to and at the time of the project proceeding. Ecological baseline conditions are those existing in the absence of development activities (CIEEM 2018).

Multidisciplinary walkover surveys were conducted on the 14th and 15th November 2019 in line with NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes) by Laoise Kelly (B.Sc.). This is outside the optimal time of year to undertake a habitat and flora survey (Smith *et al.* 2011), however habitats within and adjacent to the site were regularly occurring in both a local and a national context and a full habitat survey was achieved. Due to the small scale and nature of the works within the road corridor and agricultural land.

Habitats were identified in accordance with the Heritage Council's 'Guide to Habitats in Ireland' (Fossitt, 2000). Habitat mapping was undertaken with regard to guidance set out in 'Best Practice Guidance for Habitat Survey and Mapping' (Smith et al., 2011). Plant nomenclature for vascular plants follows 'New Flora of the British Isles' (Stace, 2019), while mosses and liverworts nomenclature follows 'Mosses and Liverworts of Britain and Ireland - a field guide' (British Bryological Society, 2010).

The walkover survey was designed to detect the presence, or likely presence, of a range of protected species. Habitats considered to be of ecological significance and having the potential to correspond to those listed in Annex I of the EU Habitats Directive 92/43/EEC were identified as such during the walkover survey. The multidisciplinary walkover survey comprehensively covered the entire study area of the subject grid connection route and surrounding habitats.

2.2.2.1 Habitats

This section provides a description of the grid connection which extends from the Crory 110 kV substation in the south to the Knocknalour and Ballynancoran windfarms in the north, a straight line distance of approximately 12km. A spur to the east extends to the Ballycadden Wind Farm and a spur to the west extends to the Gibbet Hill Wind Farm. The grid connection comprises a medium voltage 20 kV grid connection, comprising c. 26 km of 20 kV underground cable and c. 2 km of 20 kV overhead powerline, and all ancillary works in the townlands of Ballyroebuck, Ballyandrew, Tincurry, Ballaman, Ballynancoran, Corah, Kiltilly, Curralane Oldtown, Knocknalour, Moneydurtlow, Bolinahaney, Bolacaheer, Graigue More, Tombrack, Boris, Ballycarney, Curraduff and Boolnadrum, Co. Wexford. (Approx. Grid Ref: E298680; N148426 to E298475; N15989).

The most southerly section of the grid connection starts at the existing Crory 110kV substation The underground cable runs west from the substation through ***Improved Agricultural Grassland (GA1)*** and adjacent to the access road within ***Dry Meadows and Grassy Verge (GS2)*** habitat (Plate 2-1). The route then joins the local road and progresses north through the townlands of Ballycarney, Corah and Tombrack. On reaching Tombrack the route diverges east towards Ballycadden Wind Farm (**Error! Reference source not found.**). The main line of the route progresses north from Tombrack and onwards to the townland of Knocknalour. The western spur of the underground connection diverges from the townland of Ballyroebuck towards Gibbet Hill (Plate 2-3). Adjacent habitats along the underground grid connection route include ***Dry Meadows and Grassy Verges (GS2), Hedgerows (WL1)***, ***Stone Walls***

(BL1), Treeline (WL2), Scrub (WS1) an example of which is shown in Plate 2-4. Occasional residential property categorised as ***Buildings and Artificial Surfaces (BL3)*** was also recorded along the grid connection route. There were no works within adjacent habitats as part of the underground grid connection works. Species recorded within the dry meadows and grassy verges habitat included Dandelion (*Taraxacum officinalis agg.*), Yorkshire Fog (*Holcus lanatus*), Cock's-foot (*Dactylus glomerata*), Wild Carrot (*Daucus carota*), Woundwort (*Stachys sylvatica*), Great Willowherb (*Epilobium hirsutum*), Bush Vetch (*Viccia sepium*), Bracken (*Pteridium aquilinum*), Bramble (*Rubus fruticosus agg.*) and Ivy (*Hedera helix*).

The overhead section of the grid connection is located in the townlands of Knocknalour and Ballynancoran in the northernmost section of the route. The overhead section begins at Knocknalour Wind Farm and heads in an easterly direction towards Ballynancoran Wind Farm for a length of approximately 2km. This section of cable traverses fields categorised as ***Improved Agricultural Grassland (GA1)*** and ***Arable Crops (BC1)*** comprising turnip (Plate 2-5). Species within the improved agricultural grassland included Perennial Rye-grass (*Lolium perenne*), Yorkshire Fog (*Holcus lanatus*), Clover (*Trifolium spp.*), Mouse-eared Chickweed (*Cerastium fontanum*), Nettle (*Urtica dioica*) and Pineapple Weed (*Matricaria discoidea*).

Plate 2-1 Grid connection was placed within the Dry meadows and Grassy Verge (GS2) habitat adjacent to the access road to Crory 110kV substation.

Plate 2-2 Looking north towards Ballycadden Wind Farm in the townland of Boolnadrum. Showing *Hedgerow (WL1)* and *Treeline (WL2).*

Plate 2-3 Looking north in the townland of Ballycarney showing the road categorised as *Buildings and Artificial Surfaces (BL3*) and adjacent habitats; *Dry Meadows and Grassy Verges (GS2)*, *Stone Walls and Other Stone Works (BL1) and Hedgerow (WL1).*

Plate 2-4 Looking west towards Gibbet Hill Wind Farm in the townlands of Borris/Bolinahaney. Showing *Dry Meadows and Grassy Verges (GS2)* and *Hedgerow (WL1).*

Plate 2-5 Looking east towards Ballynancoran Wind Farm in the northernmost section of the route.

Watercourse Crossings

There are 10 no. natural watercourse crossings along the grid connection the locations of which are shown in Figure 3.2 of the rNIS. In addition, there are numerous small storm drainage pipe crossings at

various locations along the Grid Connection route (see as-built drawings, Appendix 3-1 of the rEIAR). Underground cables were installed using existing bridges/culverts where they crossed the River Slaney tributaries except for two crossings, crossing no. 1 located at Corah Bridge and crossing and no. 6 at Borris Stream (see Figure 3.2 rNIS). These were installed using a Horizontal Directional Drilling (HDD) method which assisted in removing the potential for direct impacts on the watercourses.

Third Schedule Invasive Species

Third Schedule invasive species, Bohemian Knotweed (*Fallopia bohemica*), was recorded in one area along the grid connection route on both sides of the road in the townland of Boolnadrum (approx. grid ref. E300394; N155108 to E300347; N155089) (Plate 2-6). All works in this area were confined to the existing road and did not impact on this Third Schedule species.

Plate 2-6 Example of Bohemian Knotweed located adjacent to the road in Boolnadrum (approx. grid ref. E300394; N155108 to E300336; N155089)

2.2.3 Fauna Present Within the Development Route

2.2.3.1 Birds

The works were restricted to the existing road curtilage and approx. 2km of overhead cable traverses habitat categorised as improved agricultural grassland and arable crop. Bird species observed in the wider area during the site visits included Buzzard (*Buteo buteo*), Rook (*Corvus frugilegus*), Kestrel (*Falco tinnunculus*) and Starling (*Sturnus vulgaris*). No Annex I bird species or species associated with the nearby Wexford Harbour and Slobs SPA or any other SPA were recorded. A detailed bird survey was not conducted as part of the ecological assessment and grid connection route and the species assemblage recorded during the site visit is typical of the survey effort and habitats present within the study area. It is likely that a greater variety of species occur within the wider landscape. No instream works occurred therefore there was no potential for impact on wetlands or waterbirds associated with the SPA.

2.2.3.2 Mammals

Otter

An otter (*Lutra lutra*) survey was conducted in line with the NRA Guidelines. Otter surveys were conducted at each watercourse crossing. Potential evidence of Otter was recorded in the form of prints at watercourse no. 3. No evidence of Otter was recorded at any additional watercourse. It is likely that the watercourses are used by Otter as a feeding area/commuting corridor, however no spraints, holts or couches were recorded. The works are located in the existing road curtilage, improved agricultural grassland and arable crop and are therefore unlikely to have impacted on any suitable Otter habitat. Works within the agricultural fields were restricted to the erection of overhead line comprising poles between 9 and 12.5 metres in height and spaced approximately 100 metres apart. Pole base excavation and erection was carried out using a rubber wheeled or tracked excavator and there was no impact on the watercourse crossing in this section.

2.2.3.3 Other Fauna

Records are held by the NBDC for Annex II listed species Freshwater Pearl Mussel within the hectads pertaining to the development site. The watercourses associated with the works also had potential to support other aquatic species such as White-clawed Crayfish (*Austropotamobius pallipes*), Salmon (*Salmo salar*), Eel (*Anguilla anguilla*) and Lamprey species No instream works were carried out, therefore there was no impact on these watercourses or associated species.

2.2.3.4 Significance of Flora

No Annex I habitats occur within the works area, i.e. the existing road and agricultural lands. All underground grid connection works were restricted to the existing road corridor and agricultural land. The overhead grid connection traverses habitats categorised as improved agricultural grassland and arable crop which were assigned Local Importance (lower value).

The watercourses adjacent to the works are of ecological significance as they may act as a potential conduit for pollution to downstream habitats of ecological sensitivity. Consequently, all watercourses have been assigned *Local Importance (higher value).* No instream works took place as part of these works.

None of the other habitats recorded at or within the vicinity of the proposed development are of particular conservation significance and were categorized as Local Importance (lower value).

2.2.3.5 Significance of Fauna

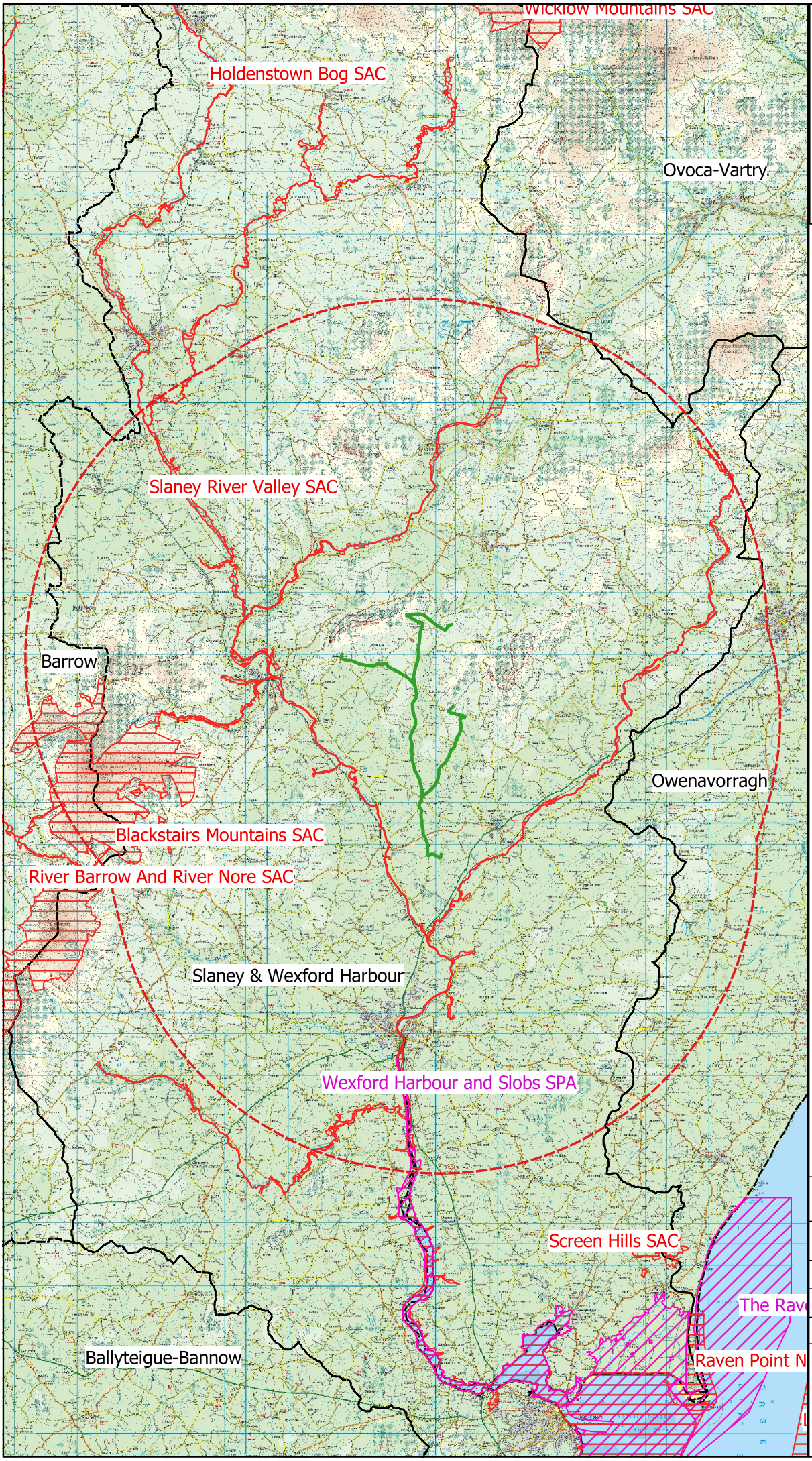
No EU Habitats Directive Annex species were recorded within the works area during the field surveys. Potential evidence of Otter in the form of prints was recorded at crossing no. 3. The watercourse crossings along the grid connection route have potential to support a number of European protected species such as Freshwater Crayfish, Salmon, Lamprey and Freshwater Pearl Mussel. However, these were not impacted as there were no instream works as part of the grid connection development. The grid connection works were small in nature and scale and restricted to the curtilage of the road and improved agricultural land.

3. IDENTIFICATION OF RELEVANT EUROPEAN SITES

3.1 Identification of the European Sites within the Likely Zone of Impact

The following methodology was used to establish which European Sites are within the Likely Zone of Impact of the development:

- Initially the most up to date GIS spatial datasets for European designated sites and water catchments were downloaded from the NPWS website (www.npws.ie) and the EPA website (www.epa.ie) on the 03/03/2020. The datasets were utilized to identify European Sites which could feasibly be affected by the development.
- All European Sites within a distance of 15km surrounding the development site were identified and are shown on Figure 3.1. In addition, the potential for connectivity with European Sites at distances of greater than 15km from the development was also considered in this initial assessment. In this case, no potential connectivity with sites located at a distance of over 15km from the development was identified.
- The catchment mapping was used to establish or discount potential hydrological connectivity between the site of the development and any European Sites. The hydrological catchments are also shown in Figure 3.1.
- In relation to Special Protection Areas, in the absence of any specific European or Irish guidance in relation to such sites, the Scottish Natural Heritage (SNH) Guidance, 'Assessing Connectivity with Special Protection Areas (SPA)' (2016) was consulted. This document provides guidance in relation to the identification of connectivity between development and Special Protection Areas. The guidance takes into consideration the distances species may travel beyond the boundary of their SPAs and provides information on dispersal and foraging ranges of bird species which are frequently encountered when considering plans and projects.
- Table 3.1 provides details of all relevant European Sites as identified in the preceding steps and assesses which are within the likely Zone of Impact. The assessment considers any likely direct or indirect impacts of the development, both alone and in combination with other plans and projects, on European Sites by virtue of the following criteria: size and scale, land-take, distance from the European Site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements and duration of construction, operation and decommissioning were considered in this screening assessment.
- The site synopses and conservation objectives of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report 03/03/2020. Figure 3.1 shows the location of the development in relation to all European sites within 15km of the development.
- Where potential pathways for Significant Effect are identified, the site is included within the Likely Zone of Impact.



Map Legend

- Special Area of Conservation
- Special Protection Areas
- 15km Buffer
- Grid Connection Route
- Hydrological Catchments

Drawing Title
European Designated Sites within 15km

Project Title
A & L Goodbody Crory WF Group

Drawn By	Checked By
AJ	LK
Project No.	Drawing No.
190806	Figure 3.1
Scale	Date
1:240963	12.02.2020

MKO
Planning and Environmental Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email:info@mkoireland.ie
Website: ww.mkoireland.ie

Table 3.1 Identification of Designated sites within the Likely zone of Impact

European Sites and distance from development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 03/03/2020	Conservation Objectives	Likely Zone of Impact Determination
Special Area of Conservation (SAC)			
Slaney River Valley SAC (000781) **Distance:** 1.5km from the grid connection route.	› Estuaries [1130] › Mudflats and sandflats not covered by seawater at low tide [1140] › Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] › Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] › Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]* › *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] › *Petromyzon marinus* (Sea Lamprey) [1095] › *Lampetra planeri* (Brook Lamprey) [1096] › *Lampetra fluviatilis* (River Lamprey) [1099] › *Alosa fallax fallax* (Twaite Shad) [1103]	Detailed conservation objectives for this site (Version 1, October 2011) were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects as the development is located entirely outside the boundary of the designated site. All 10 watercourse crossings along the grid connection route provide hydrological downstream connectivity with this SAC. The watercourse crossing no. 1 at Ballycarney Stream provides the closest downstream hydrological connectivity at approximately 1.9km hydrological distance. As a result, there is potential for indirect effects in the form of deterioration of surface water quality resulting from pollution on the following aquatic QI's, associated with the construction phase of the development: › Estuaries [1130] › Mudflats and sandflats not covered by seawater at low tide [1140] › Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] › Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]*

European Sites and distance from development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 03/03/2020	Conservation Objectives	Likely Zone of Impact Determination
	› *Salmo salar* (Atlantic Salmon) (only in fresh water) [1106]*Lutra lutra* (Otter) [1355] › *Phoca vitulina* (Harbour Seal) [1365]		› *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] › *Petromyzon marinus* (Sea Lamprey) [1095] › *Lampetra planeri* (Brook Lamprey) [1096] › *Lampetra fluviatilis* (River Lamprey) [1099] › *Alosa fallax fallax* (Twaite Shad) [1103] › *Salmo salar* (Atlantic Salmon) (only in fresh water) [1106] › *Lutra lutra* (Otter) [1355] › *Phoca vitulina* (Harbour Seal) [1365] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] is a terrestrial habitat and there is no potential pathway for impact on this habitat exists. There was no potential for disturbance to Otter given the separation distance from the SAC and small nature and scale of the works. Consequently, due to hydrological connectivity, the potential for significant effects on this European Site cannot be excluded at this stage of the Appropriate Assessment process. **This site is therefore considered to be within the Likely Zone of Impact.**
Blackstairs Mountains SAC (000770)	› Northern Atlantic wet heaths with *Erica tetralix* [4010]	Detailed conservation objectives for this site	There will be no direct effects as the development is located entirely outside the boundary of the designated site.

European Sites and distance from development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 03/03/2020	Conservation Objectives	Likely Zone of Impact Determination
Distance: 8.0km from the grid connection route.	› European dry heaths [4030]	(Version 1, November 2019) were reviewed as part of the assessment and are available at www.npws.ie	The SAC is designated for terrestrial habitat and is located approximately 8km west of the grid connection route in a separate hydrological sub-catchment. No pathway for indirect effect between the cable route and the designated site exists. **No pathway for effect was identified and the site is not within the Likely Zone of Impact, no further assessment is required.**
River Barrow and River Nore SAC (002162) **Distance:** 14.2km from the grid connection route.	› Estuaries [1130] › Mudflats and sandflats not covered by seawater at low tide [1140] › Reefs [1170] › Salicornia and other annuals colonising mud and sand [1310] › Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] › Mediterranean salt meadows (*Juncetalia maritimi*) [1410] › Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] › European dry heaths [4030] › Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]	Detailed conservation objectives for this site (Version 1, July 2011) were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects as the development is located entirely outside the boundary of the designated site. The European site is located approximately 14.2km west of the grid connection route. There is no hydrological connectivity between the cable route and this designated site which is located in a separate hydrological catchment. No pathway for indirect effect between the cable route development and the designated site exists. **No pathway for effect was identified and the site is not within the Likely Zone of Impact, no further assessment is required.**

European Sites and distance from development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 03/03/2020	Conservation Objectives	Likely Zone of Impact Determination
	• Petrifying springs with tufa formation (*Cratoneurion*) [7220] • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] • *Vertigo moulinsiana* (Desmoulin's Whorl Snail) [1016] • *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] • *Austropotamobius pallipes* (White-clawed Crayfish) [1092] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Lampetra planeri* (Brook Lamprey) [1096] • *Lampetra fluviatilis* (River Lamprey) [1099] • *Alosa fallax fallax* (Twaite Shad) [1103] • *Salmo salar* (Salmon) [1106] • *Lutra lutra* (Otter) [1355] • *Trichomanes speciosum* (Killarney Fern) [1421] • *Margaritifera durrovensis* (Nore Pearl Mussel) [1990]		

European Sites and distance from development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 03/03/2020	Conservation Objectives	Likely Zone of Impact Determination
Special Protection Area (SPA)			
Wexford Harbour and Slobs SPA (004076) **Distance:** 9.7km from the grid connection route.	› Little Grebe (*Tachybaptus ruficollis*) [A004] › Great Crested Grebe (*Podiceps cristatus*) [A005] › Cormorant (*Phalacrocorax carbo*) [A017] › Grey Heron (*Ardea cinerea*) [A028] › Bewick's Swan (*Cygnus columbianus bewickii*) [A037] › Whooper Swan (*Cygnus cygnus*) [A038] › Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] › Shelduck (*Tadorna tadorna*) [A048] › Wigeon (*Anas penelope*) [A050] › Teal (*Anas crecca*) [A052] › Mallard (*Anas platyrhynchos*) [A053] › Pintail (*Anas acuta*) [A054] › Scaup (*Aythya marila*) [A062] › Goldeneye (*Bucephala clangula*) [A067] › Red-breasted Merganser (*Mergus serrator)* [A069] › Hen Harrier (*Circus cyaneus*) [A082]	Detailed conservation objectives for this site (Version 1, March 2012) were reviewed as part of the assessment and are available at www.npws.ie	There will be no direct effects as the development is located entirely outside the boundary of the designated site. The site of the cable route development does not provide suitable supporting habitat for any of the SCI bird species for which the SPA is designated. Therefore there is no potential for significant indirect effects as a result of disturbance. All 10 watercourses along the grid connection route provide downstream hydrological connectivity with this SPA. Taking a precautionary approach, and given that the SPA is located hydrologically downstream, a potential pathway for indirect effects on the QI 'Wetland and Water birds [A999]' was identified, in the form of deterioration of surface water quality resulting from pollution, associated with the construction phase of the development. At its closest point the SPA is located approximately 15km hydrological distance downstream of the cable route. **This site is considered to be within the Likely Zone of Impact and further assessment is required.**

European Sites and distance from development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie on the 03/03/2020	Conservation Objectives	Likely Zone of Impact Determination
	› Coot (*Fulica atra*) [A125] › Oystercatcher (*Haematopus ostralegus)* [A130] › Golden Plover (*Pluvialis apricaria*) [A140] › Grey Plover (*Pluvialis squatarola*) [A141] › Lapwing (*Vanellus vanellus*) [A142] › Knot (*Calidris canutus*) [A143] › Sanderling (*Calidris alba*) [A144] › Dunlin (*Calidris alpina*) [A149] › Black-tailed Godwit (*Limosa limosa*) [A156] › Bar-tailed Godwit (*Limosa lapponica*) [A157] › Curlew (*Numenius arquata*) [A160] › Redshank (*Tringa totanus*) [A162] › Black-headed Gull (*Chroicocephalus ridibundus*) [A179] › Lesser Black-backed Gull (*Larus fuscus*) [A183] › Little Tern (*Sterna albifrons*) [A195] › Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395] › Wetland and Waterbirds [A999]		

3.2 European Sites with the Potential to be Significantly Affected by the Development

Slaney River Valley SAC (000781)

Taking a precautionary approach, a potential pathway for indirect effect in the form of surface water pollution was identified in relation to the following aquatic QI's associated with Slaney River Valley SAC:

- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]*
- *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]
- *Petromyzon marinus* (Sea Lamprey) [1095]
- *Lampetra planeri* (Brook Lamprey) [1096]
- *Lampetra fluviatilis* (River Lamprey) [1099]
- *Alosa fallax fallax* (Twaite Shad) [1103]
- *Salmo salar* (Atlantic Salmon) (only in fresh water) [1106]
- *Lutra lutra* (Otter) [1355]
- *Phoca vitulina* (Harbour Seal) [1365]

Wexford Harbour and Slobs SPA (004076)

Taking a precautionary approach, a potential pathway for indirect effect in the form of surface water pollution was identified in relation to the following aquatic SCI associated with Wexford Harbour and Slobs SPA:

- Wetland and Waterbirds [A999]

3.3 Likely Cumulative Impact of the Works on European Sites, in-combination with other plans and projects

Where potential pathways for effect have been identified in Table 3.1; the potential for cumulative effects resulting from the grid connection works when considered in combination with other plans and projects, cannot be discounted at this stage and further assessment is required.

4. ARTICLE 6(3) APPROPRIATE ASSESSMENT SCREENING STATEMENT AND CONCLUSIONS

The findings of this remedial Screening Assessment are presented following the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010).

4.1 Data Collected to Carry Out Assessment

In preparation of the report, the following sources were used to gather information:

- Review of NPWS Site Synopses, Conservation Objectives for the European Sites
- Review of 2019, 2013 and 2007 EU Habitats Directive (Article 17) Reports.
- Review of OS maps and aerial photographs of the site of the project.
- Site visits conducted by Laoise Kelly (B.Sc. Env) on the 14th and 15th November 2019.

4.2 Concluding Statement

It cannot be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the grid connection development, individually or in combination with other plans and projects, would be likely to have a significant effect on Slaney River Valley SAC (000781) and Wexford Harbour and Slobs SPA (004076).

As a result, an Appropriate Assessment is required, and a remedial Natura Impact Statement shall be prepared in respect of the grid connection development.

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