



Celtic Interconnector

Strategic Social Impact Assessment Scoping Report

April 2019



Co-financed by the European Union
Connecting Europe Facility

Mott MacDonald
South Block
Rockfield
Dundrum
Dublin 16 D16 R6V0
Ireland

T +353 (0)1 2916 700
mottmac.com

EirGrid Plc
The Oval
160 Shelbourne Road
Ballsbridge
Dublin 4
D04 FW28
Ireland

Celtic Interconnector

Strategic Social Impact Assessment Scoping Report

April 2019

Directors: C O'Donovan BE MBA CEng
MIET (Managing), J T Murphy BE
HDipMM CEng FIEI CMCILT (Deputy
Managing), D Herlihy BE MSc CEng, K
Howells BSc MBA CEng MICE MCWEM
(British), F McGivern BSc DipEnvEng
CEng MIEI
Innealtóirí Comhairleach (Consulting
Engineers)
Company Secretary: Ian Kilty BA (Hons)
ACA
Registered in Ireland no. 53280. Mott
MacDonald Ireland Limited is a member of
the Mott MacDonald Group

EirGrid Plc

Document reference: 229100428_303_001_E

Information class: Standard

The sole responsibility of this publication lies with the author. The European Union is not responsible for any use that may be made of the information contained therein.

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.

Contents

1	Introduction	1
1.1	Who is EirGrid?	1
1.2	Who is Réseau de Transport d'Électricité?	1
1.3	What is the Celtic interconnector Project?	1
1.4	Framework for Grid Development	2
1.5	What Step is the Celtic Interconnector Project at?	4
1.6	Social Impact Assessment Methodology	5
1.7	What is the Aim of this SIA Scoping Report?	6
1.8	Structure of the Strategic SIA Scoping Report	7
2	Background to the Project	8
2.1	Need for the Development	8
2.2	Description of the Development	8
2.3	Project Status	9
2.4	Revised Social Area of Influence	12
3	Stakeholder Review	21
3.1	Overview	21
3.2	Landfall Options	21
3.3	Converter Station Location Zones	29
3.4	Environment	41
3.5	Elected Representatives	42
3.6	Consultations	42
4	Social Issues	44
4.1	Introduction	44
4.2	The Public	44
4.3	Landfall Options	49
4.4	Converter Station Location Zones	55
4.5	Regional Project Benefits	58
5	Preliminary Conclusions and Next Steps	60
5.1	Project Overview	60
5.2	Social Impacts and Risks	60
5.3	Preliminary Conclusions	61
5.4	Next Steps	61
	Appendices	63

A.	CSO Statistics	64
A.2	Landfall Locations	65
A.3	Converter Station Location Zones	66

1 Introduction

1.1 Who is EirGrid?

EirGrid is responsible for a safe, secure and reliable supply of electricity – now and in the future.

EirGrid develops, manages and operates the electricity transmission grid. This brings power from where it is generated to where it is needed throughout Ireland.

EirGrid uses the grid to supply power to industry and businesses that use large amounts of electricity. The grid also powers the distribution network. This supplies the electricity used every day in homes, businesses, schools, hospitals and farms.

As part of its role EirGrid is also mandated to explore and develop opportunities to interconnect the transmission grid with the transmission grids in other countries.

1.2 Who is Réseau de Transport d'Électricité?

The project is being jointly developed by EirGrid and its French counterpart Réseau de Transport d'Électricité (RTE), with both parties sharing the costs of the current phase of the project equally.

RTE is the French Transmission System Operator (TSO), responsible for the operation, maintenance and development of the high voltage grid. RTE also manages the interconnections between the French Transmission Grid and those of other European countries.

1.3 What is the Celtic interconnector Project?

The Celtic Interconnector is a proposed electrical link which will enable the movement of electricity between Ireland and France. EirGrid has been working with their counterpart in France, RTE, to investigate the feasibility of an interconnector between our two countries. At this stage, no decision has been made to build the Celtic Interconnector. Should the project proceed, a final decision to commence construction would happen in around 2021. The interconnector would then go live in 2025/26.

The Celtic Interconnector will use High Voltage Direct Current (HVDC) technology for the subsea transfer of electricity. The main elements of the Celtic Interconnector are presented below and illustrated overleaf:

- A submarine circuit, approximately 500km in length placed on or beneath the seabed between France and Ireland;
- A landfall point where the submarine circuit comes onshore;
- A HVDC land circuit between the landfall and a converter station. As this will be HVDC, it is proposed to use an underground cable for this element;
- A converter station, to convert the electricity from HVDC to High Voltage Alternating Current (HVAC), which is used on the transmission grid;
- A HVAC land circuit between the converter station and the connection point to the grid.; and
- A connection point to an existing substation on the transmission grid.

The HVAC land circuit can be underground cable or overhead line, however, as it is HVAC there are limits to the length of cable that can be installed underground. It is EirGrid's current

preference, given that the project is underground over most of its length, to explore underground cable options in the first instance. Should an underground option prove not to be feasible, an overhead solution will be examined at that stage. On this basis, assessment up to this point of project development has considered underground cable installed in the road network for the HVAC circuit.

Figure 1: Celtic Interconnector Project Elements



Source: <http://www.eirgridgroup.com/site-files/library/EirGrid/Celtic-Interconnector-Project-Update-Brochure.pdf>

1.4 Framework for Grid Development

The Celtic Interconnector project is following EirGrid's six-step *Framework for Grid Development* as outlined in EirGrid's *Have your Say* document, as illustrated in Figure 2 overleaf. This approach facilitates engagement and consultation with stakeholders and the public which helps to explore options fully and make more informed decisions.

In 2009 EirGrid identified a link with France as a potential opportunity for interconnection with the greater European transmission grid. Since 2011 a series of joint studies and assessments of both onshore and offshore have been carried out by EirGrid and RTE. Through these studies EirGrid have brought the Celtic Interconnector project through Steps 1, 2 and part of Step 3 of their Framework for Grid Development.

EirGrid produced a (Step 2) Project Update Brochure in May 2017 which outlined the findings of the various studies that were carried out during the Feasibility Phase of the project, which was published on the EirGrid website ([Celtic Interconnector Library](#)).

EirGrid carried out stakeholder engagement and consultation throughout the second half of 2017. Following the completion of the Step 2 process, EirGrid confirmed in early 2018 that East Cork was the most suitable location for the project in Ireland with a connection point at the existing Knockraha 220kV station.

Figure 2: EirGrid's Six-Step Framework for Grid Development



Source: http://www.eirgridgroup.com/_uuid/7d658280-91a2-4dbb-b438-ef005a857761/EirGrid-Have-Your-Say_May-2017.pdf

Figure 3: Project Roadmap

Phase Description	Preliminary Feasibility	Feasibility	Initial Design & Pre-Consultation	Detailed Design & Consents	Construction
Timetable	2011 - 2014	2014 - 2016	2016 - 2019	2019 – 2021	2021 – 2025/26
EirGrid / RTE Project Work Streams	Benefits Technology Costs	Marine survey Project Parameters Economic & Financial Analysis	Initial Design Pre-Consultation Investment Request Grant Application	Detailed Design EPC Procurement Consenting	Contract Award Manufacturing Energisation
EirGrid Framework for Grid Development		Step 1	Steps 2 - 4	Step 5	Step 6

Source: EirGrid

EirGrid produced a (Step 3) Project Update Brochure in 2018 which identified ten feasible converter station location zones and a short list of five landfall location points in East Cork, as shown below.

Figure 4: Feasible Converter Station Location Zones and Short List of Landfall Locations in East Cork



Source: <http://www.eirgridgroup.com/site-files/library/EirGrid/Celtic-Interconnector-Project-Update-Brochure-2018.pdf>

1.5 What Step is the Celtic Interconnector Project at?

The project is currently at the end of Step 3 of EirGrid’s six-step Framework for Grid Development. This step involves building on the work completed by EirGrid and their

consultants, as detailed in the 2018 (Step 3) Project Update Brochure, refining the shortlist of options to meet the needs of the project.

Mott MacDonald has been appointed by EirGrid to complete the onshore elements of Step 3 of the framework and to progress the project through Step 4 (*Where exactly should we build?*) and Step 5 (*the Planning Process*). Wood Group PLC has been engaged separately by EirGrid to carry out marine route investigations and to assess and evaluate the submarine cable route options from a technical and environmental perspective, including the landfall location.

1.6 Social Impact Assessment Methodology

The International Association for Impact Assessment (IAIA) variously defines social impact assessment¹ (SIA) as

The processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programmes, plans, projects) and any social change processes invoked by those interventions.

The process of identifying and managing the social issues of project development.

....and includes the effective engagement of affected communities in participatory processes of identification, assessment and management of social impacts.”

Social impacts refer to those impacts resulting from proposed project activity, construction and operational phases, and the way in which socio-economic status, cultural identity, employment and educational opportunities, place and community attachment, health and overall sense of social cohesion may be changed or affected either positively or negatively.

This report has been prepared with due regard to EirGrid's Draft *Social Impact Assessment Methodology* (2017) which is incorporated within all of EirGrid's grid development projects. The approach sets out a standard methodological approach which considers the likely social impacts of projects across the regions in which EirGrid is working and along project specific routes.

The Social Impact Assessment Process is conducted across six iterative stages, each of which is designed to facilitate key objectives and process deliverables. The initial stages of the Social Impact Assessment Process, as set out in EirGrid's Draft *Social Impact Methodology* (2017), are summarised below:

- **Step 1: Gathering of Issues of Potential Social Impact**
 - Provides a high level, early understanding of potential social issues regarding the future needs of the electricity grid;
- **Step 2: Early Baseline and Screening for SIA**
 - Development of a Social Baseline Report, including a screening of the potential for social impact of the shortlist of technology options. This informs the multi-criteria decision-making analysis that identifies the preliminary preferred solution options;
- **Step 3: Further Baseline and Strategic SIA Scoping**
 - Early preparation of an initial Strategic SIA Scoping Report of the shortlisted technology solution options, updated to inform the decision-making in respect of the preferred technology option;

¹ Social Impact Assessment: Guidance for assessing and managing the social impacts of projects – International Association for Impact Assessment) - http://www.iaia.org/uploads/pdf/SIA_Guidance_Document_IAIA.pdf

- **Step 4 – Social Impact Appraisal: following a final iteration of the SIA Scoping**
 - Report in respect of solutions to meet the preferred technology solution, appraising potential social issues and risks (including the potential for mitigation) of the identified project solution (site/route options);
- **Step 5 – Social Impact Assessment:**
 - Depending upon the anticipated significance of social impact, formal assessment of the project proposal by way of a Statement of Social Impact, a Social Impact Report, or a Social Impact Assessment for the project; and
- **Step 6 - Mitigation and Management:**
 - Mitigation and management of social impacts, including reporting of social oversight of construction. It may include implementation of any Management Plan. It may also include measuring and monitoring of the ongoing social performance of EirGrid's projects, to provide transparency and learnings for future projects.

1.7 What is the Aim of this SIA Scoping Report?

In line with Step 2 of the Framework for Grid Development and EirGrid's Draft Social Impact Assessment Methodology, EirGrid carried out Early Baseline and Screening for SIA in 2017. The 2017 report built upon information already gathered in respect of the project and was carried out in both East Cork and West Wexford.

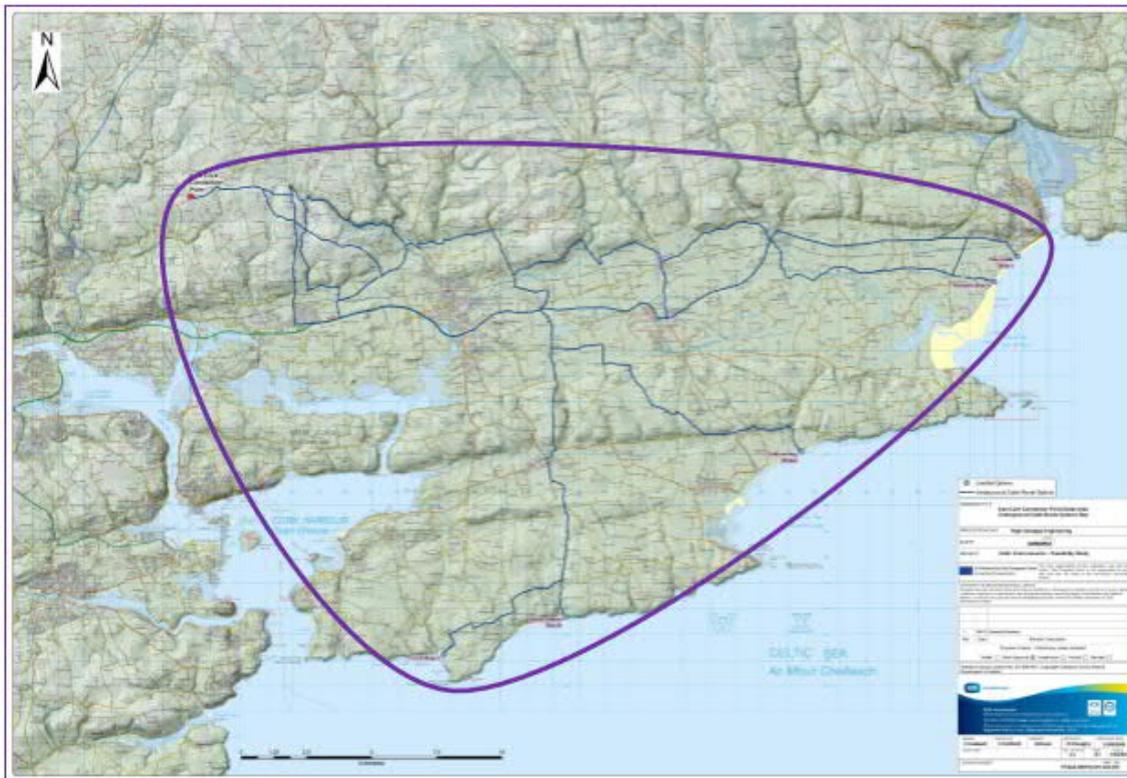
Having regard to the nature and extent, and potential location of the proposed Celtic Interconnector Development, to the social baseline of the identified Social Areas of Influence (SAOI) in both East Cork and West Wexford, and to the level of information gathered, it was concluded that the potential for the project to have a social impact could not be ruled out at the time of writing the report in April 2017.

As outlined in Section 1.4 *Framework for Grid Development*, EirGrid confirmed in early 2018 that East Cork was the most suitable location for the project in Ireland. The SAOI for the East Cork area, as detailed in the Step 2 Social Baseline Report², is presented in Figure 5 overleaf.

This Step 3 Initial Strategic SIA Scoping Report builds on the information gathered to date in respect of the Project, specifically technical and environmental feasibility studies and other analysis including the 2017 SIA Baseline Report and Framework conclusions, as they relate to the East Cork area. This SIA Scoping will be revisited towards the end of Step 3 and updated if required to reflect additional information and / or feedback that may have been gathered. The decision on the preferred options, at the end of Step 3, will be informed by the Step 3 Strategic SIA scoping.

² <http://www.eirgridgroup.com/site-files/library/EirGrid/Celtic-IC-S2-Social-Impact-Baseline-Report-Apr2017.pdf>

Figure 5: Step 2 East Cork SAOI (2017)



Source: <http://www.eirgridgroup.com/site-files/library/EirGrid/Celtic-IC-S2-Social-Impact-Baseline-Report-Apr2017.pdf>

1.8 Structure of the Strategic SIA Scoping Report

The structure of this report is set out below:

Table 1: Structure of this Strategic SIA Scoping Report

Section	Section Title
1	Introduction
2	Background to the Project
3	Stakeholder Review
4	Social Issues and Risks
5	Preliminary Conclusions and Next Steps
Appendix A	CSO Statistics

2 Background to the Project

2.1 Need for the Development

EirGrid, Ireland's state-owned transmission system operator (TSO), is statutorily obligated to explore and develop opportunities for energy interconnection for Ireland with other countries. As such, the *Interconnector Economic Feasibility Report (2009)* examined the economic feasibility of interconnection between the island of Ireland and Great Britain or France; specifically, the report identified production cost savings and capacity benefits of potential interconnections.

The *Interconnector Economic Feasibility Report* notes that the French electricity grid, managed by Réseau de Transport d'Électricité (RTE), is heavily interconnected with surrounding countries, Belgium, Germany, Switzerland, Great Britain, Spain and Italy, which frames the proposed interconnection with France within a wider European context. In this European context, the report states that France has considerable excess generation capacity; specifically, the ratio of energy exports from France to imports to France is approximately 3:1. The French energy sector is primarily characterised by nuclear generation (approximately 60% of the total installed capacity), however, renewable energy generation is becoming increasingly significant. 'High Renewables' scenarios generally improve the case for interconnection as it improves the movement of electricity within the system to networks that need it in relation to variable renewable generation.

The *Interconnector Economic Feasibility Report* concluded that high level feasibility studies indicate a high capacity (i.e. the ratio of actual energy output over time to maximum possible energy output) factor for the Ireland-France interconnector with corresponding reductions in production cost. As of 2018, EirGrid has identified further benefits associated with the operation of the Celtic Interconnector as summarised below:

- Ability to import and export 700 MW (megawatts) of electricity, the equivalent of supplying power to around 450,000 homes;
- Enhanced security of supply for Irish electricity users. It will provide Ireland's only direct energy connection to an EU Member State once the United Kingdom leaves the EU;
- Apply downward pressure on the cost of electricity to consumers in Ireland;
- Help facilitate Ireland's transition to a low carbon energy future; and
- Provide a direct fibre optic communications link between Ireland and France.

The European Commission (EC) views the Project as a key component to a more integrated European electricity system. It has designated the Celtic Interconnector as a Project of Common Interest (PCI). The EC has invested €3.6 million to date whilst up to €4 million has been approved for ongoing and future studies.

2.2 Description of the Development

The Celtic Interconnector is a proposed electrical link which will enable the movement of electricity between Ireland and France. EirGrid has been working with its counterpart in France, RTE, to investigate the feasibility of an interconnector between Ireland and France. At this stage of the project, no decision has been made to build the Celtic Interconnector; however, should the project proceed, a final decision to commence construction would be published around 2021. The interconnector would subsequently be operational in 2025/26.

The Celtic Interconnector will use High Voltage Direct Current (HVDC) technology for the subsea transfer of electricity. The main elements of the Celtic Interconnector are presented and illustrated below:

- A submarine circuit, approximately 500km in length placed on or beneath the seabed between France and Ireland;
- A landfall point where the submarine circuit comes onshore;
- A HVDC land circuit between the landfall and a converter station. As this will be HVDC, it is proposed to use an underground cable for this element;
- A converter station, to convert the electricity from HVDC to High Voltage Alternating Current (HVAC), which is used on the transmission grid. The converter station compound will have indicative dimensions of 300m x 150m. The station will include an AC switchyard, transformers, a generator, control building and converter building (typical building height of 25 metres); and;
- A HVAC land circuit between the converter station and the connection point to the grid; and
- A connection point to an existing substation on the transmission grid (in this instance Knockraha substation).

The HVAC land circuit can be underground cable or overhead line. However, as it is HVAC there are limits to the length of cable that can be installed underground. It is EirGrid's current preference, given that the project is underground over most of its length, to explore underground cable options in the first instance. Should an underground option prove not to be feasible, an overhead solution will be examined at that stage. On this basis, assessment up to this point of project development has considered underground cable installed in the road network for the HVAC circuit.

Figure 6: Celtic Interconnector Project Elements



Source: <http://www.eirgridgroup.com/site-files/library/EirGrid/Celtic-Interconnector-Project-Update-Brochure.pdf>

2.3 Project Status

As illustrated in Figure 2, *Framework for Grid Development* EirGrid follow a step by step approach to planning the grid. This approach facilitates engagement and consultation with stakeholders and the public which helps to explore options fully and make more informed decisions.

EirGrid carried out stakeholder engagement and consultation throughout the second half of 2017 as part of a range of feasibility and analytic studies ([Celtic Interconnector Library](#)):

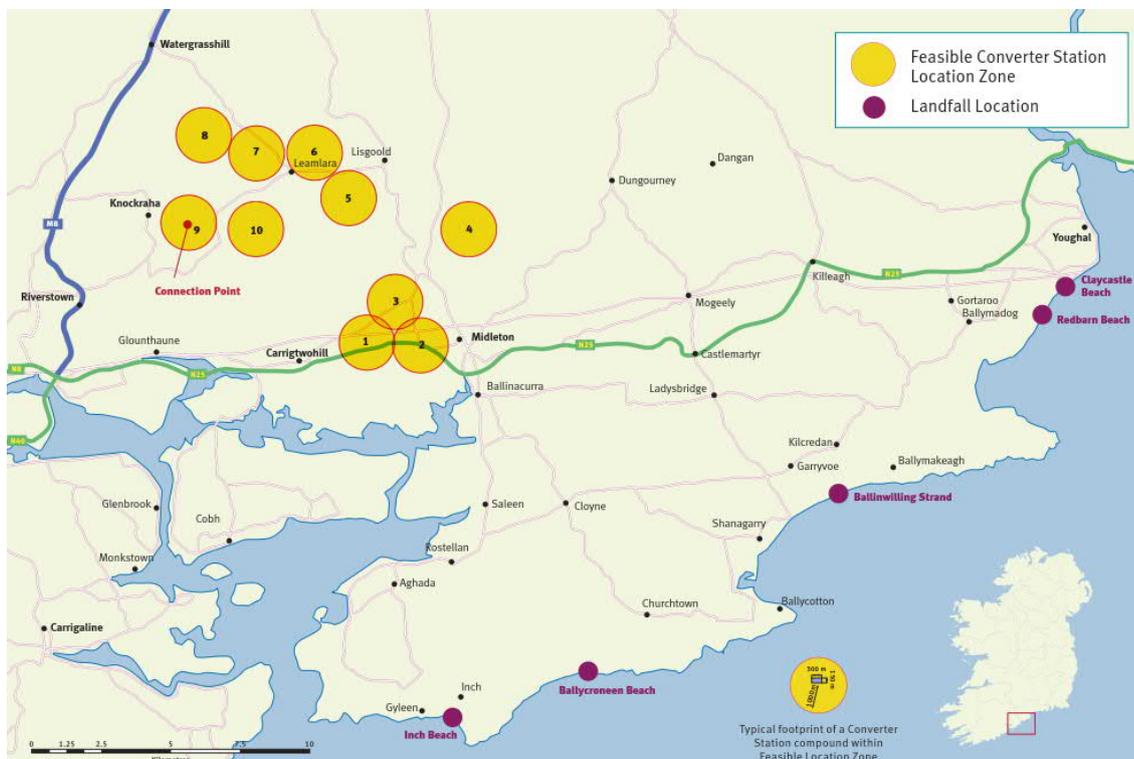
- Celtic Interconnector Feasibility Study - Converter Station Site & Route Identification in Ireland, Report reference: PE424-F0000-R000-038-001, ESBI, August 2016
- Celtic Interconnector Project – Marine Consultancy and Engineering Services Land Report, Report Reference: P1812_R3400_Rev2, Intertek, November 2014

- Celtic Interconnector - Marine Consultancy & Engineering Services Route Investigation Report, Report Reference: P1812_R3426_REV3_Route Investigation Report, Intertek January 2015 (offshore Route)
- Network Analysis Celtic Interconnector Feasibility Study: EirGrid, November 2016
- Social Impact Assessment Baseline Report Celtic Interconnector Project, EirGrid, April 2017

EirGrid produced a Step 2 Brochure in May 2017 which outlined the findings of the various studies that were carried out during Step 2 of the project. EirGrid completed Step 2 of the project in early 2018 by confirming the following, as illustrated in Figure 7 below:

- That the Celtic Interconnector is feasible;
- The best performing / suitable option is to connect to France via East Cork;
- A connection point at the existing Knockraha substation and identifying ten feasible converter station location zones (CSLZ's), referred to as CSLZ 1 to CSLZ 10, refer to Figure 7 below.
- The following shortlist of identified landfall locations in East Cork
 - Inch Beach
 - Ballycreeen Beach
 - Ballinwilling Strand
 - Redbarn Beach
 - Claycastle Beach

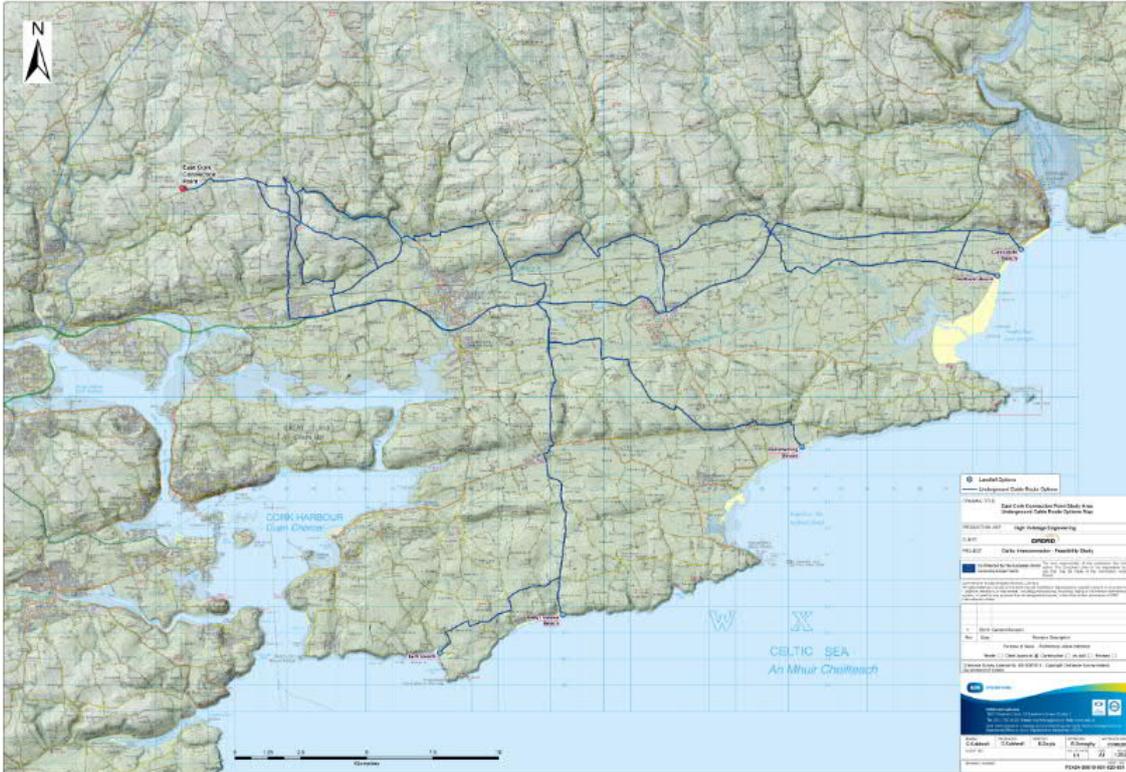
Figure 7: Feasible Converter Station Location Zones and Short List of Landfall Locations in East Cork



Source: <http://www.eirgridgroup.com/site-files/library/EirGrid/Celtic-Interconnector-Project-Update-Brochure-2018.pdf>

Potential underground HVDC land cable routes were also identified within *Feasibility Study – Converter Station Site and Route Identification in Ireland* [PE424-F0000-R000-038-001, August 2016] as presented in Figure 8. These potential routes should be considered as indicative only at this stage of the project as they will be subject to further studies and assessments.

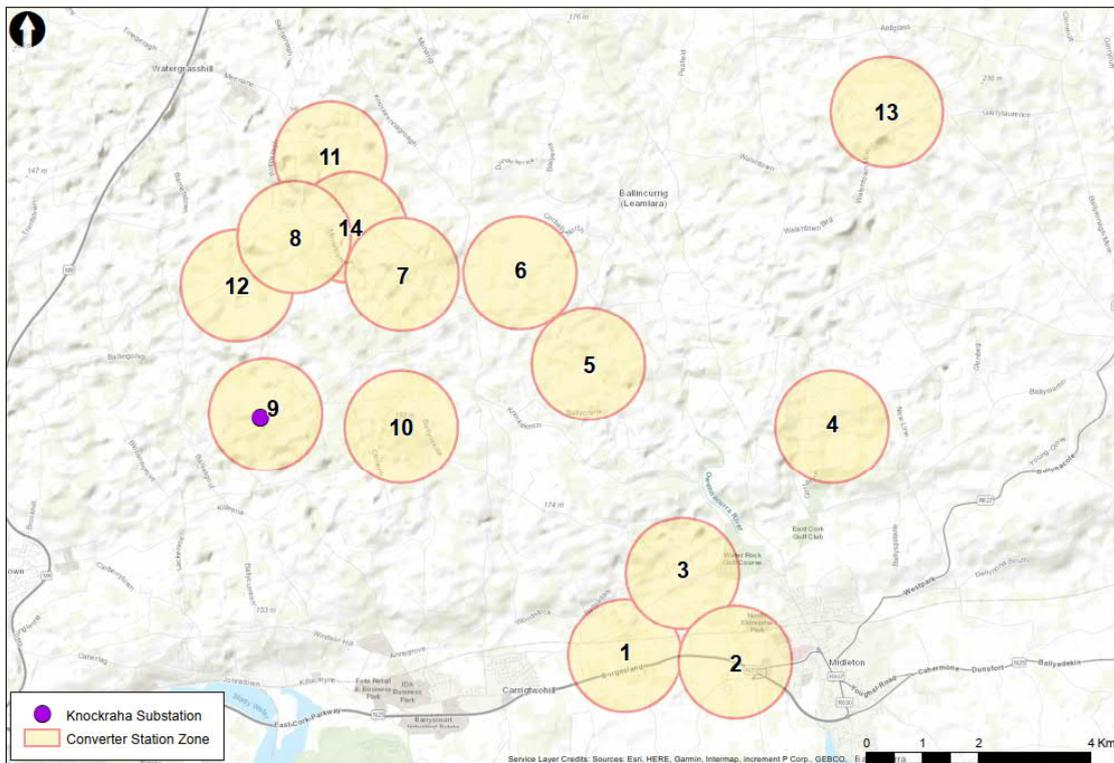
Figure 8: Underground Cable Route Options Map



Source: EirGrid

On appointment, Mott MacDonald identified a further four CSLZ's (named CSLZ 11 to CSLZ 14), with particular reference to visual screening. CSLZ 1-14 are presented in Figure 9 overleaf.

Figure 9: Converter Station Location Zones



Source: Mott MacDonald

The project is currently within Step 3 of EirGrid's six-step Framework for Grid Development. This step involves building on the work completed by EirGrid and their consultants, as detailed in the 2018 (Step 3) Project Update Brochure, refining the shortlist of options to meet the needs of the project.

2.4 Revised Social Area of Influence

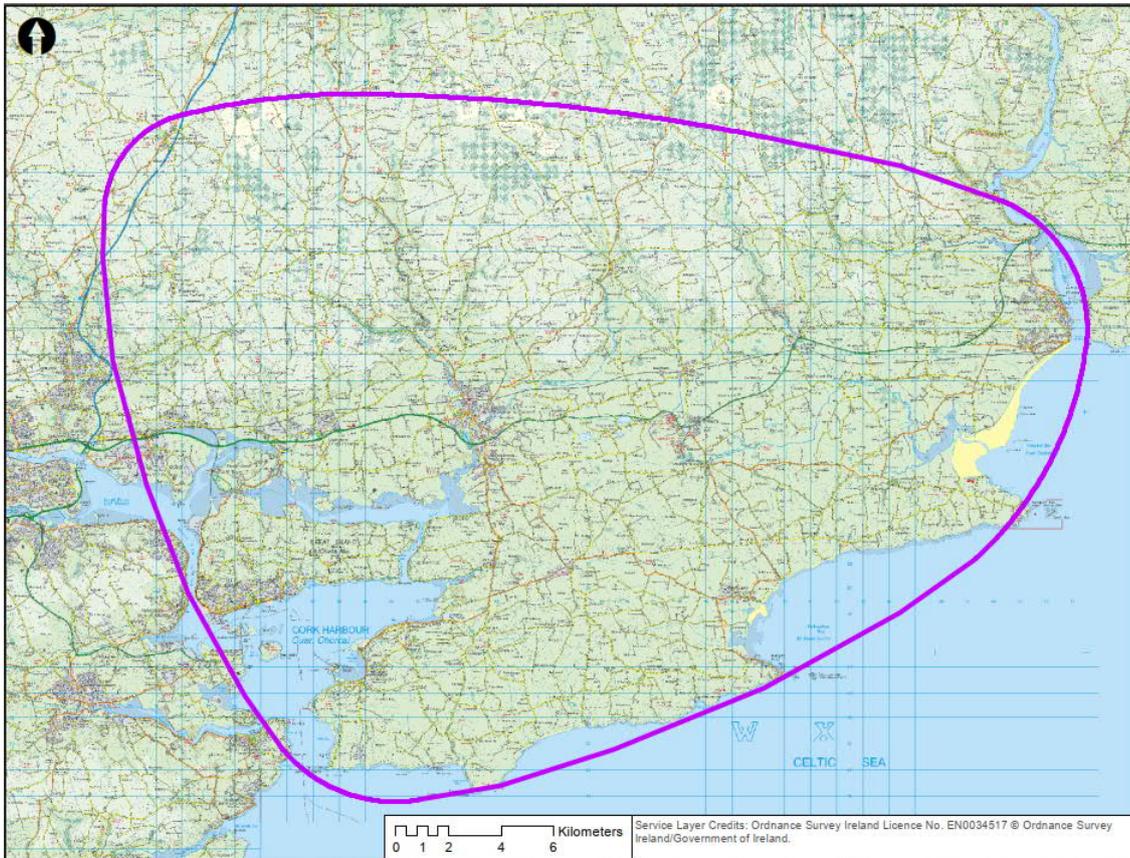
2.4.1 Introduction

This Strategic SIA Scoping Report builds on the information gathered to date in respect of the Project, specifically technical and environmental feasibility studies and other analysis including the 2017 SIA Baseline Report and Framework conclusions, as they relate to the East Cork area.

The Step 2 East Cork SAOI (refer to Figure 5) has been revised in Step 3 to reflect the four additional CSLZ's (named CSLZ 11 to CSLZ 14), referred to in Section 2.3 above.

The Step 3 SAOI is presented in Figure 10 overleaf. The spatial extent of the Step 3 SAOI encompasses the eastern fringe of Cork City to the west, Youghal to the east, Watergrasshill to the north and the coast of County Cork to the south. Significant transportation infrastructure, the M8 motorway and the N25 Wexford to Cork road, connect a number of settlements within the area.

Figure 10: Step 3 SAOI



Source: Mott MacDonald

2.4.2 Settlement Hierarchy

Settlements situated within the SAOI were identified as Small, Medium or Large based on population classifications set out by Central Statistics Office (CSO):

- Small Towns: Less than or equal to 1,000 population
- Medium Towns: 1,001 – 9,999 population
- Large Towns: 10,000 – 30,000 population

The settlements located within the SAOI are laid out in Table 2, in addition to the larger municipalities which make up East Cork.

Table 2: Settlement Hierarchy and Municipalities

Small Towns	Medium Towns	Large Towns	Municipalities
Ballymacoda	Youghal	Midleton	East Cork Municipal District
Killeagh	Carrigtwohill	Cobh	Cobh - Glanmire Municipal District
Ladysbridge	Glanmire		Fermoy Municipal District
Ballycotton	Castlemartyr		
Shanagarry	Cloyne		
Dungourney	Whitegate		
Ballinacurra	Aghada		
Rostellan	Glounthaune		
Knockraha	Watergrasshill		
Mogeely			
Garryvoe			
Lisgoold			
Leamlara			
Ballincurragh			
Inch			
Ballymadog			
Ballymakeagh			
Kilcredan			
Glyeen			
Glenbrook			
Clonmult			
Churchtown			

Source: www.cso.ie

2.4.3 Overview of the Social Area of Influence

Youghal

Youghal, on the western shore of the Blackwater estuary, is a primary settlement of the East Cork municipality. It is a medium size town with mixed commercial and residential land uses with a number of caravan parks, B&B's and holiday homes in the surrounding areas.

Youghal, is by-passed by the N25 which forms the key road connection westwards with Cork City, and eastwards to Waterford. It is also linked by the regional road network to the Fermoy municipality and the M8. The town is a major settlement link between County Waterford and County Cork. Youghal is centred around the harbour area with a mix of commercial and leisure marine activities as well as a significant extent of residential development, both within the core urban area, and in outlying clustered estates. Community facilities located within the town include a post office, regional fire station, RNLI lifeboat station, Garda Station, a range of medical centres and educational institutes, religious establishments and specialist commercial activities. Youghal is also recognised within the region for hosting a range of festivals between June and October. The first ever international Ironman competition in Ireland will be held in Youghal in June 2019 and is expected to run for the next three years.

There is a long strand that stretches southwards from the town, Youghal Front Strand Beach and Claycastle Beach. The strand area is accessed via a large car park, and promenade which extends the full length of the strand (Youghal Eco Boardwalk).

Claycastle Beach extends for a considerable distance southward from Youghal. Once outside the environs of the town, there is a considerable lack of formal access infrastructure to the beach until an area known as Redbarn Beach (a blue flag beach). Redbarn Beach is accessed off the local road network via the R633 to the south of Youghal.

Ladysbridge

The SAOI to the south of the N25, between Youghal and Castlemartyr, is relatively unpopulated; although there is extensive linear residential development along the local road network within this area. The settlement of Ladysbridge, to the south of Castlemartyr, is the only village in this area. The village is characterised as having clustered residential development set around a main street which includes a church (St. Mary's Church), public house (The Thatched Inn) and a petrol station which also serves as a grocery. Ladysbridge is also used for access to Garryvoe and the coast of East Cork.

Garryvoe, Shanagarry and Ballycotton

To the south-east of Ladysbridge are the coastal resort areas of Garryvoe, Shanagarry and Ballycotton. Garryvoe has a significant tourism market as evident by an extensive area of holiday mobile homes with associated facilities. A large car park is located adjacent to Garryvoe Beach. To the north of Garryvoe, the area is an open rural undulating landscape, served by a local road network which accommodates a limited extent of linear residential development. A local road leads to Ballinwilling Strand, with a shingle beach accessed via a ramp and a small car park is located at the top of the ramp as is a single dwelling.

Similar to Garryvoe, Shanagarry and Ballycotton are also popular purpose-built beachside amenity areas with ribbon-type developments along the approach roads. Ballymaloe House Hotel and restaurant is located within Shanagarry and it also accommodates a mix of permanent and holiday home (including mobile homes) residential developments. A car park is located by the beachfront (Ardnahinch) with Kilkenny Shop in the village area. Ballycotton, south of Shanagarry, is an attractive linear settlement set over the sea on low cliffs which serves both permanent and tourist residential population. Community facilities include St Colmcille's Church and Ballycotton Medical Centre. A RNLI station is located at the working harbour in the village which accommodates inshore fishing vessels.

West of Ballycotton, the southern part of the SAOI is relatively unpopulated though linear residential development occurs along the local road network of this area. The coastline within this section of the SAOI is relatively rocky, and consequently, there is no beachfront which might form the focus for a residential or amenity settlement or attraction. This lack of purpose-built environment is also influenced by the orientation of the local road network; specifically, the east-west oriented roads are located inland from the coast whilst a relatively small number of north-south oriented roads extend to the coastline. These crossroads form the location for a number of small hamlets and townland communities such as Churchtown.

Cloyne

Cloyne, located on the R629 regional road between Shanagarry and Midleton, is an important ecclesiastical settlement, and the current location of the Church of Ireland Diocesan cathedral – the United Dioceses of Cork, Cloyne and Ross which covers most of County Cork. The village was established as a monastic settlement in c. 560 AD and includes both the cathedral and a round tower. The town also includes a parish church, post office, Garda Station, schools, public houses, café/restaurants, pharmacy, and other specialist commercial activities such as a

veterinary practice and a hair salon. Residential development is clustered around the village core extending along the road network serving the village.

Ballycroneen

A local road extends southwards from Cloyne across a generally open rural agricultural landscape to the townland of Ballycroneen, the only part of the coastline within this area that includes a beach. Ballycroneen Beach is relatively small and remote with no signage or development indicative of major local social or community amenities. The beach is part of a longer sandy shoreline in this vicinity (Ballycroneen Beach is somewhat visually and physically separated from this longer sandy shoreline by a rock outcrop), which at its south-western end is known as Ballybranigan Beach. This is accessed off a narrow local road, with a car parking area. There is little linear residential development in the wider vicinity of the beach. Notwithstanding, Ballycroneen National School, comprising the original schoolhouse and an extension, is located north-west of the beach along a local road.

Inch and Trabolgan Village

To the south-west of Ballycroneen Beach, the coastline becomes rocky, extending to Power Head. This rocky coastline topography extends north and westwards from Power Head to Roche's Point at the eastern entrance to Cork Harbour. There are a few exceptions to this, however, which offer public access to sandy shoreline, including Gyleen (includes a slipway for small boats). Trabolgan Holiday Village is located to the east of Roche's Point which has potential access to the shoreline though this was recorded to be blocked off during historic surveys of the area (2017).

The most prominent beach along this stretch of coastline is Inch Beach. The surrounding area is generally classified as open agricultural land.

Whitegate, Aghada and Rostellan

Whitegate is located on the eastern shoreline of Cork Harbour, north of Roches Point. The town has core retail and commercial facilities which supports a clustered residential population. Whitegate Refinery, Ireland's only oil refinery, is located on Corkberg Island southwest of the village and is a visually prominent landmark within Whitegate's regional setting.

To the north-east of Whitegate, also along the eastern shoreline of Cork Harbour, are the settlements of Lower Aghada (proximate to the coast) and Upper Aghada (further inland). Aghada (inclusive) is characterised by clustered residential development located off the local road network. The overall settlement is served by general facilities such as Church of St. Erasmus, Aghada National School, a post office and a petrol station.

Of note, the Aghada 220kV substation is located to the south-west of the Aghada, off the regional road (R630) between Aghada and Whitegate. Due to the nature and scale of the development, the area accommodates a significant amount of existing overhead line infrastructure. This transmission infrastructure is considered part-and-parcel of the overall infrastructure hub of the refinery complex.

Rostellan, north-east of Aghada along the R630, is situated along the eastern extent of Cork Harbour. Linear residential development along the R630 constitutes the majority of development within this townland with Rostellan Coffee Shop providing the only consumer service within the village.

Ballinacurra

Ballinacurra is a small harbour village situated approximately 2km south of Midleton (R630) at the confluence of the Owenacurra River and the east channel of Cork Harbour. Residential development is clustered northwards toward Midleton though significant massing, Ballinacurra West, is situated in proximity to the Ballinacurra Business Park and Ramhill Industrial Estate. The village is serviced by a post office, retail outlets and public houses.

Killeagh

Killeagh is a small village situated on the N25 National Road, located approximately 10km west of Youghal and 14km east of Midleton. The village has a number of community facilities including St. Fergal's National School, St. John the Baptist Catholic Church, convenience stores, post office, pharmacy, Garda station and public houses. Killeagh is served by regular daily bus services which operate between Waterford, Youghal and Cork City.

Castlemartyr

Castlemartyr has a significant amount of residential development, and associated public houses, shops, restaurants/cafes and community facilities such as Saint Colman's Church, Castlemartyr and Ballintotas National Schools, Castlemartyr Health Centre and sport clubs, i.e. Castlemartyr Camogie Club and Castlemartyr GAA Club. Castlemartyr Resort Hotel consists of a 17th century country manor house that sits adjacent to the ruins of an 800-year-old-castle. Castlemartyr also benefits from proximate natural heritage which includes Castlemartyr Wood and Mitchell's Wood Walks.

Midleton

Midleton is the largest town within the East Cork municipality. It is the central hub of business for the East Cork area and a major employment centre. Businesses include the Jameson Distillery, Irish Distillers Pernod Ricard and acclaimed restaurants such as Farm Gate, SAGE and Ferrit & Lee. Markets include the Midleton Farmers Market and Midleton Country Market.

Supporting a significant population, Midleton provides key social and community facilities such as sport clubs (GAA, football, rugby, and angling), a large range of educational and religious institutions, post office, fire station, Garda Station and medical centres. In relation to transportation links within County Cork, the city is serviced by the N25, which by-passes the city centre to the south, and the Cork – Midleton rail line.

Dungourney and Mogeely

Dungourney and Mogeely are located north of the N25, between Youghal and Midleton, in a region defined by open agricultural landscape and a number of villages and hamlets characterised by linear residential development along the local road network.

Located off the R627, Dungourney is a small village with primary community facilities including two churches (Dungourney Church and Dungourney Church of Ireland), St. Peter's National School, a post office, and a retail outlet, Rigney Bros. The village supports two sports clubs, Dungourney GAA club and Dungourney Camogie Club, and benefits from Knockakeo Wood which provides the area with a recreational (hillwalking) and natural heritage amenity. In October 2018, Irish Distillers announced its plans to expand its maturation facility in Dungourney. According to Irish Distillers, the investment will see the construction of eight new maturation warehouses, each holding 16,800 casks, with further land to be purchased to support the next phase of development.

Similar to Dungourney, Mogeely is a predominantly agricultural-based village with primary facilities including retail, Sacred Heart Church, public houses and sport clubs. Dairygold has a significant presence within the town as indicated by a present Dairygold Co-Op Superstore and a planned cheese manufacturing facility recently approved by An Bord Pleanála. The associated waste water discharge pipe is proposed to be routed in an east-west direction, north of the N25 towards Churchtown (east of Midleton), then south via Butlerstown before travelling west towards East Ferry via the local road network.

Leamlara, Lisgoold and Ballincurrig

Leamlara, Lisgoold, and Ballincurrig are located north of the N25 between Midleton and the M8 corridor along the regional road network (R626). Situated within an open agricultural landscape, these villages have low density populations with residential massing primarily centred along the regional road network. Lisgoold supports a church (St. John the Baptist), public house, GAA Club and the Lisgoold Community Childcare Centre. Similarly, Leamlara also provides basic community services, i.e. education (Leamlara Montessori School and Bishop Aherne National School) and health services (Brookfield Care Centre). In comparison to these two villages, Ballincurrig has more limited services which include Ballincurrig Care Centre; however, it is considered highly likely that the community facilities provided by these three villages are shared between communities.

Carrigtwohill and Glounthaune

Further to the west along the N25, west of Midleton, the area is increasingly identified as part of the suburban environs of Cork City. It includes numerous residential suburbs such as Carrigtwohill and Glounthaune. Classified as medium sized towns, Carrigtwohill and Glounthaune accommodate residential populations commuting to Midleton, Little Island or Cork city for work via the N25 or rail.

Carrigtwohill is recognised as one of the fastest growing towns in the region and has become a hub for pharmaceutical and biotechnology companies. Numerous multinational corporations have established premises in the IDA Business Park to the west of the town, including GE Healthcare, Stryker, PAS Technologies, Merck Millipore, Abbott Laboratories, Gilead Sciences and Rockwell-Proscion. Notwithstanding this, the town continues to have vacant IDA land for foreign direct investment.

Similar to other medium sized towns within the region, Carrigtwohill and Glounthaune offer a wide range of community facilities including religious establishments, a number of educational institutions, post office, public houses and restaurants, Garda Station, medical centres and sport clubs. Barryscourt Castle heritage site is also situated in Carrigtwohill, just off the N25 and is a significant tourist attraction and local resource.

Fota Island and Little Island

West of Carrigtwohill and south of Glounthaune, Fota Island and Little Island can be accessed via the N25 / R624 or by rail. Fota Island, an island within the eastern extent of Cork Harbour, is an important tourism destination which includes Fota Island Resort and Hotel Spa, Fota Island Wildlife Park, Fota Gardens and Fota Island Golf Club. As a significant tourism centre, there is a small permanent residential population on the island, however, the island does not have any considerable community facilities outside of what is offered by the established attractions.

Little Island is a mainly industrialised area located on the eastern fringe of Cork city and is a major commercial and employment area. It was reported in April 2018³ that approximately 7,000 workers are employed in Little Island with the vast majority commuting to and from work which have caused significant gridlock issues within the region, extending to Watergrasshill and Knockraha. Despite a low-density permanent population situated on Little Island, the area has a range of community facilities which cater to both commuters and residential populations such as Saint Lappans Church, post office, and health care facilities.

Glanmire

Glanmire, a suburban medium sized town representing the western extent of the SAOI, is located on the eastern side of the M8 corridor. Similar to Carrigtwohill and Glounthaune, part of the residential population commutes to Cork city, Little Island etc. which has resulted in gridlock issues during the peak-time travelling hours. The town has a range of community facilities which include two churches, Saint Michael's Church and St Joseph's Church, various educational and medical facilities and sport clubs.

Knockraha

The village of Knockraha is located to the northeast of Glanmire and immediately west of Leamlara, on the eastern side of the M8 corridor. The village has clustered residential development particularly on its northern and western side with a well-defined social and community core which includes Knockraha National School, community centre, St. Mary's Church and childcare centre and public house.

Knockraha substation is located to the south-east of the village along a local road that also accommodates scattered residential development with some in close proximity to the substation. This area accommodates overhead transmission structures.

Watergrasshill

Watergrasshill, a medium sized village located on the R639 via the M8, constitutes the northern extent of the SAOI. Immediately north of Knockraha, Watergrasshill is located within a predominantly rural agricultural setting; however, the village does benefit from greater community infrastructure in comparison to other regional villages such as Watergrasshill Business Park and a range of retail outlets and public houses. The village also includes community facilities such as Watergrasshill National School, Church of the Immaculate Conception, post office and sport clubs.

Cobh and Cork Harbour

Situated on the southern extent of Great Island in Cork Harbour, Cobh is connected to the remainder of County Cork via the R624 and the Midleton – Cork rail line. The built environment of Cobh sprawls out in an east-west orientation along Cork Harbour which has historically influenced the development of the town in respect to maritime industries and emigration. Characterised as a tourist seaport town, Cobh benefits from a range of recreational attractions including Spike Island, Haulbowline Island and Cobh Farmers Market, Fáilte Ireland recognised public houses and restaurants (Kelly's Bar, the States Restaurant, and Jacob's Ladder Restaurant), sport (GAA, angling, football, kayaking, and Cobh Golf Course), museums (Cobh Museum, Cobh Heritage Centre and Titanic Experience) and festivals. It should be noted that Cobh is the only dedicated cruise ship terminal on the south coast of Ireland.

³ Plans to tackle Little Island gridlock, Sean O'Riordan, Irish Examiner, 2018

Accommodating a significant residential population which increases during the tourist season, Cobh has a wide range of community services supporting both the permanent and temporary populations: religious and educational institutions, medical centres and a wide range of retail and specialised consumer facilities.

Cork Harbour is a natural harbour and river estuary at the mouth of the River Lee in County Cork. Historically, the harbour has been utilised as a work port, recreational amenity, and recently, an economic centre for emerging manufacturing and technology sectors. A major source of employment, Cork Harbour has become a hub for energy generation, shipping, refining and pharmaceutical sectors. These industries are situated along the perimeter of the harbour which include Little Island, Ringaskiddy, Passage West, Monkstown and Whitegate and Aghada.

3 Stakeholder Review

3.1 Overview

This section of the report categorises the various stakeholders anticipated to have an interest in the project. Stakeholders or individuals/organisations who have an interest/perform a social function in the SAOI can be sub-divided into the following categories:

- The Public;
- Elected Representatives;
- Industry and Commerce;
- Social and Community; and
- Environmental and Tourism.

Each of these categories and representative organisations for same are identified below for the proposed landfall options, converter station location zones and underground cable routes.

The list of identified stakeholders detailed in this report will be reviewed and updated, as required, at regular intervals throughout the lifetime of the project.

3.2 Landfall Options

3.2.1 The Public

To assist in analysing the socio-economic trends within the SAOI, a review of CSO (www.cso.ie) information was completed. To secure as accurate representation of these regional populations, Small Areas data for the locations within the SAOI was assessed. Small Areas are areas of population generally comprising between 80 and 120 dwellings created by The National Institute of Regional and Spatial Analysis (NIRSA) on behalf of the Ordnance Survey Ireland (OSi) in consultation with CSO. Small Areas were designed as the lowest level of geography for the compilation of statistics in line with data protection and generally comprise either complete or sections of townlands or neighbourhoods. There is a constraint with using Small Areas in that they must nest within Electoral Division boundaries.

Small Areas were used as the basis for the Enumeration in Census 2016; specifically, enumerators were assigned a number of adjacent Small Areas constituting around 400 dwellings in which they had to visit every dwelling and deliver / collect a completed census form and record the dwelling status of unoccupied dwellings. The details of this analysis are provided in Appendix A of this report. The Small Area boundaries detailed in Appendix A have been amended in line with population data from Census 2016.

Agriculture, forestry and fishing (AFF) are above the national average for Redbarn Beach, Ballinwilling Strand (047156002 / 047156003), Ballycreeen Beach and Inch Beach which indicates the significance of maritime industry for coastal East Cork.

In contrast, Claycastle Beach (047322001), a major tourist destination for Youghal, is below national average for AFF but is in line with averages for Commerce and Trade (CT) whereas all other landfall points are considerably below this average. Another major industry population represented within these statistics is Manufacturing Industries (MI) which is above national averages for all landfall points excluding Ballycreeen Beach (047019002). This trend reflects

the numerous manufacturing companies clustered in Youghal, Midleton and Cork City, major employment centres for the region.

3.2.2 Industry and Commerce

The East Cork coastal region provides significant natural capital for the tourism, fisheries and aquaculture industries.

Commercial Fishing

As noted within the Cork County Development Plan 2014 and illustrated in CSO Statistics (Appendix A), commercial fishing represents an important economic activity in rural coastal areas. Small ports, harbours and quay walls located along the length of the East Cork coastline are important in terms of their fishing and commercial functions, and as referenced above, also serve as tourism access points. Commercial fishing within the region is facing several challenges which include:

- A lack of integration between regulatory bodies that control activities in the Coastal Zone;
- Greater public awareness of and involvement in environmental issues; and
- Changes in the Common Fisheries Policy which has placed restrictions on the amount and type of commercial fishing allowed within EU waters

Due in part to these challenges, employment in the fisheries sector has been declining both regionally and nationally; however, commercial fishing, including shrimp fishing, remains significant as it maintains working populations and communities where there are fewer opportunities for commercial or industrial employment within the locale.

The Operational Programme (OP) supported by the European Maritime and Fisheries Fund (EMFF) 2014-2020 in Ireland aims to help local coastal communities by providing funding and support to small-scale fisheries through the Fisheries Local Action Groups (FLAGs). Investments in small and medium sized companies is also being funded with a focus on sustainability, marine biodiversity and local-led development.⁴

Aquaculture

The East Cork coastal region is an important area for commercial aquaculture with many current operations licensed for the cultivation of shellfish (oysters). The only designated shellfish area within proximity to the proposed landfall points is Ballymacoda Bay, an estuary of intertidal sand and mudflats flanked by reclaimed marshy fields and saltmarsh and sheltered by a stabilized shingle bar and extensive sandy beach. The shellfish area is approximately 0.8 km² within Ballymacoda Bay. There are three active aquaculture licenses currently operating within Ballymacoda Bay as listed below:

- AQ 1171 T05-395 - Mr. Marc Perdriel
- AQ 1172 T05-491 - Baile Mhic Coda Iasclíogáin Teoranta
- AQ 1173 T05-482A - Baile Mhic Coda Iasclíogáin Teoranta

As reported within the most recent characterisation report, there are no identified key or secondary pressures within Ballymacoda Bay's catchment area which are likely to be affecting shellfish water quality⁵.

⁴ <https://www.agriculture.gov.ie/emff/>

⁵ Ballymacoda Shellfish Area - Characterisation Report Number 37, Department of Housing, Planning and Local Government (2010)

Utility Infrastructure

There are a range of utilities installed and maintained by service providers within 500m of the proposed landfall points including gas, water services, telecommunications and electricity infrastructure.

A buried 24" gas pipeline has been installed within Inch Beach. Within proximity to the Inch landfall point, PSE Kinsale Energy Ltd. operates an onshore gas terminal (Inch Terminal) which releases extracted gas from offshore reservoirs via a subsea pipeline to the national gas grid. PSE Kinsale Energy Ltd. also operates a gas storage facility within the vicinity using one of their subsea reservoirs. PSE Kinsale Energy Ltd. has proposed to expand their gas storage operation through the utilisation of an additional reservoir which would increase the facility's storage capacity to approximately 18% of the annual national consumption. At the time of writing this report, PSE Kinsale Energy Ltd. has not yet lodged a planning application with either An Bord Pleanála or Cork County Council.

Table 3: Stakeholders (Industry and Commerce)

EirGrid Plc
Electricity Supply Board (General and Wholesale Markets and Networks)
Gas Networks Ireland
PSE Kinsale Energy
Cork County Council
Iarnrod Eireann
Transport Infrastructure Ireland
Irish Water
East Cork Municipal District (Cork County Council) – Road / Parks, Playgrounds, & Open Spaces / Management of Beaches / Amenity & Other Grants
Aquaculture
Bord Iascaigh Mhara
Marine Institute
Inland Fisheries Ireland
Tourism
Youghal Chamber of Tourism & Development
Youghal Socio-Economic Development Group (YSEDG)
Youghal Forum
East Cork Business Alliance
Youghal Business Alliance
Irish Distillers
Dairygold
PPNetwork

Source: Mott MacDonald

3.2.3 Social and Community

Due to their proximity to Youghal, Claycastle Beach and Redbarn Beach are within the vicinity of a variety of social organisations and community facilities which include sport clubs and religious institutions. As shown in the table below, Youghal has an established social network which focuses on a range of interests including economic and maritime development,

community health, festivals and events and local governance. In relation to development interests, Youghal Socio-Economic Development Group⁶ (YSEDG) is a leading inter-agency group made up of local, regional and countrywide (Fáilte Ireland, Enterprise Ireland, Local Enterprise Office, SECAD) agencies with the aim of promoting Youghal and its environs in tourism, heritage, enterprise and development. Youghal4All⁷ organises various festivals and events throughout the year which includes Youghal's Tidy Towns committee, Youghaloween and Mackerel Festival. The first IRONMAN sporting competition is to be held in Youghal in June 2019. It is a long-distance triathlon event that will be situated there for the next three years. The Youghal Residents Network⁸ is an organisation set up to ensure that local residents have the opportunity to participate in local government decisions within Youghal and its environs and the Youghal Business Alliance is in place to support local businesses.

Ballinwilling Strand is situated within the local areas of Ballymacoda/Ladysbridge Community Council (BLCC)⁹ and Shanagarry Community Association. These two organisations have an active role in their respective communities and engage in a range of community development and social activities. Specifically, BLCC, which is affiliated to Muintir na Tire, is part of a national network of community groups dedicated to promoting and supporting local development within their communities.

As referenced above in Section 3.2.2.1, Ballycreeen and Inch Beach are more rural than the other potential landfall points and thus do not have the same level of established social organisations or community facilities. Inch does benefit from a local Fóroige club which is a recognised leading youth organisation in Ireland that encourages youth involvement within community development.

All potential landfall points are destinations for maritime leisure activities which include fishing, swimming, deep sea angling, diving, coastal rowing, surfing and windsurfing. It is important to note that these activities are not solely undertaken by tourists but are also enjoyed year-round by local communities as either part of clubs, i.e. Coastal Rowing Association and Irish Coastal Rowing Federation, commercial organisations or individually.

Archaeological artefacts, classified by Fáilte Ireland as national museum points, were found within proximity to Ballinwilling Strand and Inch Beach. These artefacts represent in part the cultural heritage of these areas and likely hold significance to local communities. It is also important to note that these artefacts may indicate higher archaeological potential within the vicinity of these potential landfall points which could reveal further archaeological remains and/or stray finds in the future. It is also noted that the *Marine Archaeological Impact Assessment of Proposed Ground Investigations Surveys* report for the Celtic Interconnector project (Cotswold Archaeology Marine, March 2018¹⁰) identified known and potential sites and features of archaeological interest at the Claycastle, Redbarn and Ballinwilling Strand landfall locations.

⁶ <http://youghal.ie/youghal-community/ysedg/>

⁷ http://youghaltidytowns.ie/?page_id=605

⁸ <https://www.cumannnadaoine.com/youghal-residents-network/>

⁹ <http://www.blcconline.org/>

¹⁰ https://www.housing.gov.ie/sites/default/files/foreshore-applications/application-documents/marine_archaeological_impact_assessment_april_2018.pdf

Table 4: Stakeholders (Social and Community)

Landfall	Community	Sport	Religion
Claycastle Beach Redbarn Beach	<ul style="list-style-type: none"> • Muintir Mhuire Teoranta • The Youghal Socio-Economic Development Group • Youghal Community Response Network • Youghal Family Support Centre c/o Youghal Community Health Project • Youghal Maritime Development Group • Youghal Residents Network • Youghal Senior Citizens Co. Ltd • Youghal4All • Youghal Business Alliance 	<ul style="list-style-type: none"> • South Coast Charter Angling • Youghal Dive Charters / Deep Sea Angling • Coastal Rowing Assoc. • Irish Coastal Rowing Fed. 	<ul style="list-style-type: none"> • Our Lady of Lourdes Church
Ballinwilling Strand	<ul style="list-style-type: none"> • Ballymacoda Ladysbridge Community Council • Shanagarry Community Association 	<ul style="list-style-type: none"> • Coastal Rowing Assoc. • Irish Coastal Rowing Fed. 	-
Ballycraheen Beach	-	<ul style="list-style-type: none"> • Coastal Rowing Assoc. • Irish Coastal Rowing Fed. 	-
Inch Beach	<ul style="list-style-type: none"> • Inch Foroige 	<ul style="list-style-type: none"> • Coastal Rowing Assoc. • Irish Coastal Rowing Fed. • Swell Surf School 	-

Source: Mott MacDonald

3.2.4 Tourism

Local tourism groups within East Cork operate on the basis of developing and promoting tourism within their towns and environs, i.e. Youghal Heritage Centre and Tourist Office, Middleton Community Tourist Office and Cobh Tourism Office – Cobh and Harbour Chamber. In contrast, the Ring of Cork and Ireland's Ancient East are region-focused organisations established to drive tourism under specific programmes. The Ring of Cork is an East Cork route that encompasses all the outlying areas around Cork City which promotes the local communities and their services, i.e. Middleton, Cobh, Youghal, Ballycotton, Shanagarry etc. as a single destination. Similarly, Ireland's Ancient East promotes various themes such as 'Maritime Gateway' and 'Vikings' which incorporate various locations along south coast of Ireland including Youghal and the East Cork coastal region.

The tourism and service sectors are key for employment growth in Youghal. Youghal's tourism sector is strengthened in part by the surrounding beaches, i.e. Claycastle and Redbarn (Blue Flag Status), quay and active port facilities which provide potential for additional maritime leisure and business activities. As of June 2018, a new harbour pontoon is in operation for casual, commercial and sailing club members which is considered a major economic boost for the town's maritime industry.

A major entertainment centre (Perks Entertainment Centre) is located at the southern part of Youghal in addition to other recreational amenities, i.e. Youghal Golf Club and Aura Youghal Leisure Centre. These businesses are supported in part by the significant number of holiday mobile homes located in parks to the south of the town, in proximity to a long strand that stretches southwards from the town, Youghal Front Strand Beach and Claycastle Beach. The strand area is accessed via a large car park, and promenade which extends the full length of the strand (Youghal Eco Boardwalk). The beachfront and promenade are an all-year-round amenity of the town for both residents and holidaymakers. Specifically, this area is a primary location for the mobile home parks which indicates that summer tourism is a significant economic sector within the town. This is emphasised by the very large size of the car park serving Claycastle Beach and the promenade.

Once outside the environs of Youghal, there is a considerable lack of formal access infrastructure to the beach until Redbarn Beach. This area is landmarked by Quality Hotel and Leisure Centre Youghal with a decking and seating area directly onto the beachfront. The hotel complex includes an extensive cluster of holiday houses in addition to mobile homes also located in this area.

Ballinwilling Strand is characterised as a source of both local amenity and recreational asset for the local tourism industry of Garryvoe, Shanagarry and Ballycotton villages. Ballinwilling Strand is not attached to any developed settlement or recreational setting and is relatively isolated in comparison to the built environment of Garryvoe further south. Garryvoe has a significant tourism market as evident by an extensive area of holiday mobile homes with associated facilities. Similar to Garryvoe, Shanagarry and Ballycotton are also popular purpose-built beachside amenity areas. In addition to coastal recreation within Shanagarry, Ballymaloe House Restaurant and Shop/Café and Stephen Pearce Pottery provide retail opportunities which in part support the local economy. Tourist attractions within Ballycotton include Ballycotton Angling, Inn by the Harbour and Ballycotton Pitch and Putt Club. The wider local area is also characterised by a range of recreational activities which include Ballycotton Head Looped Walk, Ballymaloe Farm Walk and Knockadoon Head Looped Walk. The East Cork Municipal District Local Area Plan (LAP) (2017) has set out several objectives to further develop the tourism within these villages.

Ballycroneen Beach is relatively small and remote with no signage or development indicative of major local social or community amenities. There are a cluster of dwellings, holiday homes and mobile homes within proximity of the beachfront. Inch Beach is also situated in more rural area although it is extensively used as a local amenity area. A popular surfing school (Swell Surf School) is established at the beach. The area includes a concentration of holiday homes along the local road network and a camping compound (Inch Hideaway Eco Sustainable Camp).

Maritime activities, including surfing, fishing, chartered sea angling, sailing, wind and kite surfing and boat tours, are undertaken at varying frequencies at the proposed landfall points depending on peak/off peak tourist seasons. The East Cork coastal region has a historic tradition in fishing / sea angling which holds several contemporary records in Irish sea angling including records for pollack and halibut. As year-round activities, fishing and chartered sea angling remain major markets within East Cork's tourism and commercial sectors.

Table 5: Stakeholders (Tourism)

Landfall	Fáilte Ireland Activity Listings 2017	Bathing Waters	Festivals and Misc. Tourism / Amenity	Camping / Holiday Homes	Local Tourism Groups
Claycastle Beach	<ul style="list-style-type: none"> • South Coast Charter Angling • Youghal Dive Charters / Deep Sea Angling • Perks Entertainment Centre • Claycastle Pitch & Putt Club 	<ul style="list-style-type: none"> • Claycastle • Youghal Front Strand Beach 	<ul style="list-style-type: none"> • Irelands Ancient East (Youghal) • Aura Leisure Centre, Claycastle, Youghal • Youghal Food & Mackerel Festival (Youghal, August) • Youghal's Queen of the Sea (Youghal, August, July) • Youghal Moby Dick Festival (Youghal, June) • IRONMAN (Youghal, July) 	<ul style="list-style-type: none"> • Summerfield Holiday Park • Seafield Caravan Park 	<ul style="list-style-type: none"> • Youghal Socio-Economic Development Group (YSEDG) • Youghal Heritage Centre and Tourist Office • East Cork Tourism Ltd. • Ireland's Ancient East • Ring of Cork
Redbarn Beach	<ul style="list-style-type: none"> • South Coast Charter Angling • Youghal Dive Charters / Deep Sea Angling 	<ul style="list-style-type: none"> • Redbarn (Blue Flag) 	<ul style="list-style-type: none"> • Irelands Ancient East (Youghal) • Quality Hotel and Leisure Centre Youghal 	<ul style="list-style-type: none"> • Redbarn Holiday Homes 	
Ballinwilling Strand	<ul style="list-style-type: none"> • South Coast Charter Angling • Ballymaloe House Restaurant and Shop/Café • Inn by the Harbour • Garryvoe Hotel • Bayview Hotel 	<ul style="list-style-type: none"> • Ballinwilling Beach • Ballycrennane Beach • Ardnahinch 	<ul style="list-style-type: none"> • Ballycotton Angling • Garryvoe Hotel • Ballycotton Pitch and Putt Club • Ballycotton Head Looped Walk • Ballymaloe Farm Walk • FEAST – The East Cork Food & Drink Festival (Midleton and surrounding areas, September) • Knockadoon Head Looped Walk 	-	
Ballycraheen Beach	-	<ul style="list-style-type: none"> • Ballycraheen • Ballybrannigan 	-	-	
Inch Beach	<ul style="list-style-type: none"> • Swell Surf School 	<ul style="list-style-type: none"> • Inch 	-	<ul style="list-style-type: none"> • Inch Hideaway Eco-Sustainable Camp 	

Source: Mott MacDonald

3.3 Converter Station Location Zones

3.3.1 The Public

The Converter Station Location Zones encompass sections of 'Small Areas' but not their entirety. As such, statistical analysis has been conducted at a high level due to this limitation in defining the actual population within each zone. The details of this analysis are provided in Appendix A of this report.

When comparing populations, it is noted that Zone 2 (Water-Rock) encompasses a significant population (2,294) whereas the average population for the remaining 13 zones is approximately 847. It should be noted that Zone 3 (Curragh) has the lowest zone population of 467.

All potential Converter Station Location Zones have populations that are significantly above the national average for employment in 'Manufacturing Industries' which indicates the significance of the manufacturing industry within the region. All Small Areas within Zones 4, 10 and 13 exceed the national averages for employment within 'Agriculture, Forestry and Fishing' which indicates that these zones are likely rural agricultural areas. All other categories are in line with the national averages.

3.3.2 Industry and Commerce

As stated within the East Cork Municipal District LAP (2017) and Fermoy Municipal District LAP (2017), agriculture is a key economic activity within these municipal districts, both in direct farming and in food processing as exemplified by Irish Distillers. Tourism and other services in combination with more traditional manufacturing industries are also significant employers within the area.

Agriculture

Due to the size and setting of the Converter Station Location Zones, all zones encompass rural agricultural land. The intensity of agricultural operation will vary between zones; specifically, there is a clear trend that Zones 4 to 14 (proximate communities include Ballyspillane, Leamlara, Lisgoold, Knockraha and Watergrasshill) are more agriculturally productive than Zones 1-3, which are located within the urban environs of Midleton and Carrigtwohill.

According to Teagasc, the agri-food sector in Ireland in 2016 generated 7% of gross value added (€13.9 billion), 9.8% of Ireland's merchandise exports and provided 8.5% of national employment. As such, the agri-food sector is one of Ireland's most important indigenous manufacturing sectors, accounting for employment of around 167,500 people.

The agricultural sector does, however, face a range of challenges¹¹ at the time of writing this report. A viability analysis published as part of Teagasc's 2017 National Farm Survey concluded that profitability was an emerging challenge with 30% of the farm population represented by the survey classed as being economically vulnerable. As the UK is a key market for the outputs of Irish agriculture, an unfavourable Brexit outcome which reduced market access for Irish exports would have a significant negative effect on Irish agriculture though the development of alternative markets for Irish agri-food products may provide benefits in the future. In respect to climate change, there is uncertainty as to how the objective of increasing agricultural output will

¹¹ [https://www.centralbank.ie/docs/default-source/publications/economic-letters/vol-2018-no.8-irish-agriculture-economic-impact-and-current-challenges-\(conefrey\).pdf?sfvrsn=4](https://www.centralbank.ie/docs/default-source/publications/economic-letters/vol-2018-no.8-irish-agriculture-economic-impact-and-current-challenges-(conefrey).pdf?sfvrsn=4)

be reconciled with delivering on national and EU environmental targets which could include significant changes in land use and agriculture.

The Irish Farmers' Association (IFA) is the leading representative body for the agricultural industry which will be a critical stakeholder when assessing the feasibility of developing the converter station on agriculturally active land.

Manufacturing

Midleton is the principal market town in East Cork and has a strong retail / commercial / employment base which includes a significant manufacturing and services sector in addition to Midleton Distillery. This is reflected within the CSO Statistics (Appendix A) as all Converter Station Location Zones have populations that are significantly above the national average for employment in 'Manufacturing Industries'. These statistics indicate that significant portions of Small Area populations, which compose the Midleton Environs and hinterland, are actively engaged within the industry and are likely commuting to Midleton, Carrigtwohill, Little Island or Cork city daily for employment.

Considering Ireland's post-recession economic status, the East Cork Municipal District LAP (2017) has set out an objective to:

'Expand the economic base of the town to enhance local employment opportunities and to underpin population growth ensuring the growth in the residential function of the town is balanced with economic expansion.'

In line with this objective, industry stakeholders such as the SECAD (employment service) partnership are likely to continue identifying foreign direct investment opportunities and organising recruitment campaigns in order to further expand the region's manufacturing industry. As of 2018, Irish Distillers have pledged to invest €130m in to the expansion and upgrade of the Midleton facility and the construction of the Dungourney facility. Eight new maturation warehouses, each housing 16,800 casks, will be built as part of the Dungourney facility construction and further construction of a new office building is planned in Midleton which will include the installation of additional equipment to expand capacity.¹² Notwithstanding this, there are inherent challenges associated with expanding the existing manufacturing industry within the region. As noted previously, manufacturing has specific requirements for transportation infrastructure which is particularly relevant to the movement of physical goods to their markets. The uncertainty of Brexit is another major challenge facing the manufacturing industry as the introduction of import duties and tariffs within UK markets may result in economic decline until new markets are established.

Enterprise and Commerce

Converter Station Location Zones 1, 2, and 3 encompass a wide range of local businesses and services within the environs of Midleton and Carrigtwohill. Local businesses located within these zones include retail, automotive, health and fitness, food and beverage, transportation, waste and construction services, technology and agricultural equipment. Due to their central location within the region and proximity to the N25, the catchment areas of these businesses are likely to include the entirety of East Cork and the eastern/southern extent of Fermoy as the only alternative market of similar scale is Cork city. In addition to local businesses, Converter Station

¹² <https://www.irishdistillers.ie/2018/10/14/irish-distillers-announces-e150-million-investment-in-sites-in-cork-and-dublin/>

2 also encompasses a number of business/enterprise parks as listed below (Table 6). The development and maintenance of regional transportation infrastructure is therefore critical for both businesses and consumers in regard to promoting and accessing these markets. Consultation with stakeholders such as Midleton and Area Chamber of Commerce and East Cork Business Alliance will be key to gauging the potential impacts of developing the converter station on local business and industry within these zones.

Further investment within Small and Medium Enterprises (SME's) and multinationals is set out as an economic objective by the East Cork and Fermoy Municipal District LAPs. At the time of writing this report, IDA Ireland with the support of Fermoy Enterprise Board is currently marketing a 54ha strategic site located in Converter Station Location Zone 1 (Ballyadam). The Ballyadam site in Carrigtwohill remains one of the most serviced vacant commercial locations in the country following significant investment to ensure operational viability for Amgen, a global pharmaceutical company, who withdrew consideration of the site in 2010. The Irish Examiner (2018)¹³ notes, however, that development within the Ballyadam site and along the N25, between Midleton and Carrigtwohill (Zones 1 and 2), will be difficult to commence until the dual carriageway is upgraded to a motorway (grade-separated junction) as the current volume of traffic has resulted in significant gridlock issues. At present, the Ballyadam site is used for recreational purposes although local politicians and community members have continued to call for its development in order to facilitate local employment.

Utility Infrastructure

There are a range of utilities installed and maintained by service providers within all the Converter Station Location Zones including water services, gas services, telecommunications and electricity infrastructure.

As described in Section 2.2, the interconnector will connect to the national transmission grid via a connection point, Knockraha 220kV substation, which is located within Converter Station Location Zone 9. There are currently six 110kV circuits and six 220kV circuits running into the station which has subsequently resulted in a large quantity of overhead transmission infrastructure within the surrounding area.

There have been two recently permitted applications for Solar PV farms within the vicinity of Leamlara / Knockraha and Ballyspillane West which will produce up to 25.7MW (48 hectares) and 14.1MW (28 hectares), respectively. Lightsource Renewable Energy Ireland has stated that their proposed 48ha solar PV farm between Leamlara and Knockraha will provide enough energy to accommodate the demand of 7,650 local households¹⁴. Converter Station Location Zones 7 and 8 include Ballyvatta and Clash townlands (25.7MW solar PV farm) whilst Converter Station Location Zone 4 encompasses Ballyspillane West townland (14.1MW solar farm development).

¹³ <https://www.irishexaminer.com/viewpoints/analysis/boarded-up-idle-and-used-to-walk-the-dog-shame-of-empty-ida-sites-466690.html>

¹⁴ <https://www.irishexaminer.com/ireland/residents-oppose-solar-farm-due-to-industrialisation-465140.html>

Table 6: Stakeholders (Industry and Commerce)

EirGrid Plc
Electricity Supply Board (General and Wholesale Markets and Networks)
Gas Networks Ireland
Irish Water (Water Utility Company)
East Cork Municipal District (Cork County Council) – Road / Parks, Playgrounds, & Open Spaces / Management of Beaches / Amenity & Other Grants
Cobh - Glanmire Municipal District (Cork County Council) - Road / Parks, Playgrounds, & Open Spaces / Management of Beaches / Amenity & Other Grants
Cobh - Glanmire Municipal District (Cork County Council) - Road / Parks, Playgrounds, & Open Spaces / Management of Beaches / Amenity & Other Grants
Renewable Energy Sector (Lightsource Renewable Energy Ireland / Terra Solar)
Tourism
Agriculture
Irish Distillers
Midleton & Area Chamber of Commerce
East Cork Business Alliance
SEACAD Partnership
Irish Farmers' Association
Industrial Development Authority
Fermoy Enterprise Board
Transport Infrastructure Ireland
Businesses / Enterprise Parks
Nordic Enterprise Park
Owenacurra Business Park
Europa Business Park
Northern Point Business Park
Knockgriffin Industrial Park
Ballinacurra Business Park
Ramhill Industrial Estate
Watergrasshill Business Park
IDA (Ballyadam) Business Park

Source: Mott MacDonald

3.3.3 Social and Community

Converter Station Location Zone 1

Converter Station Location Zone 1 includes the N25 Cork to Waterford road and is centred on a vacant industrial site (refer to Section 3.3.2.3). The site is situated in the townland of Ballyadam, the Electoral Division (ED) of Carrigtwohill, which is within the jurisdiction of the Carrigtwohill Community Council and is bounded to the north by the Cork / Midleton rail line and to the south by the N25. Carrigtwohill Community Council is a community elected organisation which organises and implements projects for the benefit of the community in addition to representing Carrigtwohill when interacting with external bodies, i.e. government agencies. Within 1km of the converter station location zone, there are 3 no. resident associations (Cul Ard, Fota Rock and Rocklands) which are active in community outreach and organisation and have historically

participated within the planning system. The zone is low lying and it is expected that views of the zone can be gained from the elevated areas to the north, east and west.

There are a limited number of social / community facilities either located within the converter station location zone or within a 1km precautionary distance from the area. Little Angels Creche and Barrycourt Medical Centre are both situated within 1km of the area whereas Carrigtwohill United Football Club playing fields are located within the western periphery of the zone.

Converter Station Location Zone 2

Converter Station Location Zone 2 includes the Electoral Divisions of Midleton Rural and Carrigtwohill and is traversed by the N25. Converter Station Location Zone 2 is characterised as a built-up area of mixed commercial, retail and residential massing with lands zoned for further residential development and enterprise. The Cork / Midleton rail line traverses the zone to the north. Carrigtwohill Community Council, Midleton Community Forum Ltd and Midleton MY PLACE Limited are active community organisations which provide support and resources to the residents in relation to community health and local governance.

Situated along the urban fringe of northern and western Midleton, Converter Station Location Zone 2 encompasses a range of social organisations and community facilities both in the zone and within 1km of the zone. Midleton Football Club, Southdoc Midleton medical facility and Midleton Veterinary Hospital are located within the south-western section of the zone in proximity to Midleton town centre. The Willowbank Pre-School is located within the northern extent of the zone in a predominantly residential setting.

As detailed below, numerous sport clubs, religious and educational institutions and medical and community facilities are clustered within central and southern Midleton, within 1km of the zone.

Converter Station Location Zone 3

Located in Carrigtwohill ED, the majority of Converter Station Location Zone 3 forms part of the Metropolitan Green Belt with the south-east section classified as a Built-Up Area zoned for residential development. Due in part to the Metropolitan Green Belt, community and social infrastructure is not as prevalent within this zone as compared to Converter Station Location Zones 1 and 2. Notwithstanding this, residents within Converter Station Location Zone 3 are likely to access the same social / community services and facilities, i.e. sport, religion, education and medical etc. as those residing in Zone 1 and 2 due to the spatial overlap of these areas.

The only community facility partially located within Converter Station Location Zone 3 is Water Rock Golf Club, situated in the eastern section of the zone. Midleton Educate Together National School and Willowbank Pre-School are located within 1km east of the zone.

Converter Station Location Zone 4

Converter Station Location Zone 4, a rural / semi-rural agricultural area, is situated within Templenacarriga ED and Ballyspillane ED, approximately 2.5 km north of Midleton. Ballyspillane West & Surrounding Area Action Group (hereafter referred to as BWSA Action Group) is a new and active community action group within Converter Station Location Zone 4. Formed in opposition to TerraSolar's proposal to develop a 28ha solar PV farm within Ballyspillane West townland (Ref. PL04.300602), BWSA Action Group's objections to the development were based on the potential impacts the solar PV farm could have on the rural amenity and local businesses of the area. In light of An Bord Pleanála's decision to uphold Cork County Council's grant of permission for the solar PV farm, early consultation with BWSA Action Group may be beneficial

when assessing the feasibility of Converter Station Location Zone 4 due to the area's current sensitivity towards large scale infrastructural development.

The only community facility partially located within Converter Station Location Zone 4 is East Cork Golf Club in the southern section of the zone. There are no further community facilities in the zone or within 1km of the area; however, residents are likely to access the same social / community services and facilities as those residing in Zones 1, 2 and 3 due to the proximity of these areas.

Converter Station Location Zones 5, 6, 7 and 8

Converter Station Location Zone 5 is located within the Lisgoold ED and is just outside of the Lisgoold Development Boundary, as identified in the East Cork Municipal District LAP. A rural agricultural area with a low-density population, strategic aims set out for Lisgoold by the Local Plan are to consolidate its role as an important local service centre and facilitate small-scale expansion through residential and other community development. Local community facilities and services currently provided within Lisgoold include Lisgoold GAA Club, St. John the Baptist Church and Lisgoold Community Childcare Centre. It should be noted that these community facilities are within 1km of Converter Station Location Zone 5.

Converter Station Location Zones 6, 7 and 8 are also located in the Lisgoold ED, within the vicinity of Leamlara, a rural agricultural village approximately 3.3km west of Lisgoold. Zone 6 is partially situated within the Leamlara Development LAP Boundary and has been zoned for the development of up to 10 residential dwellings within the lifetime of the plan. In contrast, Zones 7 and 8 sit outside LAP plan boundaries and no area specific policies were identified for the zones following a review of East Cork Municipal District LAP and Cobh – Glanmire District LAP mapping. Similar to Lisgoold, Leamlara provides basic community services, i.e. education (Leamlara Montessori School and Bishop Aherne National School), religious (Sacred Heart Church & Grotto) and health services (Brookfield Care Centre). These community facilities are situated within 500m of Converter Station Location Zones 6 and 7. There are no social / community facilities in Zone 8 or within 1km of the zone; however, residents are likely to access the same services and facilities as those residing in Zones 6 and 7 due to the proximity of these areas, or alternatively, may commute to surrounding centres of employment including Watergrasshill, Midleton and Cork City.

Lisgoold/Leamlara Community Council, which represents those residents living within these zones, is a community elected organisation which organises and implements projects for the benefit of Leamlara, Lisgoold, and Ballincurrag in addition to representing the interests of these villages on a regional and county basis. Lackenbehy Action Group, a community action group organised on the basis of preserving and protecting the environment and the health and well-being of the local community, is also active within the regional area of these zones. These¹⁵, organisations, in addition to the Bishop Aherne National School Board of Management, submitted observations to Cork County Council opposing the recommencement of operation at Lackenbehy Quarry [Planning Ref 177348], and at the time of writing this report, have submitted appeals to An Bord Pleanála (Ref 302853- 18) challenging Cork County Council's decision to grant permission for same.

Converter Station Location Zone 9

Converter Station Location Zone 9, located within Knockraha ED and is centred on the Project's connection point, the Knockraha 220kV Substation and associated transmission

¹⁵ <https://www.eastcorkjournal.ie/roadstone-given-green-light-to-reopen-lackenbehy-quarry/>

infrastructure. Knockraha has clustered residential development, particularly within its northern and western areas, with a well-defined social and community core made up of Knockraha National School, Knockraha community centre, St. Mary's Church and the Old School House Childcare Facility. These community facilities are situated within approximately 500m of Converter Station Location Zone 9. It should also be noted that to the north-west of Zone 9, land is zoned for community and open spaces, potentially associated with Knockraha National School.

The Knockraha 220kV substation is located to the south-east of the village along a local road that also accommodates scattered residential development with some in close proximity to the substation. The Knockraha Community Association has opposed further development of the Knockraha substation and surrounding transmission infrastructure, appealing decisions to Cork County Council and An Bord Pleanála. Due to the significance of Knockraha substation to the delivery of the Project, the Knockraha Community Association will be a key stakeholder on this project.

Converter Station Location Zone 10

Converter Station Location Zone 10, a rural agricultural area, is located east of Knockraha 220kV substation at a straight-line distance of approximately 1.3km. Zone 10 is situated within the following electoral districts: Lisgoold (eastern extents), Knockraha (western extents) and Carrigtwohill (southern extents). Depending on where the converter station is situated, Lisgoold/Leamlara Community Council, Knockraha Community Association and Carrigtwohill Community Council may share similar responsibilities in representing the interest of residents within Zone 10. There are no community facilities in the zone although Brookfield Care Centre is within 1km of the area. Residents are likely to access the same social / community services and facilities as those residing in Zones 6, 7 and 9 due to the proximity of these areas.

Converter Station Location Zone 11

Converter Station Location Zone 11 is located directly north of Converter Station Location Zone 8. This zone encompasses a forest located in the townlands of Glengarriff Beg, Carrigane, Moanbaun, Rupperagh, Skahanagh South, Knockeenagroagh, Monatooreen and Knockanenafinoga. The forest is traversed by a local road.

Converter Station Location Zone 11 is located approximately 4.5 kilometres straight line distance to Knockraha substation and approximately 3 kilometres east of the M8 and Watergrasshill. The zone includes both Lisgoold ED and Knockraha ED. No area specific policies have been identified for this zone following a review of East Cork Municipal District LAP and Cobh – Glanmire District LAP mapping.

Moanbaun Woods is a popular local recreational amenity, and the associated trails are located directly north of the local road within the forested area. No other social / community facilities have been identified within Zone 11 or within 1km of the zone; however, residents are likely to access the same services and facilities as those residing in Zones 6 and 7 due to the proximity of these areas, or alternatively, may commute to surrounding centres of employment including Watergrasshill, Midleton and Cork City.

Lisgoold/Leamlara Community Council is also likely to represent those residents living within this zone.

Converter Station Location Zone 12

Converter Station Location Zone 12 is located to the north of zone 9 within the townlands of Kilquane and Meeleen and Shanballyreagh within Knockraha ED and is centred on a forest.

The forested area is located approximately 1 kilometre to the north-east of the settlement of Knockraha described under zone 9.

The stakeholders associated with this zone are likely to be similar to those identified for zone 9, including Knockraha Community Association.

Converter Station Location Zone 13

Converter Station Location Zone 13 is within the townland of Walshtown More West and Ballynona North within the Electoral Division of Templenacarriga, approximately 8.5 kilometres north of Midleton. The zone is centred around a forest and includes the Irish Distillers site at Dungourney.

Local community groups and activities in the area include two churches (Dungourney Church and Dungourney Church of Ireland), St. Peter's National School, a post office, and a retail outlet, Rigney Bros. The village supports two sports clubs, Dungourney GAA club and Dungourney Camogie Club, and benefits from Knockakeo Wood which provides the area with a recreational (hillwalking) and natural heritage amenity. Leahy's Open Farm is located approximately 4 kilometres to the east of the zone. Dungourney Clonmult Community Group would be a key stakeholder in this area.

As detailed previously, Irish Distillers plan to expand their site at Dungourney. In-combination impacts associated with these works would need to be considered should this zone be progressed for further study.

Converter Station Location Zone 14

Converter Station Location Zone 14 is centred on a forest between converter station location zones 7 and 8 in the townland of Ballyvatta within Lisgoold ED, a straight-line distance of approximately 4 kilometres from Knockraha substation.

Moanbaun Woods, a popular local recreational amenity, and the associated trail are located to the north of the zone. Other community groups, recreational and / or tourist facilities have not been identified within the zone itself, however, it can be expected that facilities and organisations referenced for zones 7, 8 and 9 would be utilised, including the following stakeholder representatives; Lisgoold/Leamlara Community Council and Knockraha Community Association.

Table 7: Stakeholders (Social and Community)

Option	Community	Sport and Schools.	Religion	Community Facilities / Services (Including Health Services)
1	<ul style="list-style-type: none"> • Carrigtwohill Community Council • Rocklands Residents Association¹ • Cul Ard Residents Association¹ • Fota Rock Residents Association¹ 	<ul style="list-style-type: none"> • Carrigtwohill United FC 	-	<ul style="list-style-type: none"> • Barryscourt Medical Centre¹ • Little Angels Creche¹
2	-	<ul style="list-style-type: none"> • Midleton GAA Club¹ • Midleton Golf Society¹ • Midleton Football Club • Midleton Rugby Football Club¹ 	<ul style="list-style-type: none"> • St. John the Baptist Catholic Church¹ • The Holy Rosary Church¹ • Midleton Baptist Church Office¹ 	<ul style="list-style-type: none"> • Midleton Post Office¹ • Midleton Garda Station¹ • Midleton Medical Centre¹ • Midleton Health Centre¹ • East Cork Counselling¹ • Cope Foundation¹ • Midleton Community Hospital¹ • Southdoc Midleton • Midleton Dental Care¹ • Midleton Holistic Health Centre¹ • Midleton Veterinary Hospital
3	<ul style="list-style-type: none"> • Carrigtwohill Community Council • Midleton Community Forum Ltd (Family Resource Centre) • Midleton MY PLACE Limited 	<ul style="list-style-type: none"> • Water Rock Golf Club • Midleton Educate Together National School¹ 	-	<ul style="list-style-type: none"> • - Willowbank Pre-School¹
4	<ul style="list-style-type: none"> • Ballyspillane West & Surrounding Area Action Group 	<ul style="list-style-type: none"> • East Cork Golf Club 	-	-
5	<ul style="list-style-type: none"> • Lisgoold/Leamlara Community Council • Lackenbehy Action Group • Ballyspillane West & Surrounding Area Action Group 	<ul style="list-style-type: none"> • Lisgoold GAA Club¹ 	<ul style="list-style-type: none"> • St. John the Baptist Church¹ 	<ul style="list-style-type: none"> • A1-K9 Dog Training Centre and Boarding Kennel • Brookfield Care Centre¹ • Lisgoold Community Childcare Centre¹
6 / 7	<ul style="list-style-type: none"> • Lisgoold/Leamlara Community Council • Lackenbehy Action Group 	<ul style="list-style-type: none"> • Leamlara Montessori School¹ • Bishop Aherne National School¹ 	<ul style="list-style-type: none"> • Sacred Heart Church & Grotto¹ 	<ul style="list-style-type: none"> • Brookfield Care Centre¹

Option	Community	Sport and Schools.	Religion	Community Facilities / Services (Including Health Services)
8	<ul style="list-style-type: none"> Lisgoold/Leamlara Community Council Lackenbehy Action Group 		-	-
9	<ul style="list-style-type: none"> Knockraha Community Association Ltd. Lackenbehy Action Group 	<ul style="list-style-type: none"> Knockraha National School¹ 	<ul style="list-style-type: none"> St. Mary's Church¹ St. Cuain's Well, Holly Well¹ 	<ul style="list-style-type: none"> The Old School House Childcare Facility¹
10	<ul style="list-style-type: none"> Knockraha Community Association Ltd. Lisgoold/Leamlara Community Council Carrigtwohill Community Council Lackenbehy Action Group 	-	-	<ul style="list-style-type: none"> Brookfield Care Centre¹
11	<ul style="list-style-type: none"> Lisgoold/Leamlara Community Council Lackenbehy Action Group 	<ul style="list-style-type: none"> Leamlara Montessori School¹ Bishop Aherne National School¹ 	<ul style="list-style-type: none"> Sacred Heart Church & Grotto¹ 	<ul style="list-style-type: none"> Brookfield Care Centre¹
12	<ul style="list-style-type: none"> Knockraha Community Association Ltd. Lackenbehy Action Group 	<ul style="list-style-type: none"> Knockraha National School 	<ul style="list-style-type: none"> St. Mary's Church¹ St. Cuain's Well, Holly Well¹ 	<ul style="list-style-type: none"> The Old School House Childcare Facility¹
13	<ul style="list-style-type: none"> Dungourney Clonmult Community Group 	<ul style="list-style-type: none"> Dungourney GAA club Dungourney Camogie Club St. Peter's National School 	<ul style="list-style-type: none"> Dungourney Church Dungourney Church of Ireland 	<ul style="list-style-type: none"> Dungourney Post Office
14	<ul style="list-style-type: none"> Lisgoold/Leamlara Community Council Lackenbehy Action Group 	<ul style="list-style-type: none"> Leamlara Montessori School¹ Bishop Aherne National School¹ 	<ul style="list-style-type: none"> Sacred Heart Church & Grotto¹ 	<ul style="list-style-type: none"> Brookfield Care Centre¹

Source: Mott MacDonald

Note¹: Stakeholders located within 1km of the designated Converter Station Location Zone

3.3.4 Tourism

The growth of Midleton and Environs' manufacturing and enterprise industries has facilitated greater diversification within the local economy which has subsequently reduced reliance on the tourism industry to support communities. Notwithstanding this, tourism remains an important employer and contributor to the economy of Midleton and the wider regional area.

As noted within the East Cork Municipal District LAP, Midleton is both a destination and a gateway for tourism within the county. Midleton and Environs benefit as a strategic location on the major tourist routes between Rosslare (International Ferry Terminal), Cobh (cruise ships) and West Cork whilst facilitating access to other tourist attractions, i.e. Fota Island, Irish Distillers Visitor Centre, Ballymaloe, Garryvoe, Trabolgan Holiday Village and Youghal, due to proximate rail, motorway and air (Cork International Airport) infrastructure.

As a destination, Midleton and Environs offer a wide range of festivals and tourist attractions predominantly clustered within Midleton town centre which include Midleton Pitch and Putt Club, Jungle World, Crafts on the Mall, Midleton Country Market, Midleton Farmers Market and acclaimed restaurants such as Farm Gate, SAGE and Ferrit & Lee. The Nellie Cashman Monument, the Choctaw Native American Monument and the WWI memorial are popular visitor attractions.

Although promoted as tourist attractions, the Midleton Country Market and Midleton Farmers' Market, one of the most prominent farmer's markets in Ireland, are significant to both residents and the surrounding agricultural industry as venues to promote local business and produce. Promoted by Irish Distillers as a major industrial museum, the Old Jameson Distillery and Irish Whiskey Academy has also had a major effect on local tourism with the associated tour attracting over 300k visitors per annum. To the south-west of Midleton town centre, Ballyannan Woods - Midleton Forest Walk is a popular recreational attraction for both locals and tourists alike. These listed attractions, excluding Jungle World - Midleton, are within 1km of Zone 2 whereas the latter is situated in Zone 2, within the vicinity of Gate Cinema.

Situated within the northern extent of Midleton, Water Rock Golf Club and East Cork Golf Club are partially located within Converter Station Location Zones 3 and 4, respectively. Other tourist attractions within 1km north of Converter Station Location Zone 3 include Curragh Wood Walk, Hilltop Enclosure Scenic View and Glenview House. The Paddocks Holiday Village, located just outside of north-eastern Midleton, is within 1km south of Converter Station Location Zone 4.

Carrigtwohill, in comparison to Midleton, is a suburban residential community which has not yet developed significant tourist attractions or purpose-built recreational infrastructure. Jasmine Villa Caravan and Camping Park, located in the western extent of Carrigtwohill, is within 100m of Converter Station Location Zone 1. Significant transportation links from Carrigtwohill to Fota Island and Cork city do, however, provide access to regional tourist attractions and recreational amenity.

There are limited purpose-built tourist attractions and recreational infrastructure north of Midleton and within proximity to the other Converter Station Location Zones (5 – 10). Tourism established on the natural capital of the area, i.e. forests and rivers (Leamlara and Owennacurra), includes angling, fishing, kayaking and hiking. For example, Moanbaun Wood Walk within Moanbaun Woods is within 1km of Converter Station Location Zone 8.

Table 8: Stakeholders (Tourism)

Option	Fáilte Ireland Activity Listings 2017	Festivals and Misc. Tourism / Amenity	Local Tourism Groups
1	-	<ul style="list-style-type: none"> Jasmine Villa Caravan and Camping Park¹- 	<ul style="list-style-type: none"> East Cork Tourism Ltd.
2	<ul style="list-style-type: none"> Midleton Pitch and Putt Club¹ Crafts on the Mall¹ Midleton Farmers Market¹ Midleton Country Market¹ Finíns¹ Angling Roxboro River¹ 	<ul style="list-style-type: none"> Jameson Distillery Midleton¹ Jungle World, Midleton Nellie Cashman Monument¹ Irish Whiskey Academy¹ Ballyannan Woods - Midleton Forest Walk Elfordstown Earth Station FEAST – The East Cork Food & Drink Festival (Midleton and surrounding areas, September) Midleton Arts Festival (Midleton, Mid-May) 	<ul style="list-style-type: none"> Midleton Community Tourist Office Ireland's Ancient East Ring of Cork
3	<ul style="list-style-type: none"> Water Rock Golf Course 	<ul style="list-style-type: none"> Curragh Wood Walk¹ Hilltop Enclosure Scenic View¹ Glenview House¹ FEAST - The East Cork Food & Drink Festival (Midleton and surrounding areas, September) Midleton Arts Festival (Midleton, Mid-May) 	
4	<ul style="list-style-type: none"> East Cork Golf Club¹ National Space Centre 	<ul style="list-style-type: none"> - The Paddocks Holiday Village¹ 	
5 / 6 / 7	-	-	
8	-	<ul style="list-style-type: none"> Moanbaun Wood Walk¹ 	
9 / 10	-	-	
11		<ul style="list-style-type: none"> Moanbaun Wood Walk¹ 	
12 / 13			
14		Moanbaun Wood Walk ¹	

Source: Mott MacDonald

Note¹: Stakeholder is located within 1km of the applicable Converter Station Location Zone

3.4 Environment

A range of government agencies and NGO's are responsible for environmental management relevant to the Project: overseeing the conservation of natural and archaeological heritage in regard to development proposals, coastal management, and the protection of aquatic ecology.

The Environmental Protection Agency (EPA), established under the Environmental Protection Agency Act, 1992, has a range of statutory functions which include environmental licensing, enforcement of environmental law, environmental planning and strategic environmental assessment. An Taisce works to preserve and protect Ireland's natural and built heritage through advocacy, management of national assets and the development and implementation of environmental programmes and campaigns.

An Bord Pleanála will be responsible for the determination of the planning application and the overseeing of other matters set out under the Planning and Development Act 2000 (as amended) as relevant to the Project and Cork County Council will provide significant input into the planning process for all Project components due to their proposed sitting within County Cork.

The following table details governmental and local environmental groups operating within County Cork and the East Cork region. Organisations such as Cork Environmental Forum, Cork Green Party, County Nature Trust BirdWatch Cork and Cork Nature Network are established on a county-wide basis with general objectives of promoting nature conservation, increase awareness and education on environmental matters developing partnerships with local and national organisations in order to achieve their goals. Regional organisations such as East Cork Harbour Environmental Association, Harpers Ireland Wetland Centre, the Trabolgan Bird of Prey Educational Centre, Clean Coasts Ballynamona and Knockraha Area Community Association operate more exclusively within East Cork with goals and objectives specific to particular locations or local concerns. Harpers Island Wetland Centre is in the Glounthaune Estuary and supports significant populations of birds of national importance and wintering waterbirds.¹⁶

Table 9: East Cork Stakeholders (Environment)

Government Agencies	Local Environmental Groups
National Parks and Wildlife Service – Department of Culture, Heritage and the Gaeltacht	Birdwatch Ireland (Birdwatch Cork)
National Monuments Service - Department of Culture, Heritage and the Gaeltacht	Cork Harbour Alliance for a Safe Environment
Underwater Archaeology Unit - Department of Culture, Heritage and the Gaeltacht	Cork Environmental Forum
Sea Fisheries Protection Agency	Cork Green Party
Coastal Zone Management Division (Department Housing, Planning, Community and Local Government)	Cork Climate Action
Inland Fisheries Ireland	County Nature Trust
Marine Institute	Cork Nature Network
Bord Iascaigh Mhara	Clean Coasts Ballynamona
	East Cork for a Safe Environment
	East Cork Harbour Environmental Association

¹⁶ [://www.birdwatchcork.com/harper%27s.htm](http://www.birdwatchcork.com/harper%27s.htm)

Government Agencies

Local Environmental Groups

Cork Renewable Energy Group
Knockraha Area Community Association- Environmental subgroup
Youghal Environmental Safety
Youghal Residents Network
Tidy Town Committees
The Irish Environmental Network
An Taisce Green Coast

Source: Mott MacDonald

3.5 Elected Representatives

The Elected Representatives (with the exception of Senators and Members of the European Parliament) within the SAOI are set out in the table below.

Table 10: Elected Representatives

Name	Role
Mr. Pat Buckley	Cork East Constituency TD
Mr. Kevin O'Keefe	Cork East Constituency TD
Mr. Seán Sherlock	Cork East Constituency TD
Mr. David Stanton	Cork East Constituency TD
Cllr Michael Ahern	East Cork Municipal District (Cork County Council)
Cllr Noel Collins	East Cork Municipal District (Cork County Council)
Cllr Michael Hegarty	East Cork Municipal District (Cork County Council)
Cllr Mary Linehan Foley	East Cork Municipal District (Cork County Council)
Cllr Susan McCarthy	East Cork Municipal District (Cork County Council)
Cllr Danielle Twomey	East Cork Municipal District (Cork County Council)
Cllr Anthony Barry	Cobh - Glanmire Municipal District (Cork County Council)
Cllr Ger Keohane	Cobh - Glanmire Municipal District (Cork County Council)
Cllr Kieran McCarthy	Cobh - Glanmire Municipal District (Cork County Council)
Cllr Diarmaid O'Cadhla	Cobh - Glanmire Municipal District (Cork County Council)
Cllr Pdraig O'Sullivan	Cobh - Glanmire Municipal District (Cork County Council)
Cllr Cathal Rasmussen	Cobh - Glanmire Municipal District (Cork County Council)
Cllr Sinéad Sheppard	Cobh - Glanmire Municipal District (Cork County Council)

Source: Mott MacDonald

3.6 Consultations

Since 2017, EirGrid has been actively engaging with communities and stakeholders in relation to the Celtic Interconnector.

EirGrid has met with a variety of stakeholders, including elected officials, representative groups, local organisations, communities, and the media. This engagement has taken the form of face to face meetings, email outreach, public information sessions, mobile unit visits in East Cork, high level stakeholder events, media briefings, presentations to Municipal District Council Meetings, social media updates, newspaper and poster advertising, and the production of informative project materials and webpages. In addition, the Celtic Interconnector Community Liaison Officer has been available by phone and email to interested communities and stakeholders.

Much consideration has been given to the differing natures of the communities potentially affected by the project; particularly in relation to the rural/agricultural communities in and around the potential converter station location zones and the tourism/fishing communities near the landfall locations. Distinct information sessions were held for each with care given to address particular concerns through preparation of bespoke information material and research on issues relevant to the communities concerned.

Through this engagement a wide range of feedback and queries have been received on the project to date including:

- General:
 - Benefits of the project;
 - Potential for enhanced electrical and telecommunications connectivity and associated employment opportunities; and
 - When construction of the project might take place and the potential for disruption associated with the construction works.
- Landfall Locations:
 - Visual impact on the beach; and
 - Impact on marine wildlife and the fishing industry.
- Converter Station Location Zones:
 - Nature of the infrastructure;
 - Location of the converter station;
 - Visual impact in a rural/agricultural setting; and
 - Noise impact.

A number of additional options for the converter station have also been considered based on feedback received to date.

4 Social Issues

4.1 Introduction

The preceding section of this report identified the various stakeholders likely to have an interest in the proposed development. This section of the report identifies the social issues and risks which may affect those stakeholders as a result of the proposed development. These issues and risks need to be reviewed and tracked as the project progresses through the design, consenting, construction and operational phases.

4.2 The Public

4.2.1 Public Opinion Concerning this Project

EirGrid has published two Project Update Brochures in between 2017 and 2018 outlining progress on the Project. EirGrid has also held six community information sessions in 2018 at Lisgoold, Carrigtwohill, Knockraha, Glounthaune, Cloyne and Youghal in which project team members have provided project updates and answered stakeholder queries.

A review of newspaper articles indicates that the general area of Knockraha and Leamlara are active rural/semi-rural communities in relation to local participation within the planning process. Both communities have historically experienced the development of large infrastructural projects; specifically, the Knockraha 220kV Substation and subsequent modifications and Lackenbehy Quarry. As further described in Table 11, neither of these proposed developments were supported by the communities for a range of different reasons involving environmental considerations, concerns over health and well-being, the loss of local amenity and issues over consultation and due process. Other communities within the East Cork region have also displayed similar opposition to large infrastructural projects within their locales such as Lisgoold and Mogeely which objected to a solar PV farm and a new Dairygold cheese processing plant, respectively.

EirGrid has been engaging with stakeholders and communities in East Cork, particularly in Knockraha, on the Celtic Interconnector since 2017. Face to face meetings, community hall events, high level business forums, presentations to Municipal Councils and fisheries groups and Mobile Unit visits have all provided useful insight, feedback and guidance. Much of this feedback has informed the project's progress to date. This feedback is particularly useful in relation to:

- identifying the communities preferred technology
- informing assessments of the landfall and nearshore locations
- identifying potential converter station sites.

4.2.2 Public Opinion Concerning Other Infrastructure Projects in General

In the regional area of East Cork, the following opinions from the public were expressed in relation to a selection of large infrastructure projects proposed over the last 10 years. The purpose of the table below is to provide an indication of the level of engagement in the statutory process by members of the public and their opinions concerning the infrastructure proposed within the SAOI.

Table 11: Regional Infrastructure Experience

Project	Observer / Organisation	Nature of Submission
Alterations under S146B to the approved Cork Lower Harbour Sewerage Scheme including the provision of new pumping station, alterations in pipeline routes and relocation of proposed marine crossing at Cork Lower Harbour. An Bord Pleanála Ref. (PL 04.YM0003)	Titanic Experience Working Group for an Enhanced Urban Environment for Cobh Multiple Members of Public Cobh and Harbour Chamber Cobh Tourism Cobh Tidy Towns Cobh Dockyard Cobh Playground Fundraising Committee	General support for the opportunity for tourism - gain an improved urban environment as a result of the proposed works to be undertaken (<i>Working Group for an Enhanced Urban Environment for Cobh / Cobh Tourism / Cobh Tidy Towns</i>) Concern regarding the potential impact on businesses in Cobh Requested assurance that a plan is in place to minimise disruption and inconvenience to businesses and the general public during the undertaking of works Concern whether works to be undertaken could generally disrupt the amenity associated with public facilities, i.e. playgrounds
Proposed extension of existing 220kV substation with associated equipment and site development works at Ballynanelagh, Knockraha, Co. Cork. An Bord Pleanála Ref. (PL04.244030)	Cork Renewable Energy Group Knockraha Community Association Ltd. Sandra McLellan, Sinn Fein T.D. One member of the public	Lack of consultation with local residents on this particular project No consultation locally regarding the Celtic Interconnector. The submission contends that the proposed development forms part of the national hub and is an unfair burden locally. Concern whether the new infrastructure will result in increased electromagnetic radiation emissions (EMF) levels Concern that noise generated from the proposed development will adversely impact on quality of life. Belief that the proposed extension will have an adverse impact on local rural communities. It is contended that the proposed development will diminish the tourism opportunities for the local area., i.e. the historical significance of Knockraha It is believed that the proposal will have a negative visual impact on the local landscape The proposed development would diminish the area's ability to attract new families, i.e. loss of local economy and growth
Alterations to the existing 220kV Knockraha station. An Bord Pleanála Ref. (PL04.231154)	Members of the Public	States that the proposed installation of another transformer would increase the existing noise levels associated with the station. Belief that the rural area cannot accommodate further industrial development thus resulting in devaluation. Submits that the proposed installations and associated works would increase traffic. The public road serving the site is a narrow tertiary road with no public lighting or footpaths and it is not suitable for heavy vehicles. At present the, ESB use a route that is densely populated and is a bus route. Notes that the increased development of the station could have potential impacts on the natural habitats of surrounding wildlife and birds. Concerns regarding the adverse effects of electromagnetic radiation emissions (EMF)
Solar PV Development. An Bord Pleanála Ref. (300602-18)	Ballyspillane West & Surrounding Area Action Group	The proposed solar PV farm would devalue quality land Concerns that the quality of the soil and its ability to grow crops will be severely disrupted

Project	Observer / Organisation	Nature of Submission
	Members of the Public	<p>Submits that roads are unsuitable for construction and maintenance traffic</p> <p>Submits that noise impact from the units storing the power and from construction and maintenance traffic in a quiet rural landscape</p> <p>Questions whether there are studies on the electromagnetic field of solar farms and impacts on health</p> <p>States that the site is within an area designated as a high value landscape in the County Development Plan</p>
<p>The extraction by quarrying of 300,000 tonne per annum of sandstone rock from an existing quarry (over a 20 year period) on a 26.8 hectare site. An Bord Pleanála Ref. (302853)</p>	<p>Members of the Public (Lackenbehy Action Group)</p> <p>The Bord of Management Bishop Aherne N.S.</p> <p>Peter Sweetman & Associates</p> <p>Roadstone Ltd.</p> <p>Watergrasshill Athletics Club</p>	<p>Concerned of the scale of the project and any associated implications on the environment: risk of water pollution to human water supply via the Leamlara River / Owenacurra River, devaluation of natural / recreational amenity at Curragh Woods, disturbance of protected wildlife, emissions of diesel fumes and crystalline silica dust, disturbance of water wells and flooding</p> <p>Submits that the existing road network cannot accommodate increased traffic due to existing safety and mobility issues in relation to road configuration and sighting distances, i.e. volume/type of traffic passing Bishop Aherne N.S / Brookfield Care Centre / vulnerable road users (cyclists)</p> <p>Concerned that the proposed development would have an adverse effect on local farms due to the effects of stress on livestock</p> <p>Concerned that noise pollution would result in the loss of wellbeing and rural amenity for local communities</p> <p>Concerned that the proposed development poses a risk to their personal health and safety in addition to their assets (dwellings)</p> <p>Lack of consultation by the applicant with the local community regarding the proposed development including inadequate site notices and risk assessment</p> <p>Submits that the proposed development site is situated within an area designated by the Cork County Council Draft Landscape Plan as a 'Very High Landsape value, sensitivity and of national importance</p> <p>Submits that the proposed development has a clear connection with pNHAs and Natura 2000 Sites, archaeological heritage and other environmental constraints</p> <p>States that the technical evaluations submitted as part of the planning application are inadequate to effectively rule out significant environmental effects</p>
<p>New cheese production facility and a significant upgrade of the existing Dairygold Food Ingredients Facility. An Bord Pleanála Ref. (249108)</p>	<p>Members of the Public</p> <p>Atlantic Shell Fish Ltd</p> <p>Saleen & District Residents Association</p>	<p>It is submitted that the Council has struck the wrong balance when weighing the respective interests of the parties concerned and has given undue weight to the agri-food operation [industry] to the potential or actual detriment of residents, amenity users and other commercial uses</p> <p>States that there is inadequate information presented on traffic and no information on impacts from the removal of excess excavated material from the site. Further concerns are raised regarding increased traffic and delays in the village of Mogeely by reason of extra traffic. Parts of both Mogeely Road to Castlemartyr and the L3627 are too narrow in several parts and practically impossible for cars and trucks to pass each other and impossible for two HGVs to pass each other. The extra heavy vehicle traffic will make these roads very dangerous.</p> <p>States that that the information presented by the developer in its EIS and otherwise is insufficient to meet the requirements of the EIA Directive in so far as the duty is on the developer to present specified information. This is particularly so in regard to the consideration of alternatives and their impacts</p>

Project	Observer / Organisation	Nature of Submission
		<p>Submissions note that since planning was originally submitted in December 2016 it has been announced that the old railway line between Middleton and Youghal is going to be a Green Route linking both areas.</p> <p>Submissions related to potential environmental nuisance / impacts associated with noise, odour, local flooding, wastewater discharge impacts to Cork Harbour and loss of natural light (height/overshadowing)</p>

Source: Mott MacDonald

Based on the information presented above, it can be concluded that there is evidence of significant public engagement in statutory processes associated with significant infrastructure projects proposed historically in East Cork. Submissions have typically queried the potential impacts on the local economy and commerce, health, safety and well-being, rural amenity and local consultation by developers.

Local Economy and Commerce

Several submissions focused on the potential effects that the above projects may have on the local economy. The projects are located within predominantly rural areas (Knockraha, Mogeely, Lisgoold) with local economies centred on agriculture and livestock. Notwithstanding this, the development and promotion of tourism remains a relevant consideration for these communities as noted by an observer from Knockraha. Due to the high sensitivity of these sectors to variability (alteration of soil composition, the health of livestock and public perception in respect to tourism etc.), there is a concern amongst observers that significant and/or adverse long-term effects during the lifetime of the development could result in irrevocable harm to these sectors. Similar to these concerns, one observer on an urban infrastructure project requested assurance that a plan would be put in place to minimise disruption and inconvenience to businesses. A final submission questioned how Local Authorities 'weigh' varying interest from different parties such as industry versus local commerce, residents or amenity users.

Health, Safety and Wellbeing

A major concern raised within the submissions was on the potential effect that increased construction and operation traffic may have on the local road network. Due to the quality of the road network within these rural agricultural settings, particularly existing safety concerns regarding road configuration and sighting distances, observers state that an increased volume of HGV traffic would put other vehicle users and vulnerable road users (walkers / cyclists) at risk. Specific concerns relate to the road networks around Leamlara and Mogeely:

- Leamlara: Several community facilities are located within Leamlara (Bishop Aherne N.S, Brookfield Care Centre and Sacred Heart Church) on the main local road which connects Carringtwohill and Watergrasshill. An increase of HGV traffic on this route would put pupils at risk at Bishop Aherne National School in addition to those accessing these community facilities.
- Mogeely: Sections of both Mogeely Road to Castlemartyr and the L3627 are noted to be too narrow in several parts which limits manoeuvrability for cars and trucks to pass each other and prevents two HGVs passing each other. These limitations in the context of increased HGV traffic volume pose the risk of increasing traffic and delays within the village in addition to putting road users at risk.

A second major concern identified within the submissions was whether these projects would result in significant noise emissions in respect to operational emissions and/or construction phase and maintenance traffic. These observations reflect a concern that the proposed infrastructural projects could adversely impact on their quality of life as proximate sensitive receptors, and more generally, pose a risk to their long-term health and safety.

Submissions regarding EMF were consistently submitted for energy generation / transmission related projects.

Rural Amenity

An overarching concern raised by several submissions related to detrimental impacts on rural amenity. Due to historic infrastructural development, i.e. Knockraha 220kV Substation, there is a

belief that some rural areas cannot accommodate further industrial development without resulting in the devaluation of natural heritage, recreational amenity and scenic views. Further observations on Knockraha 220kV Substation reflect a concern that Knockraha and Environs are being 'unfairly burdened' by the development of a national transmission hub within their jurisdiction.

Consultation with Local Community

A significant issue raised within submissions on the profiled infrastructural projects is the lack of consultation by developers with residents regarding the proposed development.

4.2.3 Costs to the Public

The price of electricity in Ireland comprises, amongst other things, the costs associated with the development, maintenance and use of the electricity grid. To this extent providing a cost effective, secure and sustainable solution for the proposed development is a key objective for EirGrid thereby minimising the costs to the consumer.

4.3 Landfall Options

4.3.1 Industry and Commerce

Fisheries and Aquaculture

In the case of on-going commercial fishing activities, any impact is likely to be limited to a temporary increase in marine traffic and disturbance associated with the construction phase of the proposed development.

The introduction of built structures and/or physical modifications to the coastal environment can alter natural marine processes such as flow and silt movement which can affect levels of suspended sediment. The potential installation of the sub-sea cable to the Redbarn Beach landfall point may therefore have a temporary negative effect on shellfish cultivation in Ballymacoda Bay although there is a considerable distance between the landfall and designated shellfish waters (approximately 1km).

Utility Infrastructure

A range of utility companies have infrastructure within proximity to the proposed landfall points including Gas Networks Ireland, Irish Water, Eir and the Electricity Supply Board (ESB) Networks.

4.3.2 Social and Community

Local Consultation

EirGrid's 'Have Your Say' (2017) sets out the standardised approach to consultation which is implemented on all EirGrid projects. In line with the Aarhus Convention, this methodology ensures that local communities, local authorities and elected representatives, organisations and individuals have the opportunity to respond to and engage with EirGrid on proposed plans or on a particular issue. Most importantly, the local consultation is a step by step process which occurs at regular intervals of project development.

Since 2017, EirGrid has been actively engaging with communities and stakeholders in relation to the Celtic Interconnector. This engagement has taken the form of face to face meetings, email outreach, public information sessions, mobile unit visits in East Cork, high level

stakeholder events, media briefings, presentations to Municipal District Council Meetings, social media updates, newspaper and poster advertising, and the production of informative project materials and webpages. In addition, the Celtic Interconnector Community Liaison Officer has been, and is always available by phone and email to interested communities and stakeholders.

As part of Step 3, EirGrid will deliver another phase of public consultation. This will consist of the development of a new project brochure, and a website update. In addition, EirGrid will reach out to high level stakeholders, elected officials, representative groups, local organisations, communities, and the media.

EirGrid will target these stakeholders primarily through public information events and mobile unit visits across the study area in East Cork. EirGrid will also reach out to all stakeholders and communities that have engaged on this project to date to advise them of the consultation process and outlining how to get involved. The details of the consultation process will be announced via press release and the provision of a media briefing, they will be promoted on social media, advertised in local press, and through posters in areas of high footfall. A survey will be prepared, this can be completed and submitted online or in hardcopy and submitted to EirGrid by post. Presentations will be sought to forums such as the Municipal District Council, Chamber of Commerce meetings, etc. EirGrid will seek to satisfy all requests for meeting and presentations received. This phase will run for a minimum of eight weeks.

Health and Wellbeing

As described in Section 2.2 (Description of Development), the landfall point will be installed behind the beach where the submarine circuit comes ashore which will be fully re-instated following completion of the works. There will be no physical alteration to the potential landfall point beaches which will ensure that any impacts during the construction phase to the local amenity, i.e. recreation, scenic views and natural capital, are temporary. Due to the scale and nature of the landfall point, there will be no operational emissions such as noise associated with the development which could result in long-term impacts on proximate sensitive receptors, residential dwellings, holiday homes or recreational users.

During the construction period, there will be an increase of HGV traffic on the regional and local road network in order to access these sites. Claycastle and Redbarn Beach are a short distance from the R634, R633 and N25 which will reduce the number of HGVs on local roads. In comparison, Ballinwilling Strand, Ballycraheen Beach and Inch Beach are more remotely located which will require the use of the local road network for the majority of their journey. As noted in Section 4.1, the use of local roads for HGV movement has historically been opposed by local communities within the region due to health and safety concerns. Due to the linear residential and community development along the local road network, particularly Inch Beach and Ballycraheen Beach, there is a risk regarding nuisance (noise / dust) and safety for other road users. It should be noted, however, that these adverse effects would be temporary and limited to the construction phase of development.

Loss of Natural Amenity

The East Cork coastal region, classified as Indented Estuarine Coast by Cork County Council's Draft Landscape Strategy 2007, has been noted to have a 'Very High' landscape value, 'Very High' landscape sensitivity and a national landscape importance. This landscape is a significant contributor to the region's tourism industry as its scenic views and natural heritage attract visitors to these coastal communities. As noted previously, the scale of the landfall point is minor, situated underground and land will be reinstated following the completion of the works thus having no long-term effect on the natural amenity of the coastline. Construction of the

landfall point, and the installation of the cable will result in an increase of plant, stockpiling of excavated materials and associated infrastructure (i.e. construction compound) in addition to noise and dust emissions which may adversely impact the visual and recreational amenity for recreational users of Claycastle, Redbarn, Ballinwilling Strand, Ballycraheen and Inch Beach. It is important to note that these potential impacts would be temporary and will cease following the completion of the works.

Archaeological Heritage

There are a number of recorded cultural heritage sites and finds in proximity to Inch Beach including:

- Coastguard Station (RPS ID – 00666)
- Prehistoric site - lithic scatter (CO100-043---- Small scatter of flint including some Later Mesolithic")
- The Elizabeth Jane W08211 shipwreck

A number of architectural heritage sites associated with a freestanding gable-fronted Church of Ireland church and the associated graveyard (CO100-013001-) are located along the access road to Inch Beach.

A levelled Fulacht fia (CO089-076----), a house - vernacular house (CO077-041----), and Flint Bann Flake have been recorded within and in proximity to Ballycraheen Beach (CO100A001---).

There is a recorded archaeological feature near the car park at Claycastle Beach, a small scatter of flint including some Later Mesolithic (CO100-044----) and in the order of 25 architectural heritage (NIAH) sites along the strand (to the north of the beach) at Claycastle.

It is also noted that the *Marine Archaeological Impact Assessment of Proposed Ground Investigations Surveys* report for the Celtic Interconnector project (Cotswold Archaeology Marine, March 2018¹⁷) identified known and potential sites and features of archaeological interest at the Claycastle, Redbarn and Ballinwilling Strand landfall locations.

4.3.3 Tourism

The construction programme will impact local tourism industries depending on the scheduling of works. If works occur during the peak tourism season (June – August), limited accessibility to the potential landfall point site may adversely impact local businesses which depend on major tourism attractions to draw in visitors such as retail, restaurants, bait-and-tackle shops etc. Claycastle Beach is within proximity of a wide range of tourist attractions which could experience a decline in business if sections of Claycastle Beach and promenade are closed, or alternatively, if an increase in HGV traffic results in gridlock within the locale. Similar impacts may also be experienced at Redbarn Beach and Ballinwilling Strand due to hotels/rental holiday accommodations and recreational attractions within 1km of the sites. Although these potential construction phase impacts would be temporary, the peak-tourism season is critical for those communities which may depend on the revenue generated to sustain their businesses for the remainder of the year. It should also be noted that Youghal and the wider East Cork coastal region host a number of festivals during the peak-tourism season, i.e. Youghal Food & Mackerel Festival, Youghal's Queen of the Sea, IRONMAN and Youghal Moby Dick Festival, which

¹⁷ https://www.housing.gov.ie/sites/default/files/foreshore-applications/application-documents/marine_archaeological_impact_assessment_april_2018.pdf

regular attendance could be reduced due to the proposed works at Claycastle Beach and increased HGV traffic on the road network.

Development of the landfall location and installation of the subsea cable may also have an influence on additional development within proximity to these locations. As noted by chairperson¹⁸ of the East Cork Municipal District, a 'beach plan' for Youghal's three beaches (Front Strand, Claycastle and Redbarn) should be developed in order to enhance these beaches and facilities. These plans would include a potential upgrade of the lifeguard station at Claycastle Beach. Consultation with Youghal and the East Cork Municipal District will be required to ensure that the potential works at Claycastle or Redbarn Beach will not limit any enhancement works proposed for the beach.

A review of Cork County Council's Planning Database was also conducted to identify any proposed or permitted development within proximity of the landfall points which have not yet commenced. Two planning applications were identified under these criteria: Planning Ref. 134137 and Planning Ref. 146281 are approximately 450m and 350m from the proposed landfall point at Claycastle Beach. It is noted however that the planning permissions are due to expire in February 2019 and February 2020 respectively.

- Planning Ref. 134137: Permission for the construction of a motorhome park to include site entrance via existing leisure centre entrance, 84no. motorhome parking bays, 4no. parking Aires (wastewater disposal points), playground with associated car parking, all-weather playing pitch with flood lighting and associated car parking, associated internal roadways, green spaces and watercourse crossings, treatment of existing watercourses, new separate public coach parking with separate site entrance, fencing, new roadside public footpath along with all associated site works, drainage and services; and
- Planning Ref. 146281: Permission for the addition of 10 no. mobile homes to the permitted Seafield Caravan Park together with associated underground services and site development works.

As the projects described above will require intensive works within tourist areas, it is unlikely that construction will commence during the peak-tourism season. This may pose a cumulative risk of gridlock, nuisance and disturbance to local businesses during the off-season should the Project and other permitted development commence construction simultaneously.

4.3.4 Underground Cable Routes

The Celtic Interconnector is primarily a cable connection between France and Ireland, facilitating the transfer of 700MW of electrical power between the two transmission grids. 500 kilometres of the cable connection will be installed along the seabed and 30-40 kilometres will be laid in the Irish road network to bring the interconnector to Knockraha 220kV Station and completing the connection.

As it is EirGrid's preference to install the DC cable in the existing road network, sufficient space in the existing road network to accommodate the required width of the cable trench is a key consideration when considering the options available. The road surface would be fully re-instated following installation.

At the time of writing this report, the underground cable routes are not known as the locations of the landfall point and converter station have not been determined., however, the route from the

¹⁸ <https://www.irishe Examiner.com/ireland/concerns-youghals-front-strand-could-be-blown-away-469375.html>

landfall point to the converter station is expected to follow the local road network before joining the N25, east of Midleton.

The installation of the DC land circuit will pose potential risks typical to the type and nature of the development:

- There is a risk of damaging existing services within the road network¹⁹:
 - Damage to live electricity cables (electric shock, explosive effects of arcing current and by any associated fire or flames that may follow when the sheath of a cable and the conductor insulation are penetrated by a sharp object)
 - Damage that causes an immediate leak following a gas pipe rupture or after the work has been carried out due to poor reinstatement
 - Damaged water pipes may result in a jet of water emanating from a high-pressure main could injure people or damage adjacent underground services. In addition, a water leak from an underground pipe could wash away subsoil, thereby reducing support for adjacent services, roads and structures.
- Increased volume of HGV traffic may result in a risk of safety to other road users;
- Increased traffic diversions / road closures may result in the risk of increased gridlock; and
- Increased road works may result in nuisance / disturbance to linear residential and community development along the road network

A high-level assessment of the indicative underground cable routes was undertaken in order to identify potential social impacts the installation of the cable may have on East Cork communities.

Claycastle and Redbarn Connections

Youghal is by-passed by the N25 which forms the key road connection westwards with Cork City, and eastwards to Waterford. It is also linked by the regional road network to the Fermoy municipality and the M8. Road works, diversions, lane closures and increased HGV/plant traffic on the N25 from Midleton to Youghal may consequently result in major disruptions in travel between East Cork and the rest of County Cork and County Waterford. Disruptions in travel could have significant effects on commerce within the region, especially if the commencement of work coincides with the peak tourism and festival season. Notwithstanding this, road works conducted during the off-peak season would still result in a disruption of trade for regional industries such as manufacturing, retail, food and beverage and hospitality as the movement of goods and people to markets would be constrained. Youghal Chamber of Tourism & Development, Youghal Community Response Network and Youghal Socio-Economic Development Group (YSEDG) are key consultees in this regard.

A range of community facilities located within Youghal include a post office, regional fire station, RNLI lifeboat station, Garda Station, a range of medical centres (HSE - South (Youghal), Gortroe And Youghal District Hospital and St. Raphael's Centre), educational institutes and Our Lady of Lourdes Church. These community services are critical for those living within Youghal's Environs and hinterland, particularly in regard to medical, educational and religious institutions. An inability to access these services in a timely manner could result in risks to health and well-being of residents. For example, First Responders (EMTs and firemen) and Gardaí need reliable access to the road network in order to respond to calls whilst education and religious institutions provide social benefits and community to their members.

¹⁹ Code of Practice For Avoiding Danger From Underground Services (HSE, 2010)

It should be noted that the indicative cable route from Redbarn Beach follows the local road network until joining the N25 at Killeagh. The extensive use of the local road network, as described previously under Section 4.2.2.2 (Health and Safety), poses health and safety risks to vulnerable stakeholders accessing community facilities adjacent to the route (Clonpriest National School and Youghal & District Nursing Home). The proposed works may also result in nuisance and disturbance for linear residential development along the route in regard to noise, dust and light.

Situated on the N25, Killeagh and Castlemartyr are characterised as having a significant amount of linear development along the N25 including a number of community facilities: St. Fergal's National School (Killeagh), St. John the Baptist Catholic Church (Killeagh), Saint Colman's Church (Castlemartyr), Castlemartyr Health Centre, convenience stores, restaurants/cafes, post office, pharmacy, Garda station and public houses. Construction may disrupt trade and access to these facilities depending on the timing of works. Consultation with Killeagh Inch and Castlemartyr Community Councils and the impacted businesses and organisations will be required prior to commencement in order to assess how construction may affect these communities. Castlemartyr is also a prominent tourism destination due to the operation of Castlemartyr Resort and Castlemartyr Golf Resort. Traffic congestion is a major factor in Castlemartyr, particularly at peak times, thus the disruption of travel on the N25 due to construction may have a cumulative effect on local trade and the tourism industry.

Mogeely is located north of the N25 (Killeagh) in an area containing a number of villages and hamlets characterised by linear residential development along the local road network. Mogeely has basic community facilities including retail, Sacred Heart Church, a public house and sport clubs. Dairygold also has a significant presence within the village. A 3rd party submission in response to a proposed cheese manufacturing facility (Dairygold) noted that sections of Mogeely Road (potential indicative route) and the L3627 are too narrow in several sections for opposing vehicles to safely pass. Construction on Mogeely Road and the L3627 may exacerbate these hazards as lane closures and the movement of plant/construction vehicles could increase safety risks for all road users, especially pedestrians and cyclists. The proposed route through Mogeely may also adversely impact Dairygold's processing facilities if road works delay the delivery of products to regional distribution centres and markets. Other potential impacts include temporary nuisance and disturbance to residential dwellings and community facilities (Mogeely Playground) adjacent to the proposed cable route as well as reduced accessibility to and from Dungourney via the N25, approximately 5km north-west of Mogeely. Disturbance impacts would need to be considered in the context of potential in-combination impacts associated with the proposed expansion of the Irish Distillers site at Dungourney.

Ballinwilling Strand Connection

The indicative underground cable route from Ballinwilling Strand will predominantly use the local road network until joining the N25 at Churchtown North, east of Midleton. The route passes through the main settlement of Garryvoe, a significant tourism area supported by Garryvoe Hotel, B&Bs, holiday mobile homes and associated facilities. Similar to Youghal, construction during the peak-tourism season could disrupt the local tourism industry which could have an adverse effect on local businesses for the remainder of the year. To the north-west of Garryvoe, the area is an open rural undulating landscape, served by a local road network which accommodates a limited extent of linear residential development. Sensitive residential receptors situated along the indicative route may experience nuisance and disturbance throughout the construction phase which may include increases in noise, dust emissions and traffic delays / route diversions. Construction may also have an effect on the accessibility of Ladysbridge, north of Garryvoe and south of Castlemartyr, which is the only village in the area providing community

facilities: St. Mary's Church, public house (The Thatched Inn, Ladysbridge) and petrol station which also serves as a grocery.

Ballycroneen Beach & Inch Beach Connections

Indicative underground cable routes from Ballycroneen and Inch Beach Ballinwilling run in a northerly direction through the main settlement of Cloyne until joining the N25 at Churchtown North, east of Midleton. Cloyne, located on the R629 regional road between Shanagarry and Midleton, is an important ecclesiastical settlement, and the current location of the Church of Ireland Diocesan cathedral – the United Dioceses of Cork, Cloyne and Ross which covers most of County Cork. The route through Cloyne is adjacent to community facilities such as St. Colman's Cathedral, public houses, café/restaurants, pharmacy, and other specialist commercial activities and which could temporarily limit access to these facilities.

The remainder of the routes would use the local road network; however, compared to the indicative routes originating from Claycastle, Redbarn and Ballinwilling Strand, the local roads incorporated within these routes are less developed with a greater quantity of one-off residential dwellings. Construction within this rural area may therefore have a reduced risk to the health and safety of residents, compared to more populated areas, in relation to mitigating against potential traffic and nuisance risks.

The proposed routes would run parallel to communities situated on the eastern extent of Cork Harbour which include Whitegate, Upper and Lower Aghada, Rostellan and Ballinacurra. These communities provide a wide range of community facilities in addition to regionally and nationally important utility infrastructure such as Whitegate Refinery and Aghada Power Plant. It is considered unlikely that the installation of the proposed underground cable would result in any discernible impacts to these communities beyond that of temporary traffic delays / gridlock when attempting to merge on to the N25 via the R630 at Ballinacurra or the R629 through Cloyne.

4.4 Converter Station Location Zones

4.4.1 Industry and Commerce

Agriculture

The converter station compound will have indicative dimensions of 300m x 150m. The converter building will have a typical building height of approximately 25 metres and will be an industrial type building in nature.

The construction and operation of the converter station will require a permanent land-take, which if located in active agricultural land, may adversely impact the long-term profitability of the present agricultural operation. Any negative economic shock, such as the loss of a significant parcel of operational land, may amalgamate present challenges facing agricultural enterprises. The construction and the operation of the converter station may pose a further risk to proximate livestock in relation to noise and disturbance. Research²⁰ has shown that livestock are susceptible to stress, i.e. noise, even during routine handling, which if prolonged over time, may reduce immunity to illness [pasteurellosis (lung infection)] or the loss of pregnancy during the calving period.

²⁰ Kruger, L: 'The effect of environmental factors on stress in cattle.' (ARC Animal Production Institute, Newsletter No 103).

Commerce

Converter Station Location Zones 1, 2, and 3 encompass a wide range of local businesses and services within the environs of Midleton and Carrigtwohill. The construction and operation of the converter station within these zones, particularly Zone 2, poses two individual risks to local businesses: limitation and/or restriction of access during the construction phase and potential disturbance and nuisance to staff and customers. Due to the scale of the converter station, access to areas within the vicinity of the potential development site may be temporarily limited as a result of construction (movement of plant and / or supplies) or traffic congestion from an increased volume of HGV movement. Limited customer access during the construction phase may result in long term impacts on the profitability of these businesses if customers find alternative markets elsewhere. Similarly, noise and emissions during construction may result in a negative perception of proximate businesses by customers.

4.4.2 Social and Community

Local Consultation

EirGrid's 'Have Your Say' (2017) sets out their approach to consultation which is implemented within all EirGrid development. In line with the Aarhus Convention, this methodology ensures that local communities, local authorities and elected representatives, organisations and individuals have the opportunity to respond to and engage with EirGrid. As part of this process, EirGrid also consults with local businesses, sectoral organisations and representative organisations in order to gain insight from those who have specific interest in the proposed plans or on a particular issue. Most importantly, the local consultation is an iterative process which occurs at all steps of development.

Over the lifetime of this project EirGrid has held a number of meetings with stakeholders and communities. These have taken the form of face to face meetings, public information sessions, mobile unit visits, presentations to Municipal District Council meetings, and the provision of information via the website.

Where possible EirGrid has incorporated the feedback received via this consultation process. This includes the assessment of converter stations location zones proposed by the local community. EirGrid is also mindful that much of the feedback received specifically requested that the project avoid the construction of overhead lines.

EirGrid will continue to engage with local communities for the remainder of the project. On Step 3 specifically EirGrid will seek feedback from communities and stakeholders in East Cork to assist in confirming the landfall sites and converter station zones. This feedback will be gathered via an online survey, a number of public information meetings, a series of rolling mobile unit visits, presentations to Municipal District Council Meetings, and through briefings with high level stakeholders. This consultation phase will be supported by press briefings, social media promotion, advertising, posters, in the region.

Health and Wellbeing

During the construction period, there will be an increase of HGV traffic on the regional and local road network in order to access the proposed development site. Historic submissions on large scale infrastructural projects within proximity to Knockraha and Leamlara (Converter Stations 5 – 10) have noted that there are existing safety concerns on the quality of the local road network regarding road configuration and sighting distances. An increased volume of HGV traffic may therefore put other vehicle users and vulnerable road users (walkers / cyclists) at risk. Due to the massing of community facilities (Bishop Aherne N.S, Brookfield Care Centre and Sacred

Heart Church) adjacent to the local road linking Leamlara and Watergrasshill, HGV traffic entering Converter Station Location Zones 6 and 7 may pose an increased risk to residents accessing these facilities.

Historic submissions on energy generation and transmission projects, on a nationwide basis, often cite concerns about the potential effects of electromagnetic fields (EMF). These submissions frequently seek further information, or clarification, on the topic, specifically on whether a proposed development could increase levels of EMF. EirGrid is aware of the concerns of communities, and as is common practice across all projects, will seek to provide information on EMF's, and clarify any concerns that local communities may have.

Loss of Rural Amenity

Due to the proposed scale of the converter station and the permanent land-take associated with its construction, the converter station may be perceived by local residents as adversely impacting the rural amenity of the region. Due to historic infrastructural development, i.e. Knockraha 220kV Substation, and recently permitted development, such as TerraSolar's 28 hectare solar PV farm, there is an emerging trend within submitted observations on large scale development that residents do not believe these rural areas (Zones 4 – 10) can accommodate further industrial development without resulting in the devaluation of natural heritage, recreational amenity and scenic views. Similar to these concerns, residents within proximity to Knockraha (Zones 9 and 10) have indicated that the concentration of transmission infrastructure within the local area has 'unfairly burdened' the community with a national transmission hub within their jurisdiction.

4.4.3 Tourism

The converter station's construction programme may impact local tourism industries depending on the scheduling of works. If works occur during the peak tourism season (June – August), increased HGV traffic volume on the N25 and within the local road network may adversely affect the accessibility of tourist attractions for visitors although this would be limited to the construction period. It should be noted that the majority of tourist attractions within Midleton are clustered within the town centre and do not fall within Converter Station Location Zone 2 itself. The development of the Converter Station within either Zone 3 or Zone 4 could result in the permanent loss of scenic amenity of Water Rock Golf Course or East Cork Golf Course, respectively, which may have long term impacts on their ability to attract visitors.

4.4.4 Underground Cable Routes

The HVDC cable route from the landfall point to the converter station will generally utilise regional and local roads before joining the N25, east of Midleton. Indicative routes will proceed from the N25 to the local road network from either Churchtown North or Carrigtwohill in order to avoid the road network within Midleton.

It is EirGrid's current preference, given that the project is underground over most of its length, to explore underground HVAC cable options between the converter station and the connection point (Knockraha substation) in the first instance. Should an underground option prove not to be feasible, an overhead solution will be examined at that stage. On this basis, assessment at this stage has considered underground cable installed in the road network for the HVAC circuit.

Road works, diversions, lane closures and increased HGV/plant traffic on the N25 from Midleton to Carrigtwohill could result in significant disruptions for commuters. This section of the N25 has historically suffered from significant congestion during peak travel times due to the large population of commuters traveling to Midleton from the Glanmire, Glounthaune and surrounding

area, and those commuting from Midleton and Environs to Little Island and Cork city. Disruptions in travel could also have adverse impacts on commerce within the region, particularly for local businesses, i.e. manufacturing companies, food and beverage, agri-food processing etc., which rely on the movement of physical goods to their markets.

One possible underground cable route would be installed through Carrigwohill via Main Street, a built-up area of commercial and community facilities, and Station Road, which borders Ashbrook, a heavily residential area of Carrigwohill. Construction may disrupt trade and access to these facilities on Main Street depending on the timing of works whilst sensitive residential receptors situated along Station Road may experience nuisance and disturbance throughout the construction phase which may include increases in noise, dust emissions and traffic delays / route diversions. Carrigwohill Community Council and the impacted businesses and residents will be key stakeholders on this project.

The remaining sections of the routes outside of Midleton (N25) and Carrigwohill would use the local road network. The local roads incorporated within these routes are less developed with a greater quantity of one-off residential dwellings. The proposed works may also result in nuisance and disturbance for linear residential development along the route in regard to noise, dust and light, if works are carried out in the early morning or evening. Poor quality local roads within this agricultural setting may exasperate potential risks of nuisance and disturbance experienced by residents if commutes become significantly longer due to inadequate transportation infrastructure. Additionally, a number of community facilities located within Midleton and Carrigwohill are not located within Leamlara, Lisgoold, Ballincurrig and Knockraha villages: regional fire station, Garda Station and hospitals. These community services are critical for those living within Midleton's Environs and hinterland, particularly in regard to major medical service facilities. An inability to access these services in a timely manner by residents could result in risks to health and well-being.

4.5 Regional Project Benefits

The Project may also provide benefits for regional communities when considering the socio-economic risks presented within Sections 4.1, 4.2 and 4.3,

This project will facilitate increased integration of renewable energy on national transmission system, and provide an opportunity for the development of additional generation capacity and the increased facilitation of renewable generation. Under the Renewable Energy Directive, Ireland has a binding national overall target for renewable energy consumption of 16% in 2020. This target represents an important first step towards building a low-carbon economy. Subsequently, the Irish Government has decided that in order to achieve this target 40% of electricity consumed in 2020 will be generated using renewable energy sources, with targets of 10% and 12% in transport and heat respectively. In order to meet its legally binding targets for 2020 and beyond, it is clear that Ireland will need to continue to invest in and further develop its renewable energy sector including development such as the Project that facilitates the integration of increased renewables onto the national electricity grid.

The construction and operation of the Project will provide a number of employment opportunities for a range of industries and sectors within the region. Increased interconnection will offer an opportunity for exporting energy which will benefit national, regional and local economies in relation to direct payments for energy by national customers and the continued expansion of the renewable energy sector to meet demand. The development of the Project's components will also provide local employment opportunities within the construction and manufacturing sectors. The delivery of a fibre optic cable as part of the Project scope may enable further expansion of

small and medium enterprises within the region in addition to increased foreign direct investment in a Post-Brexit market.

These opportunities are part of the wider economic benefit of a cost effective, secure and sustainable electricity grid.

5 Preliminary Conclusions and Next Steps

5.1 Project Overview

The main elements of the Celtic Interconnector project comprise the following:

- A submarine circuit, approximately 500km in length between France and Ireland;
- A landfall point along the coast of East Cork;
- A converter station compound with indicative dimensions of 300m x 150m including a converter building of approximately 25 metres in height;
- An underground HVDC land circuit between the landfall and the converter station, preferably in the road network, where feasible;
- A HVAC land circuit between the converter station and the connection point to the grid; and
- A connection point to an existing substation on the transmission grid.

It is EirGrid's current preference, given that the project is underground over most of its length, to explore underground HVDC land circuit options in the first instance. Should an underground option prove not to be feasible, an overhead solution will be examined at that stage.

The HVAC land circuit can be underground cable or overhead line, however, as it is HVAC there are limits to the length of cable that can be installed underground. Assessment up to this point of project development has considered underground cable installed in the road network for the HVAC circuit.

5.2 Social Impacts and Risks

This report presents a revised Social Area of Influence (SAOI), as illustrated in Figure 10, and builds on the information gathered to date in respect of the Project, specifically technical and environmental feasibility studies and other analysis including the 2017 SIA Baseline Report and Framework conclusions, as they relate to the East Cork area.

Stakeholders anticipated to have an interest in the project have been identified, including individuals/organisations who have an interest/perform a social function in the SAOI.

Based on the information presented in this report, it can be concluded that there is evidence of significant public engagement in statutory processes associated with significant infrastructure projects in the area of East Cork. As detailed in Section 4.2.2 of this report, submissions on infrastructure projects within the SAOI have typically queried the potential impacts on the local economy and commerce, health, safety and well-being, rural amenity and local consultation by developers.

Overhead line is not being considered for the HVDC land circuit between the landfall location and the converter station and the landfalls will be fully re-instated following the installation of the land circuit. While the social impacts of the activities associated with the Celtic Interconnector project cannot be determined at this early stage in the project, given the detail provided above, the social impacts associated with the installation of the HVDC land circuit are, in general, expected to be temporary in nature. As such stakeholders may be concerned with aspects such as timing of works and potential for disruption and nuisance impacts, as they relate to the HVDC land circuit. With specific reference to the landfall, it is noted that the exact timing of works will be dependent on a number of variables associated with the installation of a cable, including the

availability of equipment and weather conditions. Installation of the cable in winter months will however be avoided, if possible.

Given the nature of the development, stakeholders may also query visual impacts associated with the siting of the converter station. In this regard it is noted that opportunities for visual screening have been given particular focus when identifying opportunities for development. Further, it can be expected that concerns may be raised in relation to the potential for an overhead line connecting the new converter station to the connection point at Knockraha Station.

5.3 Preliminary Conclusions

Having regard to the nature and extent, and potential location of the proposed Celtic Interconnector Project, to the social baseline of the identified SAOI, and to the level of information gathered to date, it is concluded that the potential for the project to have a social impact cannot be ruled out at this point in time.

5.4 Next Steps

The options presented in this report are being collated into a set of enhanced performance matrices which evaluate and compare the options with the aim of identifying general areas / zones where the proposals could be best located, taking account of criteria defined under the following headings:

- Economic Performance;
- Technical Performance;
- Deliverability Performance;
- Environmental Performance; and
- Socio-economic Performance.

EirGrid aim to consult on these general areas / zones in Spring 2019 with the aim of:-

- Confirming a short list of converter station zones;
- Confirming the technology type (underground cable or overhead line) for the AC land circuit; and
- Narrowing down the short list of the five landfall locations previously identified.

This initial SIA scoping will be revisited thereafter and updated if required to reflect additional information gathered and / or feedback received. The decision on the preferred options, at the end of Step 3, will be informed by this SIA scoping process. The feedback received from the consultations will also be detailed in the Step 3 Best Performing Options Report.

The social impact assessment process will continue throughout the project design, consenting, construction and operational phases of the proposed development with due regard to EirGrid's Draft *Social Impact Methodology* (2017) which is incorporated within all of EirGrid's grid development projects, as outlined below.

Step 4 will comprise further analysis and micro-siting of the identified best performing options. During this stage the SAOI and SIA scoping will be refined. An appraisal of the potential social issues and risks (including the potential for mitigation of those issues) of the identified project solution (site/route options) will also be carried out.

Step 5 will comprise the statutory consenting process, including preparation of environmental and technical documents to assist the consenting authorities in making their decision on the proposed development. The SIA will be carried out at this stage to accompany the statutory consent application(s).

Mitigation and management of social impacts will be carried out in Step 6. This will also include reporting of social oversight of construction and implementation of any Management Plan(s), as appropriate.

Appendices

A. CSO Statistics

64

A. CSO Statistics

A.2 Landfall Locations

Table 12: Population by Sex and Age

Landfall	Small Area(s)	Male <18	Male 18 to 65	Male >65	Total Male	Female <18	Female 18 to 65	Female>65	Total Female	Total	Total Area
Claycastle Beach	047323033	15	57	18	90	8	39	18	65	155	386
	047322001	33	67	20	120	17	73	21	111	231	
Redbarn Beach	047103002 / 047103005	39	92	33	164	38	90	69	197	361	361
Ballinwilling Strand	047156002	24	61	19	122	30	67	25	122	226	619
	047156003	20	79	11	110	34	76	15	125	235	
	047156001	12	50	17	79	12	55	12	79	158	
Ballycreeen Beach	047019002	21	36	22	79	15	40	14	69	148	148
Inch Beach	047175002	41	78	12	131	31	66	15	112	243	243

Source: CSO

Table 13: Persons at Work by Industry

Landfall	Small Area	AFF	BC	MI	CT	TC	PA	PR	O	Total
Claycastle Beach	047323033	0	4	10	4	6	1	11	15	51
	047322001	4	4	20	26	7	3	17	13	94
Redbarn Beach	047103002/047103005	12	4	18	18	11	4	39	20	126
Ballinwilling Strand	047156002	16	1	16	20	6	4	25	11	99
	047156003	10	5	18	19	6	1	33	16	108
	047156001	5	4	18	12	6	2	11	14	72
Ballycreeen Beach	047019002	12	3	9	17	3	3	10	11	68
Inch Beach	047175002	8	10	19	16	8	4	26	22	113
National Average (per Small Area)		5	5	12	26	9	6	25	19	108

Source: CSO

Note: AFF: Agriculture, forestry and fishing, BC: Building and construction, MI: Manufacturing industries, CT: Commerce and trade, TC: Transport and communications, PA: Public administration, PR: Professional services, O: Other

A.3 Converter Station Location Zones

Table 14: Population by Sex and Age

Option	Small Area(s)	Male <18	Male 18 to 65	Male >65	Total Male	Female <18	Female 18 to 65	Female >65	Total Female	Total	Zone Total
1	047077005	29	102	22	153	19	79	18	116	269	736
	047077002	28	67	19	114	26	75	18	119	233	
	047077011	34	70	15	119	32	64	19	115	234	
2	047253002/01	37	87	29	153	20	90	40	150	303	2294
	047253002/02	56	51	2	109	57	78	1	136	245	
	047253015	33	93	34	160	29	86	45	160	320	
	047077002	28	67	19	114	26	75	18	119	233	
	047077005	29	102	22	153	19	79	18	116	269	
	047253013	27	76	19	122	25	76	23	124	246	
	047253014	75	117	7	199	72	116	9	197	396	
	047253001	35	85	33	153	48	75	33	156	309	
3	047077011	31	73	15	119	32	64	19	115	234	467
	047077002	28	67	19	114	26	75	18	119	233	
4	047039001	49	94	28	171	47	111	23	181	352	620
	047308002	32	87	19	138	24	84	22	130	268	
5	047240003	40	75	15	130	37	67	15	119	249	726
	047240002	62	122	36	220	75	117	65	257	477	
6	047240003	40	75	15	130	37	67	15	119	249	996
	047240002	62	122	36	220	75	117	65	257	477	
	047240001	39	83	12	134	44	79	13	136	270	
7	047240001	39	83	12	134	44	79	13	136	270	747
	047240002	62	122	36	220	75	117	65	257	477	
8	047240001	39	83	12	134	44	79	13	136	270	1062
	047240002	62	122	36	220	75	117	65	257	477	

Option	Small Area(s)	Male <18	Male 18 to 65	Male >65	Total Male	Female <18	Female 18 to 65	Female >65	Total Female	Total	Zone Total
	047229004	55	88	15	158	53	88	16	157	315	
9	047229005	33	80	13	126	19	80	14	113	239	523
	047077013	46	95	7	148	41	82	13	136	284	
10	047240002	62	122	36	220	75	117	65	257	477	761
	047077013	46	95	7	148	41	82	13	136	284	
11	047168003	33	68	12	113	31	81	8	120	233	1097
	047229004	55	88	15	158	58	83	16	157	315	
	047240001	39	83	12	134	44	79	13	136	270	
	047318004	46	79	12	137	41	94	7	142	279	
12	047229003	67	104	6	177	69	104	10	183	360	914
	047229004	55	88	15	158	58	83	16	157	315	
	047229005	33	80	13	126	19	80	14	113	239	
13	047102001	38	74	11	123	27	51	12	90	314	1300
	047143001	80	110	13	203	58	105	16	178	381	
	047302001	55	82	16	153	42	68	14	124	277	
	047308001	54	93	18	165	51	92	20	163	328	
14	047229004	55	88	15	158	58	83	16	157	315	1062
	047240001	39	83	12	134	44	79	13	136	270	
	047240002	62	122	36	220	75	117	65	257	477	

Table 15: Persons at Work by Industry

Option	Small Area	AFF	BC	MI	CT	TC	PA	PR	O	Total
1	047077005	9	10	24	28	10	5	22	14	122
	047077002	5	5	18	16	5	9	31	7	96
	047077011	8	4	15	23	6	4	15	12	87
2	047253002/01	0	2	35	22	3	8	30	11	111
	047253002/02	0	3	8	16	4	0	13	19	63
	047253015	3	11	18	28	10	3	23	19	115
	047077002	5	5	18	16	5	9	31	7	96
	047077005	9	10	24	28	10	5	22	14	122
	047253013	11	6	17	26	2	2	27	24	115
	047253014	1	9	51	54	18	9	34	25	201
	047253001	9	5	19	27	12	5	32	10	119
3	047077011	8	4	15	23	6	4	15	12	87
	047077002	5	5	18	16	5	9	31	7	96
4	047039001	21	9	28	30	10	7	30	19	154
	047308002	15	12	19	29	12	6	24	17	134
5	047240003	6	9	23	16	13	5	23	11	106
	047240002	16	12	41	39	15	6	51	11	191
6	047240003	6	9	23	16	13	5	23	11	106
	047240002	16	12	41	39	15	6	51	11	191
	047240001	13	3	25	17	12	5	17	9	101
7	047240001	13	3	25	17	12	5	17	9	101
	047240002	16	12	41	39	15	6	51	11	191
8	047240001	13	3	25	17	12	5	17	9	101
	047240002	16	12	41	39	15	6	51	11	191
	047229004	16	6	30	23	8	2	28	14	127
9	047229005	11	2	25	28	7	10	25	9	117
	047077013	26	9	30	28	12	1	22	4	132
10	047240002	16	12	41	39	15	6	51	11	191
	047077013	26	9	30	28	12	1	22	4	132

Option	Small Area	AFF	BC	MI	CT	TC	PA	PR	O	Total	
11	047168003	14	5	23	24	8	4	26	11	115	
	047229004	16	6	30	23	8	2	28	14	127	
	047240001	13	3	25	17	12	5	17	9	101	
	047318004	5	5	25	28	15	5	21	22	126	
12	047229003	3	8	38	40	18	7	36	16	166	
	047229004	16	6	30	23	8	2	28	14	127	
	047229005	11	2	25	28	7	10	25	9	117	
13	047102001	19	4	15		18	6	4	21	12	99
	047143001	21	6	25	38	7	6	47	14	164	
	047302001	23	4	17	31	7	7	24	8	121	
	047308001	16	4	22	30	10	5	35	22	144	
14	047229004	16	6	30	23	8	2	28	14	127	
	047240001	13	3	25	17	12	5	17	9	101	
	047240002	16	12	41	39	15	6	51	11	191	
National Average (per Small Area)		5	5	12	26	9	6	25	19	108	

Source: CSO

Note: AFF: Agriculture, forestry and fishing
 BC: Building and construction
 MI: Manufacturing industries
 CT: Commerce and trade
 TC: Transport and communications
 PA: Public administration
 PR: Professional services
 O: Other

