Greenlink Interconnector Limited

Ireland | Onshore

Construction Traffic Management Plan

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Contents

1 Introduction

The proposed Greenlink development includes elements onshore in Ireland, onshore in Wales, and offshore in the Irish Sea between the two landfall sites. The effects of the project on the transport network are assessed as part of the Environmental Impact Assessment Report (EIAR) which accompanies the planning application.

The onshore elements of the development in Ireland include the construction of a converter station near Great Island, a landfall near Baginbun where the subsea cable will connect to an underground cable on land, and installation of an underground cable connecting the two sites. The underground cable will primarily be installed along public roads, either in the road itself or in the verge running alongside it.

This Construction Traffic Management Plan (OCTMP) sets out guidelines on traffic management during the construction phase of the development. It has been prepared prior to the appointment of a contractor and finalisation of the construction programme. A full Construction Traffic Management Plan (CTMP) will be prepared by the appointed contractor and agreed with the local authority before the commencement of works. The CTMP will take cognisance of any planning conditions attached to the project.

2 Existing Environment

2.1 Site Location

The proposed converter station and tail station site is located to the west of the village of Campile, County Wexford. The proposed landfall site is at Baginbun beach, approximately 1.5km south of Fethard-on-Sea, County Wexford.

Traffic associated with the proposed development will potentially affect roads in the immediate vicinity of the proposed converter station site and landfall site, as well as the roads along and near the onshore cable route which is shown in **Figure 1** below. At its closest point, the cable route lies 12km from the nearest national road, the N25 at New Ross. The total cable route length is approximately 23km. The cable will be installed in sections. The roads throughout the study area comprise regional and local roads only and are lightly trafficked.

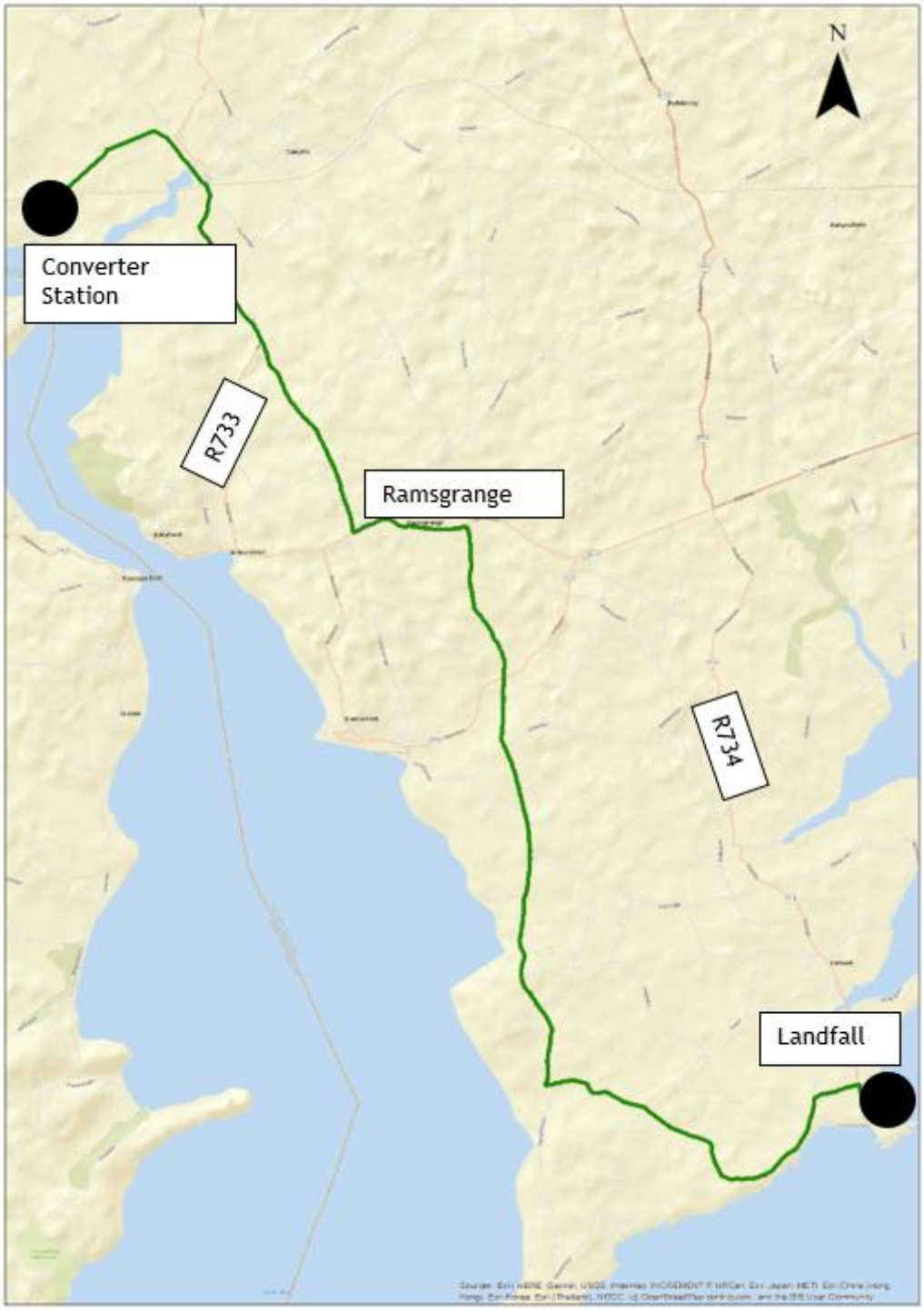

Figure 1 Onshore Cable Route, Converter Station and Landfall Site Locations | Not to Scale

2.2 Existing Traffic Conditions

The roads in the vicinity of the proposed development are generally lightly trafficked. Traffic volumes during the morning peak, evening peak and weekday daily traffic flows for the key road links near and along the proposed development are shown in **Table 1** and **Table 2** below for summer and winter respectively.

These volumes were calculated based on week-long traffic counts carried out during August and November/December 2018, and represent the highest volumes observed for each period.

Table 1 2018 Base Year Existing Two-Way Traffic Flows (Summer) (vehicles)

Link	AM (Summer)	PM (Summer)	Daily (Summer)
Local Road to Great Island	43	54	724
R733 Campile River Crossing	65	100	1296
R733 West of Ramsgrange	252	324	3789
R733 Ramsgrange village	212	301	3591
L4045 South of Ramsgrange	129	163	1910
R733 West of R734	242	324	3760
R734 Fethard-on-Sea	170	191	2322
Local Road Graigue Great	20	28	257
R734 Hook Head	26	59	352

Table 2 2018 Base Year Existing Two-Way Traffic Flows (Winter) (vehicles)

Link	AM (Winter)	PM (Winter)	Daily (Winter)
Local Road to Great Island	34	62	726
R733 Campile River Crossing	62	68	848
R733 West of Ramsgrange	212	251	2529
R733 Ramsgrange village	205	308	2762
L4045 South of Ramsgrange	93	131	1356
R733 West of R734	186	256	2609
R734 Fethard-on-Sea	103	120	1392
Local Road Graigue Great	6	9	93
R734 Hook Head	7	6	57

The Annual Average Daily Traffic (AADT) capacity on a Type 3 Single Carriageway road is 5,000 vehicles, as per the TII standard for Rural Road Link Design (DN-GEO-03031). This is the most relevant road type and standard for the roads within the vicinity of the proposed development. As can be seen in the tables above, all roads in the network are operating well within capacity, with the highest-trafficked road, the R733, operating at 75% of capacity in the summer and 55% of capacity during the winter.

2.3 Local Road Network

The character of the roads along the cable route varies considerably depending on the environment. In general, the regional roads along the cable route and in the study area, the R733, R734, and R737, are approximately 6-7m wide with grass verges but no hard shoulders. Local roads vary from 4-7m wide and also generally have grass verges but no hard shoulders.

The local road to access the Great Island substation is approximately 5.5m wide with grass verges to either side. The access road to Baginbun beach is approximately 4m wide with grass verges to either side.

2.4 Sustainable Transport Network

Sustainable transport measures are limited in the surrounding area, as would be expected given its rural nature. Footpaths are provided on a localised basis in villages and small settlements along the route. There are no footpaths provided on the approaches to proposed construction compounds. There are no continuous dedicated cycle or public transport lanes in the vicinity of the project.

Bus Éireann regional services travel to the north and east of the proposed cable route but do not travel on the route itself. The 373 regional service from New Ross to Wexford via Fethard-on-Sea operates once a week in each direction and does not travel along the proposed cable route.

3 Construction Traffic Generation

3.1 Staffing Levels and Transport Options

The anticipated number of construction staff has been calculated based on similar construction activities in recent years. These staff can be considered in three broad categories:

- Staff associated with cable laying, based in one of three cable construction compounds;
- Staff associated with Horizontal Directional Drilling (HDD) at river crossings and at the landfall site; and
- Staff associated with the construction of the converter station, tail station and associated works at Great Island.

Due to the rural nature of the site and the lack of alternative options, it is envisaged that all staff will arrive to the site via private vehicles. Car parking spaces for the personal vehicles of construction workers will be available at each of the construction compounds. Access to and circulatory arrangement of these car parks will be detailed in the CTMP. Construction staff will not park on public roads other than within the cable works area as outlined below.

3.1.1 Cable Construction Compounds

The three cable construction compounds will be located at Great Island, Lewistown and Baginbun. A maximum of 50 construction staff will be based out of these compounds at any one time. It is currently envisaged that the Great Island cable construction compound and the Baginbun cable construction compound may operate concurrently. An occupancy rate of 1.2 people per vehicle has been assumed to include for an element of carpooling with apprentices and teams which work together frequently, etc. This generates a total of 42 vehicles per day arriving at each construction compound during the section of the works for which that compound is operational. These vehicles will arrive before 07.00 and depart after 19.00 and will therefore operate outside of the peak hours on the network.

3.1.2 HDD Compounds

HDD compounds will be located on either side of the Campile river estuary, and at the landfall site at Baginbun beach. Approximately 10 staff are associated with these works. Using similar assumptions as for the cable installation works, 8 vehicles per day will arrive at these locations outside of the peak hours.

3.1.3 Converter Station Compound

It is currently envisaged that the site compound for the converter station, tail station and associated works will be located adjacent to the cable construction compound at Great Island. During the peak construction period, a maximum of 190 staff are expected to use this compound per day. This peak construction period is not expected to coincide with the cable installation, and therefore

the cable construction compound will not be operating at peak capacity during this period. Using similar assumptions as for the other elements of the works, 158 vehicles per day will arrive at the converter station compound outside of the peak hours.

3.2 On-Road Works

The cable construction will require a number of separate operations and associated vehicles at the construction area on the road, as set out in **Table 3** below. The maximum number of vehicles to be parked in each works area will be seven. Construction staff will park in the construction compounds and travel to their works area in the minimum number of vehicles required.

Table 3 Estimated Number of Vehicles for Onshore Cable Construction

Construction Activity	Duration per 1km of cable	Vehicles
Excavation/Ducting	2-3 weeks (per cable section of up to one kilometre)	5 no. vehicles
	Or, a typical HDD crossing requires 4-6 weeks to install.	5 no. HGVs & 2 no. vehicles daily
Cable Pulling and Jointing	To excavate and prepare joint bay: 5 days	5 no. vehicles
	To pull cables into joint bays: 4 days	4 no. HGVs to deliver each drum: 1 per day & 5 no. vehicles
	Jointing activities: 5 days	4 no. vehicles
	Fill in joint and re-surface road: 5 days	5 no. vehicles

The total cable length to be installed is approximately 23km. This will necessitate localised road closures which will be limited to approximately 200m at a time for a total of 20 days. Stop/go systems will be in operation for 120m at a time for a total of 138 days, and works will be carried out in the verge for 70m at a time, with traffic operating normally in both directions, for a total of 23 days.

Details of the traffic management for diversions in the case of road closures, and signage for stop/go systems, will be specified as part of the CTMP for each location where these are required.

3.3 Deliveries and Haul Routes

Deliveries to the cable construction compounds and HDD compounds will involve an average of 1-2 HGVs per day, with up to 20 two-way HGV trips per day during mobilisation and demobilisation.

Deliveries to the converter station compound will generate a maximum of 20 HGV trips per day to and from the site for deliveries and removal of waste. No export of spoil or import of fill is envisaged at the converter station and therefore this represents a conservative estimate of HGV volumes.

Most of the material to be delivered to site will travel via the N25 from the wider motorway network (the M9 at Waterford or the M11/N11 at Wexford), or from Belview Port or Rosslare Harbour for specialist component parts. Some specialist components may be delivered via the Great Island CCGT temporary berth. Indicative haul routes are shown in **Figure 2** below.

Material from quarries and other suppliers is also likely to travel via the N25 and south via regional roads. These suppliers are as yet unspecified. The CTMP will specify the locations of these suppliers and the haul routes to be used from each location to each site compound.

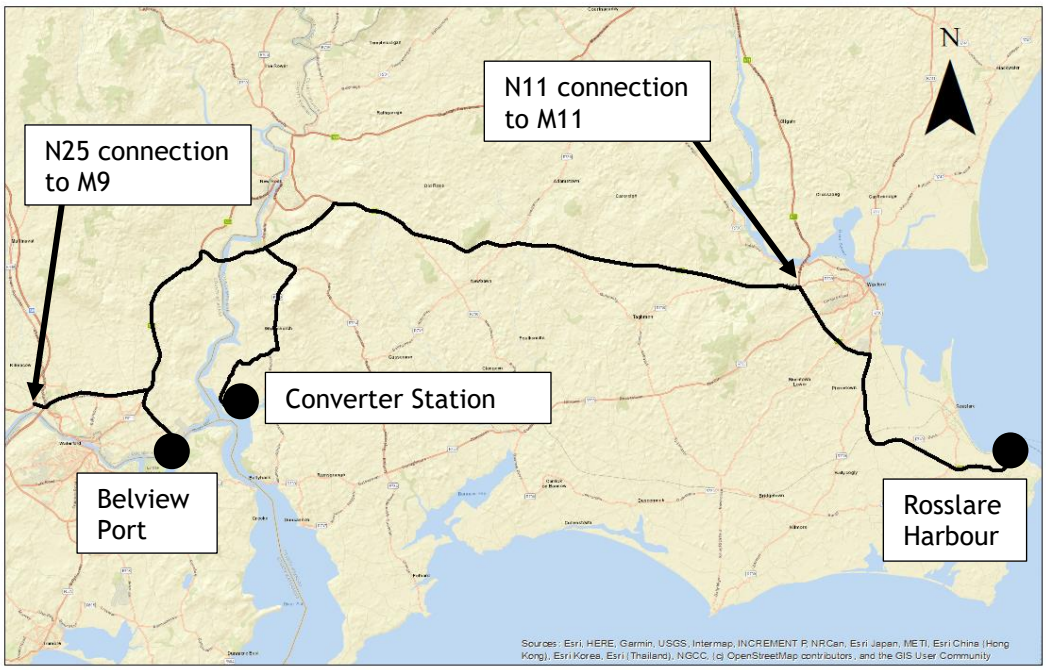

Figure 2 Indicative Haul Routes | Not to Scale

3.4 Abnormal Loads

Most of the construction material required will be delivered to site using HGVs. The largest individual pieces of equipment will be the transformers, which will have maximum dimensions of 8.5m x 5m x 5m. These transformers will be transported to site on specialist vehicles from either the Great Island berth, Belview Port, or Rosslare Harbour. The port of arrival will be determined during the construction phase and a suitable haul route will be agreed with Wexford County Council in advance of its arrival.

Regardless of the port selected, abnormal loads will be transported so as avoid peak traffic, particularly in built-up areas where a large number of people would be affected. Should any road closures be necessary on sections of the route to facilitate transport of abnormal loads, applications for these road closures would be advertised to allow local community input to any closure conditions in accordance with Wexford County Council requirements. Service providers will also be contacted to be advised that abnormal loads will be traveling along the nominated route and any overhead services (ESB and telecoms) will be temporarily diverted if necessary.

All necessary permits for transport of abnormal loads will be sought from the local authority, Transport Infrastructure Ireland (TII), and An Garda Síochána as appropriate. The contract haulage firm nominated for the transportation of the abnormal loads will undertake the preparation and lodging of these permit applications under the guidance of the contractor for the project. Any conditions attached to these permits will be fulfilled prior to transport to ensure safe and timely delivery of the items. This will form part of the CTMP.

4 Construction Traffic Management Plan

4.1 Overview

A full Construction Traffic Management Plan (CTMP) will be prepared prior to construction of Greenlink by the appointed contractor. It shall be a requirement of the project that the contractor liaise with the relevant authorities prior to construction, including Wexford County Council, TII and the emergency services, in order to finalise a comprehensive CTMP.

4.2 Site Access and Egress

All site access and egress points will be provided with adequate sight lines where possible. Minor improvements to the existing locations may be required, which will generally consist of trimming foliage. This will be carried out between 1 September and 28 February in accordance with the Wildlife Act.

Some of the proposed site access locations will not conform to sight line visibility requirements of the TII Publications. However, it should be noted that all accesses and egresses are located on regional and local roads, on which the visibility requirements of the TII Publications do not apply. To mitigate restricted visibilities, it is proposed that the principal contractor shall use a safe system of flagmen for the control of traffic during all access and egress operations at each site location.

4.3 Designated Car Parks

No car parking for staff will be permitted on public roads. Car parking spaces for the personal vehicles of construction workers will be available at each of the construction compounds. Access to and circulatory arrangement of these car parks will be detailed in the CTMP.

Vehicle parking will be provided at the construction areas for the installation of cables. This parking shall be kept to the minimum required for safe transport of staff to and from the construction area and temporary storage of materials for immediate use in the area.

4.4 Traffic Management Signage

The principal contractor shall undertake consultation with Wexford County Council and TII as required for the purpose of identifying and agreeing signage requirements. Such signage shall be installed prior to works commencing on site.

Proposed signage may include but is not limited to warning signs to advise road users of the works access/egress locations and the presence of construction traffic. All signage shall be provided in accordance with the *Traffic Signs Manual Chapter 8: Temporary Traffic Measures and Signs for Roadworks*. The contractor should consider the presence of the Eurovélo cycle route and ensure that signage is visible and legible for cyclists and non-English speakers.

Signage should clearly indicate site access and the locations of the different compounds for site staff and deliveries. The contractor shall also include temporary signage indicating shuttle control and/or road closures ahead. Diversion routes should be agreed with Wexford County Council prior to implementation, and advance warning signage should be provided on all approaches.

General information signage to inform road users and local residents and communities of the nature and locations of the works should also be included in traffic management signage near site compounds and any works areas. This should include project contact details.

4.5 Routing of Construction Traffic

HGV traffic will be directed away from residential communities and villages in the vicinity of the works areas where possible in order to minimise the effects on these communities. HGV traffic will be required to use the national and regional road network as much as possible but due to the nature of the site locations, it will be required to use the local road network to access the site compounds.

4.6 Timing of Material Deliveries

In order to minimise the impacts on local communities and residents of the areas adjacent to the proposed site compounds and along the haul routes, the contractor will be required to liaise with Wexford County Council and the management of other construction projects to coordinate deliveries should their construction periods coincide.

Deliveries will be scheduled by the contractor in such a way that construction activities requiring higher numbers of HGVs and concentrated delivery activities do not coincide, e.g. concrete pours should not be scheduled on the same day as material deliveries. Coordination of deliveries is particularly important given the combination of different activities present at Great Island with the cable construction compound, the HDD compound and the converter station compound in close proximity.

The contractor will be required to liaise with representatives of the local communities to ensure that deliveries will not conflict with sensitive events such as funerals, or major events which have potential to generate higher than usual traffic volumes such as sporting events.

HGV deliveries will avoid passing schools at opening and closing times where possible in order to minimise disruption to the local road network. Any deliveries outside of normal working hours (07.00-19.00) will be agreed in advance with Wexford County Council and set out in the CTMP.

4.7 Recommended Traffic Management Speed Limits

Adherence to posted speed limits will be emphasised to all contractor staff and suppliers during site induction. It will also be highlighted to all staff that the road network in the vicinity of the site consists largely of local roads and that due care should be taken on narrow sections and bends for oncoming traffic or passing HGVs.

4.8 Road Condition Surveys

Pre- and post-condition surveys will be carried out by the contractor on all roads on which works will be carried out. Roads shall be returned to their original condition or better following the works.

4.9 Road Cleaning

Regular condition surveys of the road network in the vicinity of the site compounds and works areas will be required of the contractor. Where necessary, the contractor shall carry out road sweeping to remove any project-related dirt and material deposited on the road network by construction or delivery vehicles. Appropriate temporary traffic management shall be provided during road sweeping to ensure safety of staff and road users.

4.10 Enforcement of Traffic Management Plan

All project staff and material suppliers will be required to adhere to the Construction Traffic Management Plan. The principal contractor shall agree and implement monitoring measures to monitor the effectiveness of the CTMP. Compliance will be monitored by the Site Engineer on behalf of Greenlink Interconnector Ltd. Inspections and spot checks will also be carried out to ensure that all project staff and material suppliers follow the measures agreed in the CTMP.