

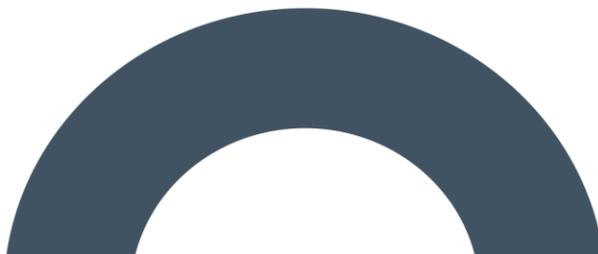


APPENDIX 14-2

TRAFFIC MANAGEMENT PLAN

Traffic Management Plan

Slieveacurry Renewable
Energy Development





DOCUMENT DETAILS

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1. INTRODUCTION

This Preliminary Traffic Management Plan (TMP) has been prepared by MKO on behalf of Slieveacurry Ltd. for the Proposed Slieveacurry Renewable Energy Development.

This document provides an outline of the traffic management proposals for the construction phase of the Proposed Development. In the event planning permission is granted for the Proposed Development, the final TMP will address the requirements of any relevant planning conditions, including any additional mitigation measures which are conditioned.

1.1 Proposed Development and Traffic Generation

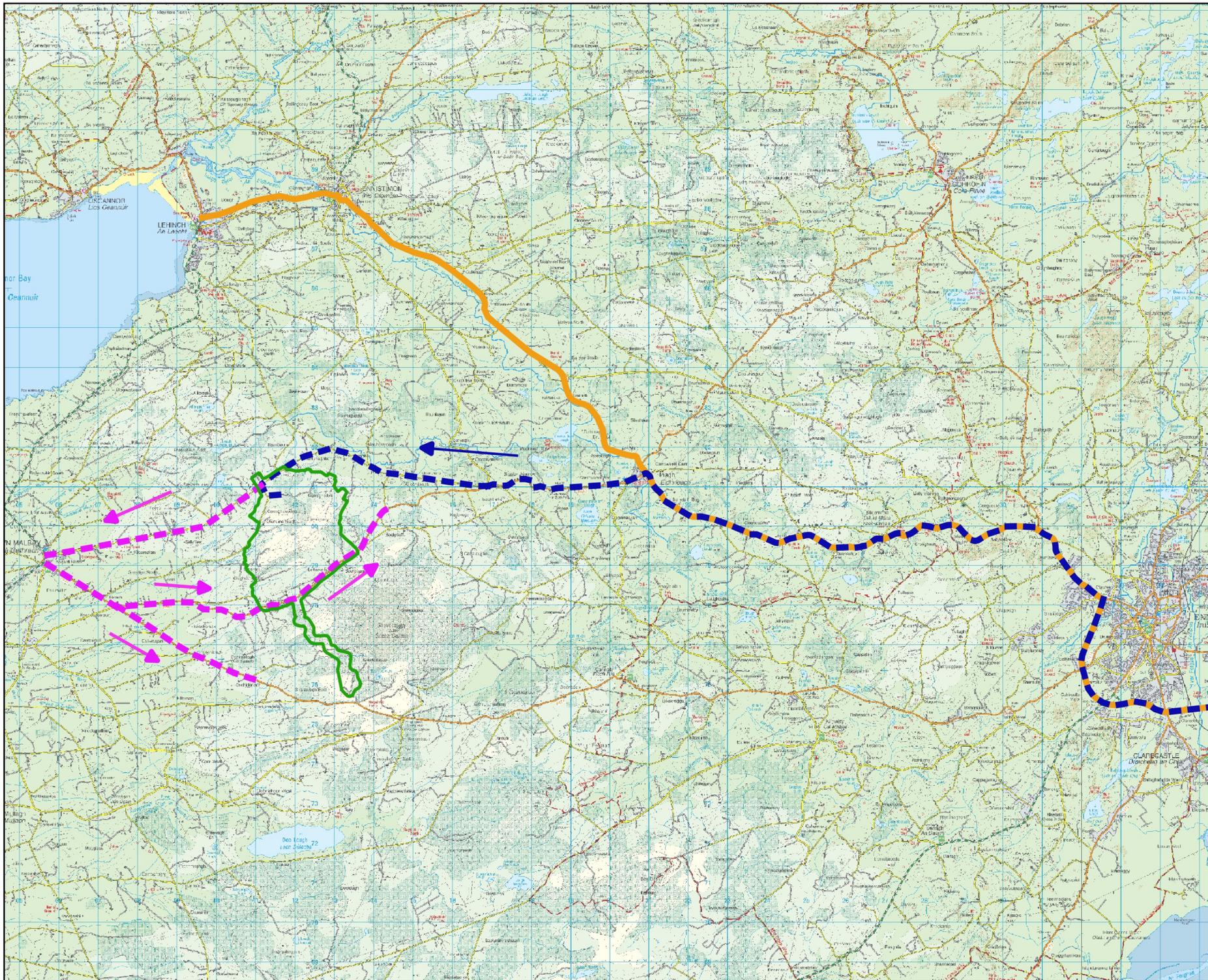
For the purposes of the EIAR assessment, a period of 12 months for the construction phase of the Proposed Development has been used to test the worst case scenario in terms of traffic volumes per day. During this construction phase, there will be two distinct types of days with respect to trip generation. During the site preparation and ground works aspect of the construction stage ('stage 1') a total of 8 days will be used to pour the 8 concrete wind turbine foundations. Foundations will likely be poured one per day, with an estimated 70 concrete loads required for each turbine foundation delivered to the site over a 12-hour period. This will result in 5 HGV (heavy goods vehicles) trips to and from the site per hour. On the remaining working days for this stage, other general materials will be delivered to the site. During all of Stage 1, based on trip rates typical of wind farm projects, it is estimated that 2,170 two-way trips will be made to the site by trucks and large articulated HGVs. Tables 14.5 – 14.7 inclusive of Chapter 14: Material Assets of the EIAR illustrates all HGV movements associated with this stage. The figures show that on the 8 days that concrete will be delivered to the site an additional 336 two-way Passenger Car Unit (PCU) will travel on the network (comprising 70 two-way HGV trips or 140 movements, with 2.4 PCUs per movement). Similarly, on the 248 days when other materials will be delivered to the site, traffic volumes on the local network are forecast to increase by an average of 31 PCUs, as set out in Table 14-7 of the EIAR.

During the turbine construction stage (stage 2) some deliveries will be made by abnormally large vehicles ('extended artics') transporting the component parts of the turbines to site. Large HGV's will also be used to transport cables, tools and smaller components to site. The EIAR assessed that a total of 64 trips will be made to and from the site by extended artics and a further 32 trips made by conventional large articulated HGVs, giving a total of 98 trips.

1.2 Turbine and Materials Transport Route

It is proposed that large wind turbine components will be delivered to the site of the Proposed Development, from Dublin Port, Foynes Port or Galway Port, via the N85 National Secondary Road. A detailed assessment of the proposed haul route for the abnormally sized loads was made from a point at which the route turns off the western bypass of Ennis (N85) at the Claureen Roundabout onto the N85 heading northwest for 13.7 kms towards Inagh. The route is shown in Figure 14-1 and discussed in detail in Section 14.1.8 of the EIAR. The route then turns left in the village of Inagh heading west on the R460 for 4.3 kms before veering right onto the local L1074. The routes continues westbound on the L1074 for 4.2 kms before taking a left hand band on the same road and continuing in a southwest direction for a further 2.0 kms. At this point the route turns left onto the L6230-19 heading south for 0.3 of a km. Access to the site is then gained by turning left onto an existing forest track heading in an eastern direction towards the site.

The delivery route for general HGV construction traffic may vary depending on the location of the suppliers of concrete and other general construction materials required to construct the Proposed Development. The quarries that could potentially provide stone and ready mix concrete for the proposed development are as follows;



Map Legend

- EIAR Site Boundary
- N85
- Turbine Delivery Route & Construction Haul Route
- Construction Haul Route



Drawing Title

Turbine Delivery and Construction Haul Route

Project Title
Slieveacurry Renewable Energy Development, Co. Clare

Drawn By: **Ellen Costello** Checked By: **Michael Watson**

Project No.: **170224c** Drawing No.: **Figure 1-1**

Scale: **1:125000** Date: **26.10.2021**



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1. Roadstone, Bunratty,
2. Roadstone, Toonagh,
3. McGraths O'Callaghan's Wills, Tulla.

Based on the cement and other suppliers in the vicinity of the Proposed Development it is estimated that the concrete deliveries and general construction traffic will travel on the same route as identified for the abnormal loads.

All deliveries of turbine components and other construction materials to the site will only be via the proposed transport route outlined in Figure 1-1. All deliveries will access the site via this haul route for the duration of construction phase. All deliveries of construction materials to the site will take place within the defined working hours of 7am – 7pm. It may be necessary on occasion, to commence works before 7am where concrete pours will be required to start earlier due to the volume of concrete required and the location of the concrete pour relative to the concrete supplier's batching plant. Main pours will be planned well in advance and will ensure disruption to work and school related traffic is avoided. The locations of all turbine foundations where large concrete pours will take place are off the public road and will be accessed by the internal site roads and will therefore eliminate the potential for queuing of trucks on the adjoining public road network. The typical vehicle type for delivery of construction materials to site with the exception of the wind turbines will be with standard heavy goods vehicles and cement mixers.

1.3

Traffic Management of Large Deliveries

The greatest effect on the road network will likely be experienced on the approximately 22 days/nights during which the 3 large loads comprising the tower sections, the blades and the nacelles are delivered to the site.

Traffic management measures include the following:

- Identification of a delivery schedule,
- Details of the alterations required to the infrastructure identified in Section 14.1.8 of the EIAR and any other minor alteration identified (hedge rows etc),
- A dry run of the route using vehicles with similar dimensions.

The transport of large components is challenging and can only be done following extensive route selection, route proofing and consultation with An Garda Síochána and the various local authorities. Turbine components are often transported at night when traffic is lightest and this is done in consultation with the roads authorities / An Garda Síochána and special permits are generally required.

In some cases, temporary accommodation works are required along the turbine delivery route (TDR) such as hedge or tree cutting, temporary relocation of powerlines/poles, lampposts, signage and minor road verge works. Any updates to the road will be carried out in advance of turbine deliveries and following consultation and agreement with the appropriate local authorities.

It is not anticipated that any sections of the local road network will be closed, although there may be delays to local traffic at various locations if the deliveries are made during daylight hours. During these periods, it may be appropriate to operate local diversions for through traffic. The effect of this stage may be minimised by the deliveries of the abnormally sized large loads taking place during the night. It is noted that it is proposed that all deliveries of abnormally sized loads will be made during night time hours, as is the norm for such deliveries.

A detailed traffic and transport management plan for turbine delivery will be prepared by the haulage company, when appointed and will be submitted to Clare County Council for approval. The plan will include:

- A delivery schedule.
- A schedule of control measures for exceptional wide and heavy loads.
- Details of temporary works or any other minor alteration identified.
- A dry run of the route using vehicles with similar dimensions.

The deliveries of turbine components to the site will be made in convoys of three to four vehicles at a time, and mostly at night when roads are quietest. Convoys will be accompanied by escorts at the front and rear operating a “stop and go” system. Although the turbine delivery vehicles are large, they will not prevent other road users or emergency vehicles passing, should the need arise. The delivery escort vehicles will ensure the turbine transport is carried out in a safe and efficient manner with minimal delay or inconvenience for other road users. It is not anticipated that any section of the local road network will be closed during transport of turbines, although there will be some delays to local traffic at pinch points. During these periods it may be necessary to operate local diversions for through traffic.

All deliveries comprising abnormally large loads will be made outside the normal peak traffic periods to avoid disruption to work and school-related traffic.

Prior to the TMP for turbine delivery being finalised, a full dry run of the transport operation along the route will be completed using vehicles with attachments to simulate the dimensions of the wind turbine transportation vehicles. This dry run will inform the final traffic management plan. All turbine deliveries will be provided for in a transport management plan which will have to be prepared in advance of the turbine delivery stage, when the exact transport arrangements are known, delivery dates confirmed and escort proposals in place. Such a transport management plan is typically submitted to the Planning Authority for agreement in advance of any abnormal loads using the local roads, and will provide for all necessary safety measures, including a convoy and Garda escort as required, off-peak turning/reversing movements and any necessary safety controls.

The roads and bridges all haul route will be subject to a condition survey by a suitably qualified engineer both before and after construction. Protection measures for such infrastructure as specified by the appointed engineers report will be implemented in full prior to construction.

Where any temporary accommodation works are required along turbine haul route these areas will be reinstated to original condition after deliveries have been completed. In the event of construction damage arising on any roads or bridges along the haul route it will be rectified immediately by the developer under consultation with the relevant roads engineer.

Prior to the delivery of oversized loads, the developer will engage with the local community to provide information on the scale, time and duration of such deliveries. This information will be informed by pre-delivery surveys which will be completed by the suppliers. This information along with any other information relevant to the project will be relayed to the local community by information leaflet and a website if deemed necessary. In addition, complaints will be documented in the site complaints log and the Site Environmental Clerk of Works will arrange to meet with those affected. The situation will be acted upon immediately and reviewed by the Project Manager.

1.4

Traffic Management During Concrete Pouring

With regards marshalling during busy periods, the likely busiest delivery days will be the days when the concrete foundations are poured. The TMP will include the locations where site staff linked by radio will be located, together with holding points for HGV's to allow approaching vehicles to pass.

The basic principles to be employed during concrete pouring will be:

1. Concrete Delivery Lorries to drive from nominated quarries along the N68 main road from Ennis to Kilrush. Vehicles will be directed to avoid busy local trafficked areas such as where schools traffic parked on both sides of the road. Concrete loads will be delivered to the site over a 12-hour period. The above strategy will be agreed with Clare County Council as required.
2. Hold points will be employed if required although it is likely that the one way system proposed will avoid vehicles meeting.
3. Empty lorries will be held at the wind farm until they receive clearance from radio control located at the junction on the L1074. Once they get the go ahead they will turn left in the direction of Miltown Malbay.
4. Drivers to follow normal rules of the road.
5. Normal permitted axial loads not to be exceeded.
6. All delivery drivers to receive toolbox talk regarding the delivery route and planned hold points (if required) prior to any deliveries.
7. All vehicles exiting site to be wheel washed clean to prevent dirt going out onto the road.

1.5 Traffic Management Measures

A detailed TMP will be provided specifying details relating to traffic management and included in the Construction Environmental Management Plan (CEMP) prior to the commencement of the construction phase of the Proposed Development. The TMP will be agreed with the local authority and An Garda Síochána prior to construction works commencing on site. The detailed TMP will include the following:

- **Traffic Management Coordinator** – a competent Traffic Management Co-ordinator will be appointed for the duration of the project and this person will be the main point of contact for all matters relating to traffic management.
- **Delivery Programme** – a programme of deliveries will be submitted to the County Council in advance of deliveries of turbine components to site. Liaison with the relevant local authorities and Transport Infrastructure Ireland (TII) will be carried out where required regarding requirements such as delivery timetabling. The programme will ensure that deliveries are scheduled in order to minimise the demand on the local network and minimise the pressure on the access to the site.
- **Information to locals** – Locals in the area will be informed of any upcoming traffic related matters e.g. temporary lane/road closures (where required) or delivery of turbine components at night, via letter drops and posters in public places. Information will include the contact details of the Project Co-ordinator, who will be the main point of contact for all queries from the public or local authority during normal working hours. An "out of hours" emergency number will also be provided.
- **A Pre and Post Construction Condition Survey** – Where required by the local authority, a pre-condition survey of roads associated with the Proposed Development can be carried out immediately prior to construction commencement to record an accurate condition of the road at the time. A post construction survey will be carried out after works are completed to ensure that any remediation works are carried out to a satisfactory standard. Where required the timing of these surveys will be agreed with the local authority. All road surfaces and boundaries will be re-instated to pre-development condition, as agreed with the local authority engineers.
- **Liaison with the relevant local authority** - Liaison with the County Council and An Garda Síochána, will be carried out during the delivery phase of the large turbine vehicles, when an escort for all convoys will be required. Once the surveys have been carried out and “prior to commencement” status of the relevant roads established, (in compliance with the provisions of the CEMP), the Roads section will be informed of the relevant names and

contact numbers for the Project Developer/Contractor Site Manager as well as the Site Environmental Manager.

- **Implementation of temporary alterations to road network at critical junctions** – at the following locations:
 - Location 1 – N85 / R460 junction at Inagh
 - Location 2 – Bend on R460
 - Location 3 – R460 / L1074 junction
 - Location 4 – Bend on L1074
 - Location 5 – L1074 / Fahanlunaghta More Road junction
 - Location 6 – Fahanlunaghta More Road forestry access road junction

The above-noted junctions are discussed in detail in Section 14.1.8 of the EIAR. In addition, in order to minimise the impact on the existing environment during turbine component deliveries the option of blade adaptor trailers will also be used where deemed practicable. Any alterations required will require prior discussion and agreement with the Municipal District Office.

- **Identification of delivery routes** – These routes will be agreed with the County Council and adhered to by all contractors.
- **Delivery times of large turbine components** - The management plan will include the option to deliver the large wind turbine plant components at night in order to minimise disruption to general traffic during the construction stage.
- **Travel plan for construction workers** – While the assessment above has assumed the worst case in that construction workers will drive to the site, the construction company will be required to provide a travel plan for construction staff, which will include the identification of routes to / from the site and identification of an area for parking.
- **Road Opening Licence** – Roads works associated with the grid connection cabling will be undertaken in line with the requirements of a road opening licence as agreed with Clare County Council.
- **Drainage** - The Applicant will engage with the Municipal District Engineers Office and agree any necessary additions or changes to the existing surface drainage infrastructure (temporary or otherwise) prior to the commencement of any construction activities on site.
- **Additional measures** - Various additional measures will be put in place in order to minimise the effects of the development traffic on the surrounding road network including wheel washing facilities on site and sweeping / cleaning of local roads as required. These are set out in the CEMP which is contained in Appendix 4-3 of the EIAR as lodged.
- **Re-instatement works** - All road surfaces and boundaries will be re-instated to pre-development condition, as agreed with the local authority engineers.