

# **Chapter 13:**

## **Transport & Access**

## 13.1 Introduction

### 13.1.1 Overview

This chapter assesses the likely impact of the proposed development in respect of traffic conditions, transport routes and general traffic safety. The assessment also identifies the proposed haul route for turbine component delivery and any secondary and indirect impacts of the proposed development on the road network.

### 13.1.2 Methodology

A high level review of all potential transport routes, road conditions and access points was undertaken by GES Ltd. Desk-based research included:

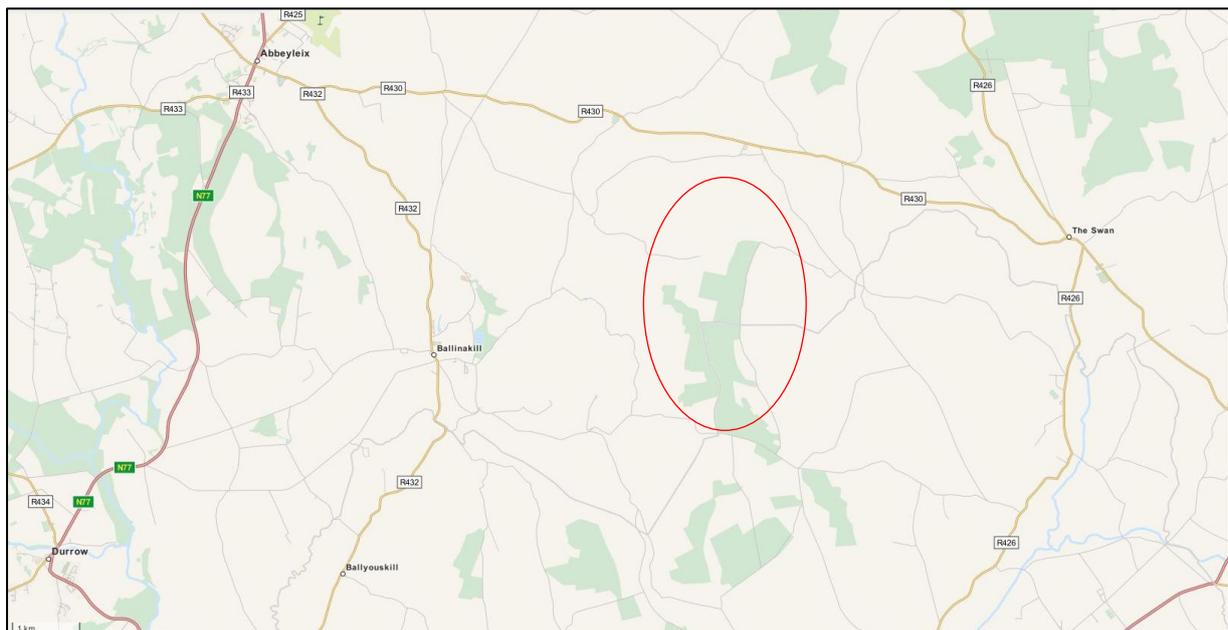
- Activities that may potentially give rise to significant traffic movements;
- Views from relevant statutory consultees and local authorities;
- Access to and within the proposed development site.

## 13.2 Description of the Existing Environment

### 13.2.1 Location

The subject site is located approximately 3km east of Ballinakill, Co. Laois and adjacent to, and south of, the R430 regional route (see **Figure 13.1**).

The site is currently predominantly used for forestry and agricultural purposes. On-site access is via existing forestry tracks from the network of local roads (L7800, L78001 and L77951).



**Figure 13.1: Road network in the environs of the subject site**

## 13.3 Description of Likely Impacts

### 13.3.1 Construction Phase

The proposed development will require the transportation of large turbine components together with associated construction plant and general construction traffic during the 12–18 month construction phase.

It is estimated that approximately 176 trips (both in and out) of abnormal oversized loads will be required to transport turbine components, including with cranes, to the site. Some temporary access

restrictions will therefore need to be put in place during the construction phase to facilitate the safe delivery of turbine components to the site. It is further estimated that a total of 3252 HGV trips and 4683 LGV van trips will occur during the construction phase. The intensity of trips will vary during the construction phase depending on the stage of the construction process (see **Table 13.1**)

<i>Construction Works</i>	<i>Oversized Loads</i>	<i>HGV</i>	<i>LGV</i>
Site works	176	2789	1320
Electrical cables	0	214	337
Substation	0	131	904
Site set-up and management	0	118	2122
Totals	176	3252	4683

**Table 13.1: Predicted vehicle trips during the construction phase**

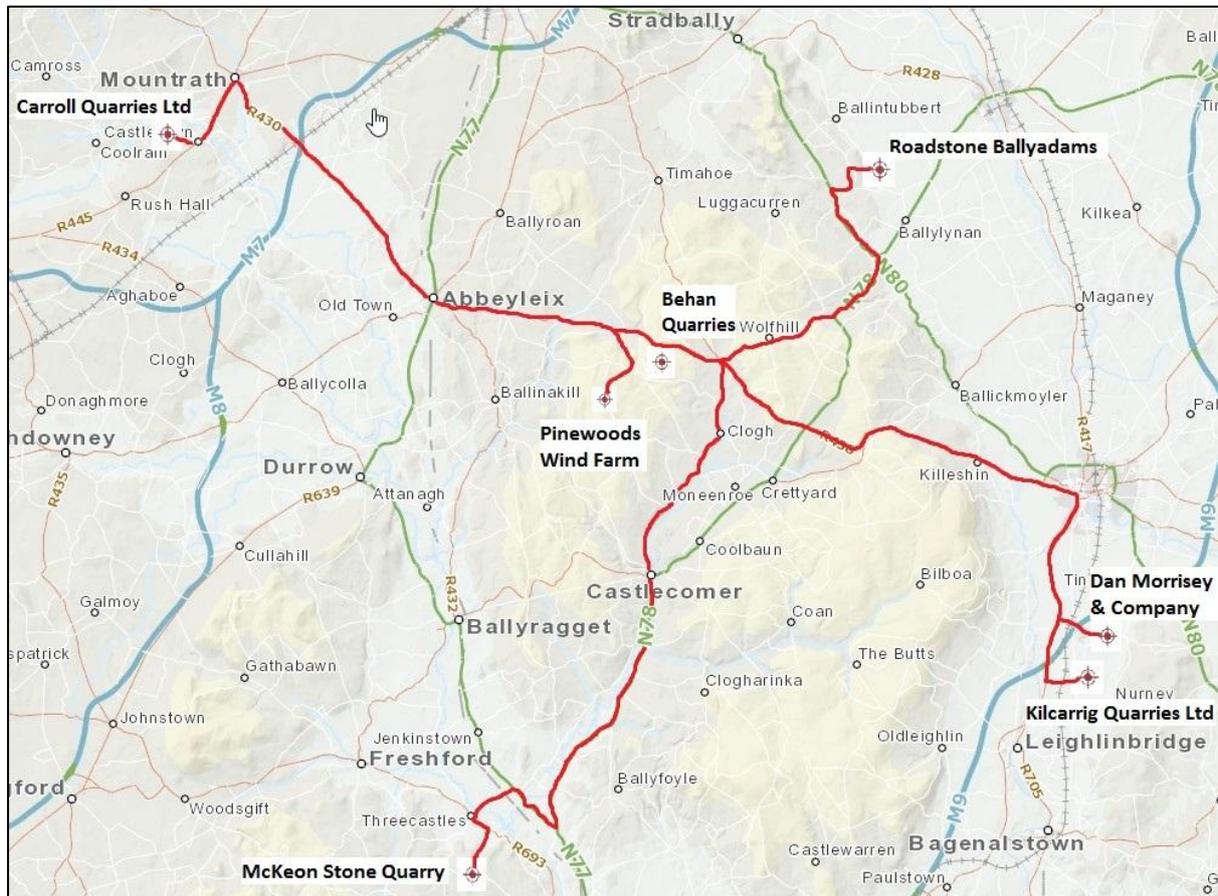
The assumptions used in estimating the number of vehicle trips required during the construction phase are provided in **Table 13.2**.

<i>Construction Works</i>	<i>Details</i>
Length of new access tracks	7.4km
Depth of access tracks	0.5m
Oversized components per turbine	16
HGV movements per turbine	296
LGV movements per turbine	426
Underground cabling	7.4km
Aggregate required for on-site access track (m <sup>3</sup> )	18,500m <sup>3</sup>
Tonnage of aggregates for on-site access track	37,500 tonnes
HGV loads	1,875
Aggregates required for turbine hardstands and site entrances (m <sup>3</sup> )	5,500m <sup>3</sup>
Tonnage of aggregates for turbine hardstands and site entrances	11,165 tonnes
HGV Loads	559
Aggregates required for turbine foundations (m <sup>3</sup> )	3,740m <sup>3</sup>
HGV loads	499
Total HGV movements	3,252

**Table 13.2: Construction phase vehicle trip assumptions**

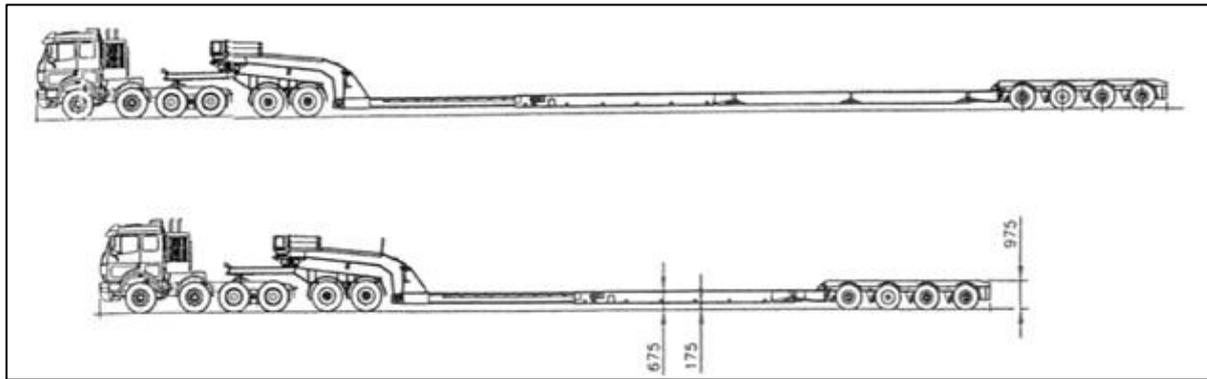
The haulage of all construction materials and aggregates to the site and the movement of personnel will be undertaken in accordance with the principles of sustainable transport. Deliveries shall, where possible, be undertaken along national and regional routes. The suppliers of construction materials have not yet been identified and will be selected by way of a competitive tendering process at the time of construction. As such confirmation of the exact haul routes for construction materials is not

possible at this time. However, it is anticipated that local suppliers will be preferred in order to minimise vehicle movements. **Figure 13.2** provide details of potential local suppliers of ready-mix concrete and aggregates for the proposed development. The transport routes as illustrated may not represent the most direct route to the site but have been chosen because they allow use of roads best suited to the volume and size of vehicles likely to be used. They also avoid the need to use narrower local roads as far as is possible. All quarries used for the proposed development will have the appropriate planning consent, license and registration, including as required by the EIA and Habitats Directives.



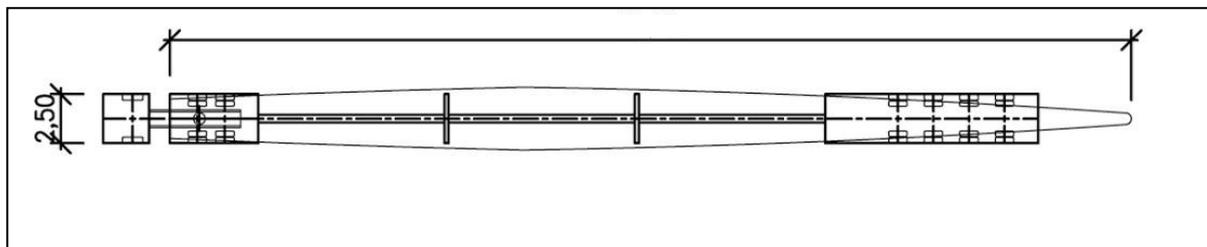
**Figure 13.2: Potential suppliers and haul routes for aggregates, stone etc.**

A transport study of the proposed haul route to the site was carried out to assess suitability for the transportation of oversized loads of wind turbine components including blades and their associated tower sections. **Figure 13.3** illustrates the type of vehicles that will be used in the transportation of the turbines to site.



**Figure 13.3: Transport vehicle dimensions for turbine components**

The fully laden load will be somewhat longer than that illustrated above in that the components will overhang the rear of the truck. **Figures 13.3** and **13.4** provides an illustration of the typical dimensions of a truck fully laden with a turbine blade. Various components of the turbine will fit differently on the truck, including the tower sections.

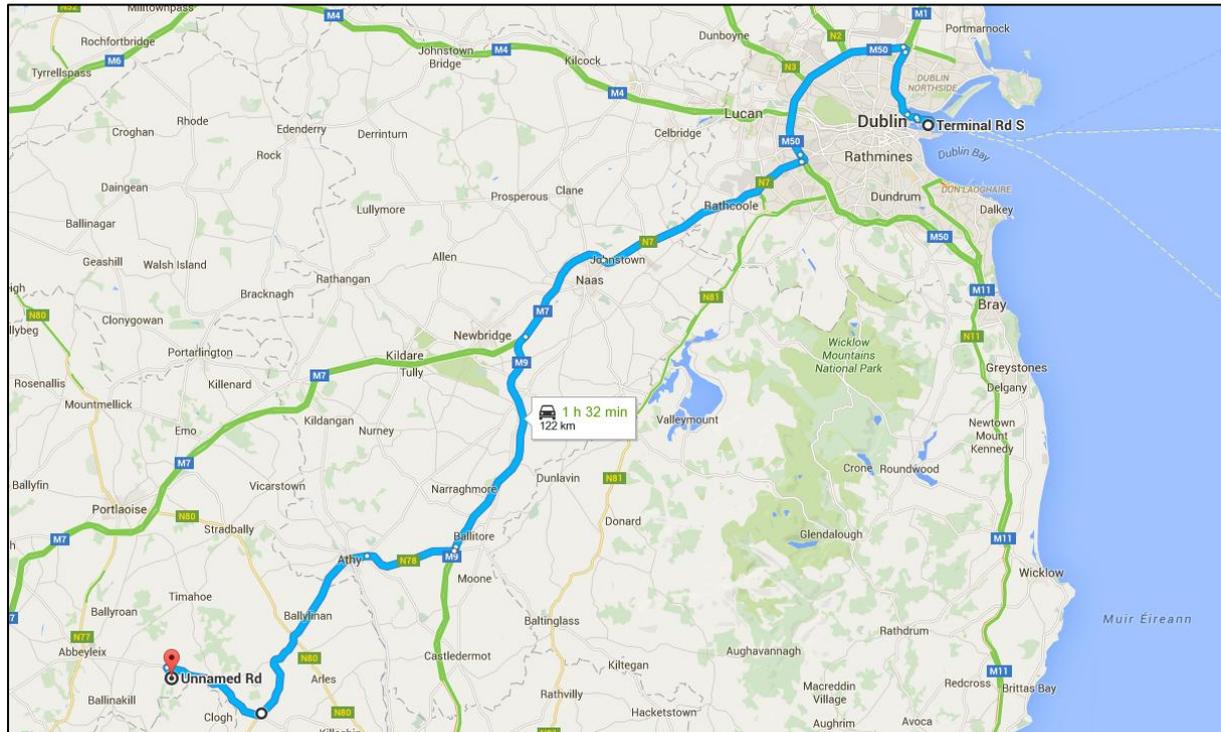


**Figure 13.4: Transport vehicle dimensions with turbine blade**

There are a number of sea ports on the island of Ireland which can accommodate the landing and handling of turbine components of the size and type of those to be used in the proposed development. Many of these ports have direct access to the national motorway network. Accordingly, given the proximity of the subject site to the motorway network, transport of turbine components from the port to the proposed development site should not present any significant difficulties.

**Figure 13.5** illustrates the likely haul route of turbine components. From the M9, the haul route continues onto the N78 at Exit 3 and proceed towards the R430 junction where it turns right towards the village of Swan. Some temporary removal of road signage will be required at Exit 3 to facilitate the swept path of the transport vehicle. From the R430, the haul route will turn left onto the L7800 local road which connects to the subject site. Some temporary junction upgrades will be required at this location to facilitate turning movements.

The proposed development will use existing forestry access points, where available. Within the subject site, approximately 7.4km of access tracks will be required. The proposed development layout has been designed to make best use of these existing forestry tracks, where possible. However, these tracks are not sufficiently wide to accommodate loads associated with the proposed turbines and will therefore be widened to a typical running width of approximately 5 metres.



**Figure 13.5: Proposed haul route from Dublin Port to the proposed development site**

**13.3.2 Operation Phase**

During the operation phase, vehicle trips to and from the site will be greatly reduced with typically 1-2 trips per week for routine inspections, servicing and maintenance activities using a van (see **Table 13.3**).

<i>Operation Works</i>	<i>Oversized Loads</i>	<i>HGV</i>	<i>LGV</i>
Routine inspections, servicing and maintenance activities	0	0	2,600 (104 per annum)

**Table 13.3: Predicted vehicle trips during the operation phase**

In the event that a major turbine component requires replacing, it may be necessary to bring larger vehicles onto the site during the operation phase to facilitate these works.

**13.3.2 Decommissioning Phase**

Vehicle trips for the decommissioning phase will be similar to the construction phase. However, given the nature of decommissioning works and the reuse of materials on site, the intensity of trips is predicted to be lower (see **Table 13.4**)

<i>Decommissioning Works</i>	<i>Oversized Loads</i>	<i>HGV</i>	<i>LGV</i>
Site works	176	188	590
Electrical cables	0	0	0
Substation	0	40	236
Site set-up and management	0	0	0
Totals	176	228	826

**Table 13.4: Predicted vehicle trips during the decommissioning phase**

## 13.4 Mitigation & Monitoring

### 13.4.1 Construction Phase

- A traffic management plan shall be agreed with the local authority as part of the Construction Management Plan in advance of the commencement of works;
- All works to the public road shall be undertaken in consultation with, and agreed in advance with, the local authority;
- All reasonable steps shall be taken to ensure that only national and regional routes are used to transport materials to the site, in so far as is possible.
- Before and after pavement and bridge surveys will be undertaken along access routes;
- Adequate signage shall be provided at entrances providing access, safety and warning information;
- Traffic restrictions shall be kept to minimum duration and extent;
- Diversions shall be implemented to facilitate continued public use of roads where temporary traffic restrictions have to be put in place;
- The timing of oversized loads shall be agreed with the relevant local authorities and An Garda Síochána;
- A wheel wash facility will be located at each site entrance. Water spraying for dust suppression will also be used, as required;
- A designated contact point and coordinator will be put in place to manage all access arrangement and to interface with the public and the local authority;
- No hedgerows or potential breeding habitats to be removed during the summer breeding season;
- The site shall be closed to the public during the construction phase.

### 13.4.2 Operation Phase

Given the infrequency of traffic movements resulting from the proposed development during the operation phase, no specific mitigation measures are required.

### 13.4.3 Decommissioning Phase

Mitigation measures for the decommissioning phase will be similar to the construction phase and will be agreed with the local authority at that time as part of the Decommissioning Management Plan.