



## Construction Transport Management Plan

In support of a planning application for a single wind turbine, on  
Land at East Karslake, Greensplat, Cornwall, PL26 7XS.



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## 1. Introduction

A Construction Transport Management Plan (CTMP) has been prepared to support the planning application for a single wind turbine, up to 135m to tip, on land at East Karslake.

This CTMP will show the impacts associated with the construction of a single wind turbine on land at East Karslake, Imerys Land, Cornwall PL26 7XS. The only significant impact is due to the movement of Heavy Goods Vehicles (HGVs) during the construction phase of the wind turbine. It can be said that the impact associated with the transport and construction of this single wind turbine is modest in scale and duration.

Once the wind turbine is operational the amount of HGV traffic to the turbine location will be minimal. Infrequent visits will be made by engineers and owners using light vehicles such as a transit van or 4x4. There may be the requirement for an HGV to access the site during operation in case of a repair or major replacement during the lifetime of the wind turbine but this eventuality, while possible, is not expected.

When the wind turbine is decommissioned, there may be further impact on the highway in the removal of the equipment and building materials from the site.

Each HGV movement will be planned and notified to every Local Council, Highway and Police authority according to the requirements of Abnormal Indivisible Loads - Road Vehicles (Authorisation of Special Types) (General) order 2003.

This report aims to clarify the dimensions and weight of the HGVs that will be required to make the deliveries and addresses the potential impact this could have on the local highway during their movement.

Both pre- and post-construction inspections of the highway will be made by the regional Engineer. Allowances have been made for the full reinstatement of any damage that may occur.

## 2. Site Location

The proposed site is located on land at East Karslake, Greensplat, Cornwall, PL26 7XS. See figure 1.

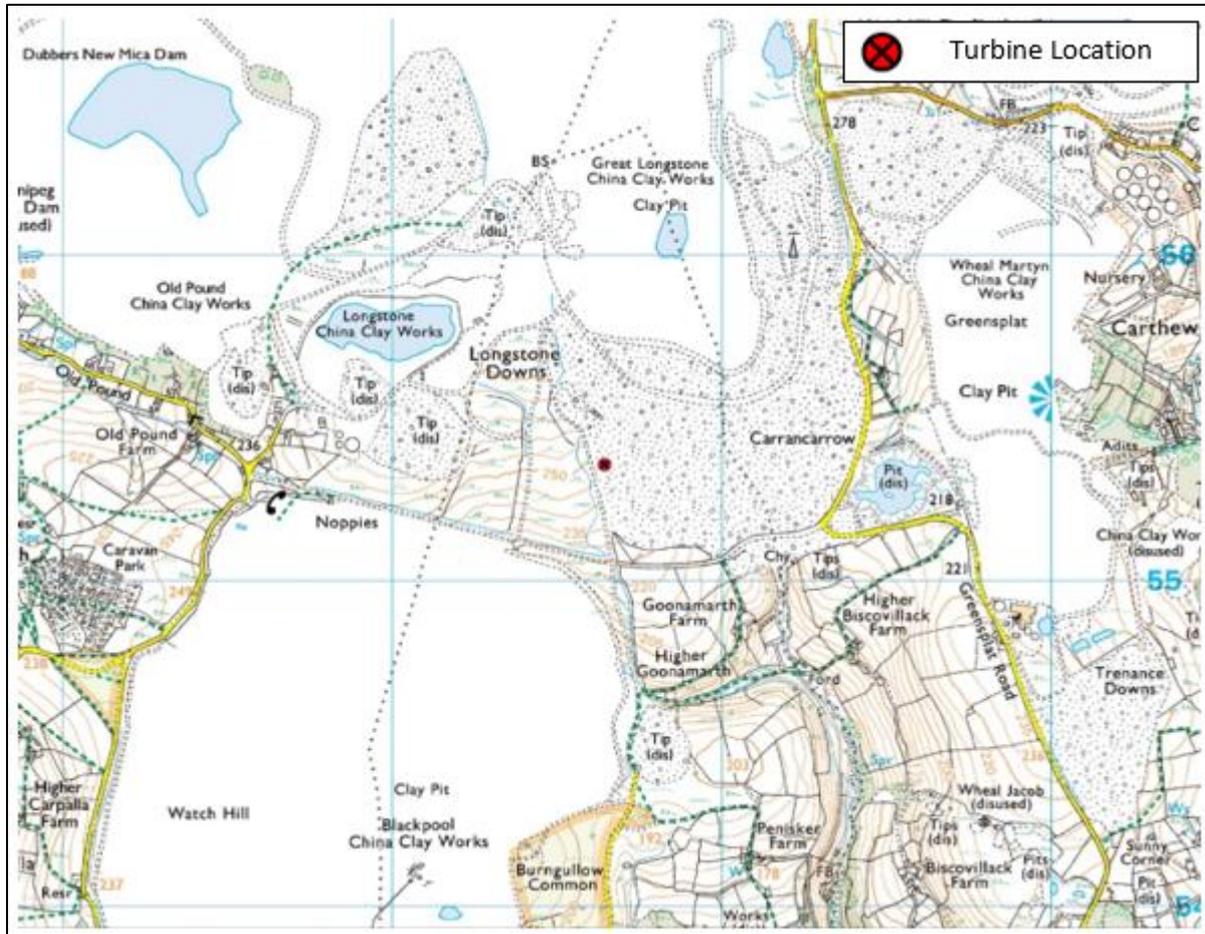


Figure 1 Proposed turbine location

### 3. Construction Phase Traffic Generation

Estimates of the traffic generation associated with the wind turbine building block deliveries are based on the following activities:

- Delivery of steel tower anchor for fitting in a concrete base
- Delivery and removal of the support crane and main crane for the turbine installation
- Delivery of the generator
- Delivery of the nacelle and the hub
- Delivery of the mainframe
- Delivery of the wind blades
- Delivery of the tower sections
- Delivery of converters, cabinets, and accessories

#### **Additional construction activities**

The other construction activities associated with the development include:

- Delivery of steel reinforcement bars for foundation
- Delivery of “ready-mix” concrete for the foundation
- Delivery of Glass Fibre-Reinforced Plastic (GRP) transformer housing
- Construction staff daily movements

These auxiliary movements will all take place in normal construction vehicles and any impact on the road network from the small number of movements is considered to be insignificant; it will therefore not be assessed further.

#### **Delivery of reinforced steel tower anchor for fitting in a concrete base**

The turbine anchor can be delivered to the site in 1 HGV movement.

#### **Delivery and removal of the support crane and main crane for the turbine installation**

The installation of the wind turbine will require the use of 2 cranes. The support crane weighs approximately 90 metric tonnes and the main crane weighs approximately 300 metric Tonnes. In addition, the main crane requires a support vehicle of approx. 95 metric tonnes. This will result in approximately 6 HGV movements.

#### **Delivery of the generator**

The delivery of the generator will require 1 HGV movement.

### **Delivery of the nacelle, hub, and small parts**

The delivery of the nacelle and hub will be 1 HGV movement.

### **Delivery of the mainframe**

The delivery of the mainframe will be 1 HGV movement.

### **Delivery of the wind blades**

The delivery of 3 blades will require 3 HGV movements.

### **Delivery of the tower sections**

The delivery of the tower is in 3 sections and will require 3 HGV movements.

### **Important Note**

The information above is an indication of requirements, it is the crane and haulage contractor's responsibility to perform an appropriate site survey before transport and building work commences.

There will therefore be an approximate total number of **16** HGV movements for the main components and a small number of normal construction vehicle movements.

4. Overall Dimensions and Weight of Components

Turbine 135m TH, 77m HH					
Building Block Section	Quantity	Length (m)	Width (m)	Height (m)	Maximum Weight (kg)
Tower Foundation Section	1	4.67 - 4.3	4.67 - 4.3	1.8	200,000
Tower Section 1	1	12.14	4.30	4.30	650,000
Tower Section 2	1	21.825	4.40-3.266	4.40-3.266	630,000
Tower Section 3	1	20,945	4.30-3.266	4.30-3.266	590,000
Tower Section 4	1	18.588	3.266-2.276	3.266-2.276	350,000
Nacelle	1	8.11	4.31	3.92	373,000
Generator Group Variant 1	1	5.5	5.2	3.4	100,000
Generator Group Variant 2	1	4	4	3	32,000
	1	5.5	5.2	3	68,000
Blades (each)	3	56.62	4.324	3.117	1,865,000
Rotor Unit	3	4.72	5.34	4.0	45,000
	Among the converter, other small parts, components, and tools will have to be packaged and transported to the site. These will likely all be loaded onto one HGV.				

## 5. Construction Traffic Main Routes and Management

CE is proposing the following route for the delivery of all the turbine components. The turbine components and ancillary construction plant will be transported by road using the strategic and local highway network. Whilst the exact details of the route along the strategic highway network have not been finalised, the route into Cornwall will likely be along the A30. All components and materials will be delivered via the route shown below.

### **Suggested route from the nearest motorway to the site:**

- The wind turbine will likely be delivered from the A30 westbound, the route will take the first exit at Victoria Interchange and go straight at the roundabout to join the B3274.
- The route will continue on this road for 2.25km then turn left towards Roche and continue onto B3274. Continue south through Roche, cross straight over two roundabouts heading south, exiting Roche village.
- It then bears right at the signpost for Nanpean/Whitemoor then immediately bears the left signposted for Greensplat.
- From here, the route will continue on the unclassified road past the Imerys quarry entrances and then bears right to continue south towards Greensplat.
- The route follows the road to the proposed site entrance which requires a right turn from the road onto the development site.
- The proposed track will continue from this point to the turbine location. See Figure 2.

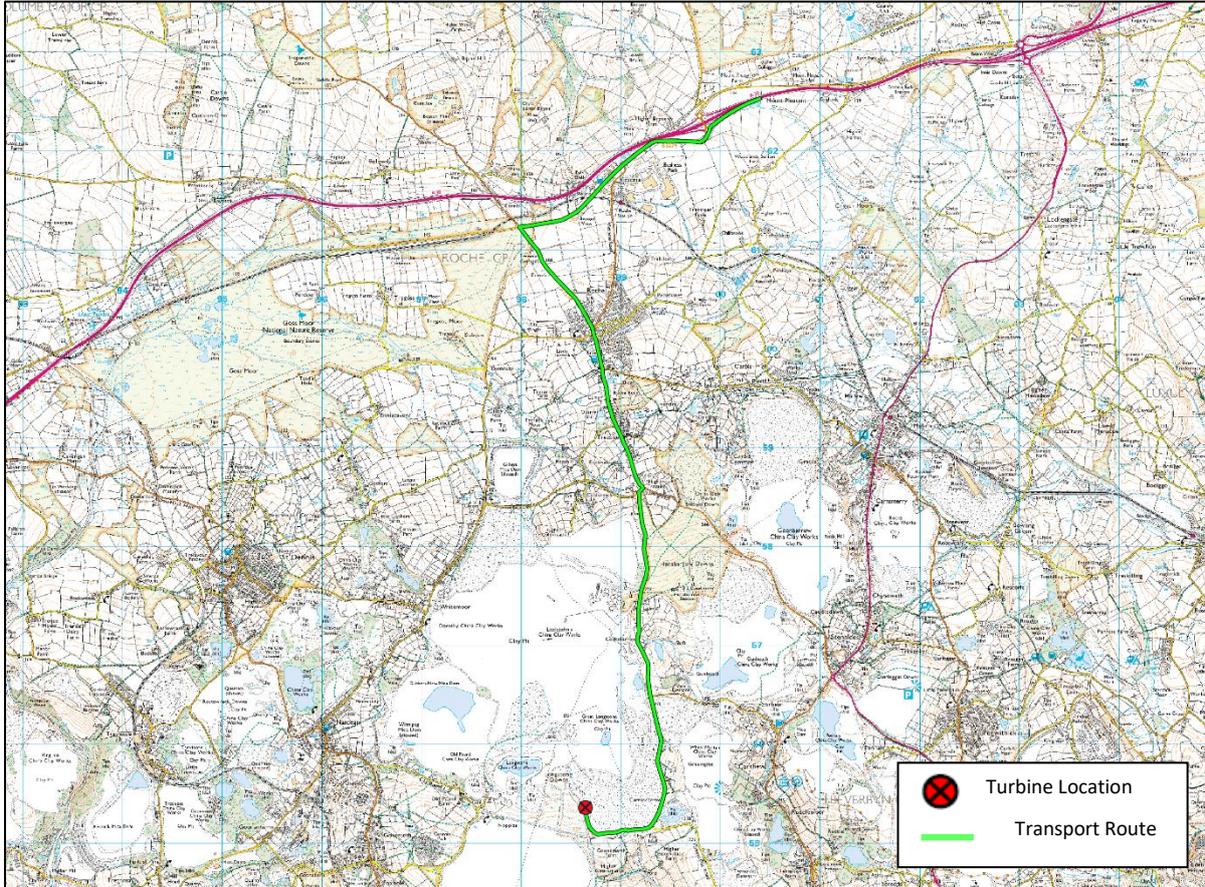


Figure 2 Proposed Route

Some points along the main highways may require the use of the full width of the carriageway and therefore a police escort will be required. Multiple street furnishings along the route will need to be removed, in conjunction with suspended parking in the village of Roche and heavy goods traffic management in the proximity of the Imerys quarries near the site - see **Appendix A** of this report for more details.

It will be the responsibility of the haulage contractor to confirm with relevant authorities should at any point on the driven route private pilot cars or police escorts are required to assist with traffic management. Movement times will also be discussed, agreed and approved with all appropriate bodies.

From the private Imerys-owned road, access to the turbine location will be via a newly constructed access track. Warning signs will be put in place at appropriate distances from the access junction in both directions to alert drivers to construction traffic.

A wheel wash facility will be put in place at the entrance to minimise materials being carried onto the road. Daily road inspections will be undertaken to ensure that no mud or

material will enter the road; sweeping will be carried out when needed. All drivers will be required to check their vehicle is adequately free of mud or soil prior to departing the site.

### **6. Working Hours**

The proposed working hours for the construction phase of the development are 0730 -1800 hours. Although out-of-hours (1800 - 0730) working will not normally be required, it is conceivable that certain works may be undertaken during this period.

### **7. Construction Compound**

As a single turbine construction site, the compound will be located in the same area as the crane pad.

### **8. Notifications to local authorities and police forces on the transport route**

The appointed haulage contractor for each building block will be requested by CE to notify the minimum required notice period in line with the regulations for construction and use and the Road Vehicles (Authorisation of Special Types) (General) Order 2003 for indivisible loads.

Form VR1 Permits will be obtained by the turbine manufacturer where required prior to delivery and construction.

### **9. Reinstatement of Land**

After construction, all temporary areas will be reinstated. The crane pad and access track will remain; with hydroseeding/habitat restoration applied where necessary.

### **10. Conclusion**

The potential impact of the HGV traffic associated with the proposed wind turbine construction should, due to the scale and duration, have minimal impact and cause minimal disruption to other road users in the local area. All removal of traffic furniture will be temporary and fully reinstated following the installation.

For the installation of this turbine, there will be a total number of 16 HGV movements for the main components and a small number of normal construction vehicle movements.

It is recognised that the delivery of these building blocks will require careful thought and planning. Additionally, due to the nature of the size of the components for each building

block, a pre-determined route and time should be arranged so that minimal disruption is caused.