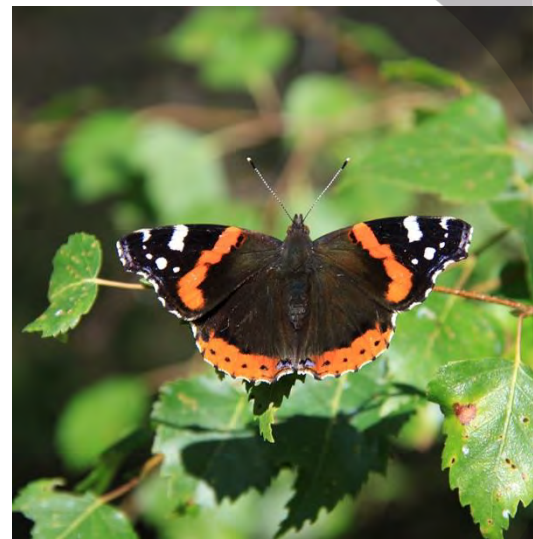




Pennant Walters (FoelT) Ltd

Foel Trawsnant Wind Farm

Revised Construction Traffic Management Plan



Report for

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Document revisions

No.	Details	Date
1	Final	November 2018
2	Revised	May 2022

Contents

1.	Introduction	5
1.1	Role of this document	5
1.2	Structure of the document	5
2.	Development proposals, access arrangements and construction traffic routes	7
2.1	Local context	7
2.2	Summary of the development proposal	7
2.3	Traffic impact summary	8
2.4	Proposed access arrangement	8
2.5	Construction traffic routes	9
	Normal load routes	9
	Abnormal load routes	10
3.	Policies, procedures and due process	12
3.1	Normal loads	12
3.2	Abnormal loads	12
	Department for Transport	12
	South Wales Trunk Road Agency	13
	Neath Port Talbot County Borough Council	14
	Bridgend County Borough Council	15
	South Wales Police	16
4.	Transport management plan requirements	17
4.1	Site access	17
4.2	Adjustment to existing highway layout for abnormal delivery	17
	Enercon Route Survey Report Summary	19
4.3	Vehicle escorts	21
4.4	Dilapidation surveys	21
4.5	Scheduling and timing of movements	21
	Schedule	21
	Timing of movements	24
4.6	Route timing and enforcement	24
4.7	Route signage	24
4.8	Public information	25
4.9	Wheel cleaning/street cleaning	25
4.10	Vehicle livery/identification	25
4.11	Construction management plan	25

5. Summary

26

Table 4.1	Two-way construction trips per month	22
Table 4.2	Two-way construction trips per day	23
Table 4.3	Abnormal loads	23
Table 5.1	Measures addressed/acknowledged as part of this CTMP and further actions required	26

Figure 2.1	Site Location Plan	After Page 11
Figure 2.2	Construction Material Supply Routes	After Page 11

Appendix A	Site access design
Appendix B	Swept path analysis
Appendix C	Enercon Route Survey Report

1. Introduction

1.1 Role of this document

This Construction Traffic Management Plan (CTMP) sets out the framework for managing the movement of construction traffic associated with the Foel Trawsnant Wind Farm amended scheme to minimise the effects on the local highway network during the construction period. At this stage in the development of the construction programme, details of the appointed site contractor, the general construction materials suppliers or the origin of the wind turbine components are not currently available. Assumptions have been made with regard to the route to the site, this has been based on professional judgement and an existing route survey report produced by Ritchie Services. The route to site will be confirmed once the aforementioned service providers have been appointed. As a result this CTMP is a working document which sets out the principles by which traffic travelling to the site should be managed, but it will require final confirmation of its suitability following the appointment of the Principal Contractor and relevant suppliers.

Parts of the construction traffic route include the Strategic Road Network (SRN) in Wales. Within Wales the M4 is the responsibility of South Wales Trunk Road Agent (SWTRA). Connecting the SRN and the site are several local network roads which will be used; the A4063 and parts of the B4282 are the responsibility of Bridgend County Borough Council (BCBC) and the A4107 and parts of the B4282 are the responsibility of Neath Port Talbot County Borough Council (NPTCBC).

During the previous 2014 submission NPTCBC, BCBC and SWTRA were consulted to ensure the contents of this CTMP satisfactorily addressed all concerns and procedures required, and as a result of these discussions, the CTMP deals with routing, schedule and timing of movements, details of escorts for abnormal loads, temporary warning signage, escort details and proposed mitigation measures.

At this stage, consultation has not been undertaken with the South Wales Police Authority (SWPA). As per the licensing requirements for the transfer of abnormal loads the SWPA will be contacted to discuss the proposed transfer route once a haulier and wind turbine supplier have been identified.

Since the 2018 submission of the CTMP document, the Applicants (Pennant Walters (FoelT) Ltd) has revisited the approved development and is seeking approval to amend the dimensions of the Wind Turbine Generators (WTGs) to be installed at the site, increasing the maximum rotor diameter of turbines from 90m to 133m (whilst retaining height to tip of 145m). As a worst-case scenario, it is assumed that 67m long blades would now be required to be delivered to the site by abnormal load. To account for the potential additional impacts of delivering the larger 67m blades to the site, this revised CTMP includes updated swept path assessments at various pinch points on the route to site and provides details of a revised abnormal load route and delivery methodology which can be achieved using a blade lifter vehicle arrangement. Details of the updated route are provided in **Section 2.5** and the updated swept path assessments are detailed in **Section 4.2**.

All contractors will be informed of this document and shall be required to conform to the restrictions, mitigations and obligations contained herein.

1.2 Structure of the document

The CTMP is set out as follows:

- Section 2 summarises the Proposed Development, the number of anticipated vehicles trips, proposed access into the site and construction traffic routes;

- Section 3 sets out the policies and procedures of the relevant transport authorities and emergency services which the CTMP need to follow;
- Section 4 sets out the CTMP requirements; and
- Section 5 provides a summary.

2. Development proposals, access arrangements and construction traffic routes

2.1 Local context

This revised CTMP is being submitted alongside an Environmental Statement (ES) addendum and Section 73 (S73) application for the Foel Trawsnant Wind Farm amended scheme, located approximately 3.2km northwest of Maesteg within the administrative boundary of NPTCBC. Land immediately surrounding the site is rural agricultural land in an upland environment. The residential settlement of Bryn is located less than 1.6km to the southwest of the Proposed Development.

The local highway network within the vicinity of the site comprises the following roads:

- B4282 – located to the south of the site and routing east to west, it connects the A4063 to the A4107. The proposed site access is formed with this road;
- A4063 – located to the east of the site and routing north to south, this is the main valley road to the east of the site and links the M4 at junction 40 to the A4107;
- A4107 – located to the north and west of the site and routes roughly north to south, this road is the main valley road to the north and west and links the M4 at junction 37 to the A4063; and
- M4 – located well to the south of the site and routes east to west. This is the main strategic road in South Wales and links the area to the rest of the motorway network.

The site is predominantly agricultural land with hedgerows on some flank boundaries and some isolated trees. A site location plan is provided as **Figure 2.1**.

2.2 Summary of the development proposal

The Foel Trawsnant Wind Farm amended scheme ('the Proposed Development') proposes the construction of eight wind turbines and associated infrastructure and civil works required to facilitate the development.

The construction period for the wind farm will last approximately 12 months (possibly extending up to 24 months if poor weather conditions are experienced). The construction process will consist of the following principal activities:

- Creation of the site entrance off the B4282;
- Up-grading of existing tracks and construction of new access tracks and passing places inter-linking the turbine locations and sub-station; this will require import of suitable roadstone;
- Remedial works to public highway to facilitate delivery of turbines as necessary;
- Formation of site compound including hard standing and temporary site office facilities;
- Construction of crane hardstanding areas to facilitate erection of turbines;
- Construction of turbine foundations and transformer bases where required by the selected turbine;
- Construction of site substation;
- Excavation of trenches and cable laying adjacent to site roads;

- Connection of on-site distribution and signal cables;
- Delivery and erection of wind turbines;
- Commissioning of site equipment; and
- Site restoration.

Many of these operations will be carried out concurrently, although predominantly in the order identified.

2.3 Traffic impact summary

It is estimated that the construction period for the Proposed Development would last approximately 12 months, dependant on weather conditions.

The peak maximum construction traffic for the wind farm is predicted to occur in month 7 of the construction programme due to concrete deliveries. During this month on three non-consecutive days 164 two-way HGV trips are predicted to be generated on each working day (82 vehicles into the site and 82 out). It is assumed that deliveries of other materials will not take place on these three days when concrete is poured. This equates to around 14 additional trips per hour (based on a 12 hour working day).

The peak general construction traffic movements (excluding concrete deliveries) are predicted to occur in month 4 of the construction programme; a total of 50 two-way vehicle trips (25 HGV in and 25 HGV out) will be made per day. This is less of an impact than the concrete pour days but would be over a longer time frame.

Further information detailing the methodology utilised to derive traffic generation is provided within **Chapter 13, Section 13.10** of the 2019 ES.

It should be noted that the daily HGV generations only provide an indication of the number of HGV trips resulting from the construction phase of the development. Further scheduling and programming information will be available once a Principal Contractor is appointed. Any changes to the traffic flow figures presented within this CTMP will be passed on to the relevant local highways authorities and appropriate action discussed.

2.4 Proposed access arrangement

The proposed access point for the development is from the B4282 adjacent to an existing forestry access. The new access will be built to standard based on the swept path of the abnormal load vehicle used to transfer the turbine component parts to site. An asphalt surfaced bell mouth is proposed, which will act as a transition between the existing asphalt road (B4282) and the site access track.

The areas adjacent to the bell-mouth will be excavated and replaced with 'Grasscrete' (or similar) which will act as a transition between the existing asphalt road and the site access. This will provide the solid track arrangement for the abnormal load vehicles whilst providing the image of a highway verge. This is to allow manoeuvrability at the entry point and to create appropriate lengths of visibility.

Temporary steel mesh panel fencing will be erected at the site entry point and maintained during construction and following completion of construction the temporary fencing will be removed and the existing hedgerow extended towards the post-construction reduced bellmouth junction, with the site gate being located a short way down the track. The proposed layout of the site access is displayed in **Appendix A**.

The access will be provided with a visibility splay of 4.5m by 215m which adheres to the visibility requirements set out in the Department for Transport (DfT) Design Manual for Roads and Bridges (DRMB) guidelines, TD42/95 "Geometric Design of Major/Minor Priority Junctions".

Any works within the public highway will be subject to a Section 278 Agreement under the Highways Act 1980, which will be in place prior to the commencement of any works. The officer responsible for dealing with Section 278 agreements will be contacted at the appropriate time.

2.5 Construction traffic routes

Normal load routes

There are proposed to be two routes which “normal” vehicles (no abnormal load vehicles) can access the site from the strategic road network.

For route one, the vehicles would travel to junction 36 of the M4 and leave heading northbound onto the A4063. The route continues north through Llangynwyd and into Maesteg. This section of the route is 11.3km in length. In Maesteg the route would pass through the town centre and turn left onto the B4282 and arrive at the site entrance at the top of a steep hill.

For route two the vehicles would route to junction 40 of the M4 and north onto the A4107. This route heads north and uphill to the junction with the B4282 after 3.2km. This route then heads east on the B4282 through the small settlement of Bryn and arrives at the site access after approximately 5.6km.

At this stage in the development process, a contractor has yet to be appointed; however, from experience contractors typically source plant equipment, concrete and aggregate from local suppliers. The latter two construction materials generate the most HGV traffic and therefore an assessment has been undertaken which considers the likely routing for the nearest concrete and aggregate suppliers.

Using the search function on the <http://www.qsrmc.co.uk/index2.php> webpage, it appears that there are CEMEX concrete plants local to the site of the proposed development at Brackla Estate, Coity, and Bridgend. Another concrete plant is located at Kings Dock, Swansea. It has therefore been assumed that all concrete deliveries will travel via the A4063 (Maesteg). It is also considered that other general construction materials will route along the A4107 and B4282 (Bryn) but traffic movements associated with these will be minimal.

With regard to aggregate suppliers, a desktop study was undertaken to identify potential local quarry sites. The nearest four quarries and their approximate distance to the site are:

- Green Circle Quarry (located east of Bridgend) – 23.5km from the site;
- Tarmac – Cornelly Quarry (South of Pyle) – 23.3km from the site;
- Tarmac - (South of Bridgend) – 21.0km from the site; and
- Minimix - Eweny Quarry (South of Bridgend) 21.9km from site.

The most direct access route for these suppliers is travelling to the site via the A4063 and B4282.

For employee travel, it is anticipated that employees will reside locally and thus access the site from the surrounding area. The following sets out a list of the regional centres, the approximate distance to site and the principal highways used for access:

- Maesteg – 1.8km to the site via the B4282;
- Tondy – 10.8km to the site via the A4063 and B4282;
- Port Talbot – 12.1km to the site via the A4107 and B4282;
- Sarn – 13.5km to the site via the A4063 and B4282;
- Bridgend – 15.8km to the site via the A4063 and B4282;

- Neath – 17.5km to the site via the A474, M4, A4107 and B4282; and
- Swansea – 26.1km to the site via the M4, A4107 and B4282.

The routes identified have been derived using Google Earth Pro, which provides an optimum route taking account of both distance and time.

The proposed routes to the site from the origins identified utilise a combination of the strategic and principal highway network which has been designed specifically to accommodate heavy goods vehicles and large volumes of traffic. It is anticipated that the employees will travel to site in either a private car or LGV i.e. a van, and whilst not all employees will utilise the routes identified, the number of trips generated as a result of employee travel is not considered to be detrimental to local highway safety or capacity.

A plan detailing the preferred construction material supply routes has been included within **Figure 2.2**.

Abnormal load routes

As discussed in **Section 1.1**, the proposed route for abnormal loads has been amended from that reported in the 2018 CTMP to reflect the proposed change to rotor diameters for the wind turbines.

The majority of the turbine components will be classified as abnormal loads and will require specialist transport vehicles and management. These vehicles will constitute abnormal loads on the delivery phase of the journey only, since extendible trailers are retracted to the size of a standard articulated vehicle (16.5m) for the return journey.

The wind turbine component supplier is yet to be identified and the final appointment will be based on a competitive tender. It is however common practice for components to be delivered to site via the nearest port to reduce the overall impact of the transfer on the highway network. In this instance the likely ports are Port Talbot or Swansea.

The route distance between the docks at either port and the site is between 35km and 50km and uses local port roads before joining the M4. The vehicles will then route to junction 36 of the M4 and leave the motorway heading north bound onto the A4063.

The route continues north through Tondy, Coytrahen and Llangwynnydd on the A4063 into Maesteg town centre where abnormal load vehicles will turn left onto the B4282 Neath Road and arrive at the site entrance at the top of a hill.

Due to the nature of the route and the constraints which exist through Maesteg town centre, two vehicle arrangements are proposed to be used to deliver blade components:

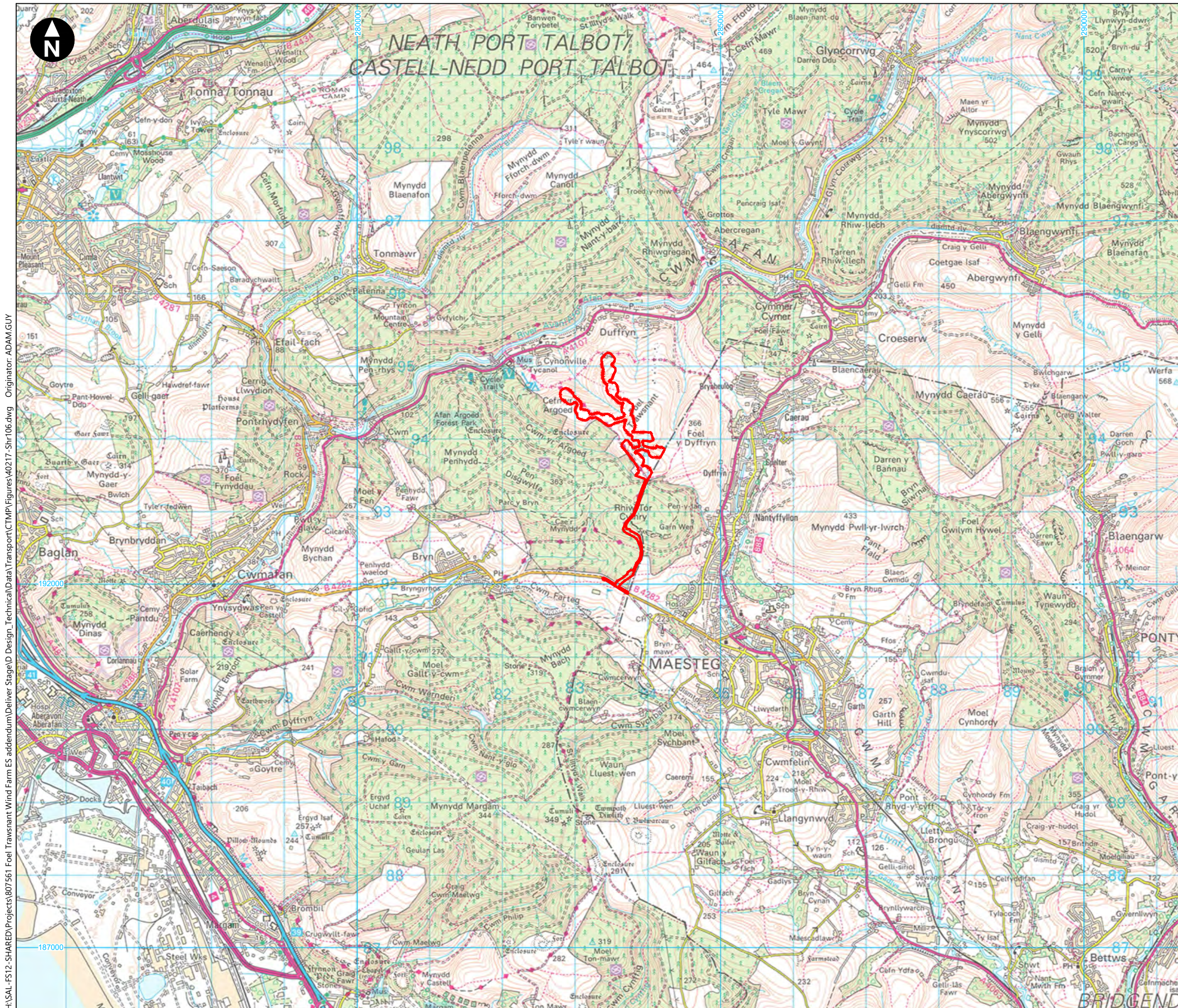
- a standard extendable trailer arrangement with manual rear steering override; and
- a blade lifter arrangement which will carry the blade at an elevated angle through the constraints of Maesteg town centre.

The blade components will be carried on a standard extendable trailer configuration between the port and a layby on the A4063 west of Betws. At this layby the blade component will be transhipped from the extendable trailer configuration to the blade lifter arrangement. The blade lifter arrangement is required for transportation through the more constrained section of route through Maesteg, this section of the route using the blade lifter has been assessed in a route survey report developed by Ritchie Services on behalf of Enercon. Further details of the route assessment using a blade lifter arrangement through Maesteg provided in the route survey report are summarised in **Section 4.2**.

A preliminary assessment of the delivery routes has been undertaken to understand if there are any improvements to the highway which will need to be made to accommodate the delivery of abnormal loads. The assessment identified improvements were required at a number of junctions; the individual junctions are

discussed in more detail in **Section 4.2**. All relevant permits for abnormal load transportation, including DfT Special Types General Order (STGO) will be arranged prior to commencement of deliveries.

A Section 278 Agreement of the Highways Act 1980 will be secured between the relevant local highways authorities and the developer to cover the associated highway works needed to facilitate the delivery of the abnormal loads. The appropriate officer at each highways authority will be contacted in due course.



Key

Planning boundary

0 km 3 km

Scale 1:50,000 @ A3

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Pennant Walters (FoelT) Ltd
Foel Trawnant Wind Farm S73 Application
Construction Traffic Management Plan

Figure 2.1
Site location plan

March 2022

