

5. SWEPT PATH ANALYSIS

The plan view drawings of the turns were surveyed 20.01.2021 using CAD Mapping, Photogrammetry reports, Google Mapping and a physical inspection of the route.

A physical inspection of the routing was also undertaken to confirm the details noted on the Swept path.

During the survey, street furniture and possible obstructions were noted.

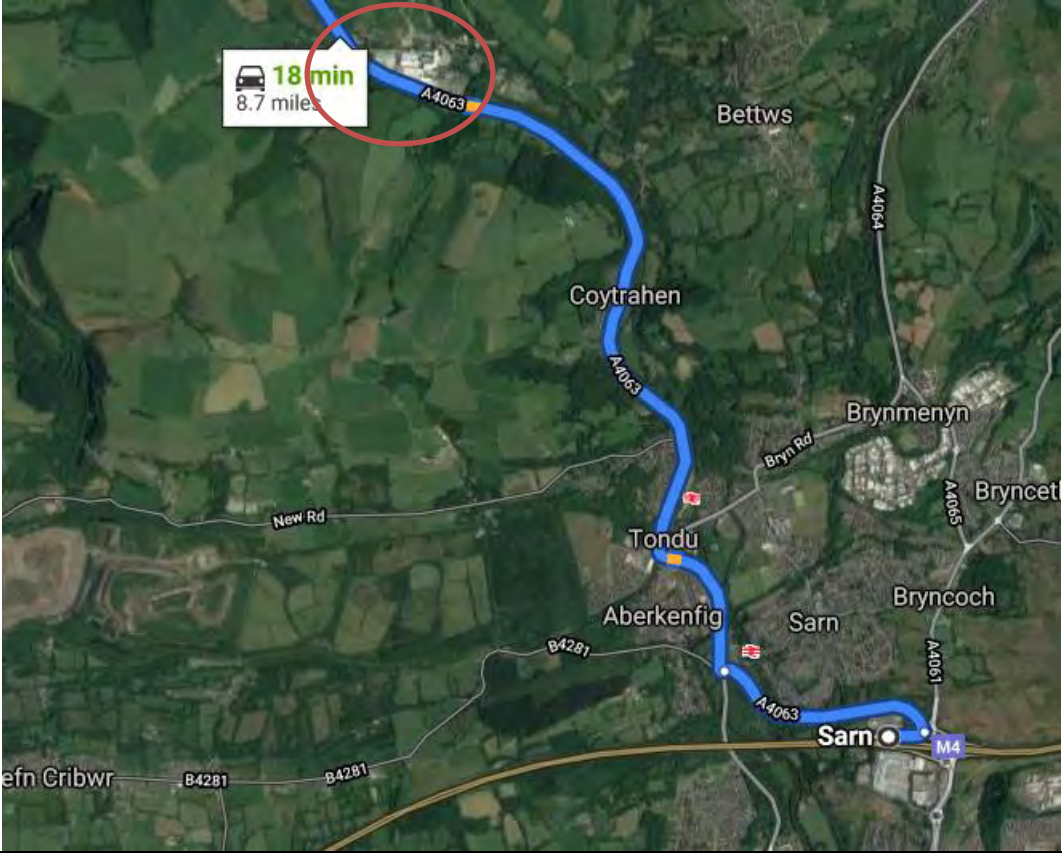
The Swept Path Analysis shows the path of the trailer (Shown via the red and Green lines) and the over sail of the load (shown by the pink line).

Details of any SPA can be found in Appendix 1 of this report.

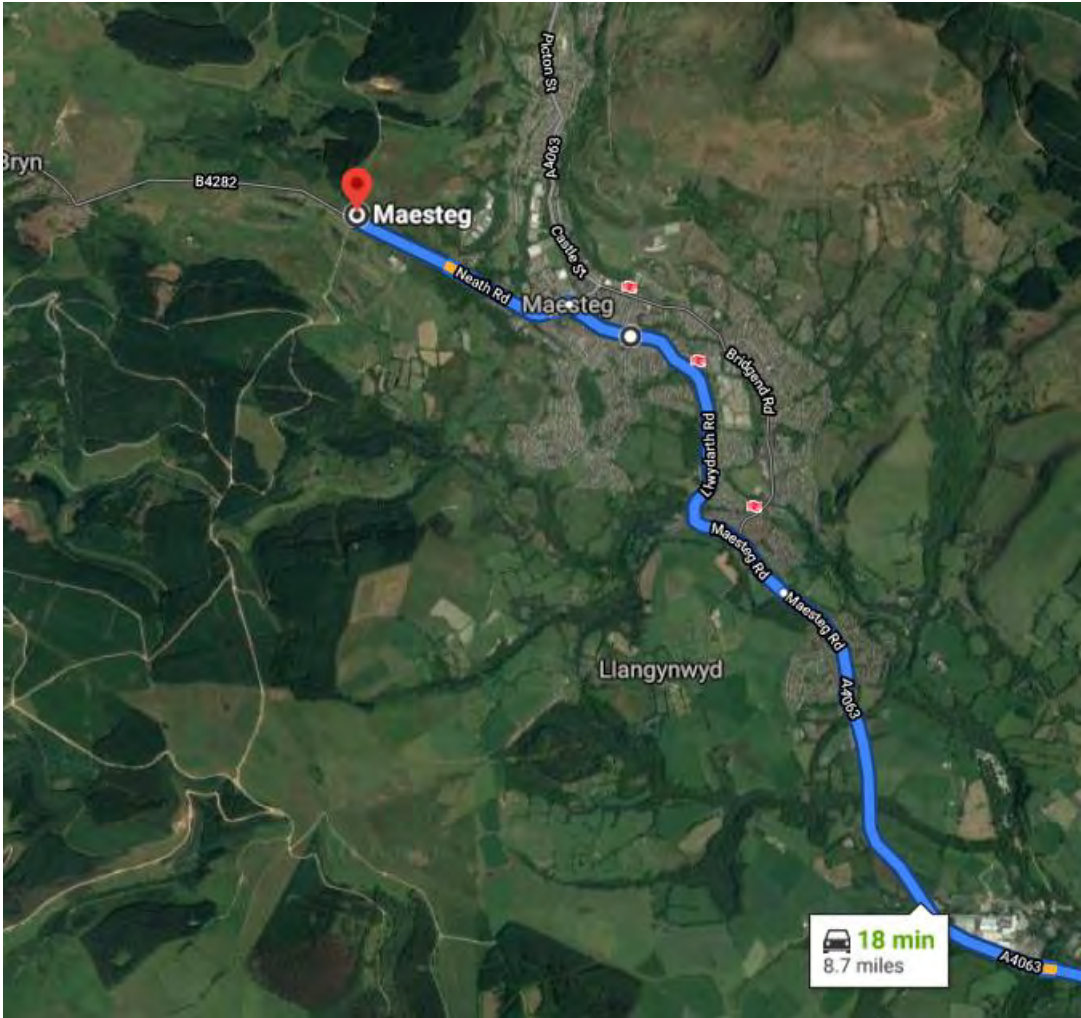
6. ROUTE SURVEY KEY

Yellow arrow:		Indication of forward driving.
Red arrow:		Indication of reverse driving.
Red box:		Indication of street furniture sign etc. that must be removed.
Red dotted box:		Removable signs, street furniture etc.
Blue area:		Indication of area that must be made suitable to drive on.
Green box/line:		Indication of tree cutting/trimming.

7. ROUTE SURVEY AND STREET FURNITURE –

Point Ref	Photo
1.	 The route between the M4 and the located noted on the map above and shown in Fig.2 Is passable with Conventional trailers. There are a number of road modifications to make, including levelling 1 roundabout at Aberkenfig. From the point noted above, Blade lifter would be required to negotiate the final stages to site.

Point Ref	Photo
2.	A4063, Bridgend CF32 0EG, UK ☉ 169°S (T) ● 51.568472, -3.609092 ±3 m ▲ 124 m  Lay by for changeover to adapter, 200mtrs long should get 3 blades in Survey Foel windfarm Maesteg 20 Jan 2021, 10:19:04
Layby is 200m long and would provide an ideal change of point to move to Blade lifter.	

Point Ref	Photo
3.	 Final stage of routing would be required on Blade lifter from the change over point noted above. It is not possible to use the diversion noted in the previous report with the E115 blades due to the increased height. We have looked at alternative transport options for the blades, including clamp and dolly system to bring the height down, however this provides some additional challenges along the routing.

Point Ref	Photo
4.	 2 Commercial St, Maesteg CF34 9DF, UK 173°S (T) 51.608531, -3.660218 ±5 m ▲ 178 m Left turn for B4282 has no overhead obstructions Survey Foel windfarm Maesteg 20 Jan 2021, 11:07:59
There are no overhead structures to be concerned with at the left turn for B4282 in Maesteg.	

Point Ref	Photo
5.	B4282, Maesteg CF34 9PR, UK ⦿ 141°SE (T) ● 51.613472, -3.680595 ±2 m ▲ 291 m  Site entrance to the right, will need widening Survey Foel windfarm Maesteg 20 Jan 2021, 11:18:34
Site entrance will require widening for all component types.	

8. CONCLUSION

Based on our review of the routing between the M4, using an eastern approach on to Junction 36 and the site is suitable, based on the components prescribed in Section 2.

Delivery of the components would be possible with the methodology prescribed in this report.

This report is based on use of Nooteboom Superwing Carriers or Similar and Goldhofer FTV500 Blade lifter with a blade elevated to 45 Degrees.

This routing is suitable for components up to 4.95m high when loaded.

Early discussion should be had with the various stakeholders to confirm acceptance of the street furniture removal on the major trunk roads.

The Survey is subject to the transport concepts being accepted by the authorities.

A full survey, including Swept Path analysis would be recommended as a next step.

We would recommend that a trial run is completed prior to the transport of main components.

9. DISCLAIMER

This survey has been based on the component sizes listed in Section 1 of this report.

This survey is valid only on the day it is completed, Highways agencies and local authorities may add or remove street furniture without notification.

We have considered, where possible, the most likely transport arrangement for each load, based on what is typically available amongst hauliers within the local market.

Where specialist equipment is required, this will be specified.

Trees and foliage grow naturally and therefore should be checked prior to moving any components to ensure that a sufficient transport window is in place.

The transport requirements of the Manufacturer should be considered alongside this report.

10. TERMS AND DEFINITIONS

Definition	Description
Access Route	The route for the transportation of the WTGs from the point of entry in the country, production location or port of import to the site
Dummy Permit	A transport permit being required to prove that the passage along the assessed route will be approved by the authorities
Project Transport Contract	A contract entered by Transport Contractor and the employer with respect to a specific project usually by application of the sample contract for transport and other logistical services
Relevant Route Point	The point on the proposed access route from which the Site Specific Requirements applies
Road Modifications	The specific amendments required along the access route in order to allow clear passage of transports to site
Site Entrance	The location where the transports leave public roads and enter the site area. Depending on the project and/or the access route, it might be one or several site entrances to be considered. Often the Relevant Route Point and the Site Entrance will be identical.
Site Specific Requirements	A document describing the requirements for the infrastructure on wind turbine construction sites
Transport Survey	The inspection report of the access route to the site, to be included as a schedule within the TSA.
Trial run	A transport simulating the dimensions of the longest, highest, widest and heaviest load for a specific transport to prove the free access along the access route
Turbine Supply Agreement	A contract entered by the Employer and its client with respect to a specific project for the delivery, installation and commissioning of wind turbines
Transport Window	The free air space required around a component to accommodate safe transport.

11. PROJECT DRAWINGS

Drawing Number	Sheets	Description

12. IMAGE AND DATA RIGHTS

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13. APPENDICES

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