

Pell Frischmann

Y Bryn Wind Farm

Appendix 11.2 AIL Transport Management Plan

March 2023

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1 Introduction

1.1 Purpose of the Report

Pell Frischmann (PF) has been commissioned by Y Bryn Wind Farm Limited (the Applicant), to undertake a Transport Management Plan (TMP) for the proposed Y Bryn Wind Farm, located on Mynydd Margam and Mynydd Penhydd, near Port Talbot.

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The TMP identifies the key points, issues and management proposals associated with the route that may require remedial works to accommodate the predicted loads. The designs of these remedial works, however, are beyond the agreed scope of works. It is the responsibility of the turbine supplier to ensure that the access route from the Port of Entry (POE) to the site is fit for purpose and that appropriate consideration for all road users has been made in accordance with the relevant health and safety legislation and ruling transport requirements.

Where references are made to work by third parties, Pell Frischmann do not accept any liabilities for these items or issues based upon them.

Whilst this report primarily features the requirements of those loads classed as abnormal under current legislation, it also contains elements relevant for the transport of other non-abnormal turbine components and materials.

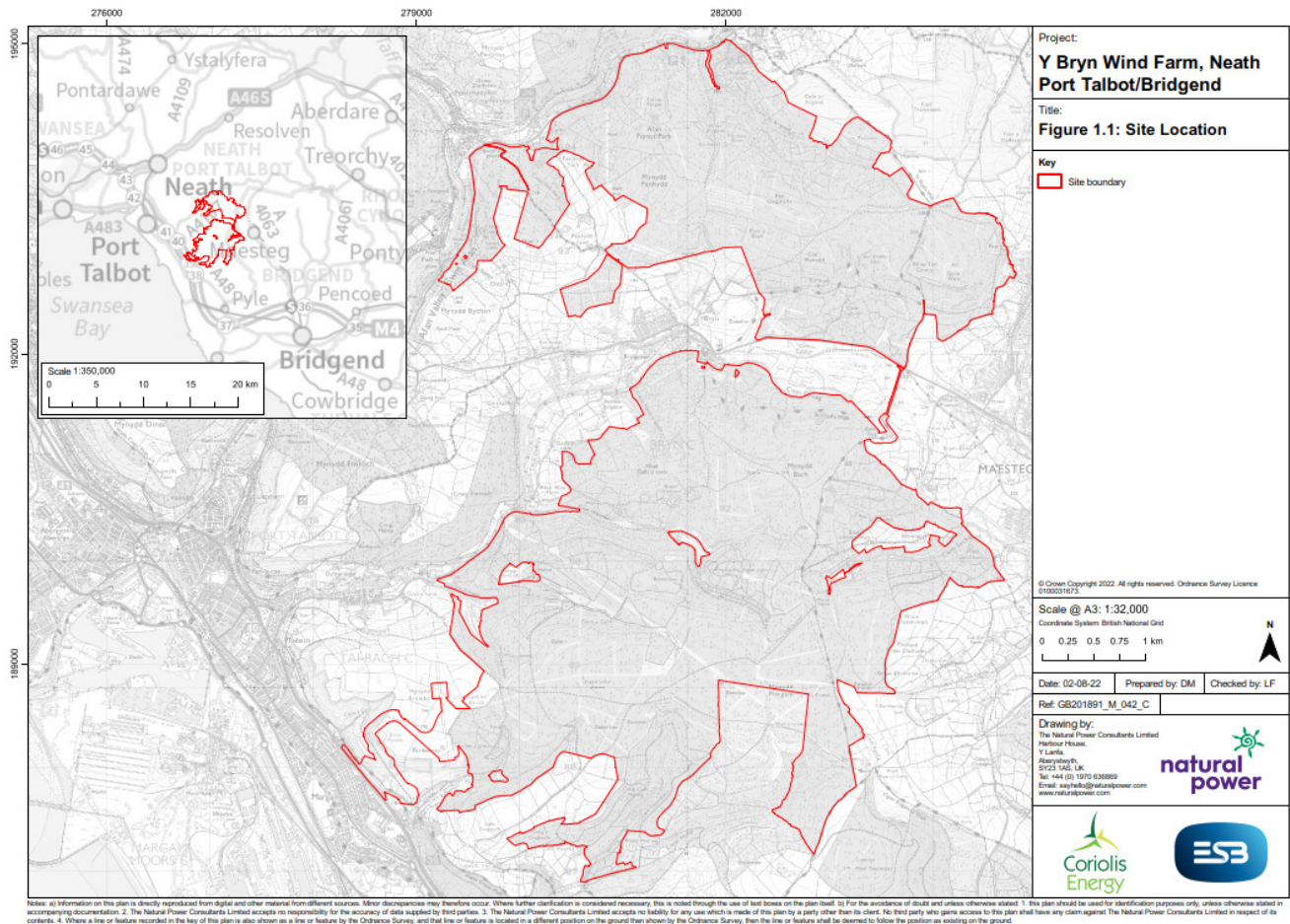
This TMP is a draft document and if the development is approved, will be used in the development of the operational TMP and the TMP issued to Abnormal Indivisible Load (AIL) and non-AIL contractors. As such, it is important that continuity is provided in this approach to future proof road safety and to discharge Construction Design and Management (CDM) Regulation requirements to the client team and those authorities that influence the design of traffic management measures.

2 Site Background

2.1 Site Location

The location of the proposed wind farm site is illustrated in Figure 1. The site is located to the east of Port Talbot and consists of two main parcels of land within the development area.

Figure 1: Site Location



In summary, the proposed Development will comprise:

- Up to 18 turbines with a maximum tip height of up to 250m;
- Transformers housed either within or adjacent to turbines;
- Onsite access tracks plus underground cable runs alongside a site sub-station building;
- A battery energy storage facility;
- One or more permanent anemometry masts (at the hub height of the turbines); and
- Temporary works including construction compounds and borrow pit search areas.

A complete description of the proposed Development for the purposes of the EIA regulations is provided in the Environmental Statement (ES).

2.2 Candidate Turbines

The Applicant has indicated that they wish to consider the worst case components from a variety of turbines that fit within their proposed height and rotor envelope. For the purpose of the route assessment, a Siemens SG170 at a tip height of 250m has been used for this preliminary assessment as this is the largest available turbine that fits within the envelope specified by the developer at this time. The details of the components have been provided by Siemens Gamesa and are detailed in Table 1 below.

Table 1: Turbine Size Summary

Component	Length (m)	Width (m)	Height / Min Diameter (m)	Weight (t)
Blade	83.330	4.500	3.428	29.000
Tower Section 1	27.770	4.300	4.289	84.808
Tower Section 2	36.000	4.289	3.503	73.911
Nacelle	15.162	3.460	3.643	73.355
Drive Train	7.446	3.130	3.218	84.679
Hub	5.160	4.700	4.245	58.625

A Route Survey Report detailing the turbine components and the proposed access route is provided in Appendix A to this report. Full vehicle and load details will be provided once the finalised turbine has been selected.

The selection of the final turbine model and specification will be subject to a commercial procurement process following consent of the application. The actual dimensions may therefore vary slightly from those assumed as part of this assessment.

The Transport Management Plan would be finalised once the turbine selection process had been completed. To ensure that this is undertaken, a planning condition requiring the production of a TMP will be required and all works noted in it, approved by the various road authorities along the route.

This report therefore should be treated as a draft only. The full technical details will be provided in the finalised plan, produced post consent.

To provide a robust assessment scenario based upon the known issues along the access route, it has been assumed that all blades would be carried on a Super Wing Carrier to reduce the need for mitigation in constrained sections of the route.

Towers would be carried in a 4+7 clamp adaptor style trailer, whereas loads such as the hub, nacelle housing and top towers would be carried on a six axle step frame trailer.

Examples of the vehicles and trailers are shown in Figures 2 and 3.

All the trailers used in the transport process are specifically designed for the transport of components or feature custom modifications to suit loads. All feature rear wheel steering and the nacelle and tower load adaptor trailers feature hydraulic lift capabilities to adjust ground clearances.

When not transporting components, the trailers are collapsed so that they do not exceed normal HGV dimensions.

The trailers are built to a high standard and the tractor units are designed for heavy haulage. Regular checks are undertaken on the vehicles on a daily basis as outlined in later sections of the report. As such, the mechanical state of vehicles is kept at a very high level and breakdowns or malfunctions are very rare.

Figure 2: Super Wing Carrier with Loaded Turbine Blade



Figure 3: Typical Tower Transport Trailer



2.3 Legislative Background

The UK Government describes an Abnormal Indivisible Load (AIL) as “any load that cannot be broken down into smaller loads without undue expense or risk of damage”. AIL movements remain a reserved matter for the UK parliament.

There are four main pieces of legislation that cover AIL movements as defined by the WG.

- The Road Vehicles (Construction & Use) Regulation 1986. This covers all aspects of the vehicles setup from the weights and dimensions through to the braking system and environmental standards.
- The Road Vehicles (Authorised Weight) Regulations 1998. This regulation sets the limited maximum weight of the vehicle and axle loading of different vehicle categories.
- The Road Vehicles (Authorisation of Special Types) (General) Order 2003. The STGO is for vehicles not covered by either of the above Regulations and covers wind turbine component delivery vehicles which are categorised as N3 for the tractor units and O4 for the specifically designed trailers. It states that the Police, the relevant highway and bridge authorities or the Secretary of State may need to be notified of vehicle movement, dependent on the size of the load.
Notifications can be made online through the 'Highway Agency's Electronic Service Delivery for Abnormal Loads (ESDAL) System' or in paper form using the BE16 form for Special Orders.
- The Road Vehicles Lighting Regulation 1989 (Authorisation of Special Types) (General) Order 2003. This regulation defines whether front, side and rear lamps and reflectors are mandatory and which ones are permitted and which are not permitted.

Applications for a 'Vehicle Special Order' (VSO) should be made to the Vehicle Certification Agency (VCA) and it is recommended that applications are applied for at least 8 weeks prior to planned vehicle movements.

To support the movement of abnormal loads the Police may be required to stop other traffic. In order to bolster existing powers, a Temporary Traffic Regulation Order (TTRO) will be required to cover the delivery period to allow the Police to stop and redirect where necessary.

2.4 General Construction Traffic

An estimate of the traffic associated with the construction phase of the development has been included in the Transport Chapter of the ES.

Estimates have been made of the likely number and type of heavy vehicle movements including abnormal loads requiring access to the site to deliver plant, equipment and materials for the various activities and stages of construction (two-wheel vehicle access is not included).

Heavy goods vehicles (HGVs) are required during the construction process for:

- Mobilisation – the initial delivery of plant and equipment to the site;
- Daily service and deliveries – for example the delivery of concrete;
- Delivery of components; and
- Demobilisation (the reverse of mobilisation).

The largest numbers of movements to and from site would coincide with the final stages of track construction and concrete pours for the turbine foundations. Further details of the construction traffic can be found in the supporting transport chapter in the EIAR.

An assessment of the likely significance of effects of the traffic associated with the proposed wind farm during construction and operation has been undertaken. Based on existing traffic data, the estimated volume of construction traffic, the implementation of mitigation measures such as an appropriate traffic management plan and suitable liaison with the relevant authorities, an assessment of the residual effect has been made. The residual traffic and transport effects are temporary and have been assessed as having no significant or lasting impact.

It should be noted that the access for general construction traffic differs from that to be used for AIL traffic. All construction traffic will use the local road network to access the site. AIL traffic, due to its physical size, cannot use these routes and can only access the site via the proposed M4 access junction when loaded. No exiting traffic will be able to use the M4 junction to be constructed for the site.

3 Access Route

3.1 Port of Entry

The closest feasible Port of Entry (POE) for all sites is Swansea Docks, located approximately 10 miles to the west of the proposed site entrance.

The port has been used by renewables deliveries in the past for a number of wind farms, including Mynydd y Betws, Pen y Cymoedd and Brechfa. The port facilities at Swansea have suitable marine access and storage areas and is used to accommodating abnormal load requirements.

Access from the port is via Baldwins Crescent onto Fabian Way.

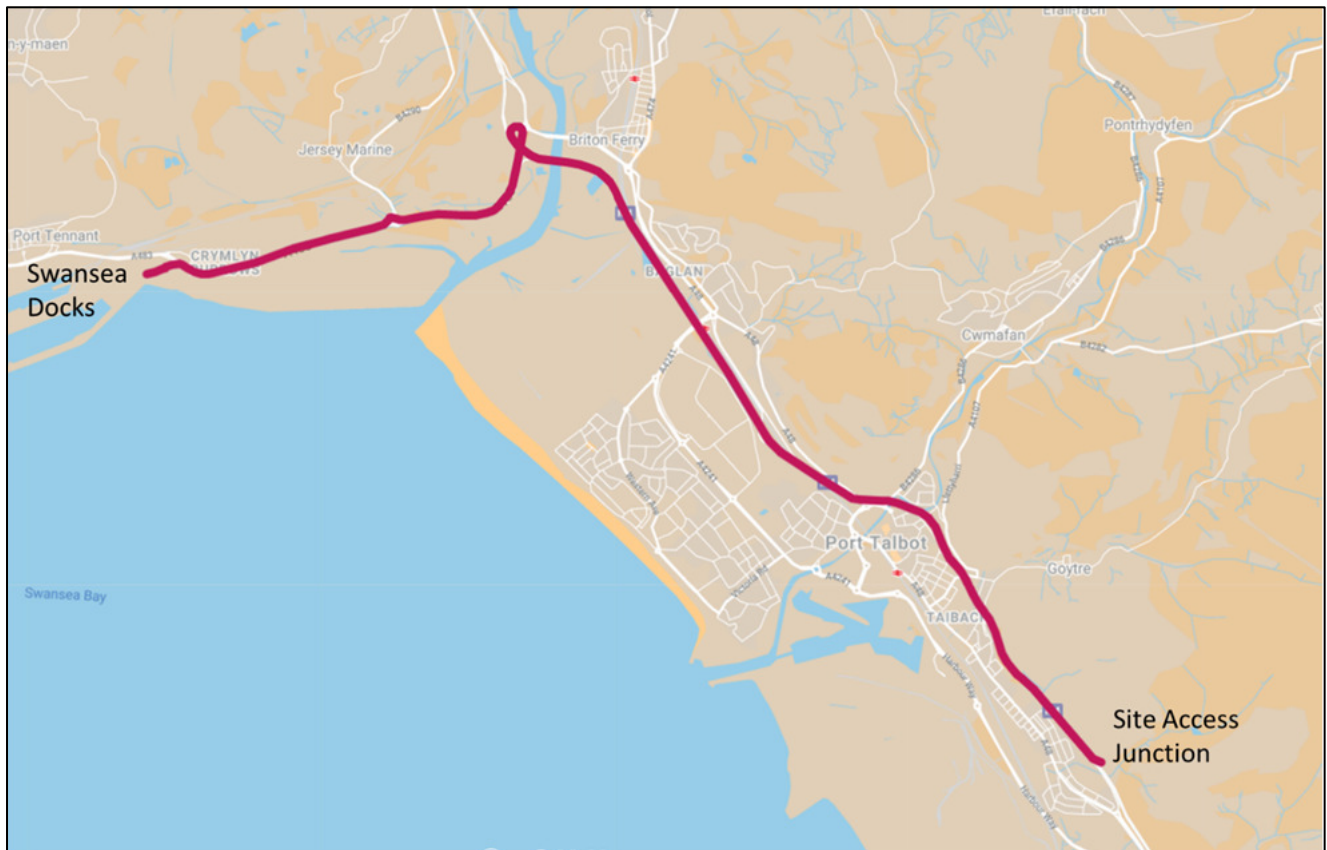
3.2 Proposed Route to Site

The proposed access route to site is as follows:

- Loads would depart the port and access the A483 Fabian Way (Eastbound) using a contraflow manoeuvre from Baldwins Crescent;
- Loads would proceed eastbound and would join the M4 at Junction 42;
- Loads would proceed on the M4 until the site access junction; and
- Loads would depart the M4 and would continue to site using private, purpose built access tracks.

The proposed route is illustrated in Figure 3.

Figure 3: Proposed Access Route



4 Access Constraints

4.1 Route Review

The route was surveyed from the port access gate through to the site entrance junction location. The locations of constraint points noted are illustrated in Appendix B.

Where physical constraints have been noted, these have been the subject to a swept path assessment for the critical loads outlined previously. The swept path drawings are provided in the Route Survey Report, provided in Appendix A.

Where operational constraints have been noted, appropriate traffic management measures have been noted.

The location and description of constraints noted on the site visit are detailed in Table 2.

Table 2: Constraints Summary

Point	Image	Details
1	Port Access Gate 	Loads will depart the docks and enter Baldwins Crescent. The lead escorts will need to hold oncoming traffic on the A483 and on Baldwins Crescent to allow loads out of the dock road. The lead escort should advise the AIL convoy to proceed only when traffic on Fabian Way is held. Loads will then proceed onto Baldwins Crescent and straight onto Fabian Way. The junction onto Baldwins Crescent is modelled in the Route Survey Report (Appendix A).
2	Fabian Way Junction 	Loads will cross the central reserve and this has been modelled in the Route Survey Report (Appendix A). The blade will oversail the northern verge on Fabian Way Junction where five road signs, one lighting column and one bollard should be removed. Loads will oversail the inside of Fabian Way junction where trees should be cleared. A section of fence and one lighting column should be removed. Loads will oversail the crash barrier. Loads will oversail the central reserve where one lighting column should be removed and the crash barrier oversailed. Once on Fabian Way, the police escort will release the held traffic and will move to protect the rear of the convoy.

Point	Image	Details
3	A483 Ffordd Amazon Roundabout 	Loads will proceed ahead onto the A483, taking the third exit. The swept path assessment indicates that the blade will oversail the splitter islands to the west of the roundabout and the north-west edge of the central island. Two sets of traffic signals and one traffic sign to be removed from the first splitter island. Blade tip to oversail the pedestrian guardrail. One lighting column, one set of traffic signals and three road signs to be removed from the second splitter island. Blade tip to oversail the pedestrian guardrail. Two sets of traffic signals and a lit chevron sign will need to be removed from the central island. The escorts will need to hold traffic on the circulating lanes of the roundabout and at the two entry arms passed by the convoy. The loads will require the full width of the entry arm onto the junction and the rear escorts must ensure that no vehicles try to cut up the inside of the loads.
4	A483 Layby 	The layby on the A483 could be closed to general traffic to allow for loads to pause and release any trailing traffic. This would only be used in emergency use, as the whole convoy will not be able to fit in the layby. The layby would be coned off and closed using a Temporary Traffic Regulation Order (TTRO) if its use was required by the Police.
5	A483 / M4 Diverge 	Loads will depart the A483 and will join the merge lane onto the M4. The rear escorts will ensure that trailing traffic does not attempt to pass the convoy on the merge lanes.

Point	Image	Details
6	A483 / M4 Onslip 	Loads will proceed onto the M4 using the on-slip at Junction 43. A swept path assessment of the bend has been undertaken and indicates that the Cross Wind road signs on either side of the slip road should be removed and relocated. The clearance to the street lighting columns will need to be confirmed via an As Built drawing of the road or during the test run. Vegetation should be trimmed on the inside verge. The rear escorts will ensure that trailing traffic does not attempt to over or undertake the convoy at the merge. The lead police escorts will move ahead of the convoy and will clear Lane 1 of traffic to allow it to merge in safety.
7	Junction 41 Merge 	Loads will continue ahead on the M4. The escorts will ensure that traffic does not try to merge into the convoy from the left.
8	Junction 40 Merge 	Loads will continue ahead on the M4. The escorts will ensure that traffic does not try to merge into the convoy from the left.

Point	Image	Details
9	Site Access Junction 	Loads will turn left into the newly constructed access junction. The new junction will only be available for inbound abnormal load traffic and will be controlled by a trunk road agent approved contractor. The junction has been designed to ensure that loads do not oversail live carriageway lanes. The junction will be closed via cones once the convoy has passed onto the site.

4.2 Structures Review

An Electronic Service Delivery for Abnormal Loads (ESDAL) consultation will be undertaken following consent and once the turbine selected for the site has been selected. An initial review has been undertaken and the results are summarised in the Route Survey Report (Appendix A). No weight constraints have been identified.

4.3 Ancillary Measures

To support movements, banksmen and a Movement Co-ordinator will be appointed. The Movement Co-ordinator will act as the main point of contact for the developer, turbine supplier, haulier, the BoP contractors, Welsh Government, planning authorities and the Police. The Co-ordinator will be in place two months prior to loads moving and will be responsible for the implementation of the TMP and for any changes and or updates.

A traffic management contractor will also be appointed to support the movement of loads along the access route. The contractor will be approved by the South Wales Trunk Roads Agent (SWTRA) and will be responsible for assisting loads at specific locations, removal and replacing street furniture, opening and closing depot gates and for temporary warning signs along the access route.

4.4 Condition Review

A before and after condition review of the trunk road infrastructure changed or altered following use by abnormal loads will be undertaken before and after deliveries. Any damage caused will be repaired at the developer's cost following the post-delivery inspection.

5 Convoy Movement Strategy & Proposed Mitigation

5.1 Convoy Management Strategy

The abnormal loads would be transported in a convoy with Police escorts. The convoy would be made up of the following vehicles:

- 3-4 Police outrider motorcyclists, providing close and advance escort protection;
- 1 police command vehicle, proving a control point for the outriders, located at either the front or rear of the convoy, depending upon movement instructions;
- 1 traffic management vehicle (operating in specific sections such as those in urban areas to provide additional traffic management support to the Police) providing traffic management support to the convoy. Please note that this vehicle would be manned by specifically trained personnel to assist with close convoy traffic management. Other traffic management teams could be stationed along the route to assist at specific points where socket signage, etc are required;
- 2 abnormal loads. The Welsh Police have indicated previously that up to 2 loads per convoy would be permitted; and
- 1 civilian escort. This vehicle is located behind the last abnormal load and provides steersman support to the AIL drivers.

The convoy is controlled by the Police when on the public highway. All movements made would be done so under their instruction.

The Police have indicated that they wish to keep AIL convoys moving as much as possible and will operate a “rolling roadblock”, by continuing ahead of the convoy and halting oncoming traffic where and when required. To be clear, it is only on Baldwins Crescent and the contraflow right turn onto Fabian Way that oncoming traffic will have to be managed in this way.

In unconstrained sections, where oncoming traffic will be able to pass safely whilst the convoy is moving are referred to as “free running”. Sections where at specified points oncoming traffic will be held by Police to enable the convoy to navigate a constrained length of carriageway are referred to as “held running”.

Oncoming traffic at junctions will be held back by Police escorts for a distance of at least 30m to allow the safe passage where loads are manoeuvring. The motorway and dual carriageway sections of the route will not present significant issues for other road users. The loads will remain in Lane 1 at all times. Other road users will be able to safely pass the loads, if allowed by the Police during deliveries.

Where loads project outwith dual carriageway lanes, the Police have previously advised that they would not wish passing traffic to pass. To overcome this, the Police have indicated that over-sail of hard shoulders / verges is permitted, or that the convoy would stop to allow overtaking where the officer in charge deems it prudent.

5.2 Hold Points and Site Specific Laybys

With the exception of a 0.3mile long section on Baldwins Crescent, the entire route is dual carriageway and as such, no new hold point laybys are proposed.

As the route is less than 10 miles in length, no strategic layover points will be required.

5.3 Delivery Timings

The timings of deliveries have been estimated and is presented in Table 3. The police have advised that they will not permit escorted loads to operate between 0700 hrs and 1900 hrs (Route Survey ESDAL consultation responses) and as such, it is assumed that loads will depart Swansea Docks at 1930 hrs.

Table 3: Indicative Timing

Time	Location	Comment
Depart at 1930 hrs	Swansea Docks	Loads will depart the port at 1930 under Police escort.
1936 hrs	Join Fabian Way	
1942 hrs	Transit of Ffordd Amazon Junction	
1947 hrs	Enter the M4	
2001 hrs	Depart the M4	Loads will depart the M4 and will enter the site access track.

Further discussion with the Police will be undertaken to identify if two convoys per evening can be transported to site, given the close proximity of the site to the Docks. If a second convoy can depart in the same evening, it is suggested that this departs at 2130hrs, to allow the Police time to return to the docks and have a short refreshment break. The second convoy could arrive at site at 1101 hrs.

The departure times after 1930 will be reviewed with the Police as the project progresses.

5.4 Queue Delays

Queue estimates have been estimated using Department for Transport (DfT) traffic data for Fabian Way and the M4. Data for surveys undertaken in 2019 has been used to avoid any Covid 19 effects on traffic flow data. Data for 1800-1900 hrs was available and has been used to create the estimates, although it should be noted that delays will therefore be lower than those estimated as loads depart after 1930 hrs.

Westbound traffic on Fabian Way will be delayed by up to 2 minutes by loads joining under police escort. Traffic flow data for the westbound carriageway suggests that a maximum of 35 vehicles would be delayed. A similar number could be delayed on the eastbound carriageway as loads undertake the contraflow movement onto Fabian Way from Baldwins Crescent. Sufficient stacking provision is available in both direction and "queue Ahead" warning signs would be deployed on the road.

Fabian Way is dual carriageway and as such, car and LGV traffic can pass the convoys. The delays on the road are considered to be minor and are more likely to affect HGV flows. Eastbound HGV flows were recorded as being no greater than 4 HGV in one hour and such, the likely delays are considered insignificant.

Traffic flows in the M4 would mainly be restricted to HGV traffic being unable to pass the convoy. HGV traffic eastbound on the M4 after 1800 hrs was recorded as being 70 HGV per hour. With loads transiting the M4 for less than 6 miles, the likely number of vehicles delayed is expected to be in the region of 17 HGV.

The temporary inconvenience that could be caused by delivery vehicles must be viewed in the context that the delivery period is very short and is a 1 in 25 year event.

During actual deliveries, a careful monitoring of trailing traffic on the M4 will be made by the Police escort who will judge if the convoy will need to move over to the hard shoulder to ease any trailing traffic. Given that the police will have the final say on convoy movements, it is difficult to further estimate with any degree of certainty the level of delay to other road users at this stage, save to say that any such delay will clearly be limited and well within guidance.

Further theoretical queue estimations cannot be wholly accurate as they are dependent upon journey time, seasonality, events, traffic composition, etc. A more developed timing review would be undertaken in the finalised TMP produced post consent.

5.5 Advance Warning Signs

Advance warning signs would be installed on the approaches to the affected roads network. Temporary signage advising drivers that abnormal loads will be operating could be erected on the Fabian Way and Baldwins Crescent. Signs such as the examples shown in Figure 4 could be installed to help assist drivers and pedestrians. Separate bilingual signs could be provided if the dual language ones are considered inappropriate.

Figure 4: Indicative Information Signs (Left Vehicular / Right Pedestrian)



The purpose of this type of the vehicular signage is to help improve driver information and allow drivers of oncoming traffic to consider proceeding to the nearest convenient passing bay (when directed to by the Police or escorts), or breaking their journey until the convoy has moved on.

The temporary pedestrian warning signs would be erected on Baldwins Crescent, the junction with Fabian Way and at the Ffordd Amazon Roundabout to alert pedestrians of the proposed loads. The time and date section of the sign could be written in marker pen so to allow re-use of the sign during the life of the project. The signs would be fixed by means of cable ties (or similar) to existing street furniture.

Discussion with SWTRA will be held to use suitable warning messages on the M4 Variable Message Signs (VMS) on the M4.

5.6 Public Information

Information on the movement of abnormal load convoys should be provided to local media outlets to help assist the public. Information could be provided to local newspapers and radio stations, which may include:

- BBC Radio Wales;
- BBC Radio Cymru;
- Swansea Bay Radio;
- Western Mail Newspaper;
- South Wales Echo Newspaper; and
- South Wales Evening Post Newspaper.

It is hoped that this level of information will make residents aware of convoy movements and help reduce any potential conflicts.

The Applicant will also produce a local newsletter for distribution to properties along the most affected sections of the proposed access routes, advising of convoy movements and the measures put in place to ensure the safe and efficient operation of the road network.

It may be possible, Police permitting, to provide convoy movement updates on the Police Twitter feed. Consultation with the Police will be held on other forms of communication that could also be utilised.

6 Traffic Management Plan

The Transport Management Plan by its definition is a live document and should be updated on a regular basis to reflect changes in road, load and operational conditions that may develop over the delivery period.

The safe and efficient transport of all loads associated with the wind farm is vital and experience gained on the project must and will be presented in the report as it develops. As such, following planning consent, this document should be considered a controlled document and updates made and logged as and when required. All those developing this plan and influencing it, may be liable under CDM regulations and as such, it is important to document any changes.

In addition to the finalised TMP, a condensed version known as a Driver Information Pack (DIP) will be provided to AIL drivers that sets out all the operational requirements such as:

- Welfare arrangements;
- Incident plans;
- Requirements for Tool Box Talks;
- Weather and road condition checks;
- Safety equipment requirements; and
- Other pertinent safety briefing material.

6.1 Daily Initial Checks

Before the convoys depart the POE, the lead convoy driver will check weather and traffic conditions and advise colleagues through a “Tool Box Talk”. The following websites provide relevant weather and traffic updates:

- www.traffic-wales.com
- www.theaa.com/traffic-news/index
- www.bbc.co.uk/travelnews
- www.transportdirect.com
- www.rac.co.uk
- www.metoffice.gov.uk
- www.bbc.co.uk/weather
- www.uk.weather.com
- www.weatheronline.co.uk

6.2 Potential Urban / Built Up Area Conflict Points

The urban areas along the route pose different challenges for the abnormal loads. Whilst the vehicle speeds will be less than those in the rural or motorway sections of the route, there are more potential conflicts with other road users to be aware of. These include:

- Pedestrians and cyclists;
- Local vehicular traffic;
- Parked vehicles;
- Side junctions; and
- Street furniture.

Within the urban / built up areas, the convoy escorts and other loads will need to be aware of all road and footway users at turn sections within the route.

6.3 Daily Management Updates

Daily updates to the general convoy management will be provided at the daily Tool Box Talks, where drivers and escorts will be fully briefed on the specific requirements of the convoys on that day. During these sessions, the following checks will be made:

- That staff are aware of the TMP and have a copy of the latest version of the Driver Information Pack (DIP) in the cab;
- That all staff have the appropriate licences, safety equipment and clothing;
- That all radios and mobile telephones are fully charged and that the correct channels are known;
- That the convoy is aware of its legal responsibilities for the country of operation;
- That drivers are briefed on welfare issues, including provisions for sleep and rest during the day;
- That the convoy is aware of client, haulier and turbine supplier health and safety requirements and method statements; and
- That all staff have been inducted on site rules before entering the site boundary and that induction is undertaken immediately upon arrival. Details of induction process are to be provided by the main contractor to the haulier before loads commence.

6.4 Communications Strategy

In order to ensure effective communications during transit, all vehicles within the convoy will be fitted with Citizens Band (CB) radio equipment. The CB units on the transporters will be hard-wired to reduce the risk of power failure during transit. All escort vehicles will be fitted with hand held battery powered CB radio sets. Spare sets should be carried to allow communications with the Police during transit, if the Police request it only. In addition to the CB sets, all vehicles will be fitted with hands free mobile phones, to allow contact with third parties without CB devices and that would also act as an alternative form of communication in an emergency. Mobile phones will only be used when stationary.

A communication protocol, between the escorting Police officers and the emergency services so that in the case of a blue light emergency, the convoys would be diverted to the nearest lay-by / hold point area.

In the case of emergency vehicles that need to pass the convoy en-route to a third party emergency, the escorting police will be informed by radio of the incident and the requirement for vehicles to pass unhindered. At that time, the convoy would pull onto the hard shoulder and escorting police officers would wave traffic past.

This entire process will be controlled by the escorting police officers, in contact with the emergency services control centre.

6.5 Contingency and Incident Plans

Contingency details for incidents such as tyre punctures, breakdowns and accidents are described below and should be observed. In all situations the safety of personnel and the public is paramount and reasonable steps to ensure safety at a site should be undertaken. In the event of an incident, it should be reported to the appropriate person immediately.

These items are relevant for both abnormal and non-abnormal loads. Where the police are escorting, their instructions will take precedence and the lead Police officer must be informed should an issue on transit occur.

In the event of vehicle breakdown or incident the following details from The Highway Code must be observed:

- Try to remove the vehicles off the road if possible. On the motorway / dual carriageway, if possible, depart at the nearest exit or service area. If it is not possible to depart the motorway, pull onto the hard shoulder as far left as possible;
- If on a dual carriageway, try to stop near to an emergency telephone;
- When stopped, close the convoy up to reduce the length where possible;
- Warn other traffic by using hazard warning lights if the vehicles are causing an obstruction;
- Drivers should depart using the left-hand side door. Unless staff are threatened by their situation, all staff should depart the vehicles;
- Use PPE at all times when outside the vehicle;
- Place a warning triangle on the road at least 100 metres behind the last convoy vehicle on the same side of the road. Use the warning cones and flares carried in the escorts to protect the end of the convoy by

creating a diagonal around the back of the last vehicle. Always take great care when placing or retrieving them. The Highway Code indicates that warning triangle should not be used on motorways;

- Consult with the Police escorts to identify what additional warning devices should be deployed;
- Keep sidelights and beacons on;
- No staff should stand between the convoy vehicles and oncoming traffic. Staff should not stand between vehicles in the convoy. Staff should be located at locations where all road users can see them;
- Staff should wait on the verge and where barriers are provided, stay behind them;
- In the event of injuries, do not move injured people unless they are in immediate danger from fire or explosion. Staff must not remove a motorcyclist's helmet unless it is essential to do so and should be prepared to give first aid if appropriately trained;
- In the case of injuries, all staff must stay at the scene until the emergency services arrive;
- In the event if a collision which causes damage or injury to any other person, vehicle, animal or property, the convoy must stop, provide contact details and addresses, provide vehicle registration details to third parties. The police escort should be informed and the incident reported within 24 hours to the local police station;
- In the event of a collision, all staff should obey directions from the escort Police Officers or attending officers;
- In the event of a breakdown, the nature of the breakdown should be reported to the indicated assistance provider. Obtain advice from the haulier Project Manager; and
- In the event of a burst tyre the appropriate repair provider should be contacted to come and replace the damaged item. Staff should not attempt to replace any HGV tyres themselves although if possible, the HGV should continue to the next lay-by if safe to do so in order to reduce delays. A spare wheel can be carried in the escort vehicles to be fitted by a specialist technician to help speed up the process.

Where the police are escorting, their instructions will take precedence and the lead Police officer must be informed should an issue on transit occur. To ensure the minimum delay and inconvenience, the turbine supplier has recovery agreements set up with suitable contractors along the route.

For minor vehicle faults, repairs could be made at the roadside or existing laybys on Fabian Way as per any other road user, with the police escort helping divert traffic around the temporary restriction. Loads should proceed to the site access should this occur on the M4.

In the event of the police being required for an emergency, the convoy would be stopped at the nearest safe location and the civilian and traffic management contractor deployed to allow traffic to pass in safety using stop / go boards until the Police returned. Such occurrences where all Police officers depart a convoy are exceptionally rare, if not unheard of. It is more likely that the Police escort numbers would reduce and the convoy continue with a smaller escort.

In the event of an incident along the route, the contact information for breakdowns or medical assistance is provided in Table 5.

Table 4: Emergency Contacts

Service	Number
Emergency	999
Scania Assistance	0800 800 660
Volvo	0800 898 892
Police – Non-Emergency	101
NHS Direct Health Support – Non-Emergency (England)	111
NHS Direct Wales Health Support – Non-Emergency (Wales)	0845 46 47
Morriston Hospital A&E, Heol Maes Eglwys, Cwmrhydyceirw, Morriston SA6 6NL	01792 702222

6.6 Third Party Accident/Breakdown on the Route

In the eventuality of a third-party accident or breakdown on the delivery route, ahead of the AIL convoy, it may be necessary for the convoy to be slowed or temporarily halted until safe passage can be assured. The police escort would take control of the convoy and monitor manoeuvring of the convoy into a safe location. The convoy would be held at this location until the highway ahead was judged by the police to be sufficiently clear to enable safe passage of the convoy.

Should it be required for Loads to be temporarily halted, traffic in the vicinity of the convoy will be marshalled by a combination of the police and civilian escorts.

6.7 Equipment Requirements

Each of the convoy vehicles must be suitably equipped with hazard warning devices to warn all other road users. All the tractor, trailer and escort vehicles operating on the project must have the following:

- Tractor units to have beacon bars on the roof and 3M reflective markings on both sides;
- All vehicle warning signage to be in English;
- Trailer units to have amber beacons on the rear with 3M reflective markings on both sides;
- All escort vehicles will have beacon bars on the roof, with 360 degree motion for all round visibility, and 3M reflective markings; and
- Certified cargo lashing straps are to be used at all times. Certification must be carried and made available for inspection, kept within the cab.

All hazard warning equipment must be checked and cleaned at the start of each day. Additional cleaning of the warning equipment may be required throughout the day and must be undertaken when required.

All escort vehicles will carry the following equipment:

- 8 x Reflective Road Cones
- 8 x Flare Alert Beacons
- 2 x Warning Triangles
- 1 x Spill Kit
- 1 x Emergency Hammer
- 1 x Flash Light
- 1 x Auxiliary Rechargeable CB Radio
- 1 x Fire Extinguisher (dry powder)
- 1 x Van/Truck First Aid Kit
- 1 x Roll of Barrier Tape
- 1 x Spare High-Vis Waistcoat
- 1 x Spare Hard Hat.
- 1 x pack of disposable dust masks
- 1 x safety spectacles

All relevant personnel must have the appropriate Personal Protective Equipment (PPE). All PPE clothing must be 'CE' marked to show it meets the European standards and should be appropriate for use in Motorway situations (i.e. must be full coats with reflective bands on the arms). Drivers must be issued with:

- Hard hat (within certification date);
- High-Vis (jacket / coat and trousers);
- Lace up steel toe capped safety boots; and
- Gloves

7 Summary

Pell Frischmann were commissioned by Y Bryn Wind Farm Limited (the Applicant) to produce a Transport Management Plan for the delivery of abnormal loads associated with the proposed Y Bryn Wind Farm.

This report outlines the key points and issues associated with the route. It is the responsibility of the wind farm turbine supplier to ensure that the access route from the port of entry to the sites are fit for purpose and that appropriate consideration for all road users has been made in accordance with the relevant health and safety legislation and ruling transport requirements.

The access review has been undertaken from Swansea Docks through to the site access junction. The route is suitable for the movement of the anticipated loads, although careful manoeuvring will be required through a small number of sections along the route and into the site access.

A series of operational measures have also been detailed to further aid the delivery of equipment and to minimise the impact of convoys on the network. These include the provision of warning signs and incident contingency plans.

The temporary inconvenience that could be caused by delivery vehicles must be viewed in the context that the delivery period is restricted to 1 in 25 year event. Police escorts, assisted by civilian escorts will also ensure road user safety.

Appendix A Route Survey Report

Pell Frischmann

Y Bryn Wind Farm

Abnormal Indivisible Load Route Survey

March 2023

This report is to be regarded as confidential to our Client and is intended for their use only and may not be assigned except in accordance with the contract. Consequently, and in accordance with current practice, any liability to any third party in respect of the whole or any part of its contents is hereby expressly excluded, except to the extent that the report has been assigned in accordance with the contract. Before the report or any part of it is reproduced or referred to in any document, circular or statement and before its contents or the contents of any part of it are disclosed orally to any third party, our written approval as to the form and context of such a publication or disclosure must be obtained.

Report Ref.		Y Bryn SG170 RSR.Docx				
File Path		https://pellf.sharepoint.com/sites/EdinburghOfficeTeam/Shared Documents/General/Projects/103343 Y Bryn Wind Farm/3 Working/Reports/Y Bryn SG170 RSR.docx				
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02		Issue	25/05/2022	J Stirrat	G Buchan	G Buchan
03		Final	09/03/2023	J Stirrat	G Buchan	G Buchan
Ref. reference. Rev revision. Suit suitability.						

Prepared for

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Pell Frischmann

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1 Introduction

1.1 Purpose of the Report

Pell Frischmann (PF) has been commissioned by Y Bryn Wind Farm Limited (the Applicant) to undertake a survey of the Abnormal Indivisible Load (AIL) delivery route for wind turbine loads associated with the construction and development of Y Bryn Wind Farm, located on Mynydd Margam and Mynydd Penhydd, near Port Talbot.

The Route Survey Report (RSR) has been prepared to help inform the Applicant on the likely issues associated with the development of the site with regards to off-site transport and access for AIL traffic. This report identifies the key issues associated with AIL deliveries and notes that remedial works, either in the form of physical works or as traffic management interventions will be required to accommodate the predicted loads

The detailed assessment and subsequent designs of any remedial works are beyond the agreed scope of works between PF and the Applicant at this point in time.

It is the responsibility of the wind turbine supplier to ensure that the entirety of the proposed access route is suitable and meets with their satisfaction. The turbine supplier will be responsible for ensuring that the finalised proposals meet with the appropriate levels of health and safety consideration for all road users and in accordance with the relevant legislation at the time of delivery.

2 Site Background

2.1 Site Location

The development site is located atop Mynydd Margam and Mynydd Penhydd, to the south-east of Port Talbot, Wales. Figure 1 illustrates the general site location.

Figure 1: Site Location Plan



2.2 Candidate Turbine

The Applicant has indicated that they wish to consider the worst case components from a variety of turbines that fit within their proposed height and rotor envelope. For the purpose of the route assessment, a Siemens SG170 at a tip height of 250m has been used for this preliminary assessment as this is the largest available turbine that fits within the envelope specified by the developer at this time. The details of the components have been provided by Siemens Gamesa and are detailed in Table 1 below.

Table 1: Turbine Size Summary

Component	Length (m)	Width (m)	Height / Min Diameter (m)	Weight (t)
Blade	83.330	4.500	3.428	29.000
Tower Section 1	27.770	4.300	4.289	84.808
Tower Section 2	36.000	4.289	3.503	73.911
Nacelle	15.162	3.460	3.643	73.355
Drive Train	7.446	3.130	3.218	84.679
Hub	5.160	4.700	4.245	58.625

The lower sections of the tower are made from concrete and as such do not represent an abnormal load. The worst case loads for kinematic envelope are therefore the blade and a combined tower load using the maximum width and length of the two sections.

2.3 Proposed Delivery Equipment

To provide a robust assessment scenario based upon the known issues along the access route, it has been assumed that all blades would be carried on a Superwing Carrier trailer to reduce the need for mitigation in constrained sections of the route.

The towers would be carried on a 4+7 clamp trailer. The hub and nacelle housing would be carried on a six-axle step frame trailer. The worst case loads for these sections will be considered in a further study.

Figure 2: Superwing Carrier Trailer



Figure 3: Tower Trailer



3 Access Route Review

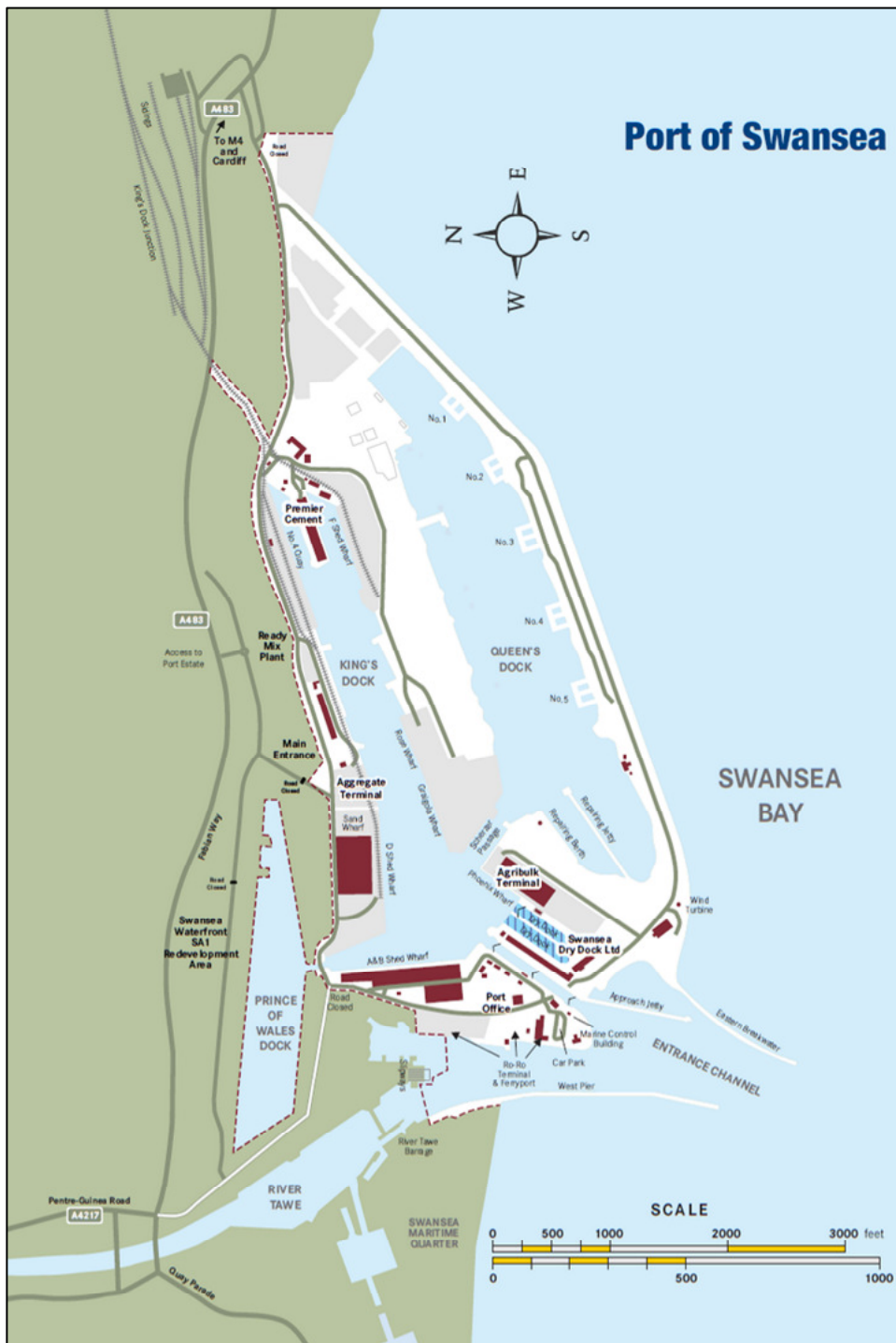
3.1 Port of Entry

The proposed Port of Entry (POE) is Swansea. The port is the closest suitable port to site and as such is in line with the UK Government's "Water Preferred" policy towards AIL movements.

The port has been used by renewables deliveries in the past for a number of wind farms, including Mynydd y Betws, Pen y Cymoedd and Brechfa.

The port has sufficient quay and storage space and is well located for the strategic trunk road network. The layout of the port is illustrated below in Figure 4.

Figure 4: Port of Swansea



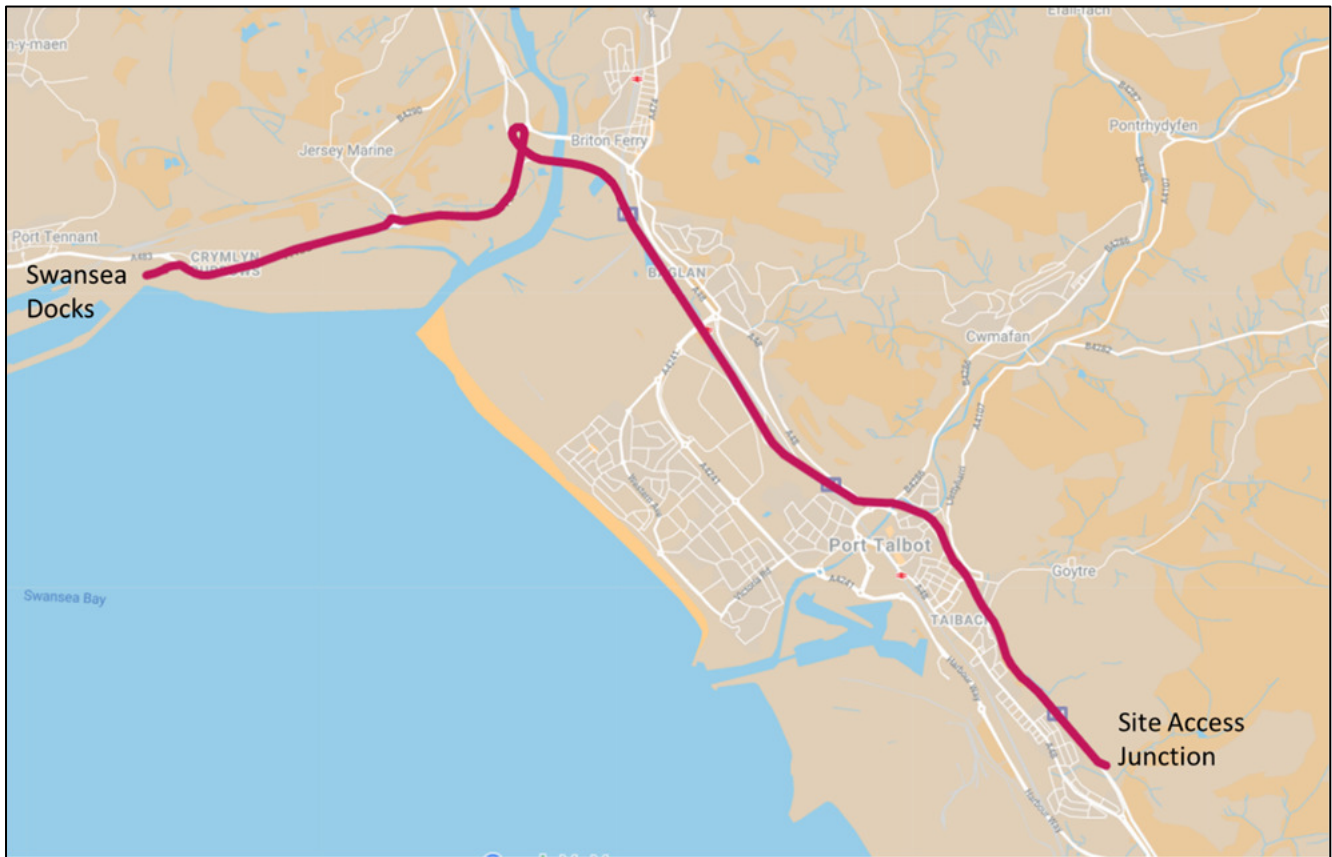
3.2 Proposed Access Routes

This study has been undertaken following a site visit of the route undertaken with the Applicant. The proposed access route to the site access junction from Swansea Docks is as follows:

- Loads would depart the port and access the A483 Fabian Way (Eastbound) using a contraflow manoeuvre;
- Loads would proceed eastbound and would join the M4 at Junction 42;
- Loads would proceed on the M4 until the site access junction; and
- Loads would depart the M4 and would continue to site using private, purpose built access tracks.

The proposed southern access route is illustrated in Figure 5.

Figure 5: Proposed Access Route



3.3 Route Constraints

The constraints noted on route are detailed in Table 2. These cover all constraints from the port access gate through to the proposed site access junction. No consideration of the transport issues within the development site have been undertaken in this report.

Plans illustrating the location of the constraints are provided in Appendix A.

Table 2: Constraint Points and Details

POI	Constraint	Details
1 & 2	Port Access Gate / Fabian Way Junction 	Loads will exit the port access gate and proceed ahead onto Baldwins Crescent. This will need to be undertaken under full Police escort as all traffic on the dual carriageway will need to be held as loads pass through the gap in the central reserve. The swept path assessment indicates the southern verge after the initial junction should be cleared of vegetation. The blade tip will oversail rocks on the northern verge. The blade will oversail the northern verge on Fabian Way Junction where five road signs, one lighting column and one bollard should be removed. Loads will oversail the inside of Fabian Way junction where trees should be cleared. A section of fence and one lighting column should be removed. Loads will oversail the crash barrier. Loads will oversail the central reserve where one lighting column should be removed and the crash barrier oversailed. Swept path assessment SK01 is included in Appendix B.

POI	Constraint	Details
3	A483 Ffordd Amazon Roundabout 	Loads will proceed ahead onto the A483. The swept path assessment indicates that the blade will oversail the splitter islands to the west of the roundabout and the north-west edge of the central island. Two sets of traffic signals and one traffic sign to be removed from the first splitter island. Blade tip to oversail the pedestrian guardrail. One lighting column, one set of traffic signals and three road signs to be removed from the second splitter island. Blade tip to oversail the pedestrian guardrail. Two sets of traffic signals and a lit chevron sign will need to be removed from the central island. Swept path assessment SK02 is included in Appendix B.
4	A483 / M4 Onslip 	Loads will proceed onto the M4 using the on-slip at Junction 43. A swept path assessment of the bend has been undertaken and indicates that the Cross Wind road signs on either side of the slip road should be removed and relocated. The clearance to the street lighting columns will need to be confirmed via an As Built drawing of the road or during the test run. Vegetation should be trimmed on the inside verge. Swept path assessment SK03 is included in Appendix B.

POI	Constraint	Details
5	Site Access Junction 	Loads will turn left into the newly constructed access junction. The new junction will only be available for inbound abnormal load traffic and will be controlled by a trunk road agent approved contractor. The junction has been designed to ensure that loads do not oversail live carriageway lanes.

3.4 Swept Path Assessment Results and Summary

The detailed swept path drawings for the locations assessed are provided in Appendix B for review. The drawings in Appendix B illustrate tracking undertaken for the worst case loads at each location.

The colours illustrated on the swept paths are:

- Grey / Black – OS / Topographical Base Mapping;
- Green – Vehicle body outline (body swept path);
- Red – Tracked pathway of the wheels (wheel swept path); and
- Purple – The over-sail tracked path of the load where it encroaches outwith the trailer (load swept path).

Where mitigation works are required, the extents of over-run and over-sail areas are illustrated on the swept path drawings.

Please note that where assessments have been undertaken using Ordnance Survey (OS) base mapping, there can be errors in this data source.

Where provided by the client, topographical data has been utilised. Please note that PF cannot accept liability for errors on the data source, be that OS base mapping or client supplied data.

3.5 Weight Review

A weight review has been undertaken via the ESDAL (Electronic Service Delivery for Abnormal Loads) contacts database using the Highways Agency website www.esdal.com.

All of the relevant ESDAL contacts are noted in Table 3 and have been contacted to ascertain if there are any relevant constraints that should be noted. The results of the consultation are provided in Appendix C.

Table 3: ESDAL Contacts

Organisation	Email Address
Neath Port Talbot County Borough Council	abloads@npt.gov.uk
South Wales Police	swp@abloadspolice.com
Swansea Council	Abnormal.Loads@swansea.gov.uk
South Wales Trunk Road Agent	abnormalloads@southwales-tra.gov.uk
Network Rail	AbLoadsESDAL@networkrail.co.uk
Canal and River Trust	abnormal.loads@canalrivertrust.org.uk
Historic Rail	rsgbrb@jacobs.com

3.6 Land Ownership

The limits of road adoption can vary depending upon the location of the site and the history of the road agencies involved. The adopted area is generally defined as land contained within a defined boundary where the road agency holds the maintenance rights for the land. In urban areas, this usually defined as the area from the edge of the footway across the road to the opposing footway back edge.

In rural areas the area of adoption can be open to greater interpretation as defined boundaries may not be readily visible.

3.7 Site Access Layouts

The layouts of the site access junctions are presented in Appendix D for reference. Appropriate traffic management and control measures would be applied to both, with appropriate traffic management plan proposals.

3.8 Summary Issues

It is strongly suggested that following a review of the RSR, the Applicant should undertake the following prior to the delivery of the first abnormal loads, to ensure load and road user safety:

- A further review of axle loading on structures along the entire access route with the various road agencies is undertaken immediately prior to the loads being transported in case of last minute changes to structures;
- A review of clear heights with utility providers and the transport agencies along the route to ensure that there is sufficient space to allow for loads plus sufficient flashover protection (to electrical installations);
- That any verge vegetation and tree canopies which may foul loads is trimmed prior to loads moving;
- That a review of potential roadworks and or closures is undertaken once the delivery schedule is established in draft form;
- That a test run is completed to confirm the route and review any vertical clearance issues; and
- That a condition survey is undertaken to ascertain the extents of road defects prior to loads commencing to protect the developer from spurious damage claims.

4 Summary

4.1 Summary of Access Review

PF has been commissioned by Y Bryn Wind Farm Limited to prepare a Route Survey Report to examine the issues associated with the transport of AIL turbine components to the development site.

This report identifies the key points and issues associated with the proposed route and outlines the issues that will need to be considered for successful delivery of components.

The report is presented for consideration to the Applicant. Various road modifications, structural reviews and interventions are required to successfully access the site. If these are undertaken, access to the consented wind farm site is considered feasible.

4.2 Further Actions

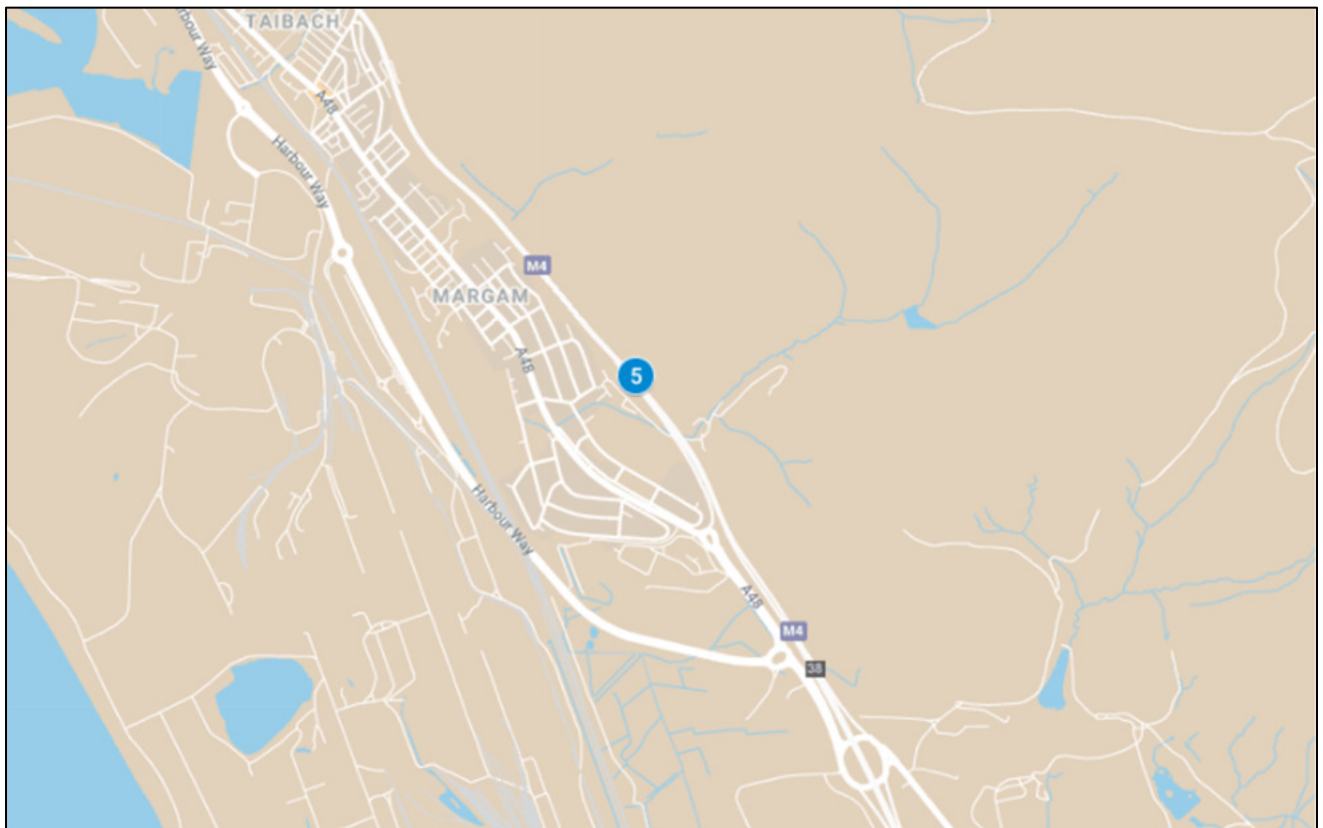
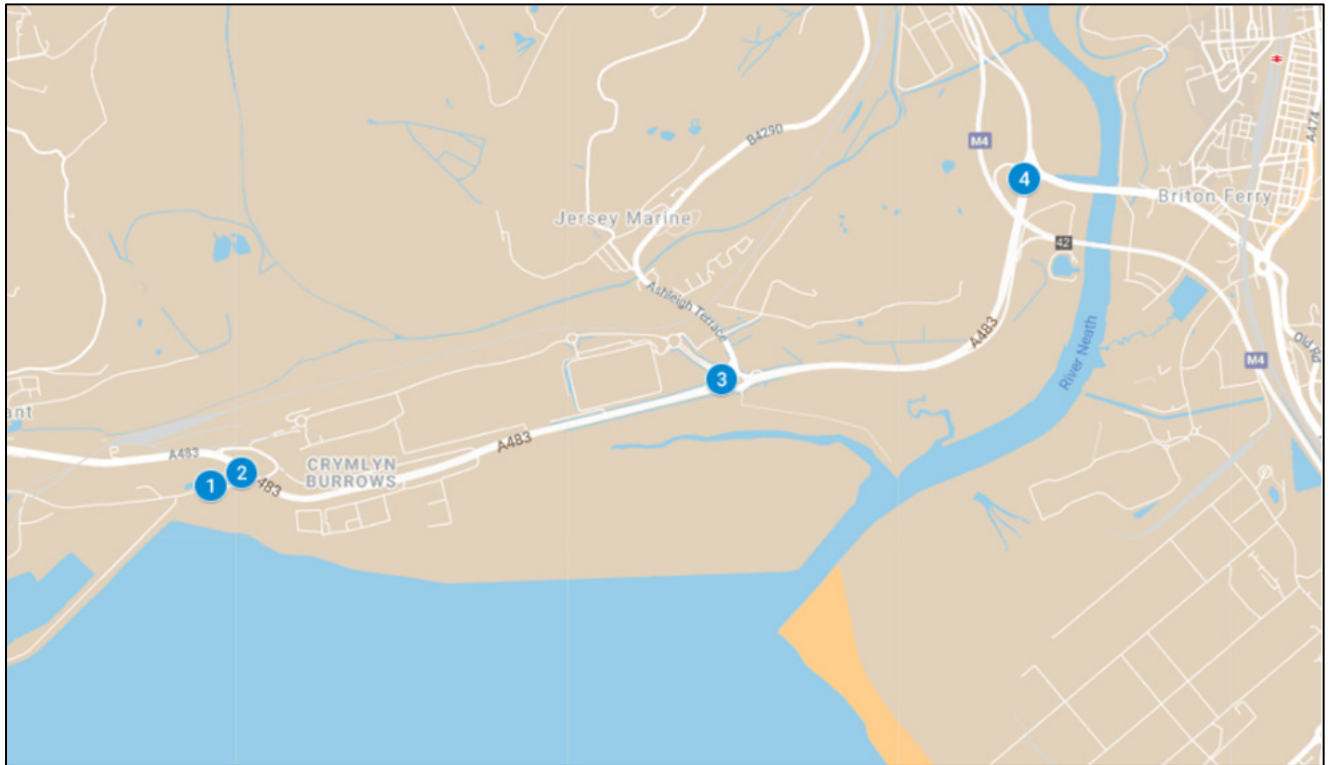
The following actions are recommended to pursue the transport and access issues further:

- Prepare detailed mitigation design proposals to help inform the land option / consultee discussions;
- Undertake discussion with the affected utility providers and roads agencies;
- Obtain the necessary statutory licences to enable the mitigation measures; and
- Develop a detailed operational Transport Management Plan to assist in transporting the proposed loads.

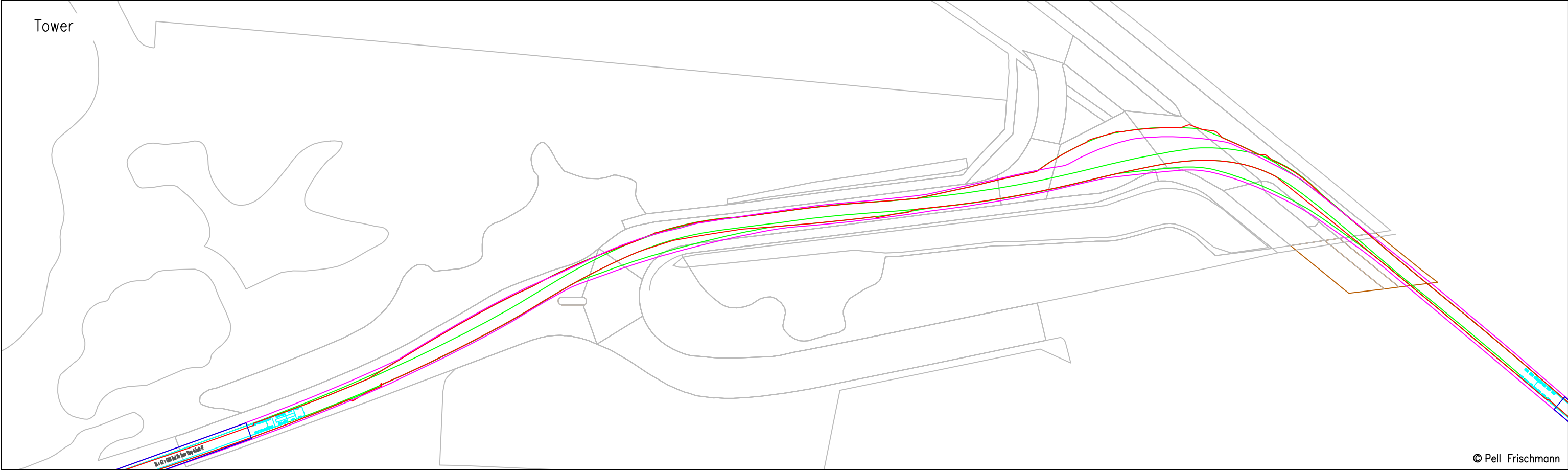
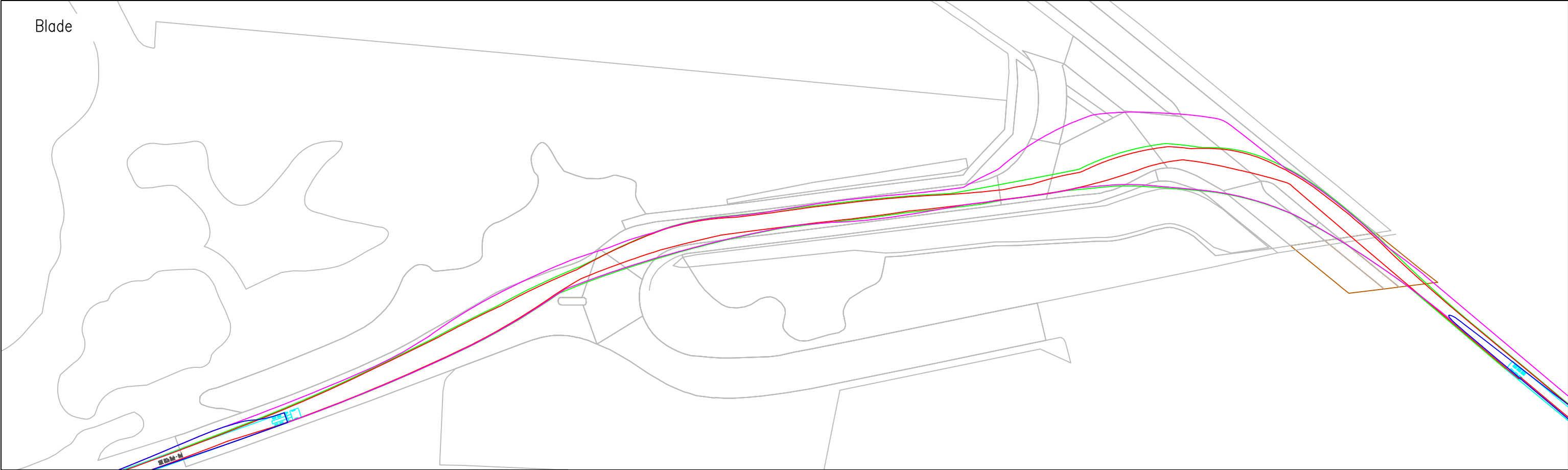
Appendix A Points of Interest

An electronic version of this plan can be found here:

<https://www.google.com/maps/d/u/0/edit?mid=12N3PsNnD590AMAP61OQ4IVqA49CvjAzk&usp=sharing>

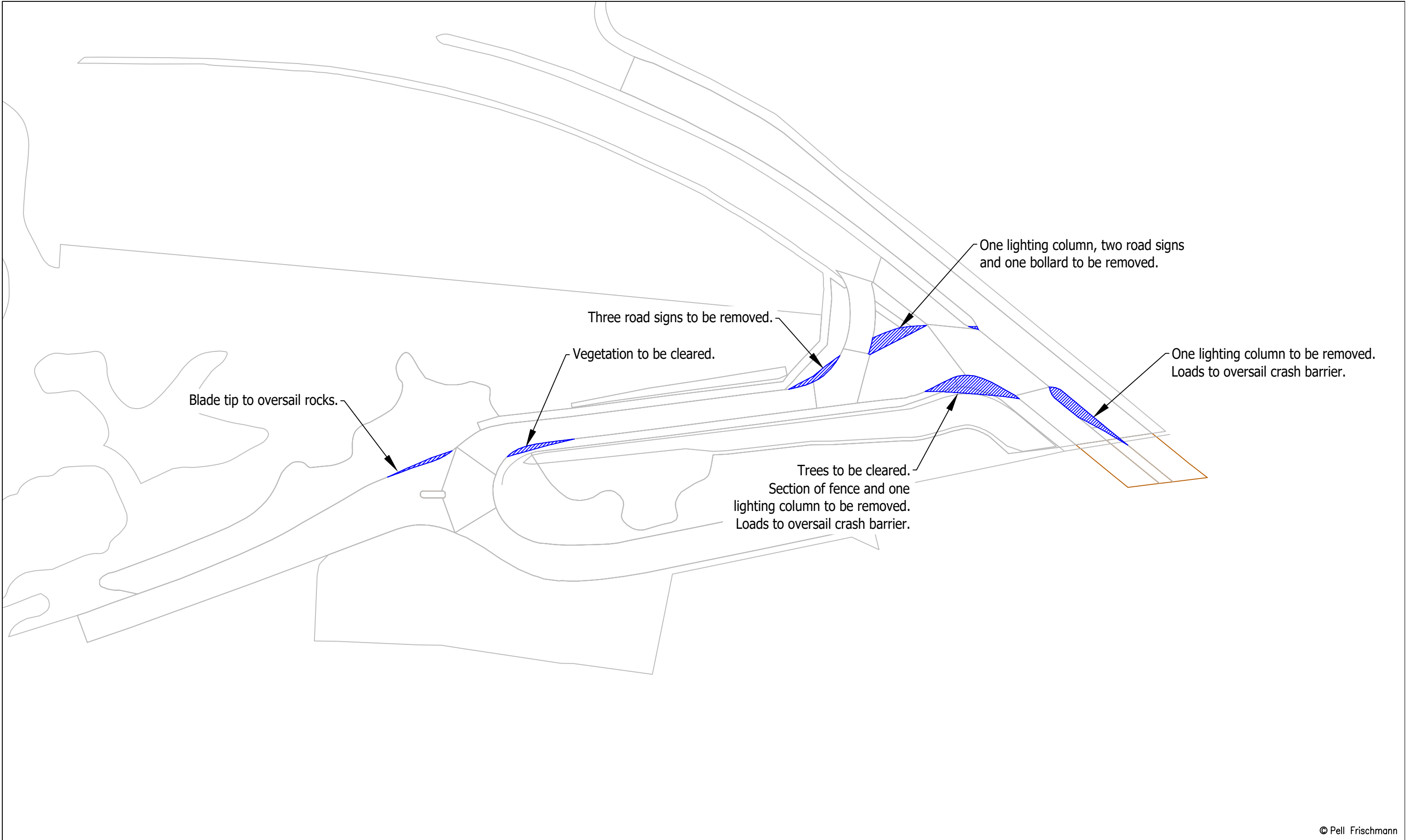


Appendix B Swept Path Assessments



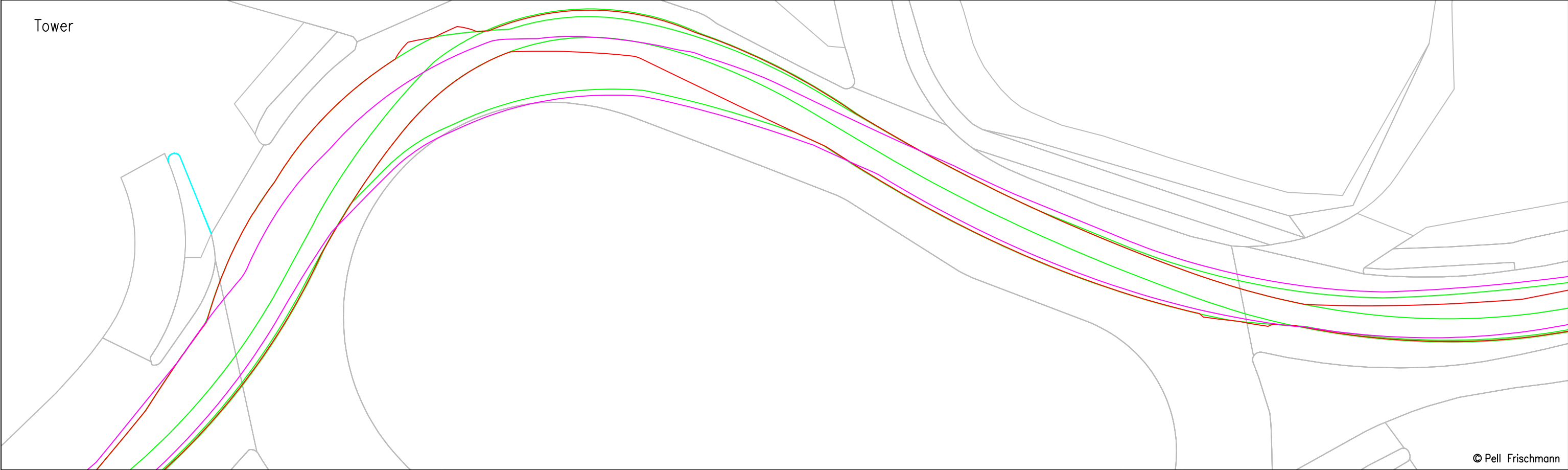
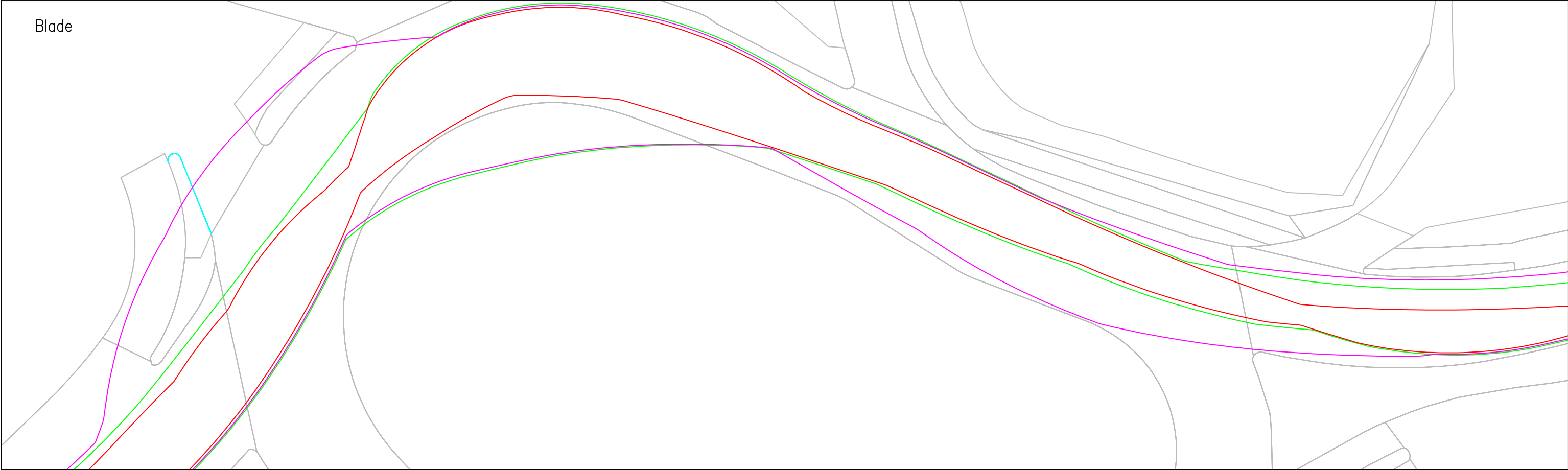
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Pell Frischmann 93 GEORGE STREET, EDINBURGH, EH2 3ES Tel: +44 (0)131 240 1270 Email: pfedinburgh@pellfrischmann.com www.pellfrischmann.com	Project		Y Bryn Wind Farm			Name	Date	Scale			
					Drawn	JS	15/09/2021	1:1000 @ A3			
					Designed	GB	13/09/2021	File No. Y Bryn SG170 SPA JS.dwg			
					Checked	GB	13/09/2021	Drawing Status			
Client	Y Bryn Wind Farm Limited		Drawing Title		Point of Interest		1, 2		Draft		
					Draft						
Key	SPA Location		SG170 Blade & Tower		Drawing No.		Notes:		Revision		
					SK01		1. All mitigation is subject to confirmation through a test run. 2. This is not a construction drawing and is intended for illustration purposes only.		1		
Wheel SPA		Body SPA		Load SPA		Indicative		Over-run		Over-sail	



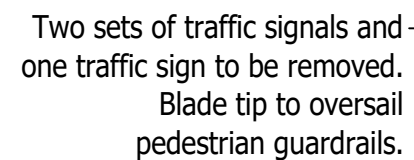
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			Checked	GB	13/09/2021		Drawing Status		
Client	Y Bryn Wind Farm Limited	Drawing Title	SG170 Blade & Tower	Point of Interest		1, 2		Draft	
				Drawing No.	Notes:			Revision	
Key	Wheel SPA Body SPA Load SPA Indicative Over-run Over-sail	SPA Location	Port Access Gate / Fabian Way Junction	SK01A	1. All mitigation is subject to confirmation through a test run. 2. This is not a construction drawing and is intended for illustration purposes only.			1	



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			Drawn	JS	15/09/2021	File No. Y Bryn SG170 SPA JS.dwg		
			Designed	GB	13/09/2021	Drawing Status Draft		
			Checked	GB	13/09/2021			
Client Y Bryn Wind Farm Limited	Drawing Title SG170 Blade & Tower		Point of Interest		3			
			Drawing No. SK02		Notes: 1. All mitigation is subject to confirmation through a test run. 2. This is not a construction drawing and is intended for illustration purposes only.		Revision 1	
Key Wheel SPA Body SPA Load SPA Indicative Over-run Over-sail	SPA Location A483 Ffordd Amazon Roundabout							



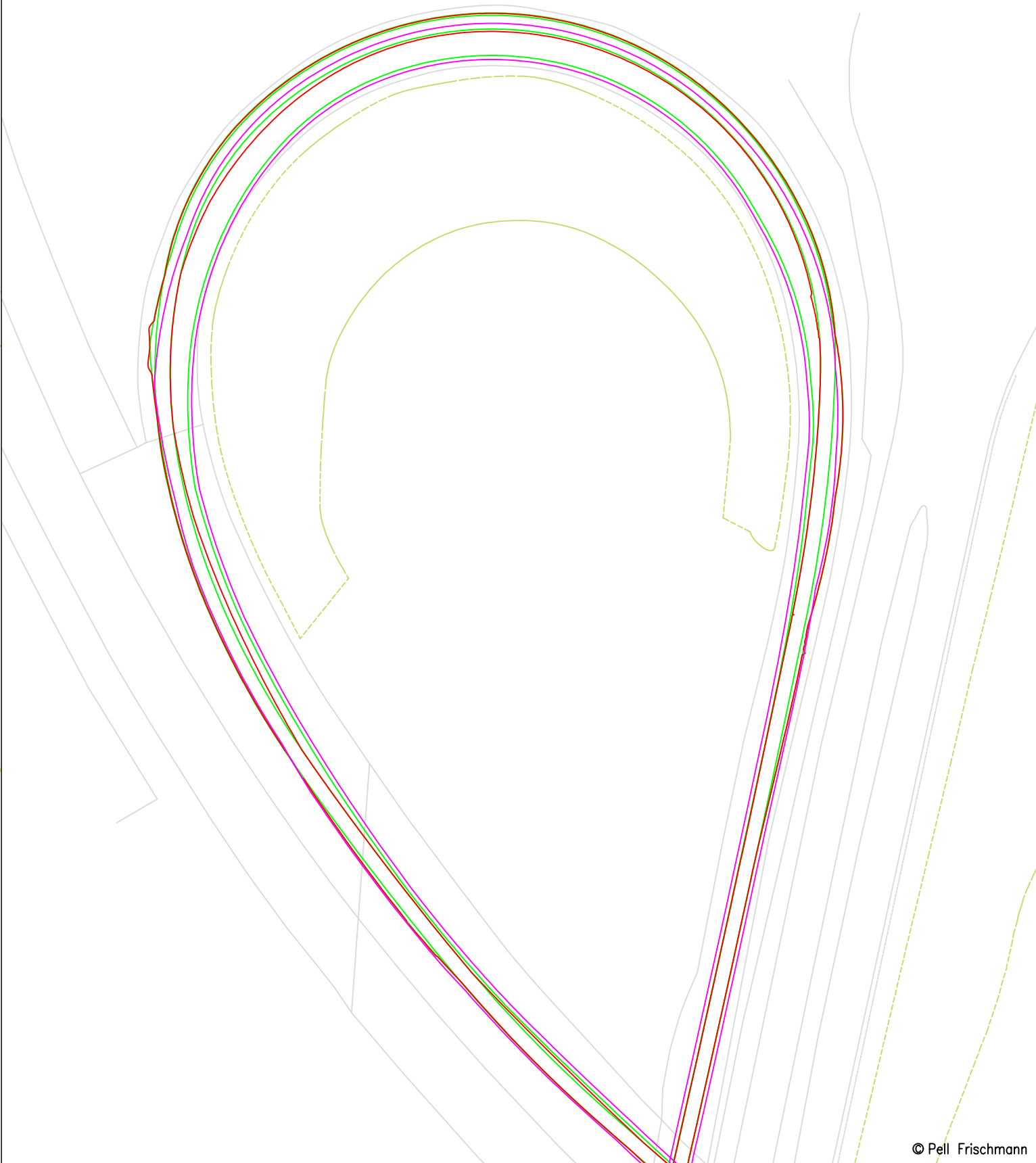
- Two sets of traffic signals and one lit chevron sign to be removed.

Pell Frischmann 93 GEORGE STREET, EDINBURGH, EH2 3ES Tel: +44 (0)131 240 1270 Email: pfeinburgh@pellfrischmann.com www.pellfrischmann.com	Project Y Bryn Wind Farm		Name	Date	Scale 1:500 @ A3		
		Drawn	JS	15/09/2021	File No. Y Bryn SG170 SPA JS.dwg		
		Designed	GB	13/09/2021			
		Checked	GB	13/09/2021	Drawing Status Draft		
Client Y Bryn Wind Farm Limited	Drawing Title SG170 Blade & Tower	Point of Interest		3			
Key Wheel SPA Body SPA Load SPA Indicative Over-run Over-sail	SPA Location A483 Ffordd Amazon Roundabout	Drawing No. SK02A		Notes: 1. All mitigation is subject to confirmation through a test run. 2. This is not a construction drawing and is intended for illustration purposes only.		Revision 1	

Blade



Tower



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			Drawn	JS	15/09/2021	File No. Y Bryn SG170 SPA JS.dwg	
			Designed	GB	13/09/2021	Drawing Status Draft	
			Checked	GB	13/09/2021		
Client Y Bryn Wind Farm Limited	Drawing Title SG170 Blade & Tower		Point of Interest		4		
Key Wheel SPA Body SPA Load SPA Indicative Over-run Over-sail	SPA Location A483 / M4 Onslip		Drawing No. SK03		Notes: 1. All mitigation is subject to confirmation through a test run. 2. This is not a construction drawing and is intended for illustration purposes only.		Revision 1

Appendix C ESDAL Weight Review Consultation

CADW DE CYMRU'N **DDIOGEL** • KEEPING SOUTH WALES **SAFE**

Pencadlys Heddlu

Heol y Bont-faen
Penybont
CF31 3SU

Mewn argyfwng ffoniwch **999**
fel arall, ffoniwch **101**

Gwefan: www.heddlu-de-cymru.police.uk

Police Headquarters

Cowbridge Road
Bridgend
CF31 3SU

In an emergency always dial **999**
for non-emergencies dial **101**

Website: www.south-wales.police.uk

Dear Sir/Madam

This is an automated response to your notification received on 15/09/2021 at 12:14 concerning the movement of an abnormal load.

Our reference for this notification is 'SWP ref no 4215'.

PLEASE ALWAYS INCLUDE THIS REFERENCE IN THE SUBJECT LINE OF ANY EMAIL TO US CONCERNING THIS MOVEMENT.

Your notification has been received by the South Wales Police Abnormal Loads team, who will only contact you if your notification is unsatisfactory.

Notice Period

The Notice Period for STGO and C&U notifications is **2 CLEAR WORKING DAYS**

STGO Clear Working Days refer to Mondays to Fridays ONLY

C&U Clear Working Days refer to Mondays to Saturdays

STGO Refers to the Road Vehicles (Authorisation of Special Types) (General) Order 2003

C&U refers to the Road Vehicles (Construction and Use) Regulations 1986

******* PLEASE BE AWARE *******

NO MOVEMENT of police notifiable abnormal loads are permitted within the South Wales Police area between the following times:

Monday to Friday - 07:00 - 10:00 and 16:30 - 19:00 (Rush Hour)

Saturday - 10:00 - 19:00

Additionally - if any abnormal load exceeds:

Length: 26m (85` 0")

Width: 3.82m (12` 6")

Weight: 101,605kg (100t)

It will not be permitted to travel between the following times:

Monday to Friday - 07:00 - 19:00

Saturday - 10:00 - 19:00

It is the haulier's responsibility to ensure that they travel within the appropriate times.

Alun Hughes

Abnormal Loads Manager

Website: <https://www.south-wales.police.uk>

For live traffic information, please visit: <http://www.trafficwales.co.uk>

From: Matthew Bevan
Sent: 22 September 2021 10:14
Subject: RE: Y Bryn Wind Farm ESDAL

All of our structures along this route are able to deal with the proposed load with no issues.

Kind Regards

Matthew Bevan

Bridges/ Pontydd
Neath Port Talbot County Borough Council/ Cyngor Bwrdeistref Sirol Castell-nedd Port Talbot



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From: rsgbrb
Sent: 16 September 2021 12:06
Subject: RE: Y Bryn Wind Farm ESDAL
Importance: High

Dear Jordan,

Thank you for your enquiry.

As this route uses trunk roads until the exit from the M4, no HRE structures will be affected by the journeys of wind turbine components.

However, I must inform you that there is a disused rail tunnel beneath Mynydd Brombil itself – I'm not sure if anyone involved in the development is aware of its presence? You will see the tunnel and it's orientation if you look at the OS map (Grid Ref. SS831916).

Regards

Tania

Tania Howell

Abnormal Loads Officer (on behalf of **Highways England Historical Railways Estate**)

Jacobs

From: Joshua Southwell
Sent: 16 September 2021 10:59
Subject: RE: Y Bryn Wind Farm ESDAL

Good morning,

I sent this to our structures team who have sent back the following:

A cursory look suggest that that weight would not be an issue. The Haulier would likely have to make arrangements with the Police for escorted travel due to the width. Regarding the length, as far as I am aware, that Haulier would have to scope the route themselves to work out if travel at that length would be possible.

I hope this is of use to you

Kind regards,

Josh Southwell

Technical Administrator – Network Occupancy

Gweinyddwr Technegol – Meddiannaeth Rhwydwaith

South Wales Trunk Road Agent

Asiant Cefnffyrdd De Cymru

Unit 12, Llandarcy House

The Courtyard,

Llandarcy, Neath. SA10 6EJ



From: Lisa Wheelwright-Brown
Sent: 15 September 2021 12:13
Subject: RE: Y Bryn Wind Farm ESDAL

Good Afternoon Jordan

The proposed route Y Bryn Wind Farm ESDAL does not affect any of the Canal & River Trust's infrastructure.

Kind Regards

Lisa Wheelwright-Brown

Technical Administrator

Canal & River Trust

Fearns Wharf, Neptune Street, Leeds, LS9 8PB

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Become a fan on [Facebook](#). Follow us on [Twitter](#) and [Instagram](#)

From: Martyn Wheel
Sent: 15 September 2021 14:24
Subject: RE: Y Bryn Wind Farm ESDAL

Hi Jordan,

Thank you for your enquiry. The route crosses over Baldwins Bridge on the A483 immediately after leaving the docks. I do not foresee any issue with the gross vehicle weight you have indicated.

Cofion/Regards

Martyn

Martyn Wheel

Pontydd a Strwythurau

Bridges & Structures

Croesewir gohebiaeth yn y Gymraeg a byddwn yn ymdrin â gohebiaeth Gymraeg a Saesneg i'r un safonau ac amserlenni.

We welcome correspondence in Welsh and will deal with Welsh and English correspondence to the same standards and timescales



Appendix D Site Access Junction Plans



- NOTE:
1. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION FOR HIGHWAY WORKS AND THE TURBINE MANUFACTURERS STANDARDS.
 2. ALL WORKS TO BE EXECUTED IN ACCORDANCE WITH THE DMRB, THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS, DESIGN MANUAL FOR ROADS AND BRIDGES, AND TRAFFIC SIGNS MANUAL.
 3. ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHERWISE. ALL LEVELS ARE IN METERS AND RELATE TO ORDNANCE DATUM.
 4. DO NOT SCALE FROM ANY DRAWING. WORK TO FIGURED DIMENSIONS ONLY. ANY DISCREPANCIES IN DIMENSIONS ARE TO BE REFERRED TO THE DESIGNER BEFORE WORK IS PUT TO HAND.
 5. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PREPARING ANY WORKING DRAWINGS OR COMMENCING ON SITE.
 6. ALL WORKS BY THE CONTRACTOR MUST BE CARRIED OUT IN SUCH A WAY THAT ALL REQUIREMENTS UNDER THE HEALTH AND SAFETY AT WORK ACT ARE SATISFIED.
 7. ALL WORKS ARE TO BE CARRIED OUT IN COMPLIANCE WITH THE REQUIREMENT OF THE STATUTORY AUTHORITIES AND CONSTRUCTION DESIGN MANAGEMENT REGULATIONS.

- Legend:
- Roads Within M4 Boundary
 - Gravel Track
 - Earthworks

REV	DESCRIPTION	DRN	CHK	APP	DATE
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Pell Frischmann
GEORGE HOUSE, GEORGE STREET, WAKEFIELD WF1 1LY
Telephone +44 (0) 1924 368 145
Email: pfwakefield@pellfrischmann.com
www.pellfrischmann.com

Client
Coriolis Energy Ltd

Project
Y Bryn Access Review

Drawing Title
M4 General Layout - Slip Road Design

	Name	Date	Scale	1:1000	A1
Drawn	JS	Sept 21	File No.	220519 Y Bryn Access Junction.dwg	
Designed	JS	Sept 21	Drawing Status	DRAFT	
Checked	SCM	Sept 21			
Approved	SCM	Sept 21			

Drawing No.	SK01	Revision	-
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Slip Road Location

REV	DESCRIPTION	DRN	CHK	APP	DATE		
Pell Frischmann GEORGE HOUSE, GEORGE STREET, WAKEFIELD WF1 1LY Telephone +44 (0) 1924 368 145 Email: pfwakefield@pellfrischmann.com www.pellfrischmann.com							
Client							
Coriolis Energy Ltd							
Project							
Y Bryn Access Review							
Drawing Title							
Location Plan - M4 Slip Road							
	Name	Date	Scale	1:1000 @ A1			
Drawn	JS	Sept 21	File No. 220519 Y Bryn Access Junction.dwg				
Designed	JS	Sept 21					
Checked	SCM	Sept 21	Drawing Status DRAFT				
Approved	SCM	Sept 21					
Drawing No. SK01A				Revision -			



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Proposed Road

DMRB Standard Junction Design

REV	DESCRIPTION	DRN	CHK	APP	DATE
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Client

Coriolis Energy Ltd

Project

Y Bryn Access Review

Drawing Title

Access Junction - Neath Road

	Name	Date	Scale	1:200 @ A1
Drawn	JS	Sept 21	File No.	220519 Y Bryn Access Junction.dwg
Designed	JS	Sept 21	Drawing Status	DRAFT
Checked	SCM	Sept 21	Drawing No.	SK02
Approved	SCM	Sept 21	Revision	-



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Slip Road Location

REV	DESCRIPTION	DRN	CHK	APP	DATE
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Pell Frischmann

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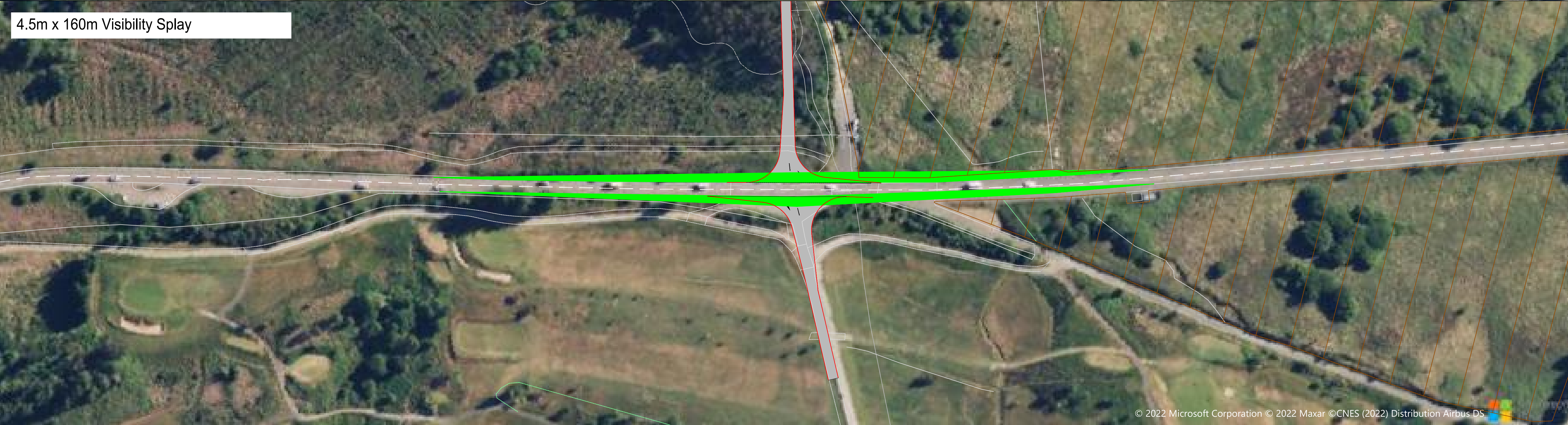
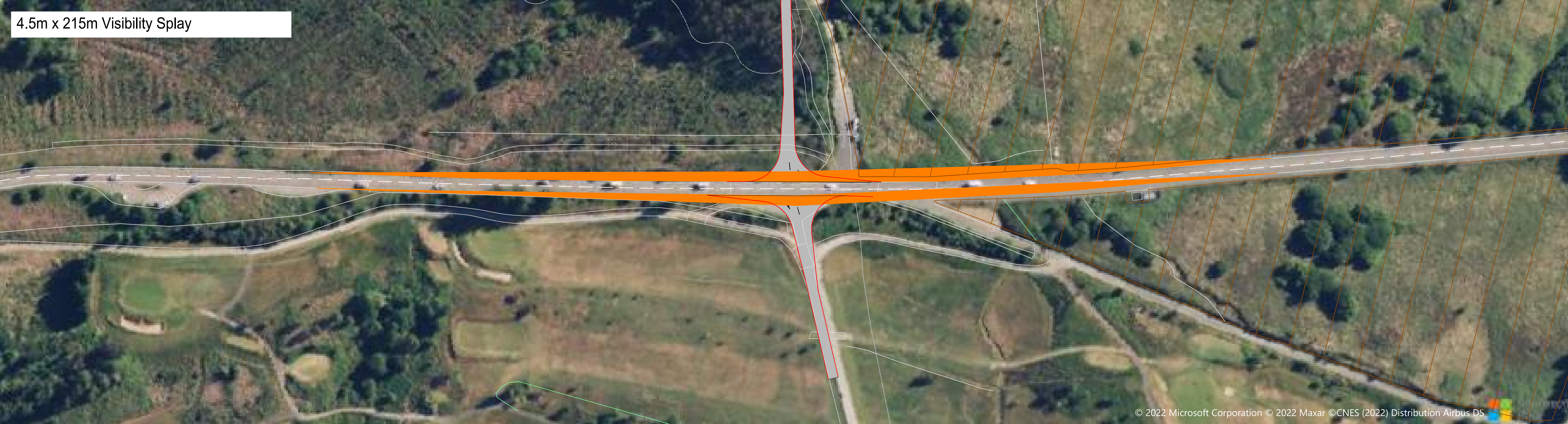
Project

Y Bryn Access Review

Drawing Title

Location Plan - Neath Road Junctions

	Name	Date	Scale	1:1000	A1
Drawn	JS	Sept 21	File No.	220519	Y Bryn Access Junction.dwg
Designed	JS	Sept 21	Drawing Status	DRAFT	
Checked	SCM	Sept 21			
Approved	SCM	Sept 21			
Drawing No.	SK02A		Revision	-	



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- 4.5m x 215m Visibility Splay
- 4.5m x 160m Visibility Splay
- 2.5m x 120m Visibility Splay
- Third Party Land

REV	DESCRIPTION	DRN	CHK	APP	DATE
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Client

Coriolis Energy Ltd

Project

Y Bryn Access Review

Drawing Title

Visibility Splays - Neath Road

	Name	Date	Scale
Drawn	JS	Sept 21	1:1000 @ A1
Designed	JS	Sept 21	File No. 220519 Y Bryn Access Junction.dwg
Checked	SCM	Sept 21	Drawing Status
Approved	SCM	Sept 21	DRAFT

Drawing No.	Revision
SK02B	-

Appendix B Point of Interest Plan

