Glenvernoch Windfarm **26/04/2024**

Reference number GB01T19G67-ALA-011

ABNORMAL LOADS ASSESSMENT

SYSTRA

GLENVERNOCH WINDFARM

ABNORMAL LOADS ASSESSMENT

IDENTIFICATION TABLE	
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APPROVAL

Version	Name		Position	Date	Modifications
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2	Author				
	Checked by				
	Approved by				

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1. INTRODUCTION

1.1.1 SYSTRA has been commissioned by EnergieKontor UK Ltd to undertake an Abnormal Loads Assessment (ALA) for the proposed Glenvernoch Windfarm development, which is located to the northwest of Newton Stewart and to the west of the A714.

1.1.2 The development is for a number of turbines which will be manufactured off-site and transported to the site for assembly via the port of entry at KGV Docks in Glasgow. The longest component parts of the turbine are the blades, which will be approximately 85m long and would be the "worst case" component in terms of the length and width combination.

1.1.3 SYSTRA has undertaken a review of the route from KGV docks to the site and have identified 27 pinch points on the route to the site access point. The identified pinch points are on the route from the harbour to the site access that may cause a problem to abnormal load vehicles. The pinch points are points of interest (bends, junctions etc) that will need to be overcome in order to facilitate the safe and efficient movement of the abnormal load vehicles. Swept paths have been undertaken based on the movement of 85m blades to assess whether the route is feasible and to assess the level of mitigation that may be required on the route as well as potential requirements for third party land.

1.2 Description of Route to Site

1.2.1 As is standard practice with wind turbine developments, the turbine components will be delivered to the chosen PoE and then transported to site via the public road network. The abnormal load vehicles are likely to require a police escort for the duration of the route.

1.2.2 For the purposes of this assessment, it has been assumed that the components will be transferred by sea to Glasgow KGV Docks and then brought to site via the M8, M74, M6, A75 strategic roads and then via the local road network – primarily an Unclassified Road to the west of Newton Stewart (to bypass Newton Stewart) and finally the A714 to the site access point. KGV docks in Glasgow is familiar with the importation of wind turbine components and has suitable facilities to accommodate the size of components being considered for this project.

1.2.3 It is anticipated that the route to the site from the port of delivery will generally be of a suitable standard to accommodate the abnormal loads associated with the proposed Development. The following route has been identified as being potentially suitable for abnormal loads vehicles travelling to the site:

- From KGV docks onto the M8;
- Transporter vehicles will then join the M74 from the M8 to travel south-east towards Abington where the route continues onto the A74(M);
- The vehicles will then join the M6 and continue to Carlisle;
- At Carlisle, the vehicles will exit the M6 at Rose Hill Roundabout to return back onto the M6 to head north-east;
- The transporters will exit the M6 at Grena Green to join the A75 to heading west through Dumfries and on to Newton stewart.
- At Newton Stewart, the vehicles will travel north on an Unclassified Road on the west sid of Newton Stewart before joining the A714 for 9km to reach the site access point.

1.2.4 **Figure 1** indicates the path of the preferred access route to site. **Figures 2, 3, 4, 5, 6 and 7** identify the pinch points which have been identified along the route requiring swept path analysis.

Figure 1. Abnormal Loads Route

Figure 2. Location of Pinch Points 1 – 4

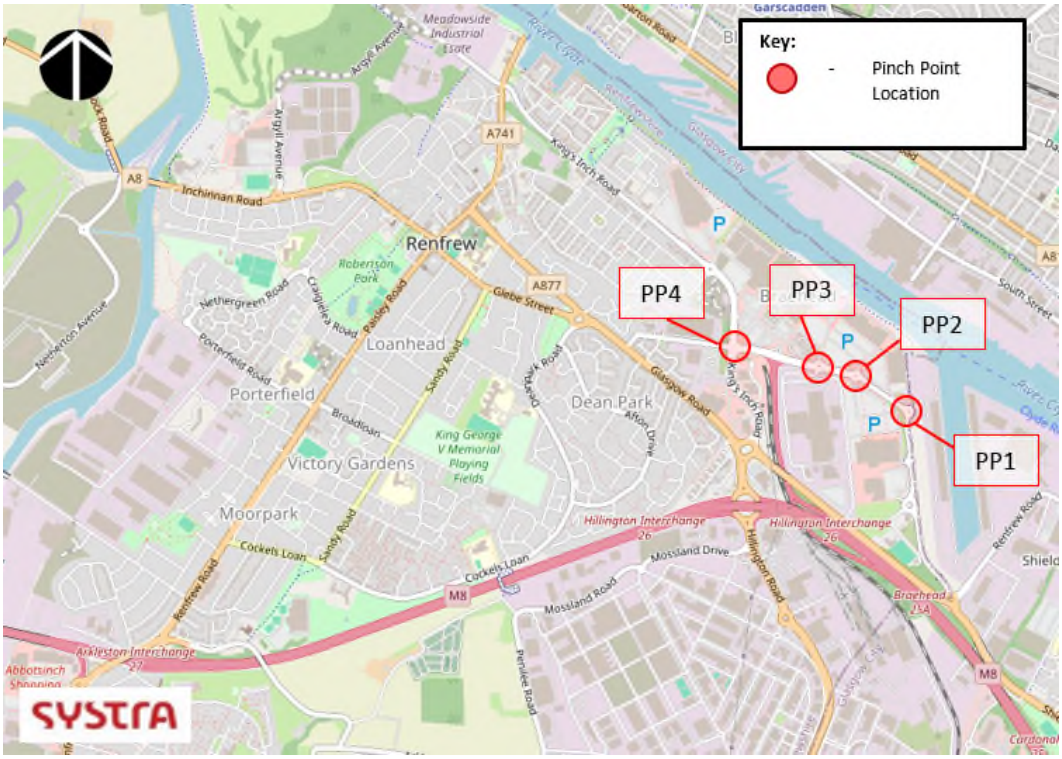


Figure 3. Location of Pinch Point 5

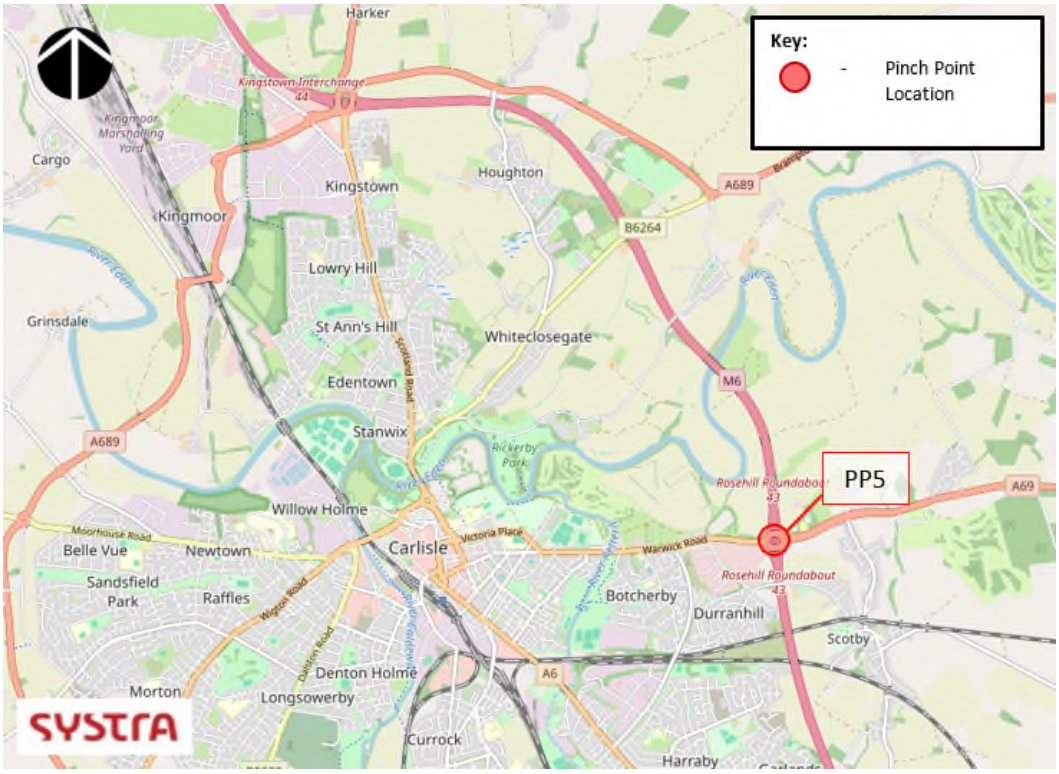


Figure 4. Location of Pinch Points 6 – 12

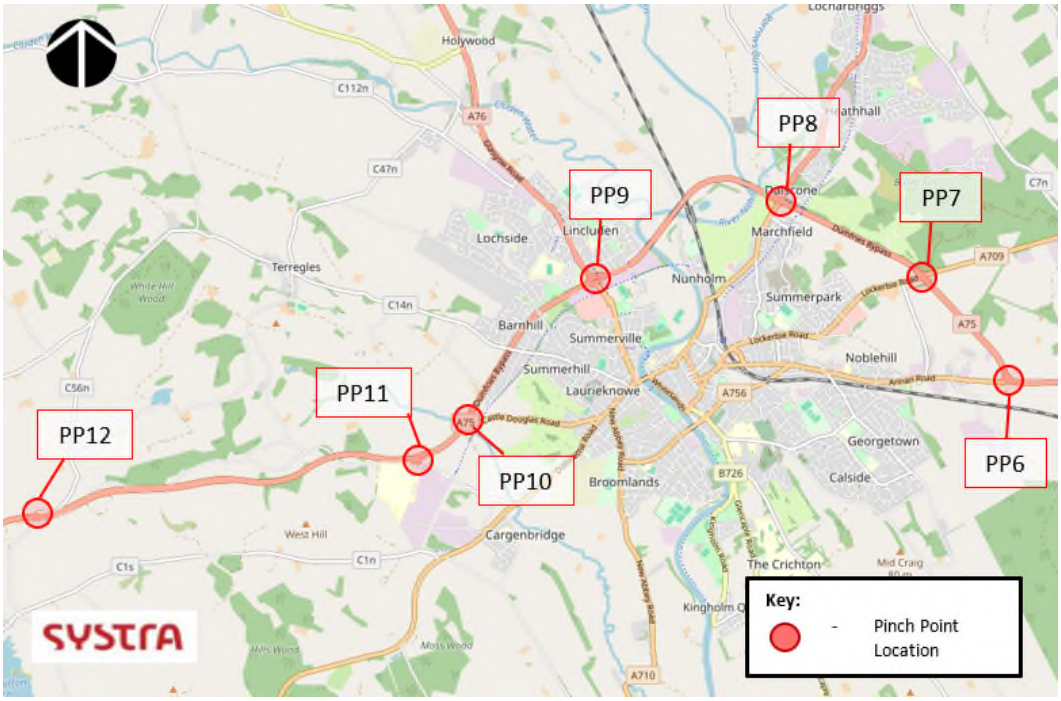


Figure 5. Location of Pinch Points 13 – 14

Figure 6. Location of Pinch Points 15 – 19

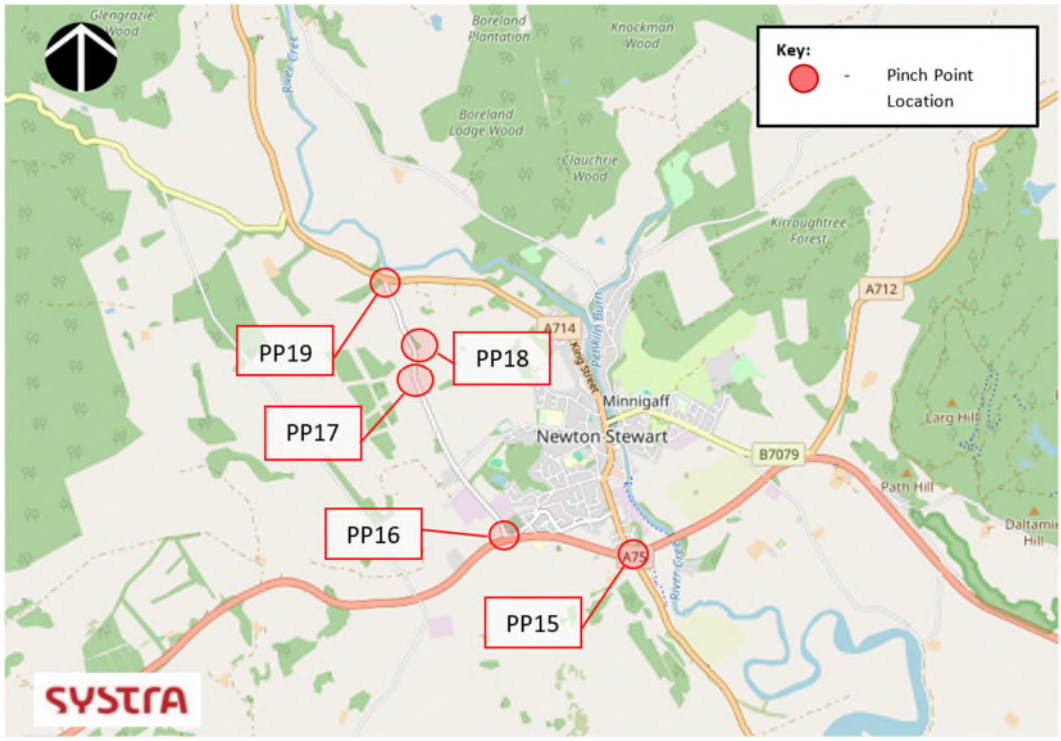
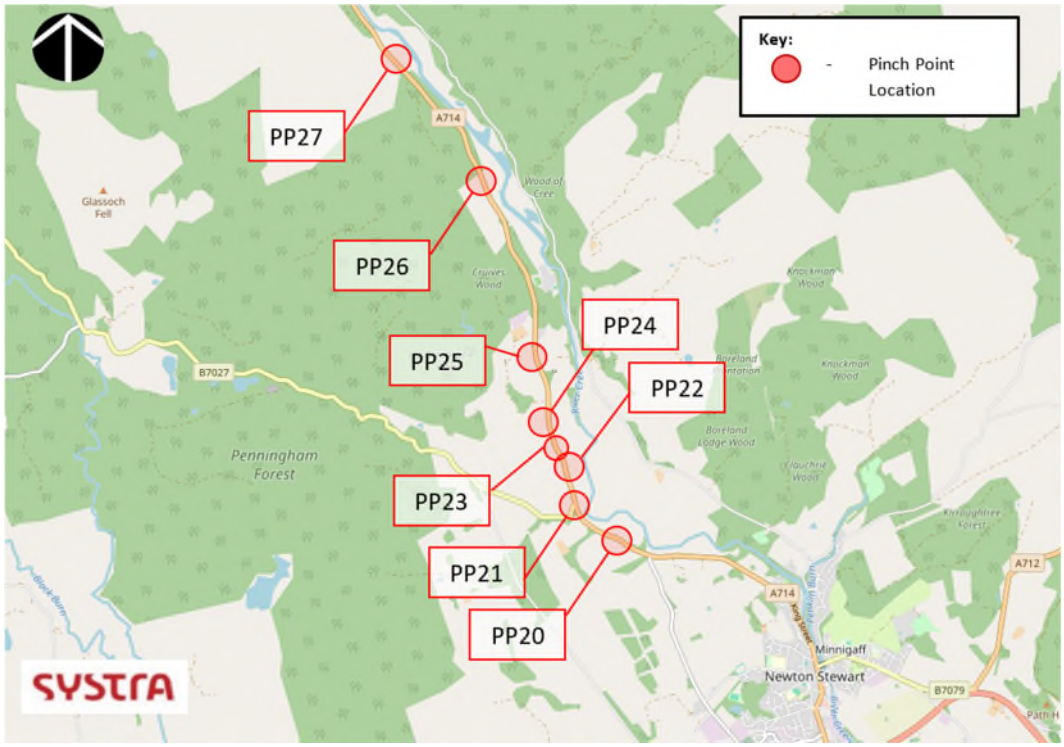


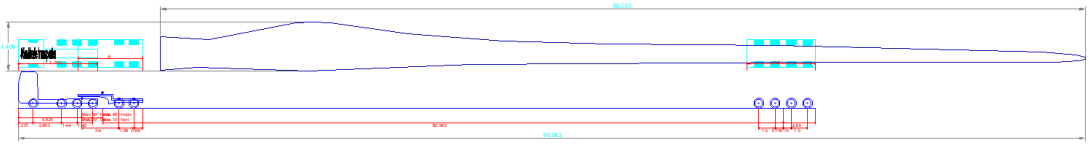
Figure 7. Location of Pinch Points 20 - 27



1.3 Turbine Transport Requirements

1.3.1 For the purposes of this assessment, an 85m long turbine blade transport vehicle have been assessed. The 85m blade from the turbine would be loaded onto a "bogie trailer". The Turbine Delivery Vehicle (TDV) would total 63.24m in length from the front of the tractor unit to the rear of the bogie. The turbine blade would overhang the end of the bogie by ~25m. An indicative drawing of the TDV is shown in **Figure 2** and provided as drawing *GB01T19G67/I/SPA/29* within **Appendix A**.

Figure 8. 85m Turbine Delivery Vehicle



1.3.2 At this stage in the design process, the haulier of the wind turbine blades is not yet known nor the exact specifics of the vehicles that they will use. However, from experience of previous developments and from the details of the components to be moved, it is possible to estimate (with some degree of accuracy) the specifics of the design vehicles that will be used to allow a route assessment to be undertaken.

1.3.3 SYSTRA has used the computer package AutoTrack to produce a swept path analysis for the identified pinch points on the delivery route.

1.3.4 It is noted that the trailer units associated with the design vehicle for the transportation of the blades is extendible so on delivery of the abnormal load, the trailer can be reduced in length. In these circumstances, the Autotracking and route assessment has only been undertaken for the route to the site and not the route away from site.

1.4 Swept Paths

1.4.1 The swept paths for the 27 identified pinch points and site access options are contained within **Appendix A** while a summary of the impacts and mitigation requirements at each pinch point is contained within **Section 2** of this report.

2. SWEPT PATH OUTCOME AND CONCLUSIONS

2.1 Summary

2.1.1 This report has identified a preferred abnormal loads route to site**.** A number of pinch points have been identified on the preferred route which have been assessed in terms of assessing the swept paths of the abnormal load vehicles travelling through the pinch points.

2.1.2 The swept path plans are contained within the Appendix to this report. The plans indicate areas over over-run and over-sail as well as highlighting potential clashes with street furniture and potential infringements into third party land. **Table 1** summarises the main issues that have been highlighted from the swept path exercise undertaken, for the blade transport vehicles.

Table 1. Summary of Required Mitigation for Measure for Blade Transport Vehicle

PINCH POINT	STREET FURNITURE REMOVAL	TEMPORARY PAVING	THIRD PARTY LAND
PP1 – King's Inch Drive / Port Access Roundabout	2 No. Road signs	Centrl islnd of roundabout lready modified to allow overrun.	None anticipated.
PP2 – King's Inch Drive / Ikea Access Roundabout	2 No. Road signs 1 No. Lighting column	Transition ramps required to allow vehicle to overrun southern footway. Existing overrun area in centrl island looks suitable to accommodate overrun.	None anticipated.
PP3 – King's Inch Drive / Marlinford Road Roundabout	None required.	None required.	None anticipated.
PP4 – King's Inch Drive/M8 Junction	1 No. Lighting column 1 No. Road sign 3 No. Traffic lights 1 No. Pedestrian signal 11m section of steel pedestrian barrier	Transition ramps required to allow vehicle to over-run footway. Area of temporary paving required on the inside of the turn in verge area.	Potential third party land agreements required to accommodate the over-sail of body and blade. Third party land checks required.
PP5 – M6 Rose Mill Roundabout	10 No. Road signs 12 No. Lighting columns 29 No. Bollards	None required.	None anticipated.
PP6 – Dumfries Bypass (A75) / A780 Roundabout (contra-flow movement)	1 no. Lighting column 2 No. Bollards 2 No. Road signs	Transition ramps required to allow vehicle to over-run footway and eastern splitter island.	None anticipated.

PINCH POINT	STREET FURNITURE REMOVAL	TEMPORARY PAVING	THIRD PARTY LAND
PP7 – Brownrigg Roundabout (A75/A709)	4 No. Lighting columns 3 No. Road signs	Transition ramps required to allow vehicle to over-run roundabout.	None anticipated but extents of public road should be checked.
PP8 – Bloomfield Roundabout (A75 / A701)	6 No. Bollards 1 No. Road sign	Transition ramps required to allow vehicle to over-run southern footways.	None anticipated but land check required to southeast of roundbout in over-sail area.
PP9 – Cuckoo Bridge Roundabout (A75 / A76)	1 No. Lighting column 1 No. Road sign	Transition ramps required to allow vehicle to over-run southern footways.	None anticipated but land to east of roundabout should be checked to ensure that it is under rods authority control.
PP10 – Dumfries Bypass - A75 / A780 Roundabout	2 No. Lighting column 5 No. Road signs	Transition ramps required to allow vehicle to over-run northern splitter island and roundabout. Noted that roundbout has already been modified to allow overrun.	None anticipated.
PP11 – Garroch Roundabout (A75 / DGRI Access Road)	2 No. Reflective Bollards 3 No. Road Signs	Transition ramps required to allow vehicle to over-run roundabout and splitter island. New over-run area to be formed within central island.	None anticipated.
PP12 – Drummore Roundabout (A75)	4 No. Road Signs	Transition ramps required to allow vehicle to over-run roundabout. The existing overrun area in the central island will need to be widened to the north.	None anticipated.
PP13 – Allanton Roundabout (A75 / A745)	2 No. Lighting columns 3 No. Road signs 1 No. Bollard	Transition ramps required to allow vehicle to over-run the roundabout. Noted that overrun area has already been formed in central island which vehicle is able to stay within.	None anticipated.

PINCH POINT	STREET FURNITURE REMOVAL	TEMPORARY PAVING	THIRD PARTY LAND
PP14 – Castle Douglas Bypass Roundabout (A75 / B736)	2 No. Lighting columns 6 No. Road signs 2 No. Bollards	Transition ramps required to allow vehicle to over-run of the roundabout and eastern splitter island. Eisting overrun area in centrl island needs to be extended to accommodate overrun.	None anticipated.
PP15 – Newton Stewart Bypass Roundabout (A75 / Wigtown Road)	6 No. Road signs 4 No. Bollards	Transition ramps required to allow vehicle to over-run of roundabout and both the eastern and western splitter islands. A large overrun area needs to be formed across the roundabout central island which is raised soft landscaping.	None anticipated.
PP16 – Newton Stewart Bypass (A75) /Unnamed Road right hand turn	6 No. Road signs 4 No. Bollards 1 No. Telegraph pole	Transition ramps and temporary paving required to allow vehicles to over-run northern verge on A75 and western verge on unnamed road.	None anticipated but ownership in northern verge area should be checked.
PP17 – Right hand bend on Unnamed Road	None required	None anticipated.	None anticipated.
PP18 – Left hand bend on Unnamed Road	None required	None anticipated.	None anticipated.

PINCH POINT	STREET FURNITURE REMOVAL	TEMPORARY PAVING	THIRD PARTY LAND
PP19 – Unnamed Road/A714 Junction (Left hand turn)	None anticipated although height of bridge parapet to be checked.	Transition ramps and temporary paving required to allow vehicles to over-run western and eastern verge areas on unnamed road and northern verge on A714. Noted that there appears to be an ovrrun area already constructed on west side of junction.	Potential third party land agreements required to accommodate the over-run and over-sail of vehicles on both sides of unnamed road. Third party land checks required.
PP20 – Left hand bend on the A714	None required	None anticipated.	None anticipated.
PP21 – Right hand bend on the A714, approx. 500m north-west of PP20	None required	None anticipated.	None anticipated.
PP22 – Left hand bend on the A714, approx. 550m north of PP21	None required	None anticipated.	None anticipated.
PP23 – Right hand bend on the A714	None required	None anticipated.	None anticipated.
PP24 – Right hand bend on the A714	None required	None anticipated.	None anticipated.
PP25 – Right hand bend on the A714, approx. 800m north of PP24	None required	None anticipated.	None anticipated.

PINCH POINT	STREET FURNITURE REMOVAL	TEMPORARY PAVING	THIRD PARTY LAND
PP26 – Right hand bend 1.3km south of site access on the A714	None required	None anticipated.	None anticipated.
PP27 – Left hand turn on the A714 onto site access	Section of hedges for access	New overrun area needed at site access	None anticipated.

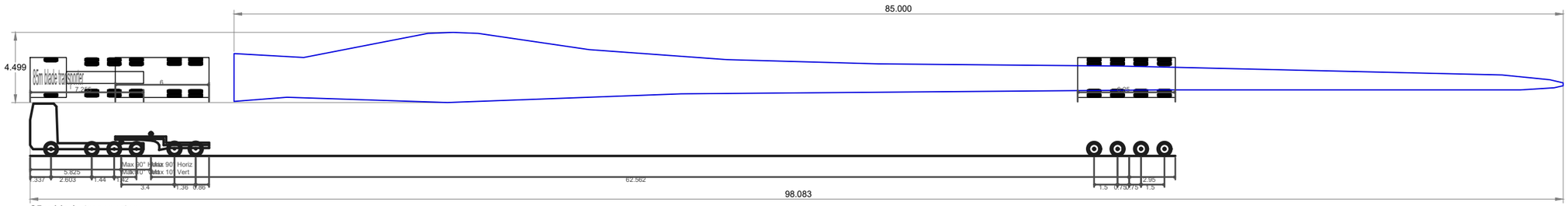
2.2 Conclusion

2.2.1 It is considered that a technically feasible route to site exists for the transportation of abnormal loads. In light of the assessment undertaken, the following recommendations are made:

Recommendations

- If the necessary mitigation measures are made then the route can be navigated by vehicles carrying wind turbine components to the proposed site;
- Police escort or Pilot car will be required to accompany abnormal loads in order to assist with traffic control and the control of oncoming traffic;
- It is recommended to have adequate warning signs implemented to warn other road users at critical points along the route;
- All hedges, shrubs, bushes, trees and overhanging branches along the nominated routes must be trimmed from within carriageway verges;
- Specific street furniture has been nominated in this report for removal to facilitate over-sailed and 'swept' areas;
- Full carriageway widths must be available along the entirety of the route. Measures to remove parked vehicles must therefore be in place;
- Measures to assist the vehicle negotiating the kerbed changes in level at footways, roundabouts, pedestrian refuges etc. will be required; and
- Steel road plates may be required at locations where the vehicle overruns utility boxes or footways.
- A vertical alignment check of the route will be required post-planning.
- The route requires to be checked for structures post-planning.
- Land ownership checks should be progressed at this stage.

APPENDIX A – SWEPT PATH PLANS



85m blade transporter

Overall Length	73.237m
Overall Width	2.550m
Overall Body Height	3.335m
Min Body Ground Clearance	0.375m
Max Track Width	2.550m
Lock to lock time	0.10s
Wall to Wall Turning Radius	9.800m

GENERAL NOTES

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2. Dimensions are in mm and levels are in m OD unless stated otherwise.

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Project: Glenvernoch Wind Farm

Title: 85m Blade Transporter Vehicle Details

Drawn	Checked	Approved
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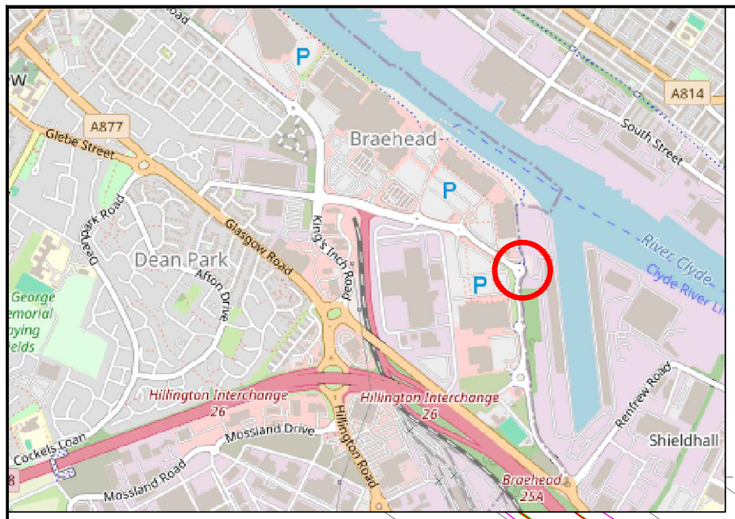

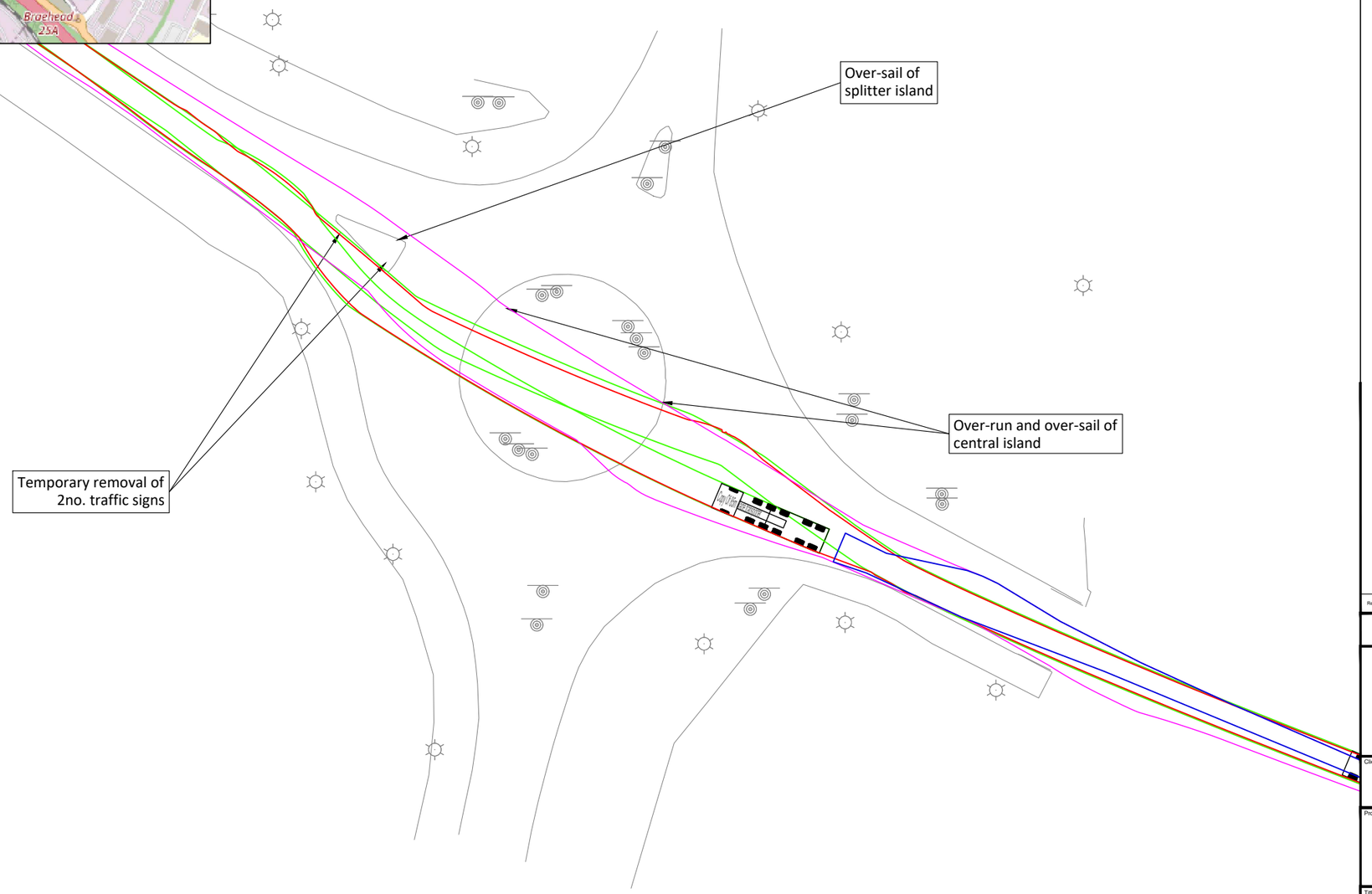

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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

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Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 1

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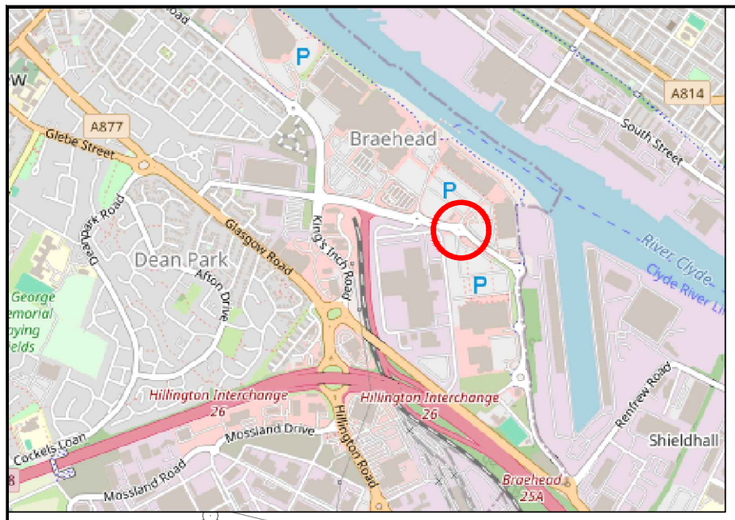

Temporary removal of 2no. traffic signs

Over-run and over-sail of central island

Temporary removal of 1no. lighting column

Over-sail of verge

Over-run and over-sail of verge

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Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 2

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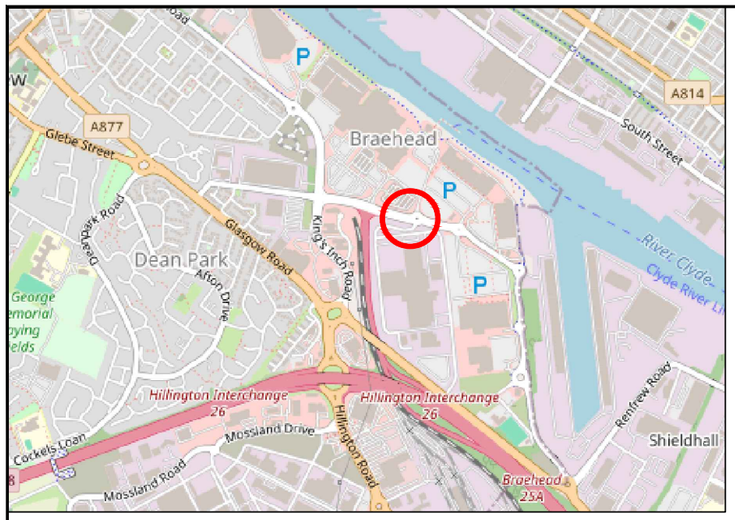

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Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 3

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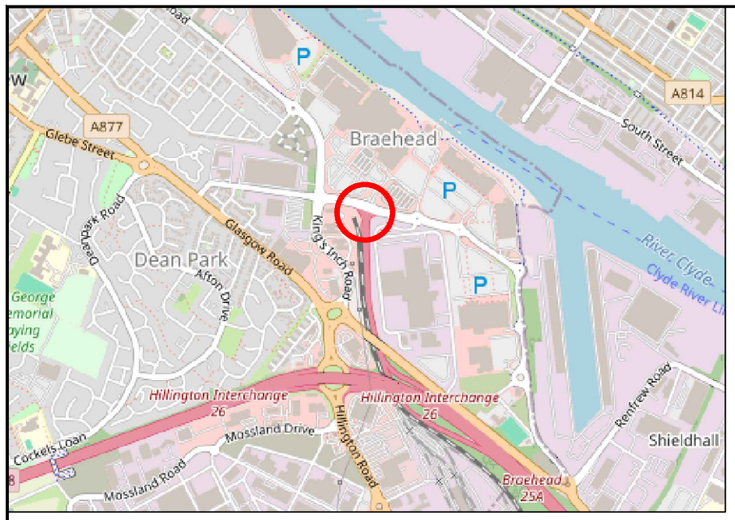

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85m Blade Transporter
Pinch Point 4

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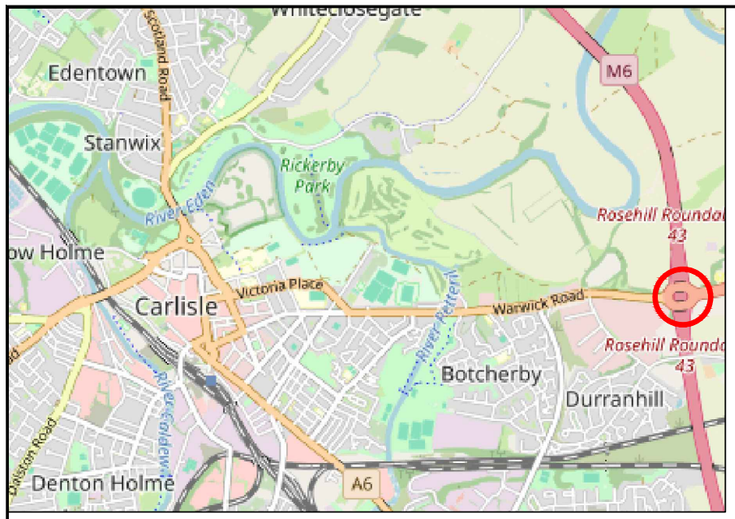

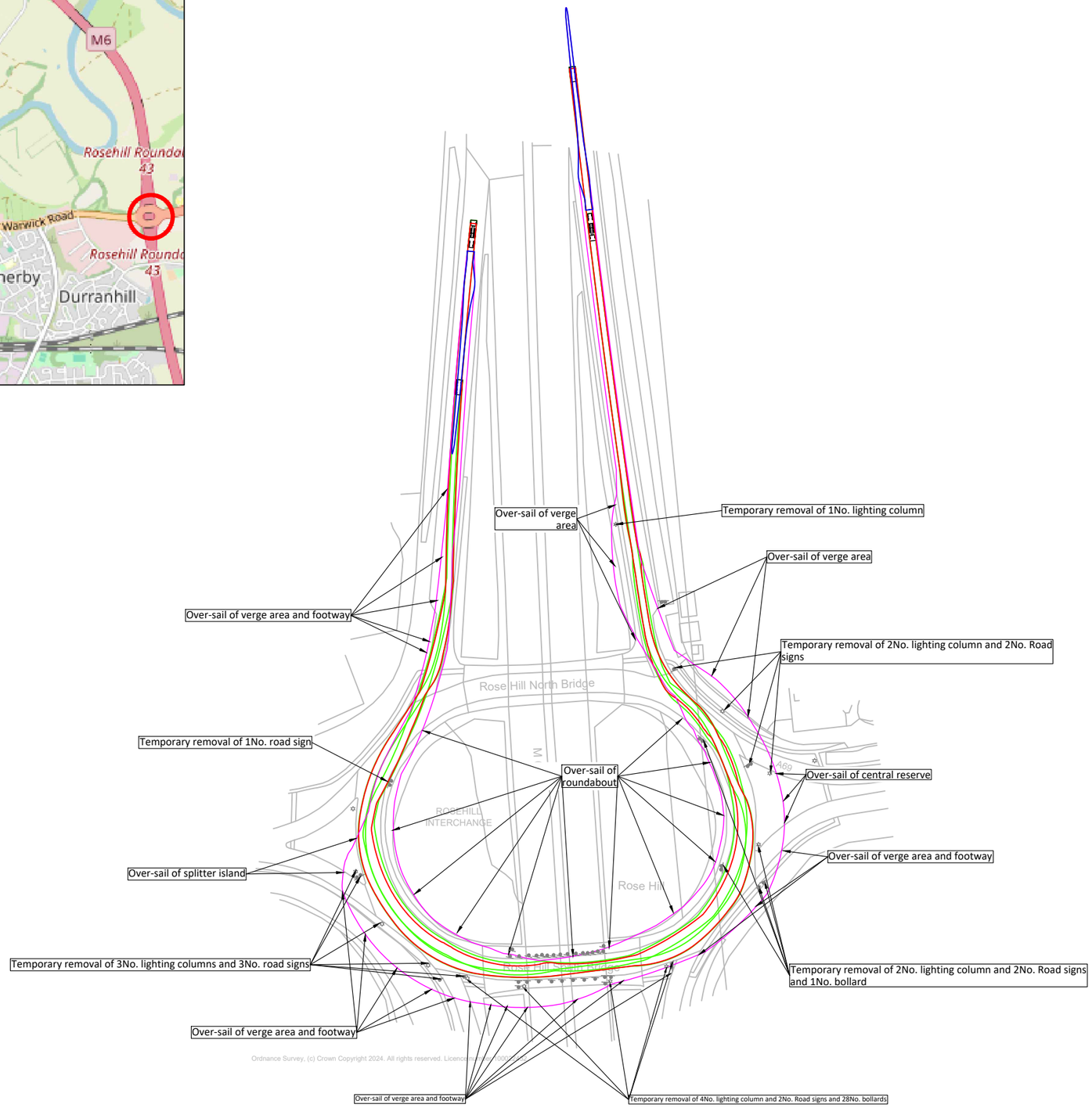

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85m Blade Transporter
Pinch Point 5

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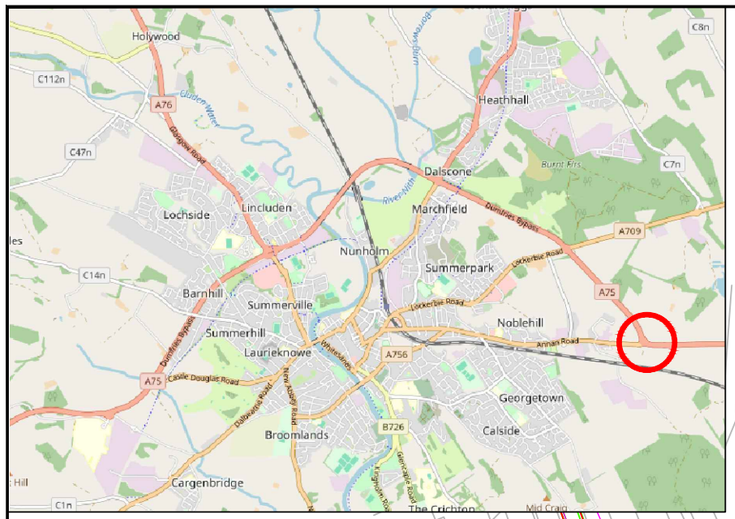

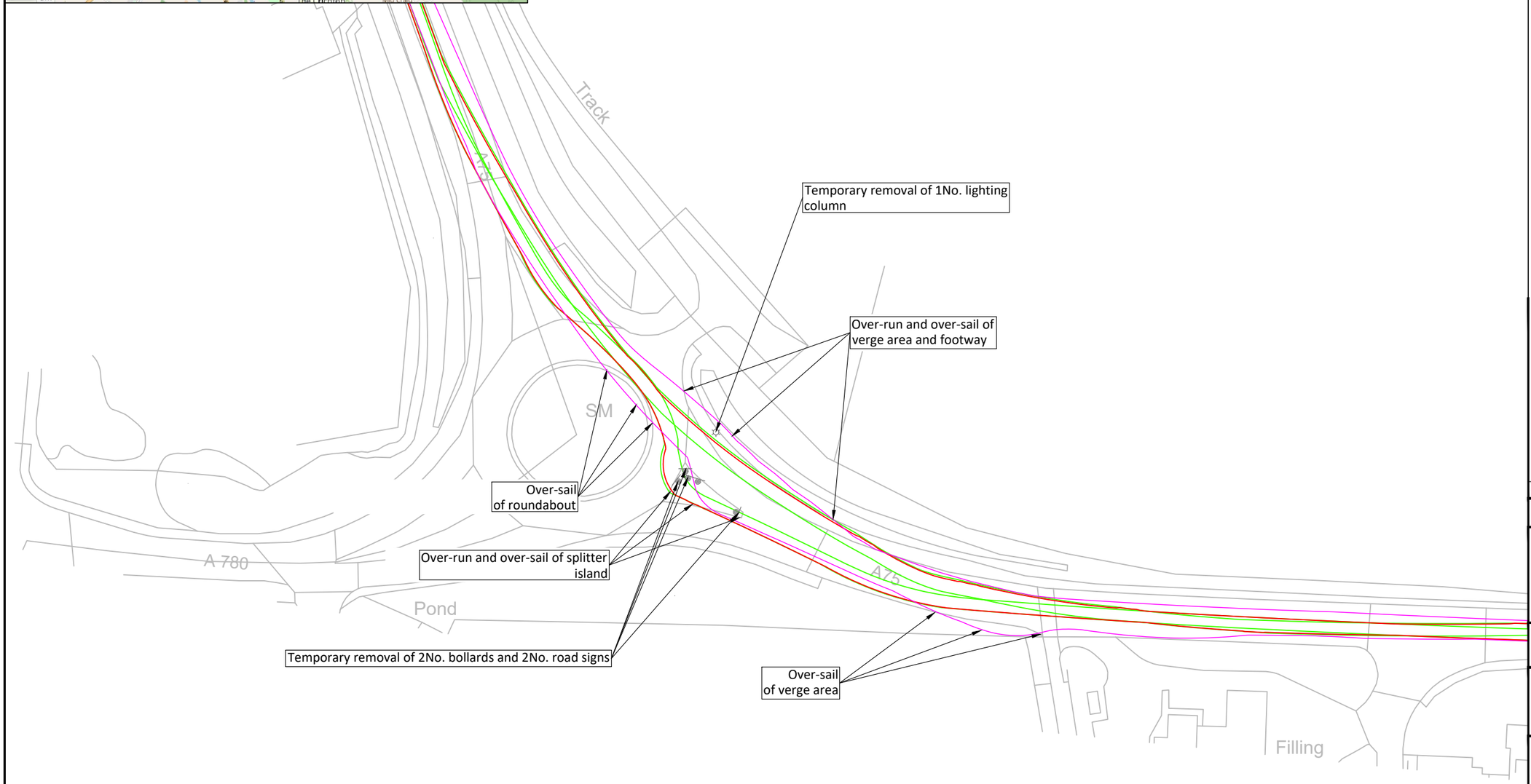

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Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 6

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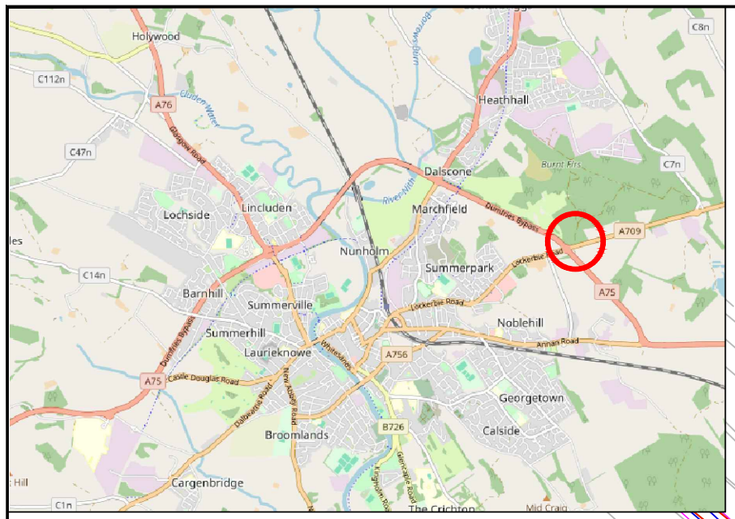

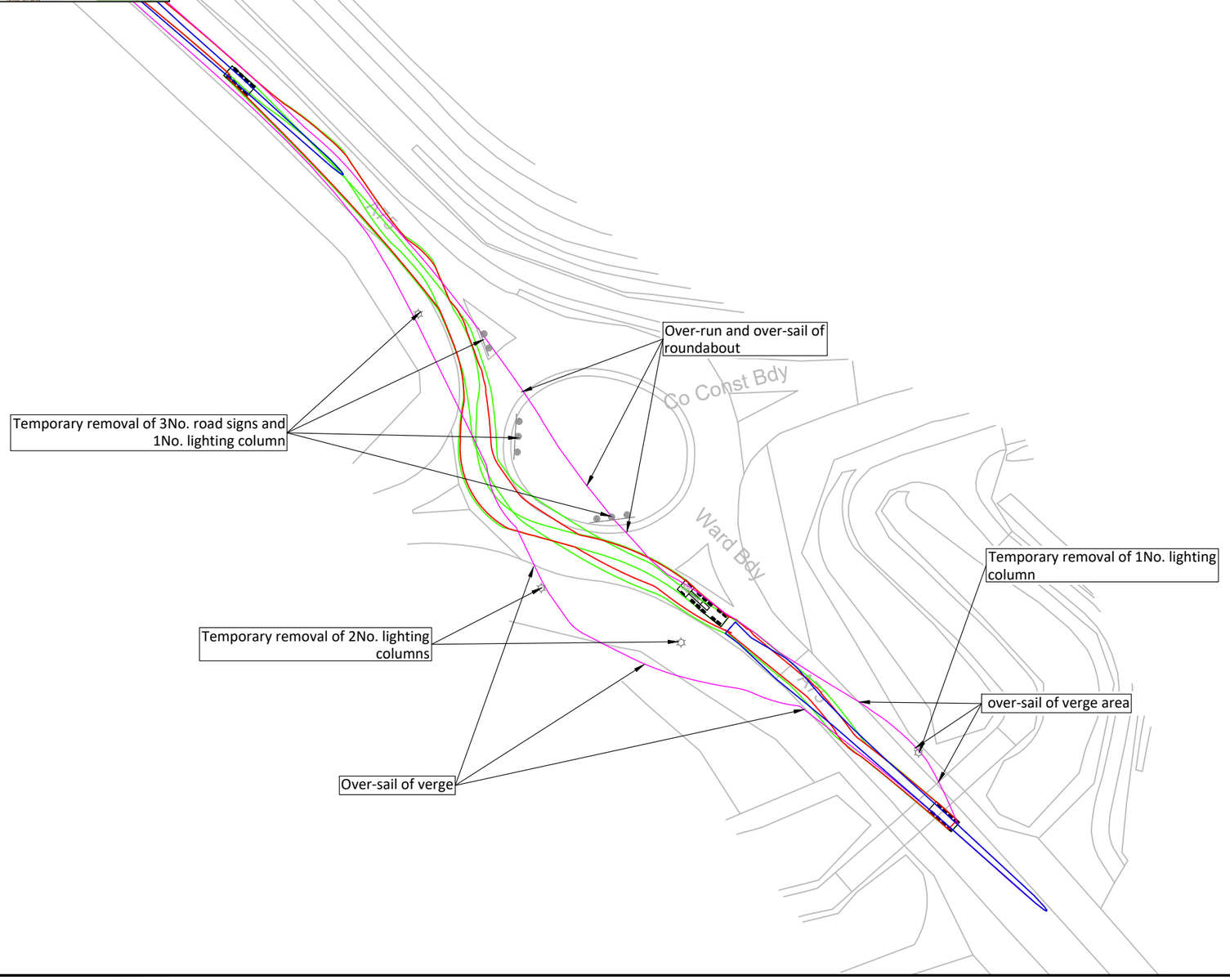

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Pinch Point 7

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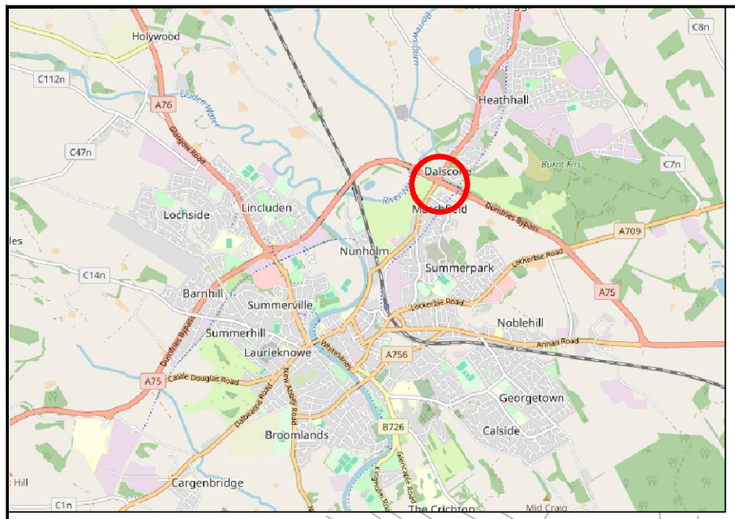
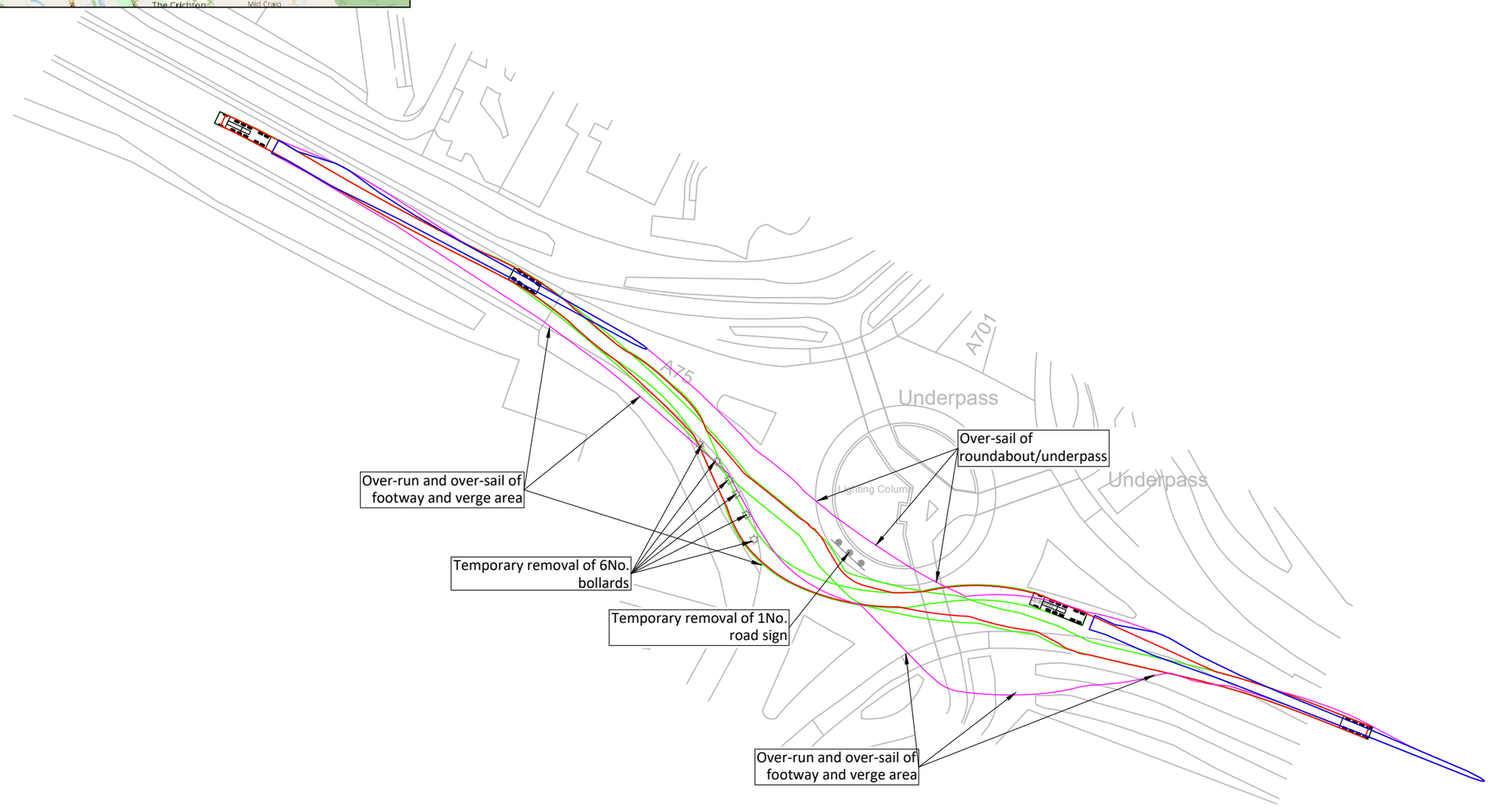
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/07	-





GENERAL NOTES

1. Do not scale from this drawing.
2. Dimensions are in mm and levels are in m OD unless stated otherwise.

Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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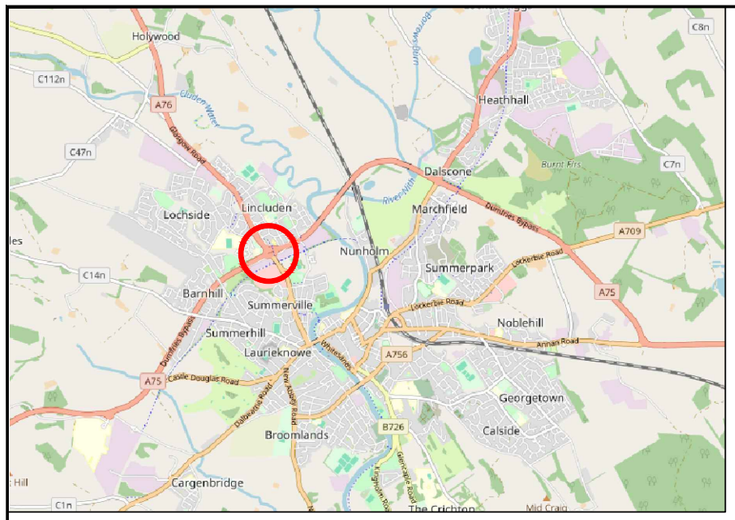
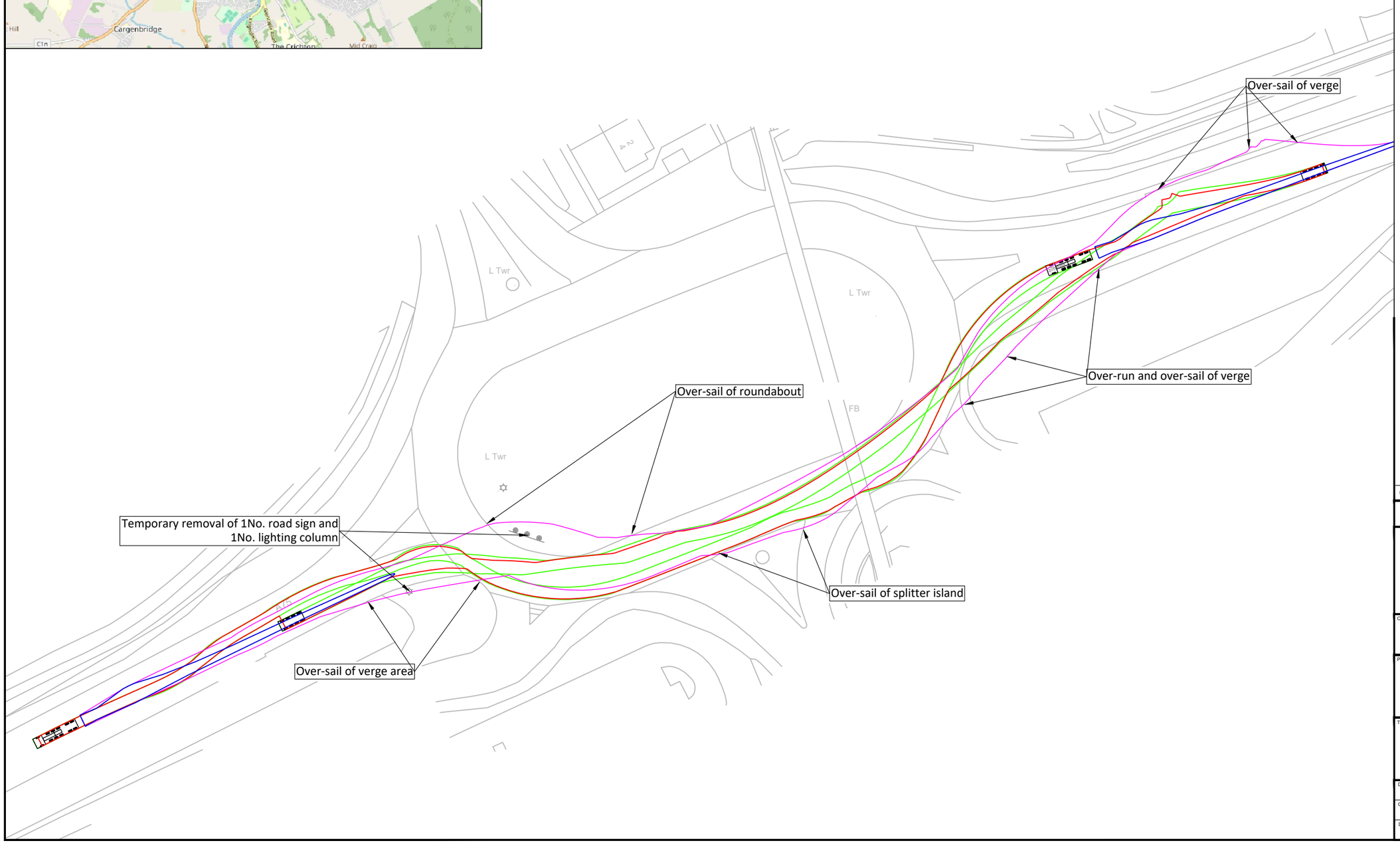
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 8

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/08	-





GENERAL NOTES

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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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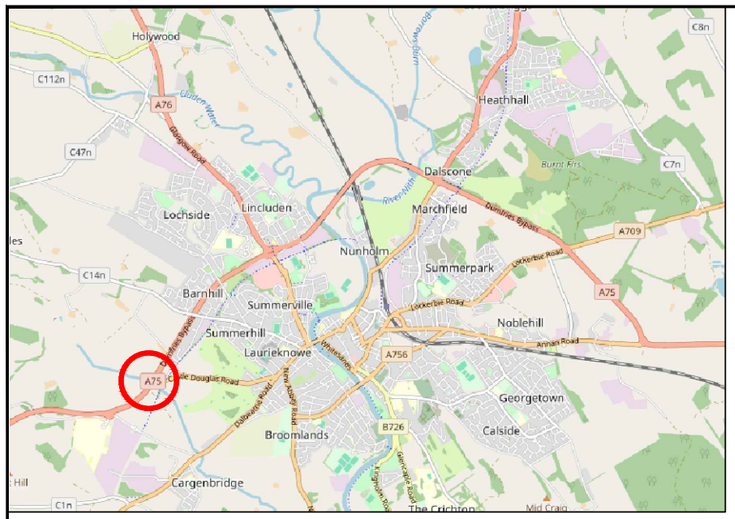
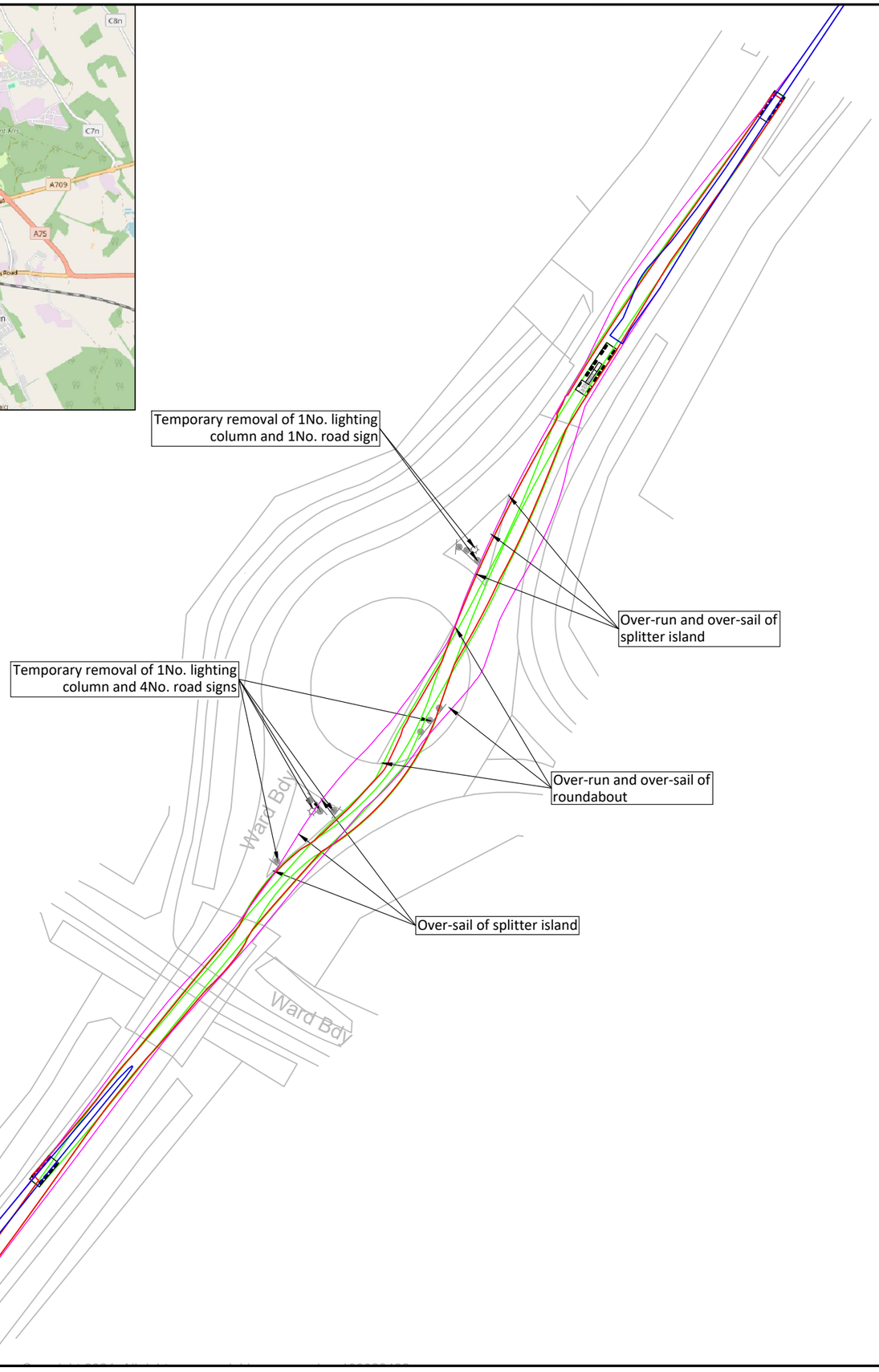
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 9

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/09	-





GENERAL NOTES

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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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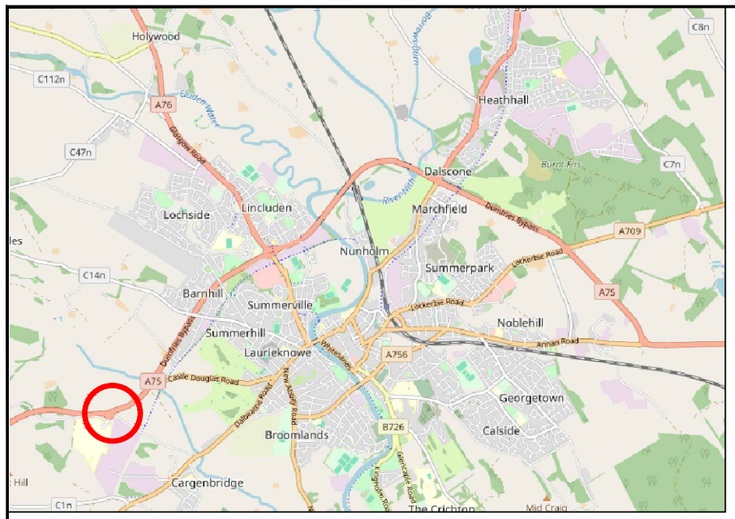
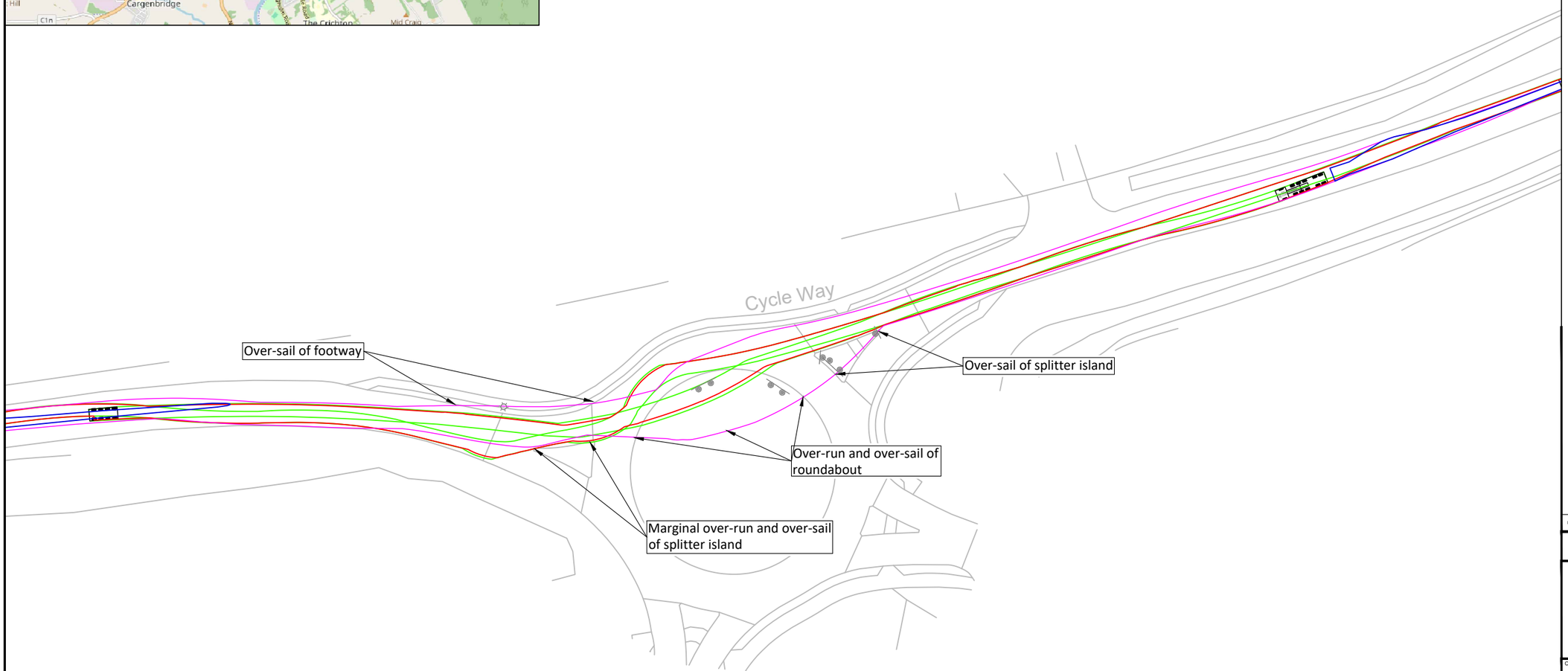
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 10

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/10	-





GENERAL NOTES

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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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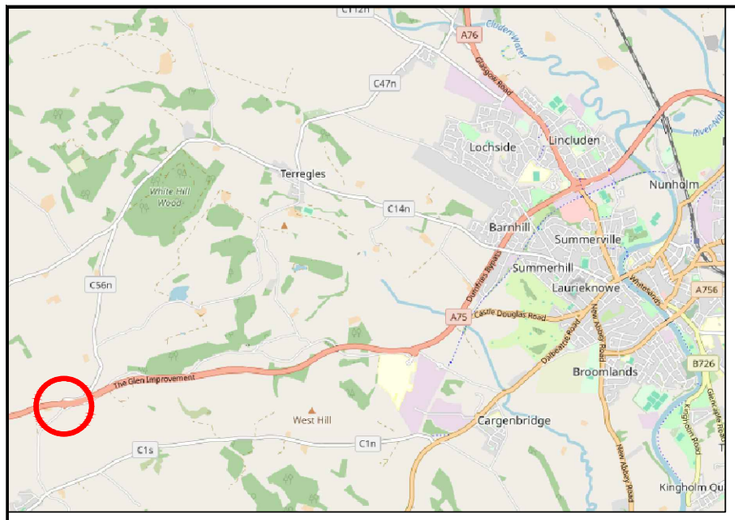
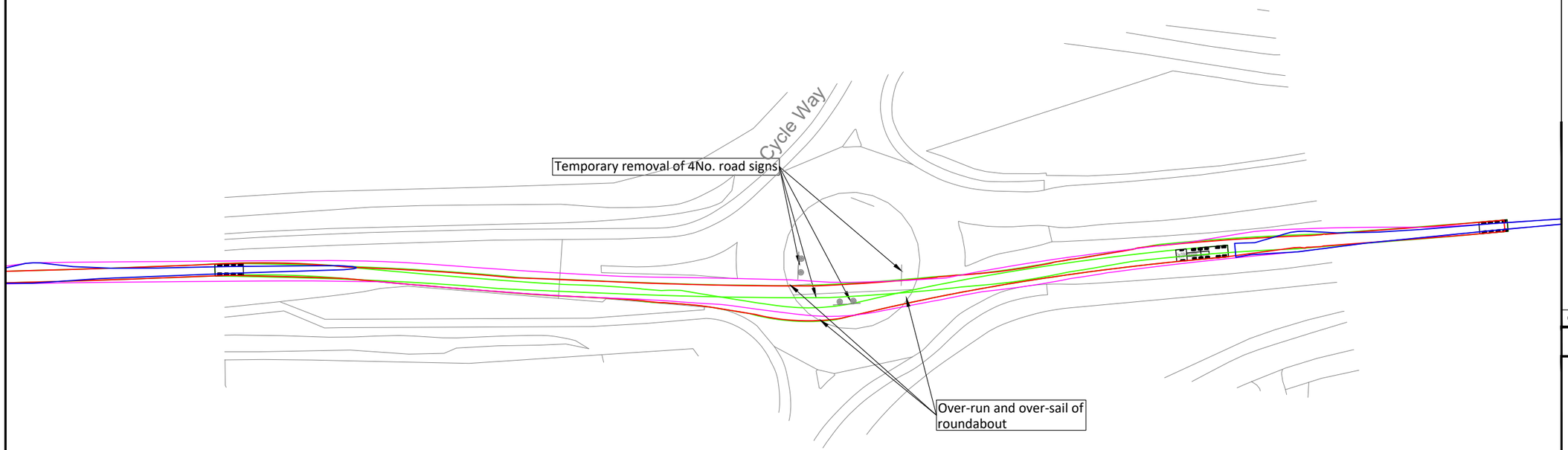
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 11

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/11	-





GENERAL NOTES

1. Do not scale from this drawing.
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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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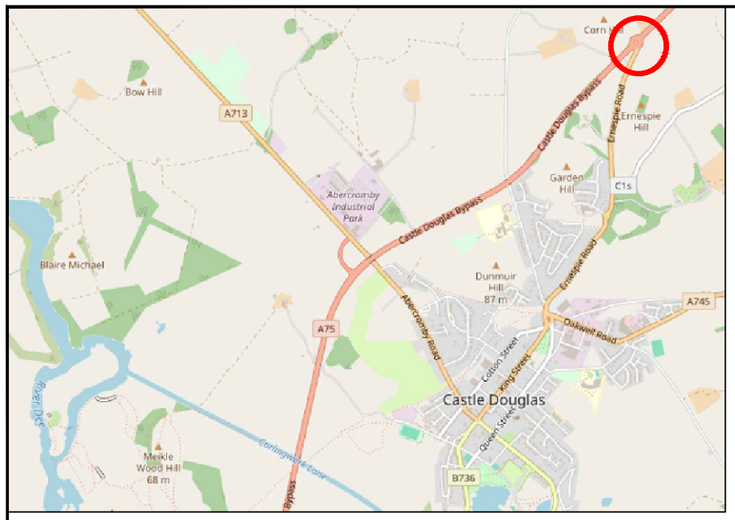
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 12

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/12	-



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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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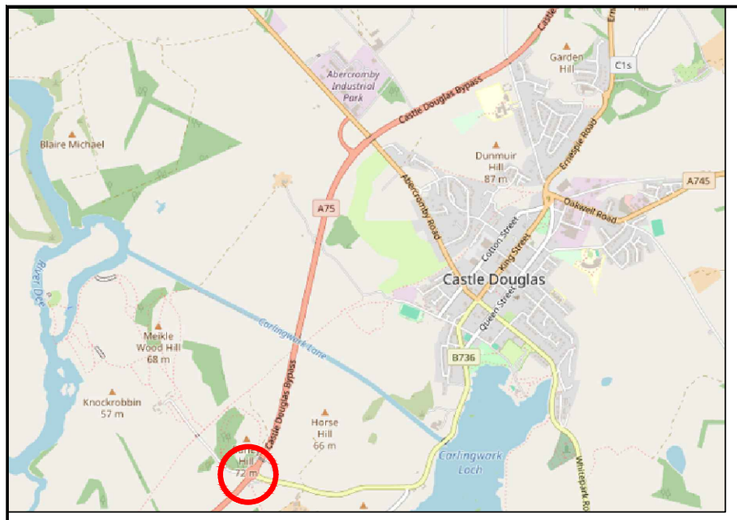
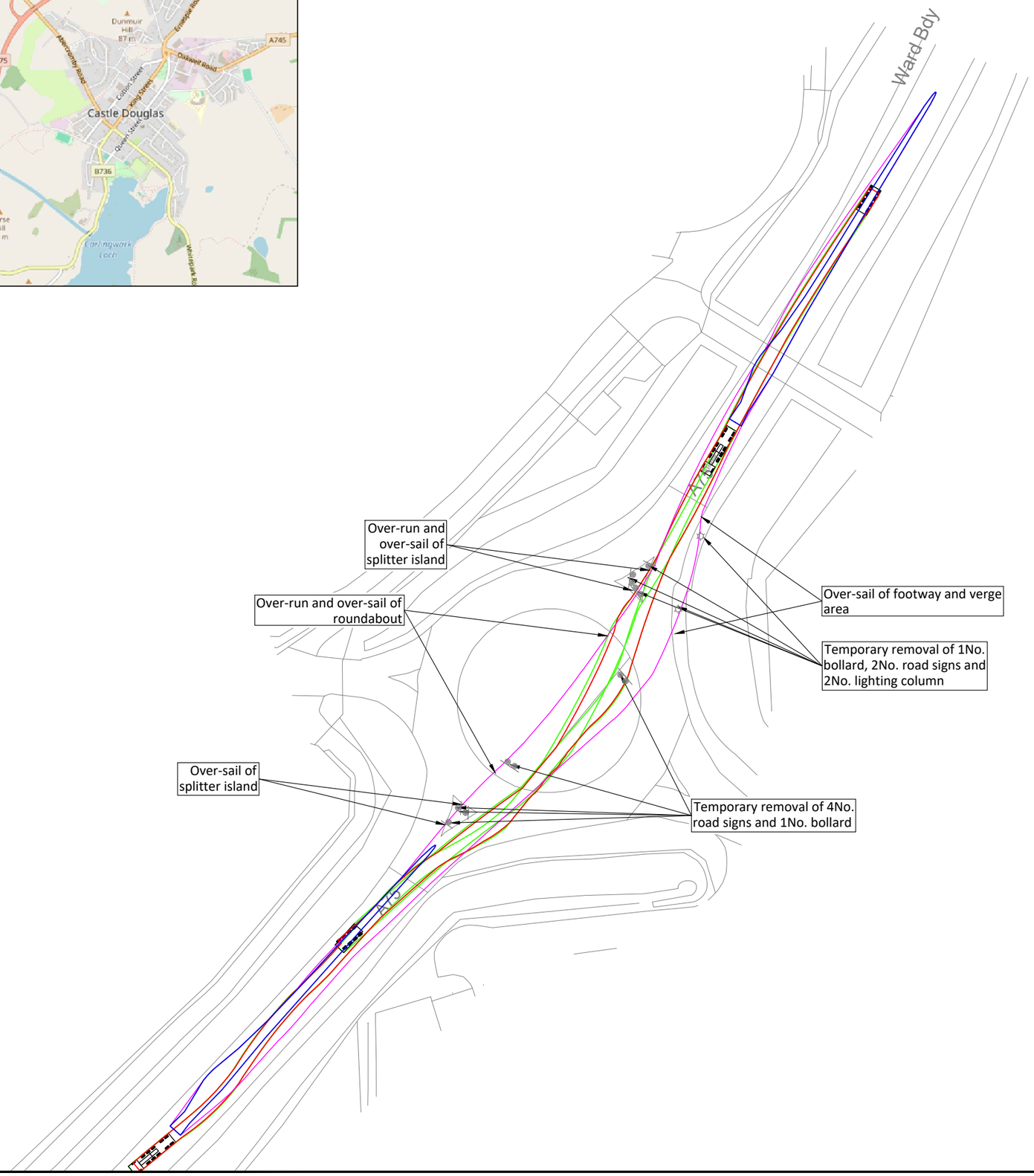
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 13

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/13	-





GENERAL NOTES

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Key:

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- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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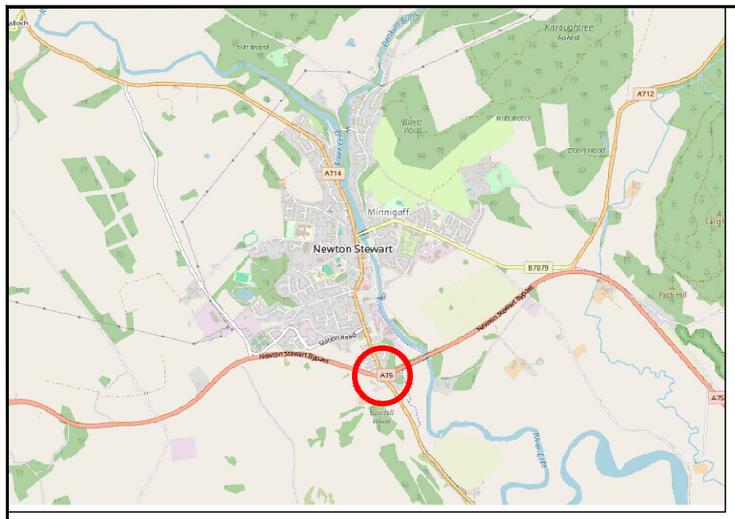
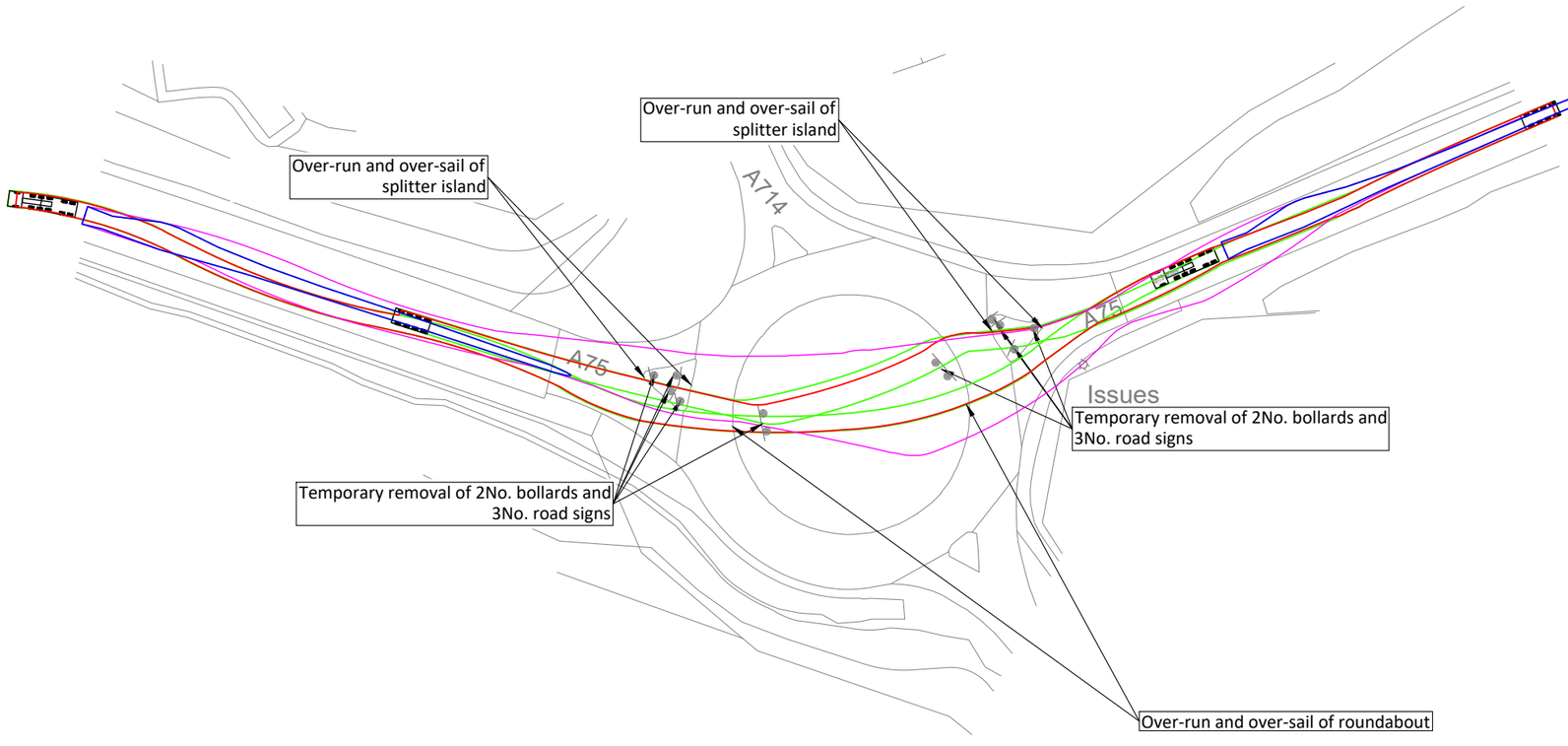
Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 14

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/14	-





GENERAL NOTES

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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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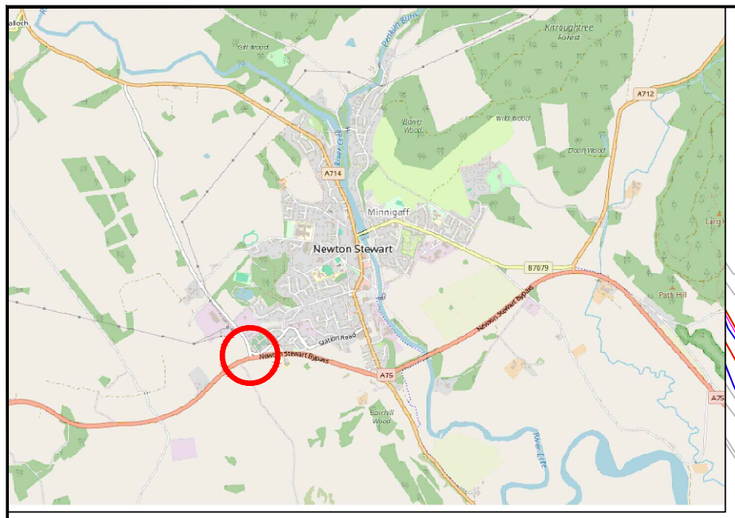
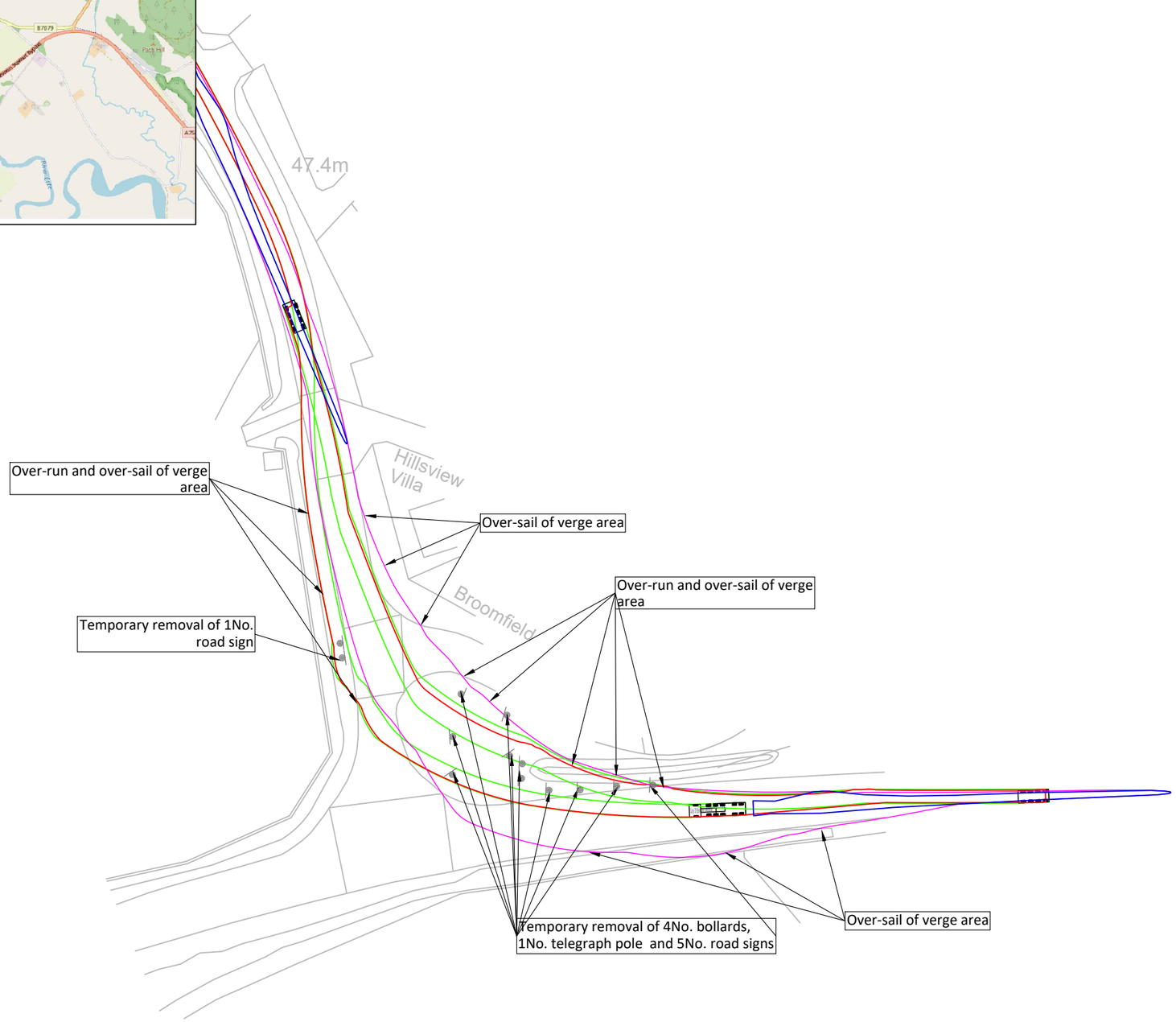
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 15

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/15	-





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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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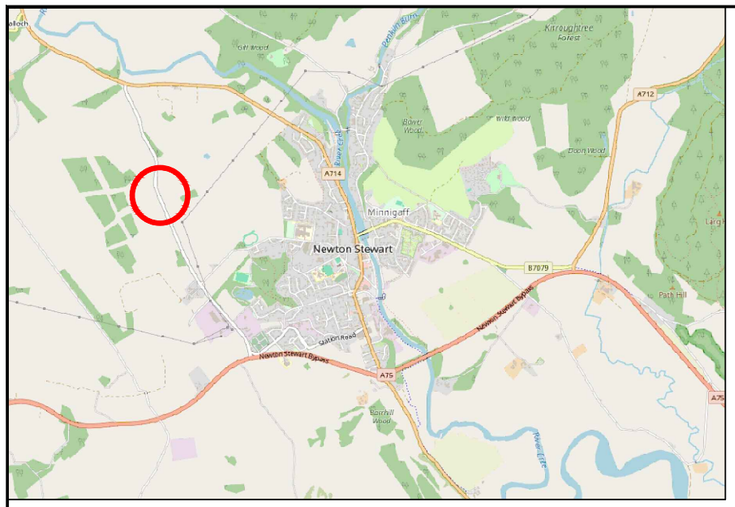
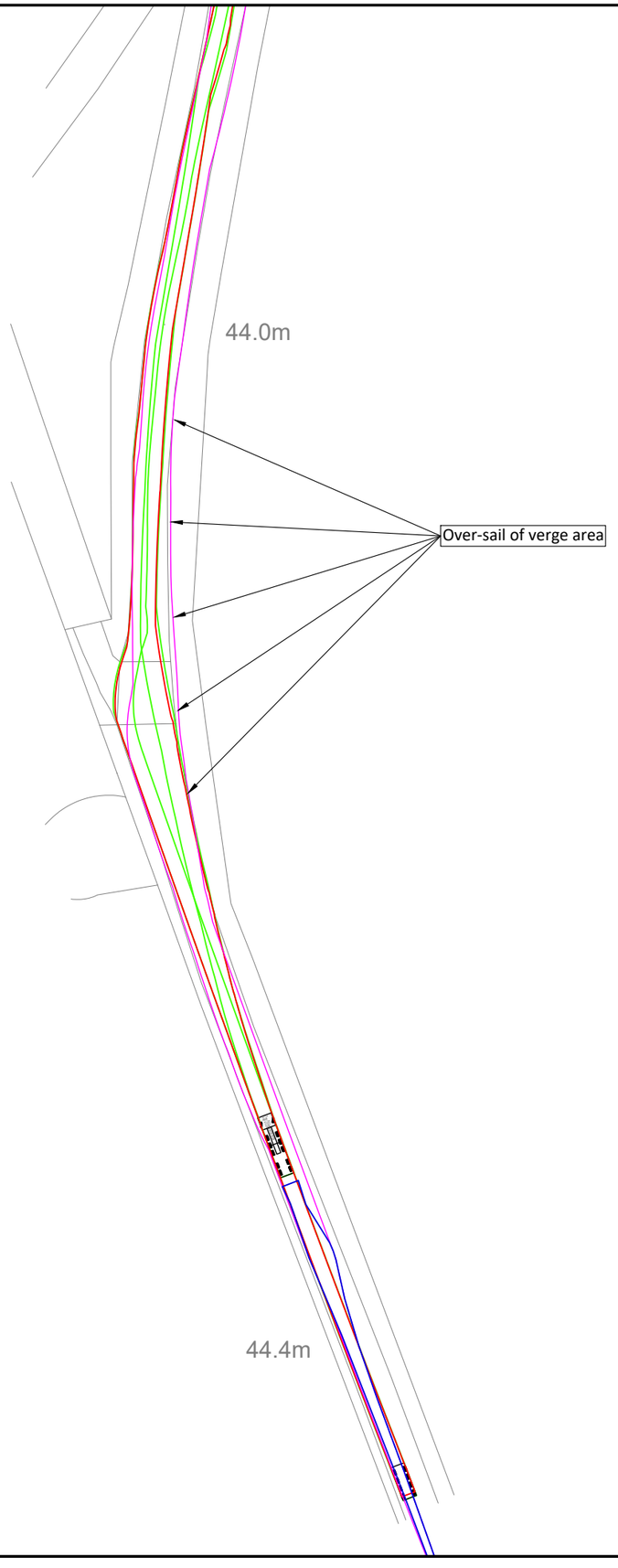
Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 16

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/16	-





GENERAL NOTES

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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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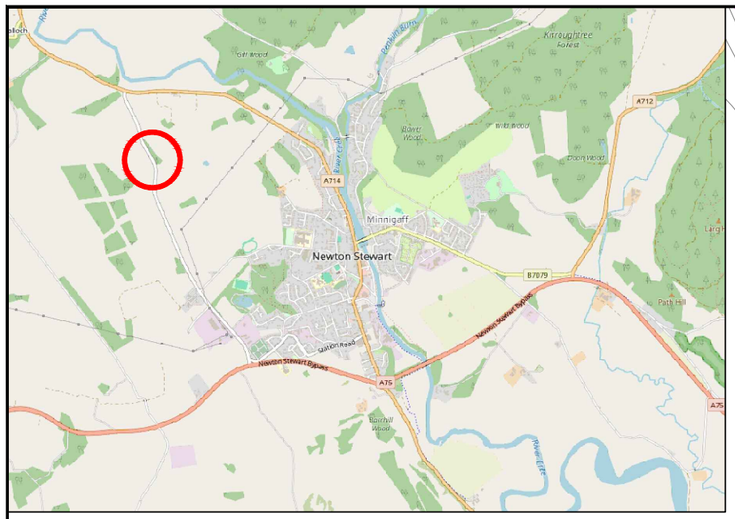
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 17

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/17	-



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Key:

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- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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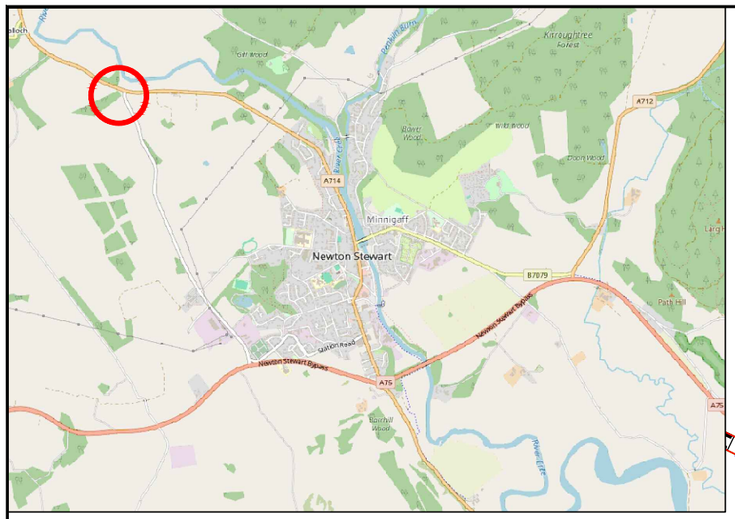
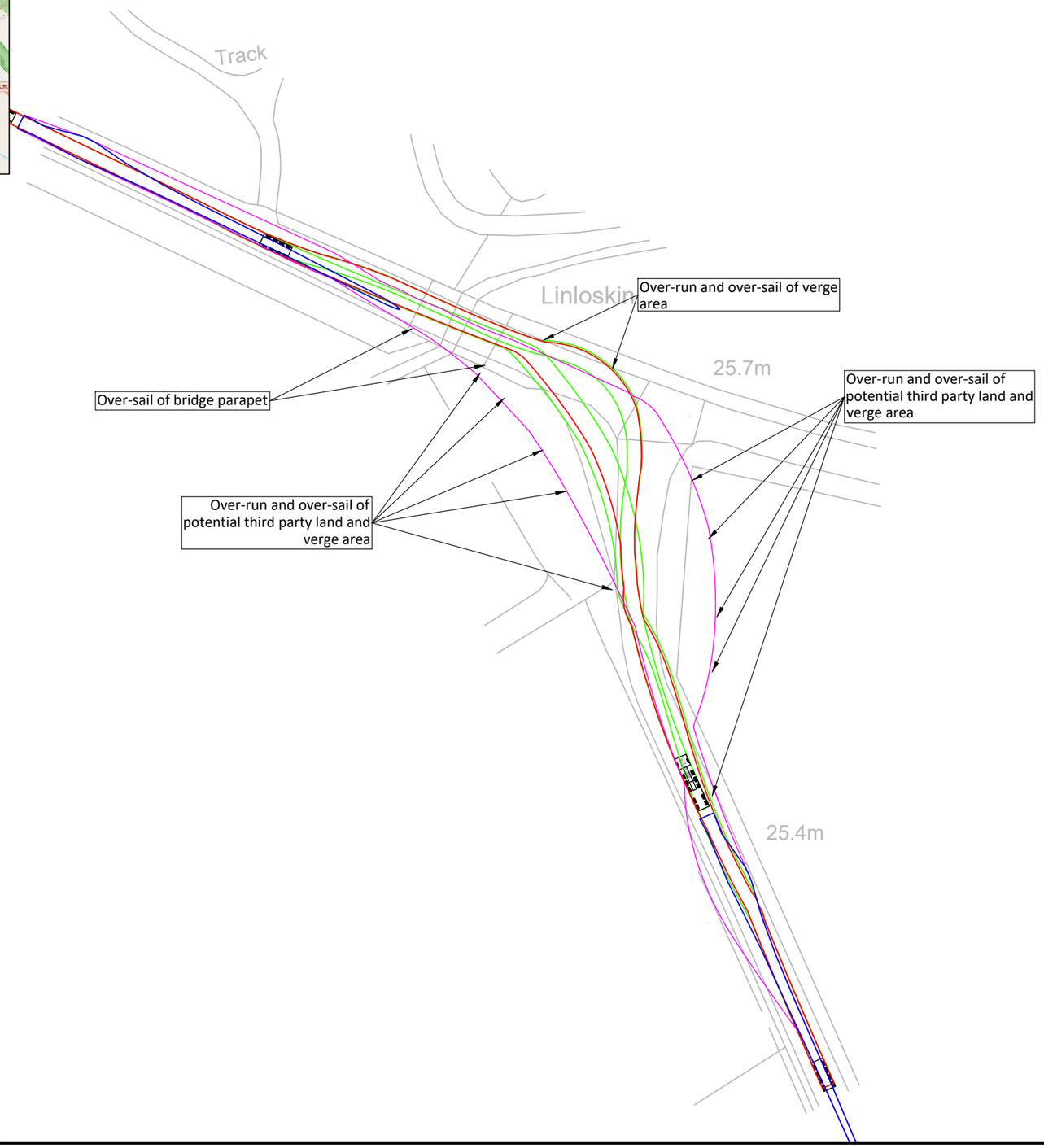
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 18

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/18	-





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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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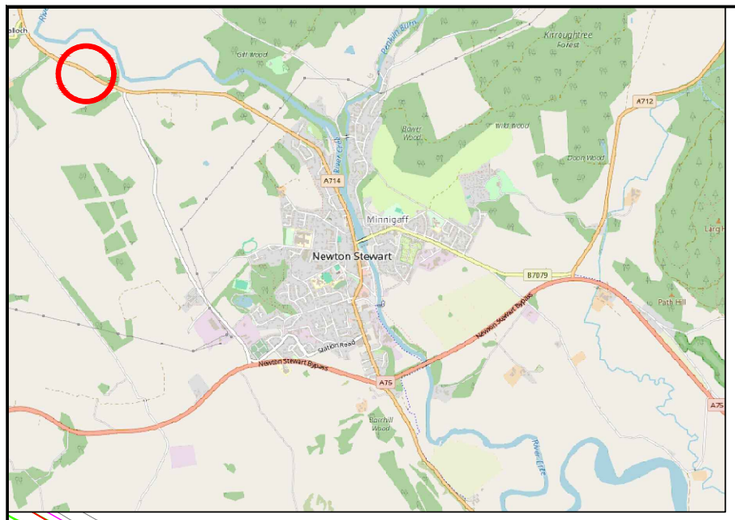
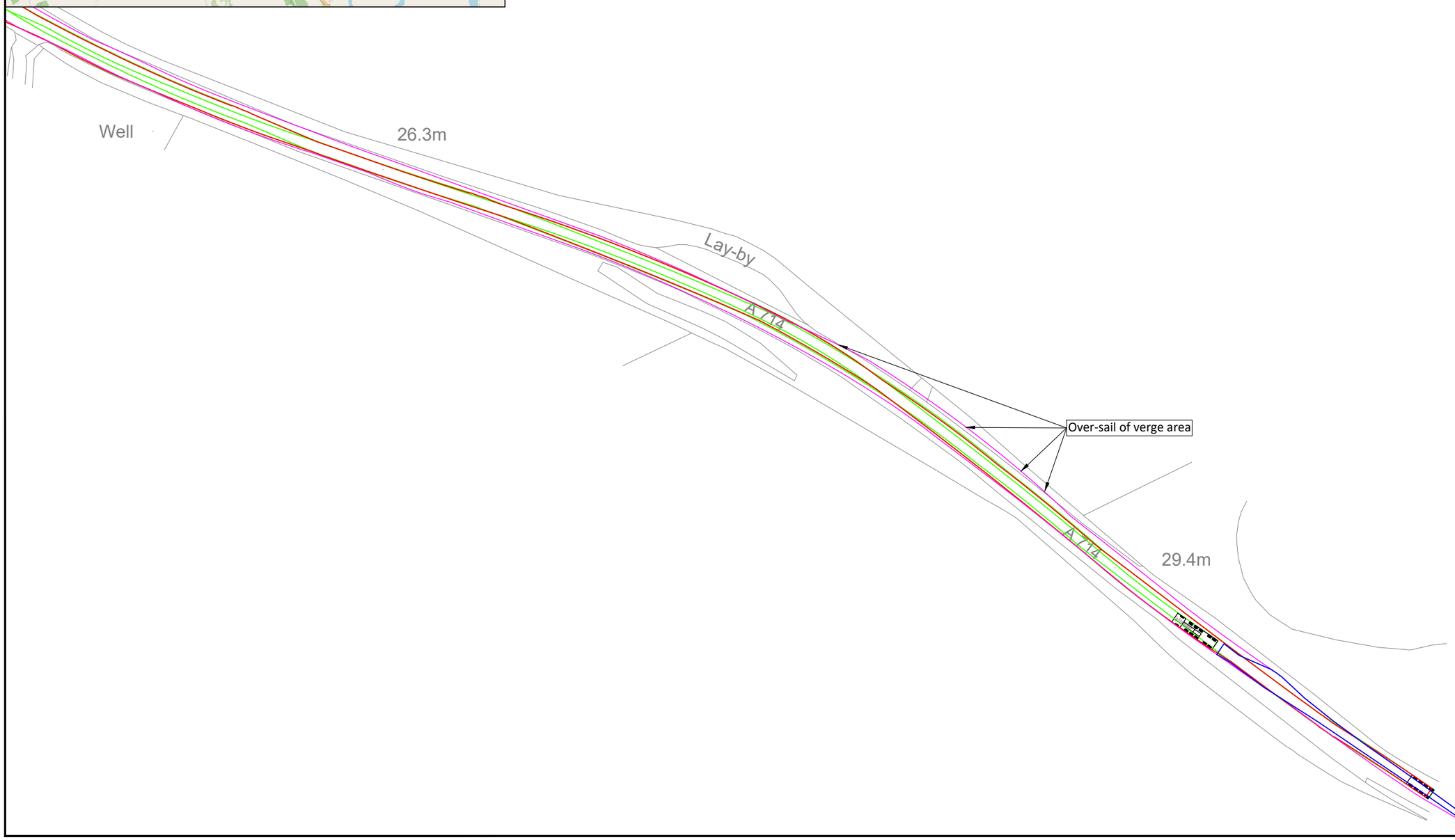
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 19

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/19	-





GENERAL NOTES

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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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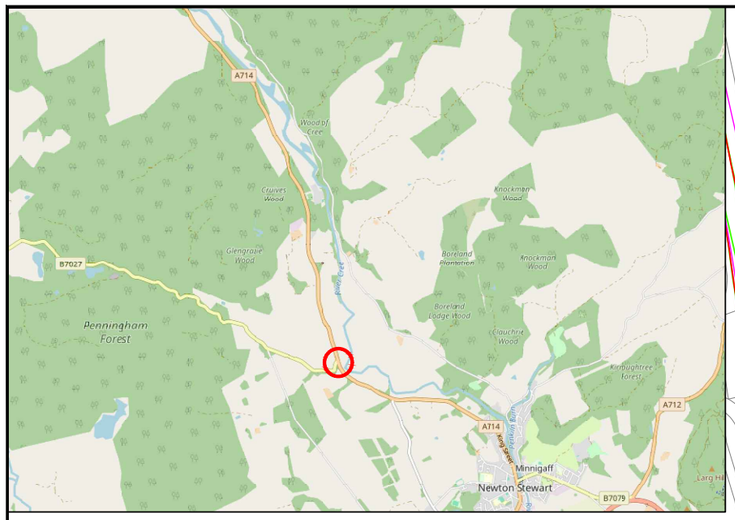
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 20

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/20	-



28.1m

GP

Over-sail of verge area

26.4m

GENERAL NOTES

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Key:

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- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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Client: EnergieKontor UK Ltd

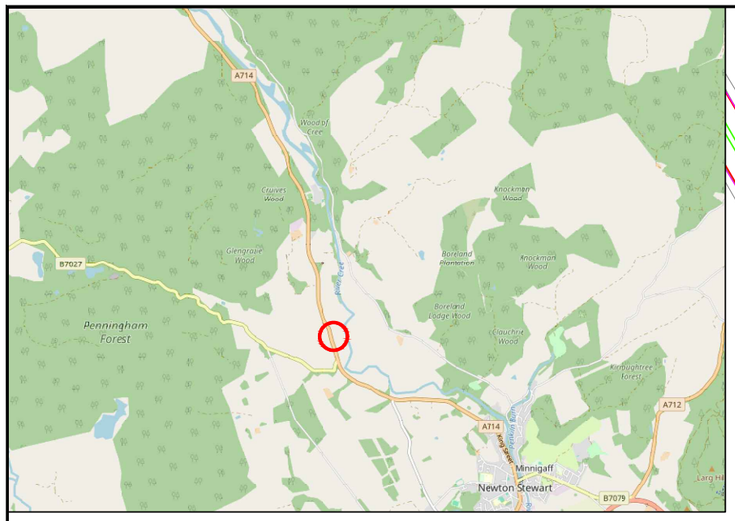
Project: Glenvernoch Wind Farm

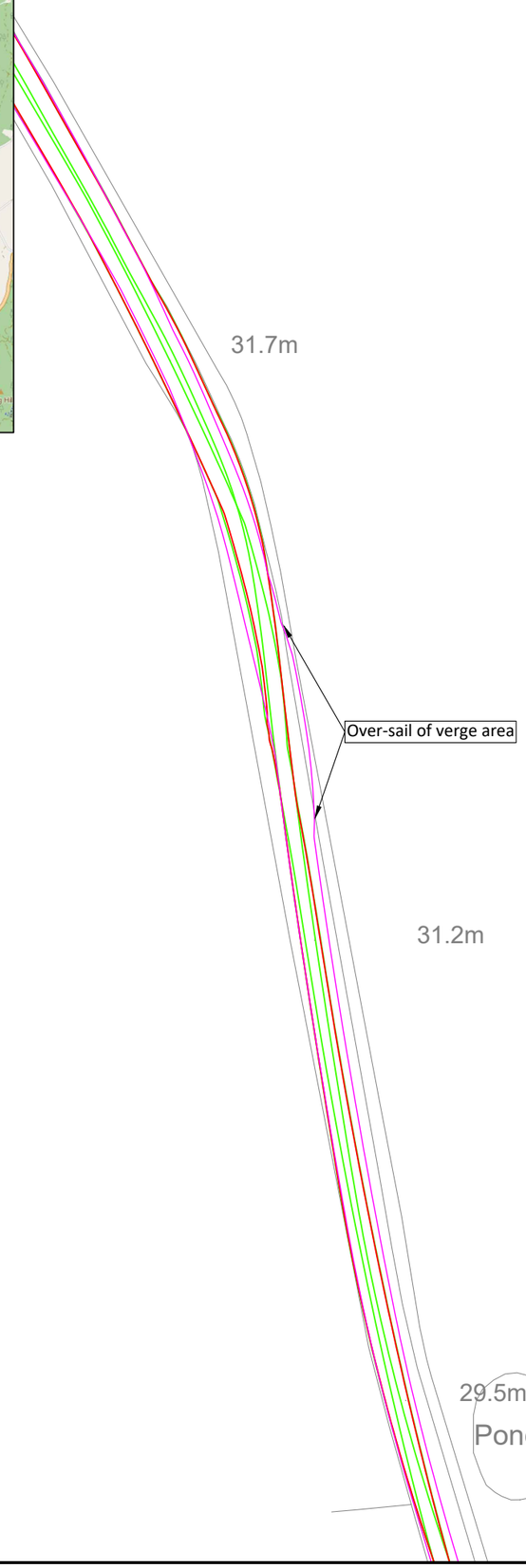
Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 21

Drawn	Checked	Approved
CC	ADV	ADV

Original drg. size	Date	Scale
A3	May'24	1:1000

Drawing Status	Drawing Number	Rev.
Information	GB01T19G67/I/SPA/21	-





GENERAL NOTES

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Key:

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- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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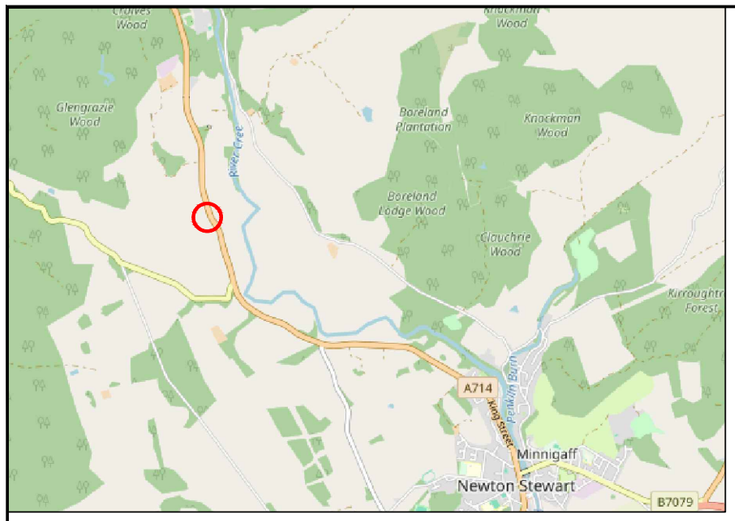
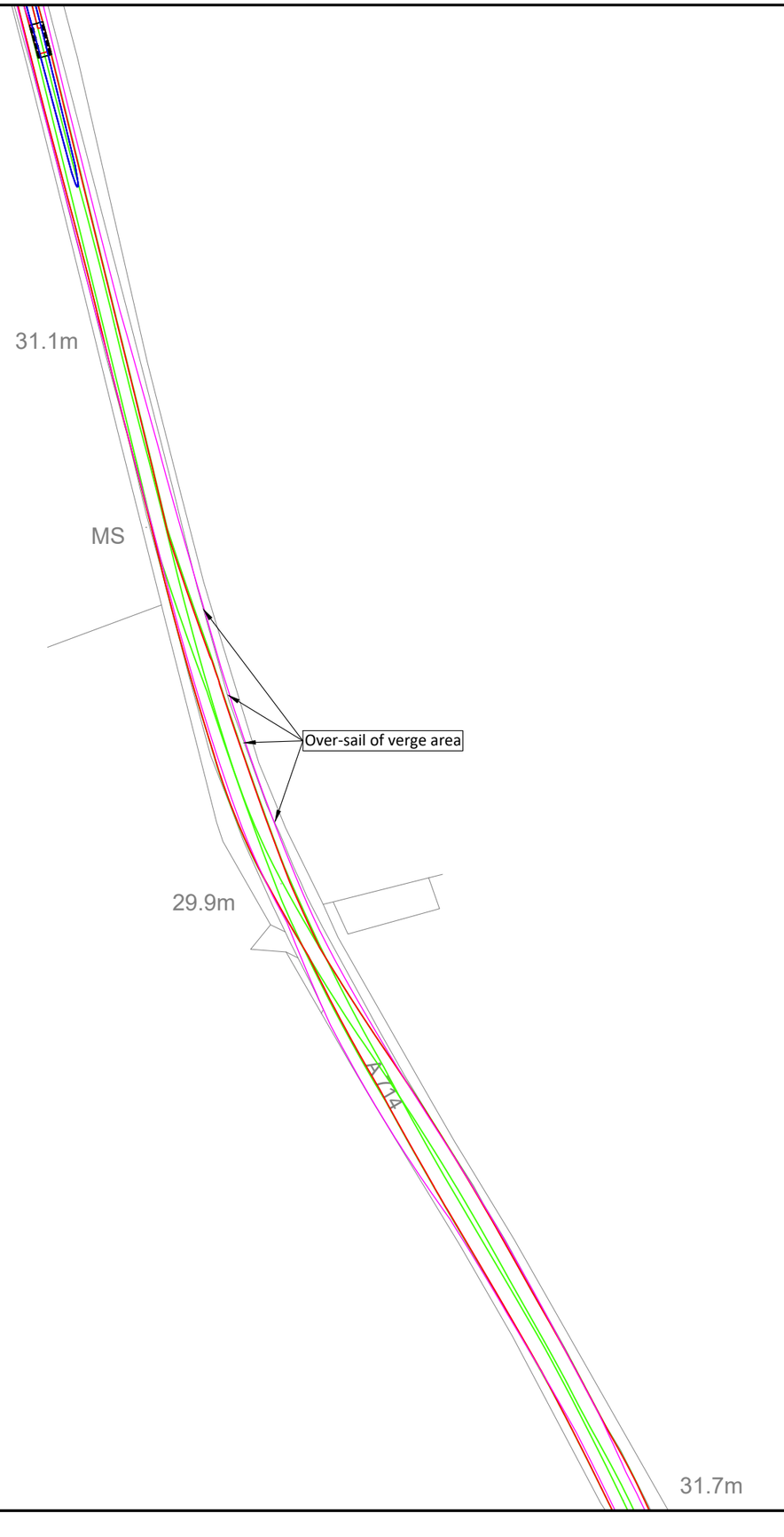
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 22

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/22	-





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Key:

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- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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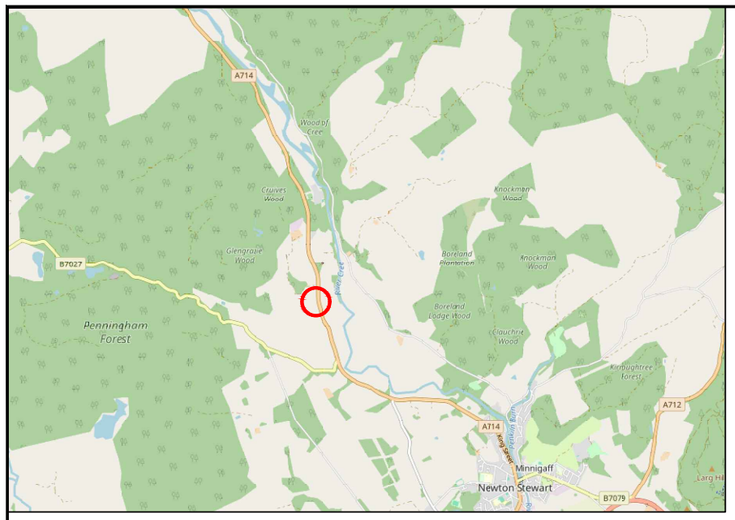
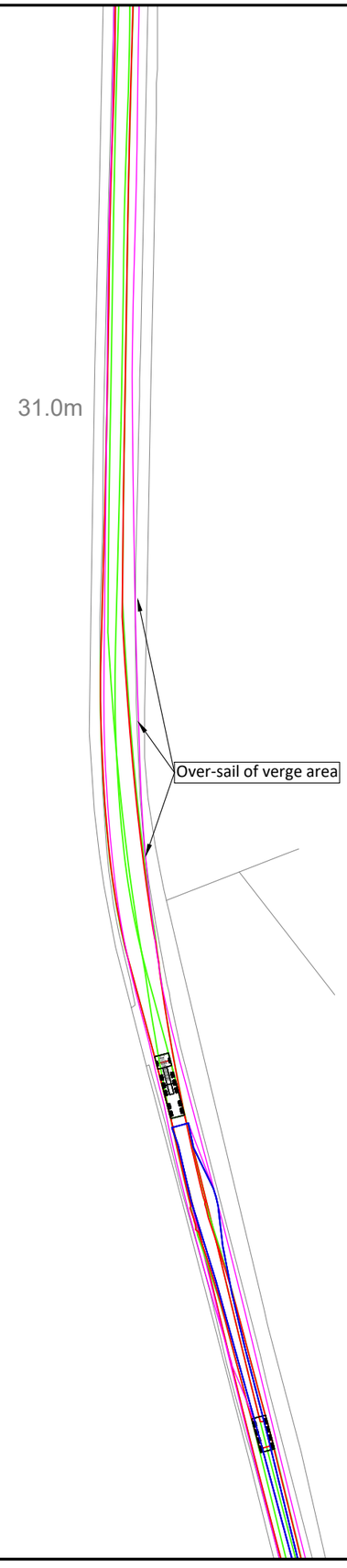
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 23

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/23	-





GENERAL NOTES

1. Do not scale from this drawing.
2. Dimensions are in mm and levels are in m OD unless stated otherwise.

Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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Client: EnergieKontor UK Ltd

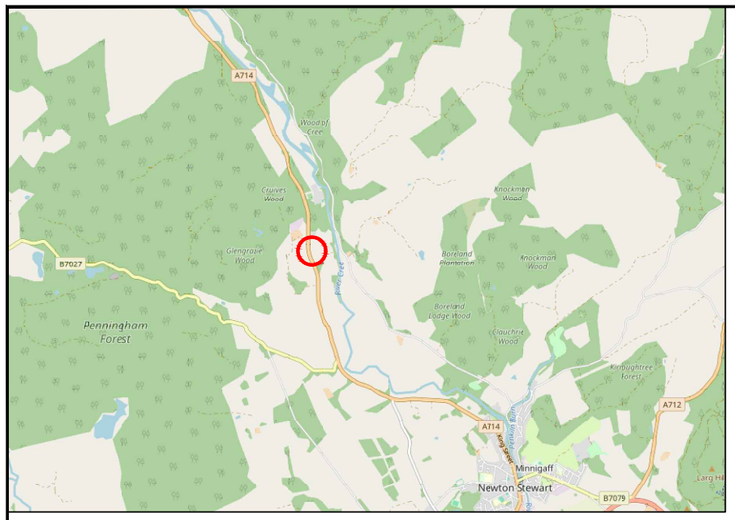
Project: Glenvernoch Wind Farm

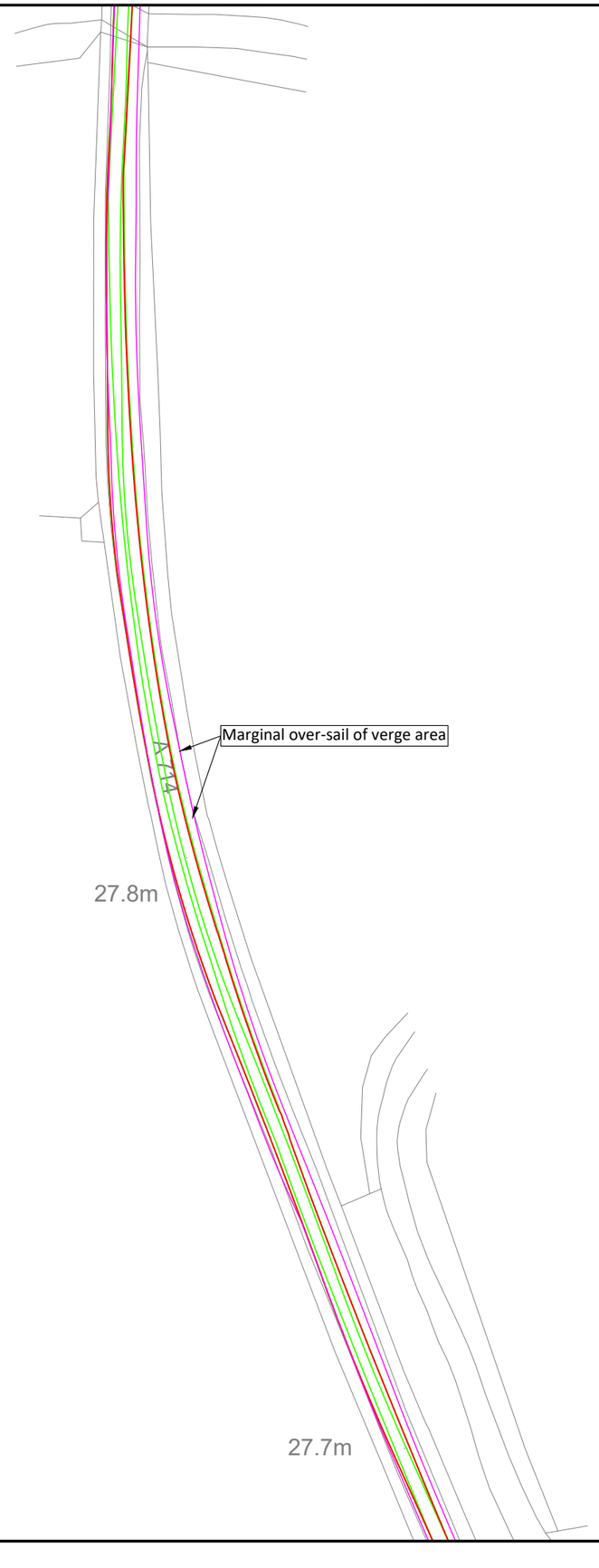
Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 24

Drawn	Checked	Approved
CC	ADV	ADV

Original drg. size	Date	Scale
A3	May'24	1:1000

Drawing Status	Drawing Number	Rev.
Information	GB01T19G67/I/SPA/24	-





GENERAL NOTES

1. Do not scale from this drawing.
2. Dimensions are in mm and levels are in m OD unless stated otherwise.

Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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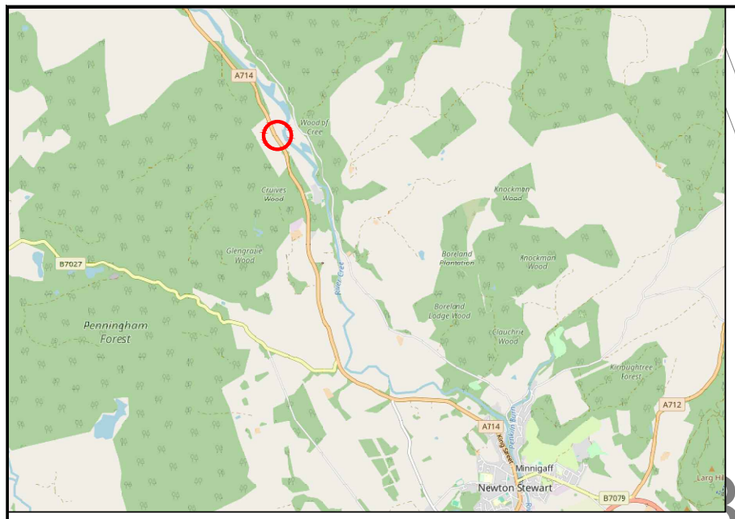
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 25

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/25	-



34m

Marginal over-sail of verge area

36m

GENERAL NOTES

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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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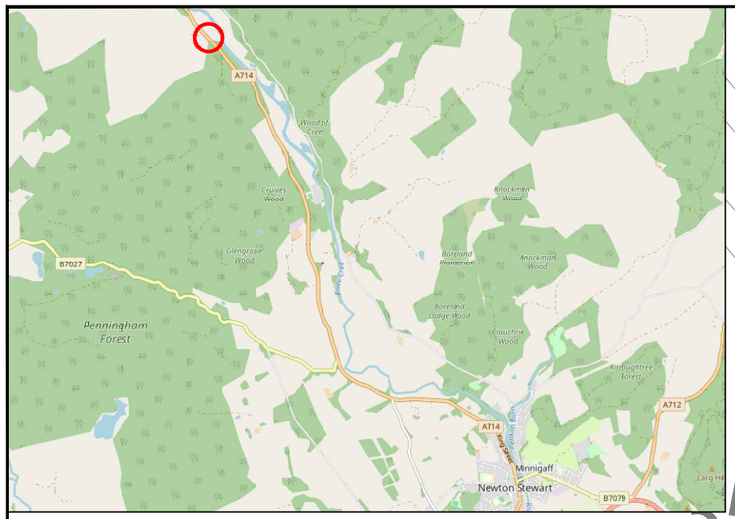
Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 26

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/26	-



35m

Over-run and over-sail of verge area

GENERAL NOTES

1. Do not scale from this drawing.
2. Dimensions are in mm and levels are in m OD unless stated otherwise.

Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade
- Pinch point location

Rev.	Date	Revision details	Drawn	Checked	Approved

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Client: EnergieKontor UK Ltd

Project: Glenvernoch Wind Farm

Title: Swept Path Analysis
85m Blade Transporter
Pinch Point 27

Drawn	Checked	Approved
CC	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	May'24	1:1000
Drawing Status	**Drawing Number**	**Rev.**
Information	GB01T19G67/I/SPA/27	-

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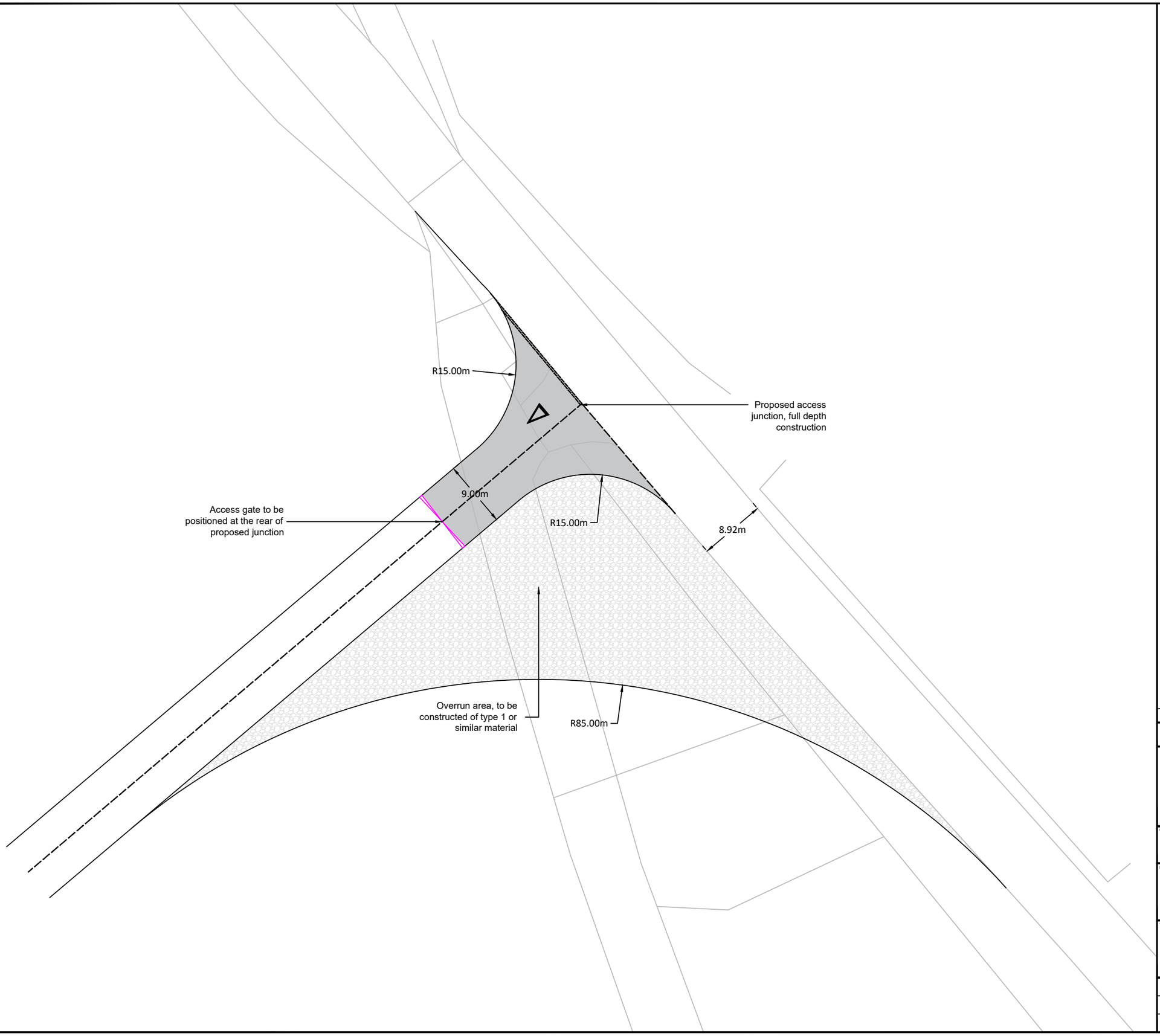

Notes:

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2. All dimensions in metres unless otherwise stated.
3. Please note that marked service locations are indicative only and should be confirmed by topographical survey.

Rev.	Date	Revision details	Drawn	Checked	Approved

SYSTRA
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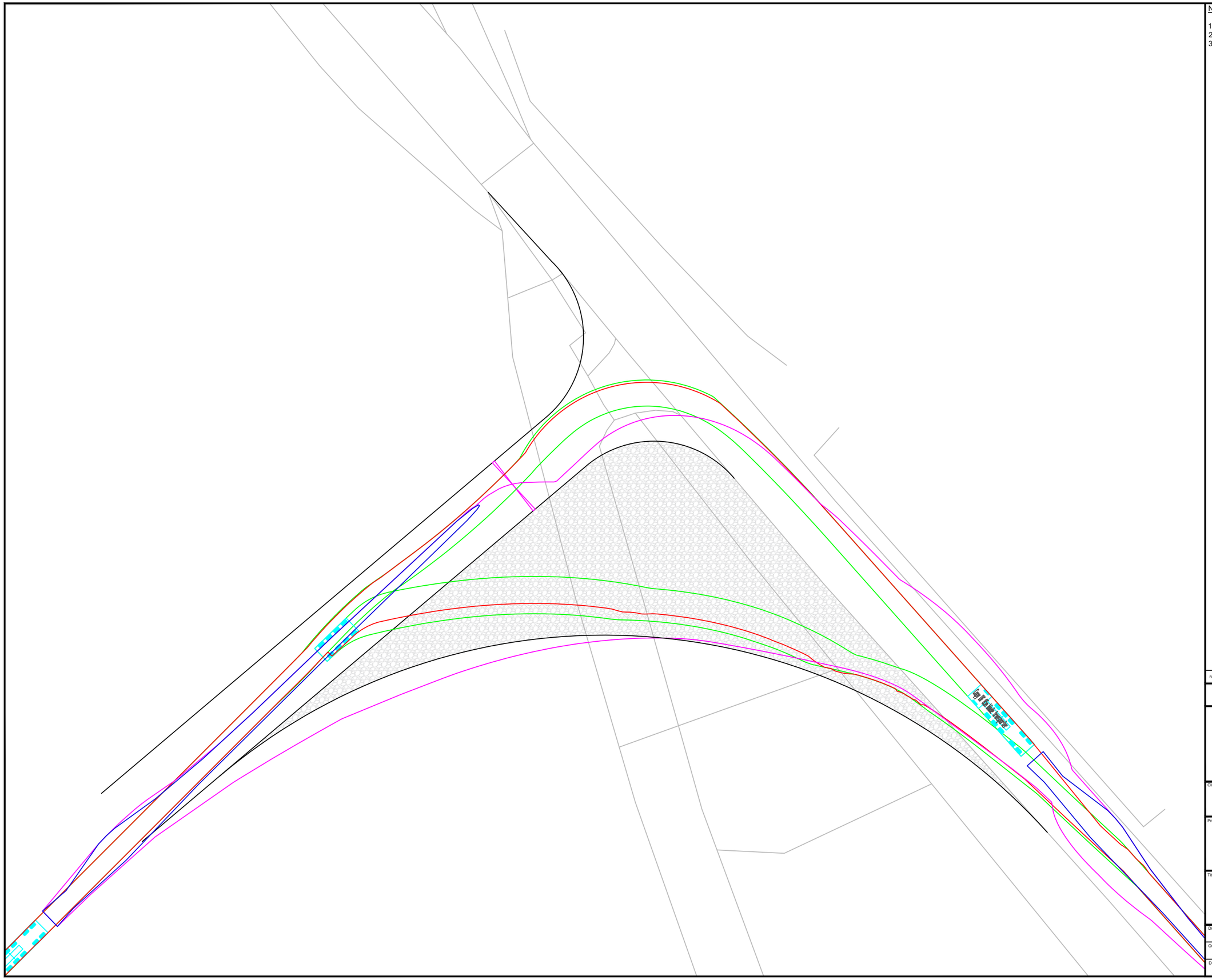
Client: EnergieKontor

Project: Glenvernoch Wind Farm

Title: Site Access
General Arrangement

Drawn	Checked	Approved
AMS	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	02/10/2024	1.999815
Drawing Status	**Drawing Number**	**Rev.**
Information	GA	-



Notes:

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2. All dimensions in metres unless otherwise stated.
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Rev.	Date	Revision details	Drawn	Checked	Approved

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Client: EnergieKontor

Project: Glenvernoch Wind Farm

Title: Site Access
Swept Path Analysis

Drawn	Checked	Approved
AMS	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	02/10/2024	1:500
Drawing Status	**Drawing Number**	**Rev.**
Information	SPA	-

Notes:

1. Do not scale from drawing.
2. All dimensions in metres unless otherwise stated.
3. Please note that marked service locations are indicative only and should be confirmed by topographical survey.

N

Rev.	Date	Revision details	Drawn	Checked	Approved

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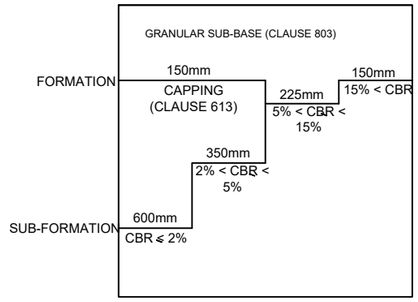
Client: EnergieKontor

Project: Glenvernoch Wind Farm

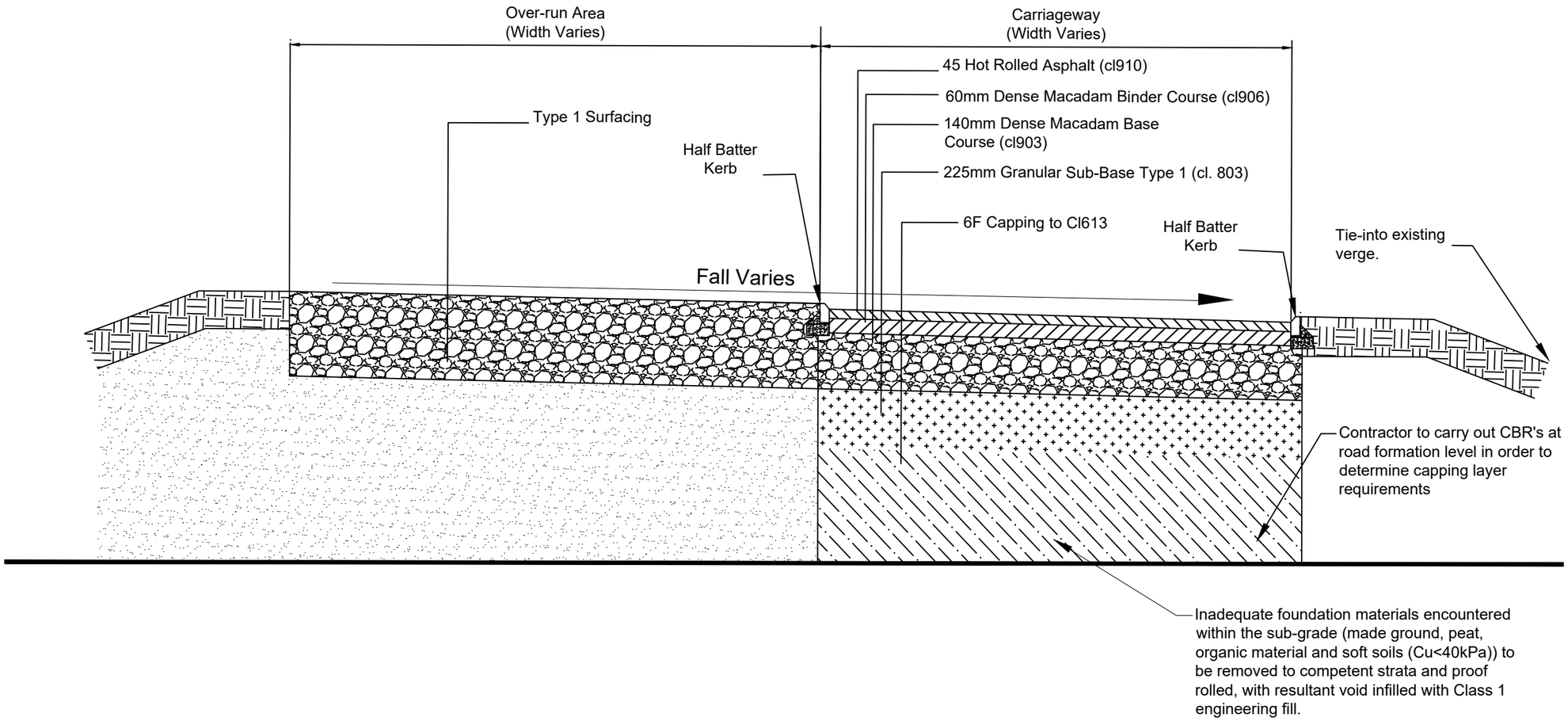
Title: Site Access
2.4m x 215m Visibility Splay

Drawn	Checked	Approved
AMS	ADV	ADV
Original drg. size	**Date**	**Scale**
A3	02/10/2024	1:1500
Drawing Status	**Drawing Number**	**Rev.**
Information	VBS	-



Capping layer requirements

Capping layer to be as per capping requirements table above and in line with SHW Cl613.



Notes:

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Rev.	Date	Revision details	Drawn	Checked	Approved

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Project: Glenvernoch Wind Farm

Title: Site Access
General Arrangement

Drawn	Checked	Approved
AMS	ADV	ADV
Original drg. size: A3	Date: 02/10/2024	Scale: 0.772042
Drawing Status: Information	Drawing Number: CS	Rev.: -