

Technical Appendix 11.1b

Abnormal Load

Assessment - Northern

Route



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ABNORMAL LOADS ASSESSMENT



SYSTRA

HAGSHAW ENERGY CLUSTER – WESTERN EXPANSION

ABNORMAL LOADS ASSESSMENT

IDENTIFICATION TABLE

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Study	Abnormal Loads Assessment
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APPROVAL

Version	Name		Position	Date	Modifications
1	Author	S Hilditch	Assistant Engineer	06/10/2023	V1
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2	Author	T Foster	Consultant	17/03/2025	Minor updates
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1. INTRODUCTION

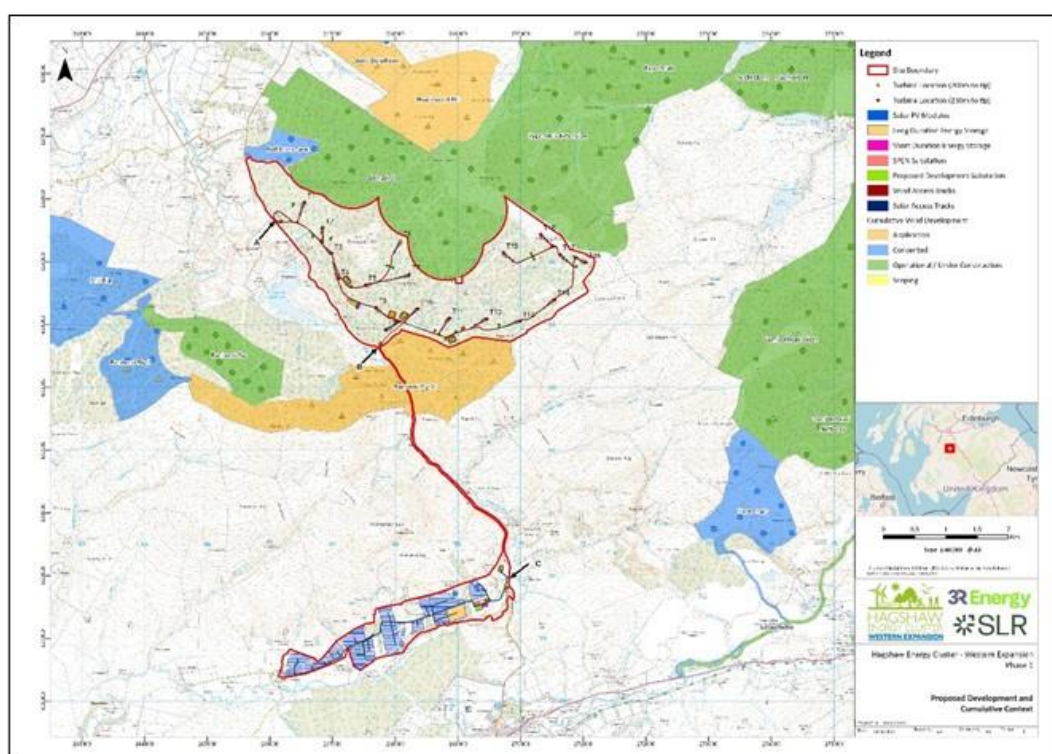
1.1 General

1.1.1 SYSTRA Ltd (SYSTRA) has been commissioned by 3R Energy to undertake an Abnormal Loads Assessment for the proposed Hagshaw Energy Cluster – Western Expansion development near Dungavel in South Lanarkshire.

1.1.2 The development is for an energy development consisting of a wind farm element, solar element and energy storage element. The overall site area splits either side of the B743 road where access from the public road network would be taken from. The wind farm would be accessed from the proposed access junction “A”.

1.1.3 The proposed wind farm element has approximately 18 turbines which would be manufactured off-site and transferred to the site for assembly from the proposed Port of Entry (PoE) at King George V (KGV) Docks in Glasgow. The longest component parts of the turbine are the blades, which would be 81.088m long when loaded for transportation and would be the “worst case” in terms of a *length and width* combination to be moved. This blade length is consistent with the Vestas V162 machine and is the longest when compared with other turbines in that generating class. The current indicative development area is indicated by **Figure 1** below.

Figure 1. Development Layout



- 1.1.4 Systra has undertaken a review of the route from KGV docks to the site and has identified 32 pinch points on the route from the port to the site (including the two site access points) 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 the blade component to assess whether the route is feasible and to establish the level of mitigation that may be required on the route.

1.2 Description of Route

- 1.2.1 As is standard practice with wind turbine developments, the turbine components will be delivered to the chosen PoE and then be 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 and the deliveries will need to be planned well in advance.

- 1.2.2 This assessment assumes that the port of delivery for the wind turbine components will be King George V Docks in Glasgow, located to the north of the site. The port is familiar with the importation of wind turbine components and has suitable facilities to handle the component of the size envisaged. The following route has been identified as suitable for abnormal loads vehicles travelling to the site:

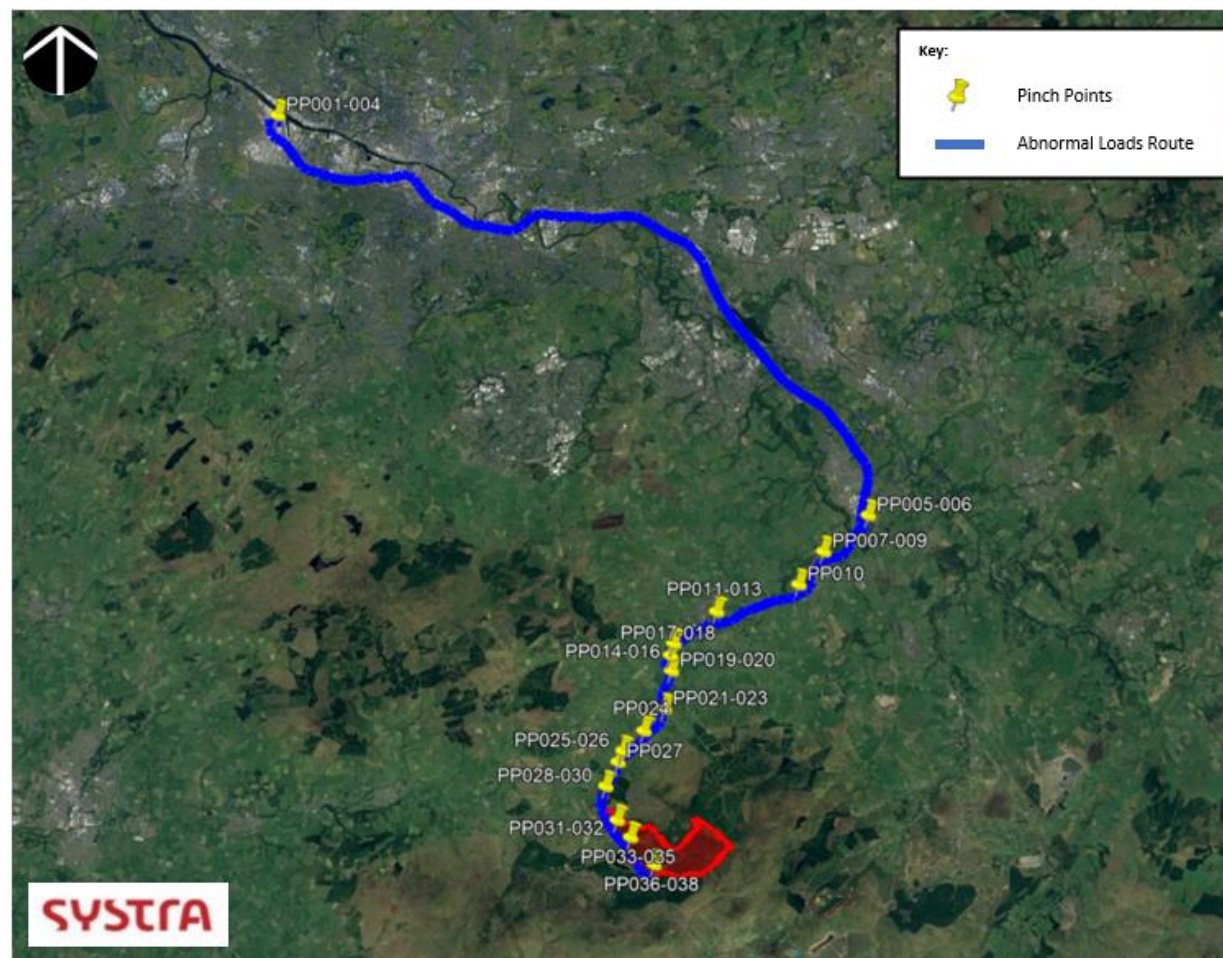
- From KGV Docks heading west on Kings Inch Drive turning left onto the M8 towards junction 25A;
- Transporter vehicles will travel east on the M8;
- The vehicles will remain on the M8 eastbound until joining the M74;
- The blade transporters will then travel approximately 30km southbound on the M74 before exiting at Junction 8;
- Turning left onto the A71 the transporters will route south-west for approximately 10km, travelling through the settlement of Stonehouse , leading to Strathaven;
- Turning left onto the B743 the transporters will route south-west for approximately 13.5km where they will turn left into the access point identified as "A".

- 1.2.3 **Figure 2** indicates the path of the route to site and **Figure 3** identifies the pinch points which have been identified as requiring swept path analysis.

Figure 2. Route to Site



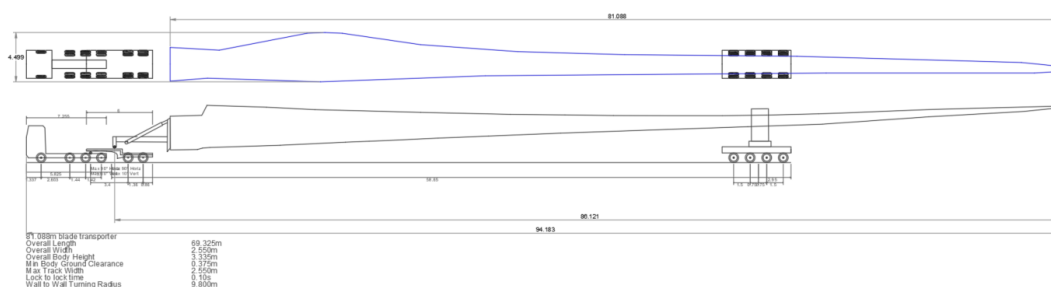
Figure 3. Identified Pinch Points



1.3 Turbine Transport Requirements

- 1.3.1 For the purposes of this assessment, the worst-case “design” component has been assessed which is an 81.088m long turbine blade.
- 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 A schematic of the load configuration is indicated by **Figure 4** below.

Figure 4. Blade Transport Configuration



- 1.3.5 The transport vehicle will be greatly reduced in length for its return journey. In these circumstances, the swept path analysis 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 32 identified pinch points 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.
- 1.4.2 The swept path plans are contained within **Appendix A** to this report. The plans indicate areas over overrun and over-sail as well as highlighting potential clashes with street furniture and potential infringements onto third party land. **Table 1** relates to the 81.088m blade transporter and summarises the main issues that have been highlighted from the swept path exercise undertaken.

Table 1. Summary of required Mitigation Measures

PINCH POINT	STREET FURNITURE REMOVAL	TEMPORARY PAVING	THIRD PARTY LAND
PP1 – Access from KGV Docks/Kings Inch Drive Roundabout 1 (Glasgow)	2no. traffic signs	None Anticipated	It is anticipated that potential third-party land required when exiting KGV Docks is within the ownership of the Port Authority.
PP2 – Kings Inch Drive Roundabout 2 (Glasgow)	2no. traffic signs 1no. lighting column	Area of temporary paving required on south side of road on approach to roundabout. Central island of roundabout will need to be altered to allow vehicles to overrun area.	None anticipated.
PP3 – Kings Inch Drive Roundabout 3 (Glasgow)	None anticipated.	None anticipated.	None anticipated.
PP4 – Kings Inch Drive/M8 Jct 25A Slip Road (Glasgow)	1no. lighting columns 3 no. signal heads 1no. pedestrian signal 1no. Traffic Sign 1no. VMS Approximately 60m of pedestrian guardrail	None anticipated.	None anticipated but check on extents of public road boundary required.
PP5 – M74 Jct 8 Slip Road/A71 Junction (South of Larkhall)	3no. traffic signs Utility Box	None anticipated.	None anticipated but check on extents of public road boundary required.
PP6A – A71 Canderside Toll (South of Larkhall) (Option 1)	2no. lighting columns 4no. traffic signs 1no. bollard	Significant area of temporary paving required to accommodate over-run of roundabout central island. Further areas of temporary paving required in verge areas on approach to roundabout.	None anticipated but check on adopted road boundaries required.

PINCH POINT	STREET FURNITURE REMOVAL	TEMPORARY PAVING	THIRD PARTY LAND
PP6A – A71 Canderside Toll (South of Larkhall) (Option 2)	2no. traffic signs Area of trees	Significant area of temporary paving through roundabout central island.	None anticipated.
PP7 – A71/Lockhart Street Roundabout (Stonehouse)	4no. traffic signs 2no. lighting columns 14no. bollards Central island hard landscaping	Area of temporary paving required across central island which is currently raised in hard landscaping.	Potential third party land requirement on east side of road on approach to roundabout.
PP8 – A71 Roundabout (Stonehouse)	1no. traffic signs 1no. lighting columns	Area of temporary paving required on the east side of the road (existing verge area) on approach to pinch point. Note: The central roundabout island is raised so need to ensure that load can over-sail above the island.	None anticipated.
PP9 – A71/Strathaven Road Roundabout (Stonehouse)	1no. lighting column 3no. traffic signs 8no. bollards	Central island has recently been modified to allow abnormal load vehicles to run across it. Check required at detailed design stage to check that over-run area is wide enough to accommodate swept path of proposed loads. Transition ramps to splitter islands will be required.	None anticipated.
PP10 – A71/Cot Castle View Roundabout (Stonehouse)	2no. lighting columns 3no. traffic sign	None required.	Potential third party land requirement to south of road to accommodate over-sail of blade – check on road adoption boundary required.
PP11 – “S” Bend on A71 just east of Strathaven	1no. traffic sign Approximately 60m of fencing	Areas of temporary paving required on the north side of the A71 at two locations. Noted that there is a grass banking at second location.	Potential 3rd party land agreement required to accommodate the over-run and over-sail of blade transporter on north side of the road.

PINCH POINT	STREET FURNITURE REMOVAL	TEMPORARY PAVING	THIRD PARTY LAND
PP12 – A71/Kirk St/Castle St Roundabout (Strathaven)	5no. traffic signs 2no. lighting columns 1no. traffic light 1no. electrical box Approximately 20m of pedestrian guard rail	Area of temporary paving required in the verge area to north of road. Transition ramps required to allow vehicles to overrun footway areas.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter north and south of road.
PP13 – Left turn onto B743 (Strathaven)	3no. traffic signs 1no. lighting column 1no. utility box Approximately 40m of pedestrian guard rail	Area of temporary paving required on the inside of the turn on approach to pinch point across existing verge area.	None anticipated but check required on adopted road boundary.
PP14 – Left bend on B743 (Just south of Strathven)	Potentially 2no. traffic signs Potential impact on bridge parapets	None anticipated.	None anticipated.
PP15 – Right bend on B743 (Just south of Strathaven)	4no. traffic signs Hedges to be trimmed back	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter.
PP16 – Left bend on B743 (South of Strathaven)	Trees to be trimmed back/removed to accommodate the over sail of the blade	Areas of temporary paving required on the inside of the bend.	3rd party land agreements required to accommodate the over-sail of blade transporter.
PP17 – “S” bend on B743 (North of Brownsbridg)	8no. traffic signs 4no. bollards Approx. 175m of fencing 1no. field gate Trees to be trimmed back/removed	Significant area of temporary paving required to accommodate over-run on the inside bend.	3rd party land agreements required to accommodate the over-sail and over-run of blade transporter.

PINCH POINT	STREET FURNITURE REMOVAL	TEMPORARY PAVING	THIRD PARTY LAND
PP18 – Left bend on B743/Brown’s Bridge (Brownsbridge – Over Avon Water)	3no. traffic signs 4no. bollards 2no. telecom poles Impact on Bridge parapets Trees to be trimmed back/removed Approx. 135m of fencing	Significant area of temporary paving and earthworks required to accommodate over-run on the inside and outside of bend, and on the approach to the bridge.	3rd party land agreements required to accommodate the over-sail and over-run of blade transporter.
PP19 – Right bend on B743 (Just South of Brownsbridge)	3no. telecom poles Potentially 2no. traffic sign	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter on both sides of the road.
PP20 – Left bend on B743 (North of Roman Road Junction)	Trees to be trimmed back/removed	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter.
PP21 – Right bend on B743 (near West Cauldcoats)	Trees to be trimmed back/removed on west side of road	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter. Check on adopted road boundary required.
PP22 – Right bend on B743 (just south of West Cauldcoats)	Potentially 2no. traffic signs Trees to be trimmed back/removed to west of road.	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter.
PP23 – “S” bend on B743 (SW of West Cauldcoats)	1no. telecom pole	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter.
PP24 – “S” bend on B743 (SW of West Cauldcoats)	1no. telecom pole	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter on both sides of the road.
PP25 – Left bend on B743 (Just north of Dykes Burn)	Impact on hedges	None anticipated.	None anticipated.

PINCH POINT	STREET FURNITURE REMOVAL	TEMPORARY PAVING	THIRD PARTY LAND
PP26 – S bend on B743/ Dykes Bridge (Bridge over Dykes Burn)	3no. telecom poles Potentially 1no. chevron traffic sign Potential impact on bridge parapet. Trees to be trimmed back/removed on east side of road.	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter.
PP27 – Slight Left bend on B743 (south of Dykes Burn)	No impacts beyond clearing vegetation in verge areas.	None anticipated.	None anticipated.
PP28 – Left bend on B743 (at Dungavel)	No impacts beyond clearing vegetation in verge areas.	None anticipated.	None anticipated.
PP29 – Straight on B743 (just south of Dungavel)	No impacts beyond clearing vegetation in verge areas.	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter. Noted that OS mapping not accurate at this location so extents of adopted road boundary should be checked.
PP30 – “S” bend on B743 (South of Dungavel)	1no. telecom pole 2no. traffic signs	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter on both sides of road.
PP31 – “S” bend on B743 (north of Woolen Burn)	Impact on up to 10no. telecom poles	None anticipated.	Potential 3rd party land agreements required to accommodate the over-sail of blade transporter on both sides of road.
PP32 – Left turn from B743 into site access point “A” (existing public road junction)	See site access drawing GB01T2463/2001/I/GL001 for details		

2. ASSESSMENT OUTCOMES AND CONCLUSIONS

2.1 Horizontal Feasibility

- 2.1.1 The abnormal load assessment has identified that the route from the King George V Docks to the site is technically feasible in terms of horizontal geometry, which is dependent upon third-party land agreements at a number of locations. It is noted that this report has focussed on the horizontal alignment of the route. No vertical checks have been undertaken at this point, but no major impediments have been identified at this stage and no weight restrictions have been identified on the route at this stage.

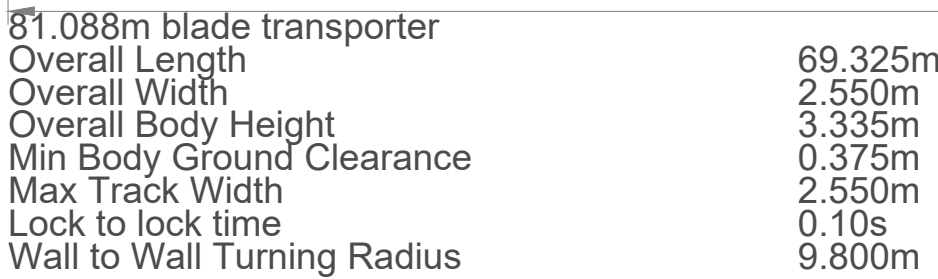
2.2 Summary

- 2.2.1 In the first instance, it is recommended that third-party land enquiries are made at the identified locations, and it is also recommended that further engagement is undertaken with the Clyde Port Authority, South Lanarkshire Council, Transport Scotland and AMEY (the M74 Trunk Road operator).

- 2.2.2 Additionally, the following points should also be considered:

- If the necessary mitigation measures are achievable then the route can be navigated by vehicles carrying wind turbine components to the proposed site subject to confirmation of structural checks;
- 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.




APPENDIX A – SWEPT PATH PLANS



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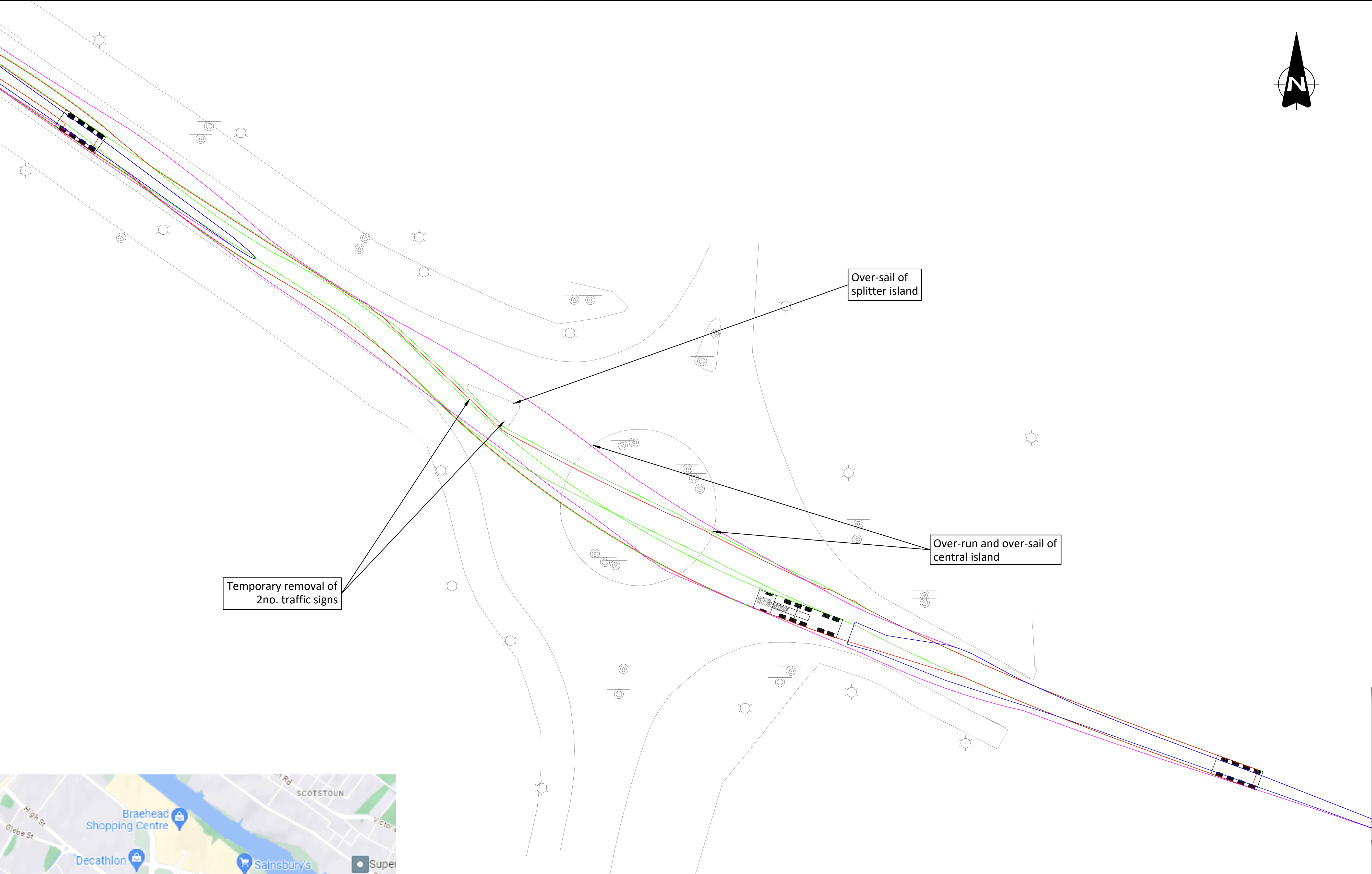
Client **3R Energy**

Project

Hagshaw Energy Cluster - Western Expansion

Vehicle Details
81.088m Blade Transporter

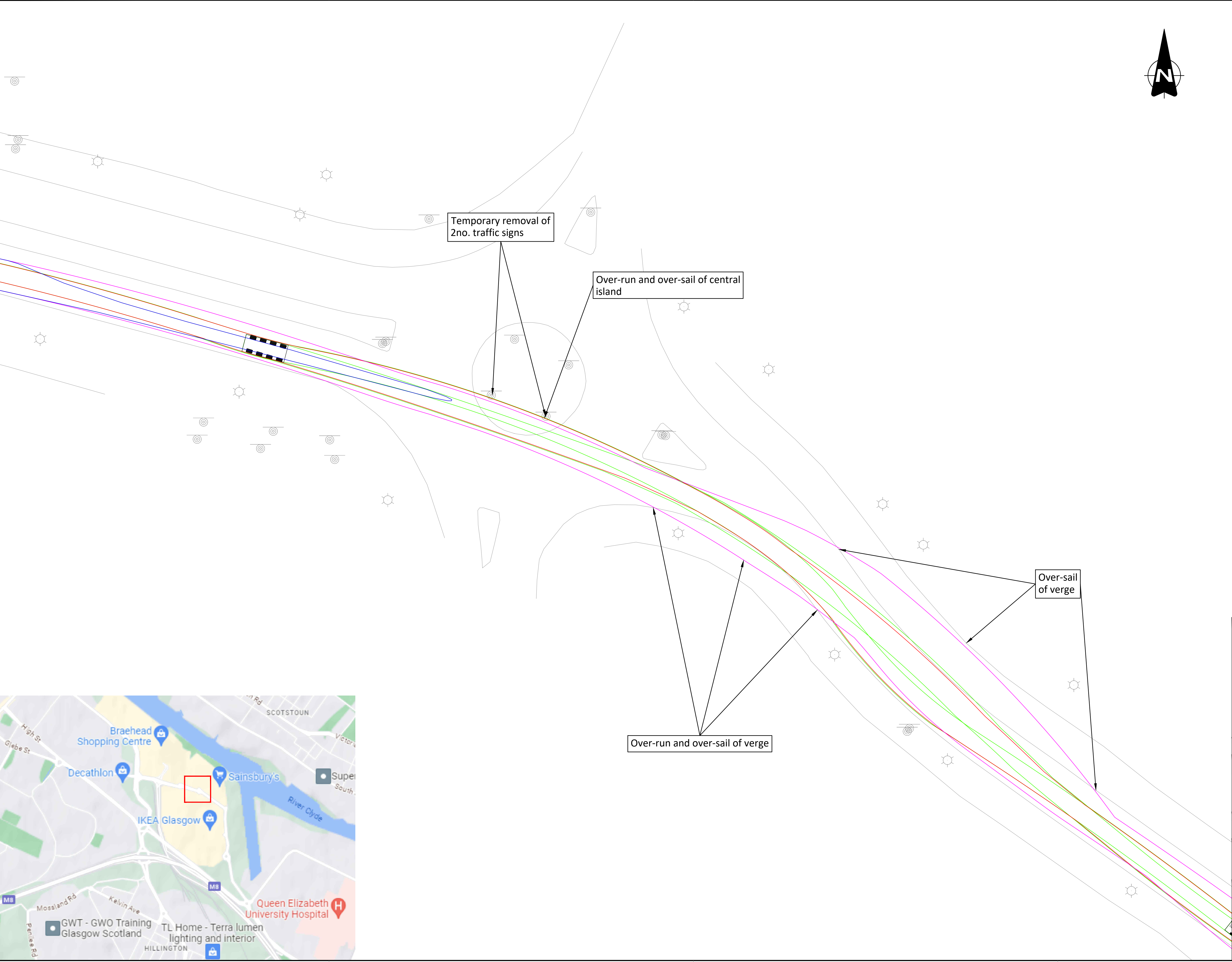
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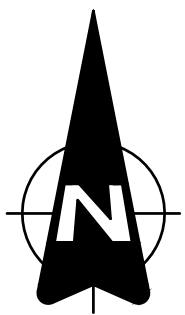
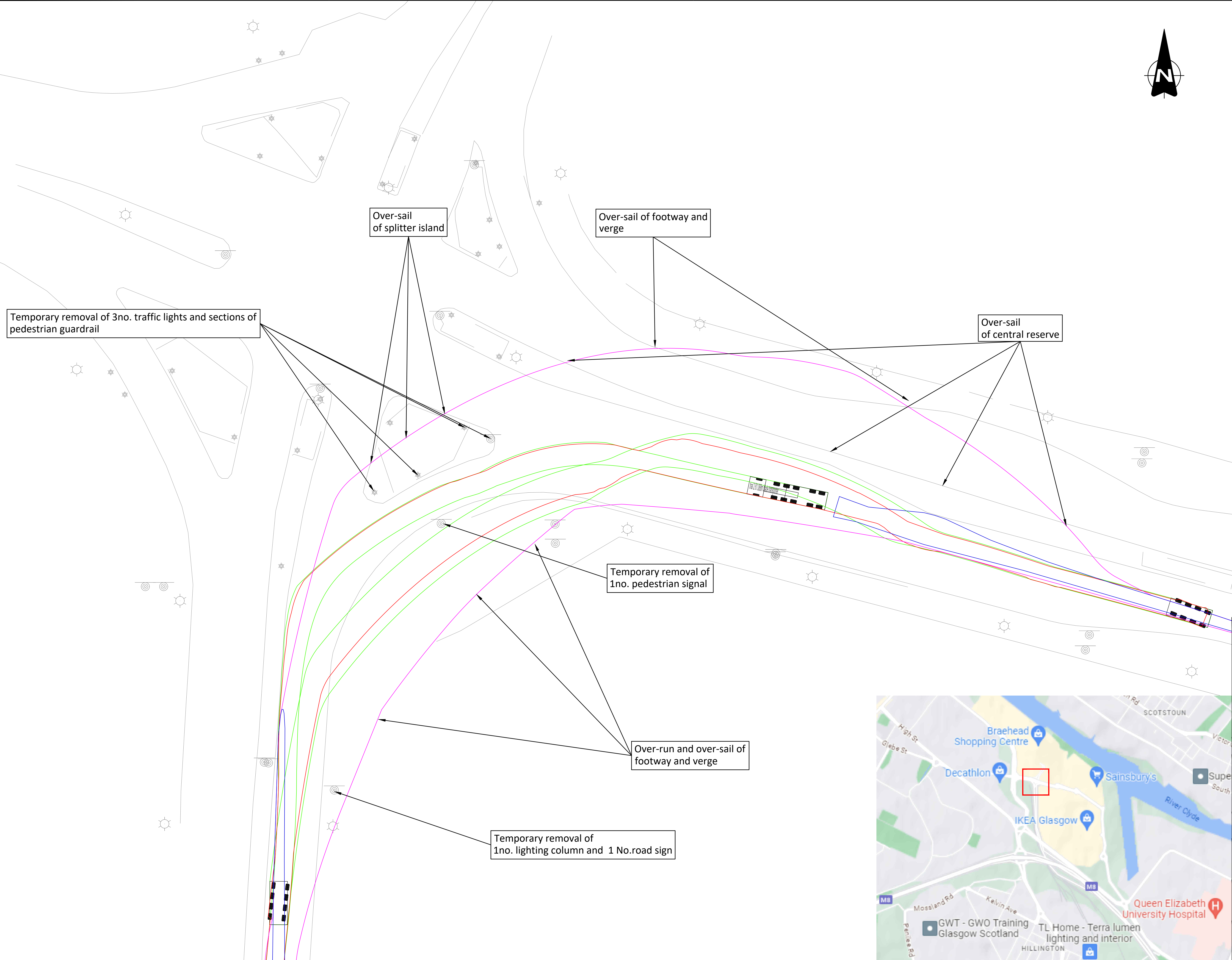
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Project: Hagshaw Energy Cluster - Western Expansion


Title: Swept Path Analysis
81.088m Blade Transporter

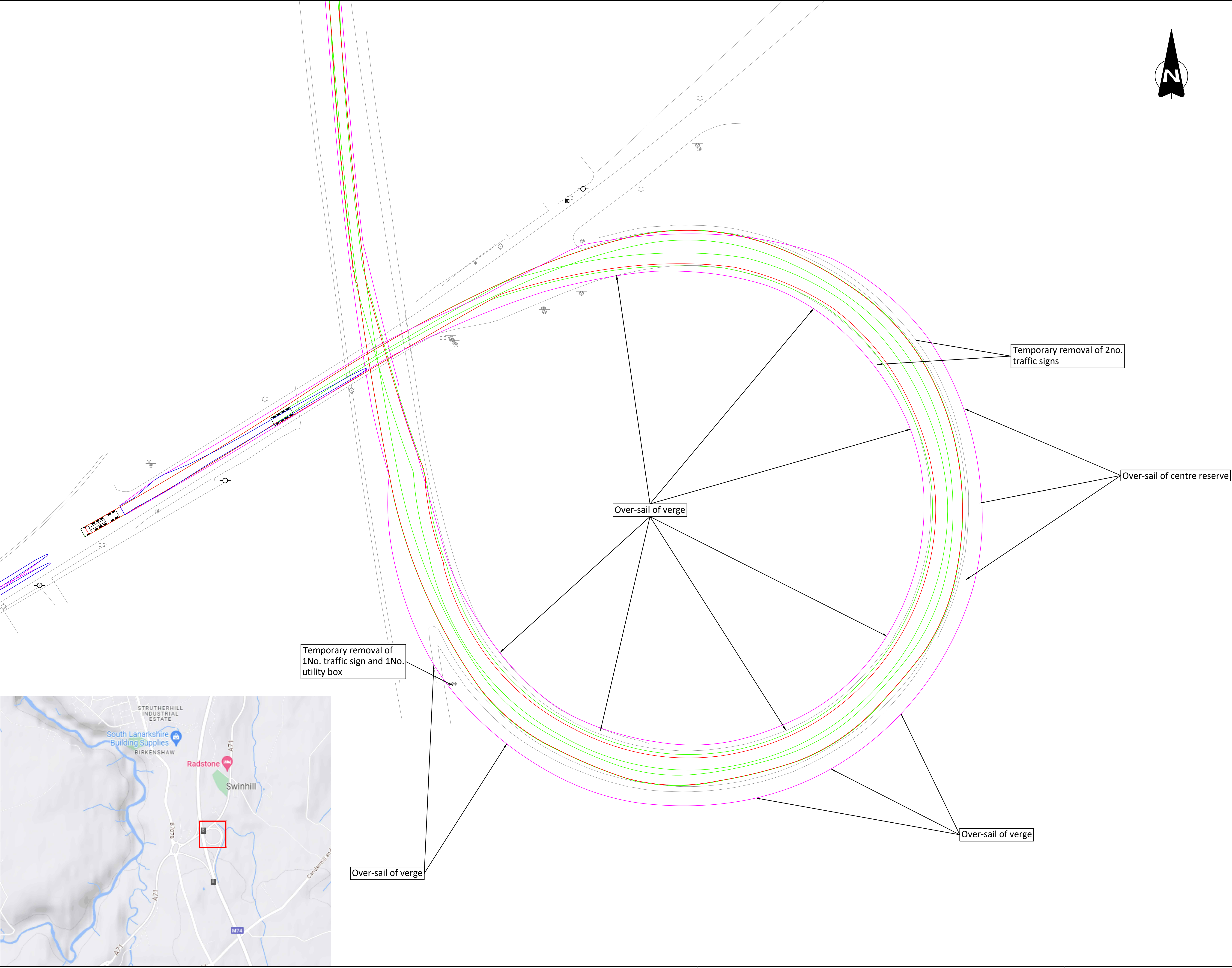
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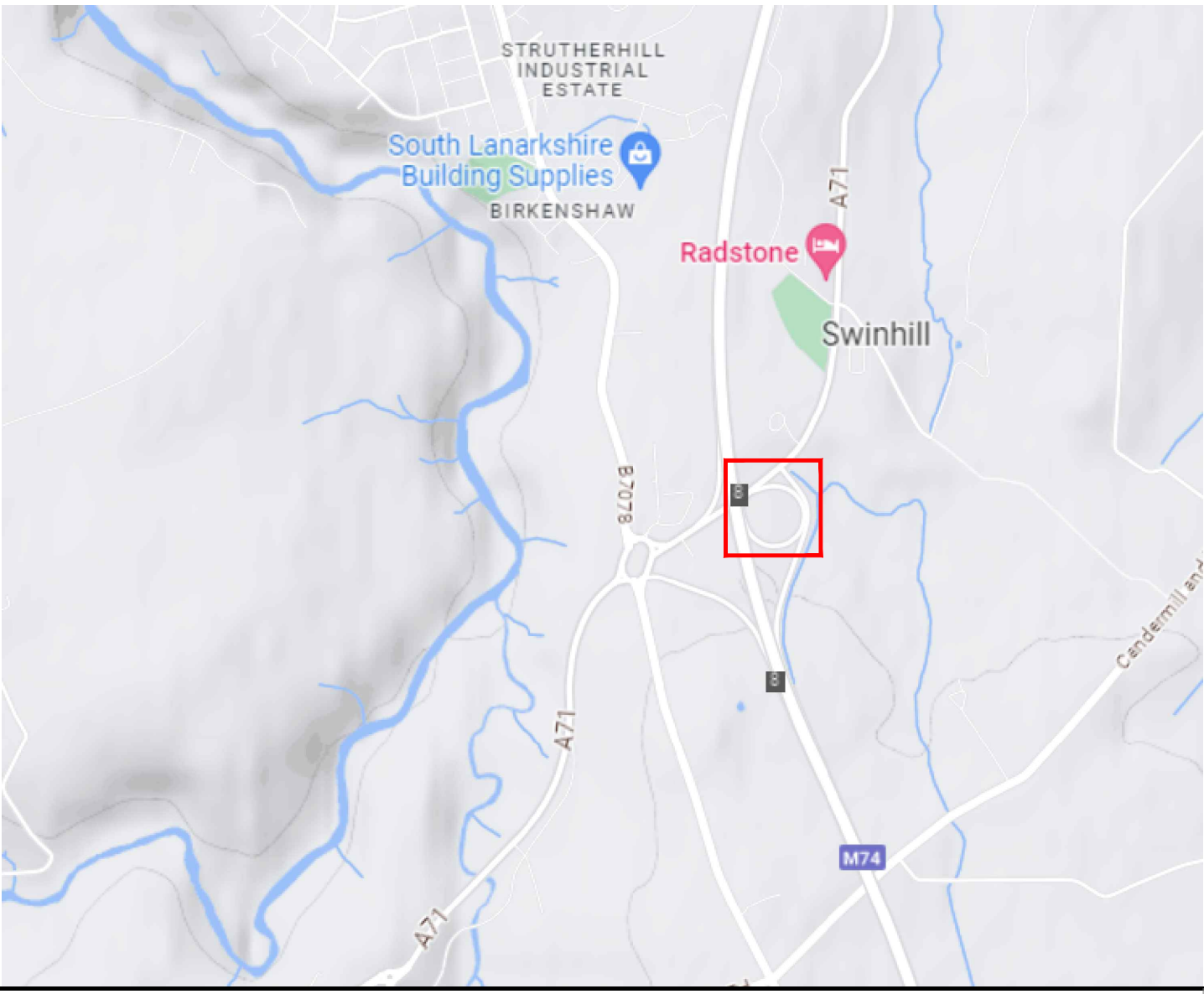
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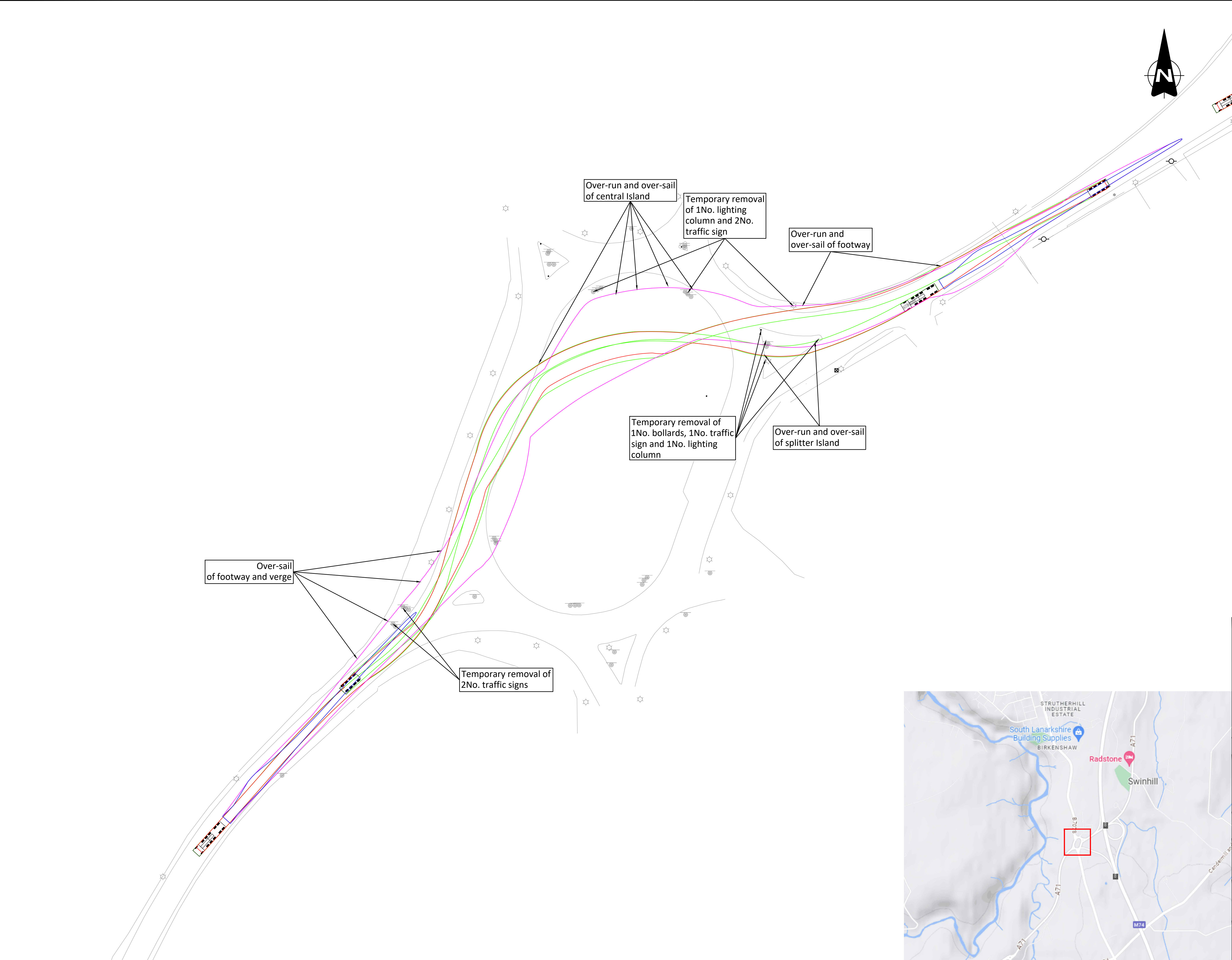
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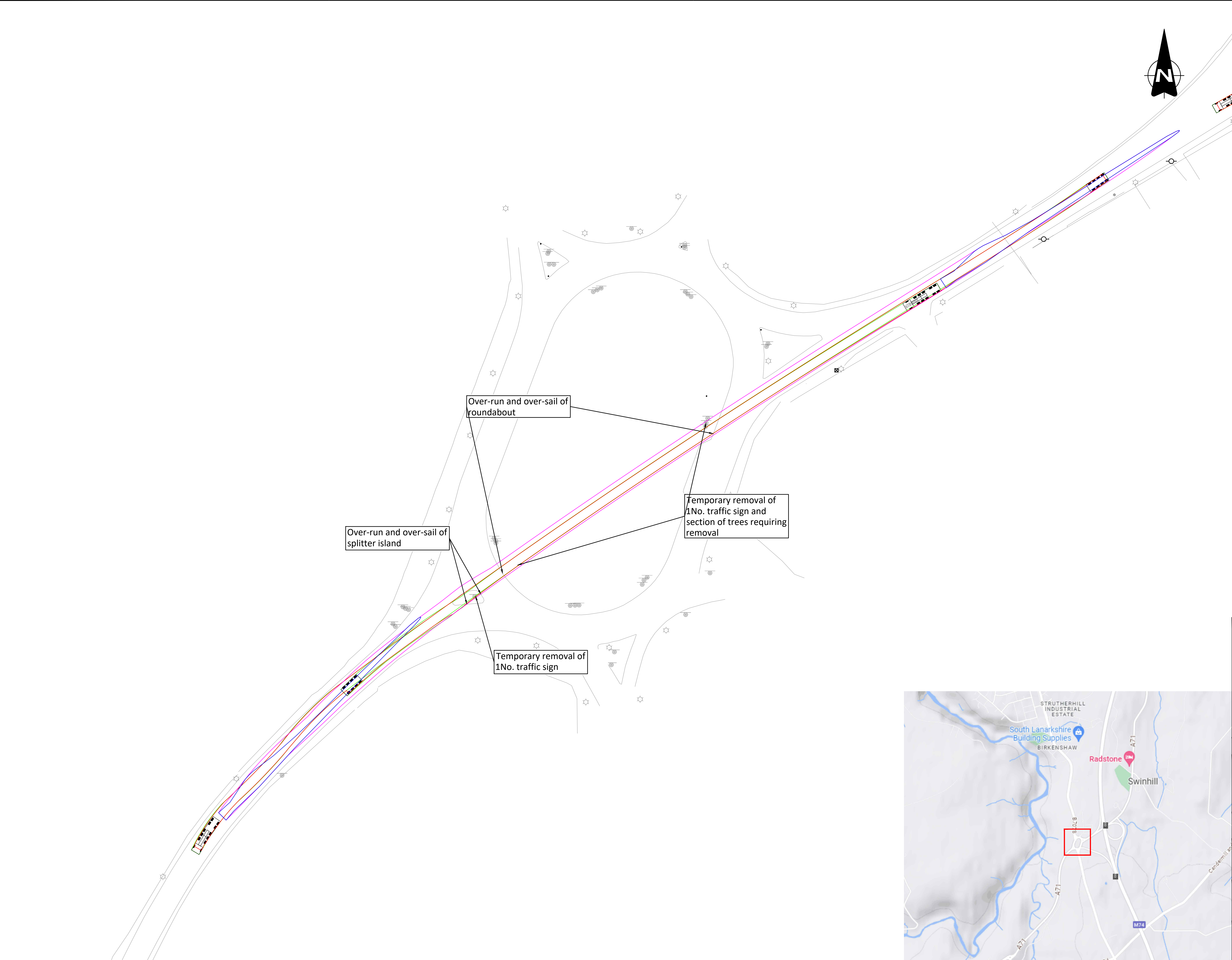
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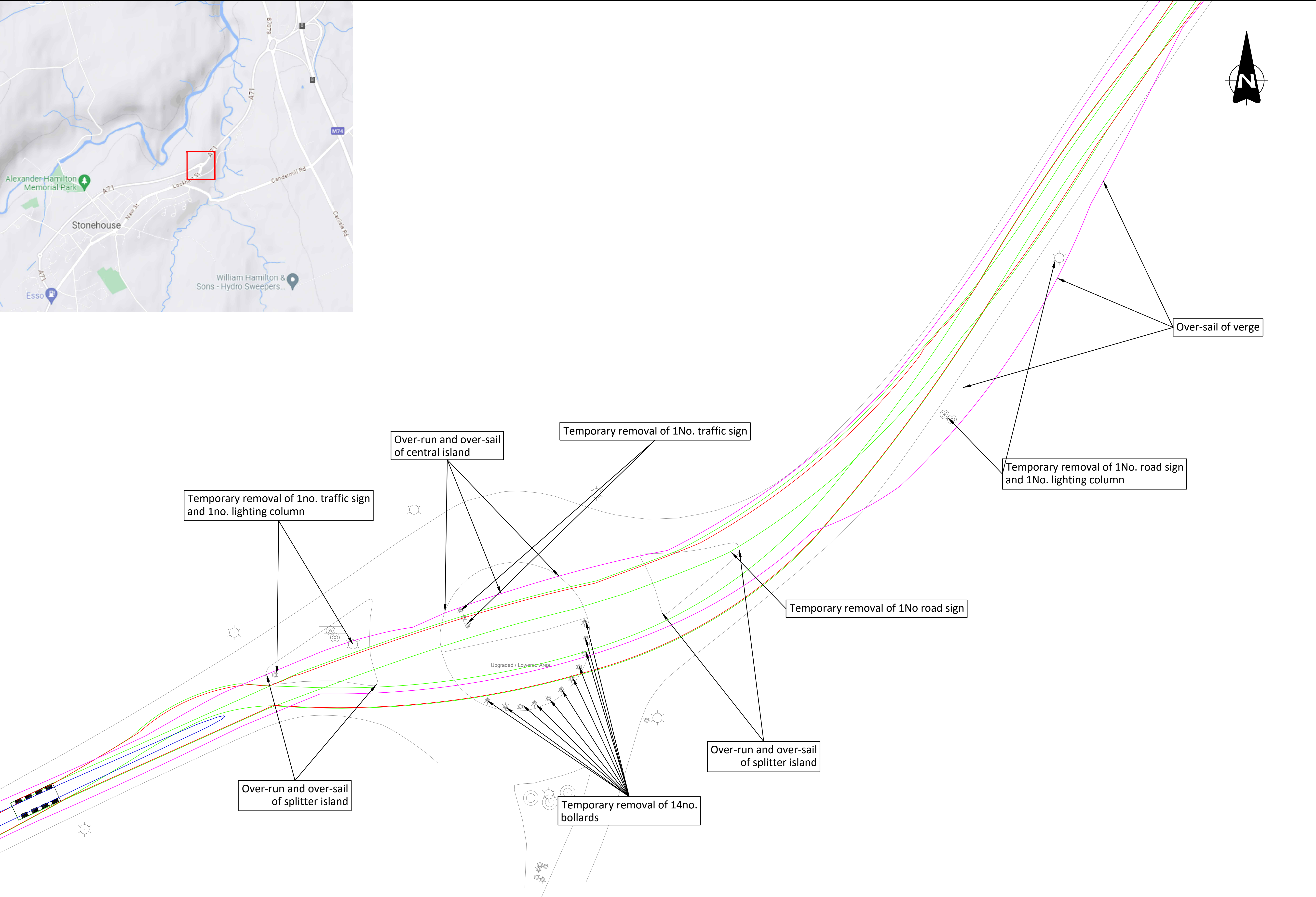
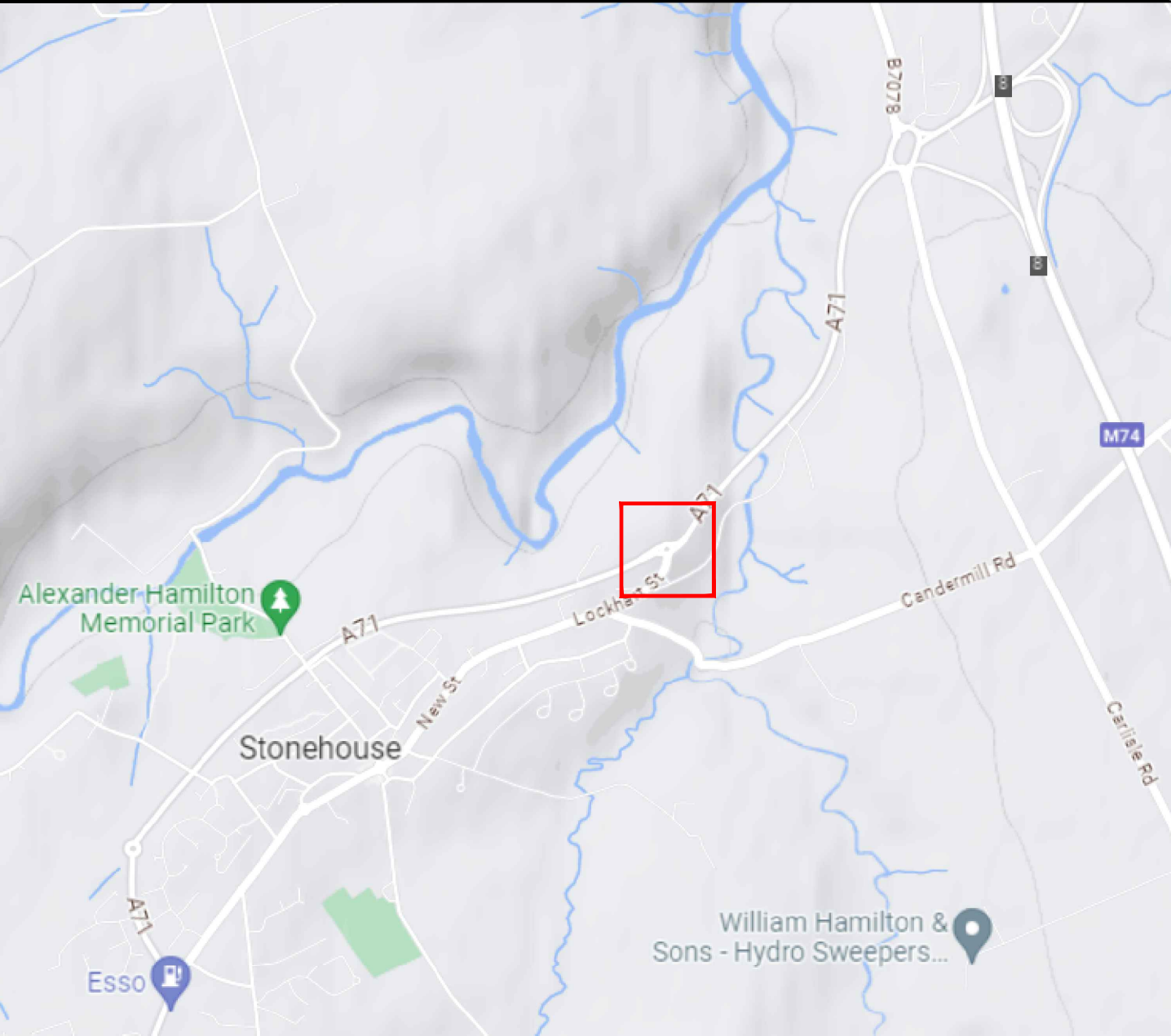
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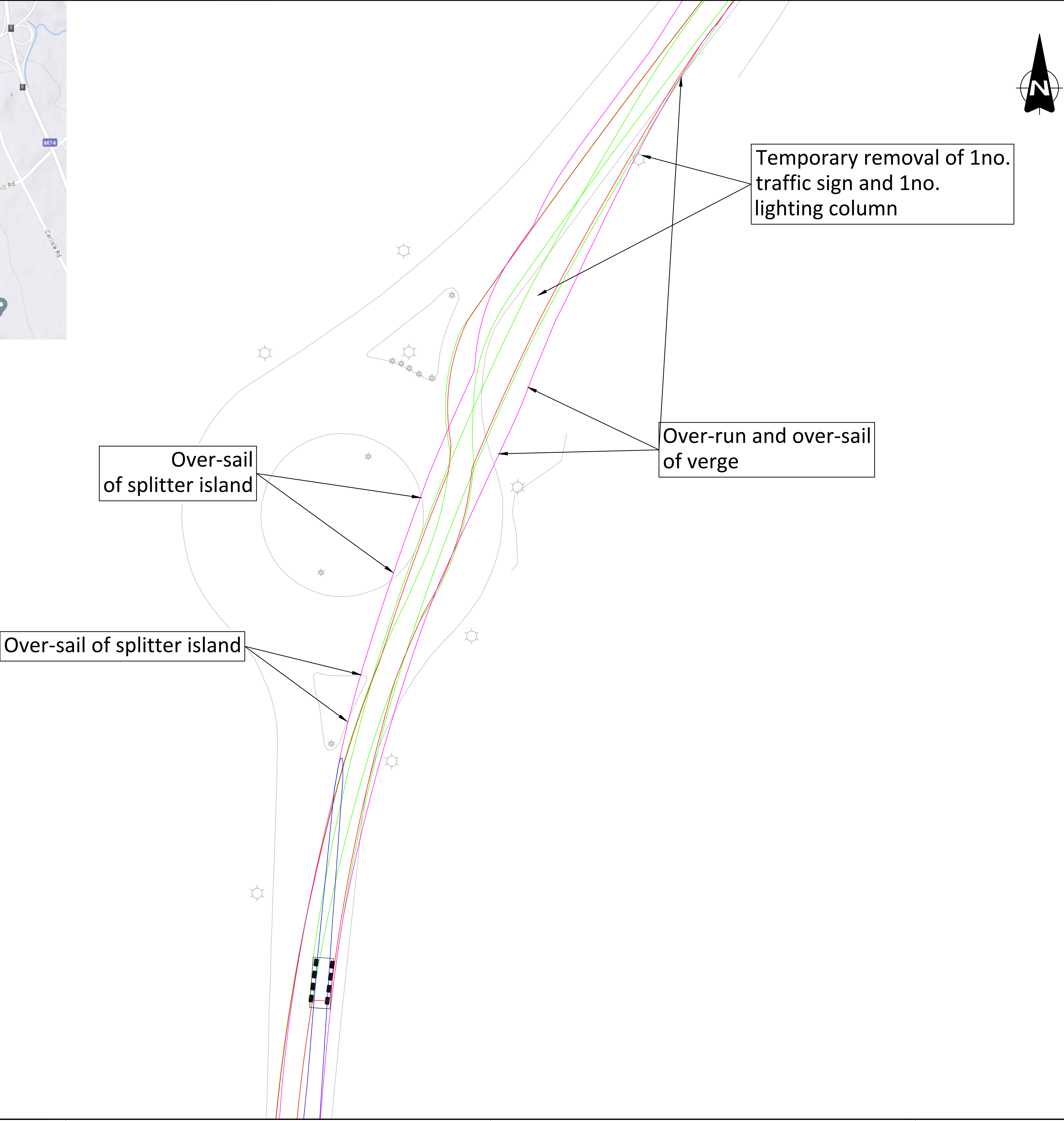
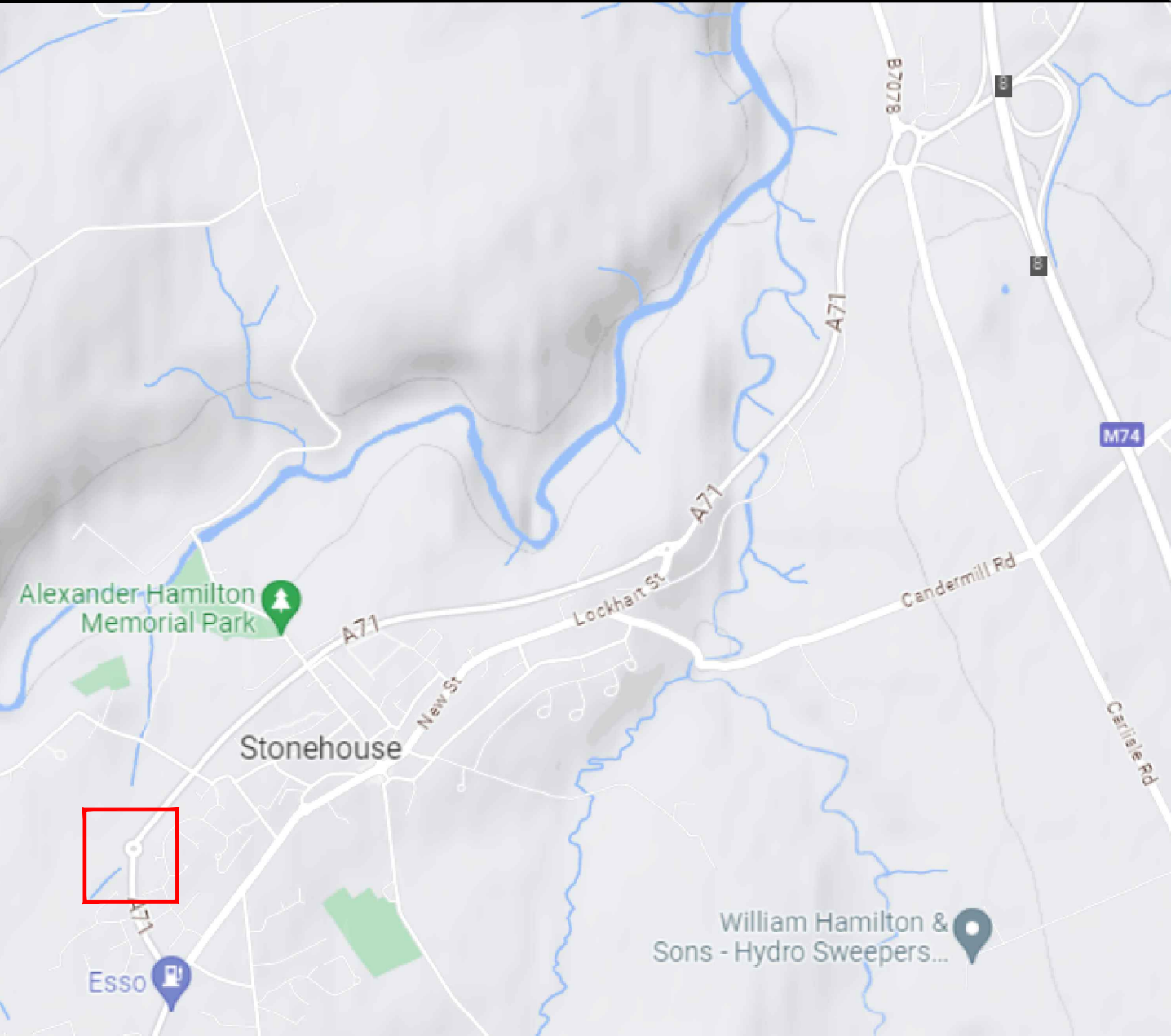
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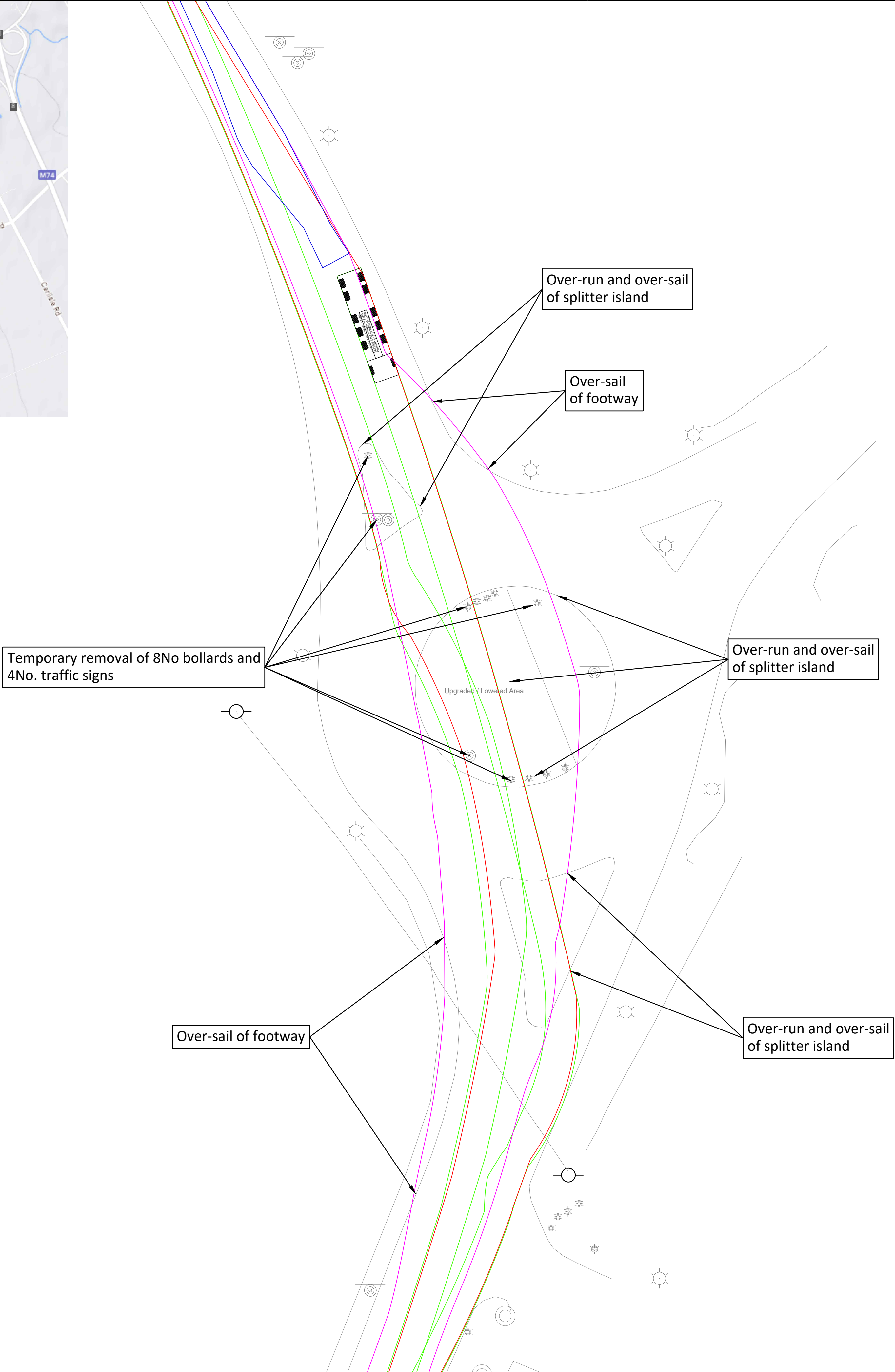
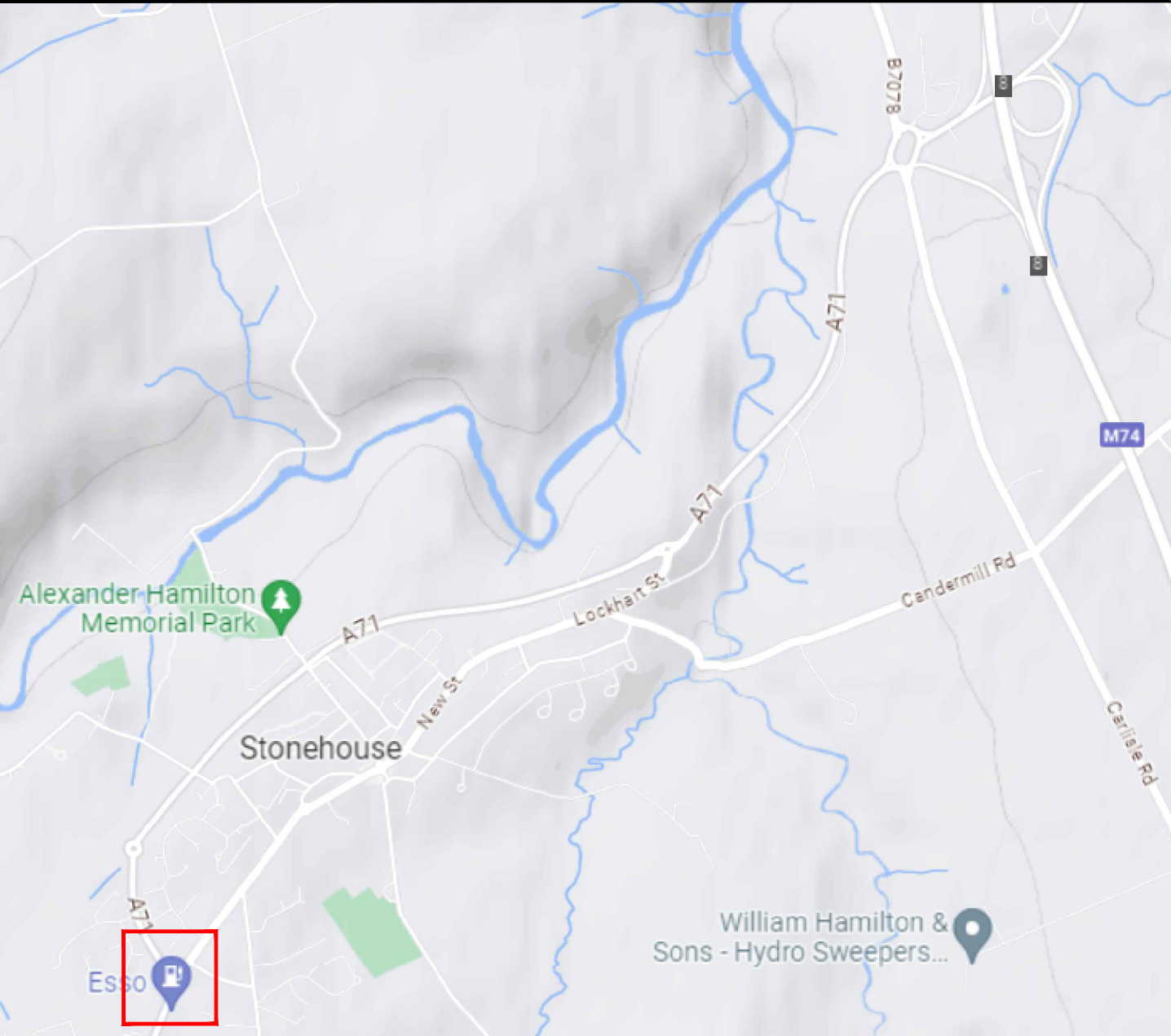
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Project: Hagshaw Energy Cluster - Western Expansion

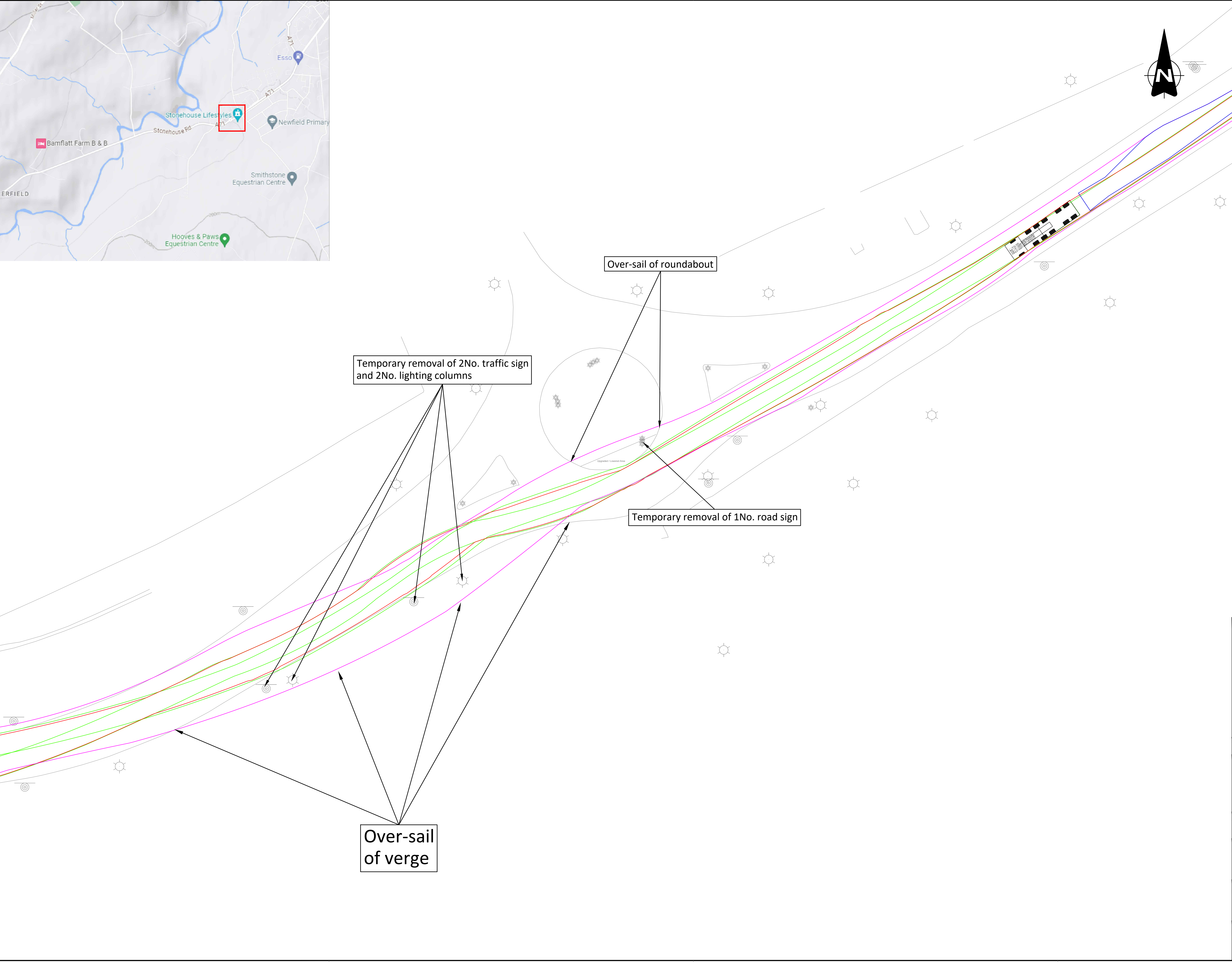
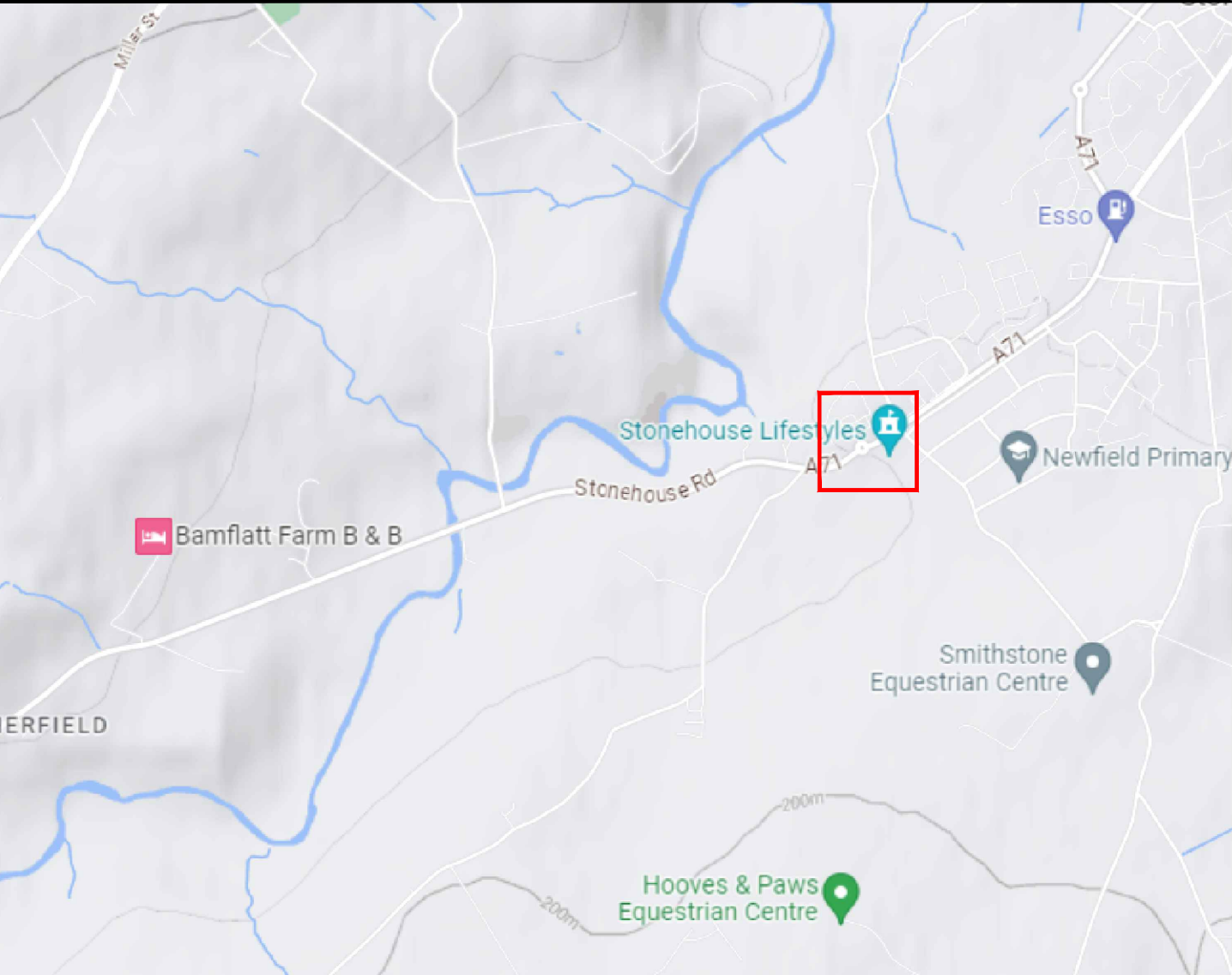
Title: Swept Path Analysis
81.088m Blade Transporter

Drawn: SH	Checked: ADV	Approved: ADV
Original dtp. size: A1	Date: Oct'23	Scale: 1:250
Drawing Status: For Information	Drawing Number: SPA/008	Rev. -



- GENERAL NOTES**
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- Key:**
- Outline of wheels
 - Outline of vehicle body
 - Outline of blade

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Project Hagshaw Energy Cluster - Western Expansion					
Title Swept Path Analysis 81.088m Blade Transporter					
Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:250
Drawing Status	For Information		Drawing Number	SPA/009	Rev. =



GENERAL NOTES

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Key:

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- Outline of vehicle body
- Outline of blade

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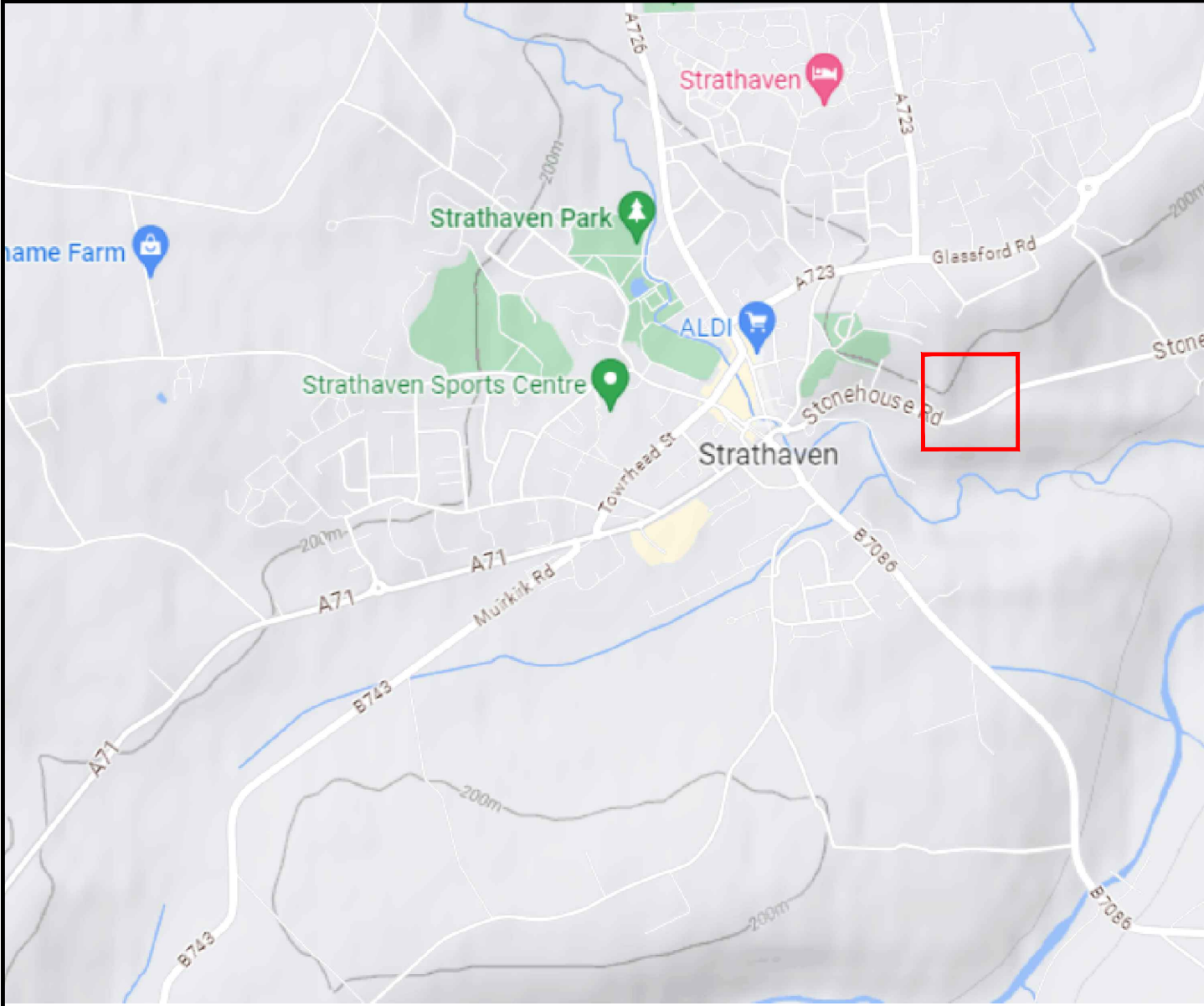
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Client
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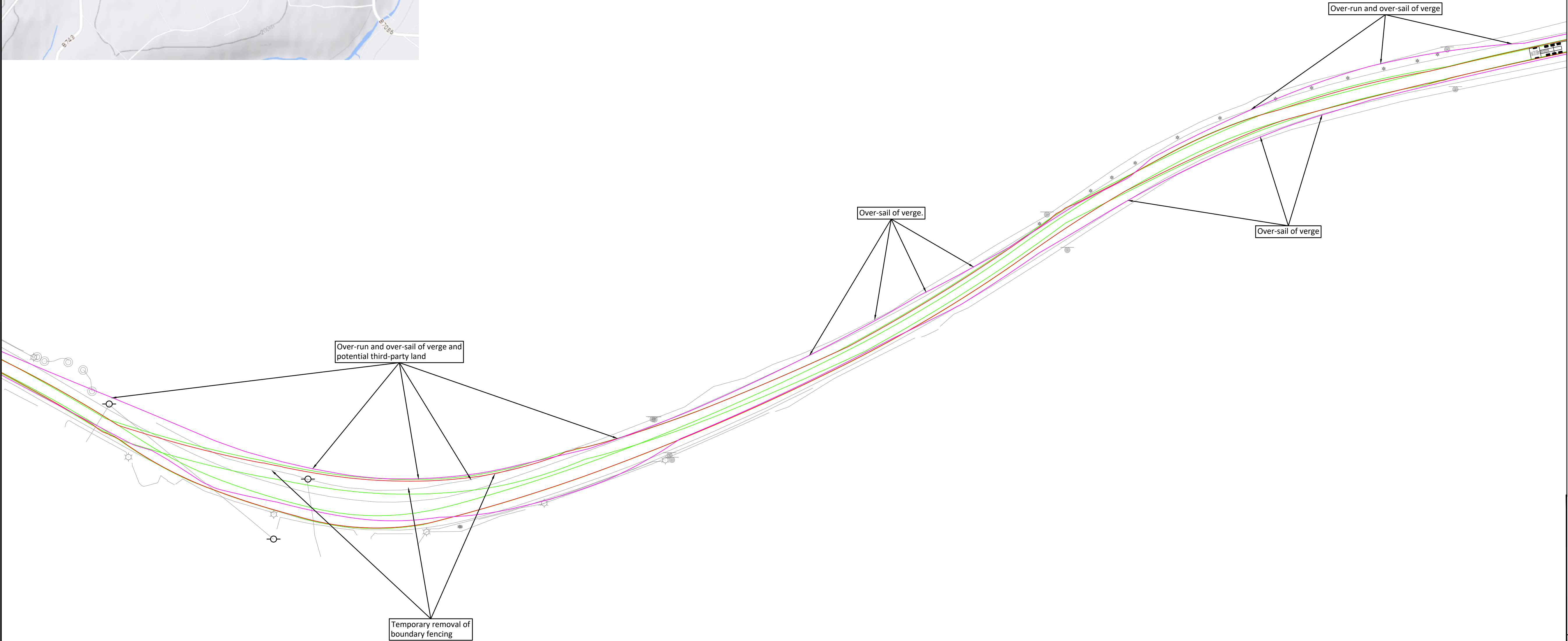
Project
Hagshaw Energy Cluster - Western Expansion

Title
Swept Path Analysis
81.088m Blade Transporter

Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:250
Drawing Status	For Information		Drawing Number	SPA/010	
Rev.	-				



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- Key:**
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 - Outline of vehicle body
 - Outline of blade



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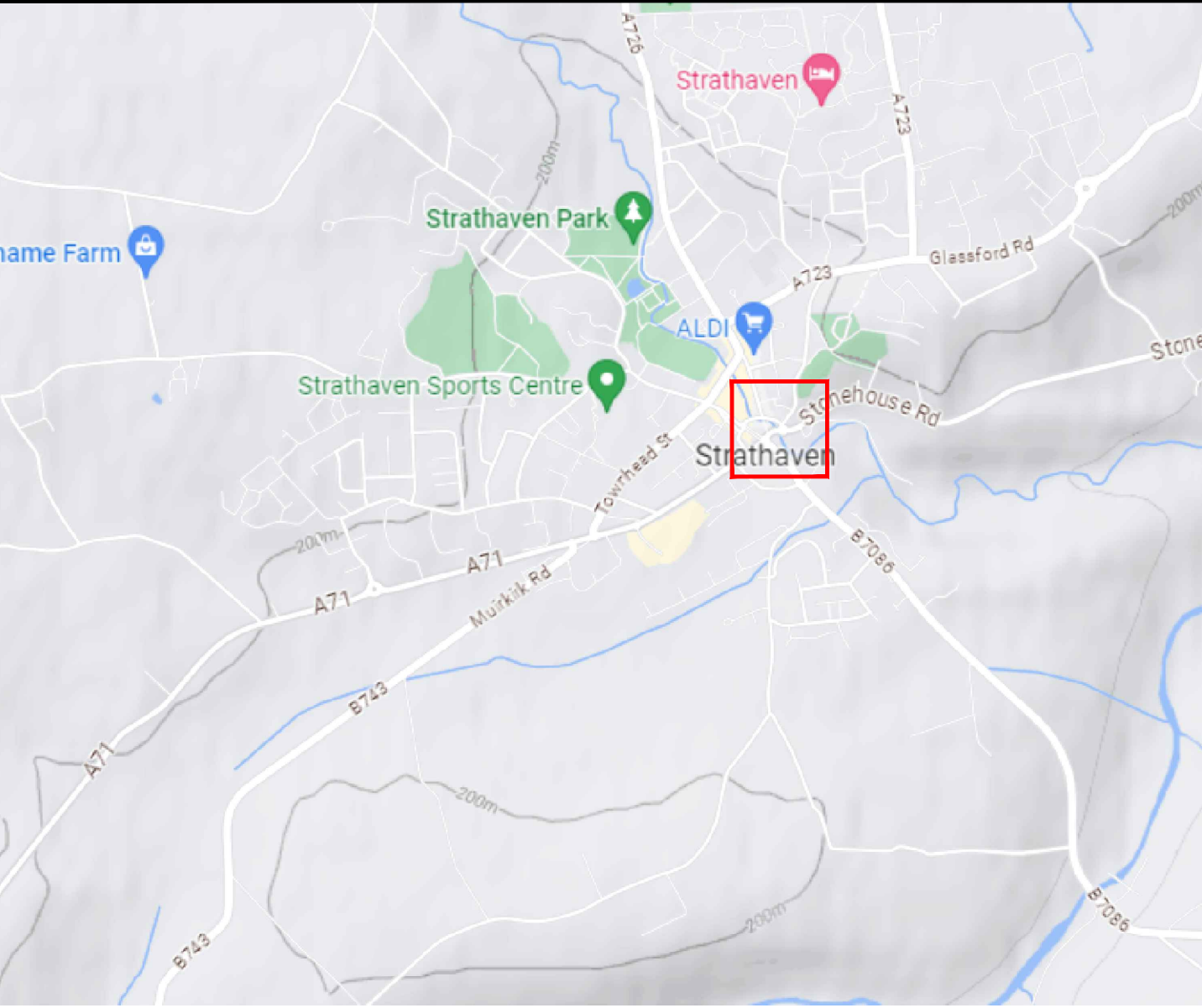
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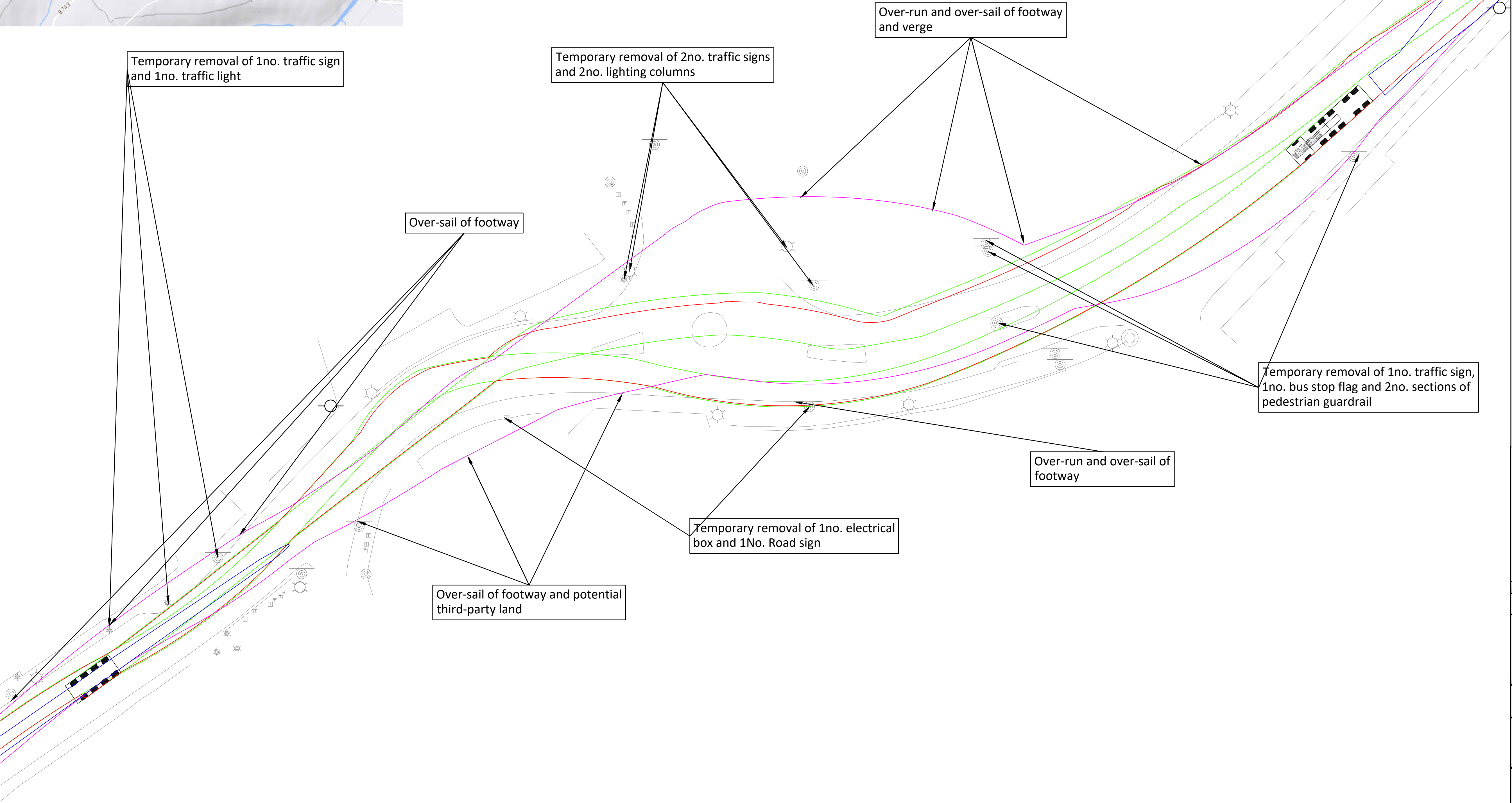
Project: Hagshaw Energy Cluster - Western Expansion

Title: Swept Path Analysis
81.088m Blade Transporter

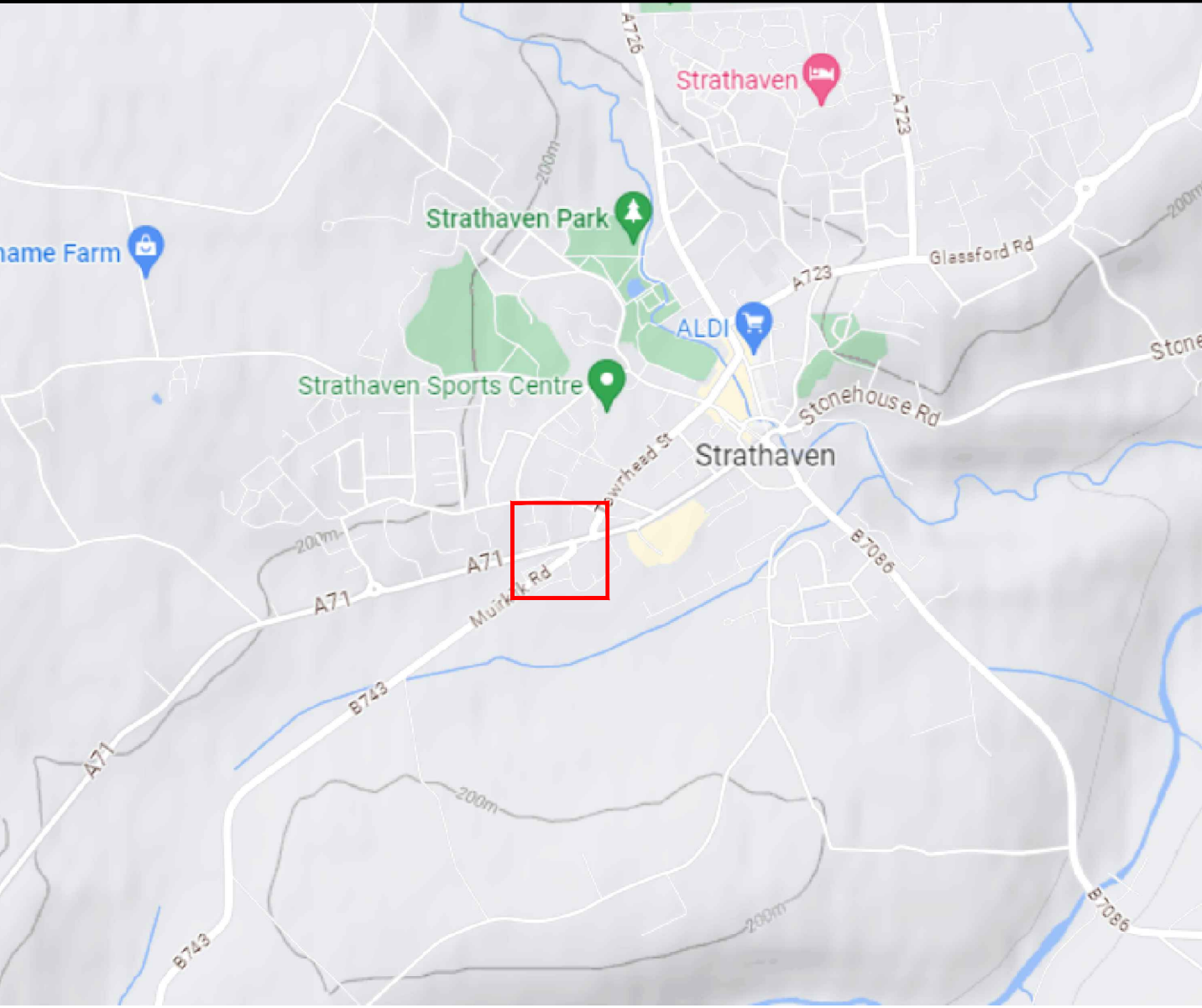
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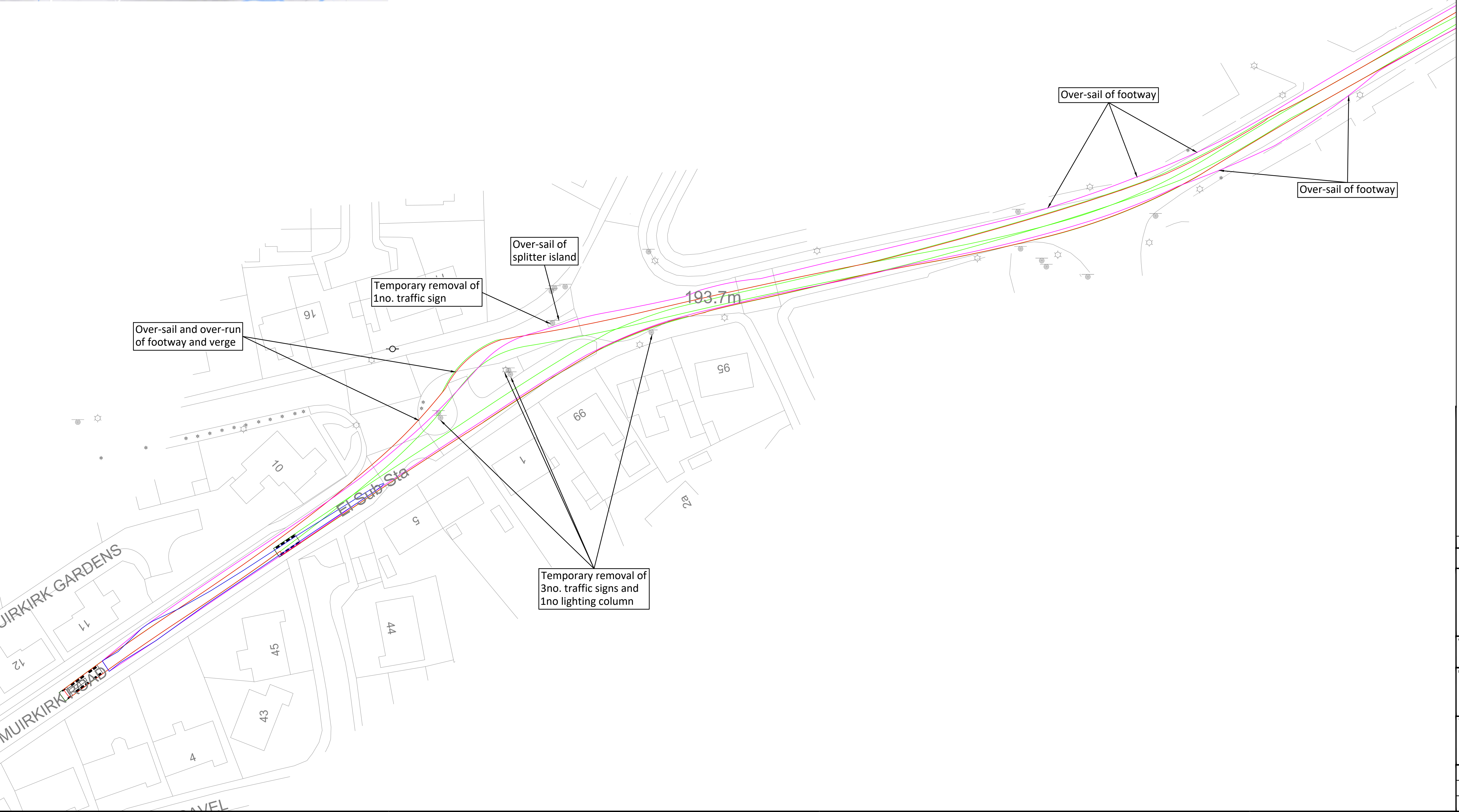
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- Key:
- Outline of wheels
 - Outline of vehicle body
 - Outline of blade




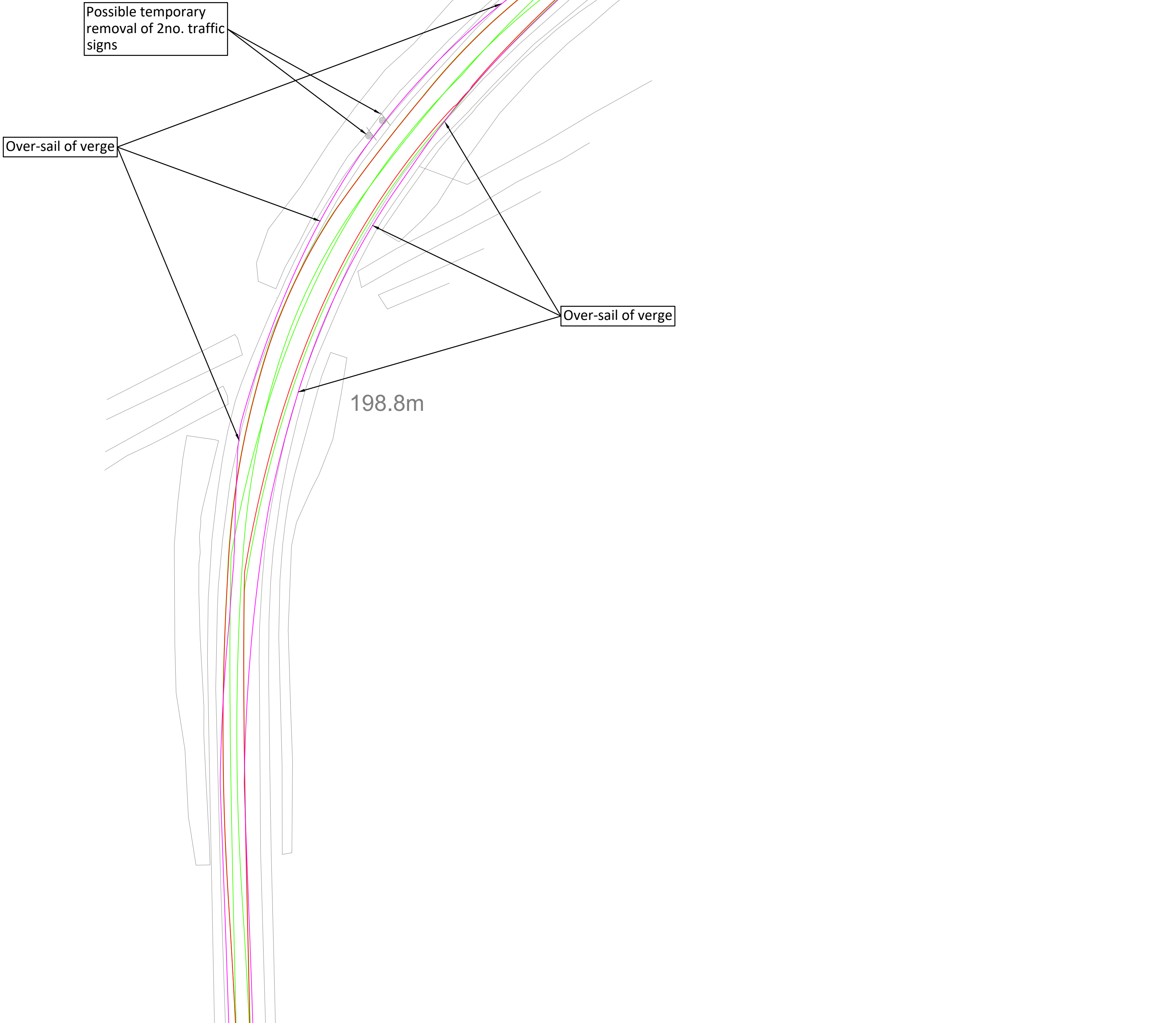
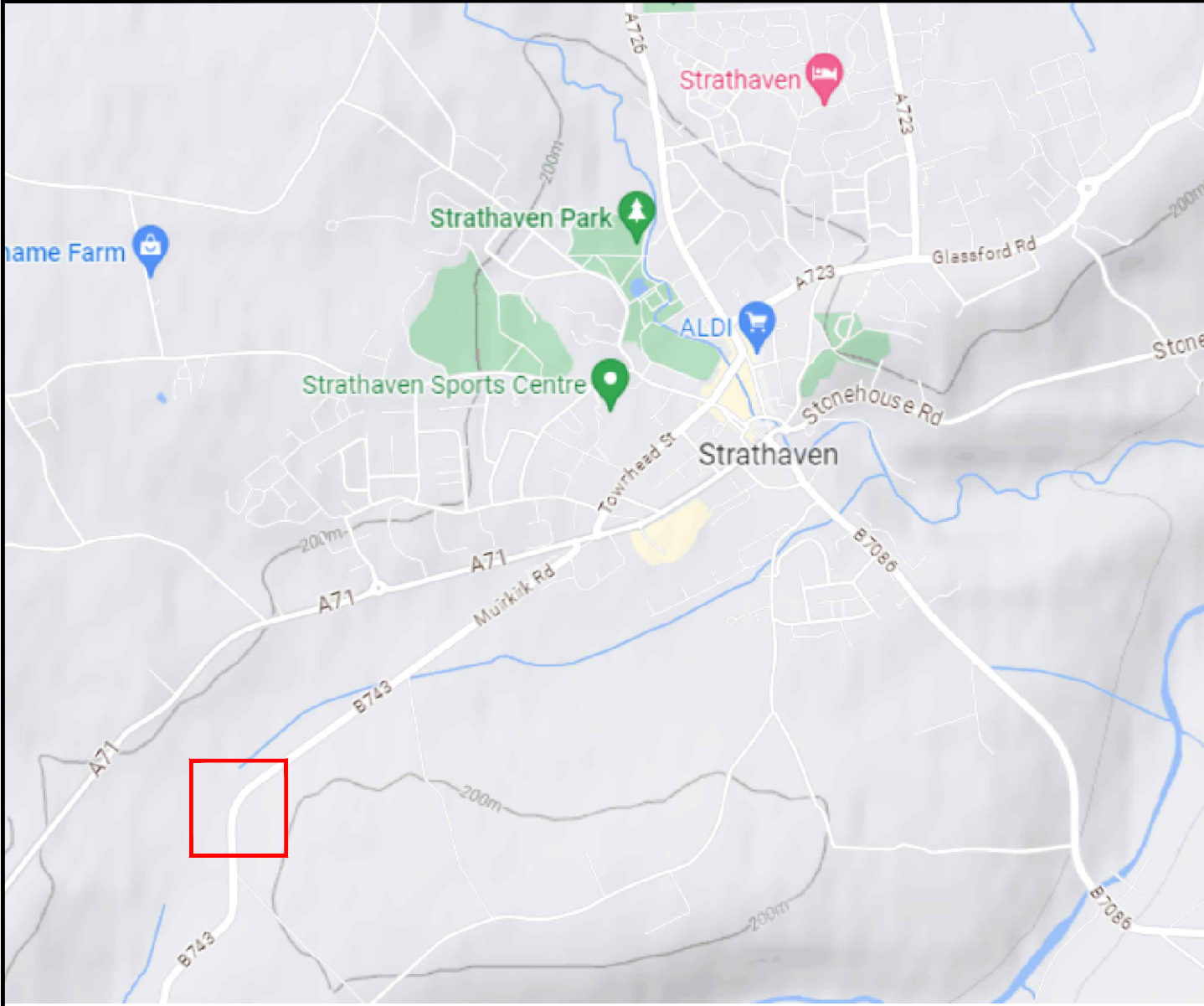
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Client 3R Energy					
Project Hagshaw Energy Cluster - Western Expansion					
Title Swept Path Analysis 81.088m Blade Transporter					
Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:250
Drawing Status	For Information		Drawing Number	SPA/012	
Rev.	-				



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 - Outline of vehicle body
 - Outline of blade



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Client 3R Energy					
Project Hagshaw Energy Cluster - Western Expansion					
Title Swept Path Analysis 81.088m Blade Transporter					
Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:500
Drawing Status	For Information		Drawing Number	SPA/013	
Rev.	-				



GENERAL NOTES

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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade

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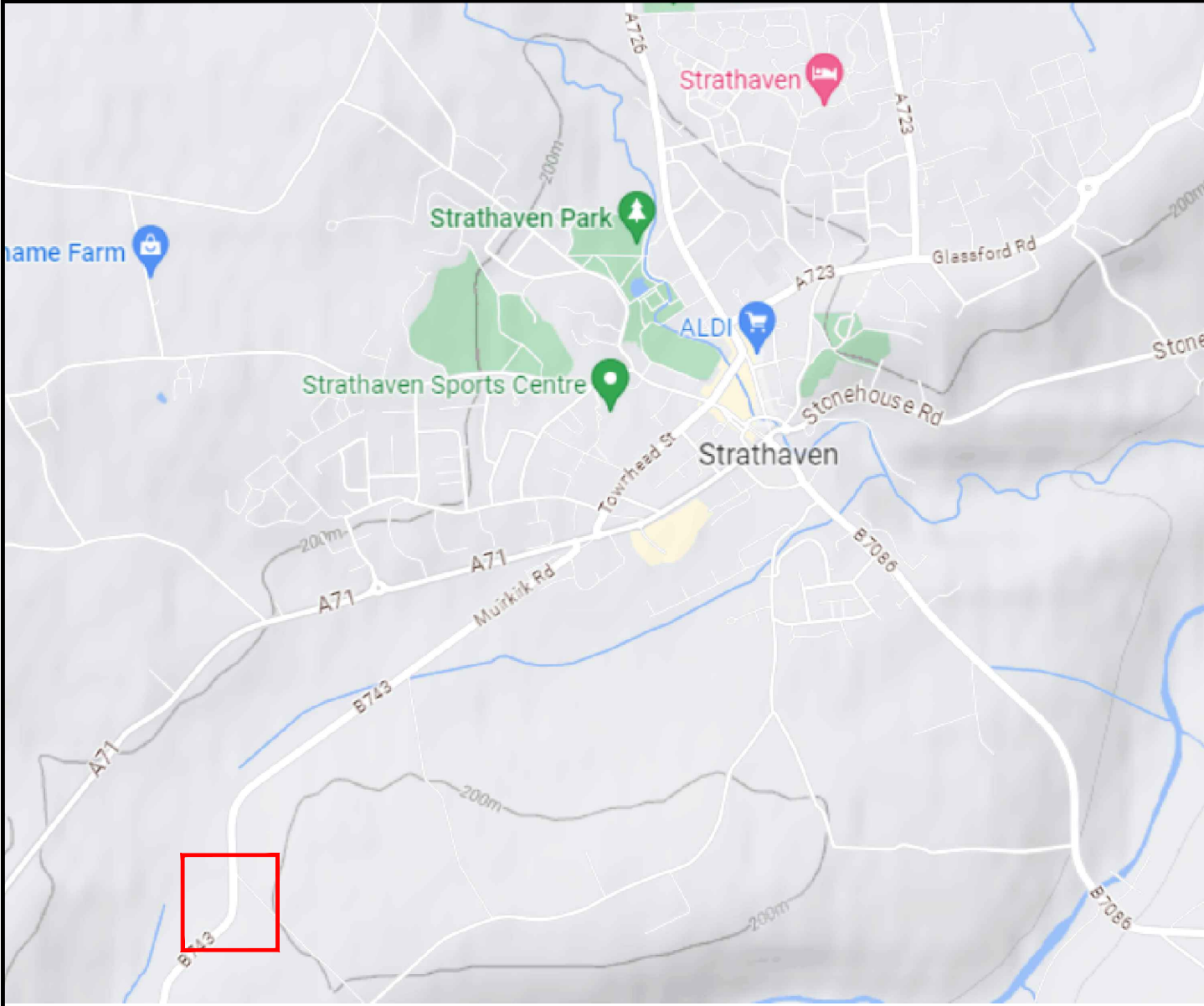
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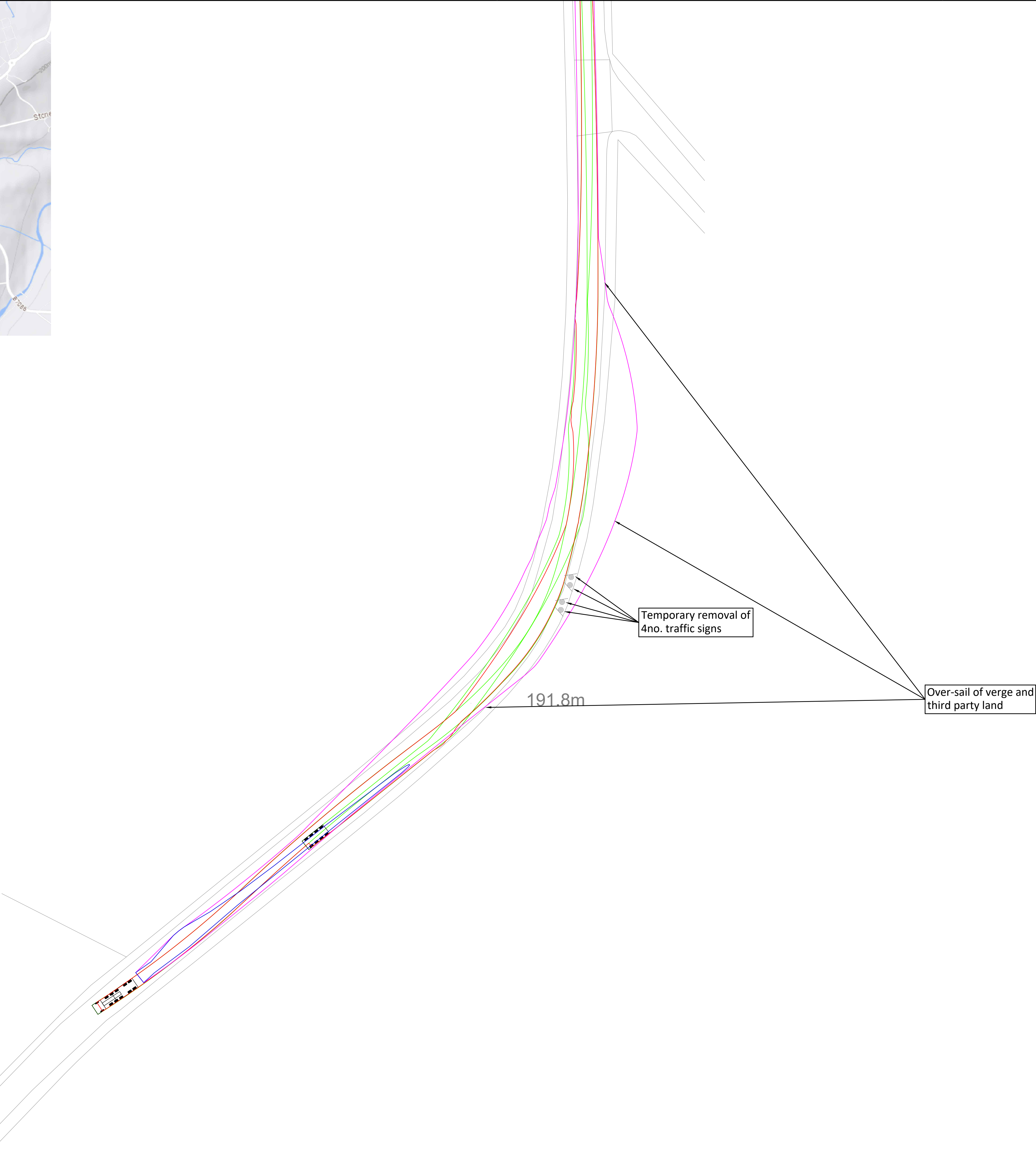
Project: Hagshaw Energy Cluster - Western Expansion

Title: Swept Path Analysis
81.088m Blade Transporter

Drawn: SH	Checked: ADV	Approved: ADV
Original dtp. size: A1	Date: Oct'23	Scale: 1:500
Drawing Status: For Information	Drawing Number: SPA/014	Rev. -




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 - Outline of blade



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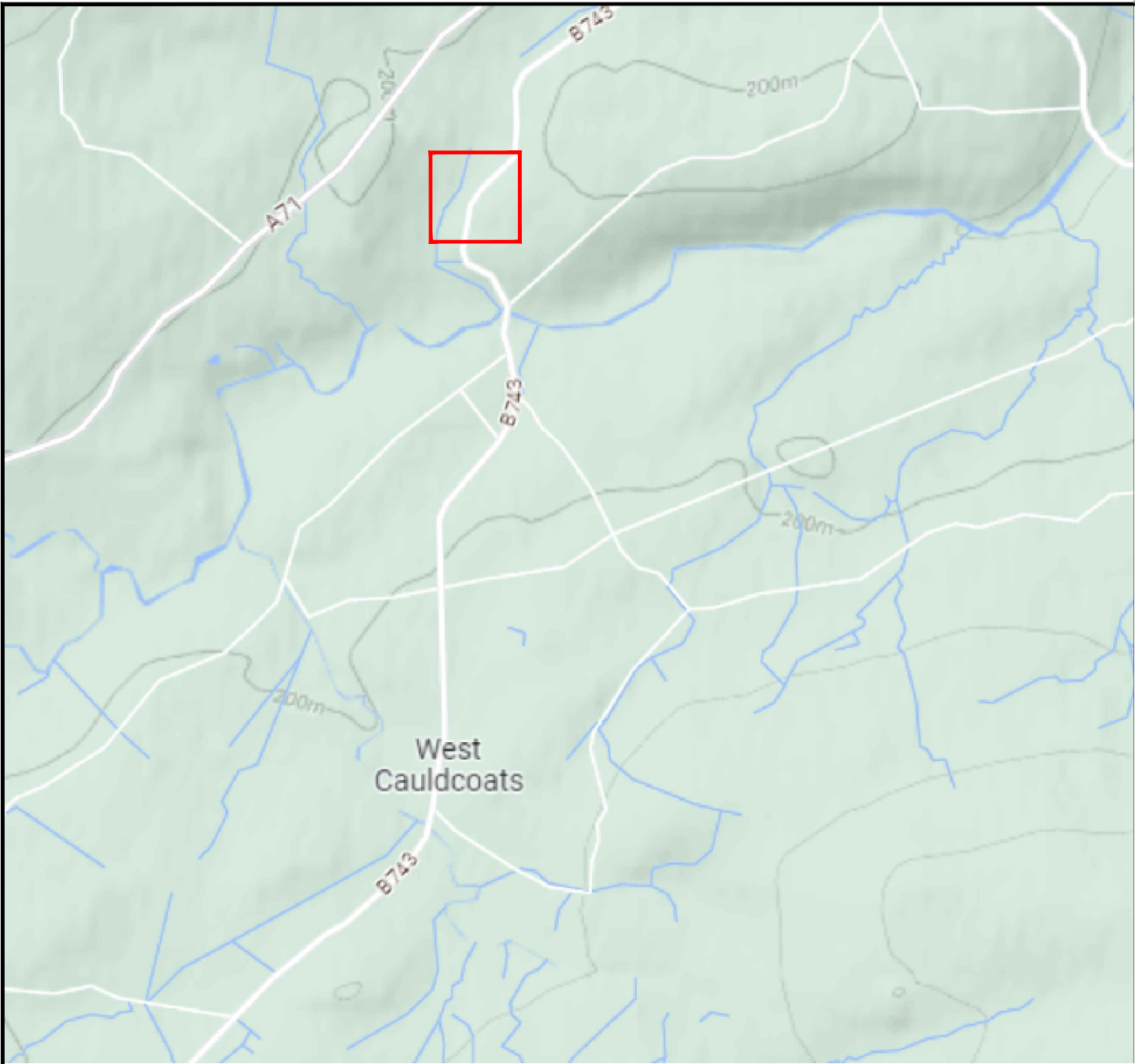
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Hagshaw Energy Cluster - Western Expansion

Title

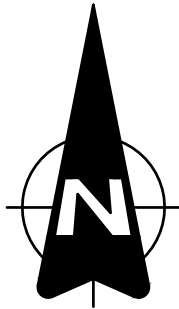
Swept Path Analysis
81.088m Blade Transporter

Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:500
Drawing Status	For Information		Drawing Number	SPA/015	Rev. =



Over-sail of verge and
third party land

Over-sail and over-run
of verge



GENERAL NOTES


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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade

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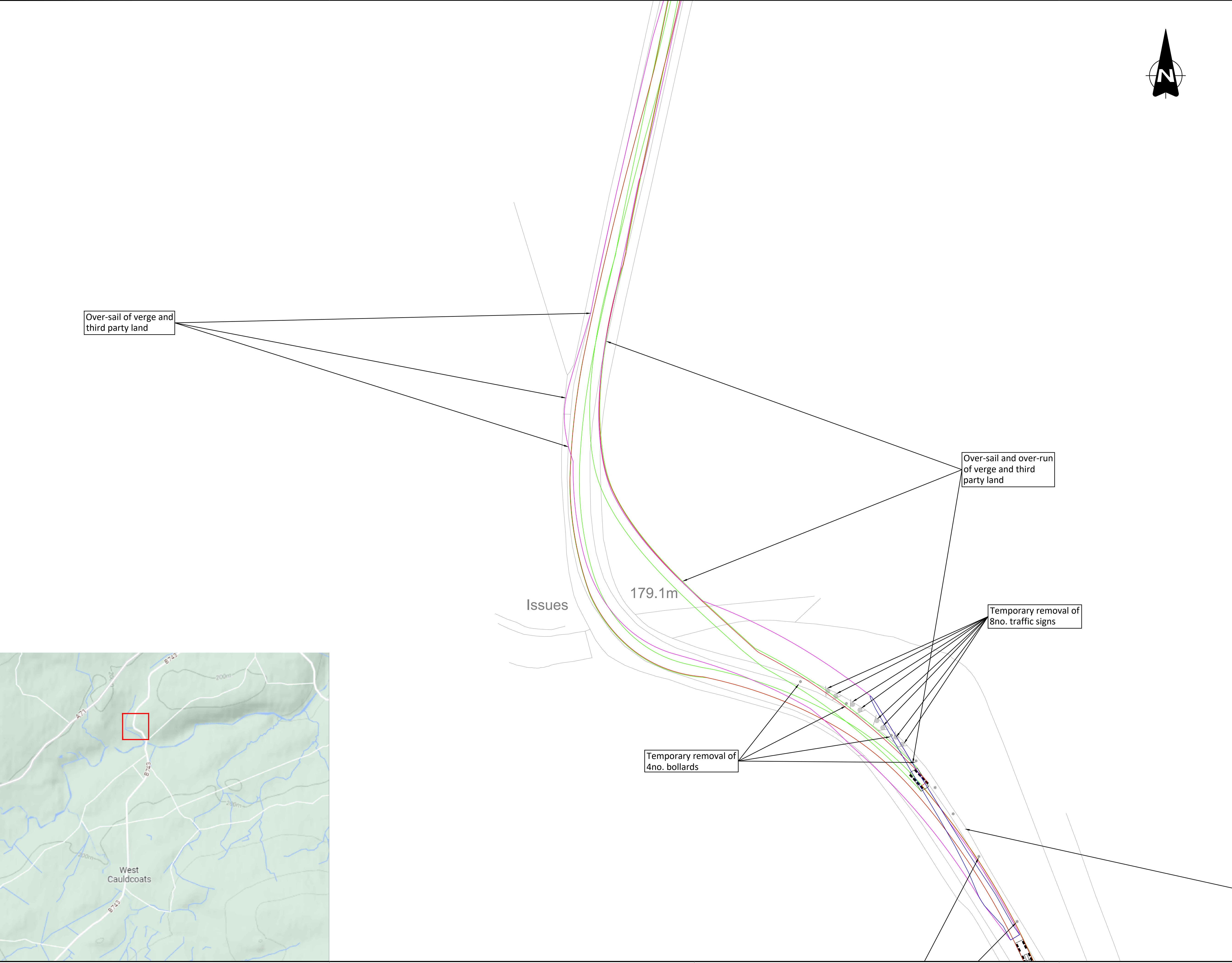
Project

Hagshaw Energy Cluster - Western Expansion

Title

Swept Path Analysis
81.088m Blade Transporter

Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:500
Drawing Status	For Information		Drawing Number	SPA/016	Rev.
					-



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Key:

- Outline of wheels
- Outline of vehicle body
- Outline of blade

Rev.	Date	Revision details	Drawn	Checked	Approved

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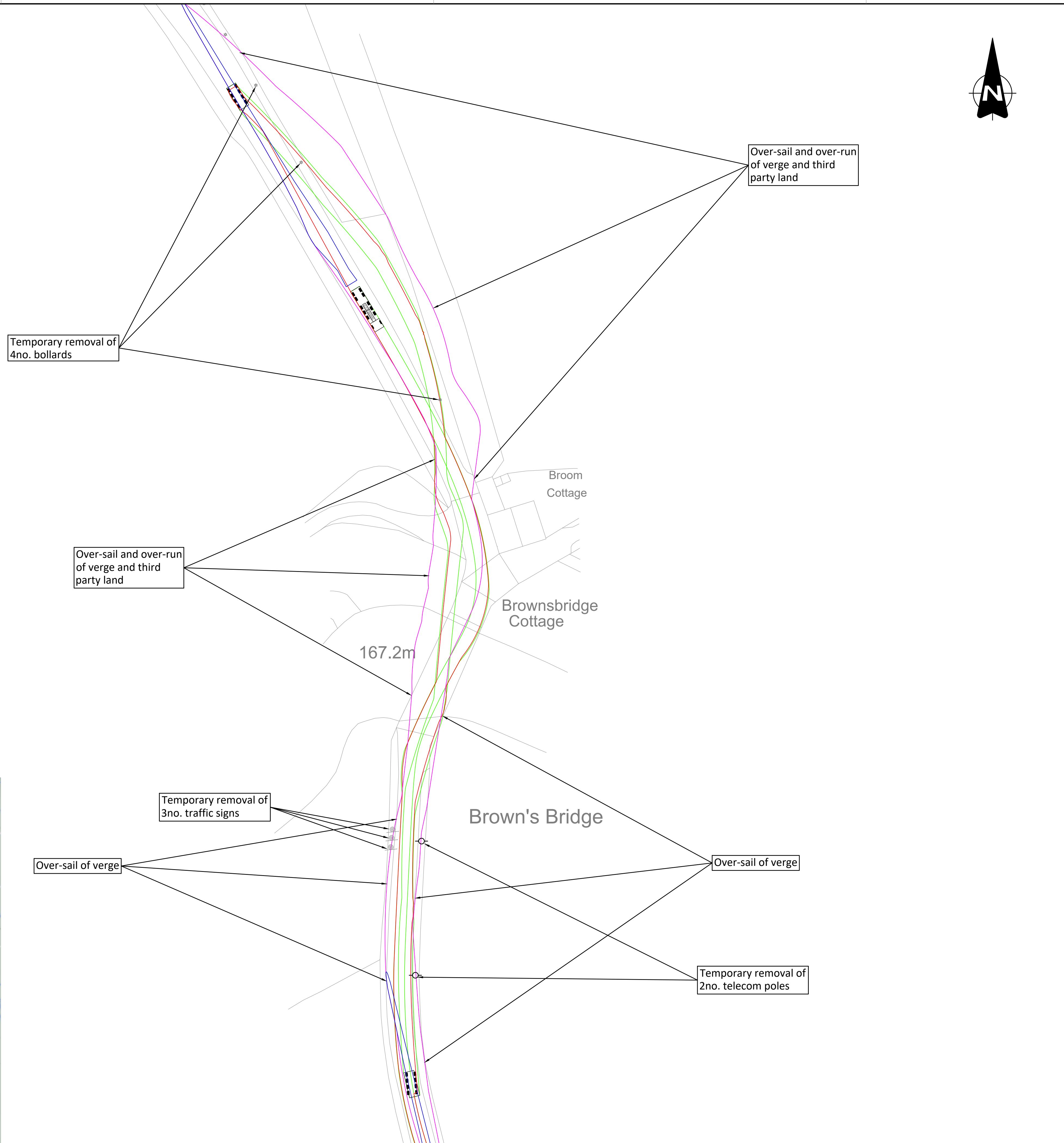
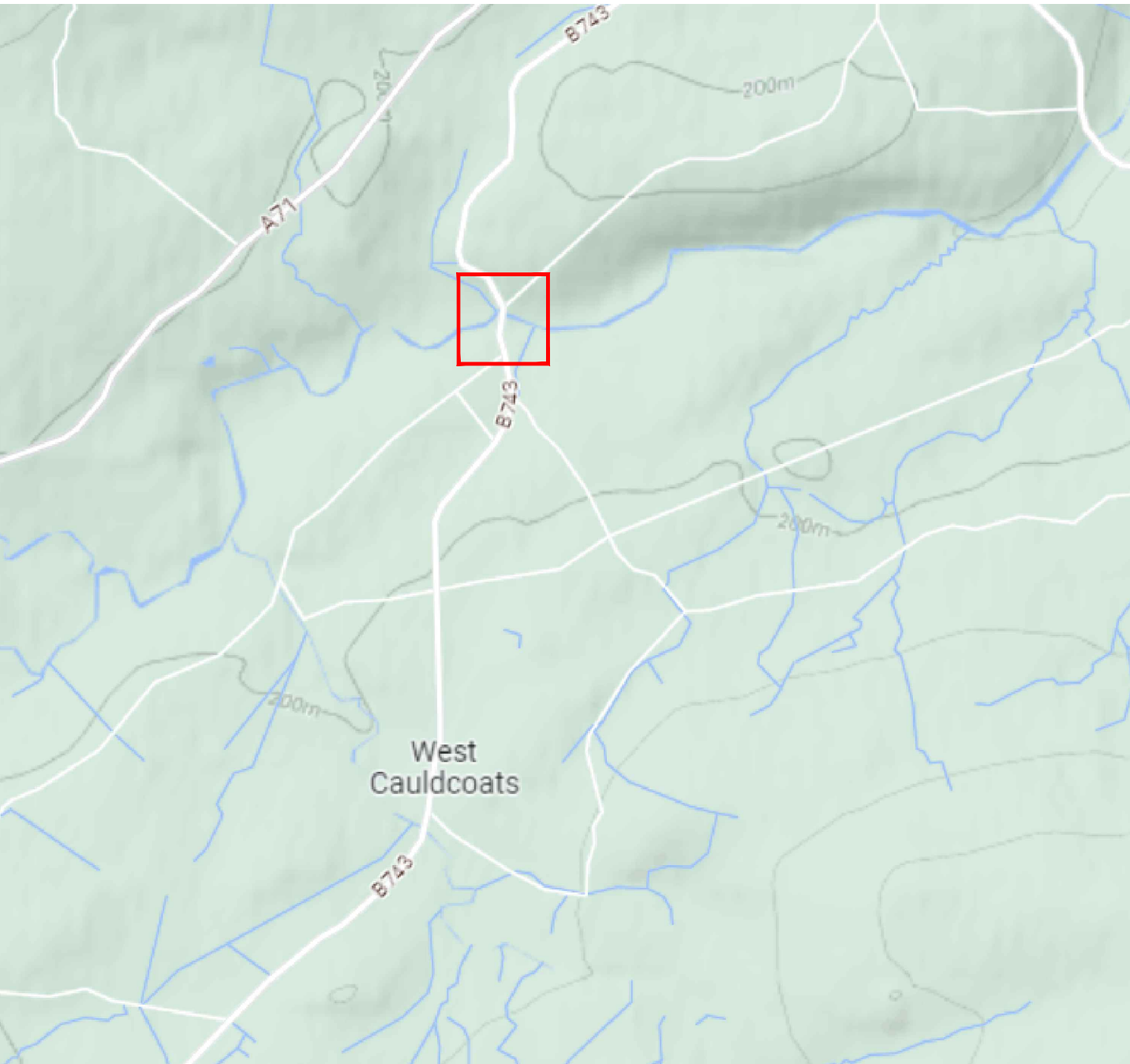
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Client
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Project
Hagshaw Energy Cluster - Western Expansion

Title
Swept Path Analysis
81.088m Blade Transporter

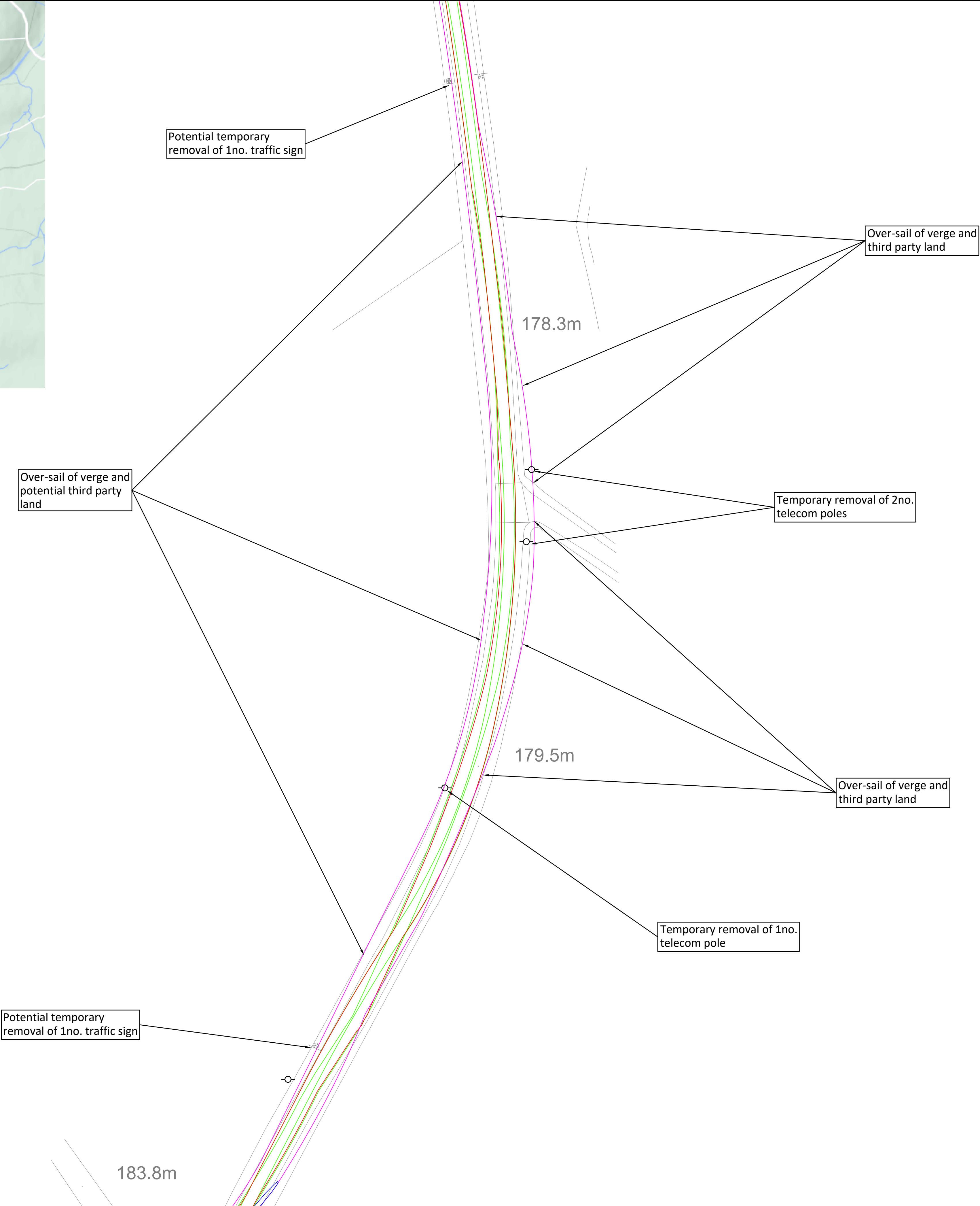
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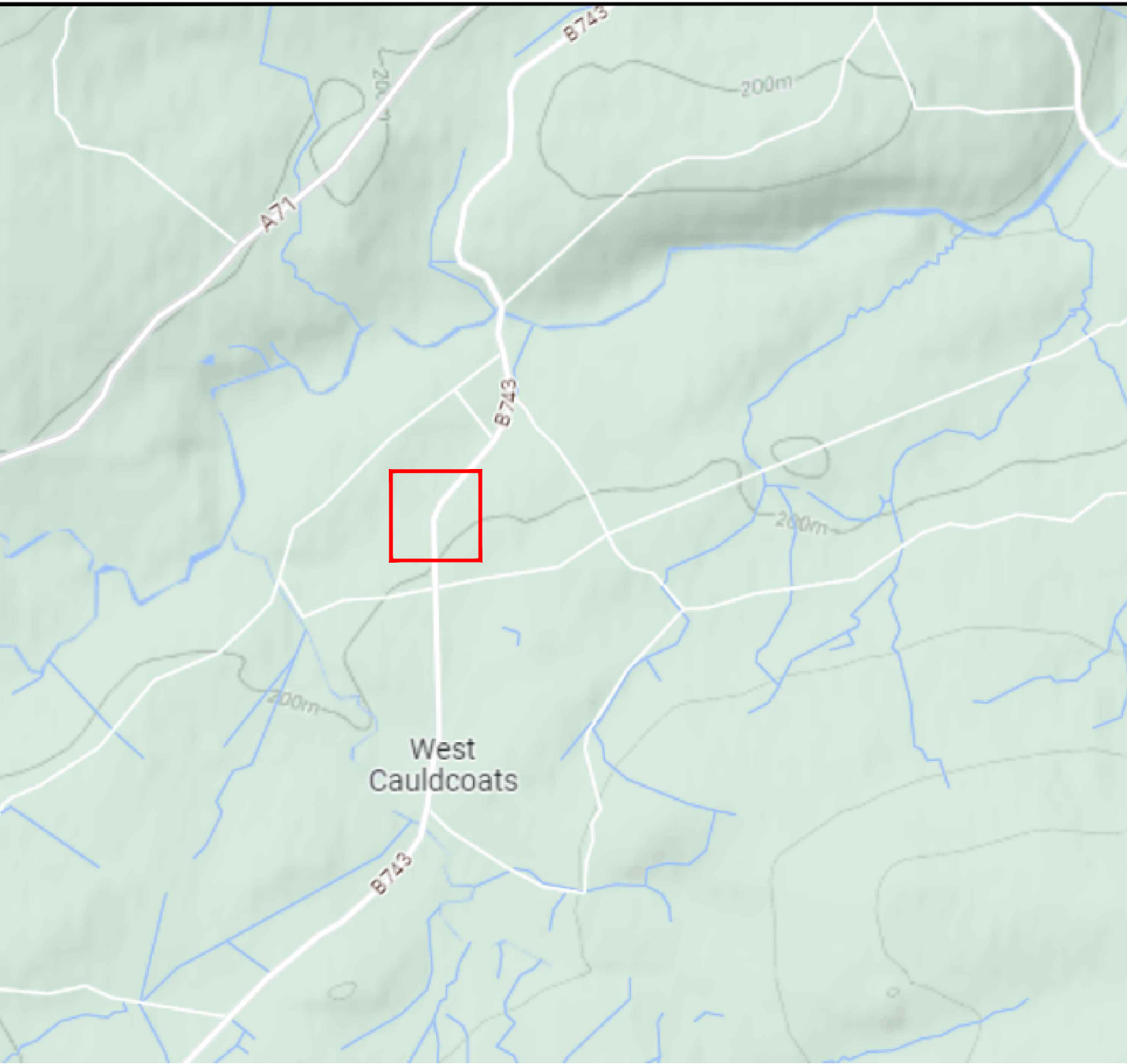
Key:
Outline of wheels
Outline of vehicle body
Outline of blade

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Title			Swept Path Analysis 81.088m Blade Transporter		
Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:500
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Rev.	-				



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 - Outline of vehicle body
 - Outline of blade

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Title			Swept Path Analysis 81.088m Blade Transporter		
Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:500
Drawing Status	For Information		Drawing Number	SPA/019	Rev. =



- GENERAL NOTES**
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- Key:**
- Outline of wheels
 - Outline of vehicle body
 - Outline of blade


Over-sail of verge and
third party land

Over-sail of verge and
potential third party
land

199.7m

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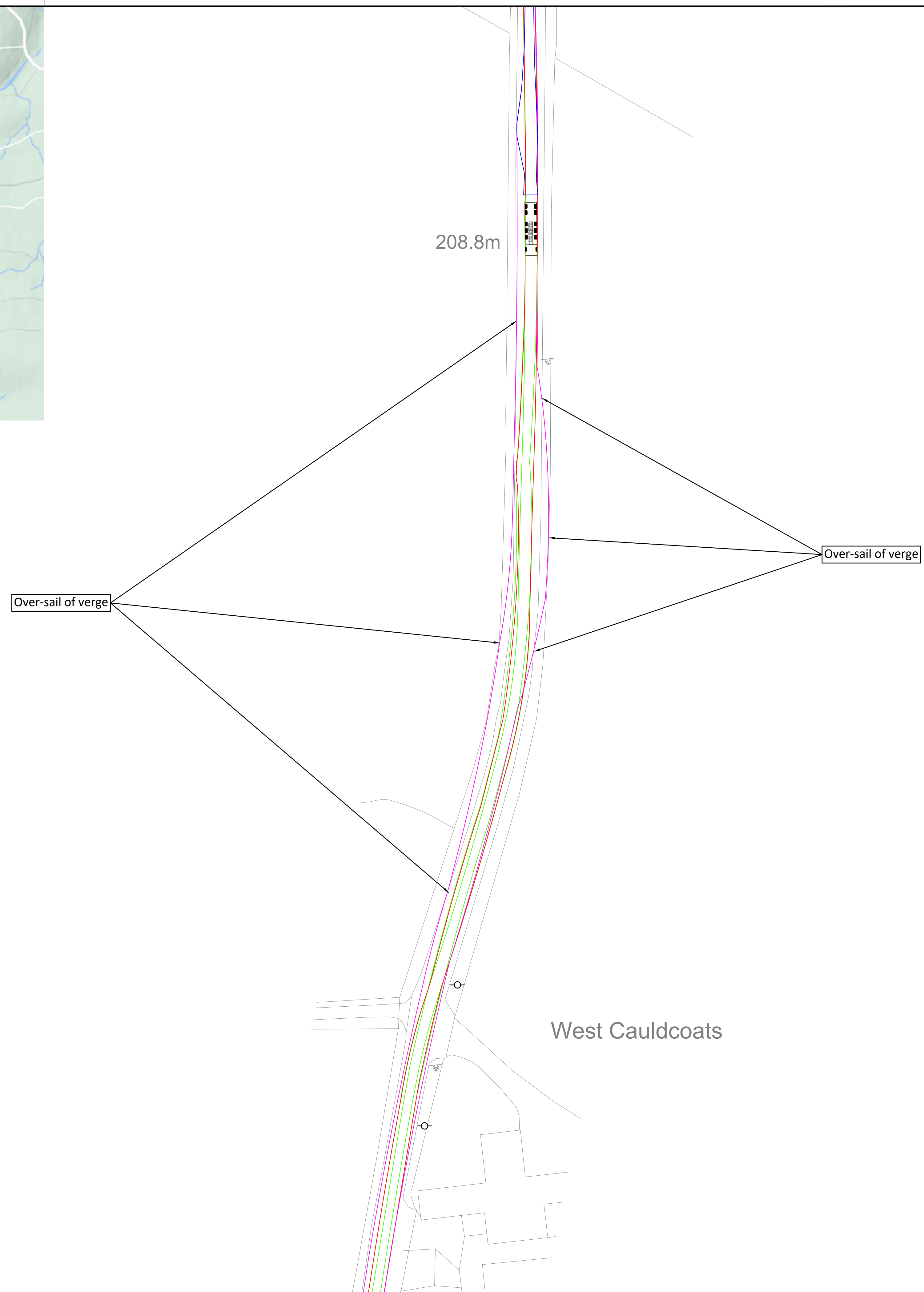
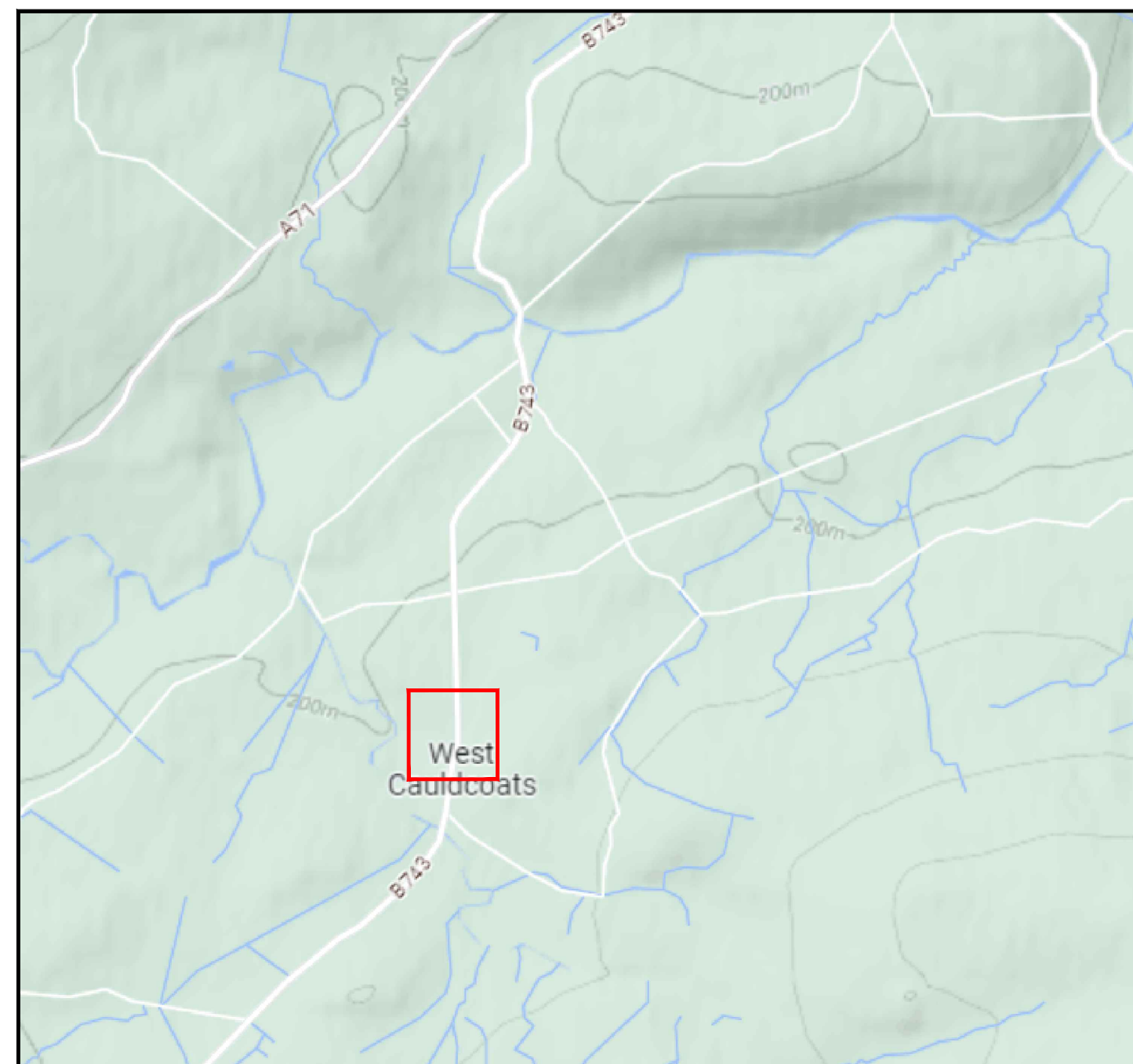
Project

Hagshaw Energy Cluster - Western Expansion

Title

Swept Path Analysis
81.088m Blade Transporter

Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:500
Drawing Status	For Information		Drawing Number	SPA/020	Rev. =



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- Outline of vehicle body
- Outline of blade

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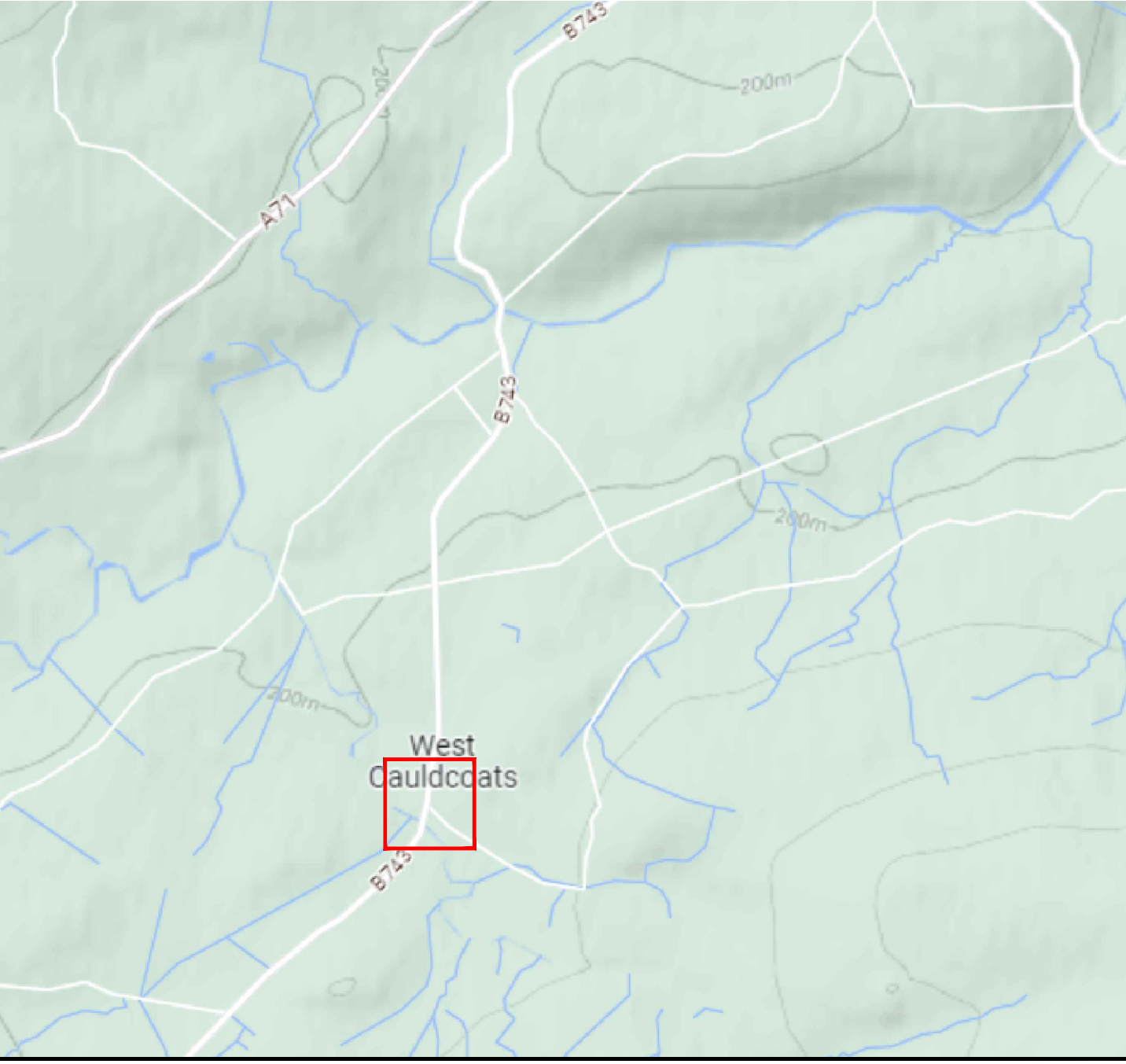
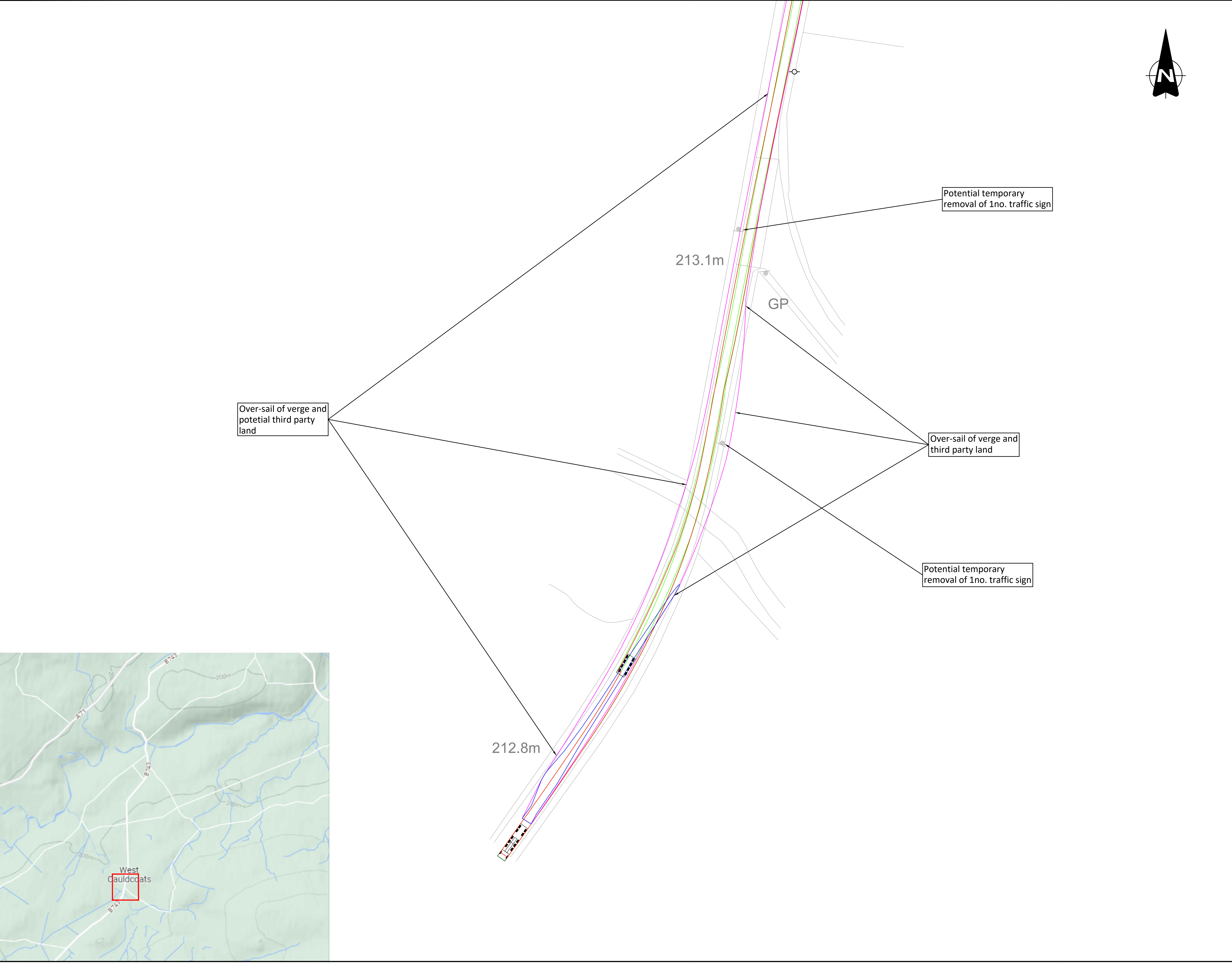
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Client	3R Energy
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Project	Hagshaw Energy Cluster - Western Expansion
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Swept Path Analysis
81.088m Blade Transporter

Drawn SH	Checked ADV	Approved ADV
Original dwg. size A1	Date Oct'23	Scale 1:500
Drawing Status For Information	Drawing Number SPA/021	Rev. -



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- Outline of blade

Rev.	Date	Revision details	Drawn	Checked	Approved

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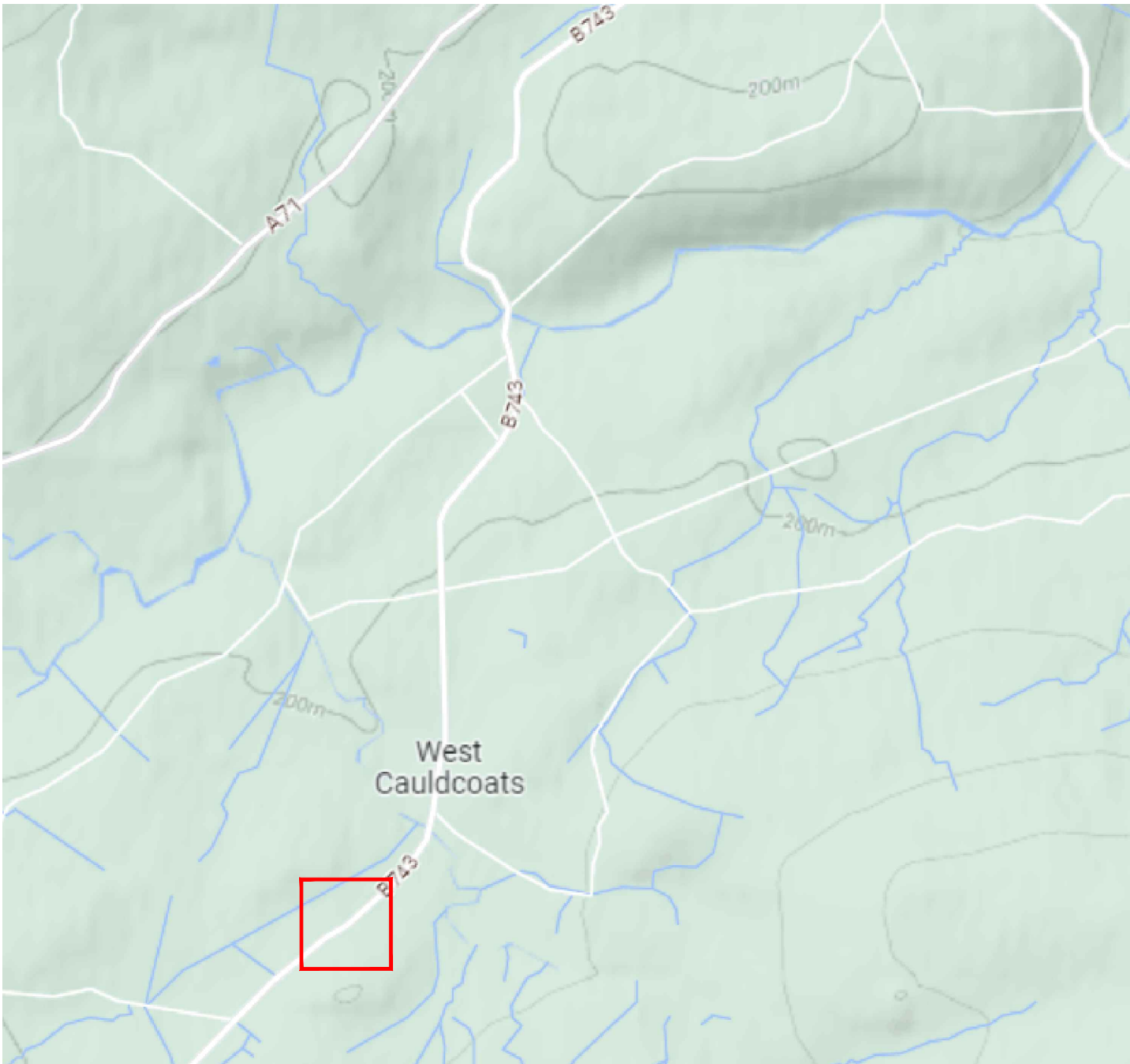
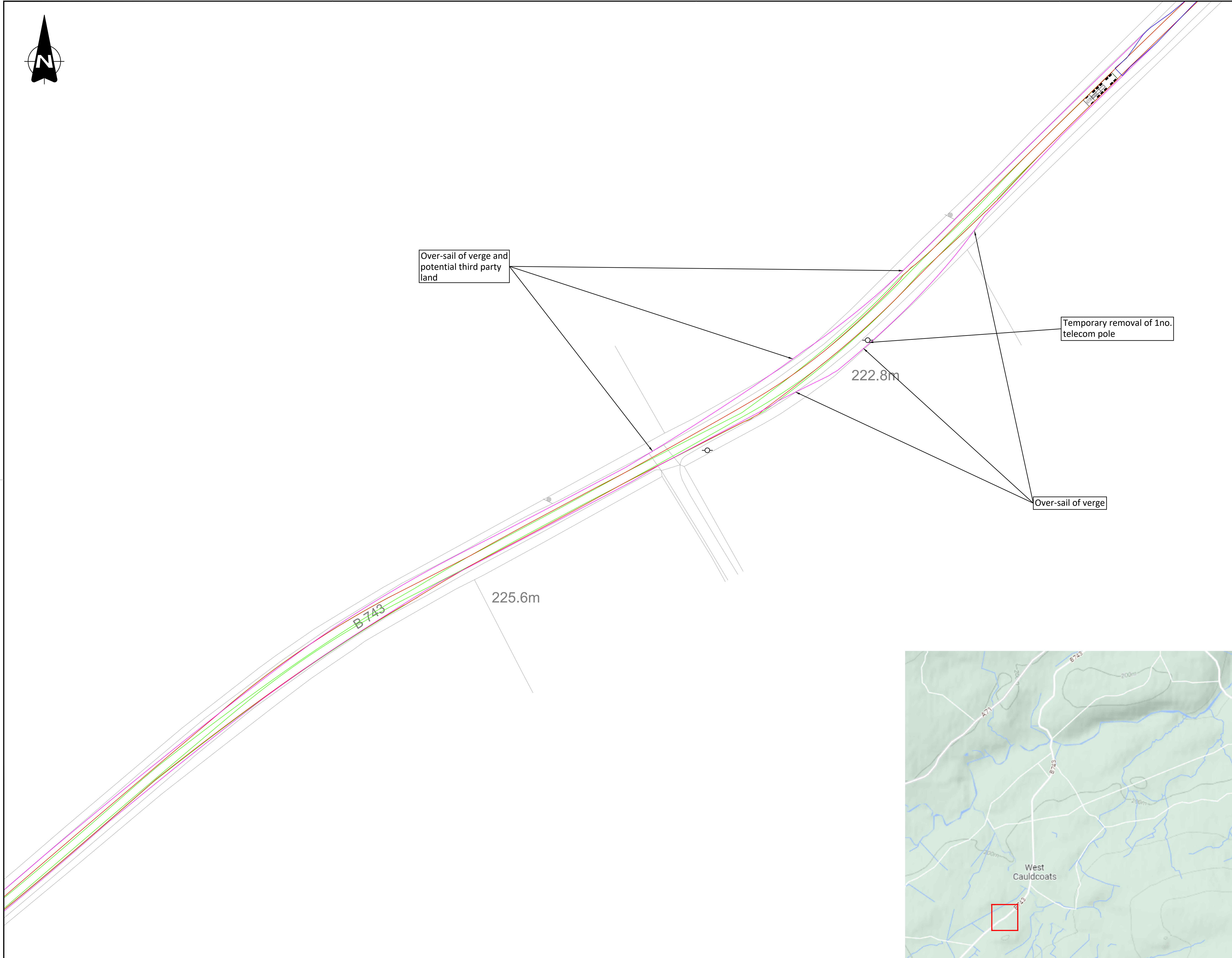
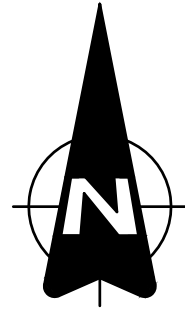
Client
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Project
Hagshaw Energy Cluster - Western Expansion

Title
Swept Path Analysis
81.088m Blade Transporter

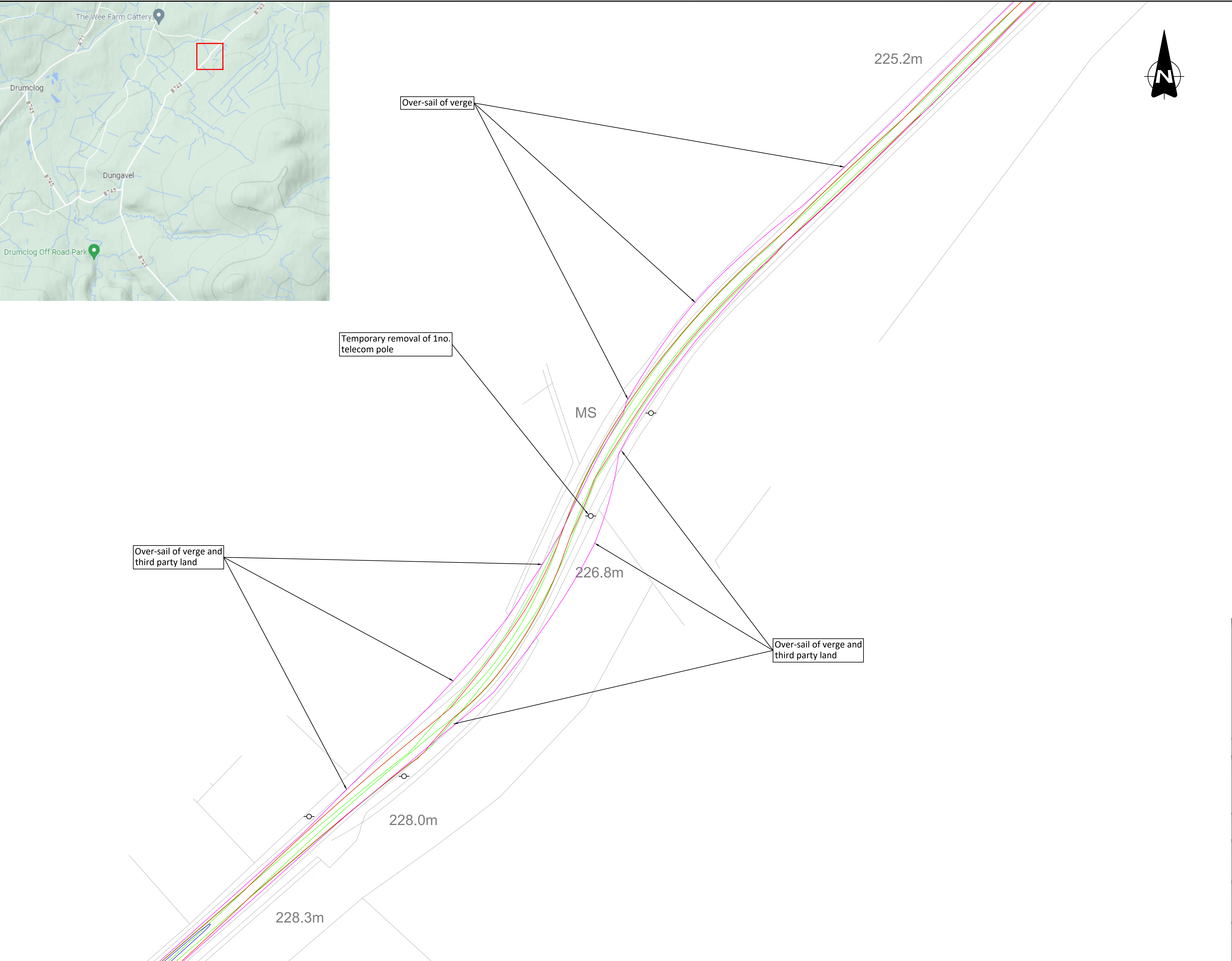
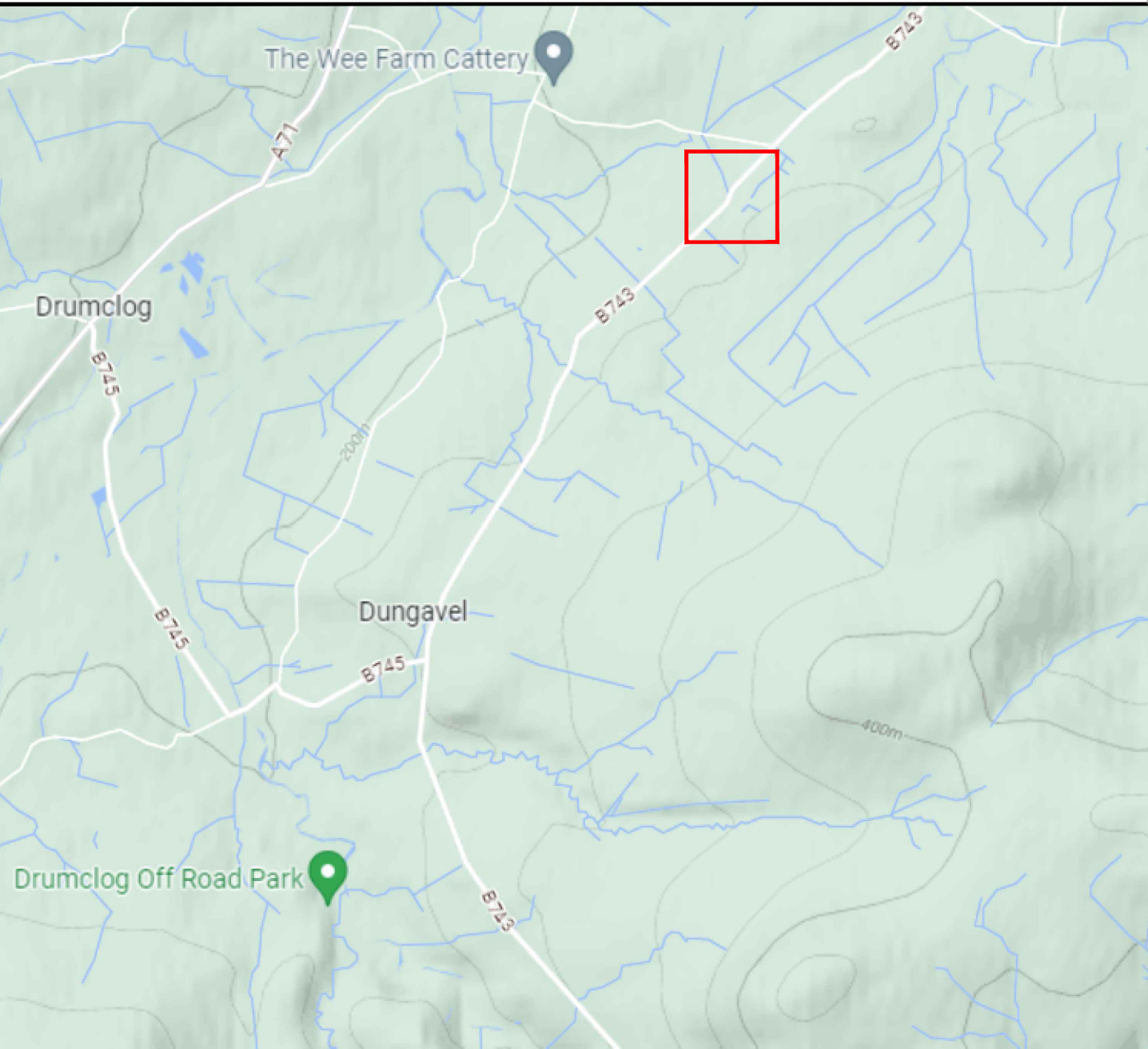
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Original dwg. size	A1	Date	Oct'23	Scale	1:500
Drawing Status	For Information		Drawing Number	SPA/022	

Rev.	
1	



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 - Outline of vehicle body
 - Outline of blade

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Project			Hagshaw Energy Cluster - Western Expansion		
Title			Swept Path Analysis 81.088m Blade Transporter		
Drawn		SH	Checked		ADV
Original dtp. size		A1	Date		Oct'23
Drawing Status		For Information	Drawing Number		SPA/023
			Rev.		-



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 - Outline of vehicle body
 - Outline of blade

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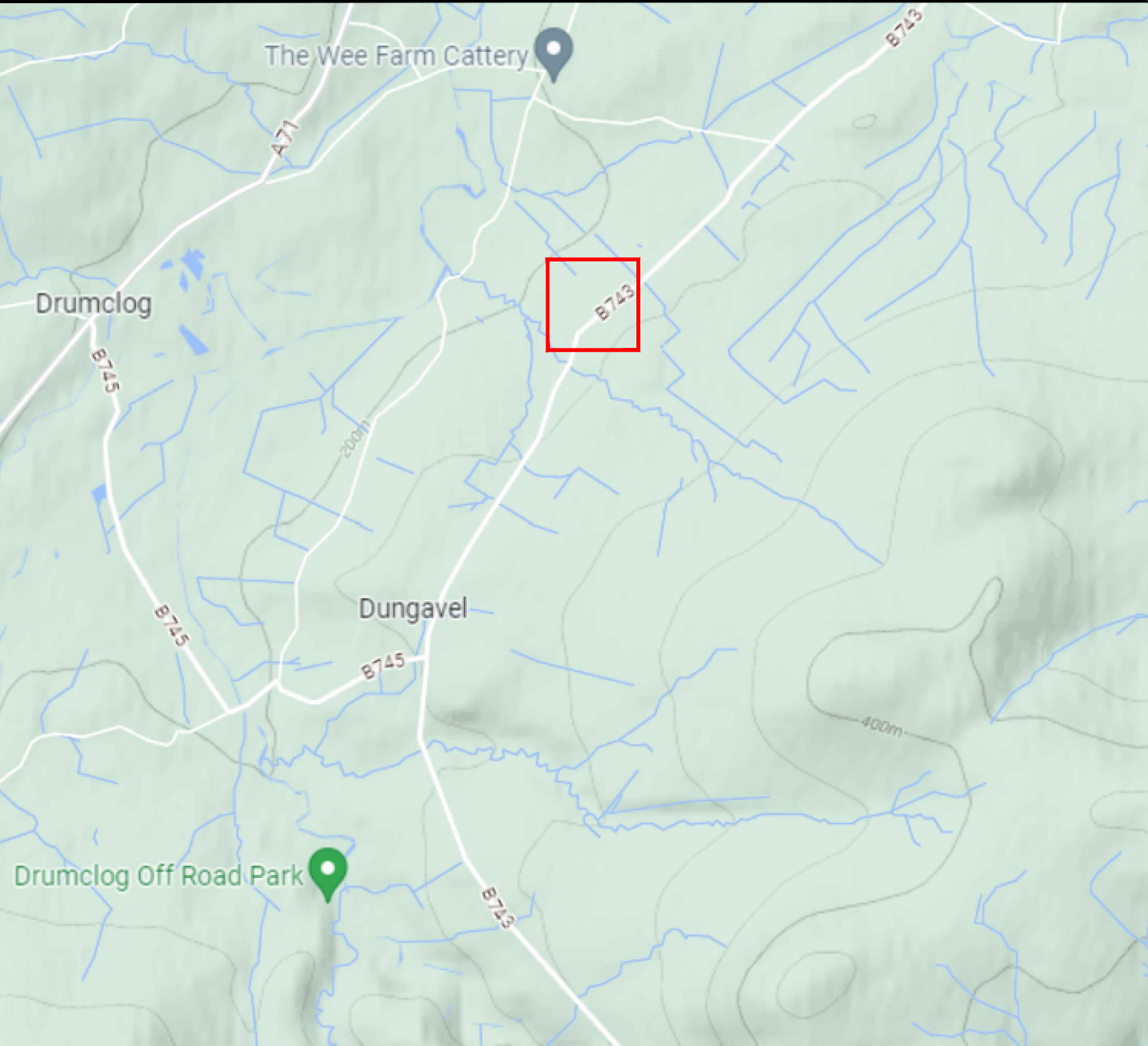
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Project: Hagshaw Energy Cluster - Western Expansion

Title: Swept Path Analysis
81.088m Blade Transporter

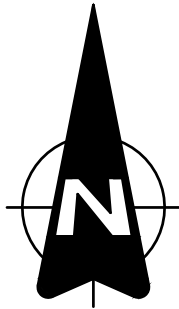
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Original dtp. size: A1	Date: Oct'23	Scale: 1:500
Drawing Status: For Information	Drawing Number: SPA/024	Rev.:



Over-sail of verge

229.5m

Over-sail of verge



230.7

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

Rev.	Date	Revision details	Drawn	Checked	Approved

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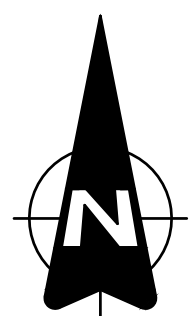
Project

Hagshaw Energy Cluster - Western Expansion

Title

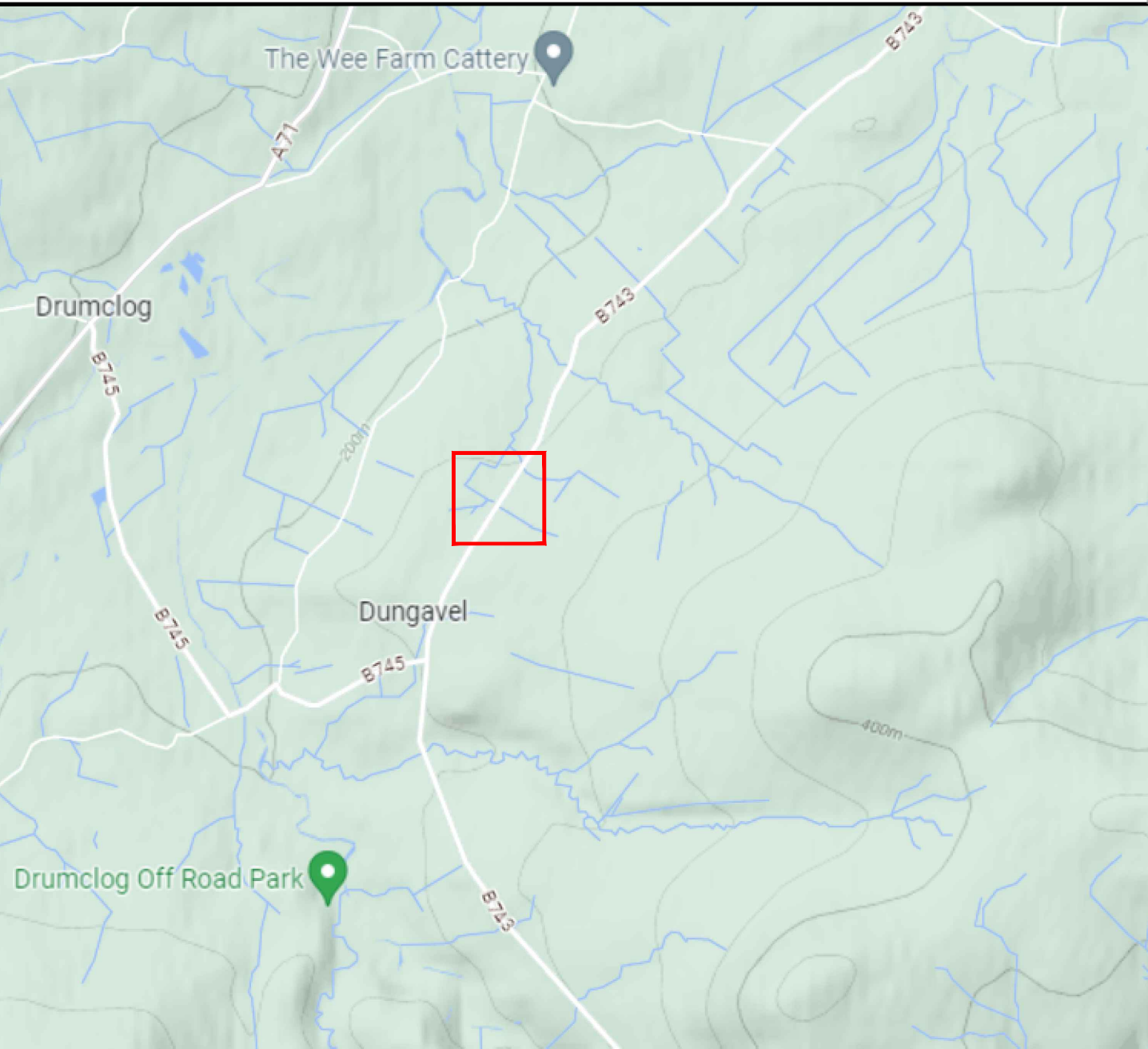
Swept Path Analysis
81.088m Blade Transporter

Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:500
Drawing Status	For Information		Drawing Number	SPA/025	Rev. =



- Key:**
- Outline of wheels
 - Outline of vehicle body
 - Outline of blade


Drawn	SH	Checked	ADV	Approved	ADV
Original drg. size	A1	Date	Oct'23	Scale	1:500
Drawing Status		Drawing Number			Rev.
For Information		SPA/026			-



- GENERAL NOTES**
1. Do not scale from this drawing.
 2. Dimensions are in mm and levels are in m OD unless stated otherwise.
- Key:**
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 - Outline of vehicle body
 - Outline of blade

Rev.	Date	Revision details	Drawn	Checked	Approved

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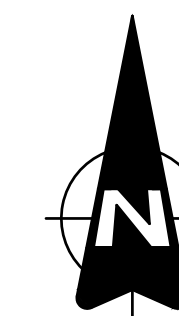
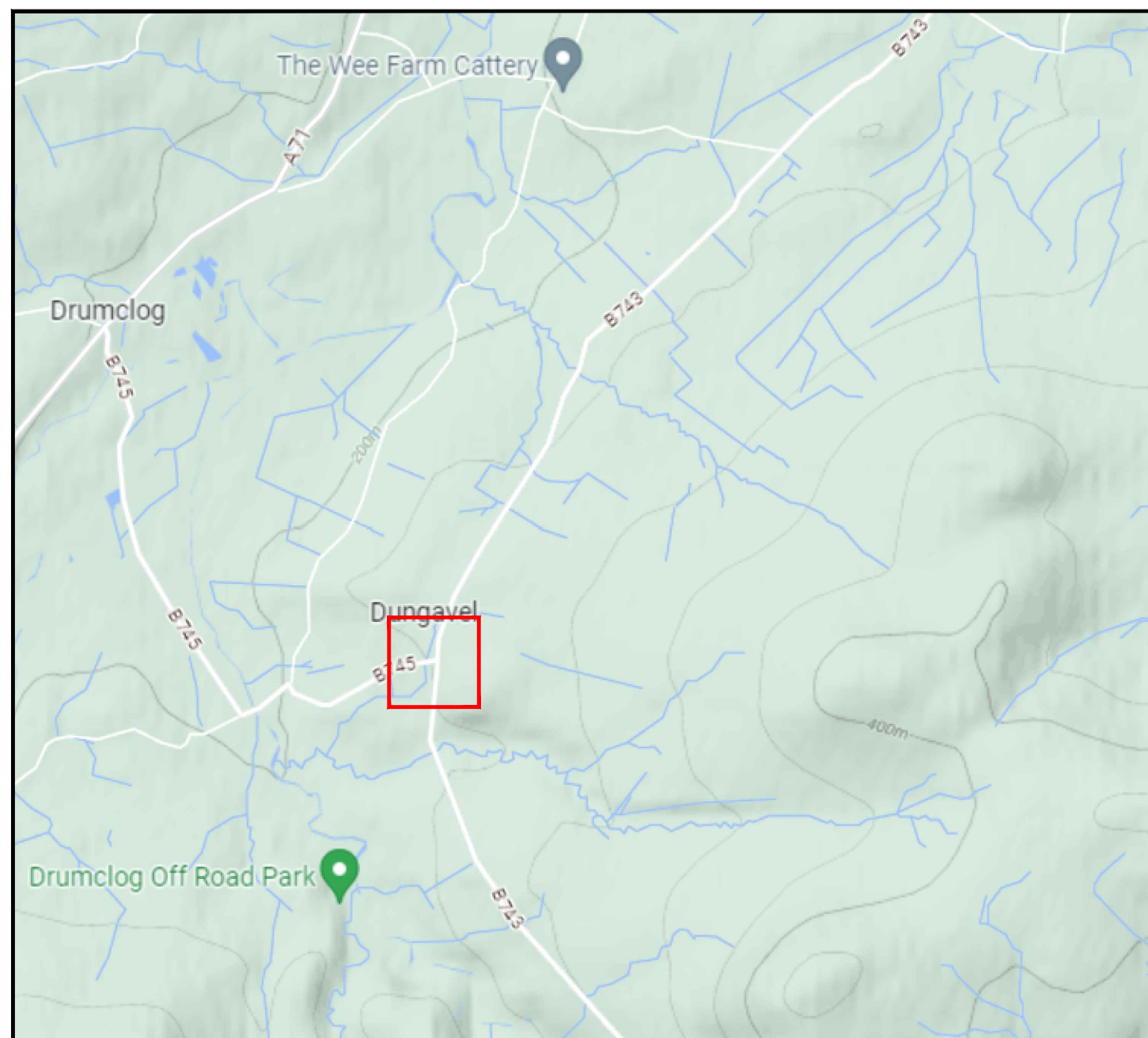
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Client3R Energy

ProjectHagshaw Energy Cluster - Western Expansion

TitleSwept Path Analysis
81.088m Blade Transporter

Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:500
Drawing Status	For Information		Drawing Number	SPA/027	Rev. =



	<u>GENERAL NOTES</u>
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1. Do not scale from this drawing.
2. Dimensions are in mm and levels are in m OD unless stated otherwise.

Key:

- Key:**
- Outline of wheels
 - Outline of vehicle body
 - Outline of blade

Rev.	Date	Revision details	Drawn	Checked	Appr.
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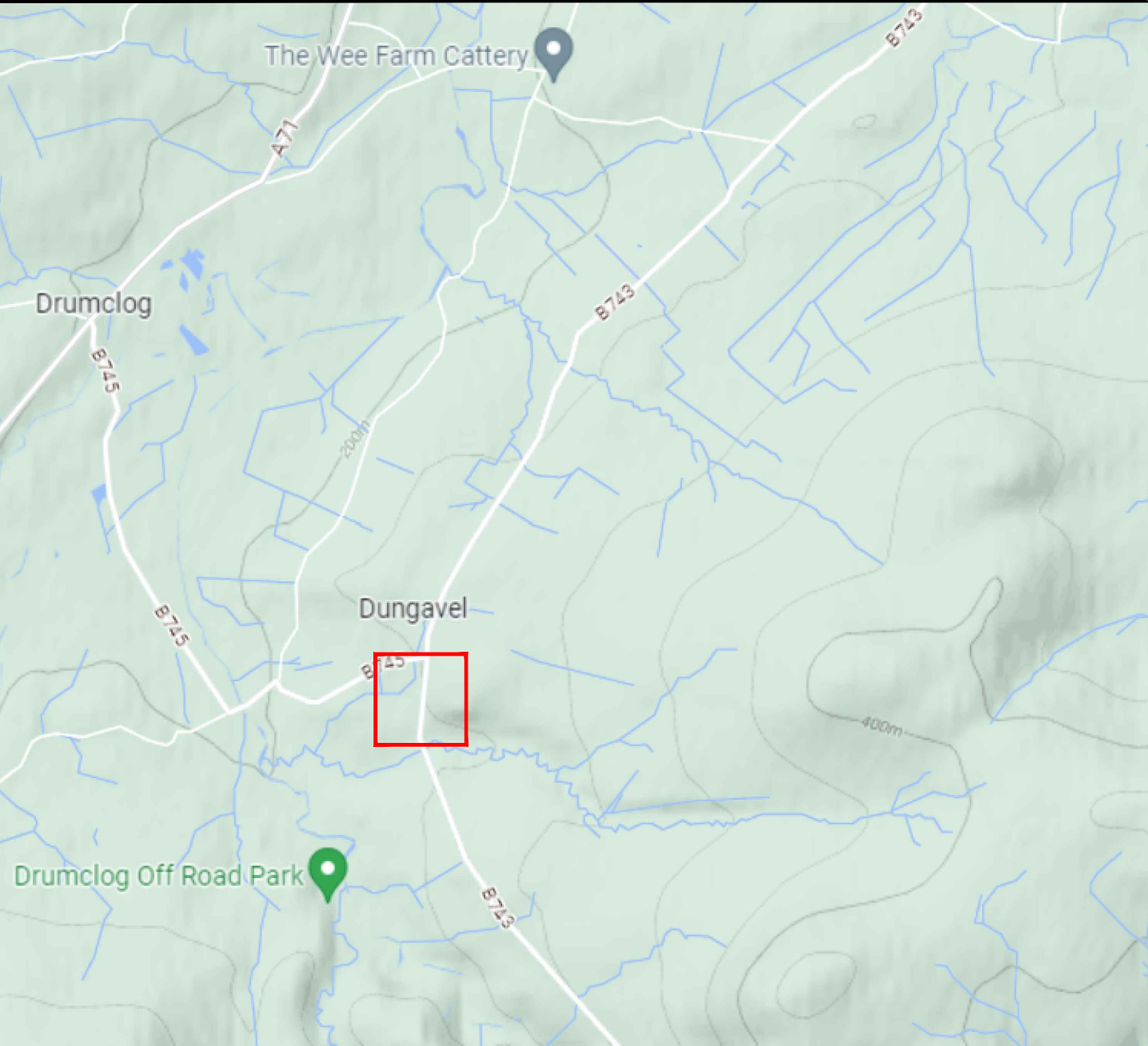
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Client **3R Energy**

Project	Hagshaw Energy Cluster - Western Expansion
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Swept Path Analysis
81.088m Blade Transporter

Drawn SH	Checked ADV	Approved ADV
Original dwg. size A1	Date Oct'23	Scale 1:500
Drawing Status For Information	Drawing Number SPA/028	R 01



- GENERAL NOTES**
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 - Outline of blade

Over-sail of verge

235m


MS

GP

B 743

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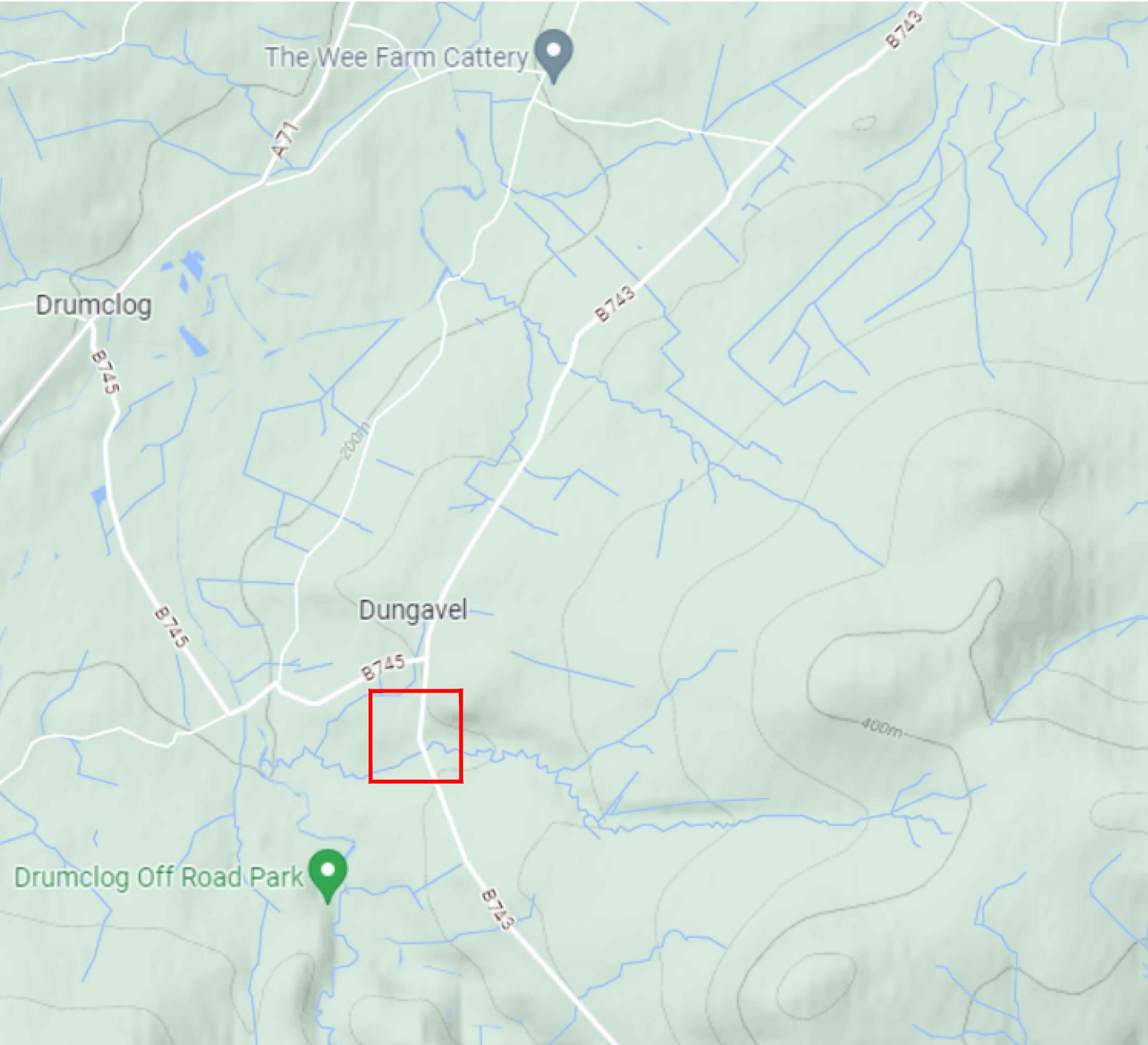
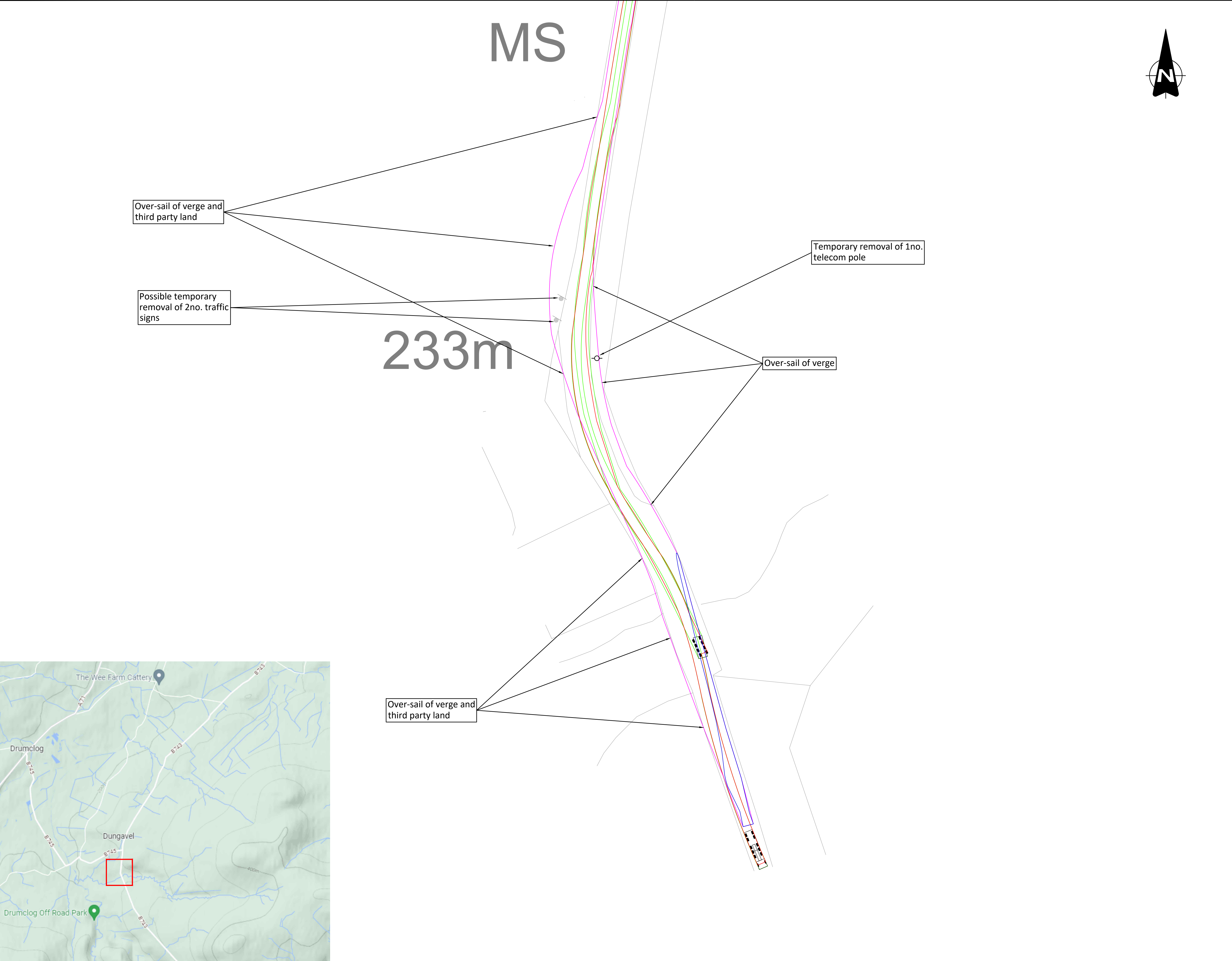
Project

Hagshaw Energy Cluster - Western Expansion

Title

Swept Path Analysis
81.088m Blade Transporter

Drawn	SH	Checked	ADV	Approved	ADV
Original dwg. size	A1	Date	Oct'23	Scale	1:500
Drawing Status	For Information		Drawing Number	SPA/029	Rev.



GENERAL NOTES

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Key:

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Rev.	Date	Revision details	Drawn	Checked	Approved

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Client: 3R Energy

Project: Hagshaw Energy Cluster - Western Expansion

Title: Swept Path Analysis
81.088m Blade Transporter

Drawn: SH	Checked: ADV	Approved: ADV
Original dwg. size: A1	Date: Oct'23	Scale: 1:500
Drawing Status: For Information	Drawing Number: SPA/030	Rev. =



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Key:
Outline of wheels
Outline of vehicle body
Outline of blade

Rev.	Date	Revision details	Drawn	Checked	Approved

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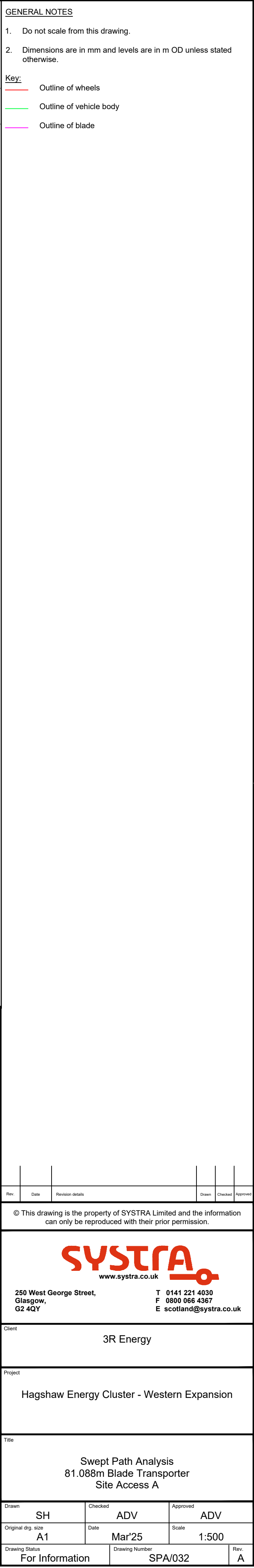
Project
Hagshaw Energy Cluster - Western Expansion






Title
Swept Path Analysis
81.088m Blade Transporter

Drawn	SH	Checked	ADV	Approved	ADV
Original dtp. size	A1	Date	Oct'23	Scale	1:500
Drawing Status	For Information		Drawing Number	SPA/031	

Rev.
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Mast



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Project Hagshaw Energy Cluster - Western Expansion										
Title Swept Path Analysis 81.088m Blade Transporter Site Access A										
Drawn SH		Checked ADV				Approved ADV				
Original dtp size A1		Date Mar'25		Scale 1:500						
Drawing Status For Information				Drawing Number SPA/032						
				Rev. A						

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