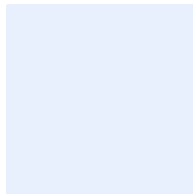
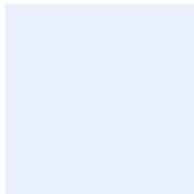
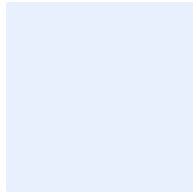
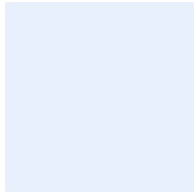


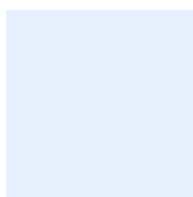
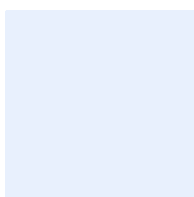
Balgray Windfarm

11/03/2024

Reference number GB01T19G67



ABNORMAL LOADS ASSESSMENT – NORTHERN ROUTE – NORTHERN ROUTE



SYSTRA

BALGRAY WINDFARM

ABNORMAL LOADS ASSESSMENT – NORTHERN ROUTE

IDENTIFICATION TABLE

Client/Project owner	Fred Olsen Renewables
Project	Balgray Windfarm
Study	Abnormal Loads Assessment – Northern Route
Type of document	Report
Date	11/03/2024
Reference number	GB01T19G67
Number of pages	16

APPROVAL

Version	Name		Position	Date	Modifications
1	Author	T Foster	Consultant	11/03/2024	V1
	Checked by	Alan Devenny	Principal	11/03/2024	
	Approved by	Alan Devenny	Projects Director	11/03/2024	

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1. INTRODUCTION

1.1 General

- 1.1.1 SYSTRA has been commissioned by Fred Olsen Renewables to undertake an assessment of an identified abnormal loads route to the Balgray Windfarm site, which is located in the Dumfries and Galloway administrative area. The site location is indicated by **Figure 1**.



Figure 1. Site Location

- 1.1.2 The centre of the site lies ~6.5km to the northeast of Lockerbie and ~3.5km south of Boreland. The B723 runs north-south to the west of the site.

1.2 Turbine Transport Requirements

- 1.2.1 For the purposes of this assessment, the worst-case “design” component has been assessed which is a turbine blade of 81m in length, which would be loaded onto a “superwing trailer”. The Turbine Delivery Vehicle (TDV) is 73.6m long, and incorporates a 70.1m trailer. The turbine blade would overhand the end of the trailer by ~12m.
- 1.2.2 The trailer incorporates tandem bogies on the rear axles and allows for a 2nd rear steer of up to 30 degrees. A drawing of the TDV is shown in **Figure 2** and provided as **VEH001** in **Appendix A**.

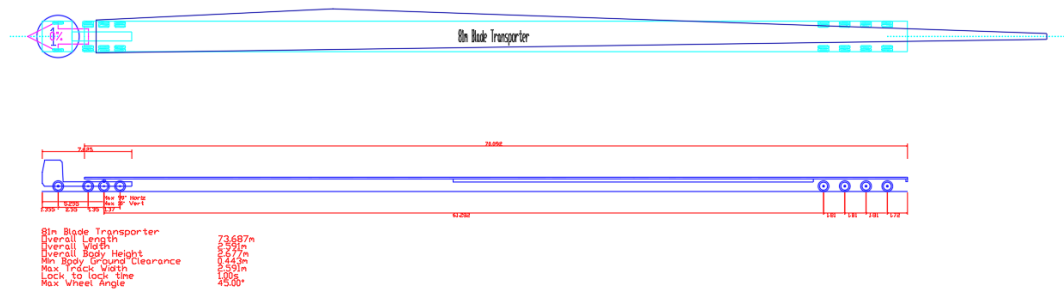


Figure 2. 81m Blade “Superwing” Transporter

- 1.2.3 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 detailed and accurate route assessment to be undertaken.
- 1.2.4 Systra has used the Autodesk (CAD) extension package AutoTrack to undertake swept path analysis (SPA) for the identified Pinch Points (PP) on the delivery route. The trailer units associated with the design vehicle for the transportation of the blades are extendable 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 delivery route to the site.

1.3 Assessed Abnormal Loads Route

- 1.3.1 The likely Port of Entry (PoE) for the turbine components is KGV Docks in Glasgow, to the north of the site, which is frequently used for the transportation of large renewable components. The assessed route to site is indicated by **Figure 3**.



Figure 3. Primary Abnormal Loads Route

- 1.3.2 The identified abnormal loads route is set out in **Table 1**.

Table 1. Abnormal Loads Route Chainage

SECTION	CUMULATIVE DISTANCE (MILES)
Exit the KGV Docks continuing east on to Kings Inch Drive	0.0
Turn left onto the M8 towards junction 25A	0.4
Merge onto the M74	4.2
Exit the A74(M) at Junction 17, turning left onto the B7068	73.5
At the roundabout turn left onto the B7076 heading north	73.7
Turn right onto the link road and then right again to turn onto Breckenry Road	75.0
At Boreland continue straight ahead from the B723 onto the unclassified road	80.5
Turn right onto site access track (to be constructed)	81.6

- 1.3.3 SYSTRA previously prepared an assessment from the KGV Docks to the site. The route between Glasgow and Breckenry Road remains common with the previous assessment. The previous assessment then looked at an access route into the south end of the windfarm site.
- 1.3.4 The same design component has been utilised for both assessments, therefore Pinch Points between KGV Docks and the right-hand bend in Breckenry Road at Applegarth Hall have not been re-assessed. For clarity, Pinch Points from the previous assessment between the A74(M) and Applegarth Hall have been included in this report and the drawing pack found in **Appendix A**.
- 1.3.5 Beyond this point the previous assessment departed Breckenry Road at Balgray village heading east and accessing the site from the south. This is shown as Route Option 1 in **Figure 4**.

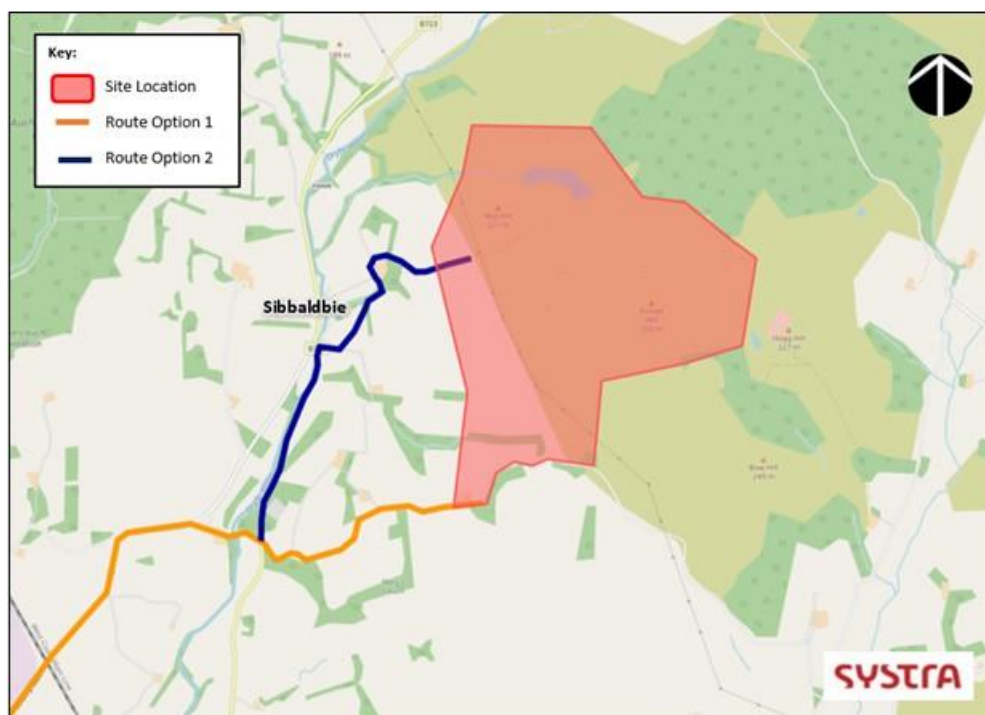


Figure 4. Potential Route Options from Previous Assessment

2. SWEEP PATH ASSESSMENT

2.1.1 In total, 18 Pinch Points have been identified on the route, as indicated by **Figures 5 to 8**.



Figure 5. PPs at Junction 17 of A74(M)

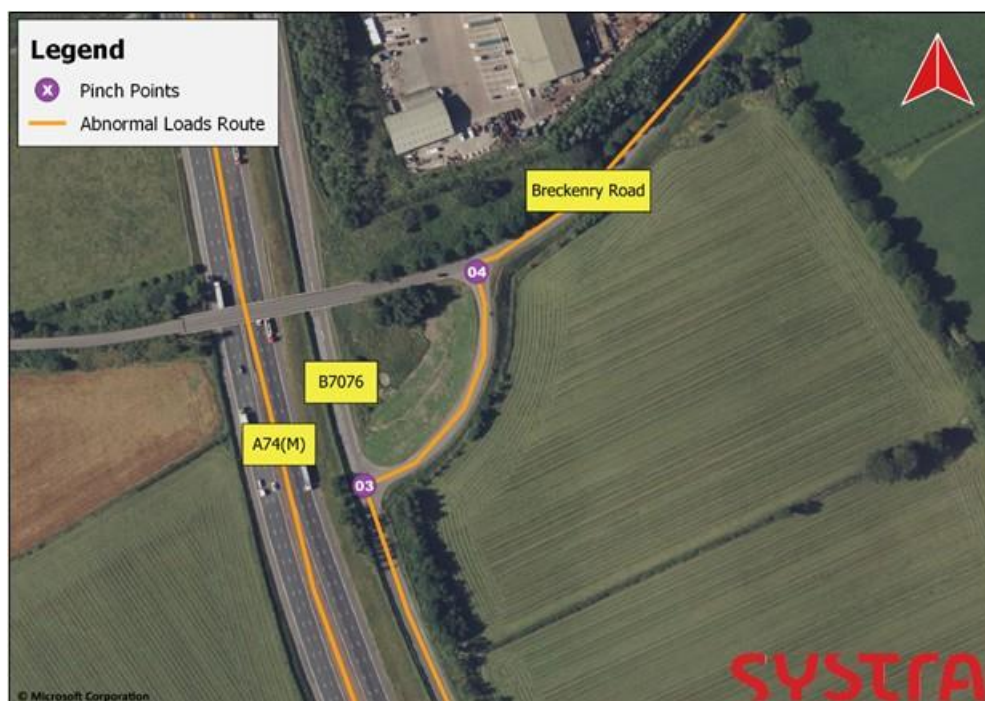


Figure 6. PPs at B7076 / Breckenry Road Junction



Figure 7. PPs at Applegarth Hall and Balgray Village

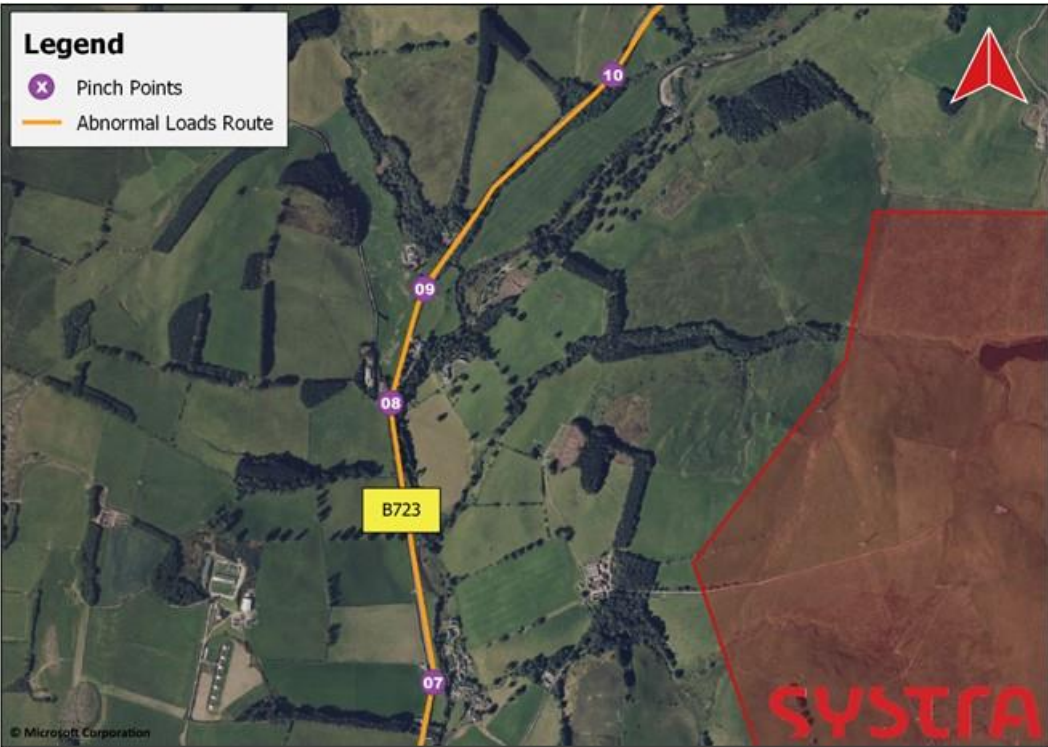


Figure 8. PPs on B723 South of Boreland

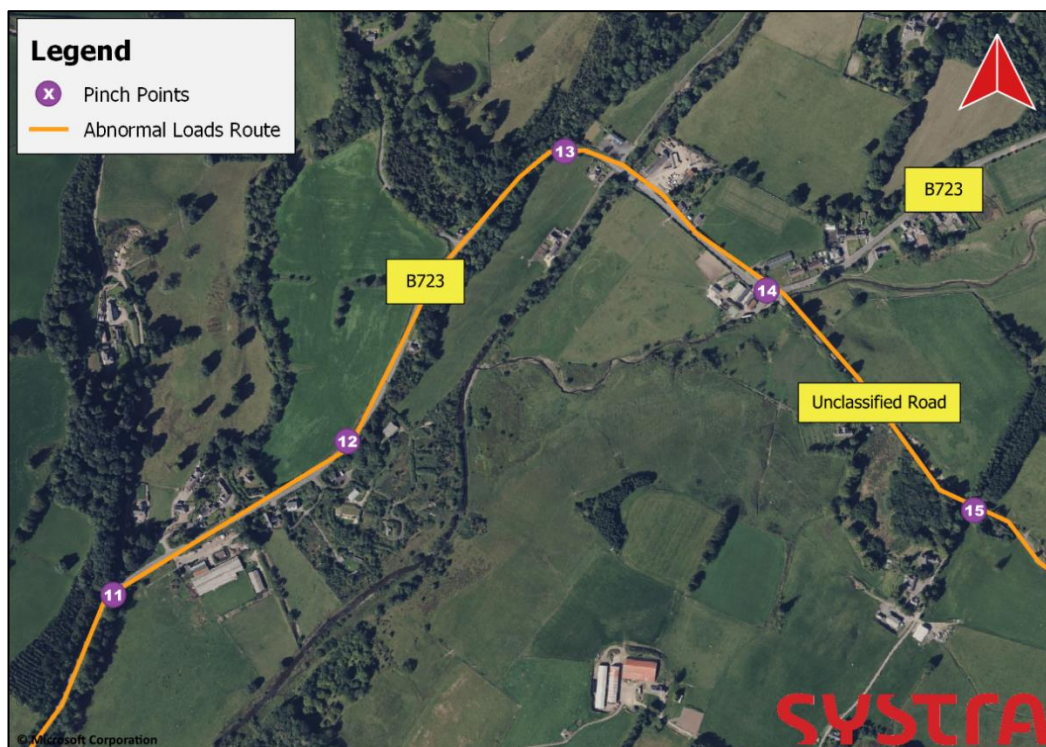


Figure 9. PPs on B723 and the Unclassified Road in Proximity to Boreland



Figure 10. PPs on the Unclassified Road Southeast of Boreland

2.1.2 The swept path plans are contained within **Appendix A**. The plans indicate areas of overrun and over-sail, as well as highlighting potential clashes with street furniture and requirements for third-party land.

2.1.3 **Table 2** summarises the findings at each location.

Balgray Windfarm	
Abnormal Loads Assessment – Northern Route – Northern Route	GB01T19G67
Report V1	11/03/2024

Table 2. Pinch Point Summary

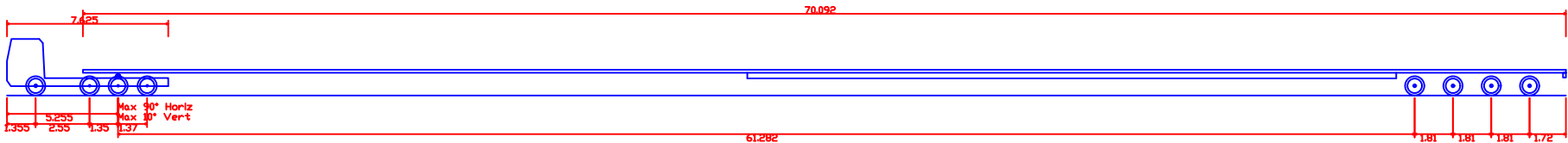
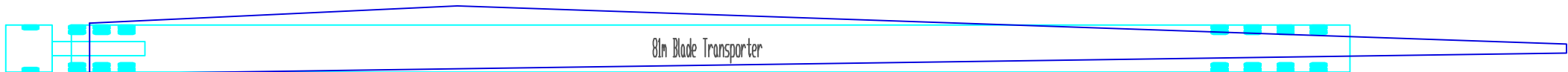
PP	LOCATION	LAT	LONG	STREET FURNITURE	PAVING / GRADING	3RD PARTY LAND
1	90-degree left-hand turn from A74(M) to B7068	55.13344°	-3.36691°	3no. traffic signs 3no. lighting columns - Fencing	Yes – New hardstanding overrun area to facilitate turn	Yes – Potential third party land required for new overrun area
2	Left-hand turn at B7076 / B7068 roundabout	55.13374°	-3.36376°	6no. traffic signs 3no. lighting columns 2no. bollard	Yes – New hardstanding overrun area on inside of turn	Yes – Potential third party land required for new overrun area
3	90-degree right-hand turn onto link road	55.14908 °	-3.38129°	3no. traffic signs	Yes – Bank treatment and new hardstanding overrun area	Yes – Potential third party land required for new overrun area
4	90-degree right-hand turn onto Breckenry Road	55.15016°	-3.38042°	1no. traffic sign	Yes – Bank treatment and new hardstanding overrun area	Yes – Potential third party land required for new overrun area
5	Right-hand bend in Breckenry Road at Applegarth Hall	55.16203°	-3.36674°	1no. traffic sign	Yes – Bank treatment	None
6	Left-hand bend in Breckenry Road	55.16316°	-3.35748°	None	None	None
7	Left-hand bend in B723 at Sibbaldbie	55.17662°	-3.34383°	None	None	None
8	Right-hand bend in B723	55.18338°	-3.34586°	- Overhead power transmission line - Trees to be trimmed	None	None
9	Right-hand bend in B723	55.18616°	-3.34451°	Overhead power transmission line	None	None
10	Bend in B723	55.19144°	-3.33670°	None	None	None
11	Right-hand bend in B723 at Berryscaur	55.20255°	-3.32123°	Overheard telecommunications lines	None	None
12	Left-hand bend in B723 at Berryscaur	55.20457°	-3.31607°	Overheard telecommunications lines	None	None
13	Tight right-hand bend in B723 at Boreland	55.20832°	-3.31134°	2no. road signs 5no. bollards - Trees and vegetation to be trimmed	Yes – Slight area of bank reinforcement required	None
14	Right-hand turn off of B723 at Boreland	55.20660°	-3.30677°	None	Yes – Transition ramps may be required to enable vehicle to mount footway	None
15	Tight bends in Unclassified Road	55.20384°	-3.30205°	Overhead telecommunications line	Yes – East and west overrun areas approximately within existing overrun area, central overrun area may require grading of bank	Third party check may still be required on overrun area
16	Right-hand bend in Unclassified Road	55.20116°	-3.29553°	Overhead power transmission line	None – Overrun of vehicle approximately within existing overrun areas	- Third party check may still be required on overrun area - Yes – Over-sail of blade on outside of bend
17	Left-hand bend in Unclassified Road	55.19805°	-3.29539°	- Overhead power and telecommunications lines - Vegetation to be trimmed	None	None
18	Right-hand turn off of Unclassified Road into site	55.19467°	-3.29274°	Short section of fencing	Yes – new offline access track to be constructed	Third party land check may still be required

3. SUMMARY AND CONCLUSION

- 3.1.1 The abnormal load assessment has identified a technically feasible route to the site (in terms of geometry), which may be dependent upon third-party land agreements at seven locations. The route would bring vehicles into the northern boundary of the windfarm site.
- 3.1.2 At Pinch Points 15, 16 and 17 existing hardstanding overrun areas are present. These have likely been constructed to support other windfarm developments in the area but may not be included in the adopted highway boundary. Therefore, third party land checks are recommended for these area. A number of locations have also been identified where new hardstanding overrun areas will be required.
- 3.1.3 Noted that the road east of Boreland is a single track road so in addition to the localised widening identified by the swept path analysis, there may also be a need to widen the carriageway (by stoning up the verges) to achieve the turbine manufacturer requirements for a minimum running width which is normally 5m.
- 3.1.4 A number of overhead utility lines (telecommunications and power) have been identified at the assessed Pinch Points. There are likely to be other locations within the study area, and on the route between the Port of Entry and the site, where overhead lines are also present. The location and heights of these lines should be checked on site as they may need to be temporarily lowered to allow delivery.
- 3.1.5 In the first instance, it is recommended that third-party land enquiries are made at the identified locations and it is recommended that early engagement is undertaken with Dumfries and Galloway Council on the proposed route.

Appendix A – TDV Drawing and Swept Path Assessment

- 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.



81m Blade Transporter	73.687m
Overall Length	2.591m
Overall Width	0.443m
Overall Body Height	2.591m
Min Body Ground Clearance	1.00s
Max Track Width	45.00°
Lock to lock time	
Max Wheel Angle	

Rev.	Date	Revision details	Drawn	Checked	Approved

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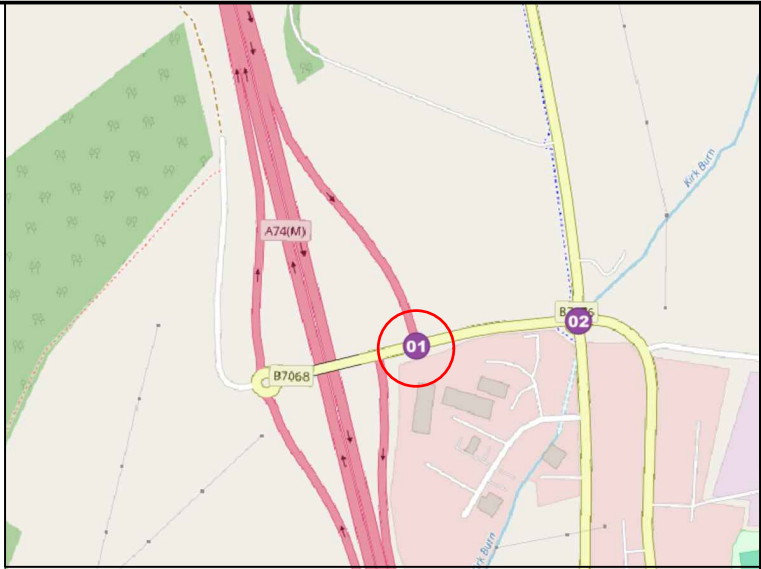
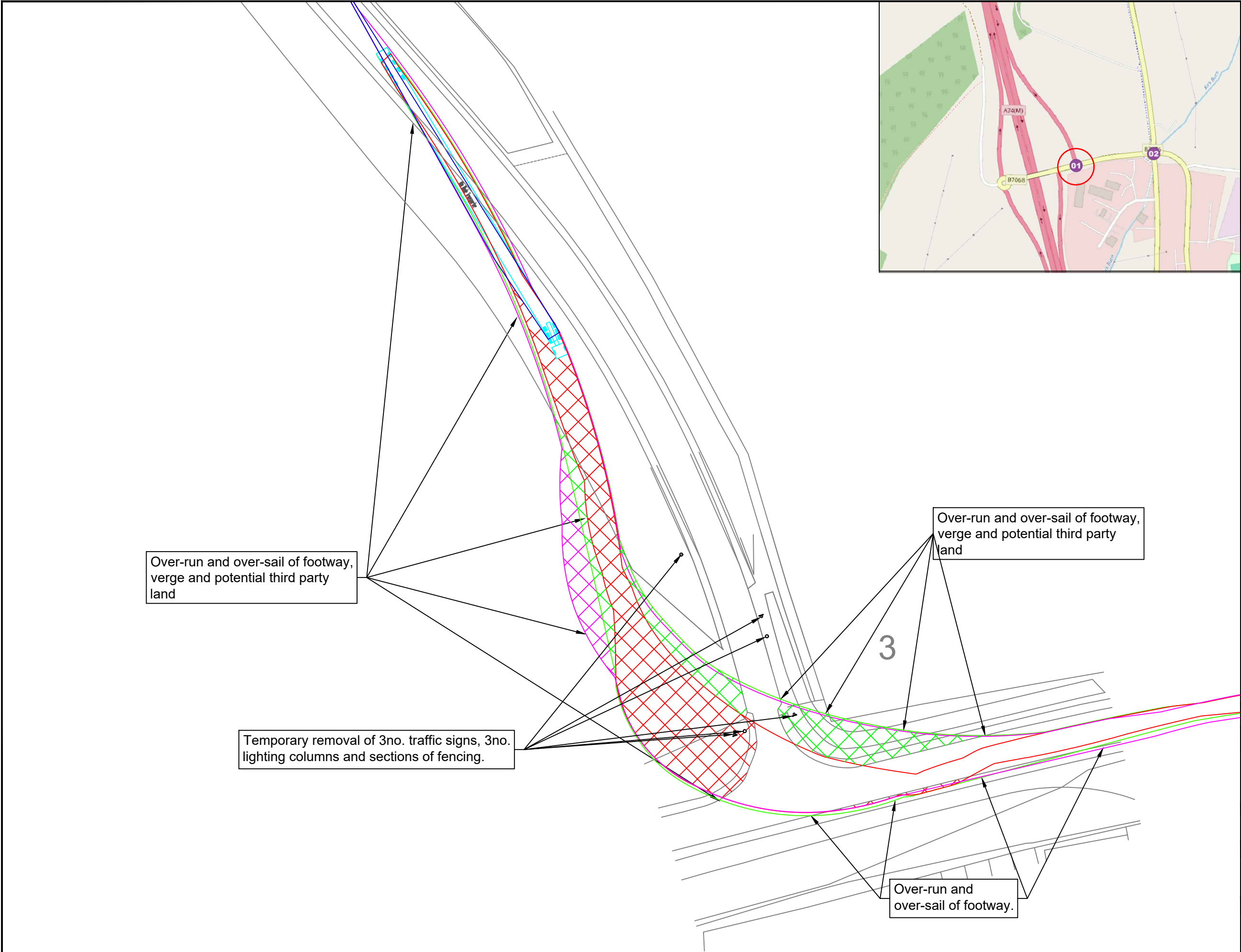
Project

Balgray Wind Farm

Title

81m Blade "Superwing" Transporter

Drawn	TF	Checked	ADV	Approved	ADV
Original dpg. size	A3	Date	08/03/2024	Scale	NTS
Drawing Status	Information	Drawing Number	GB01T19G67/3000/VEH001	Rev.	-



Notes:

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Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

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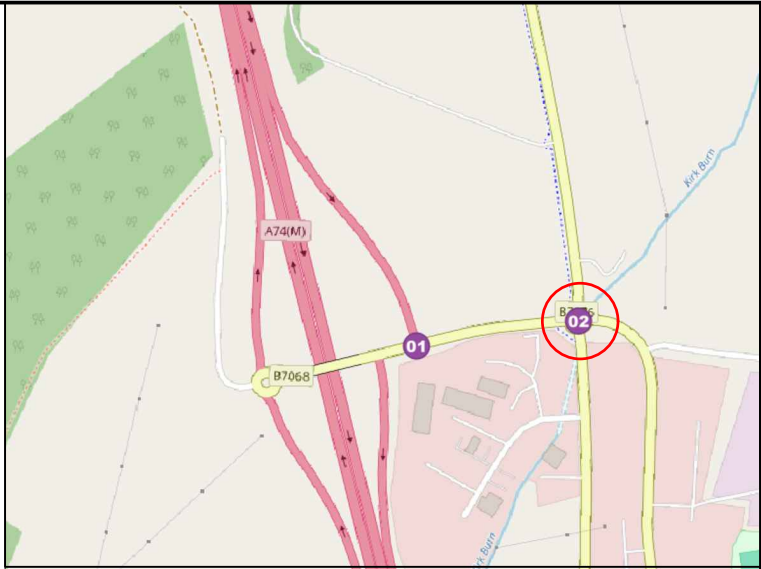
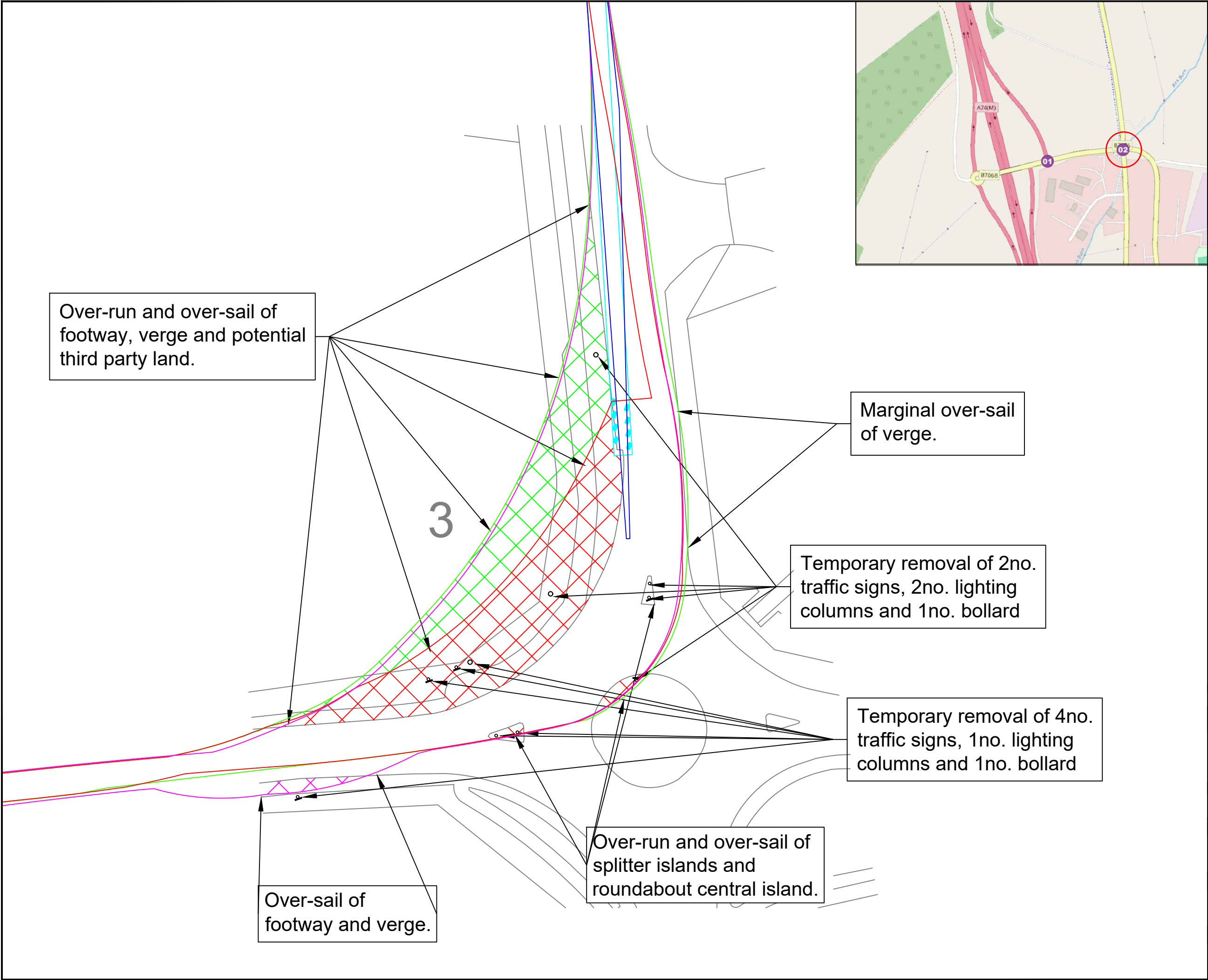
Client
Fred Olsen Renewables

Project
Balgray Wind Farm

Title
Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 1

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Drawing Number
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Title
Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 2

Drawn	Checked	Approved
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Original dtp. size A3	Date 08/03/2024	Scale 1:500
Drawing Status Information	Drawing Number GB01T19G67/3000/SPA002	Rev. -

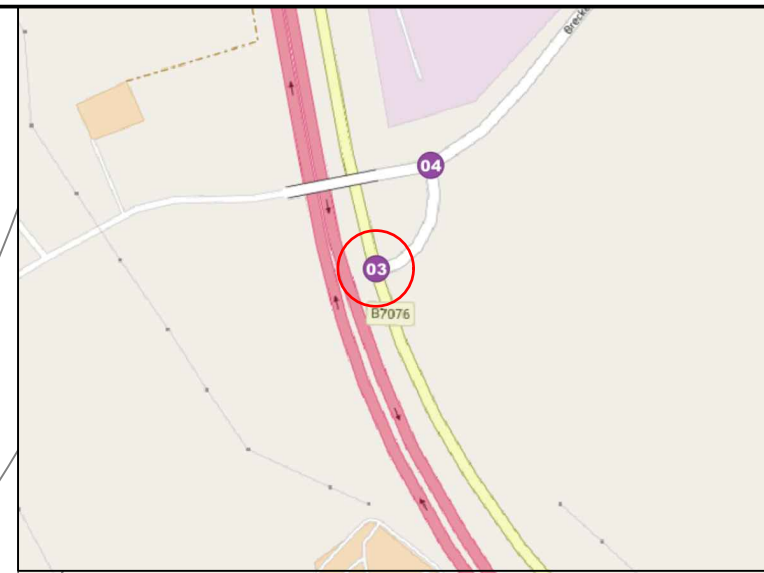
Significant over-run and over-sail of verge and potential third party land

Temporary removal of 3no. traffic signs

Over-run and over-sail of verge

Over-sail of verge

3



Notes:

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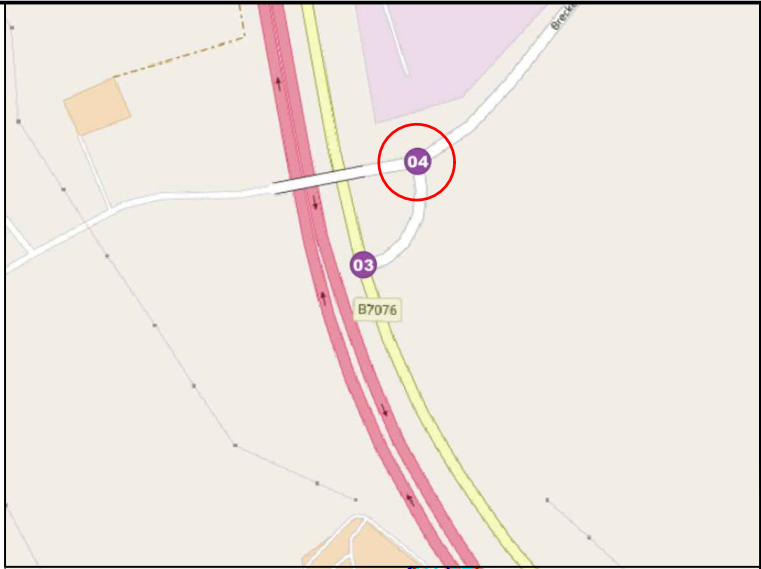
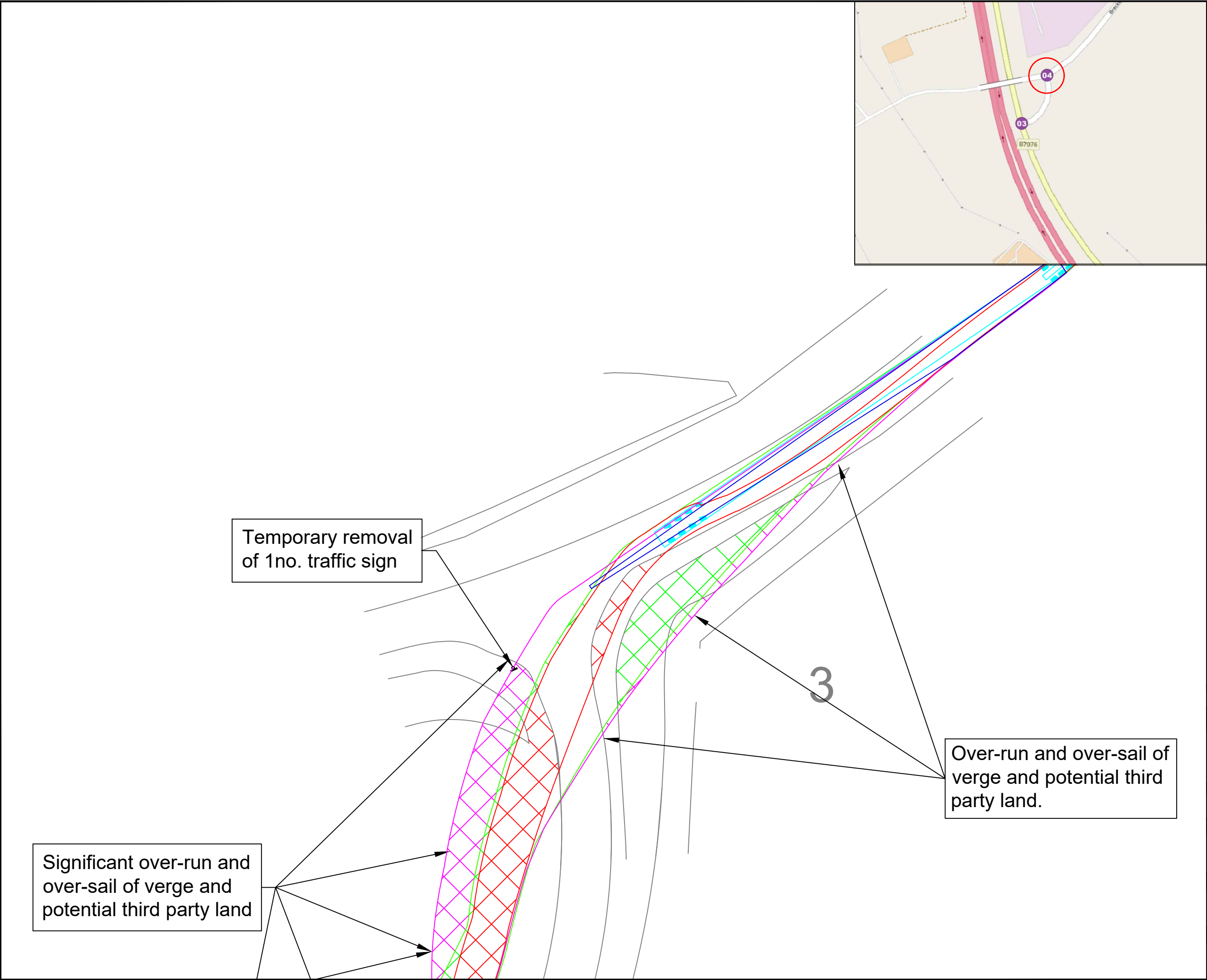
Client
Fred Olsen Renewables

Project
Balgray Wind Farm

Title
Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 3

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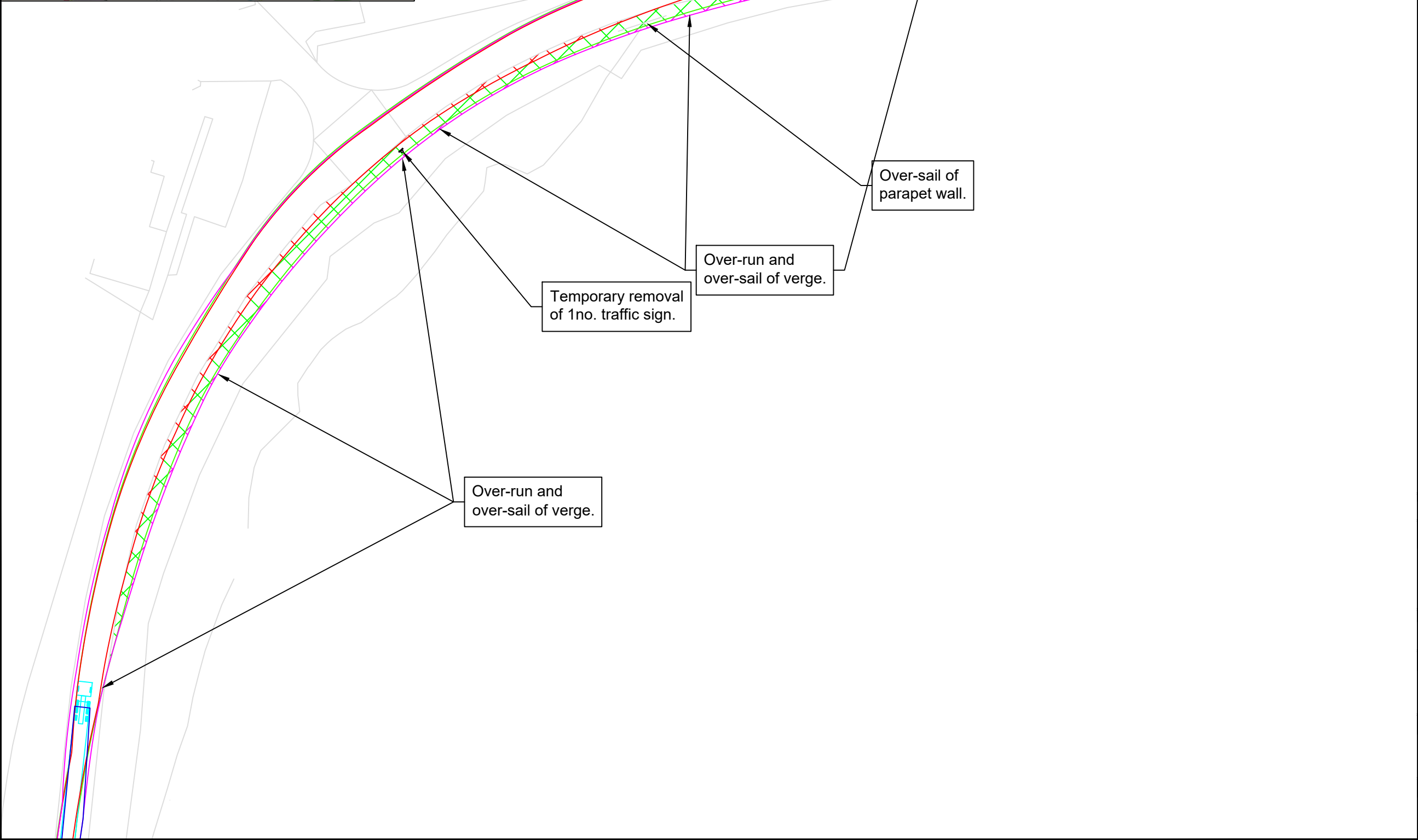
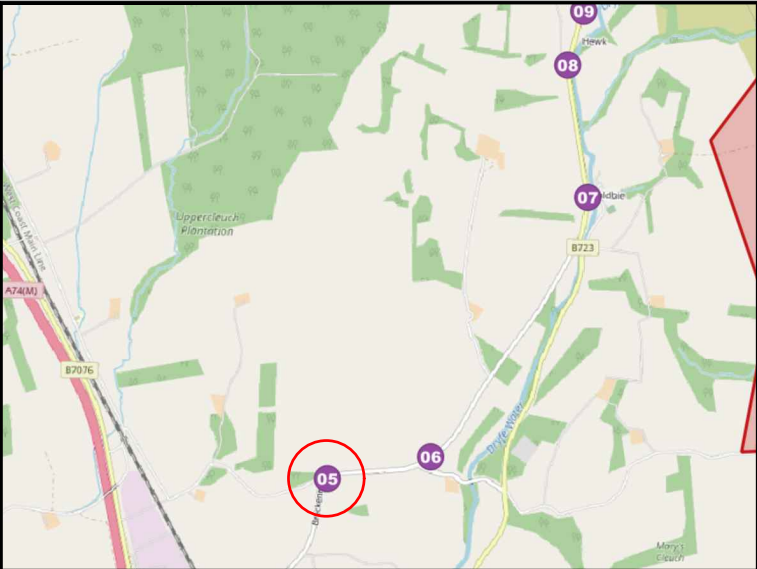
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Client: Fred Olsen Renewables

Project: Balgray Wind Farm

Title: Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 4

Drawn	Checked	Approved
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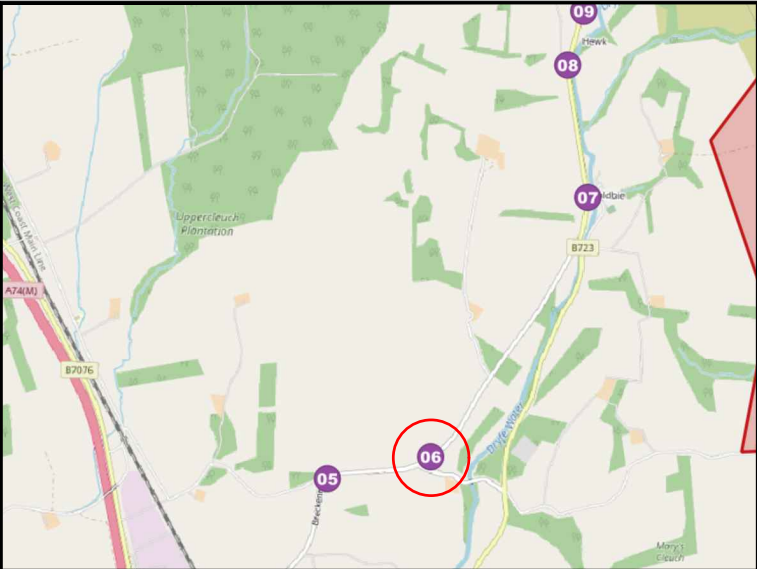
Title

Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 5

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Swept path of vehicle fully accommodated within carriageway extents



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Project

Balgray Wind Farm

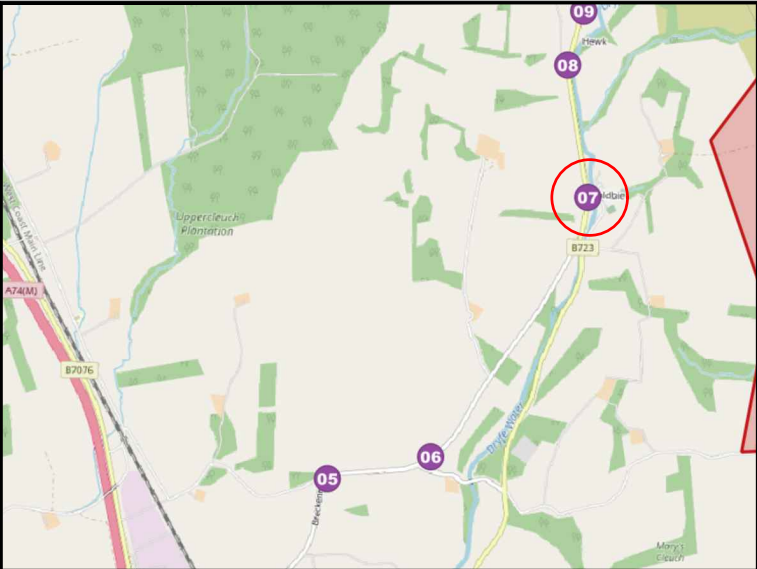
Title

Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 6

Drawn	TF	Checked	ADV	Approved	ADV
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Slight oversail of verge by trailer bed

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 - Over-sail area of blade out with carriageway

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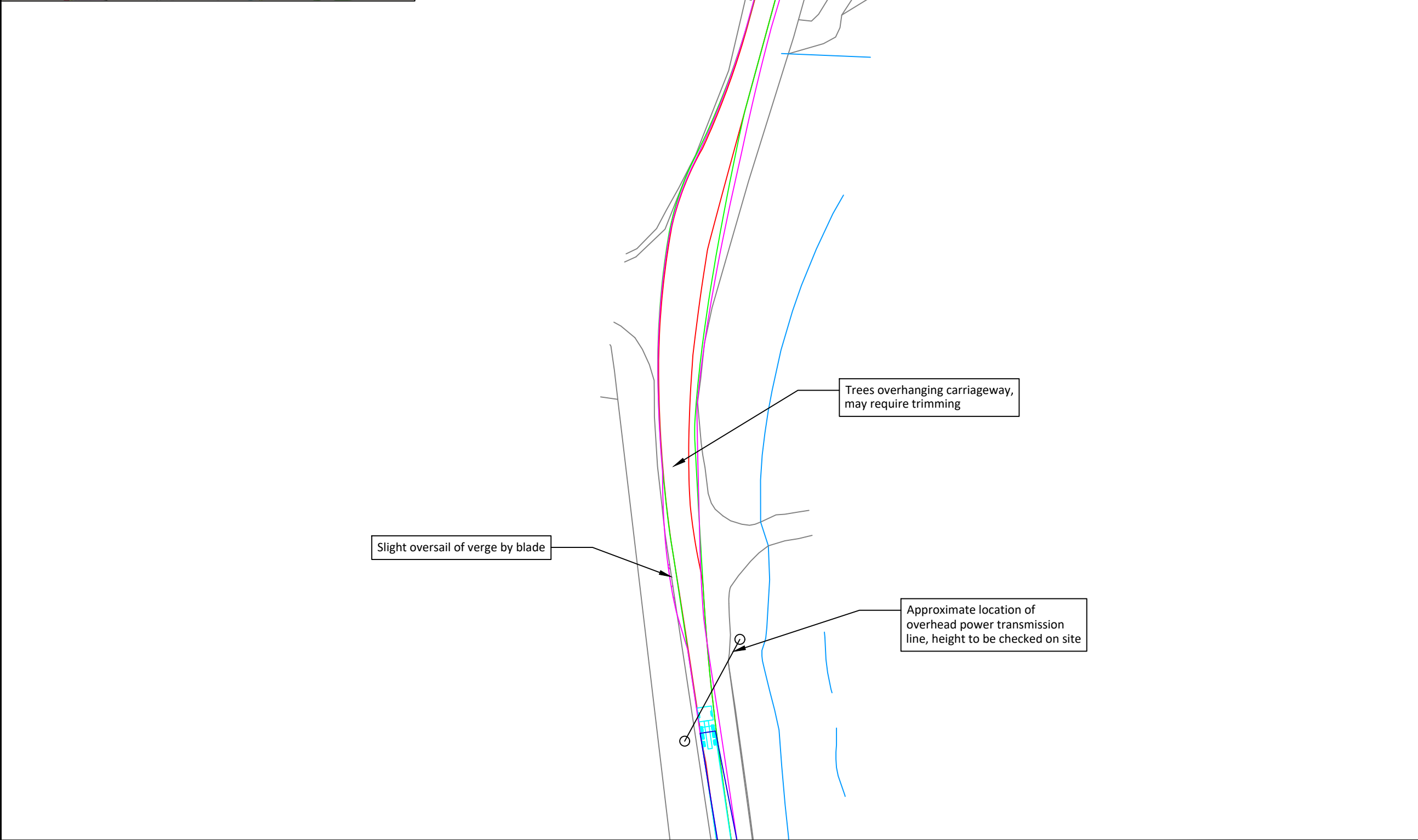
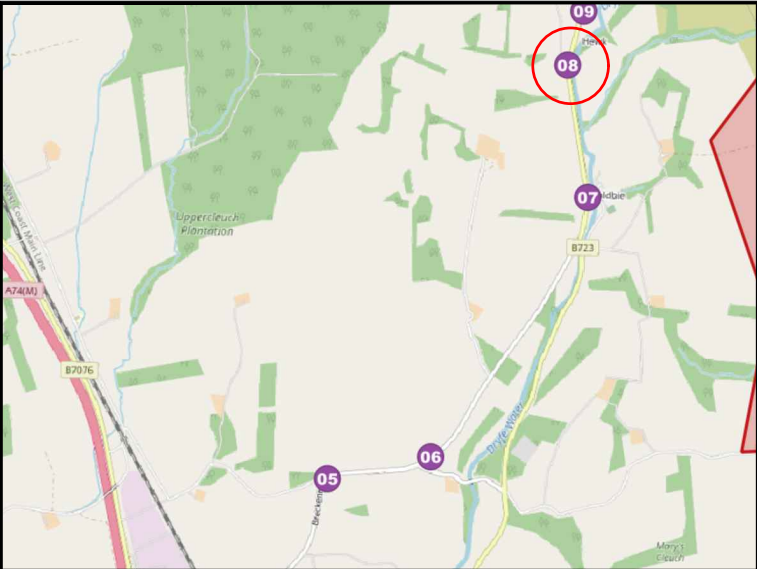


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Client			
Fred Olsen Renewables			
Project			
Balgray Wind Farm			
Title			
Swept Path Assessment 81m Blade "Superwing" Transporter Alternative Route via Boreland Pinch Point 7			
Drawn	TF	Checked	ADV
Original dtp. size	A3	Date	08/03/2024
Scale	1:500	Rev.	-
Drawing Status		Drawing Number	
Information		GB01T19G67/3000/SPA007	



Notes:

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- Please note that marked service locations are indicative only and should be confirmed by topographical survey.

Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

Rev.	Date	Revision details	Drawn	Checked	Approved

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Client

Fred Olsen Renewables

Project

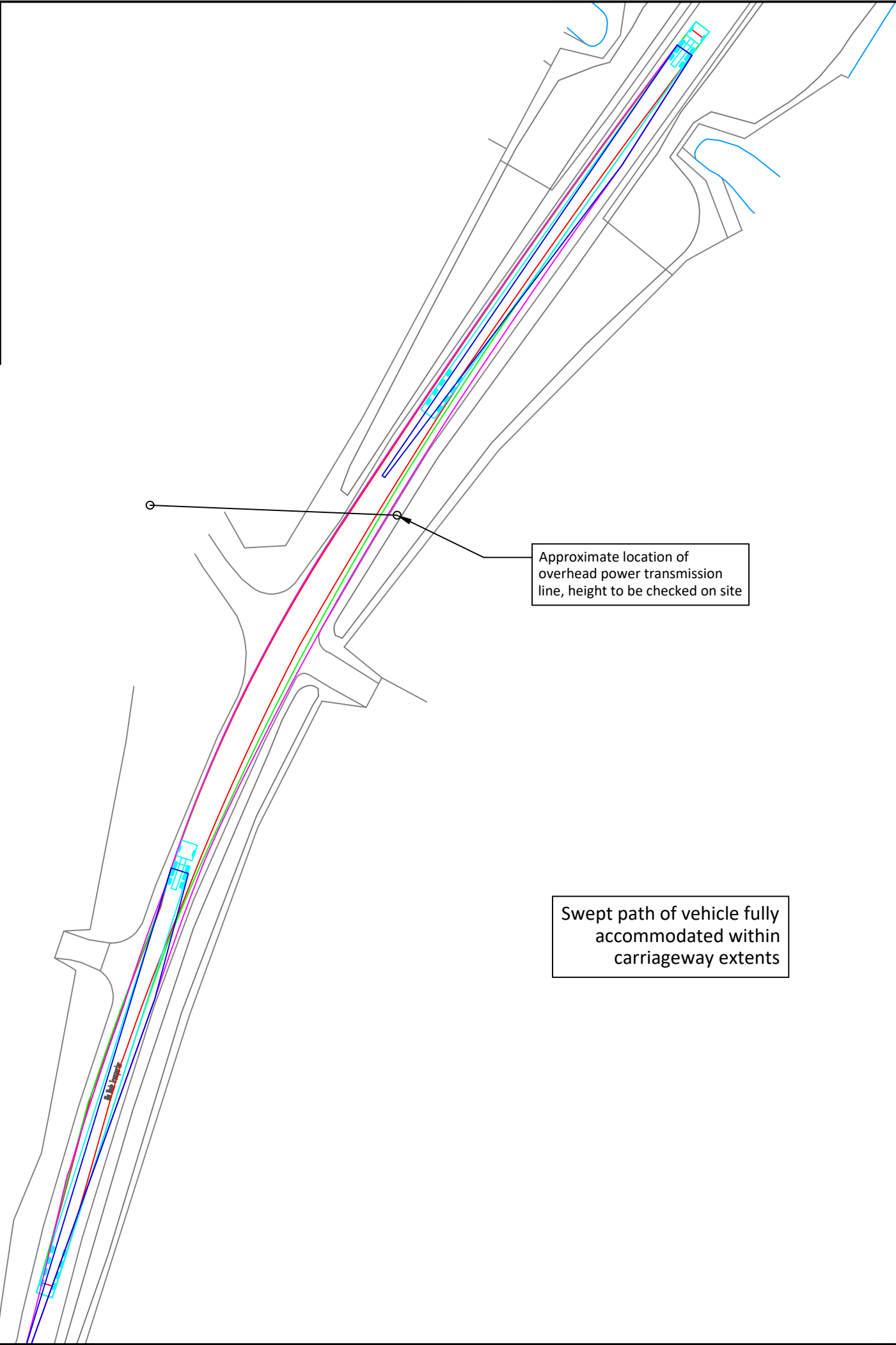
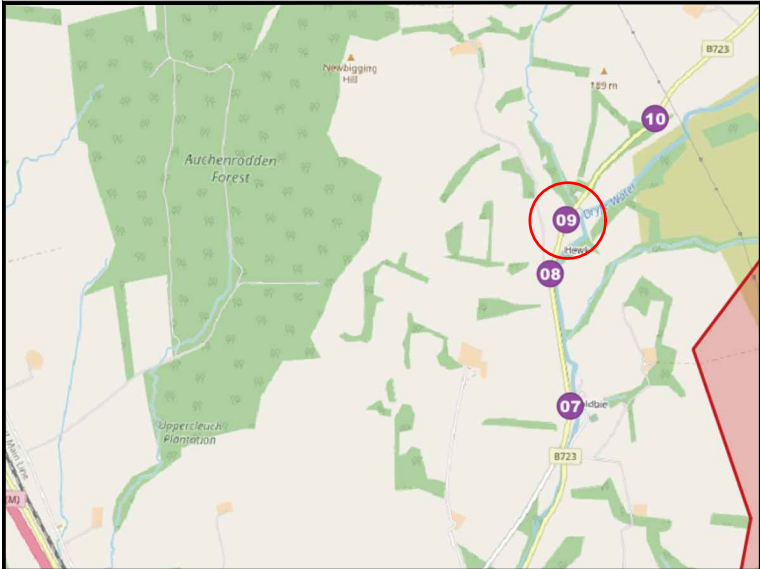
Balgray Wind Farm

Title

Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 8

Drawn	TF	Checked	ADV	Approved	ADV
Original dtp. size	A3	Date	08/03/2024	Scale	1:750
Drawing Status	Information		Drawing Number	GB01T19G67/3000/SPA008	Rev.

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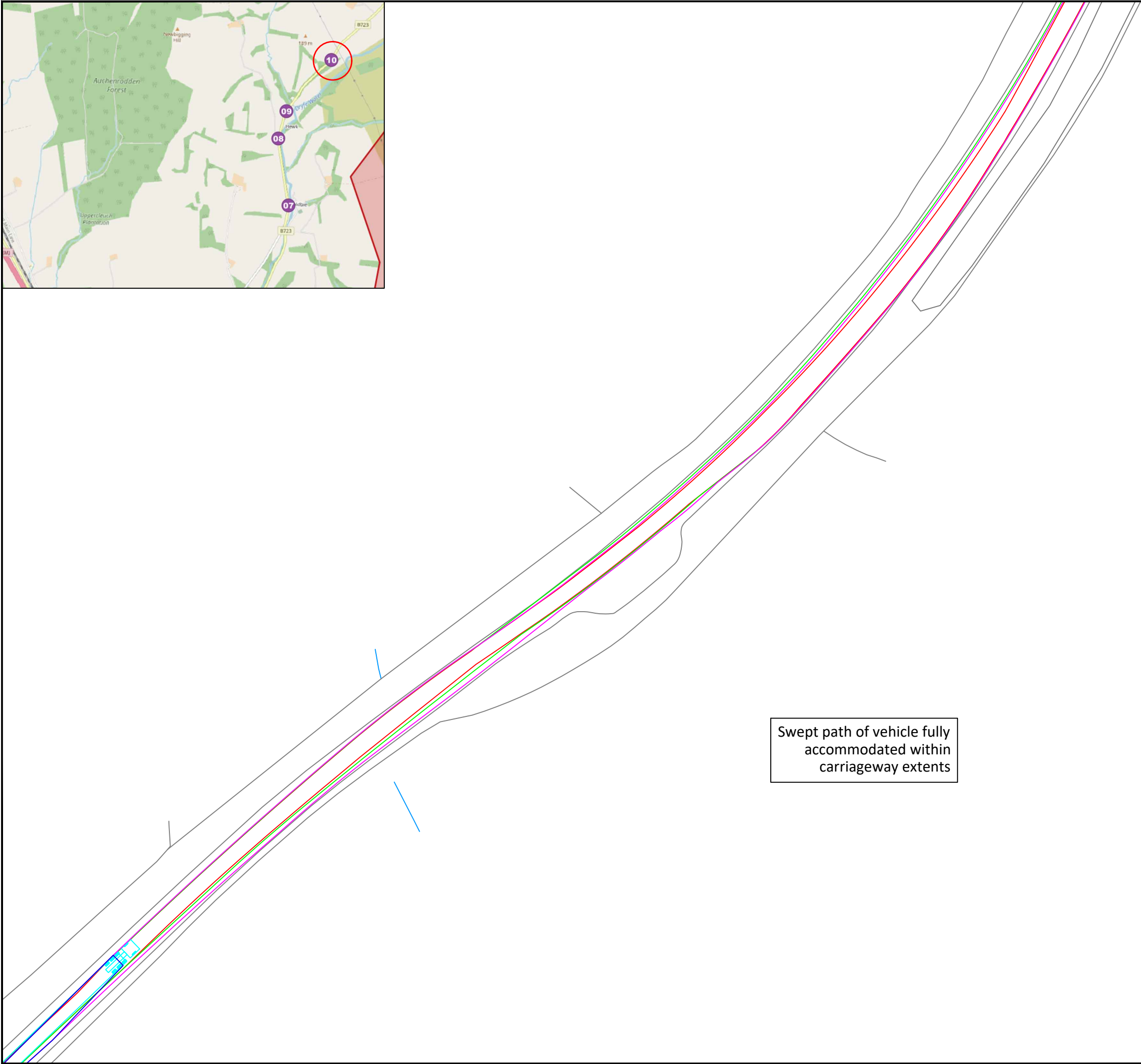
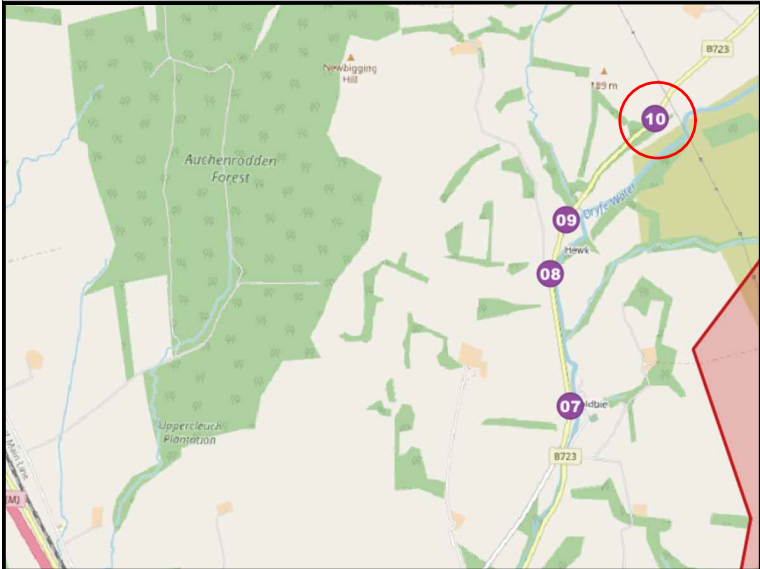
Notes:

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

Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

Rev.	Date	Revision details	Drawn	Checked	Approved
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Client Fred Olsen Renewables					
Project Balgray Wind Farm					
Title Swept Path Assessment 81m Blade "Superwing" Transporter Alternative Route via Boreland Pinch Point 9					
Drawn TF		Checked ADV		Approved ADV	
Original dtp. size A3		Date 08/03/2024		Scale 1:750	
Drawing Status Information		Drawing Number GB01T19G67/3000/SPA009		Rev. -	



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 3. Please note that marked service locations are indicative only and should be confirmed by topographical survey.



- Key:
- Blade Transporter Vehicle
 - Blade Outline
 - Over-run envelope of tractor and trailer wheels
 - Over-sail envelope being swept by tractor and trailer bed
 - Over-sail envelope being swept by blade path
 - Over-run area of tractor and trailer wheels out with carriageway
 - Over-sail area of tractor and trailer bed out with carriageway
 - Over-sail area of blade out with carriageway

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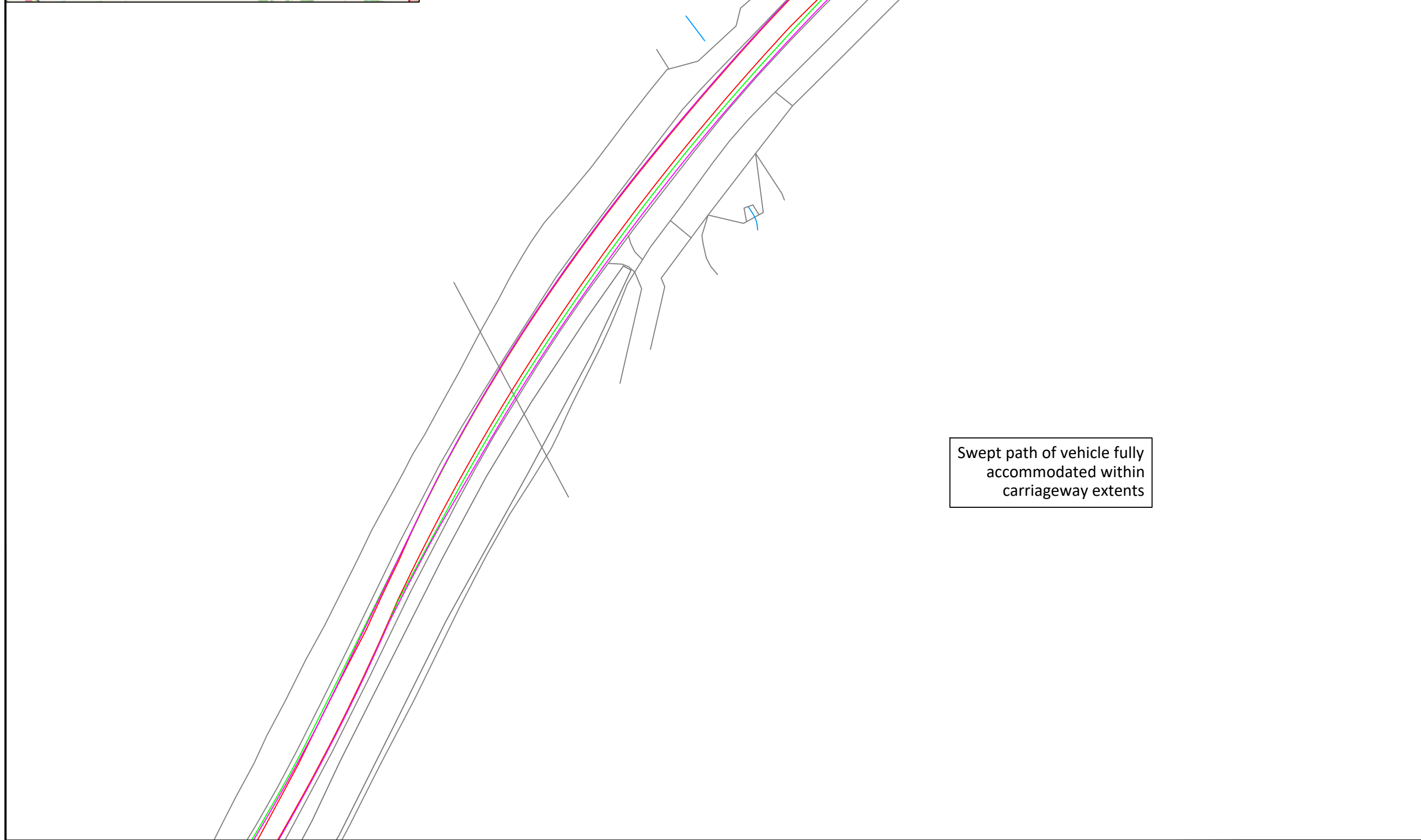


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Project Balgray Wind Farm					
Title Swept Path Assessment 81m Blade "Superwing" Transporter Alternative Route via Boreland Pinch Point 10A					
Drawn TF		Checked ADV		Approved ADV	
Original dtp. size A3		Date 08/03/2024		Scale 1:750	
Drawing Status Information			Drawing Number GB01T19G67/3000/SPA010		Rev. -



Swept path of vehicle fully accommodated within carriageway extents

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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.



- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

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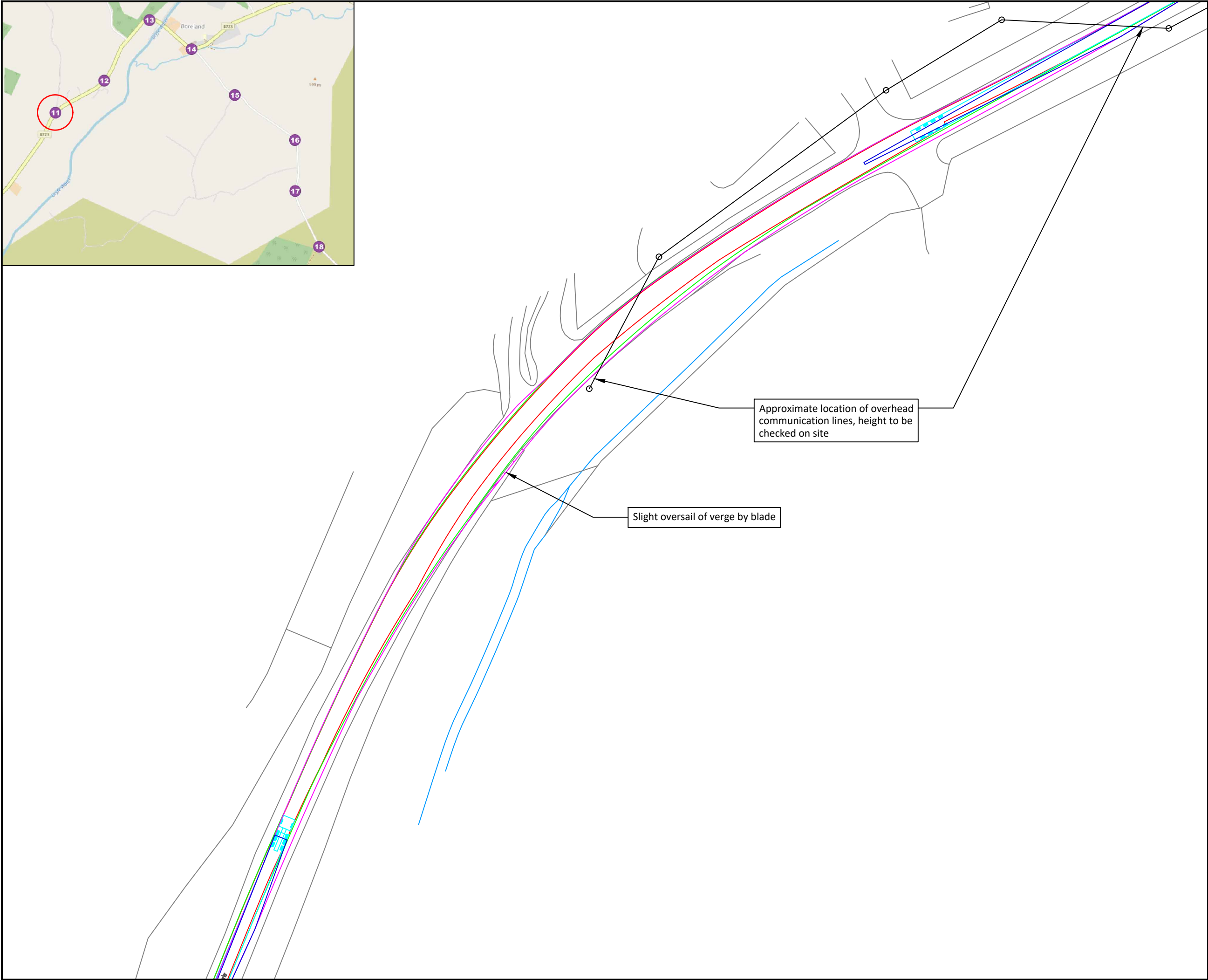
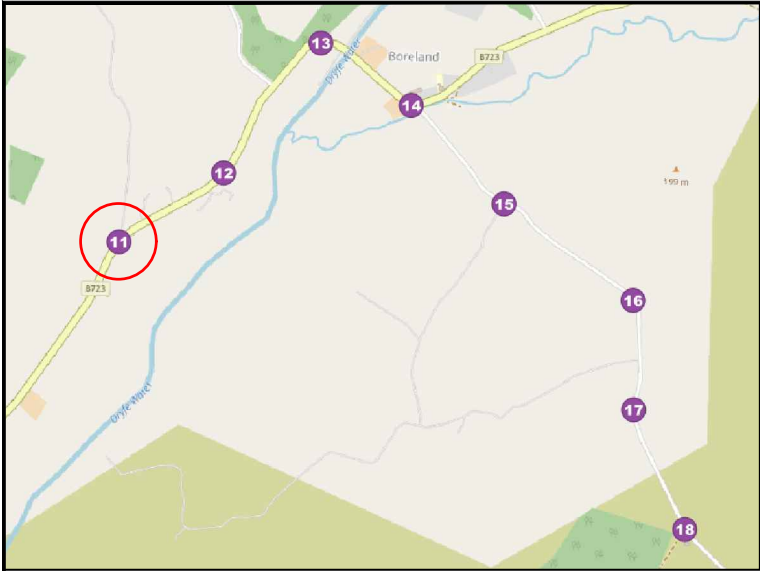


Fred Olsen Renewables

Balgray Wind Farm

Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 10B

Drawn TF	Checked ADV	Approved ADV
Original dir. size A3	Date 08/03/2024	Scale 1:750
Drawing Status Information	Drawing Number GB01T19G67/3000/SPA011	Rev. -



Notes:

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- Please note that marked service locations are indicative only and should be confirmed by topographical survey.

Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

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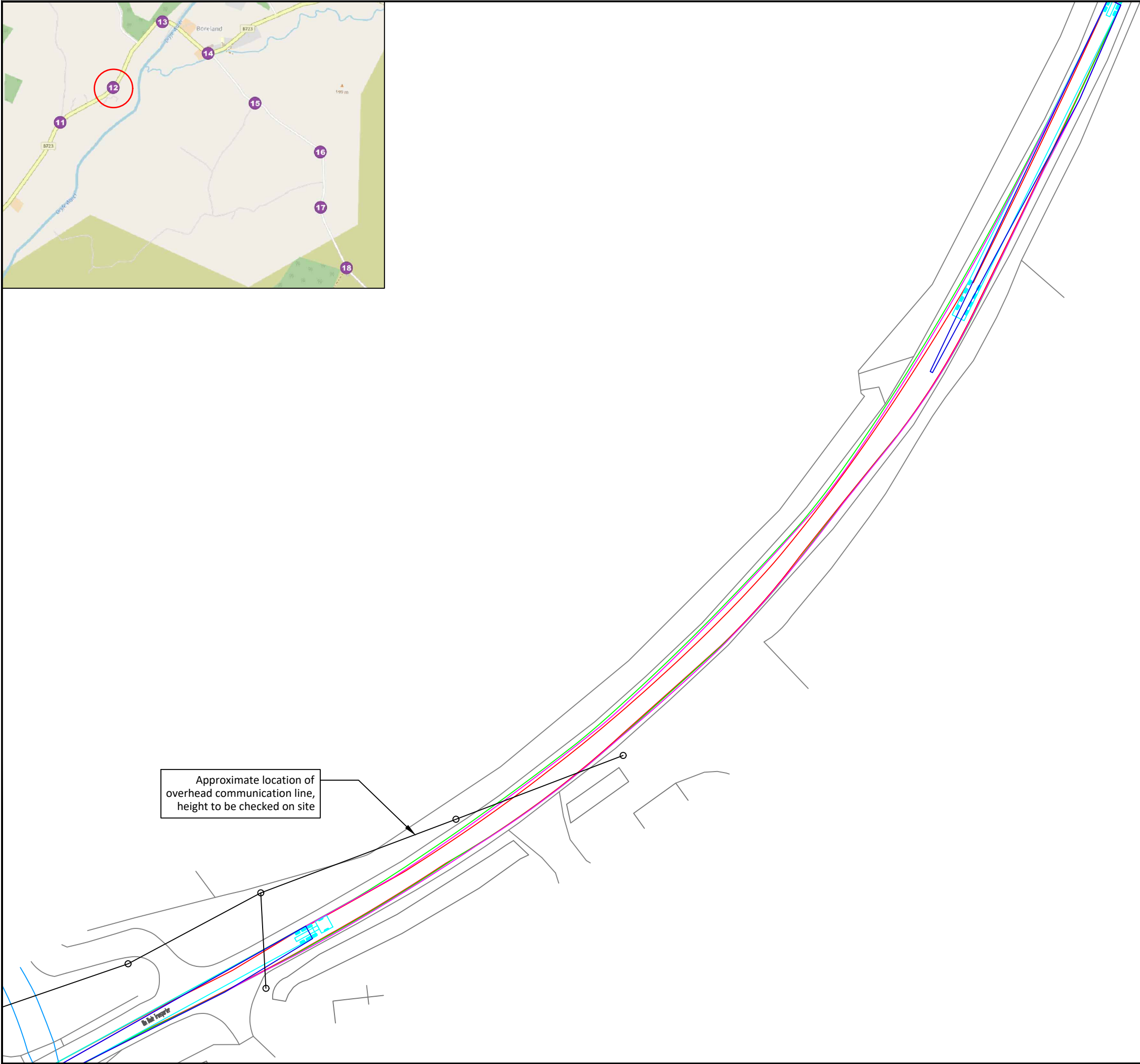
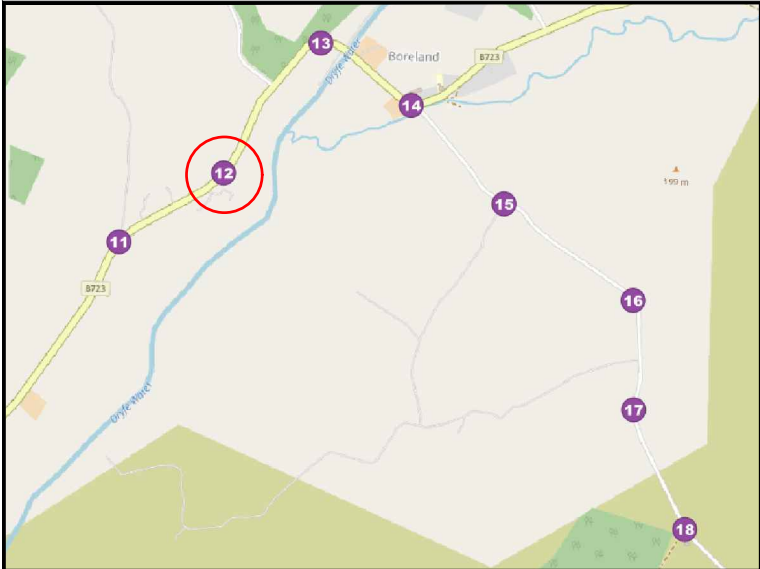
Project
Balgray Wind Farm

Title
Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 11

Drawn	Checked	Approved
TF	ADV	ADV

Original dtp. size	Date	Scale
A3	08/03/2024	1:750

Drawing Status	Drawing Number	Rev.
Information	GB01T19G67/3000/SPA012	-



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- Key:
- Blade Transporter Vehicle
 - Blade Outline
 - Over-run envelope of tractor and trailer wheels
 - Over-sail envelope being swept by tractor and trailer bed
 - Over-sail envelope being swept by blade path
 - Over-run area of tractor and trailer wheels out with carriageway
 - Over-sail area of tractor and trailer bed out with carriageway
 - Over-sail area of blade out with carriageway

Rev	Date	Revision details	Drawn	Checked	Approved

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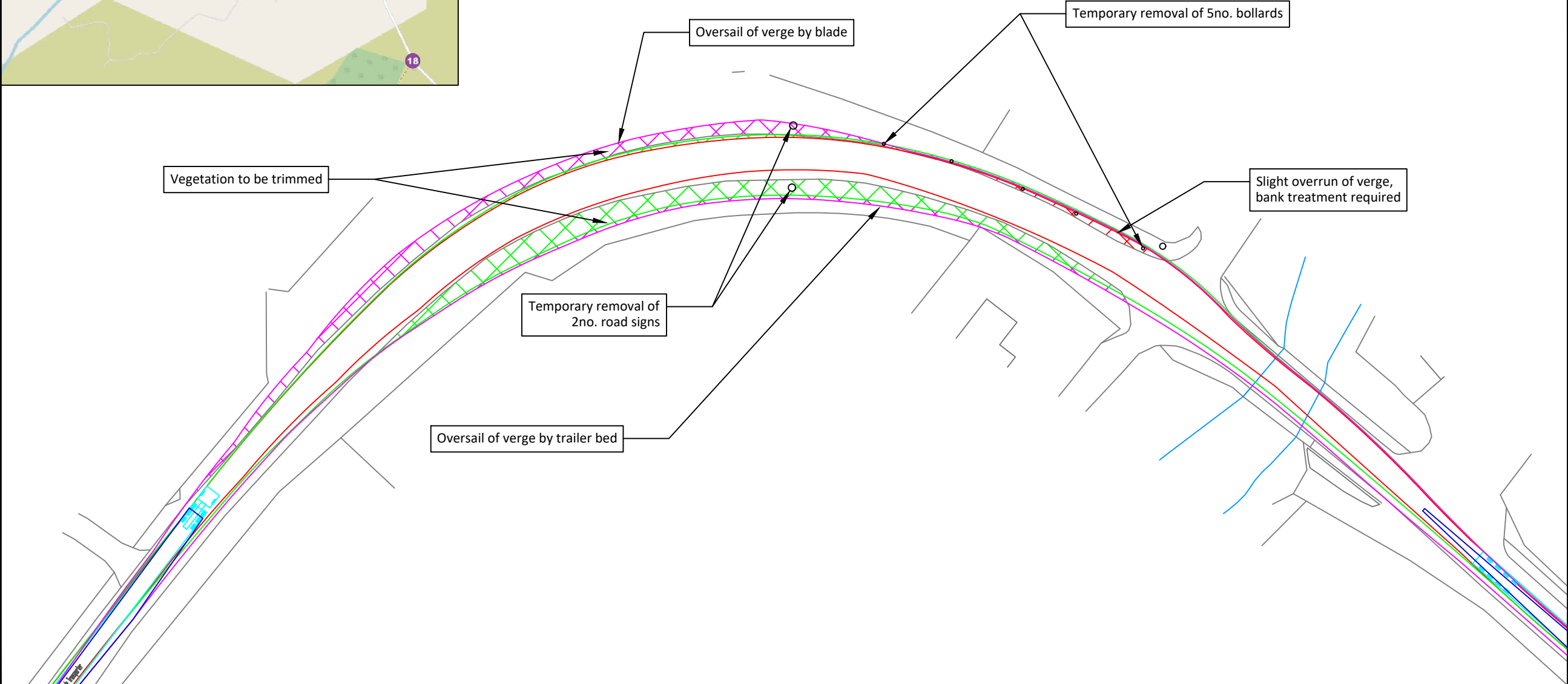
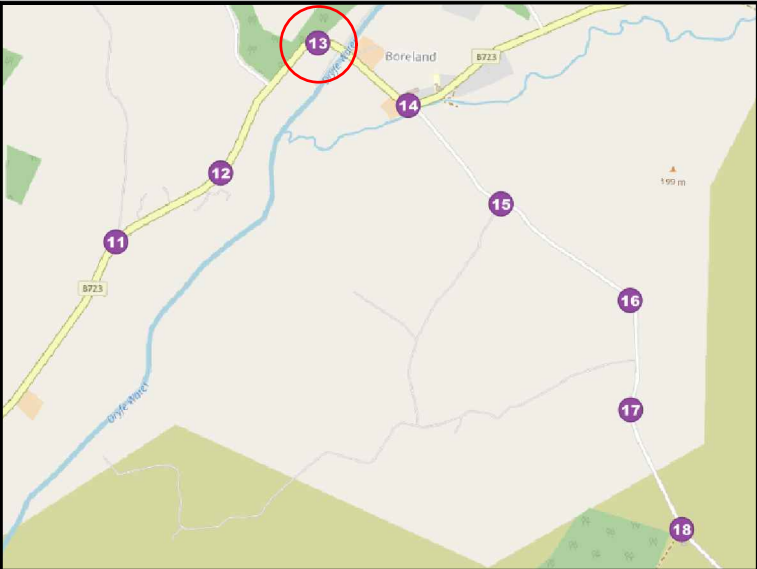
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Balgray Wind Farm

Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 12

Drawn	TF	Checked	ADV	Approved	ADV
Original dtp. size	A3	Date	08/03/2024	Scale	1:750
Drawing Status	Information	Drawing Number	GB01T19G67/3000/SPA013	Rev.	-



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Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

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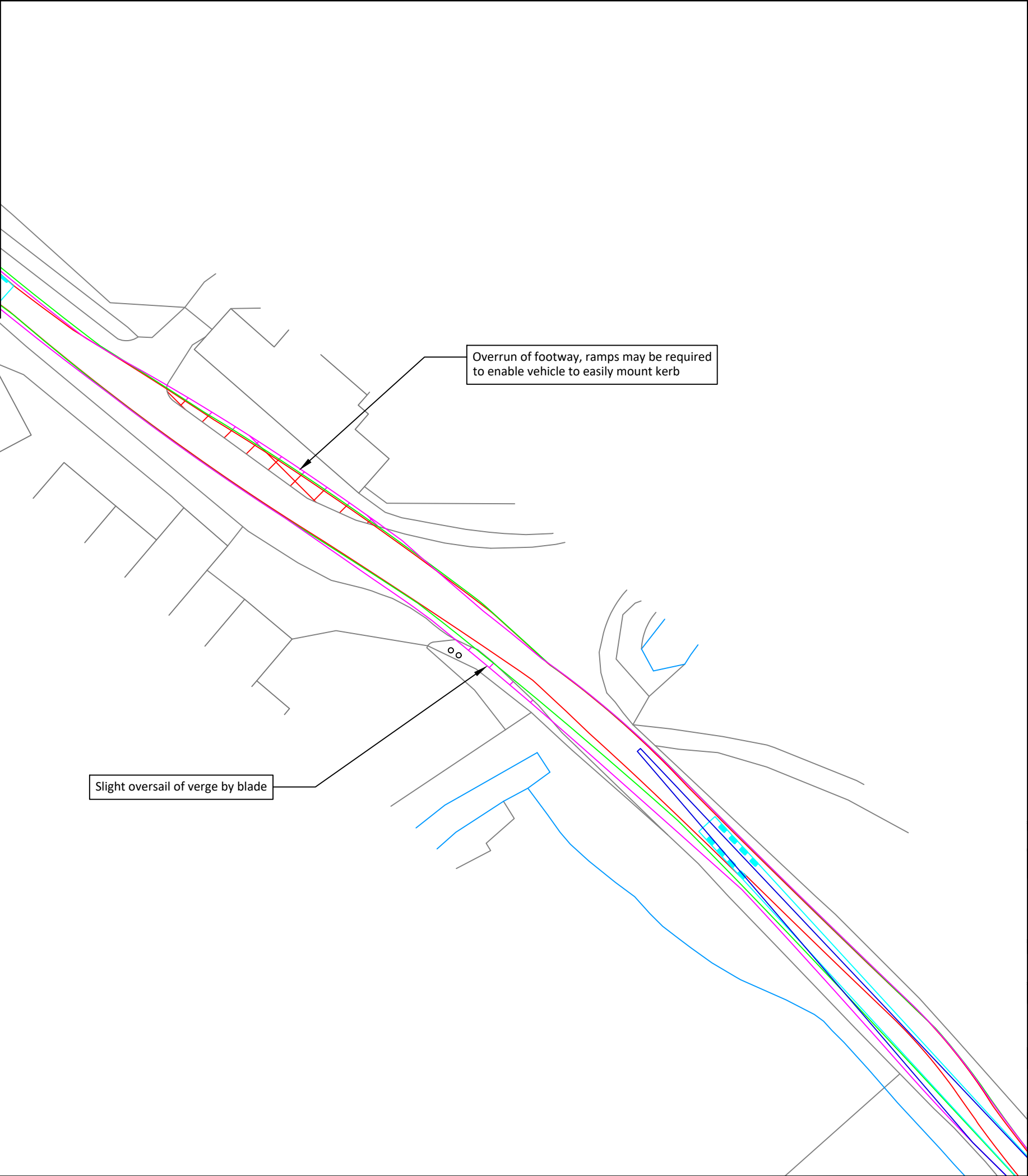
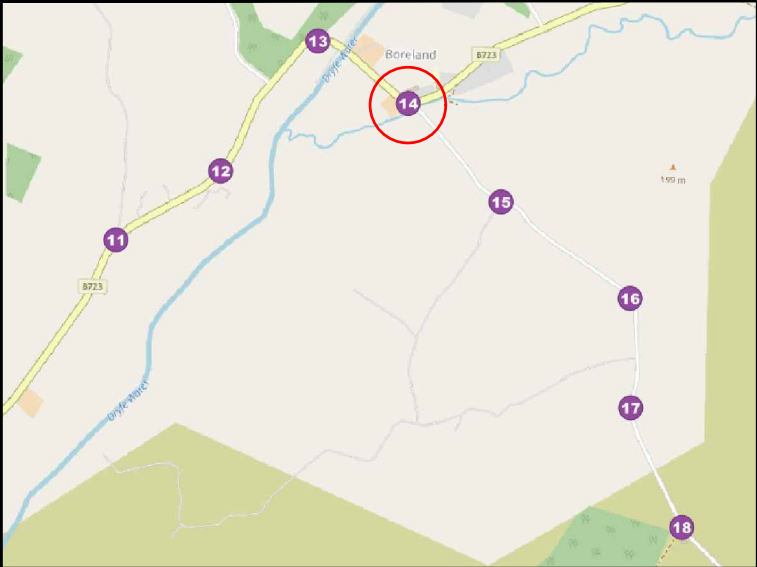
Project
Balgray Wind Farm

Title
Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 13

Drawn	Checked	Approved
TF	ADV	ADV

Original dtp. size	Date	Scale
A3	08/03/2024	1:750

Drawing Status	Drawing Number	Rev.
Information	GB01T19G67/3000/SPA014	-



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Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

Rev.	Date	Revision details	Drawn	Checked	Approved

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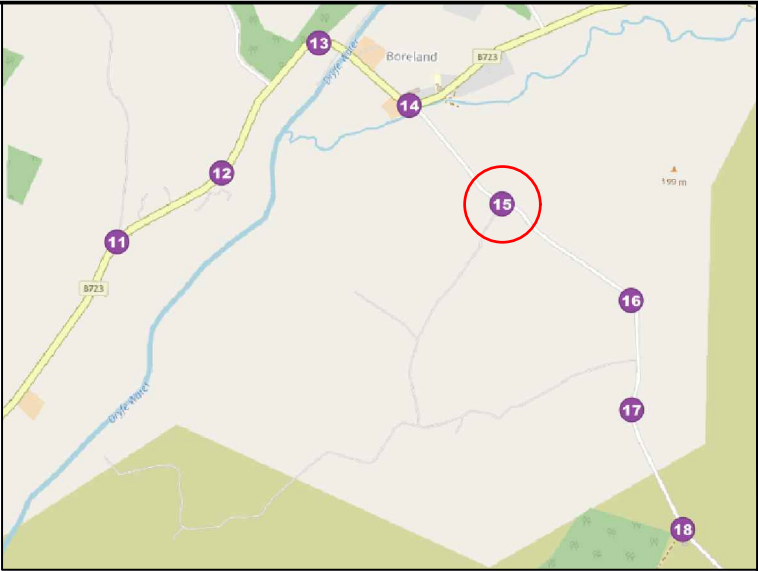
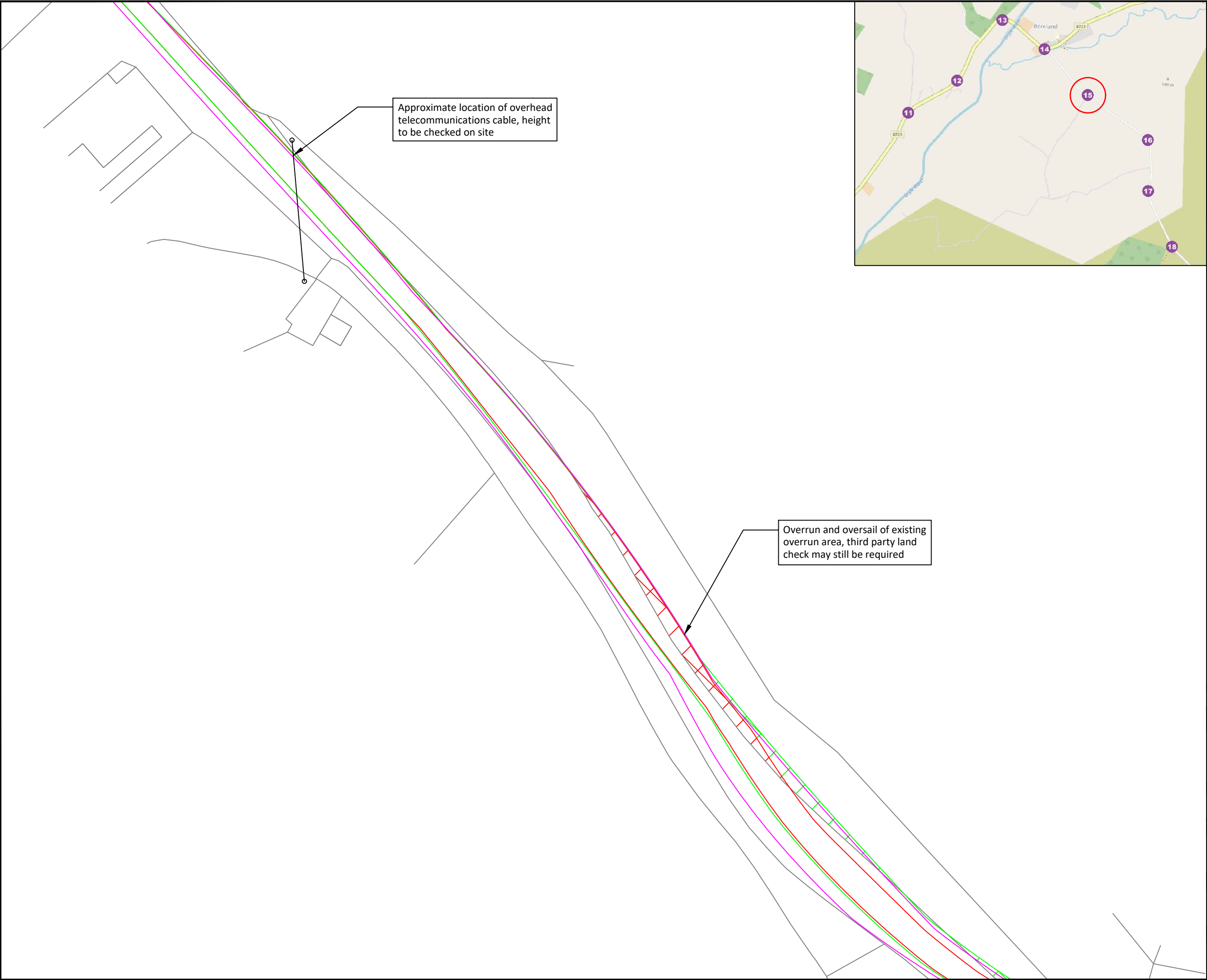
Client
Fred Olsen Renewables

Project
Balgray Wind Farm

Title
Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 14

Drawn	Checked	Approved
TF	ADV	ADV
Original dtp. size A3	Date 08/03/2024	Scale 1:500

Drawing Status	Drawing Number	Rev.
Information	GB01T19G67/3000/SPA015	-



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Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

Rev.	Date	Revision details	Drawn	Checked	Approved

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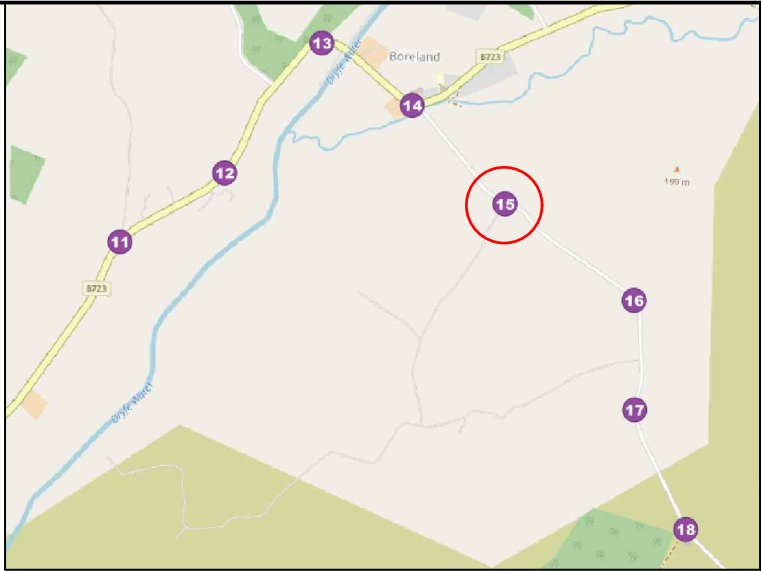
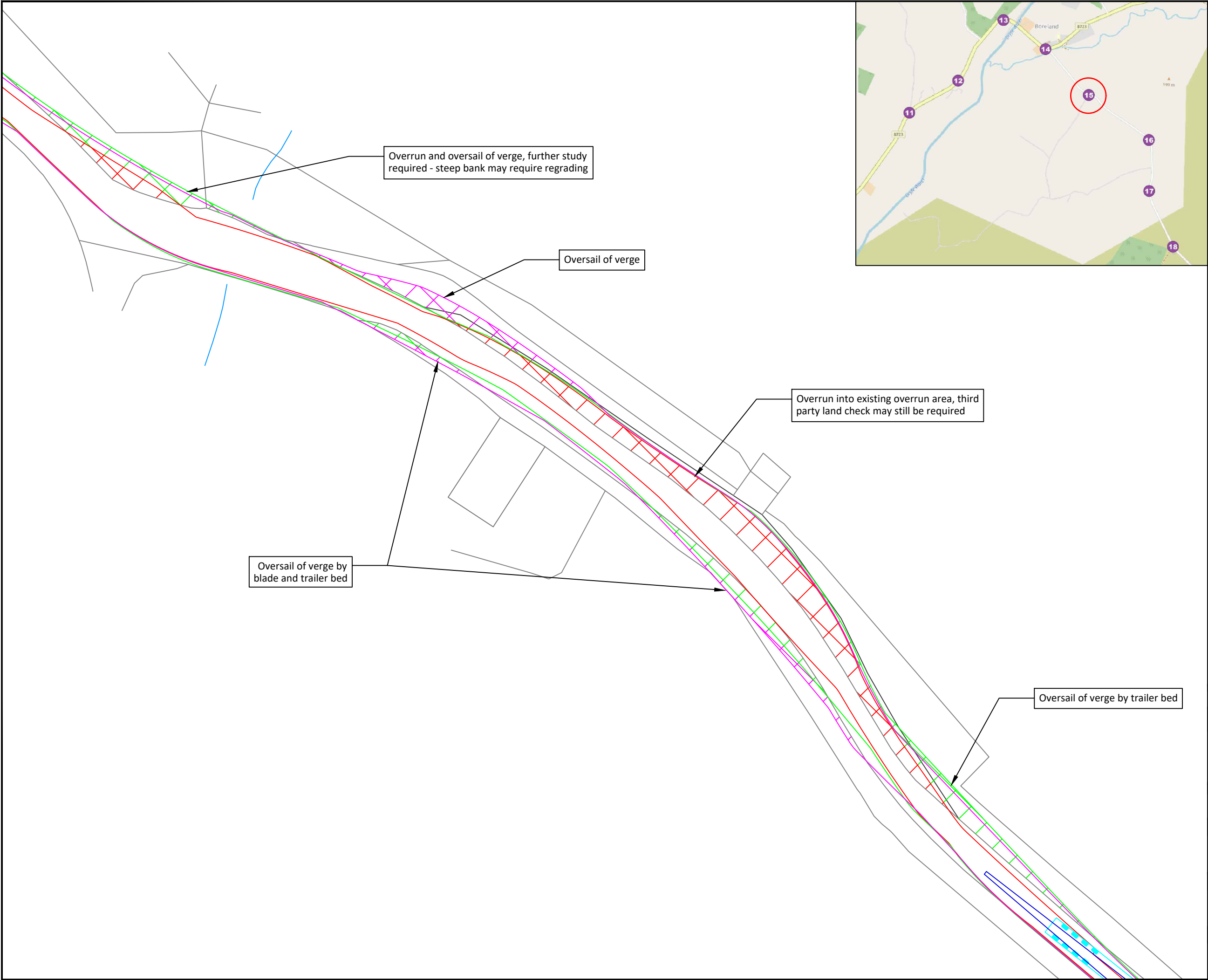
Project

Balgray Wind Farm

Title

Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 15A

Drawn	TF	Checked	ADV	Approved	ADV
Original dpg. size	A3	Date	08/03/2024	Scale	1:500
Drawing Status	Information	Drawing Number	GB01T19G67/3000/SPA016	Rev.	-



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Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

Rev.	Date	Revision details	Drawn	Checked	Approved

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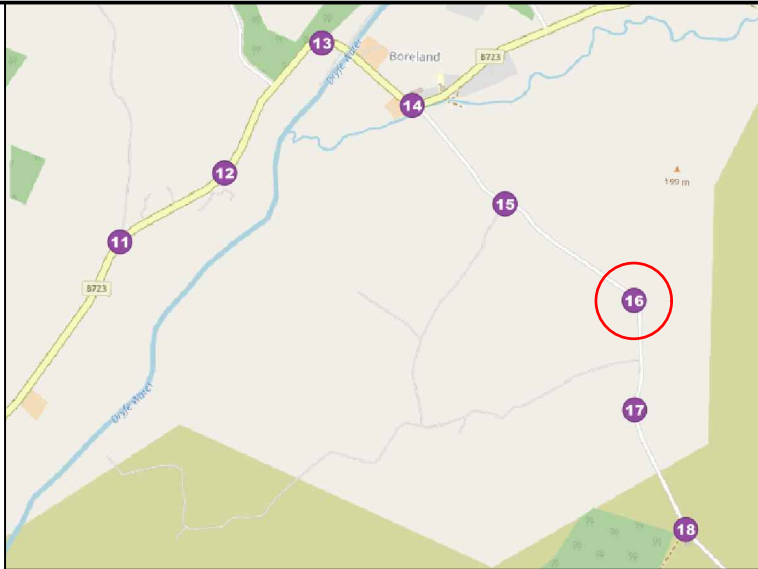
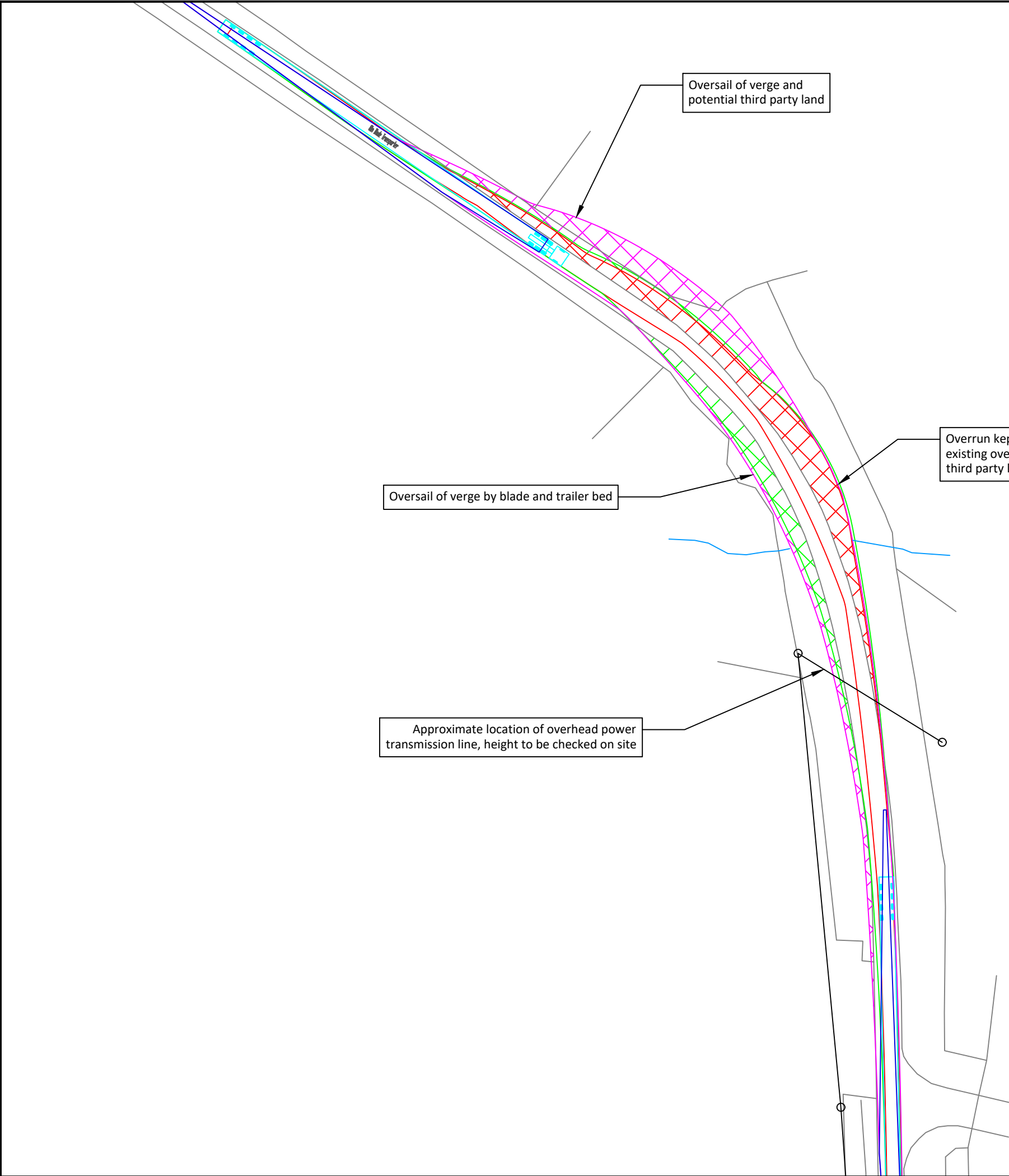
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Client
Fred Olsen Renewables

Project
Balgray Wind Farm

Title
Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 15B

Drawn	Checked	Approved
TF	ADV	ADV
Original dtp. size A3	Date 08/03/2024	Scale 1:500
Drawing Status Information	Drawing Number GB01T19G67/3000/SPA017	Rev. -



Notes:

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Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

Rev.	Date	Revision details	Drawn	Checked	Approved

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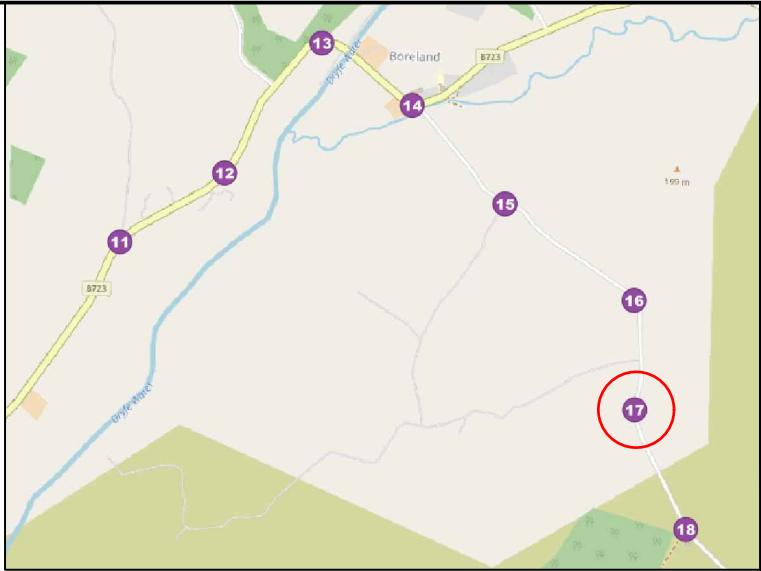
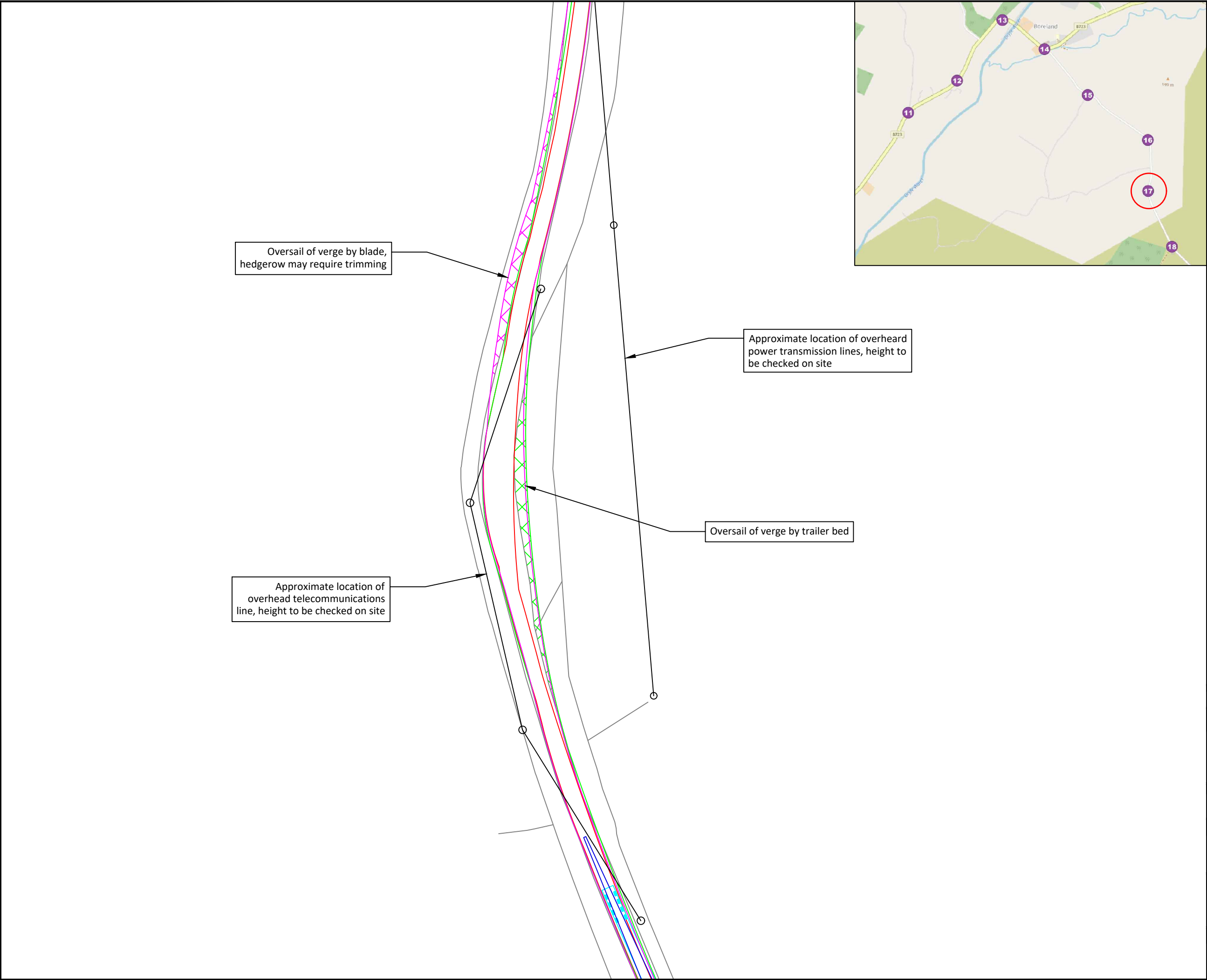
Project

Balgray Wind Farm

Title

Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 16

Drawn	TF	Checked	ADV	Approved	ADV
Original dtp. size	A3	Date	08/03/2024	Scale	1:750
Drawing Status	Drawing Number		GB01T19G67/3000/SPA018		Rev.
Information					-



Notes:

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Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

Rev.	Date	Revision details	Drawn	Checked	Approved

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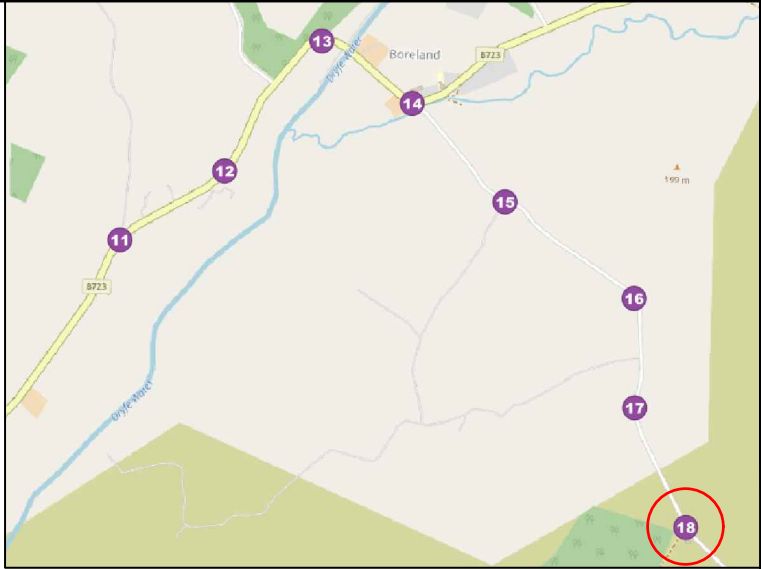
Project

Balgray Wind Farm

Title

Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 17

Drawn	TF	Checked	ADV	Approved	ADV
Original dtp. size	A3	Date	08/03/2024	Scale	1:750
Drawing Status	Drawing Number		GB01T19G67/3000/SPA019	Rev.	-
Information					



Notes:

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- Please note that marked service locations are indicative only and should be confirmed by topographical survey.

Key:

- Blade Transporter Vehicle
- Blade Outline
- Over-run envelope of tractor and trailer wheels
- Over-sail envelope being swept by tractor and trailer bed
- Over-sail envelope being swept by blade path
- Over-run area of tractor and trailer wheels out with carriageway
- Over-sail area of tractor and trailer bed out with carriageway
- Over-sail area of blade out with carriageway

Rev.	Date	Revision details	Drawn	Checked	Approved

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Project

Balgray Wind Farm

Title

Swept Path Assessment
81m Blade "Superwing" Transporter
Alternative Route via Boreland
Pinch Point 18

Drawn	TF	Checked	ADV	Approved	ADV
Original dtp. size	A3	Date	08/03/2024	Scale	1:1000
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