



Technical Appendix 12.1: Arecleoch Windfarm Extension

Route Survey Report



April 2019

Arecleoch Windfarm Extension



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1 INTRODUCTION

Report Purpose

- 1.1 WYG has been commissioned by ScottishPower Renewables (SPR) to undertake a route review for the delivery of abnormal loads associated with the proposed Arecleoch Windfarm Extension (Proposed Development). This report reviews the constraints associated with the transportation of wind turbine components from Cairnryan Ferry Terminal to the proposed site access.
- 1.2 This report has been prepared in accordance with instructions from SPR on the above project details. No liability is accepted for the use of all or part of this report by third parties.
- 1.3 This report is Copyright © of ScottishPower Renewables and WYG, 2019. No section of this report may be reproduced without prior written approval.
- 1.4 WYG has been commissioned to prepare this route survey report as a source of guidance. The report identifies the key points and issues associated with the routes that may require remedial works to accommodate the predicted loads. The detailed design of these remedial works, however, are beyond the agreed scope of works. It is the responsibility of the turbine supplier (depending on contract) to ensure that the access route from the POE to the site is fit for purpose and that appropriate consideration for all road users has been made in accordance with the relevant health and safety legislation and ruling transport requirements.

Report Structure

- 1.5 Following this introduction, the proceeding chapters of the report are structured as follows:
- **Chapter Two** describes the location of the proposed windfarm development;
 - **Chapter Three** describes the route options reviewed on the site visit along with areas of potential significant constraints; and



- **Chapter Four** provides a summary of the report and an outline of suggested further works, actions and recommendations for consideration by SPR.

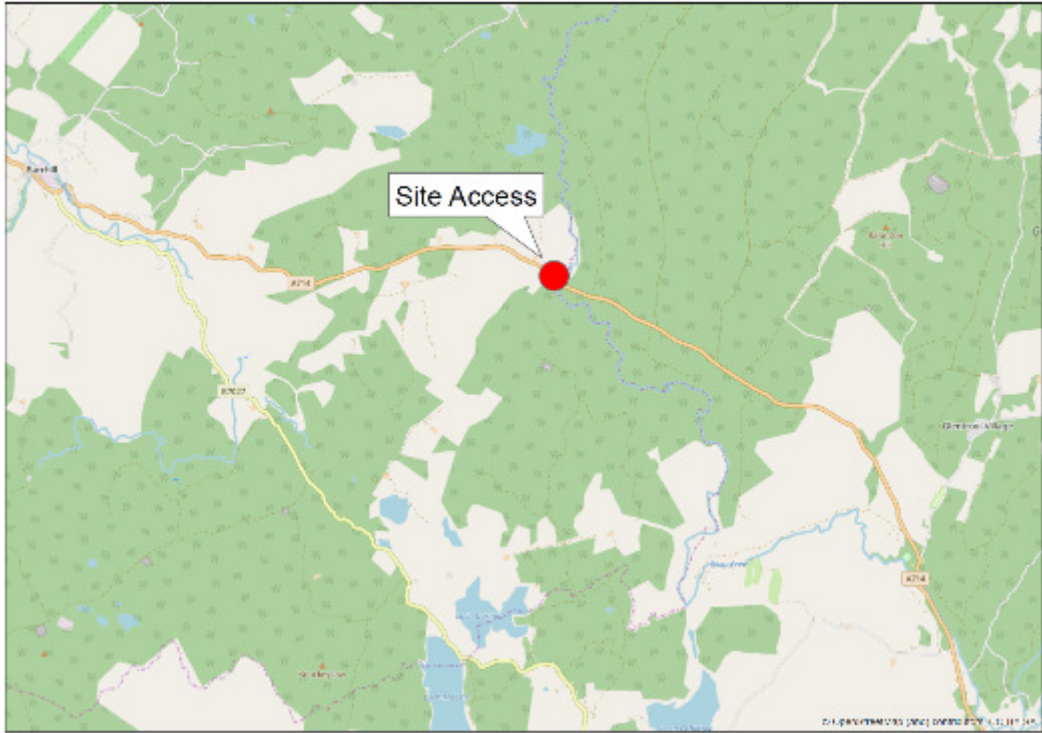


2 **PROPOSED SITE AND ACCESS STRATEGY**

Site Description and Location

- 2.1 The proposed Arecleoch site is located 3km southeast of Barhill, East Ayrshire. The site entrance is illustrated below in Figure 2.1.

Figure 2.1: Site Access Location



Candidate Turbine

- 2.2 SPR have indicated that they wish to consider a Vestas V150 turbine as being the worst-case turbine for the proposed site.
- 2.3 A worst-case blade and tower combination have been assumed with the dimensions illustrated within Table 2.1.



Table 2.1: Worst Case Turbine Loads and Dimensions

Component	Length	Maximum Width on Vehicle
Blade	74m	4.03m
Tower	33.88m	4.5m

- 2.4
- WYG has assumed that all loads will follow the relevant manufacturers transport guidelines.
- 2.5
- The components can be delivered on a variety of transport platforms all of which feature independent rear wheel steering and would be provided with both Police and civilian escorts.
- 2.6
- At this point in time, no assessment of the erection crane has been undertaken.



3 ROUTE REVIEW

- 3.1
- Access to the Proposed Development site could be taken from a number of suitable ports of entry (POE) such as Glasgow KGV or Cairnryan. These ports provide direct access onto the trunk road network and have experience as renewable energy delivery hubs.
- 3.2
- A route review was undertaken by video survey on Thursday 7th February from Cairnryan to the proposed site access. This method allows a full record of the route to be undertaken, with notes recorded following completion of the survey. Not only is this process efficient, it also provides a much safer working environment for staff. The video survey allows a full record of the route to be kept for future reference. To accompany the video survey, various Points of Interest (POI) were recorded using a Global Positioning System (GPS) tracker that logs the locations of points on the routes to Ordnance Survey (OS) co-ordinates.
- 3.3
- 1.1 The port of Cairnryan has some restrictions including limited water depth and port handling facilities/component storage and may limit the use of this port. If consented, SPR would engage in detailed discussions with the turbine suppliers, haulage contractors, Transport Scotland, Police Scotland and road authorities regarding the port of entry strategy and delivery route. Blades for previous developments in the vicinity of Arecleoch have been undertaken from Glasgow and a significant number of road junction improvements have been made on the A75 to support these deliveries (for Kilgallioch and other nearby windfarms). The assessment of the proposed route is based upon the reinstatement proposals associated with the mitigation measures previously provided for Kilgallioch Wind Farm, which are currently being agreed with Transport Scotland. The site visit did not include any geotechnical, utility or environmental reviews and as such the information provided in this report is based solely on the observations noted on the site visit and subsequent swept path assessments.
- 3.4
- Plans illustrating the location of the constraints and a detailed list of POI's are provided in Appendix A.



Route Description

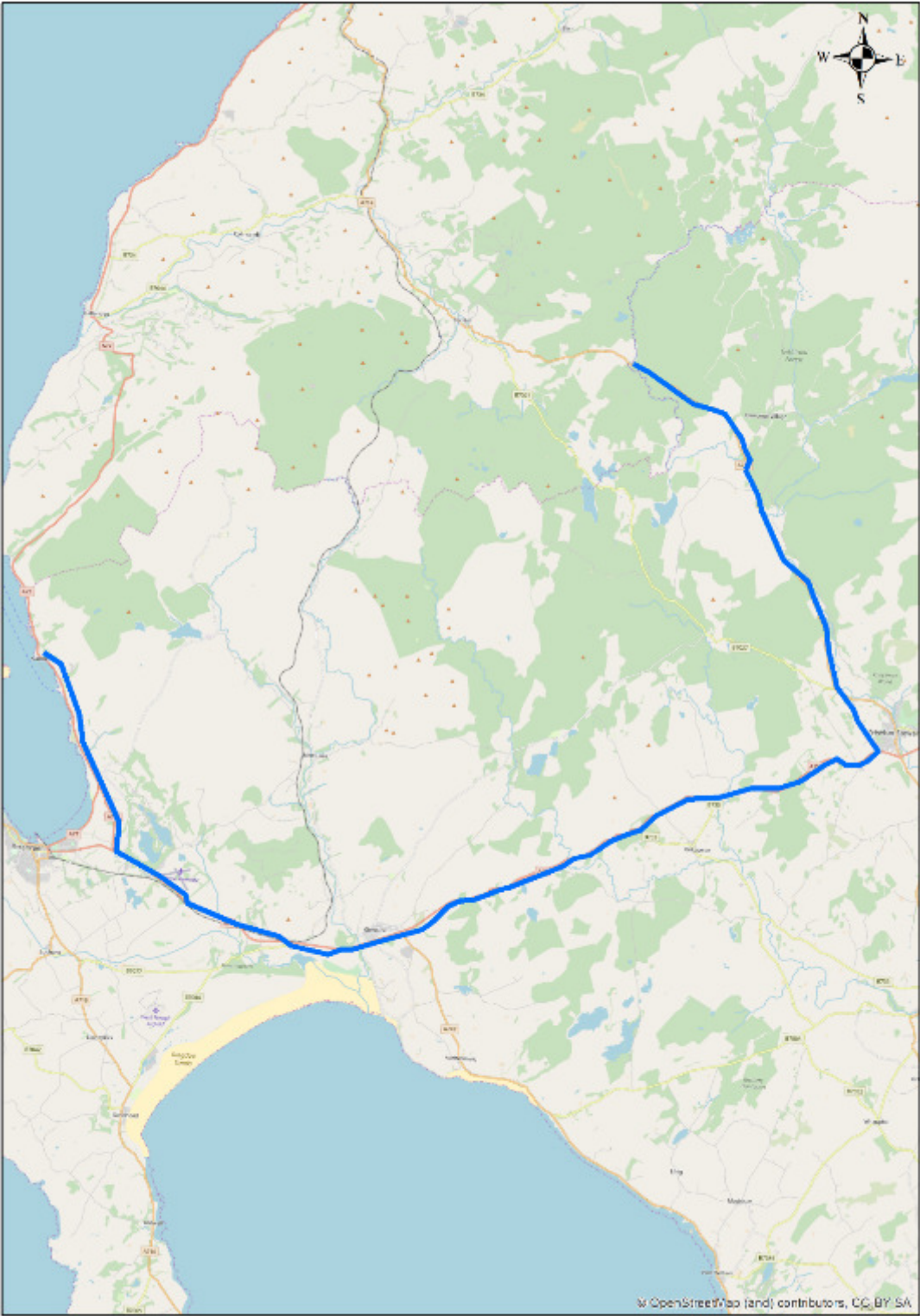
- 3.5
- It is proposed that all loads will follow the route described below:

 - The route from Cairnryan to the site access is as follows:
 - Depart Cairnryan Ferry Terminal and proceed south on the A77;
 - Turn left onto the A751 at Innermessan and proceed southbound;
 - Turn left onto the A75 and proceed eastbound;
 - Depart the A75 to the west of Newton Stewart and proceed north via an unclassified minor road and continue north on the A714; and
 - Depart the A714 at the site access track junction and proceed to site via a private haul road.

- 3.6
- Within the windfarm site, loads would then proceed ahead to the turbine locations. All on-site access roads should be designed to the selected turbine manufactures minimum standards and as such are excluded from this report.



Figure 3.1: Proposed Access Route








Network Constraints

- 3.7
- Tables 3.1 details the potential constraint point locations on the route from Cairnryan Port through to the proposed site access.
- 3.8
- Where street furniture is to be removed to allow movement, it is suggested that socket foundations are used. All elements can be reinstated following the manoeuvre.



Table 3-1: Route Constraint Points

POI	Constraint	Details
1	Cairnryan Port	<div><div></div><div>Loads exit the docks</div><div>As loads proceed through the gates it is to be confirmed if the gates require widening with the port authorities.</div><div>Loads oversail the northern splitter island and the northern verge on exit where two road signs, one flagpole, one tree and a section of fence to be removed. Proximity to lighting column to be confirmed though topographical survey or test run.</div><div>Loads oversail the western footway on exit where one road sign should be removed.</div><div>Swept path drawing SPA001 is included in Appendix B.</div></div>






POI	Constraint	Details
2	A77 / A751 Junction	<div><div></div><div>Loads will turn left from the A77 onto the A751.</div><div>Loads oversail the western verge where the blade tip will oversail two bollards.</div><div>Loads oversail the splitter island where one bollard should be removed.</div><div>Loads oversail the inside of the bend where one road sign should be removed.</div><div>Swept path drawing SPA002 is included in Appendix B.</div></div>
3	A751 / A75 Junction	<div><div></div><div>Loads will turn left onto the A75.</div><div>The blade tip will oversail the western verge where trees and vegetation should be cleared. Embankment re-profiling may be required. The limits of adoption should be confirmed at this location.</div><div>One road sign and two bollards should be removed on the splitter island.</div><div>Loads oversail the inside of the left bend where one road sign and one bollard should be removed. Vegetation should be trimmed back.</div><div>Loads will oversail the Sothern verge of the carriageway where three bollards should be removed.</div><div>Swept path drawing SPA003 is included in Appendix B.</div></div>






POI	Constraint	Details
4	Cross Roads Wood 	<p>Loads will continue ahead on the A75.</p> <p>No mitigation is required at this location.</p> <p>Swept path drawing SPA004 is included in Appendix B.</p>
5	A75 / Newton Stewart Bypass 	<p>Loads will turn right onto the bypass route, thus avoiding a transit through the town centre.</p> <p>A load bearing surface is required on the inside of the junction. Three road signs on the inside of the junction will need to be relocated and three bollards removed. Confirmation of the extent of existing over run area is required.</p> <p>Vegetation should be trimmed back from the southern verge and proximity to wall to be confirmed through topographical survey or test-run. Land search required and potential third-party land required.</p> <p>Swept path drawing SPA005 is included in Appendix B.</p>






POI	Constraint	Details
6	A714 / Barnkirk Road Junction 	<p>Loads will turn left onto the A714. The existing junction widening works will be reused.</p> <p>Loads will over-sail both sides of the carriageway. Inside the bend one road sign, trees, vegetation and section of fence should be removed.</p> <p>Loads will over-sail and overrun the eastern vergewhere one tree is to be removed. Blade tip will oversail the fence and a load bearing surface should be laid in the overrun area.</p> <p>Third party land required. SPR are noted to already have secured ownership of the required extents.</p> <p>Swept path drawing SPA006 is included in Appendix B.</p>
7	A714 / Left bend 	<p>Loads will continue ahead on the A714.</p> <p>No mitigation works are required at this location.</p> <p>Swept path drawing SPA007 is included in Appendix B.</p>
8	A714 left bend 	<p>Loads will continue ahead on the A714.</p> <p>No mitigation works are required at this location.</p> <p>Low utilities were observed at this location. It is recommended a utility search is undertaken to ensure suitable clearances.</p> <p>Swept path drawing SPA008 is included in Appendix B.</p>




POI	Constraint	Details
9	A714 right bend 	<p>Loads will continue ahead on the A714.</p> <p>No mitigation works are required at this location.</p> <p>Low utilities were observed at this location.</p> <p>It is recommended a utility search is undertaken to ensure suitable clearances.</p> <p>Swept path drawing SPA009 is included in Appendix B.</p>
10	A714 / Left bend 	<p>Loads will continue ahead on the A714 through the left bend.</p> <p>Low utilities were observed at this location.</p> <p>It is recommended a utility search is undertaken to ensure suitable clearances.</p>
11	A714 alongside River Cree 	<p>Loads will continue ahead on the A714.</p> <p>No mitigation works are required at this location.</p> <p>Swept path drawing SPA010 is included in Appendix B.</p>






POI	Constraint	Details
12	A714 Double Bend River Cree 	<p>Loads will proceed ahead on the A714 though this location.</p> <p>Tree canopies should be trimmed within the over-sail area.</p> <p>The embankment height should be confirmed in the western verge of the second bend to ensure loads can over-sail safely. Minor re-profiling works may be required.</p> <p>Swept path drawing SPA011 is included in Appendix B.</p>
13	A714 Series of Bends River Cree 	<p>Loads will proceed ahead on the A714 though this location.</p> <p>Trees to be removed from within the over-sail area.</p> <p>Swept path drawing SPA012 is included in Appendix B.</p>
14	A714 / Clachaneasy 	<p>Loads will continue ahead on the A714.</p> <p>No mitigation works are expected at this location.</p> <p>Tree canopy to be trimmed back to provide a minimum 5m clearance.</p>




POI	Constraint	Details
15	A714 Bargrennan Bridge 	<p>Loads will proceed ahead through the right turn bend at Bargrennan.</p> <p>Confirmation is required that the existing mitigation measures are available for use.</p> <p>Loads will over-sail the sides of the carriageway into third party land and require an over-run area to the west of the carriageway.</p> <p>Section of fence, road signs and one telegraph pole to be removed from the western side of the carriageway. The blade tip will over-sail the section of barrier.</p> <p>In the eastern verge two road signs to be removed, section of fence and associated gate to be set-back and stone wall to be over-sailed. Loads will over-sail the bridge parapet and confirmation of height clearances should be confirmed. Parapet reductions may be required for tower loads.</p> <p>Third party land is required at multiple locations. SPR are noted to already have secured land rights at this location to allow for any modifications.</p> <p>Swept path drawing SPA013 is included in Appendix B.</p>



POI	Constraint	Details
16	A714 Bargrennan Series of Bends 	<p>Loads will proceed ahead through the series of bends on the A714 at this location.</p> <p>Loads will over-run and over-sail the eastern verge upon exiting the bridge. A load bearing surface is to be laid, the land re-profiled to carriageway level and the ditch culverted. Utilities to be protected, section of crash barrier to be set-back and trees and vegetation to be cleared.</p> <p>Loads will over-sail both verges of the carriageway where one road sign, one telegraph pole and vegetation to be removed.</p> <p>Swept path drawing SPA014 is included in Appendix B.</p>
17	A714 	<p>Loads will continue ahead on the A714.</p> <p>Loads will straddle the full carriageway through this section.</p> <p>No mitigation works are expected at this location.</p>
18	A714 	<p>Loads will continue ahead on the A714.</p> <p>No mitigation works are required at this location.</p> <p>Swept path drawing SPA015 is included in Appendix B.</p>



POI	Constraint	Details
19	Site Access	<div></div> <p>Loads will turn left into the site access track.</p> <p>Loads will over-sail the northern verge when entering the junction. One road sign and a section of fence should be removed. Blade tip will over-sail the stone wall. Third party land required. SPR are noted to already have secured land rights at this location to allow for any modifications.</p> <p>Loads will over-sail the inside of the junction. All temporary signs should be removed from the over-sail area.</p> <p>Swept path drawing SPA016 is included in Appendix B.</p>

Swept Path Assessment Results

- 3.9

The drawings in Appendix B illustrate tracking undertaken at each location. The colours provided on the swept paths are:
 - Green – vehicle/trailer outline (body swept path);
 - Red – wheel tracked pathway (wheel swept path); and
 - Purple – load over-sail tracked path (load swept path).
- 3.10

Where mitigation works are required, the locations are illustrated on the swept path drawings. Please note that any alterations to the specified load or vehicle details will invalidate the assessment results.
- 3.11

It is important to note that a number of the swept path assessments undertaken have been based on OS data. There can be measurement errors associated with the use of this data.
- 3.12

The drawings illustrate the street furniture modifications required to enable transit. The exact individual location of all street furniture in the vicinity of the



POIs is not shown as these cannot be accurately plotted on the OS data without recourse to the various road authorities. Please note that WYG cannot accept any liability for errors on the data source.

Route Summary

- 3.13

Where required SPR have secured the necessary land to accommodate the proposed route. Assuming that the outlined mitigation is performed, the route from Cairnryan Port to the site access is considered feasible for the delivery of proposed components.

Land Ownership and Utilities

- 3.14

The limits of road adoption can vary depending upon the location of the site and the history of the adopting agency. In general, the adopted area is that contained within a defined boundary where the affected Council areas or Transport Scotland holds the maintenance rights for the land from the original land owner. In urban areas, this usually defined as the area from the edge of the footway across the road to the opposing footway back edge.
- 3.15

In rural areas the area of adoption can be open to greater interpretation as defined boundaries may not be readily visible. In these locations, the general rule is that the area of adoption is between established fence / hedges lines or a maximum 2m from the road edge. This can vary between areas and every location can be different.

General Comments

- 3.16

WYG has undertaken a review of the potential access routes from Cairnryan Port through to the proposed site access. WYG would strongly suggest that a review of the following is undertaken prior to the delivery of the abnormal loads, to ensure load and road user safety:
 - A review of maximum axle loading on structures along the entire access route with the various road agencies is undertaken immediately prior to the loads being transported in case of last minute changes to structures;
 - A review of clear heights with utility providers and the transport agencies along the route.



- The chosen haulier is recommended to ensure with utility providers that there is sufficient clearance with an appropriate safety factor (especially with respect to power lines);
- That any vegetation which may foul the loads is trimmed back to allow passage (this is of concern once the load is on the local road network and should be assessed for summer conditions);
- That there are no roadwork's or closures that could affect the passage of the loads. A check with the affected Council areas and Transport Scotland should be made before the transit of the first abnormal load;
- That a test run is completed to further assess the route for all components and confirm findings of the swept path assessments;
- That there are no new or diverted underground services on the access route that are at risk from the abnormal loads.



4 SUMMARY AND FURTHER WORKS

Summary

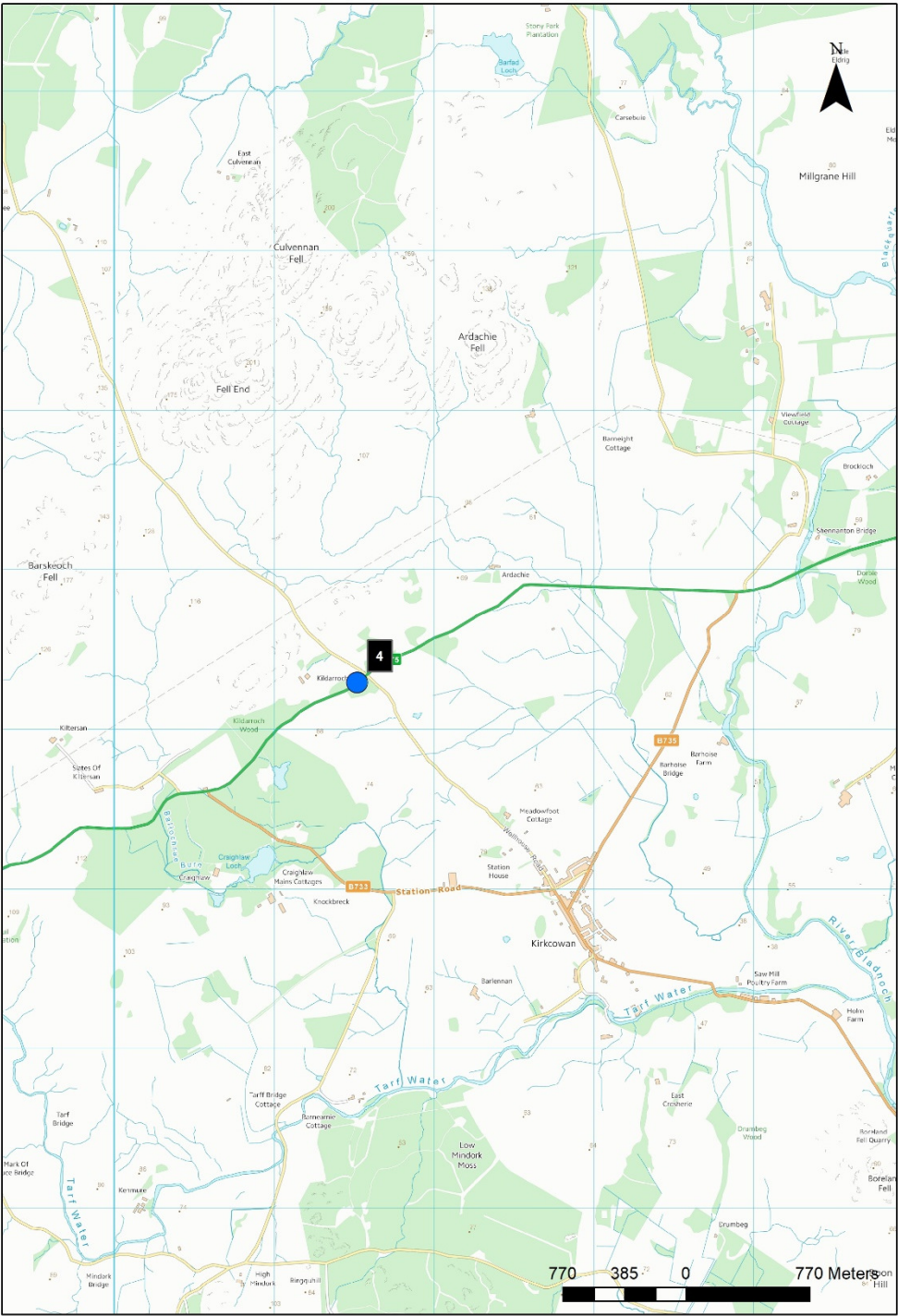
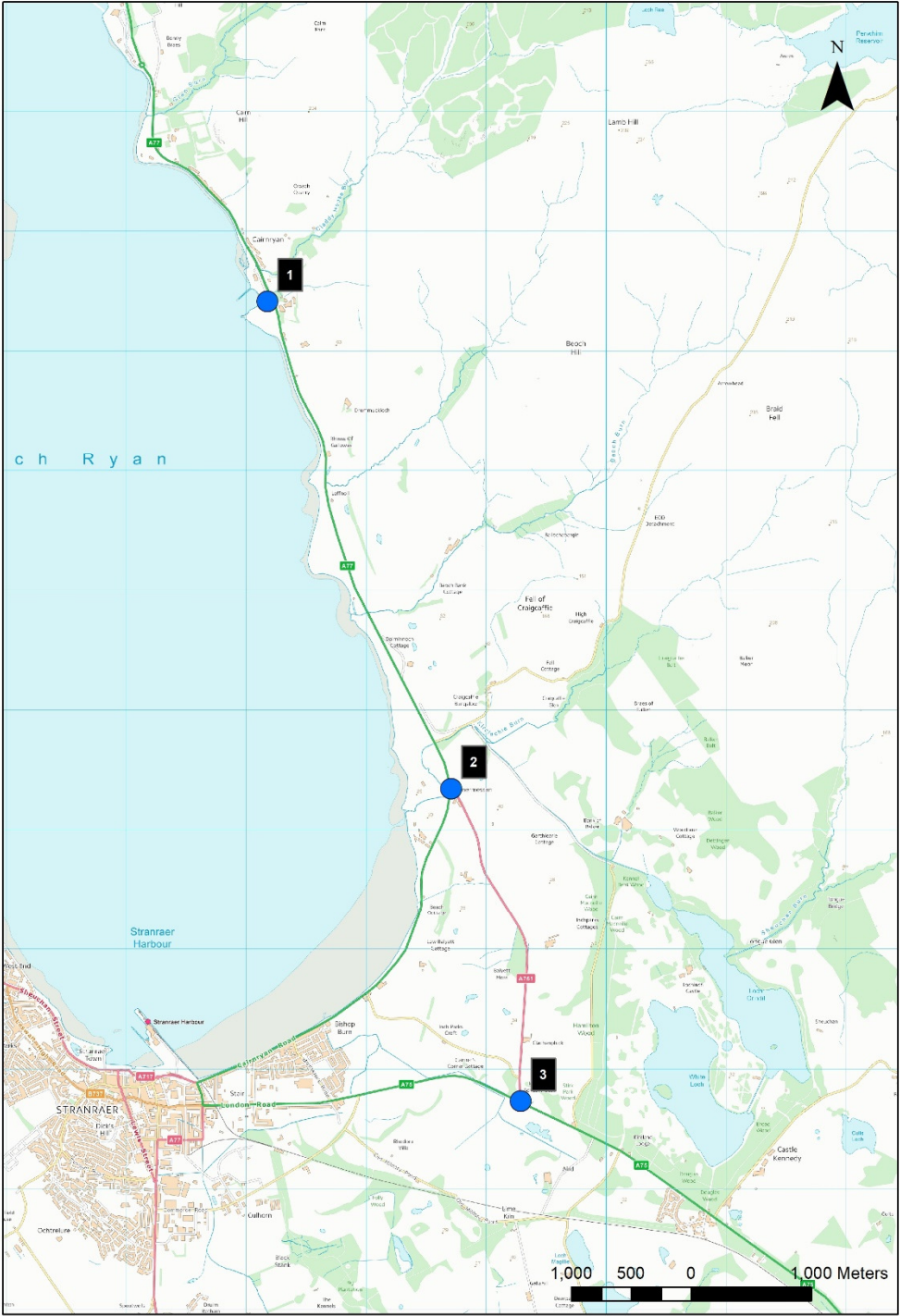
- 4.1.1 This report identifies the key points and issues associated with the proposed routes from Cairnryan Port through to the site access.
- 4.1.2 The route to site is presented for consideration by ScottishPower Renewables. The route is considered feasible subject to the implementation of the proposed mitigation measures however these will need to be agreed with Transport Scotland and affected Council areas.

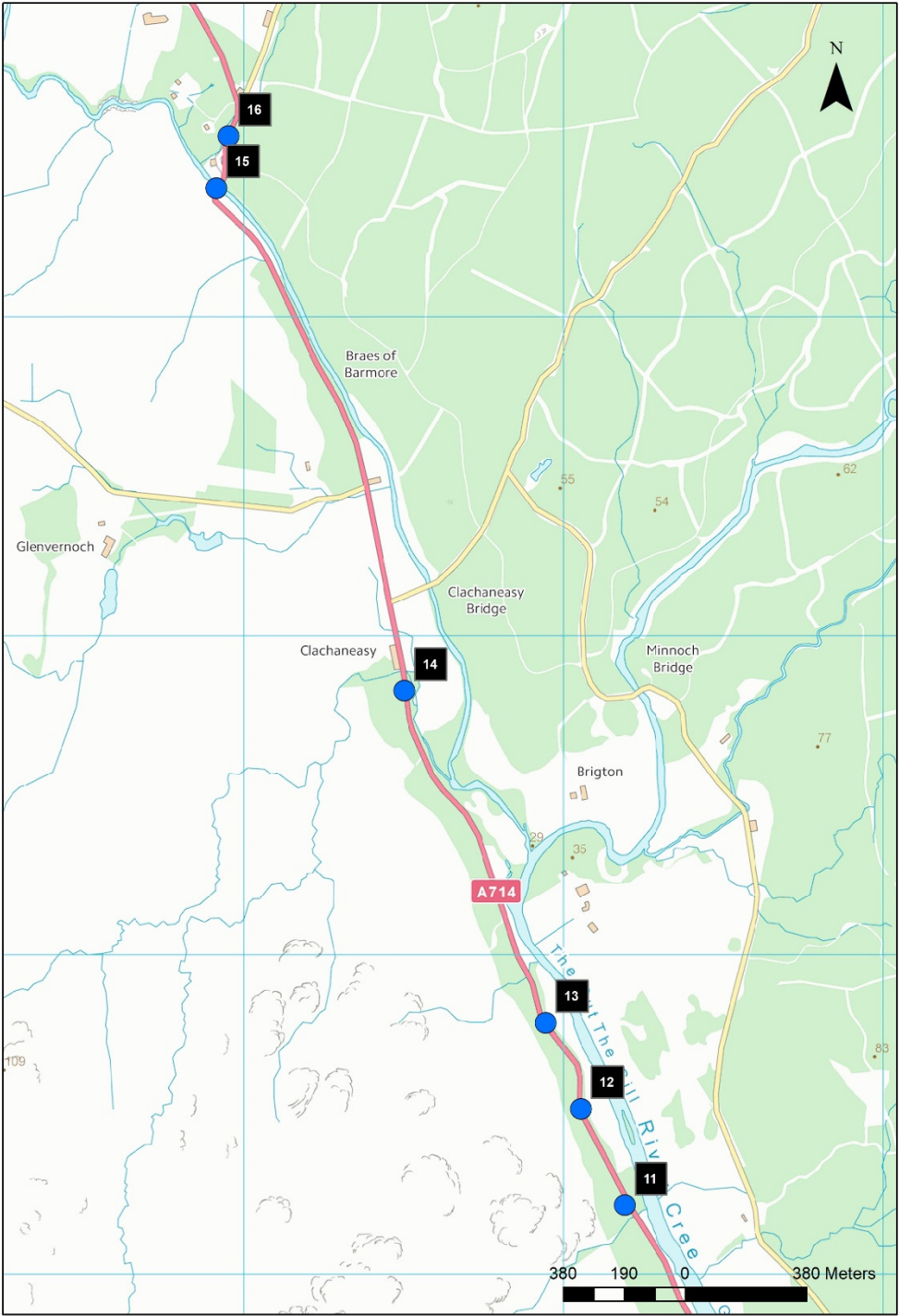
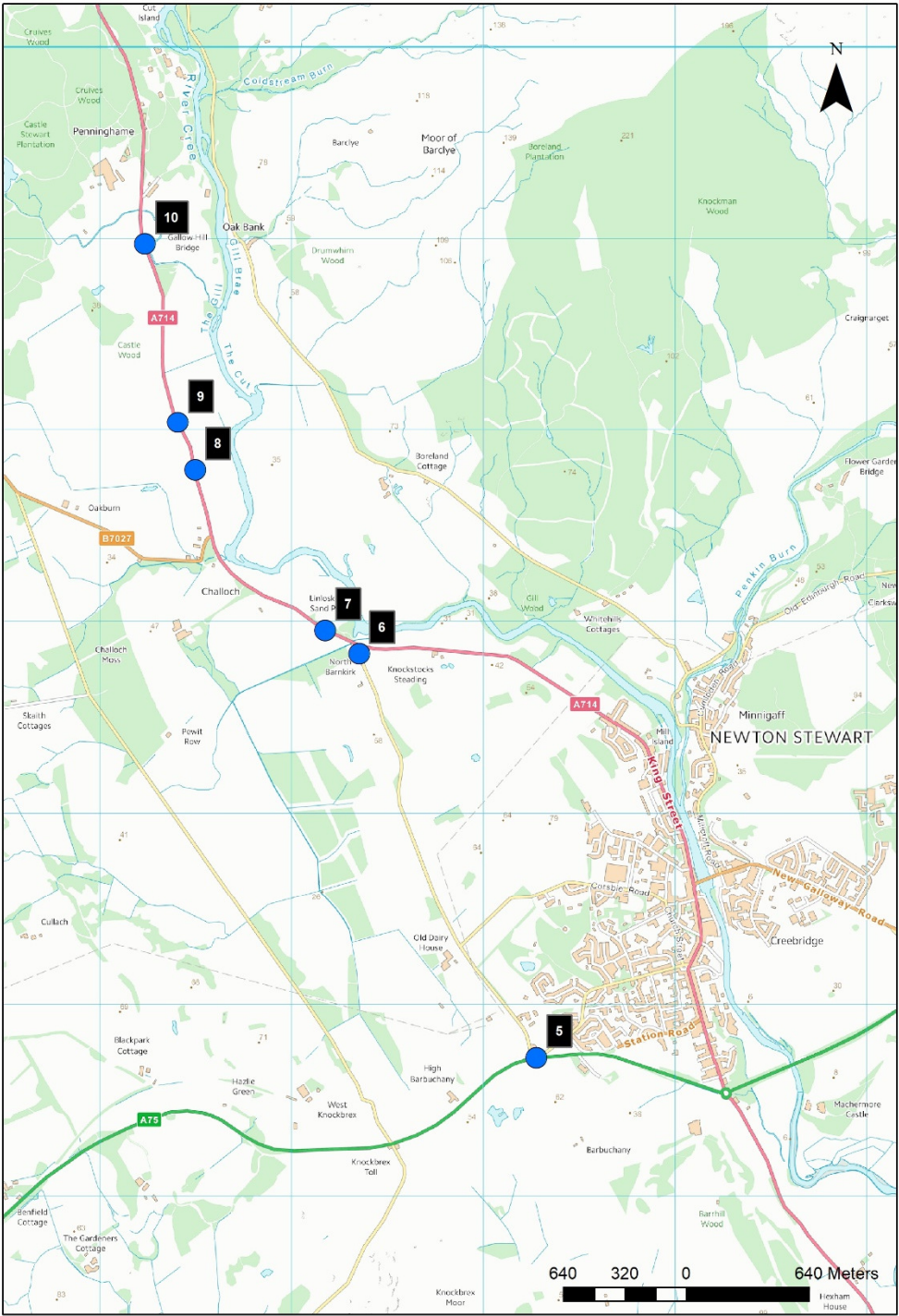
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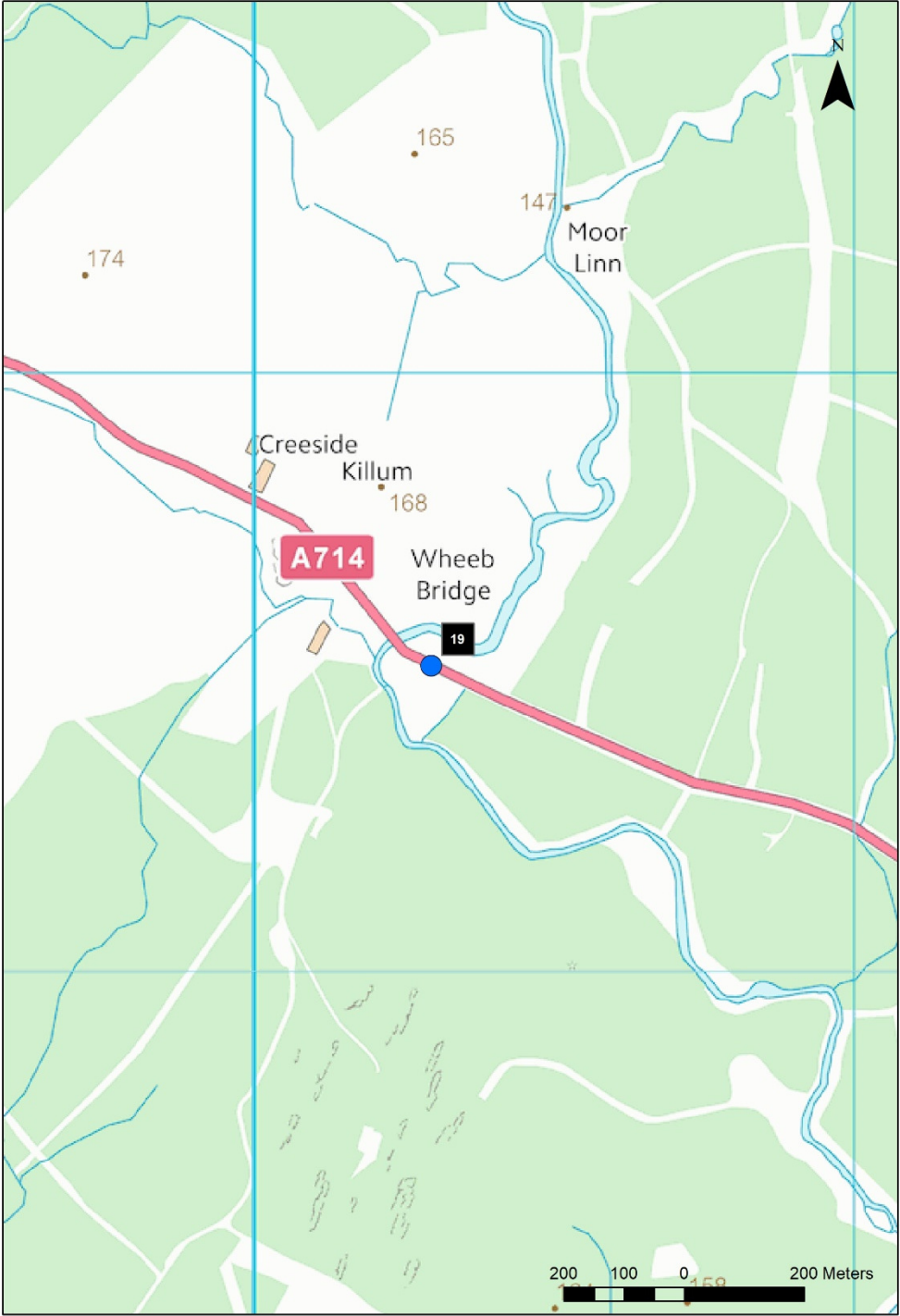
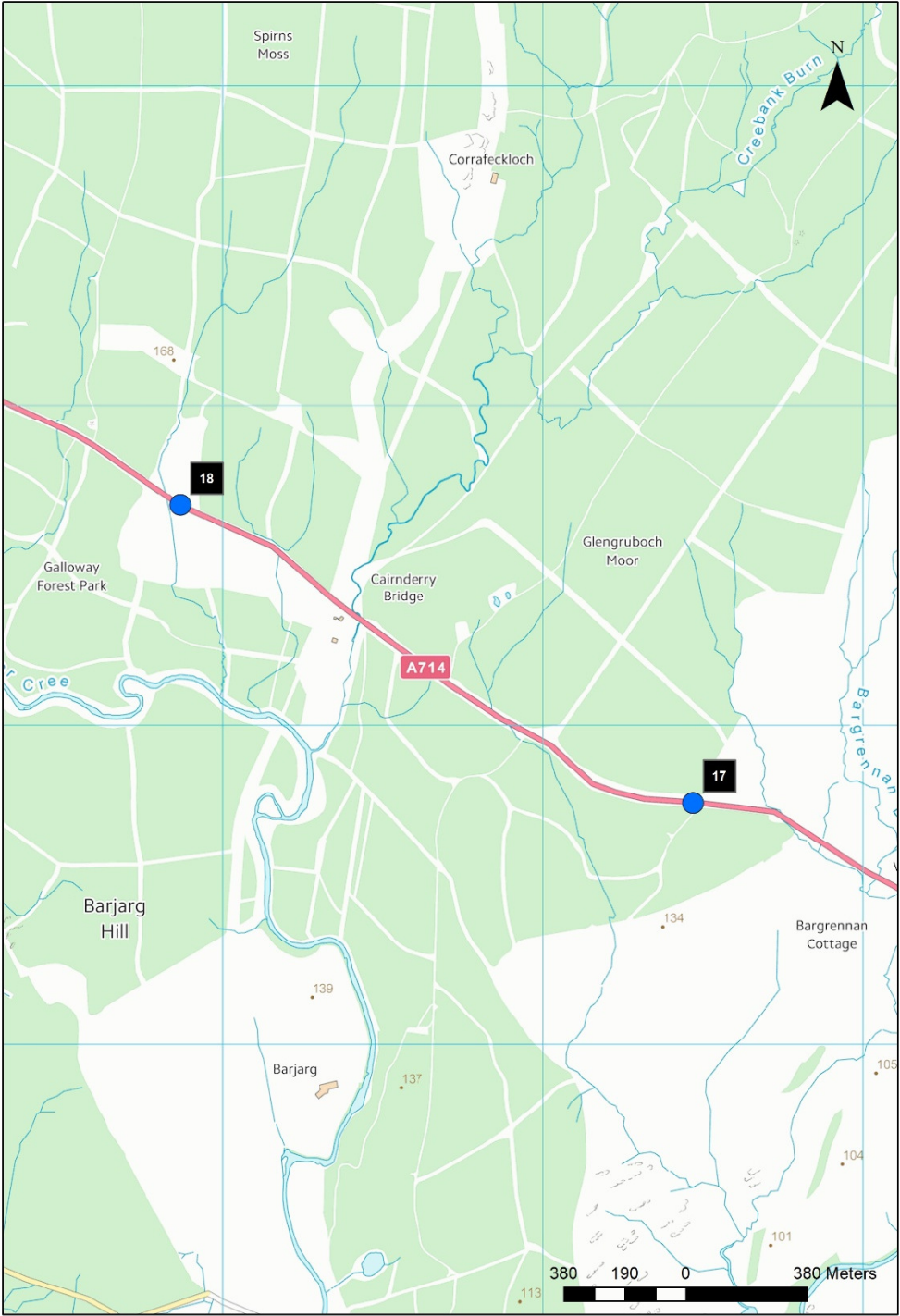
- 4.1.3 From this review, WYG would suggest any mitigation works are designed to be permanent to ensure that future wind farm maintenance can be undertaken without the need to re-open land and access rights on site.
- 4.1.4 The following work is recommended to ScottishPower Renewables for consideration in relation to the proposed access routes:
 - Detailed design review of the proposed mitigation works;
 - A test run is recommended in order to confirm the required mitigation due to the limited clearances in a number of locations;
 - Topographical surveys are undertaken at the identified locations; and
 - Traffic Management Plan - a detailed Traffic Management Plan (TMP) will be essential for this project given the level of constraint in a number of areas – this is provided within **Technical Annex 12.5 'Outline Construction Traffic Management Plan (CTMP)'**.



APPENDIX A
POI PLANS



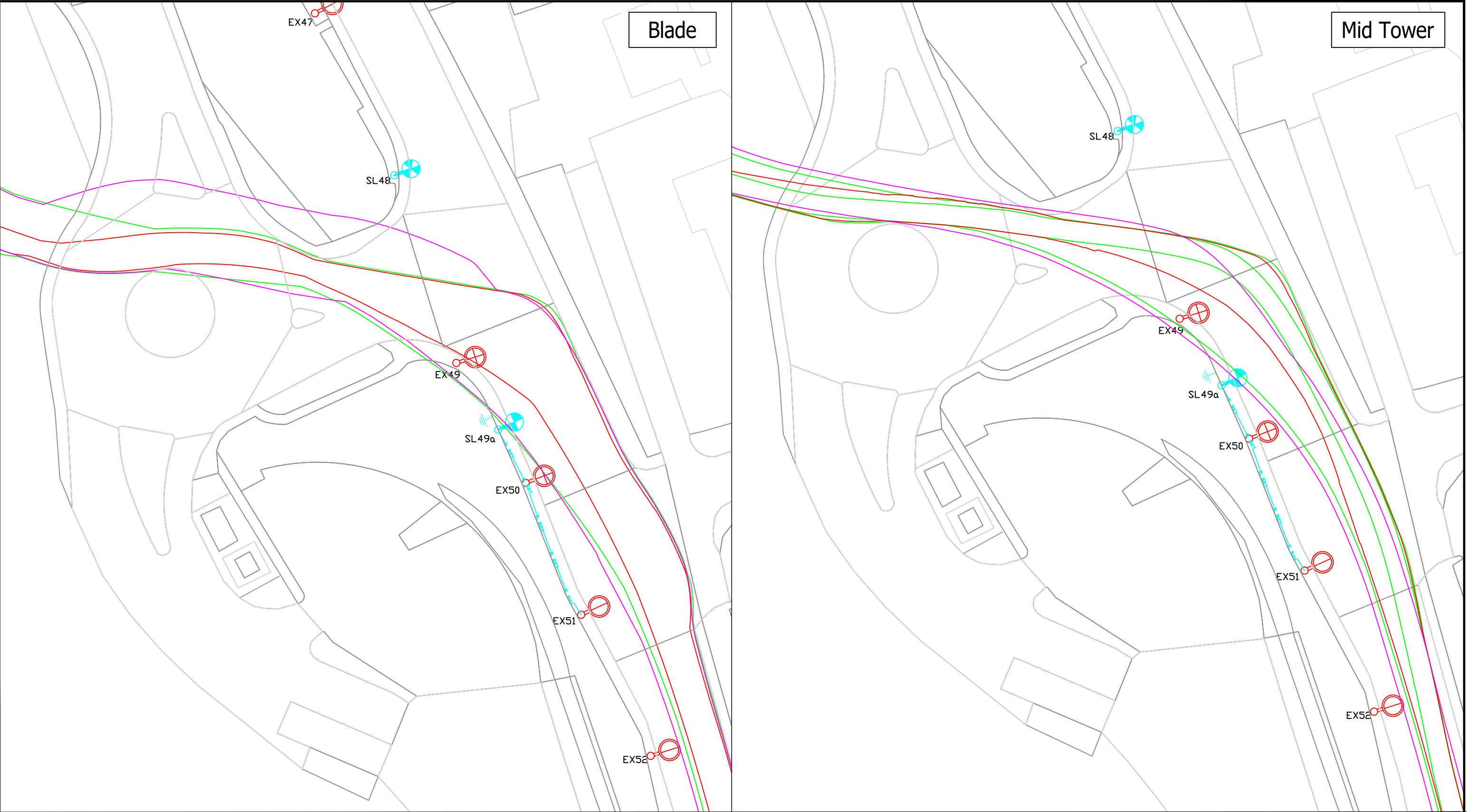






APPENDIX B

Swept Path Assessment



Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.

Key:

Load Swept Path

Vehicle Swept Path

Wheel Swept Path

Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION: Cairnryan Port Exit

POI: 1

COMPONENTS: Vestas V150 Blade and Mid Tower

Swept Path Assessment

DRAWN: JS

CHECKED: JD

DATE: April 2019

SCALES: 1:500 @ A3

ScottishPower Renewables

WYG Transport Planning

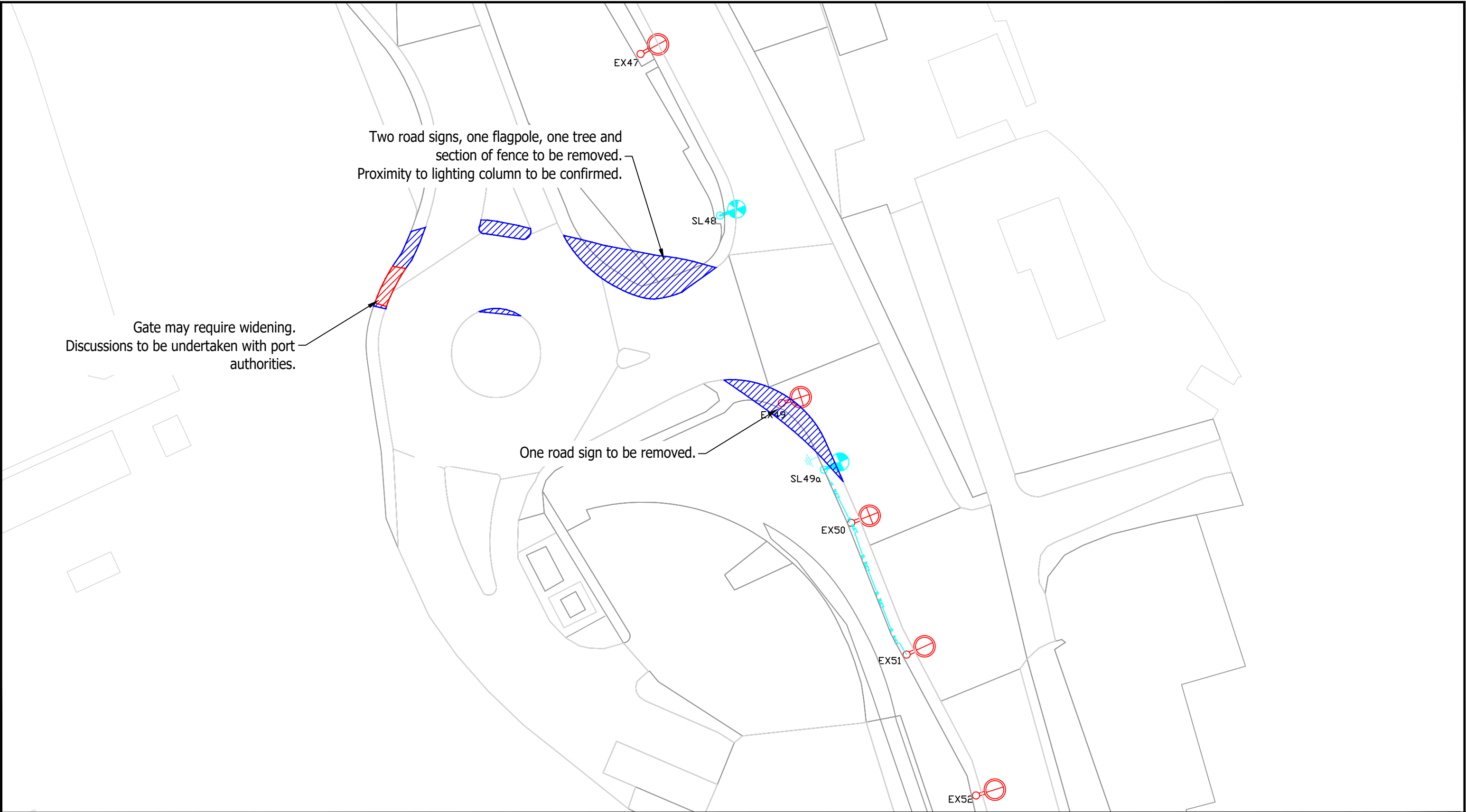
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PROJECT NUMBER: A112434

DRAWING NUMBER: SPA001

REVISION: .



Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.

Key:

Over-run Required

Over-sail Required

Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:
Cairnryan Port Exit

POI:
1

COMPONENTS:
Vestas V150 Blade and Mid Tower

Required Remedial Works

DRAWN: JS	CHECKED: JD	DATE: April 2019	SCALES: 1:500 @ A3
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ScottishPower Renewables

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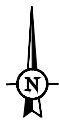
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Notes:
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- Key:
- Load Swept Path
 - Vehicle Swept Path
 - Wheel Swept Path
 - Ordnance Survey Mapping



Arecleoch Wind Farm Extension

LOCATION:

A77 / A751 Junction

POI:

2

COMPONENTS:

Vestas V150 Blade and Mid Tower

Swept Path Assessment

DRAWN:

JS

CHECKED:

JD

DATE:

April 2019

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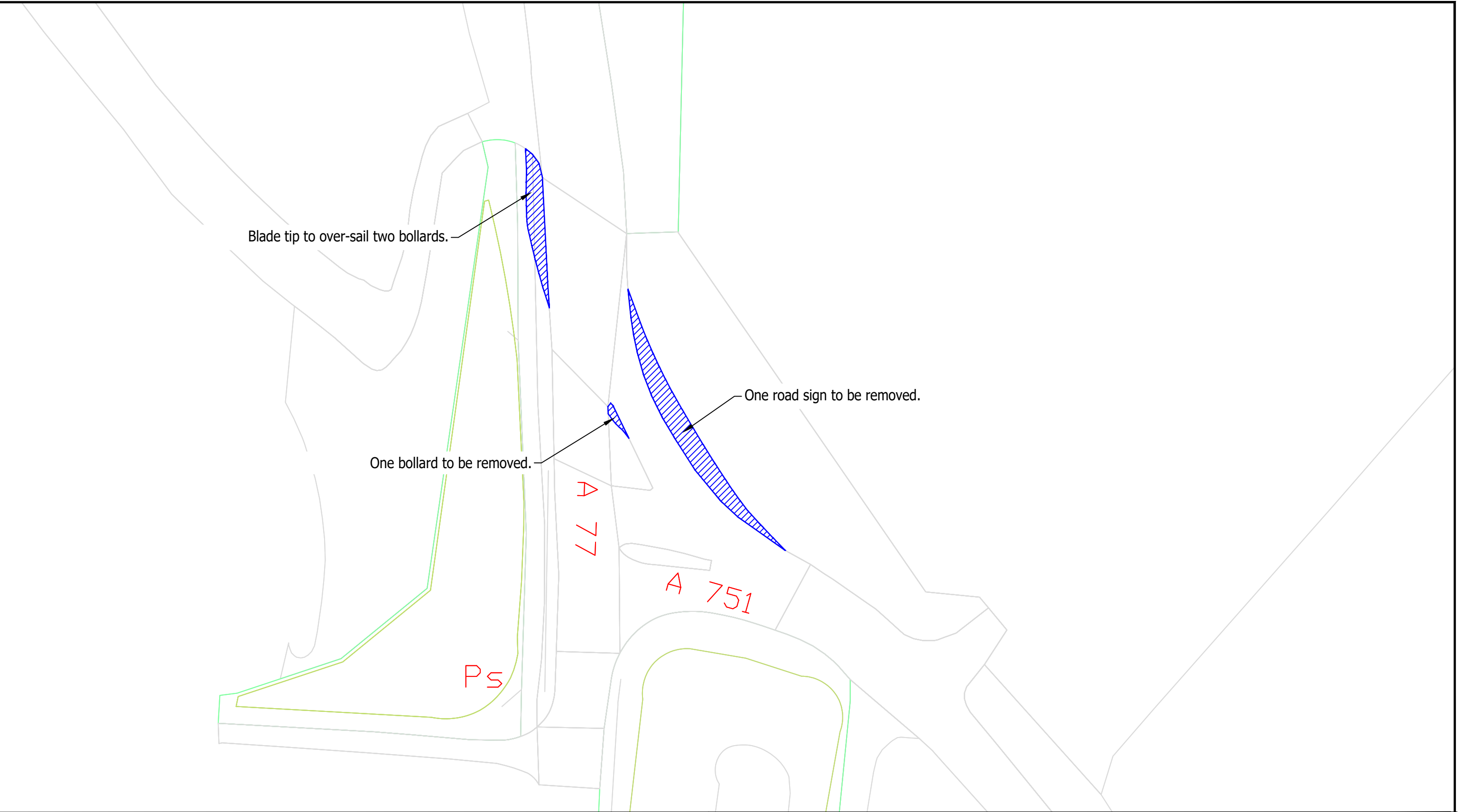
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SPA002

REVISION:




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Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.

Key:

-  Over-run Required
-  Over-sail Required
-  Ordnance Survey Mapping



Arecleoch Wind Farm Extension				ScottishPower Renewables	
LOCATION: A77 / A751 Junction			POI: 2	<div>WYG Transport Planning part of the WYG group</div> <div></div> <div>The Cube 45 Leith Street Edinburgh EH1 3AT t: +44 (0)131 247 5700 e: edinburgh@wyg.com</div>	
COMPONENTS: Vestas V150 Blade and Mid Tower					
Required Remedial Works					
DRAWN: JS	CHECKED: JD	DATE: April 2019	SCALES: 1:500 @ A3	PROJECT NUMBER: A112434	DRAWING NUMBER: SPA002-2
				REVISION: .	



Notes:

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Key:

- Load Swept Path
- Vehicle Swept Path
- Wheel Swept Path
- Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:

A751 / A75 Junction

POI:

3

COMPONENTS:

Vestas V150 Blade and Mid Tower

Swept Path Assessment

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JS

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JD

DATE:

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Notes:

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Key:

Over-run Required

Over-sail Required

Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:
A751 / A75 Junction

COMPONENTS:
Vestas V150 Blade and Mid Tower

Required Remedial Works

DRAWN: JS

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POI: 3

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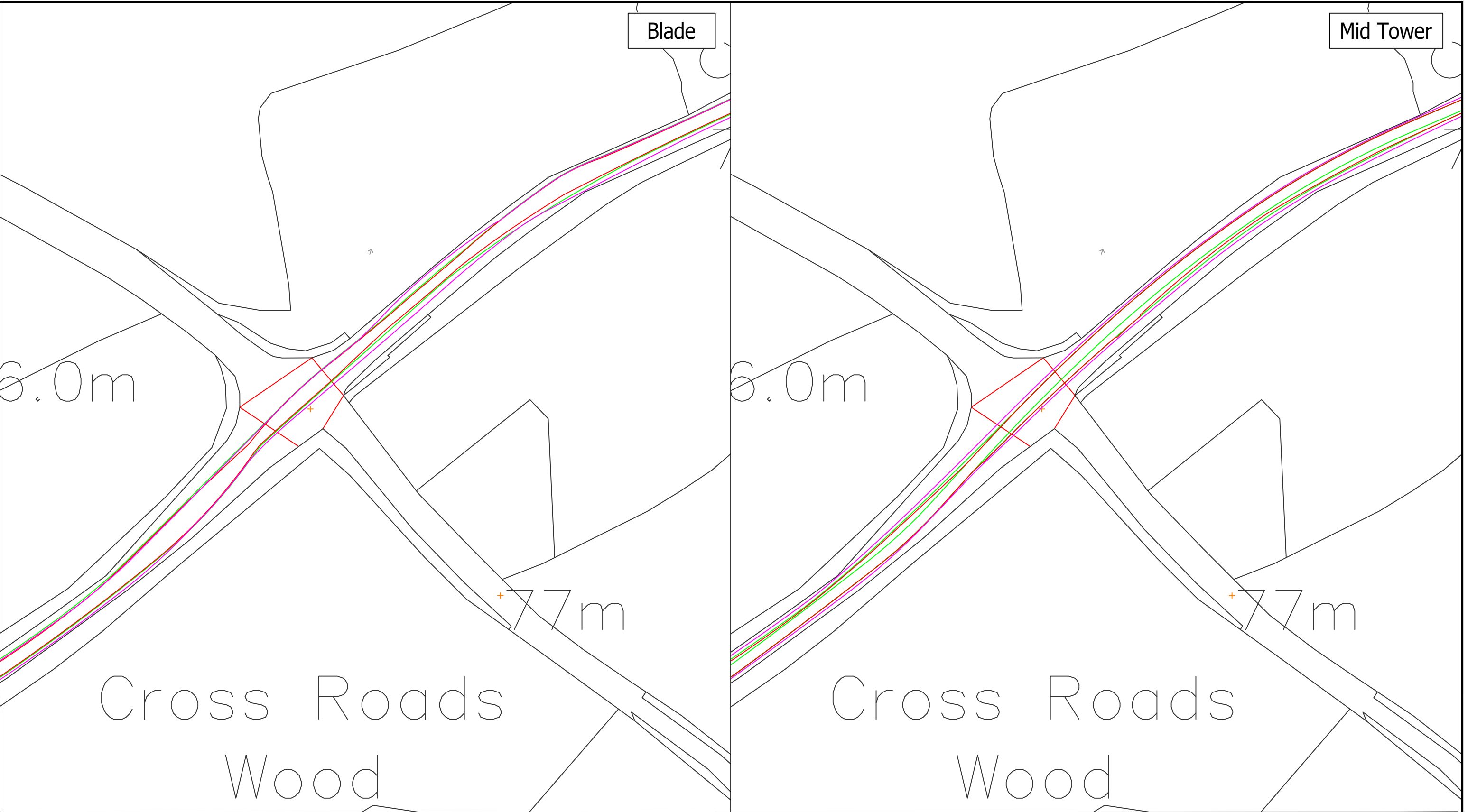
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REVISION: .




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Key:

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- Vehicle Swept Path
- Wheel Swept Path
- Ordnance Survey Mapping

NO MITIGATION REQUIRED

Arecleoch Wind Farm Extension				ScottishPower Renewables		
LOCATION:			POI:			
Cross Roads Wood			4			
COMPONENTS:				<div><div>WYG Transport Planning</div><div>part of the WYG group</div><div></div><div><div>The Cube45 Leith StreetEdinburghEH1 3AT</div><div>t: +44 (0)131 247 5700e: edinburgh@wyg.com</div></div></div>		
Vestas V150 Blade and Mid Tower						
Swept Path Assessment						
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JS	JD	April 2019	1:1000 @ A3	A112434	SPA004	.



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Key:

Load Swept Path

Vehicle Swept Path

Wheel Swept Path

Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:

A75 / Newton Stewart Bypass

POI:

5

COMPONENTS:

Vestas V150 Blade and Mid Tower

Swept Path Assessment

DRAWN:

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CHECKED:

JD

DATE:

April 2019

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A112434

DRAWING NUMBER:

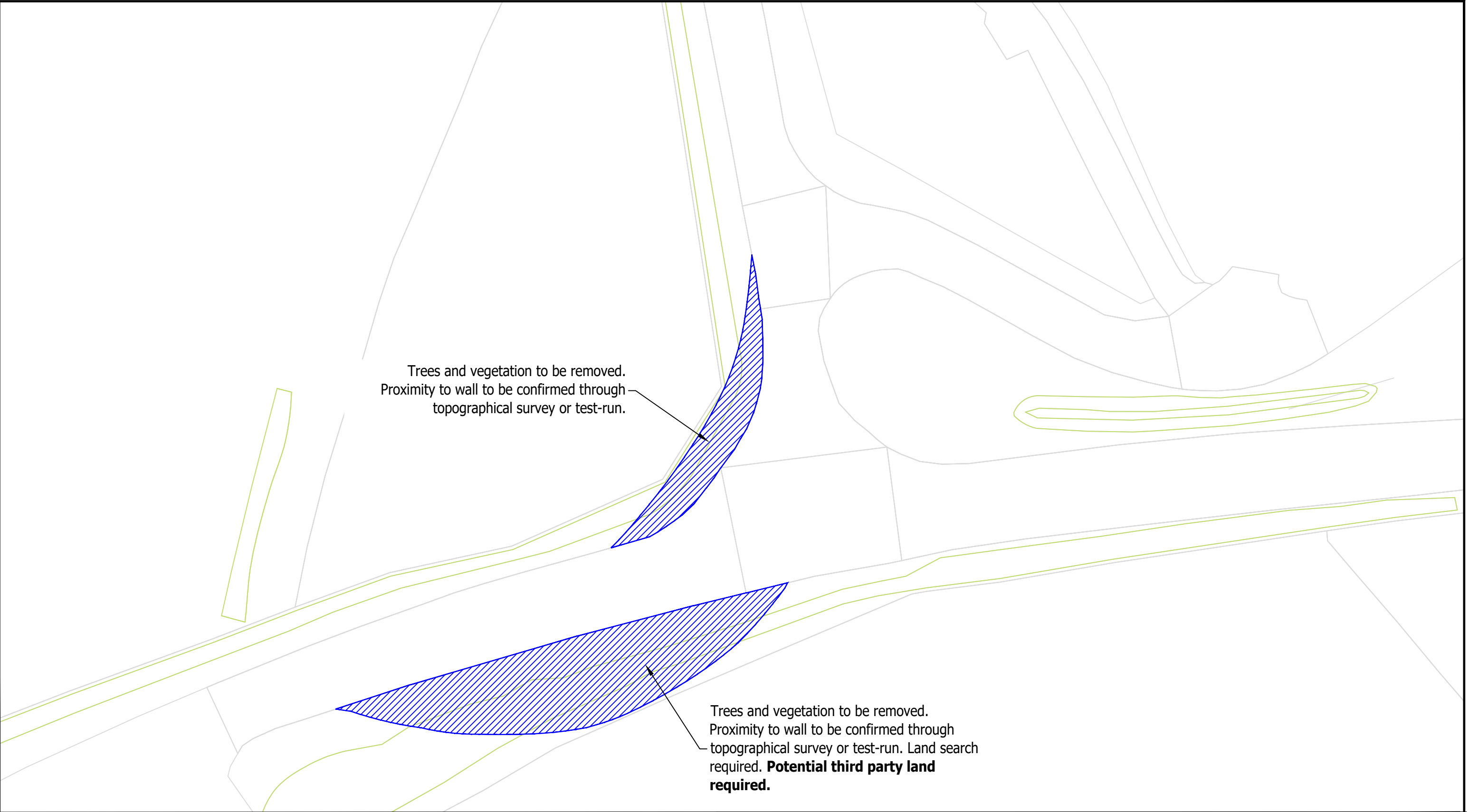
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Key:

Over-run Required

Over-sail Required

Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:

A75 / Newton Stewart Bypass

POI:

5

COMPONENTS:

Vestas V150 Blade and Mid Tower

Required Remedial Works

DRAWN:

JS

CHECKED:

JD

DATE:

April 2019

SCALES:

1:500 @ A3

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PROJECT NUMBER:

A112434

DRAWING NUMBER:

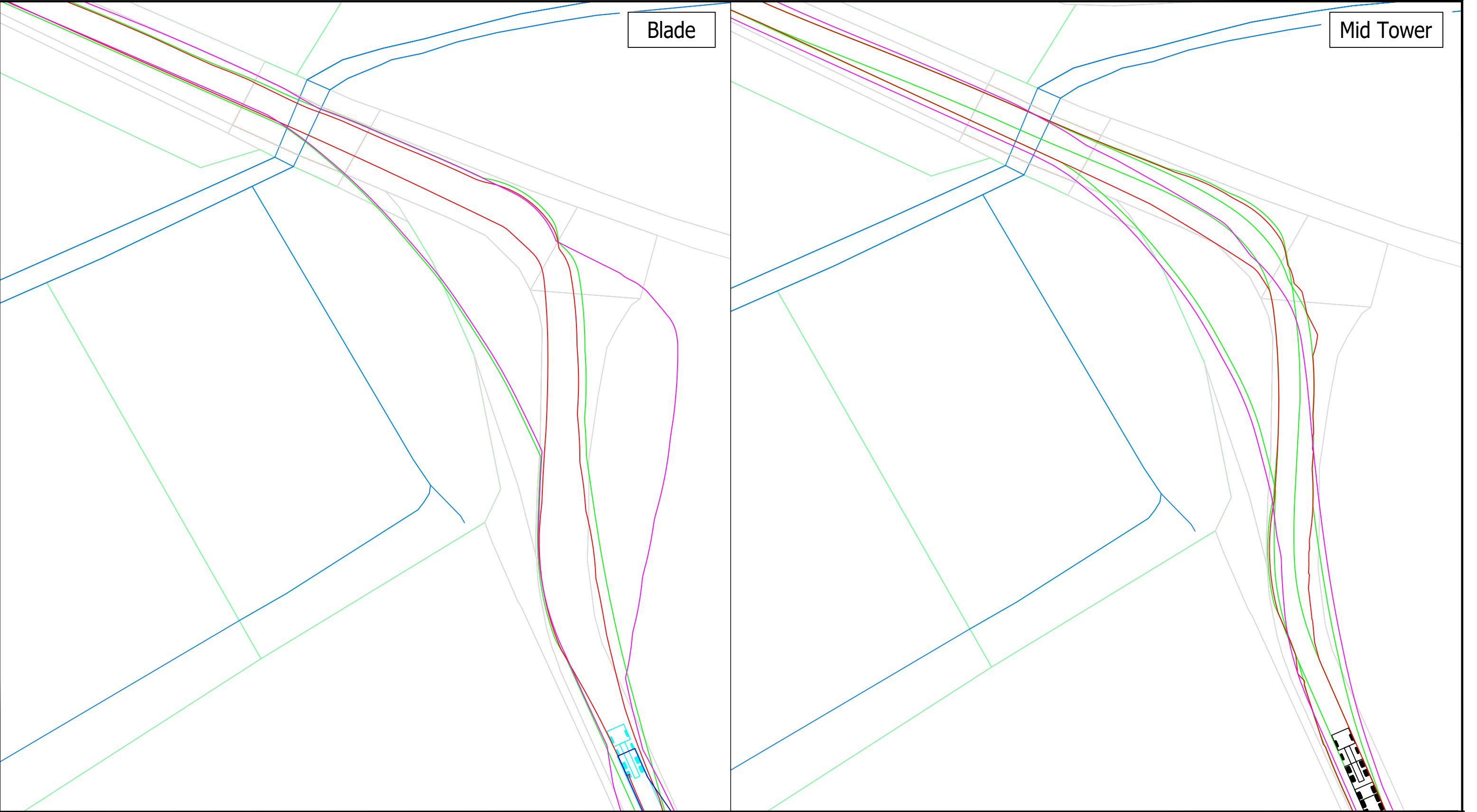
SPA005-2

REVISION:

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Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.

Key:

- Load Swept Path
- Vehicle Swept Path
- Wheel Swept Path
- Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:
A714 / Barnkirk Road Junction

COMONENTS:
Vestas V150 Blade and Mid Tower

Swept Path Assessment

POI:
6

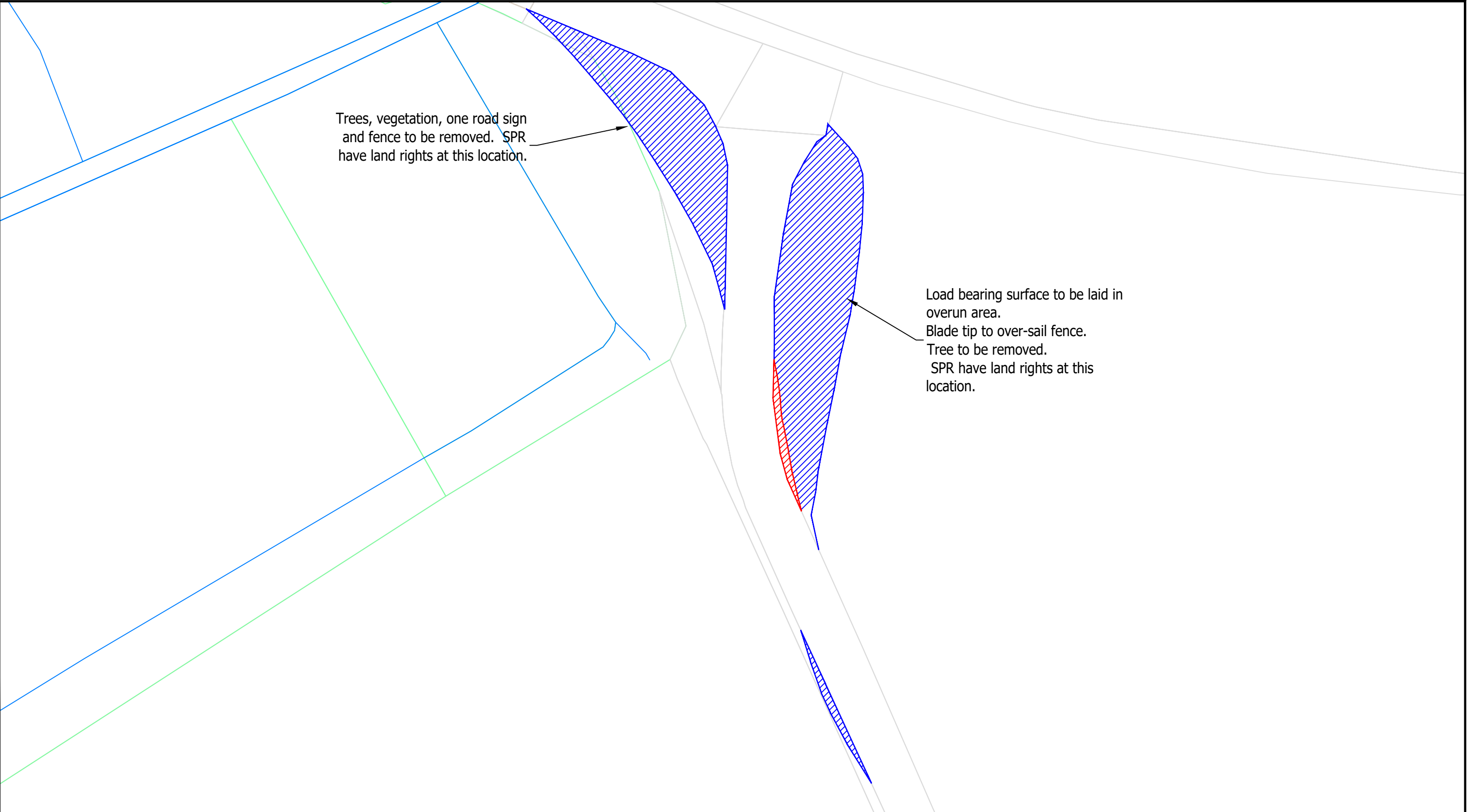
DRAWN: JS	CHECKED: JD	DATE: April 2019	SCALES: 1:500 @ A3
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PROJECT NUMBER: A112434	DRAWING NUMBER: SPA006	REVISION: .
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Notes:

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Key:

Over-run Required

Over-sail Required

Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:

A714 / Barnkirk Road Junction

POI:

6

COMPONENTS:

Vestas V150 Blade and Mid Tower

Required Remedial Works

DRAWN:

JS

CHECKED:

JD

DATE:

April 2019

SCALES:

1:500 @ A3

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PROJECT NUMBER:

A112434

DRAWING NUMBER:

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Key:

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- Vehicle Swept Path
- Wheel Swept Path
- Ordnance Survey Mapping



NO MITIGATION REQUIRED

Arecleoch Wind Farm Extension

LOCATION:

A714 Bend

POI:

7

COMPONENTS:

Vestas V150 Blade and Mid Tower

Swept Path Assessment

DRAWN:

JS

CHECKED:

JD

DATE:

April 2019

SCALES:

1:1000 @ A3

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PROJECT NUMBER:

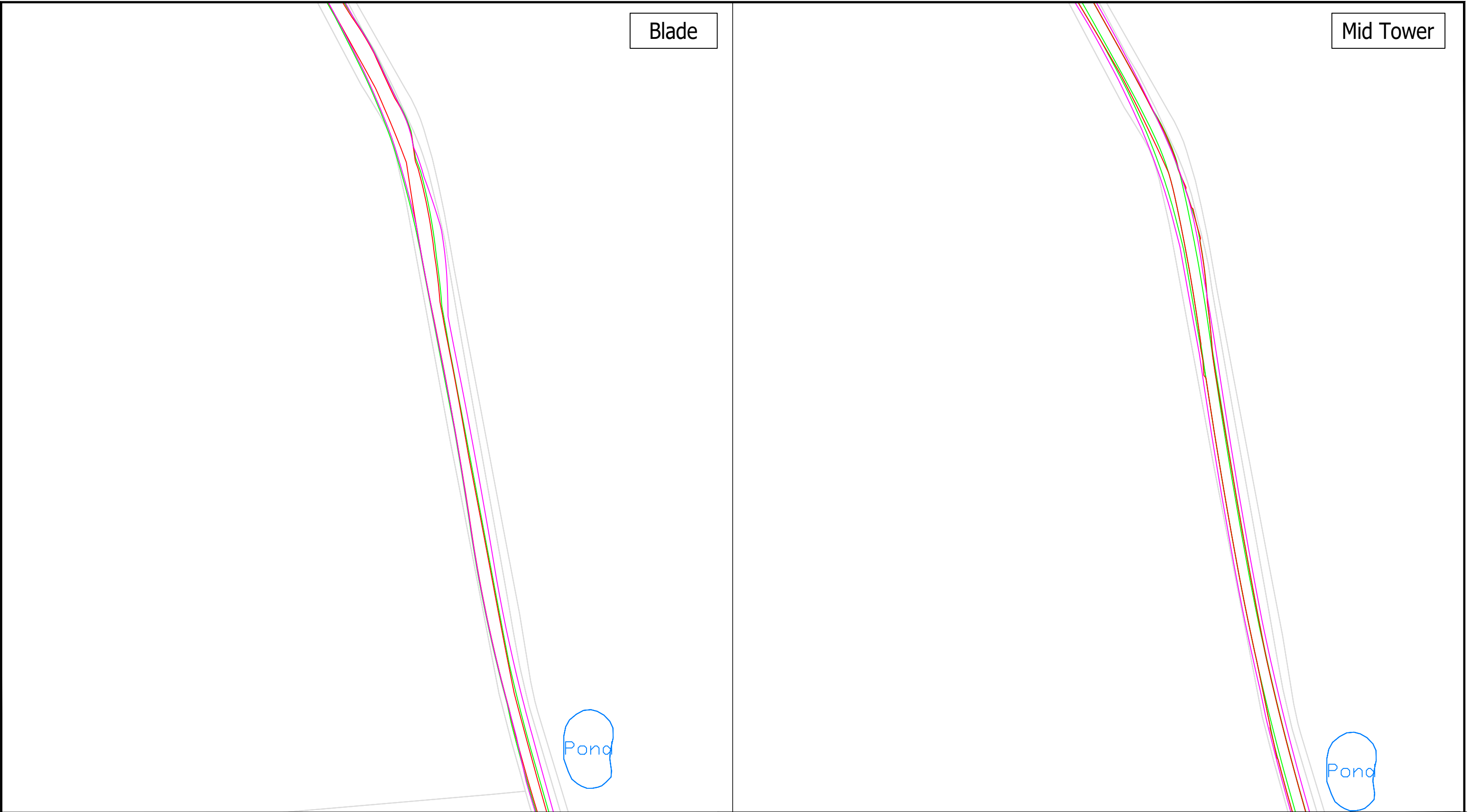
A112434

DRAWING NUMBER:

SPA007

REVISION:

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Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.

Key:

Load Swept Path

Vehicle Swept Path

Wheel Swept Path

Ordnance Survey Mapping

NO MITIGATION REQUIRED

Arecleoch Wind Farm Extension

LOCATION:	POI:
A714 Left Bend	8
COMPONENTS:	
Vestas V150 Blade and Mid Tower	

Swept Path Assessment

DRAWN:	CHECKED:	DATE:	SCALES:
JS	JD	April 2019	1:1000 @ A3

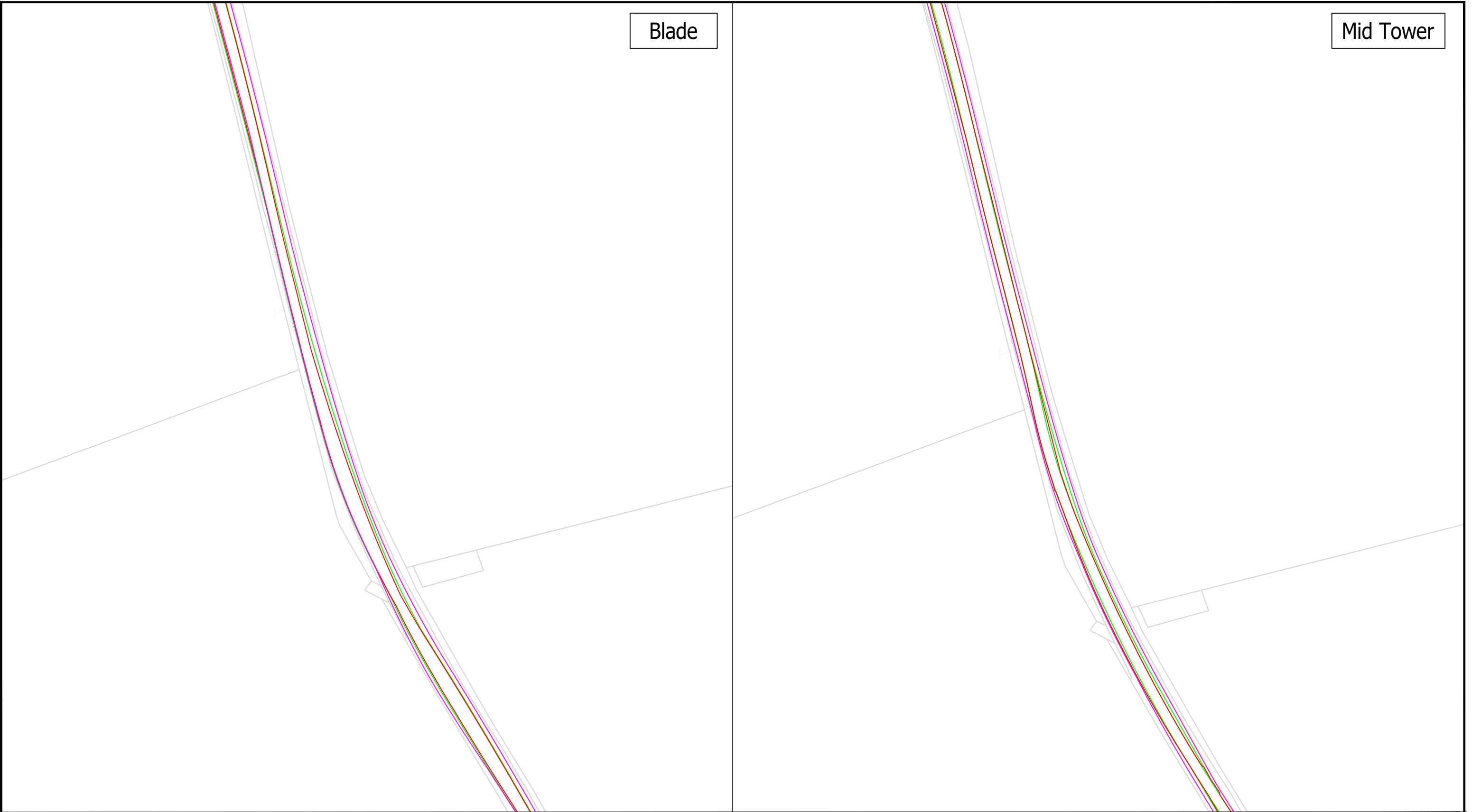
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PROJECT NUMBER:	DRAWING NUMBER:	REVISION:
A112434	SPA008	.



Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.

Key:

Load Swept Path

Vehicle Swept Path

Wheel Swept Path

Ordnance Survey Mapping

NO MITIGATION REQUIRED

Arecleoch Wind Farm Extension

LOCATION:		POI:
A714 Right Bend		9
COMPONENTS:		
Vestas V150 Blade and Mid Tower		

Swept Path Assessment

DRAWN:	CHECKED:	DATE:	SCALES:
JS	JD	April 2019	1:1000 @ A3

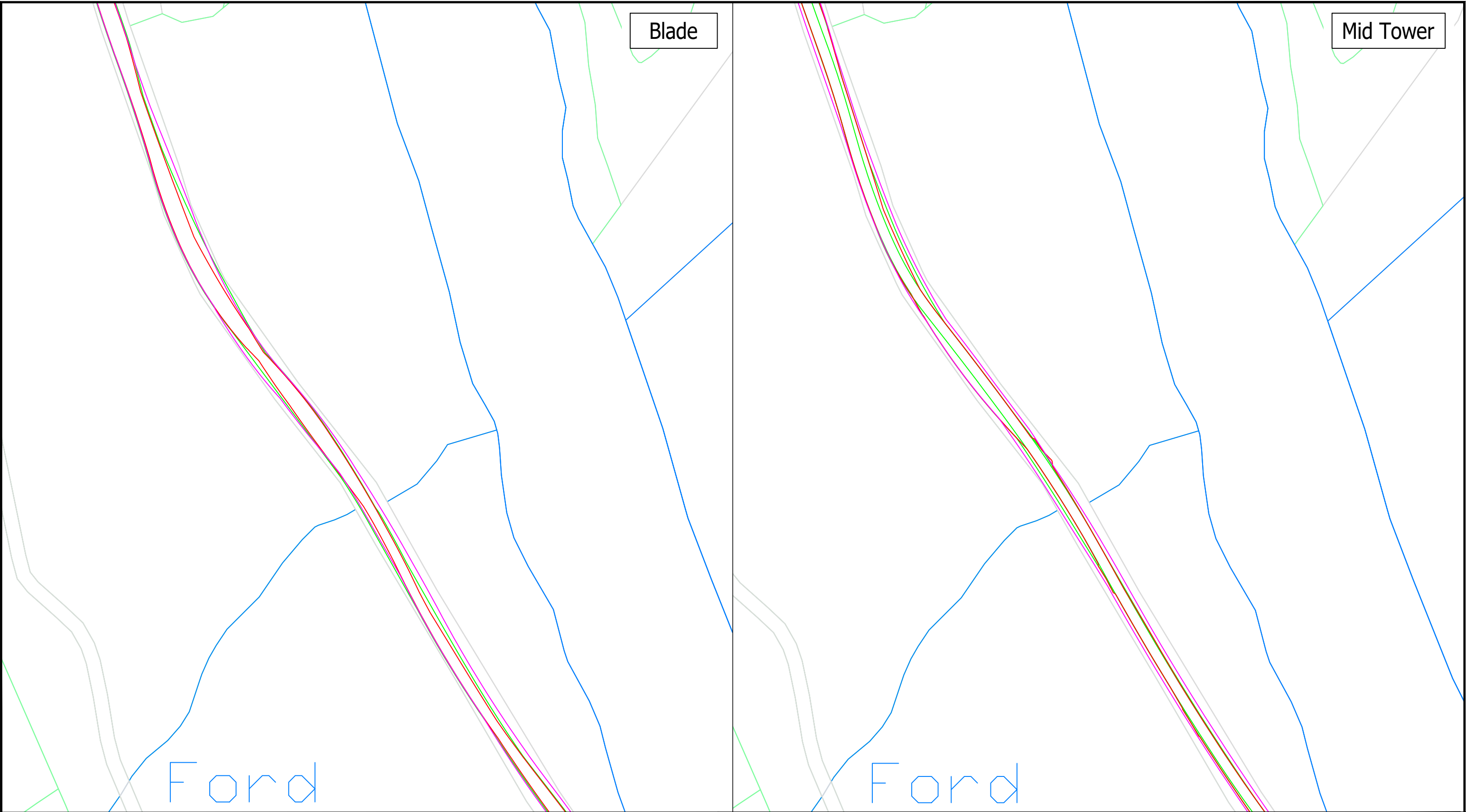
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PROJECT NUMBER:	DRAWING NUMBER:	REVISION:
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Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.

Key:

Load Swept Path

Vehicle Swept Path

Wheel Swept Path

Ordnance Survey Mapping

NO MITIGATION REQUIRED

Arecleoch Wind Farm Extension

LOCATION:		POI:
A714 alongside River Cree		11
COMPONENTS:		
Vestas V150 Blade and Mid Tower		
Swept Path Assessment		

DRAWN:	CHECKED:	DATE:	SCALES:
JS	JD	April 2019	1:1000 @ A3

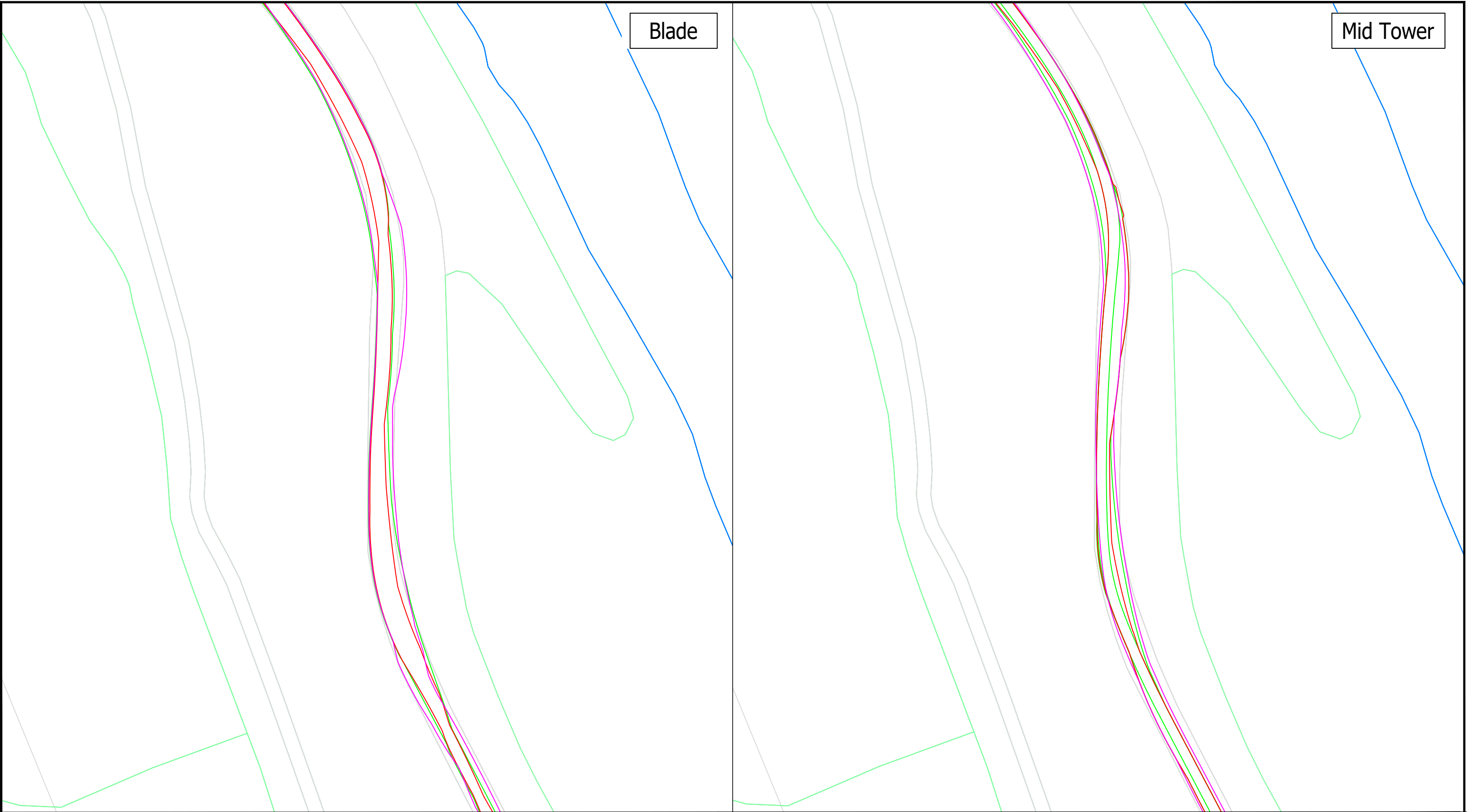
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- Key:
- Load Swept Path
 - Vehicle Swept Path
 - Wheel Swept Path
 - Ordnance Survey Mapping



Arecleoch Wind Farm Extension

LOCATION:		POI:
A714 Double Bend River Cree		12
COMPONENTS:		
Vestas V150 Blade and Mid Tower		

Swept Path Assessment

DRAWN:	CHECKED:	DATE:	SCALES:
JS	JD	April 2019	1:1000 @ A3

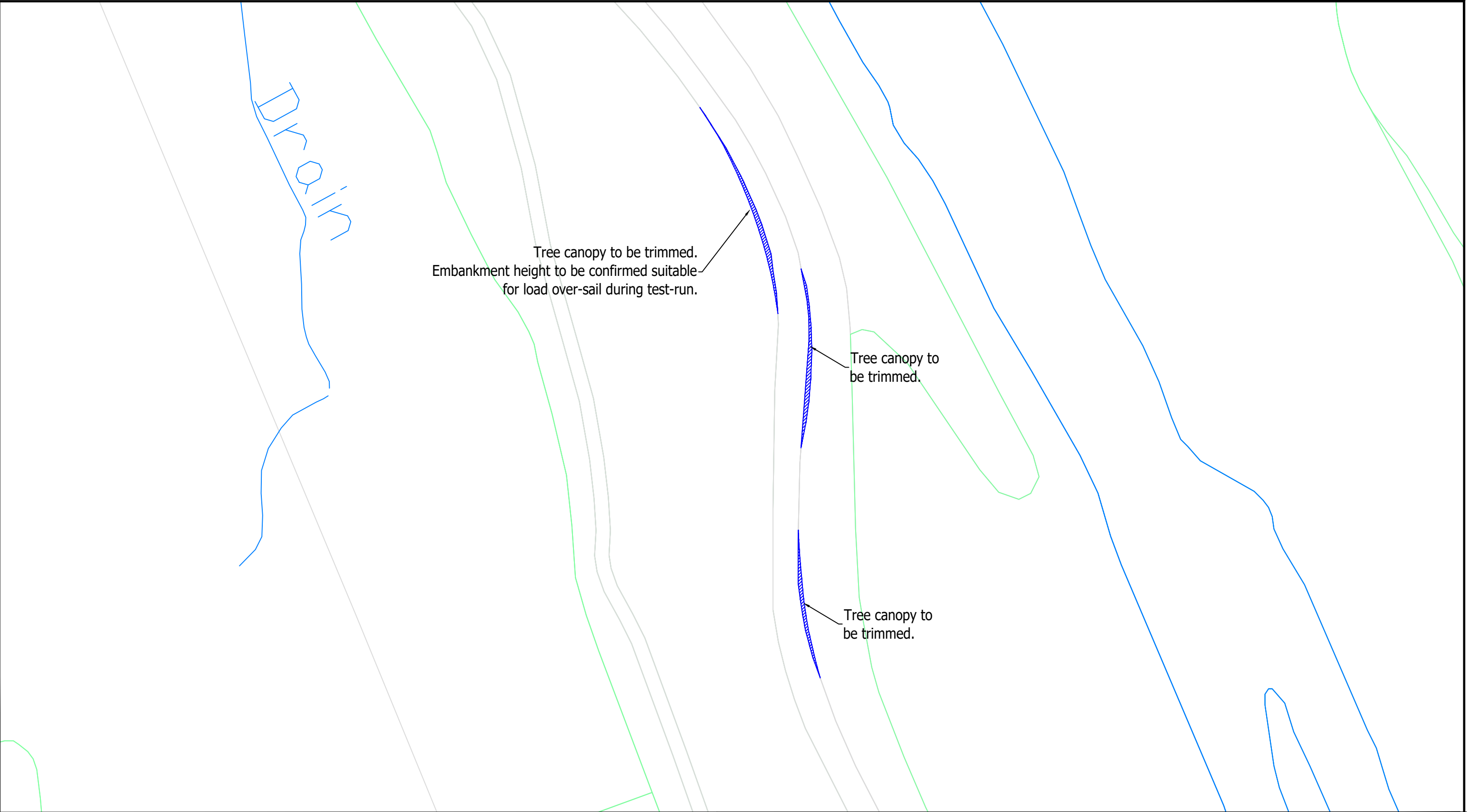
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PROJECT NUMBER:	DRAWING NUMBER:	REVISION:
A112434	SPA011	.



Notes:

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Key:

Over-run Required

Over-sail Required

Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:

A714 Double Bend River Cree

POI:

12

COMPONENTS:

Vestas V150 Blade and Mid Tower

Required Remedial Works

DRAWN:

JS

CHECKED:

JD

DATE:

April 2019

SCALES:

1:1000 @ A3

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PROJECT NUMBER:

A112434

DRAWING NUMBER:

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Key:

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- Vehicle Swept Path
- Wheel Swept Path
- Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:

A714 Series of Bends River Cree

POI:

13

COMPONENTS:

Vestas V150 Blade and Mid Tower

Swept Path Assessment

DRAWN:

JS

CHECKED:

JD

DATE:

April 2019

SCALES:

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PROJECT NUMBER:

A112434

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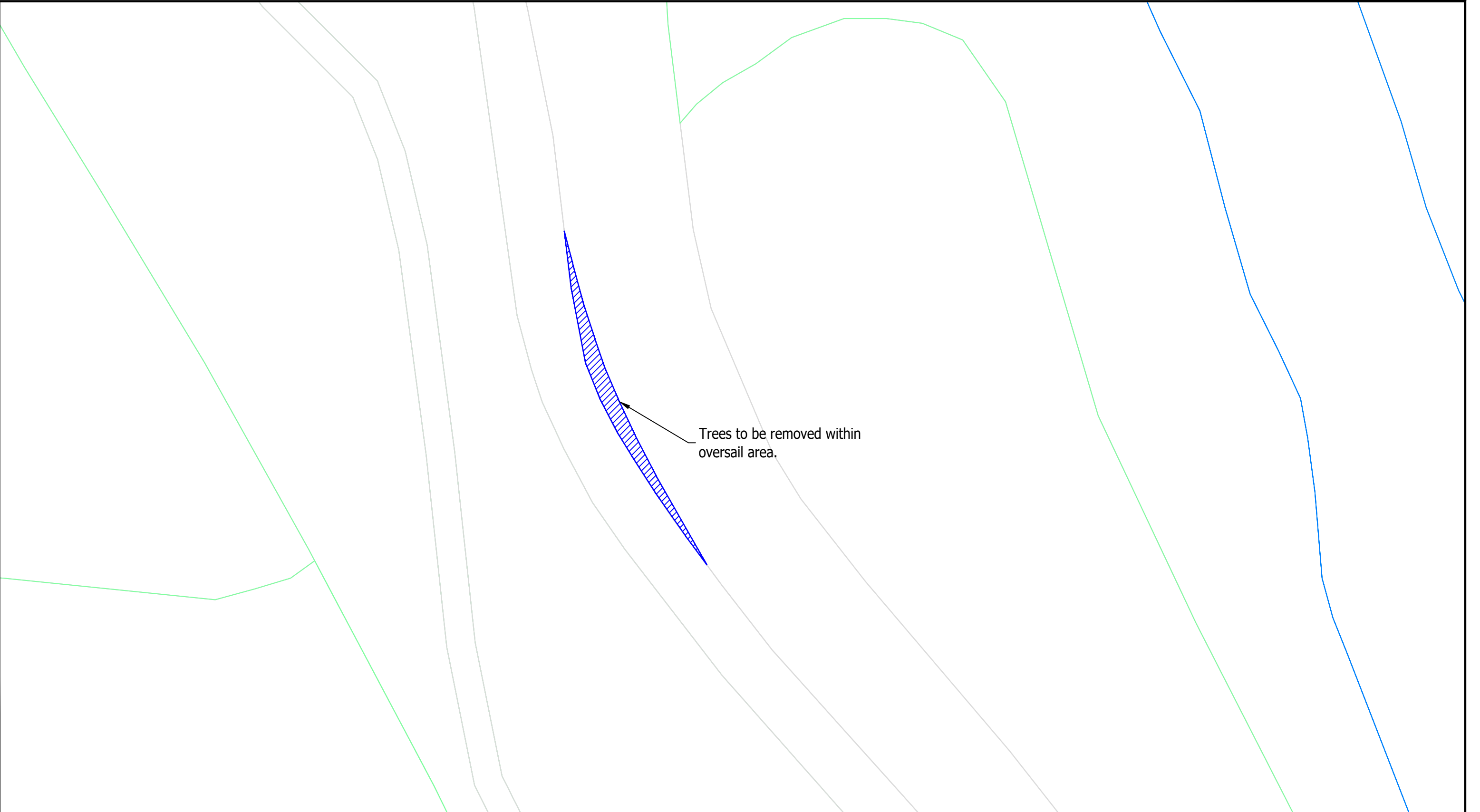
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Key:

Over-run Required

Over-sail Required

Ordnance Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:

A714 Series of Bends River Cree

POI:

13

COMPONENTS:

Vestas V150 Blade and Mid Tower

Required Remedial Works

DRAWN: JS

CHECKED: JD

DATE: April 2019

SCALES: 1:500 @ A3

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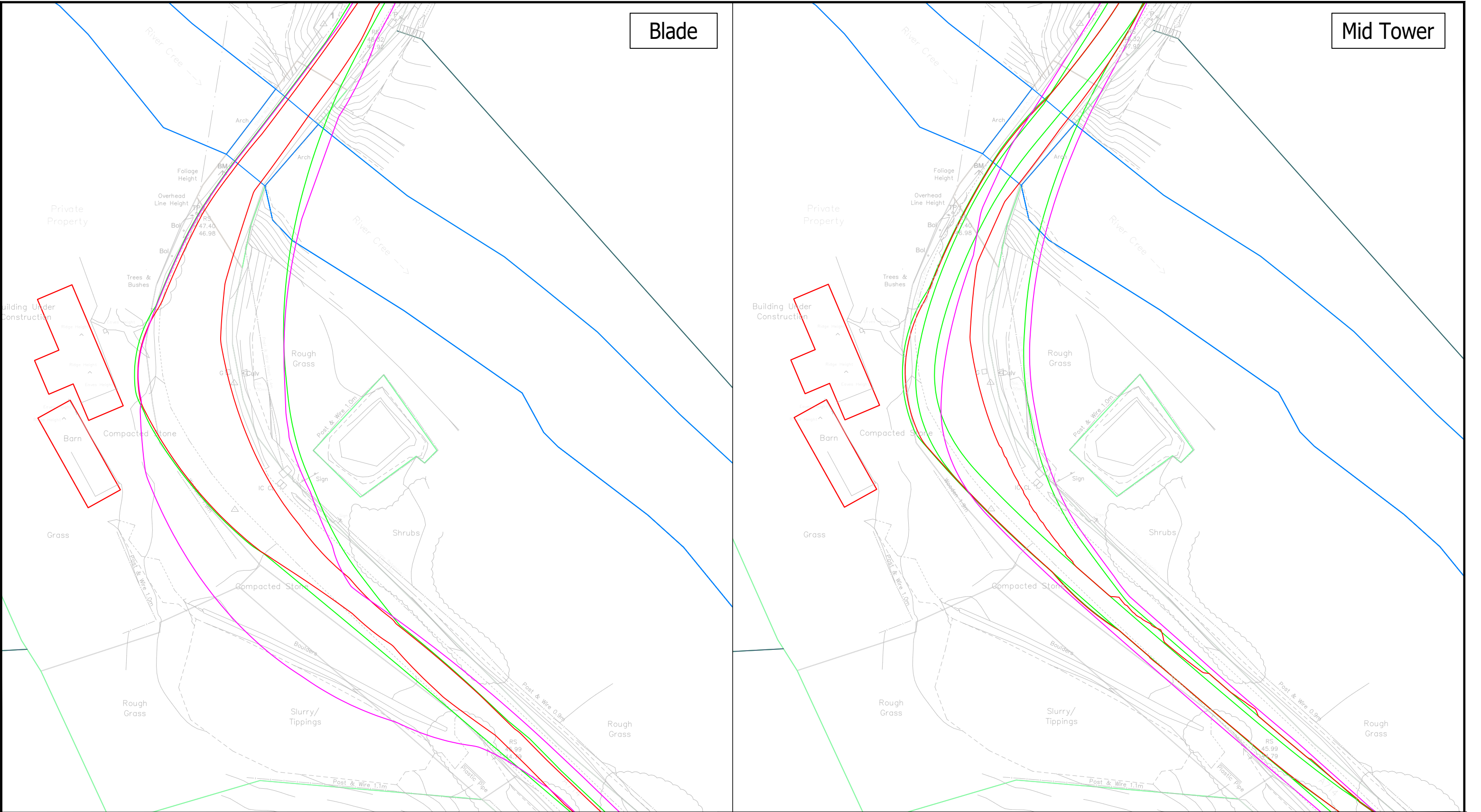
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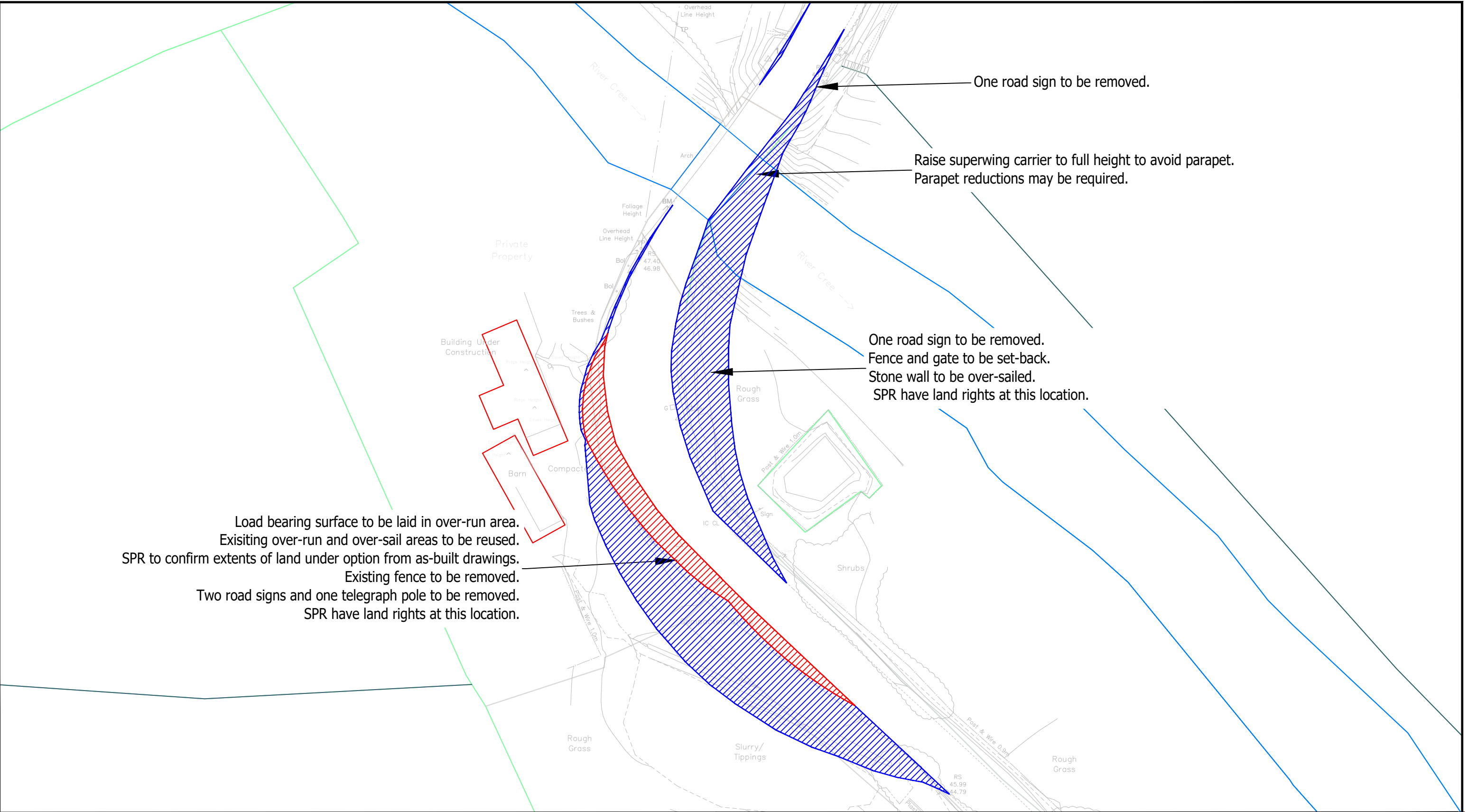
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REVISION: .

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Key:

- Over-run Required
- Over-sail Required
- Ordnance Survey Mapping
- Client Provided Topographical Survey Mapping

Arecleoch Wind Farm Extension

LOCATION:

A714 Bargrennan Bridge

POI:

15

COMPONENTS:

Vestas V150 Blade and Mid Tower

Required Remedial Works

DRAWN: JS

CHECKED: JD

DATE: April 2019

SCALES: 1:500 @ A3

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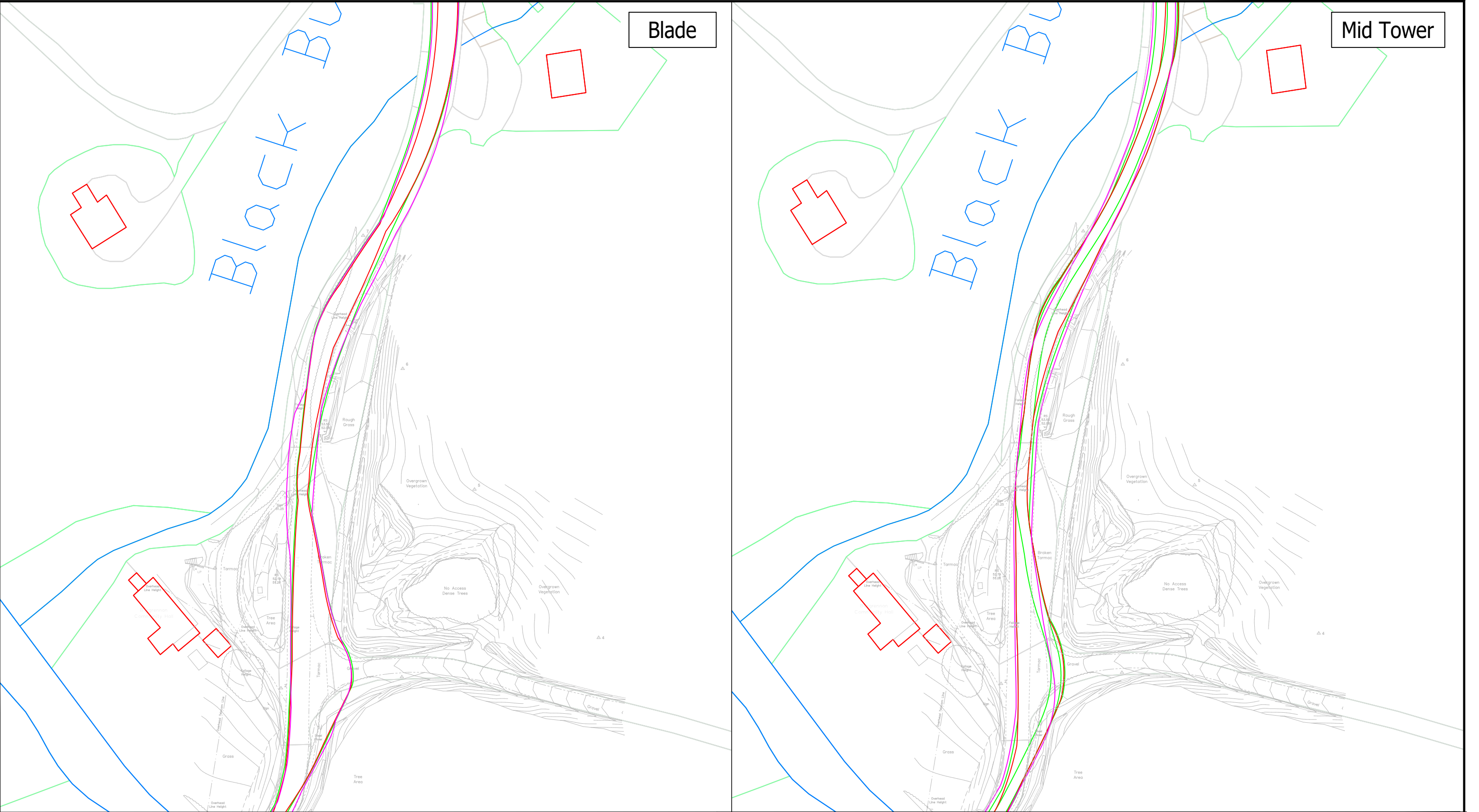
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DRAWING NUMBER: SPA013-2

REVISION: .

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Key:

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- Vehicle Swept Path
- Wheel Swept Path
- Ordnance Survey Mapping
- Client Provided Topographical Survey Mapping

Arecleoch Wind Farm Extension

LOCATION: A714 Bargrennan Series of Bends

COMPONENTS: Vestas V150 Blade and Mid Tower

Swept Path Assessment

POI: 16

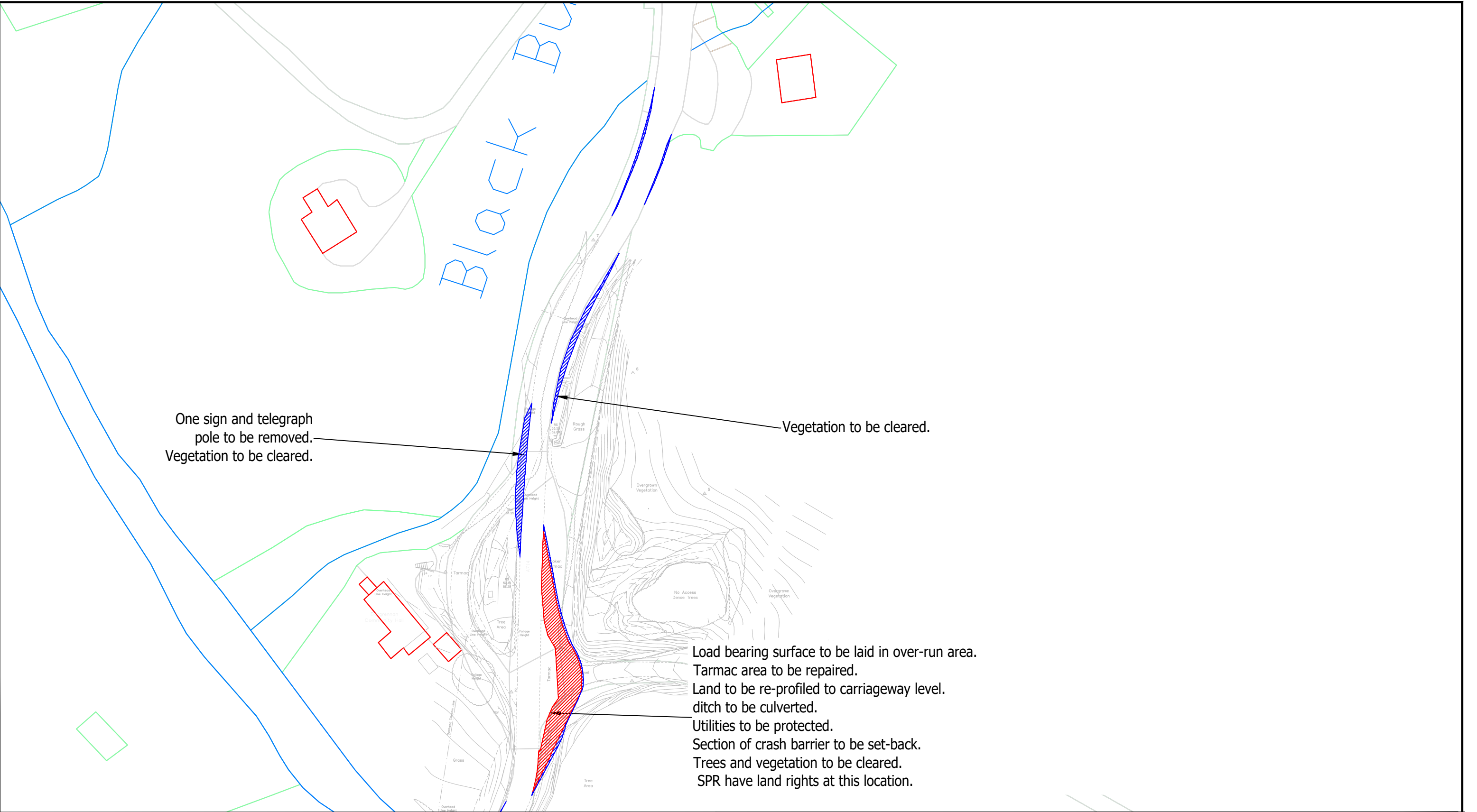
DRAWN: JS	CHECKED: JD	DATE: April 2019	SCALES: 1:1000 @ A3
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PROJECT NUMBER: A112434	DRAWING NUMBER: SPA014	REVISION: .
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Notes:


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Key:

- Over-run Required
- Over-sail Required
- Ordnance Survey Mapping
- Client Provided Topographical Survey Mapping



Arecleoch Wind Farm Extension			
LOCATION:			POI:
A714 Bargrennan Series of Bends			16
COMPONENTS:			
Vestas V150 Blade and Mid Tower			
Required Remedial Works			
DRAWN:	CHECKED:	DATE:	SCALES:
JS	JD	April 2019	1:1000 @ A3

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PROJECT NUMBER:	DRAWING NUMBER:	REVISION:		
A112434	SPA014-2	.		



Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.

- Key:
- Load Swept Path
 - Vehicle Swept Path
 - Wheel Swept Path
 - Ordnance Survey Mapping



NO MITIGATION REQUIRED

Arecleoch Wind Farm Extension

LOCATION: A714 POI: 18

COMPONENTS: Vestas V150 Blade and Mid Tower

Swept Path Assessment

DRAWN: JS	CHECKED: JD	DATE: April 2019	SCALES: 1:1000 @ A3
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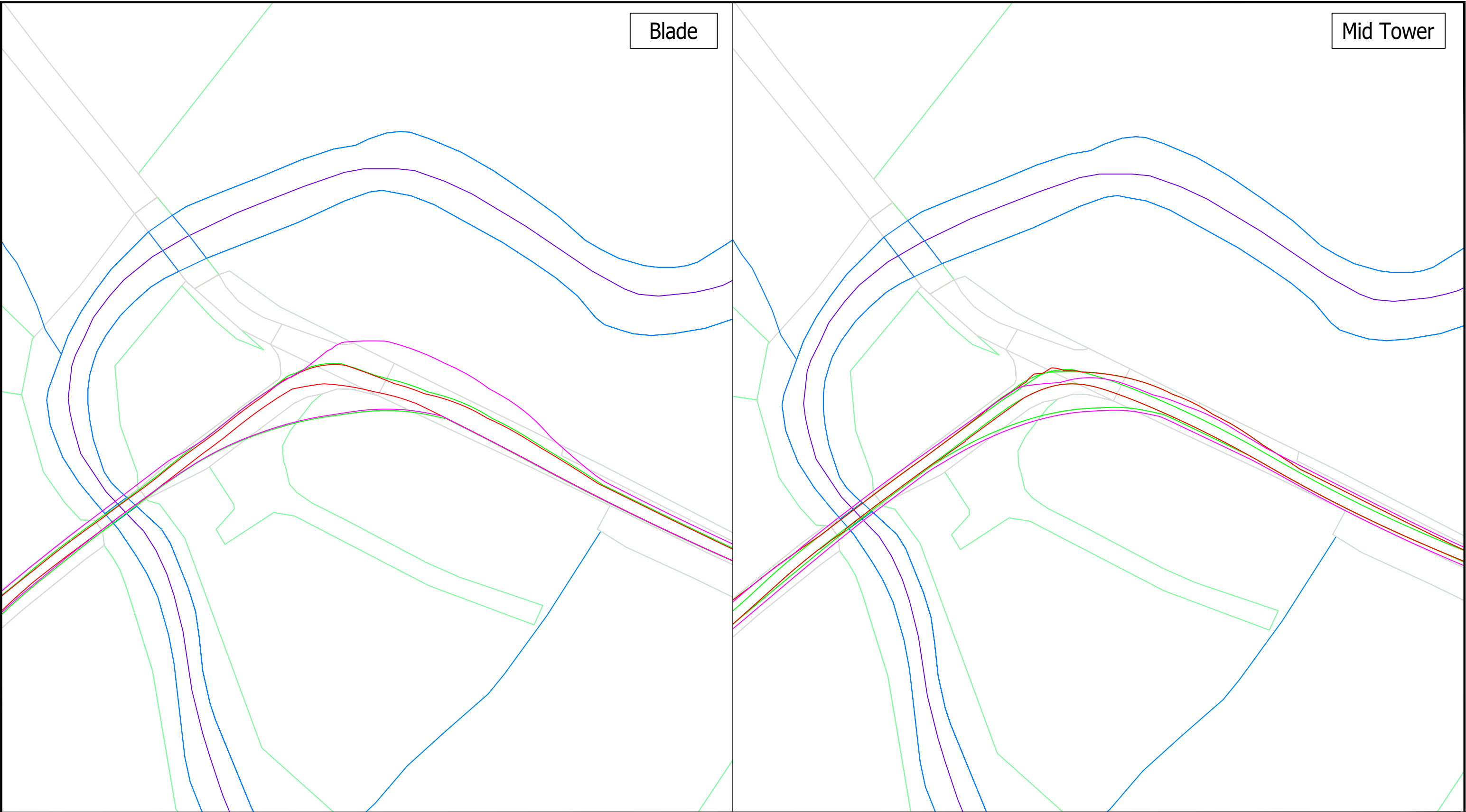
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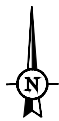
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PROJECT NUMBER: A112434	DRAWING NUMBER: SPA015	REVISION: .
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Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.

- Key:
- Load Swept Path
 - Vehicle Swept Path
 - Wheel Swept Path
 - Ordinance Survey Mapping



Arecleoch Wind Farm Extension

LOCATION:		POI:
Site Access		19
COMPONENTS:		
Vestas V150 Blade and Mid Tower		

Swept Path Assessment

DRAWN:	CHECKED:	DATE:	SCALES:
JS	JD	April 2019	1:1000 @ A3

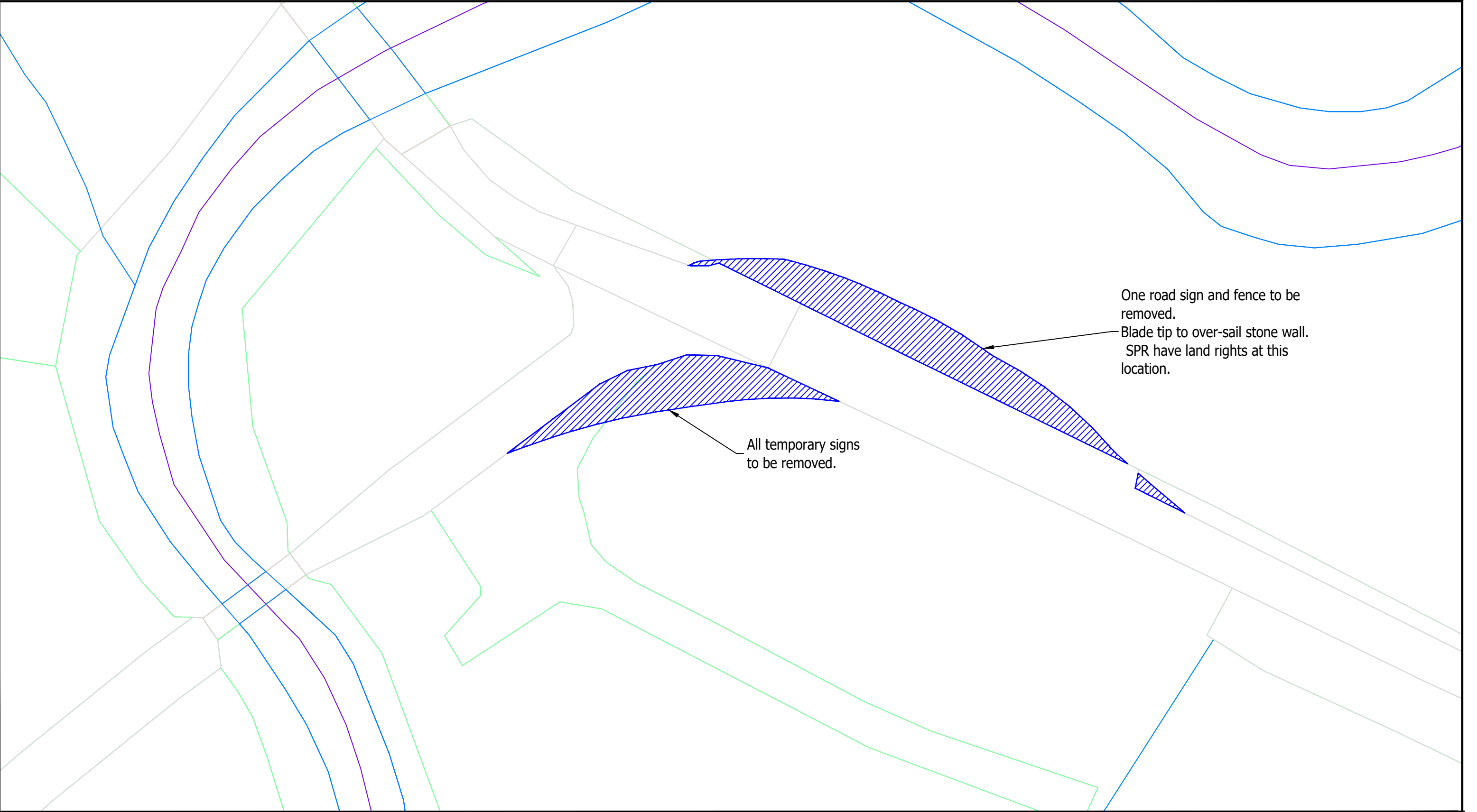
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Notes:

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Key:

-  Over-run Required
-  Over-sail Required
-  Ordnance Survey Mapping




Arecleoch Wind Farm Extension

LOCATION:		POI:	
Site Access		19	
COMPONENTS:			
Vestas V150 Blade and Mid Tower			
Required Remedial Works			
DRAWN:	CHECKED:	DATE:	SCALES:
JS	JD	April 2019	1:500 @ A3

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