



ARCUS

ACKRON WIND FARM

ABNORMAL LOAD ROUTE ASSESSMENT

MAY 2020



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1 INTRODUCTION

Ackron Wind Farm is a proposed wind farm located south of the A836 west of Thurso in the Scottish Highlands. This Abnormal Load Route Assessment (ALRA) provides an assessment of land based routes to the wind farm site for the delivery of wind turbine components.

2 METHODOLOGY

This ALRA is a desk based study which uses publically available Ordinance Survey (OS) mapping to conduct swept path analysis of pinch points on the proposed delivery route. Swept path analysis is conducted in AutoCAD using the Vehicle Tracking software and a bespoke set of delivery vehicles developed for this ALRA.

2.1 Mapping

OS Mastermap was used to conduct swept path analysis along the proposed delivery route. This mapping is two-dimensional; and therefore, the assessment only considers the horizontal geometry of points of constraint (PCs) on the route. Topographical surveys may be required in order to undertake an assessment of vertical constraints.

2.2 Delivery Vehicle Specifications

This assessment is based upon a Vestas V136 candidate turbine. The vehicle data sheet is included in Appendix A. Dimensions of the blade and corresponding delivery vehicle specifications are provided in the following tables.

Table 2.1: Turbine Blade Data

| | Data Used in Assessment |
|-------|-------------------------|
| Blade | Length 66.66m |

Table 2.2: Assumed delivery vehicles for Turbine Blade

| | Data | Source |
|---------------|--|---|
| Blade Trailer | Vehicle length – 62.62m Blade overhang – 8.8m | Volvo Cab / Nootboom Superwing Trailer |

2.3 Route to Site

Wind turbine components will be delivered to the Port of Scrabster for onward overland delivery to the Wind Farm Site. The route for turbine components will be as follows:

- Leave Port of Scrabster southbound on A9;
- Turn right onto A836;
- Turn left onto A897; and
- Turn left into Site Entrance.

Figure 1, included in Appendix B, indicates the assessed abnormal load route from the Port of Scrabster.

2.4 Site Entrance Location

The Site Entrance will be located off the A897 approximately 200 m south of its junction with the A836 and north of the settlement at Ackron and Golval. This location is indicated on Figure 1 of Appendix A.

2.5 Assumptions

In order to keep the results of assessment as concise as possible, the following assumptions have been made at each PC:

- During transit, delivery vehicles will be accompanied by an escort vehicle and a police escort if required;
- At all locations where the delivery vehicle occupies the full road width, or is required to contraflow a junction, appropriate traffic management procedures will be implemented by the escort. This will usually involve temporary closure of the road or junction whilst the vehicle passes; and
- A detailed traffic management plan will be prepared prior to delivery to inform all relevant stakeholders of road closures and other procedures to be implemented during delivery.

2.6 Categorisation of Risk

Risk has been categorised according to the following criteria:

- High Risk – PCs which require third party land either for oversail or overrun;
- Medium Risk – PCs which may require third party land depending on confirmation of the exact positioning of land boundaries and fences or those which do not require third party land but do require the construction of overrun areas within the road verge; and
- Low Risk – PCs which do not require third party land and do not require construction of overrun areas.

3 RESULTS OF ASSESSMENT

Based on swept path analysis of all PCs identified on the proposed delivery route, outcomes and mitigation requirements have been defined and are detailed in Table 3.1.

Table 3.1: Assessment of Constraints

| Ref | Location | Assessment Outcome | Mitigation | Risk |
|-------|---|---|--|--------|
| PC/01 | Port of Scrabster Bend after Exit | Load to oversail inside of the bend into third party land area, will conflict with fence and lighting column. | Lighting columns to be removed from oversail area on inside bend. Height of load above fence to be checked, fence to be removed if necessary. Third party oversail permissions to be sought. | High |
| PC/02 | A9/A836 Junction | Vehicle to use existing overrun area. Blade to oversail northeast junction over wall into third party land area. | Third party oversail permissions to be sought. No further mitigation required. | High |
| PC/03 | A836 Bend Northwest of Scrabster Lodge | Load to oversail the inside of the bend within road verge. | No mitigation required. | Low |
| PC04 | A836 Bend Before Bridge of Forss | Vehicle required to overrun into layby area at Forss Mill conflicting with trees on verge and chevron signpost. Landownership status of layby unknown. | Landownership search to be undertaken. Trees to be removed from verge between road and layby. Chevron signpost to be temporarily removed during delivery. | Medium |
| PC/05 | A836 Bend after Bridge of Forss | Load to oversail inside of the bend above fence into third party land. | Clearance height of load above fence to be checked. Third party oversail permissions to be sought. | High |
| PC/06 | A836 Bend at Forss Business Park Entrance | Vehicle to overrun outside of bend within road verge in order to minimise risk of third party oversail on the inside of the bend. However, despite this, clearance to third party oversail is below the factor of safety (0.75m). | A topographical survey is recommended to establish the exact road constrains and to establish if the indicated overrun area will allow vehicle to pass without third party oversail, alternatively if third party oversail permissions can be sought for the inside bend then construction of overrun area will not be required. | Medium |

| Ref | Location | Assessment Outcome | Mitigation | Risk |
|-------|--------------------------------------|---|---|--------|
| PC/07 | A836 Bend after Buldoo | Load to oversail inside of bend near to residential property. Clearance to property was assessed at less than the factor of safety. | Dry run or topographical survey recommended to establish if clearance is sufficient. | Medium |
| PC/08 | A836 Bridge of Isauld | Load and trailer to oversail inside of bend beyond bridge above stone wall into third party land conflicting with telegraph post. Blade tip to oversail outside of bend into third party land and conflict with telegraph post. | Clearance height of load and trailer above stone wall on inside bend to be checked. Third party oversail permissions to be sought. Telegraph posts to be relocated. | High |
| PC/09 | A836 Reay | Minor oversail of load within road verge whilst passing through village. No conflict identified. | No mitigation required. | Low |
| PC/10 | A836 Bridge over Sandside Burn, Reay | Load and trailer to oversail inside bend and blade tip to oversail outside bend. Location of fence on mapping does not correspond to online mapping observations. | Location of fence and third party land boundary to be confirmed. Third party oversail permissions may need to be sought. | Medium |
| PC/11 | A836 Bend at Creagan Loisgte | Vehicle required to overrun northwest of bend in order to avoid third party oversail on inside bend. However clearance to third party land on inside bend remains below factor of safety. | Topographical survey recommended to establish location of fences and landownership search recommended to establish extents of road verge. Load bearing surface to be constructed in verge to the northwest of bend. | Medium |
| PC/12 | A836/A897 Bend | Vehicle to overrun and oversail inside bend of junction within road verge. Ground slopes up from road edge, possible conflict with load and trailer oversail. | Load bearing surface to be laid on overrun area on inside bend. Clearance height of trailer above sloping verge to be established. | Medium |
| PC/13 | Site Entrance Junction | New access junction to be constructed. | Refer to access junction design. | Low |

4 CONCLUSION

4.1 Summary

This ALRA identified 13 PCs on the route to site and undertook swept path analysis at each. Following completion of the assessment four of the PCs were classified as high risk, where third party land permissions would need to be acquired. Six PCs were classified as medium risk, where third party land may be required dependant on establishing the exact location of land boundaries or where construction works outwith third party land are required. The remaining three PCs were classified as low risk where no construction works or third party land permissions are required.

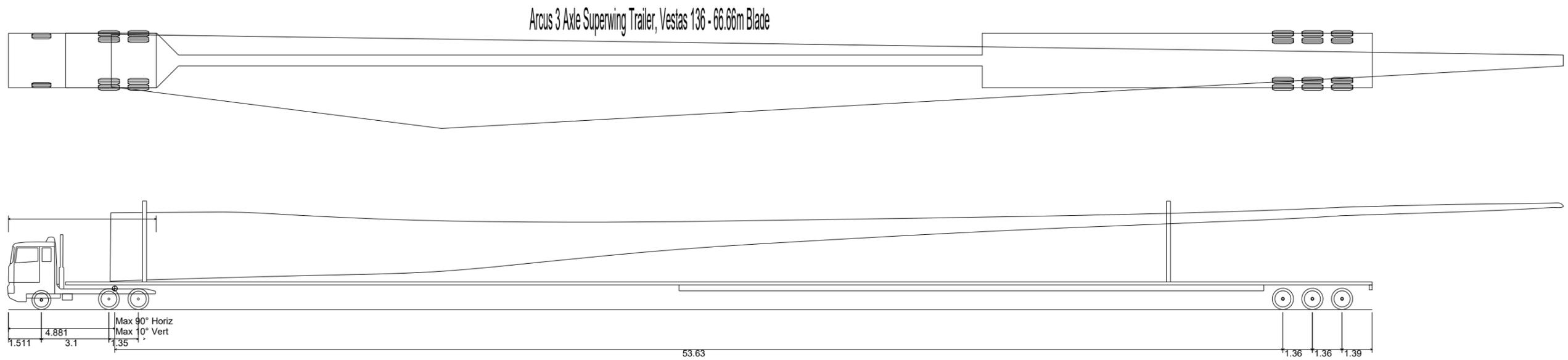
4.2 Recommendations for Further Work

Structural surveys may need to be undertaken at structures along the route in order to establish weight limits. An abnormal indivisible loads application should be submitted to the relevant authority which will initiate consultations with all relevant parties and identify areas where further review is required.

At a number of locations identified it is not clear from the mapping exactly where the extent of public road verge terminates. At these locations a topographical survey has been recommended in order to establish these limit. Landownership searches should be undertaken at these locations and at all locations where the need for third party land has been identified.

APPENDIX A – VEHICLE DATA SHEET

Plot Date : 30 November 2020 09:21:37
 File Name P:\PROJECTS\3138 ACKRON WIND FARM\CAD\01-WORKING\01_01-DRAWINGS\3138_ALR_0001_P1



Arcus 3 Axle Superwing Trailer, Vestas 136 - 66.66m Blade
 Overall Length 71.38m
 Overall Width 4.12m
 Overall Body Height 4.28m
 Min Body Ground Clearance 0.360m
 Max Track Width 2.740m
 Lock to lock time 6.00s
 Kerb to Kerb Turning Radius 6.600m

| | | | | | | | | |
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| | | Scale @ A3 1:20 | | | | | | |

APPENDIX B – ROUTE TO SITE



- Site Boundary
- Route to Site
- Low Risk Pinch Point
- Medium Risk Pinch Point
- High Risk Pinch Point



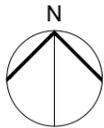
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| Produced By: KL | Ref: 3138-REP-080 |
| Checked By: TAT | Date: 30/10/2020 |

Pinch Point Location Plan
Figure 1

Ackron Wind Farm
Abnormal Load Route Assessment

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APPENDIX C – SWEEP PATH ANALYSIS DRAWING



LEGEND

- VEHICLE
- VEHICLE WHEEL TRACK
- VEHICLE OVERHANG
- LOAD
- LOAD OVERHANG
- THIRD PARTY LAND
- EXTENT OF VEHICLE OVERRUN
- EXTENT OF VEHICLE/LOAD OVERSAIL

NOTES:

1. MANUAL REAR STEERING HAS BEEN UTILISED FOR THIS SWEEP PATH ANALYSIS.
2. ANALYSIS HAS NOT CONSIDERED VERTICAL GROUND CLEARANCE OF THE VEHICLE AND LOAD.
3. FURTHER INVESTIGATION WORKS WILL BE REQUIRED IN ORDER TO IDENTIFY THE IMPROVEMENT WORKS REQUIRED INCLUDING BUT NOT LIMITED TO CARRIAGEWAY WIDENING, EARTHWORKS, DRAINAGE, SERVICES, PEDESTRIAN FACILITIES AND TRAFFIC MANAGEMENT.
4. ANALYSIS BASED ON 66.66m BLADE ON NOOTEBOOM SUPERWING TRAILER WITH VOLVO CAB.
5. ANALYSIS BASED ON OS MASTER MAP. WHERE REQUIRED TOPOGRAPHICAL SURVEY TO BE UNDERTAKEN AND USED AS A BASIS FOR DETAILED DESIGN.
6. A 0.75m FACTOR OF SAFETY INDICATED OUTSIDE OVERRUN AND OVERSAIL AREAS FROM THE EXTENT OF VEHICLE SWEEP PATH. THIS IS TO PROVIDE A FACTOR OF SAFETY AND TO INDICATE THE AREA WHICH SHOULD BE ALLOWED FOR IN ORDER TO PROVIDE A MARGIN OF ERROR DURING DELIVERY.

Plot Date : 02 November 2020 09:28:49
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LEGEND

- VEHICLE
- VEHICLE WHEEL TRACK
- VEHICLE OVERHANG
- LOAD
- LOAD OVERHANG
- THIRD PARTY LAND
- EXTENT OF VEHICLE OVERRUN
- EXTENT OF VEHICLE/LOAD OVERSAIL

NOTES:

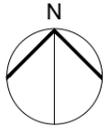
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VEHICLE TO USE EXISTING WTG OVERRUN AREA

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LOAD BEARING SURFACE TO BE LAID
IN OVERRUN AREA WITHIN ROAD VERGE

42.1m

CLEARANCE TO THIRD PARTY LAND
BOUNDARY BELOW FACTOR OF SAFETY.
DRY RUN OR TOPOGRAPHICAL SURVEY RECOMMENDED
TO ESTABLISH CLEARANCE DISTANCE.

40.8m

- LEGEND
- VEHICLE
 - VEHICLE WHEEL TRACK
 - VEHICLE OVERHANG
 - LOAD
 - LOAD OVERHANG
 - THIRD PARTY LAND
 - EXTENT OF VEHICLE OVERRUN
 - EXTENT OF VEHICLE/LOAD OVERSAIL

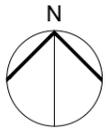
NOTES:

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Forss Mill

Kiln House

Post Office Cottage

LB

Granary House

15.2m

Bridge of Forss

Track

Forss Cottage

CHEVRON SIGNPOST TO BE TEMPORARILY REMOVED DURING DELIVERY

TREES TO BE REMOVED FROM OVERSAIL AREA

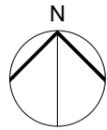
LANDOWNERSHIP OF LAYBY AREA TO BE CONFIRMED

- LEGEND
- VEHICLE
 - VEHICLE WHEEL TRACK
 - VEHICLE OVERHANG
 - LOAD
 - LOAD OVERHANG
 - THIRD PARTY LAND
 - EXTENT OF VEHICLE OVERRUN
 - EXTENT OF VEHICLE/LOAD OVERSAIL

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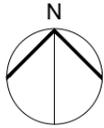
- LEGEND**
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LOAD BEARING SURFACE TO BE LAID
IN OVERRUN AREA WITHIN ROAD VERGE

42.1m

CLEARANCE TO THIRD PARTY LAND
BOUNDARY BELOW FACTOR OF SAFETY.
DRY RUN OR TOPOGRAPHICAL SURVEY RECOMMENDED
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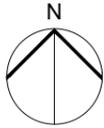
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Plot Date : 02 November 2020 09:47:02
File Name P:\PROJECTS\3138 ACKRON WIND FARM\CAD\01-WORKING\01_01-DRAWINGS\3138_ALR_0001_P1

| | | | | | | | | |
|---|---|----------------------------|-------|----------|----------|---|--|----------|
| Project Title ACKRON WIND FARM ABNORMAL LOAD ROUTE ASSESSMENT | Drawing Title PC/06 A836 BEND AT FORSS BUSINESS PARK ENTRANCE | Purpose of issue | | | | THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE SCOPE OF ARCUS' APPOINTMENT WITH ITS CLIENT AND IS SUBJECT TO THE TERMS OF THAT APPOINTMENT. ARCUS ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS CLIENT AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED | Arcus Consultancy Services | |
| | | FOR INFORMATION | | | | | Drawing Number 3138_ALR_0006 | Rev - |
| Client ACKRON WIND FARM LTD | | Designed | Drawn | Checked | Approved | | | |
| | | GR | KL | TAT | TAT | | | |
| | | Arcus Internal Project No. | | Date | | | | |
| | | 3138 | | 22/05/20 | | | | |
| | | Scale @ A3 | | | | | | |
| | | 1:1000 | | | | | | |

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CLEARANCE OF LOAD TO THIRD PARTY LAND BOUNDARY
LESS THAN FACTOR OF SAFETY. DRY RUN RECOMMENDED TO
ESTABLISH CLEARANCE DISTANCE.

38.4m

Mast (Telecommunication)

Pond

- LEGEND
- VEHICLE
 - VEHICLE WHEEL TRACK
 - VEHICLE OVERHANG
 - LOAD
 - LOAD OVERHANG
 - THIRD PARTY LAND
 - EXTENT OF VEHICLE OVERRUN
 - EXTENT OF VEHICLE/LOAD OVERSAIL

NOTES:

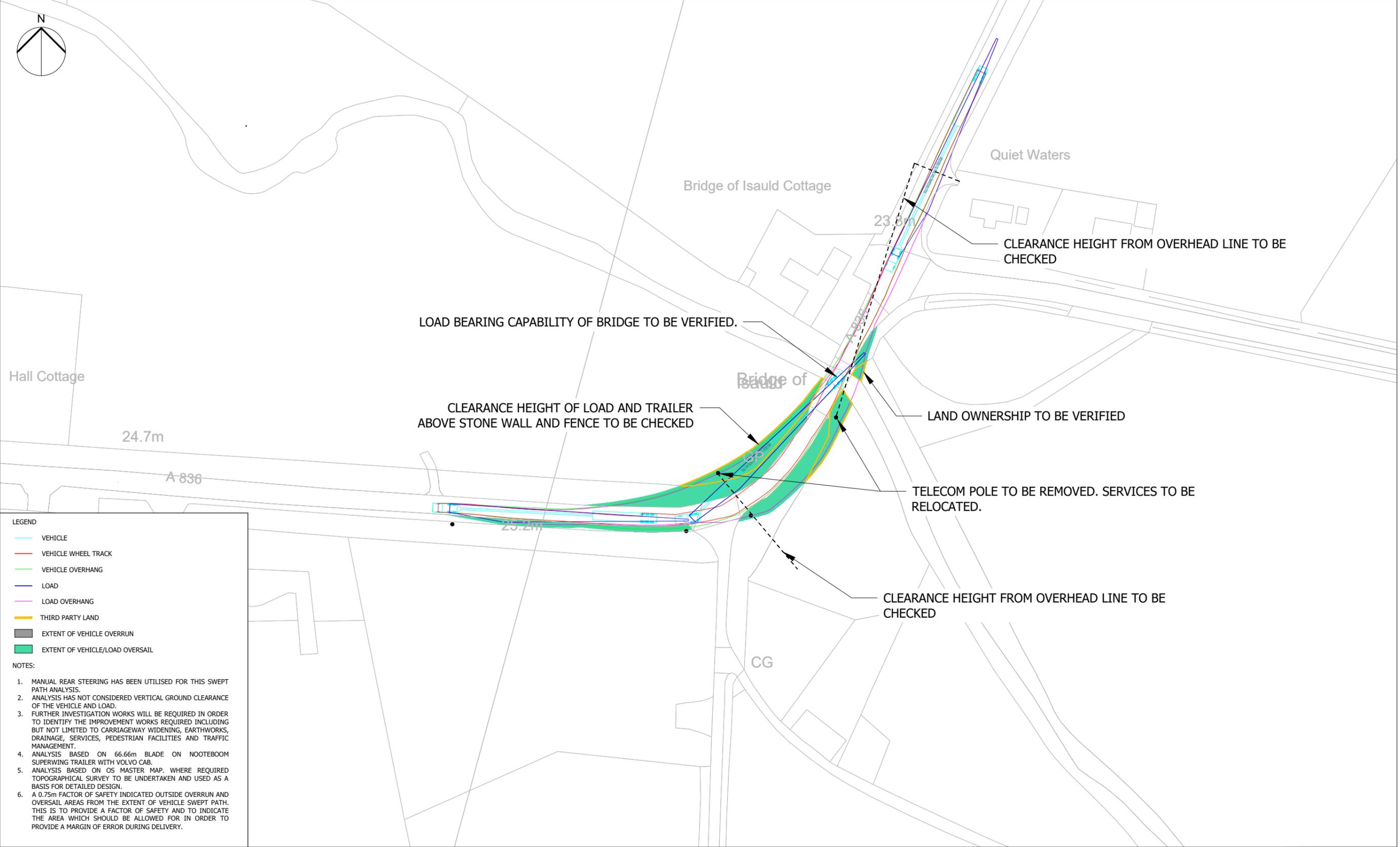
1. MANUAL REAR STEERING HAS BEEN UTILISED FOR THIS SWEEPED PATH ANALYSIS.
2. ANALYSIS HAS NOT CONSIDERED VERTICAL GROUND CLEARANCE OF THE VEHICLE AND LOAD.
3. FURTHER INVESTIGATION WORKS WILL BE REQUIRED IN ORDER TO IDENTIFY THE IMPROVEMENT WORKS REQUIRED INCLUDING BUT NOT LIMITED TO CARRIAGEWAY WIDENING, EARTHWORKS, DRAINAGE, SERVICES, PEDESTRIAN FACILITIES AND TRAFFIC MANAGEMENT.
4. ANALYSIS BASED ON 66.66m BLADE ON NOOTEBOOM SUPERWING TRAILER WITH VOLVO CAB.
5. ANALYSIS BASED ON OS MASTER MAP. WHERE REQUIRED TOPOGRAPHICAL SURVEY TO BE UNDERTAKEN AND USED AS A BASIS FOR DETAILED DESIGN.
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Plot Date : 02 November 2020 09:48:42
File Name P:\PROJECTS\3138 ACKRON WIND FARM\CAD\01-WORKING\01_01-DRAWINGS\3138_ALR_0001_P1

| | | | | | | | | |
|---|--|--|-------------|----------------------|-----------------|---|--|--|
| Project Title ACKRON WIND FARM ABNORMAL LOAD ROUTE ASSESSMENT | Drawing Title PC/07 A836 BEND AFTER BULDOO | Purpose of issue FOR INFORMATION | | | | THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE SCOPE OF ARCUS' APPOINTMENT WITH ITS CLIENT AND IS SUBJECT TO THE TERMS OF THAT APPOINTMENT. ARCUS ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS CLIENT AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED | Arcus Consultancy Services 7th Floor 144 West George Street Glasgow, G2 2HG Tel: +44 (0)141 221 9997 Fax: +44 (0)141 221 5610 www.arcusconsulting.co.uk | |
| | | Designed GR | Drawn KL | Checked TAT | Approved TAT | | Date 22/05/20 | Drawing Number 3138_ALR_0007 |
| Client ACKRON WIND FARM LTD | | Arcus Internal Project No. 3138 | | Scale @ A3 1:1000 | | | | |



Plot Date : 02 November 2020 09:53:19
 File Name P:\PROJECTS\3138 ACKRON WIND FARM\CAD\01-WORKING\01_01-DRAWINGS\3138_ALR_0001_P1



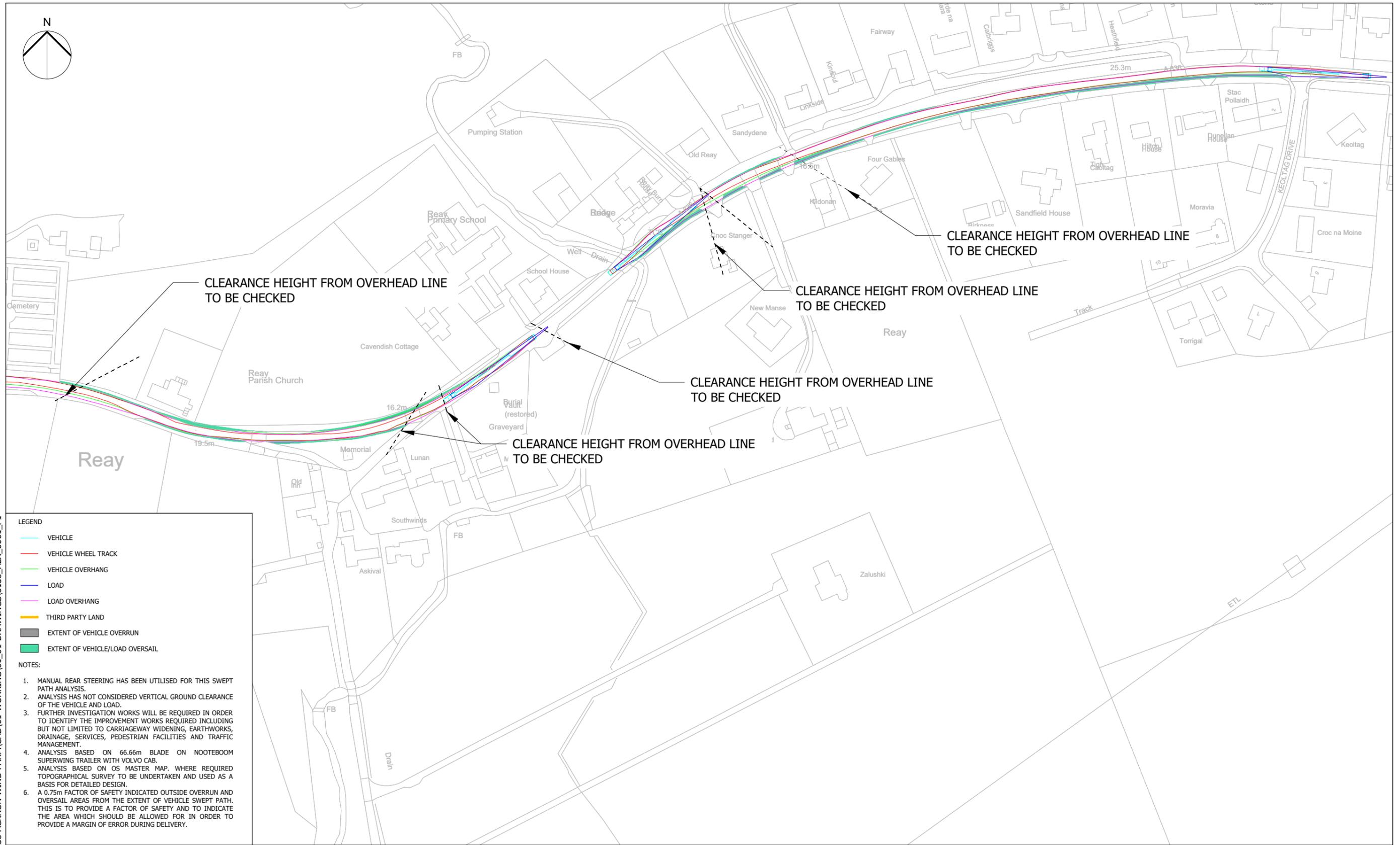
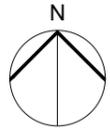
LEGEND

- VEHICLE
- VEHICLE WHEEL TRACK
- VEHICLE OVERHANG
- LOAD
- LOAD OVERHANG
- THIRD PARTY LAND
- EXTENT OF VEHICLE OVERRUN
- EXTENT OF VEHICLE/LOAD OVERSAIL

NOTES:

1. MANUAL REAR STEERING HAS BEEN UTILISED FOR THIS SWEEPED PATH ANALYSIS.
2. ANALYSIS HAS NOT CONSIDERED VERTICAL GROUND CLEARANCE OF THE VEHICLE AND LOAD.
3. FURTHER INVESTIGATION WORKS WILL BE REQUIRED IN ORDER TO IDENTIFY THE IMPROVEMENT WORKS REQUIRED INCLUDING BUT NOT LIMITED TO CARRIAGEWAY WIDENING, EARTHWORKS, DRAINAGE, SERVICES, PEDESTRIAN FACILITIES AND TRAFFIC MANAGEMENT.
4. ANALYSIS BASED ON 66.66m BLADE ON NOOTEBOOM SUPERWING TRAILER WITH VOLVO CAB.
5. ANALYSIS BASED ON OS MASTER MAP. WHERE REQUIRED TOPOGRAPHICAL SURVEY TO BE UNDERTAKEN AND USED AS A BASIS FOR DETAILED DESIGN.
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| | | | | | | | | |
|---|---|--|------------------|----------------|-----------------|---|--|-------|
| Project Title ACKRON WIND FARM ABNORMAL LOAD ROUTE ASSESSMENT | Drawing Title PC/08 A836 BRIDGE OF ISAULD | Purpose of issue FOR INFORMATION | | | | THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE SCOPE OF ARCUS' APPOINTMENT WITH ITS CLIENT AND IS SUBJECT TO THE TERMS OF THAT APPOINTMENT. ARCUS ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS CLIENT AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED | Arcus Consultancy Services | |
| | | Designed GR | Drawn KL | Checked TAT | Approved TAT | | Drawing Number 3138_ALR_0008 | Rev |
| Client ACKRON WIND FARM LTD | | Arcus Internal Project No. 3138 | Date 22/05/20 | | | | | ARCUS |



Plot Date : 02 November 2020 09:58:01
 File Name P:\PROJECTS\3138 ACKRON WIND FARM\CAD\01-WORKING\01_01-DRAWINGS\3138_ALR_0001_P1

| | |
|---------------|--|
| Project Title | ACKRON WIND FARM ABNORMAL LOAD ROUTE ASSESSMENT |
| Client | ACKRON WIND FARM LTD |

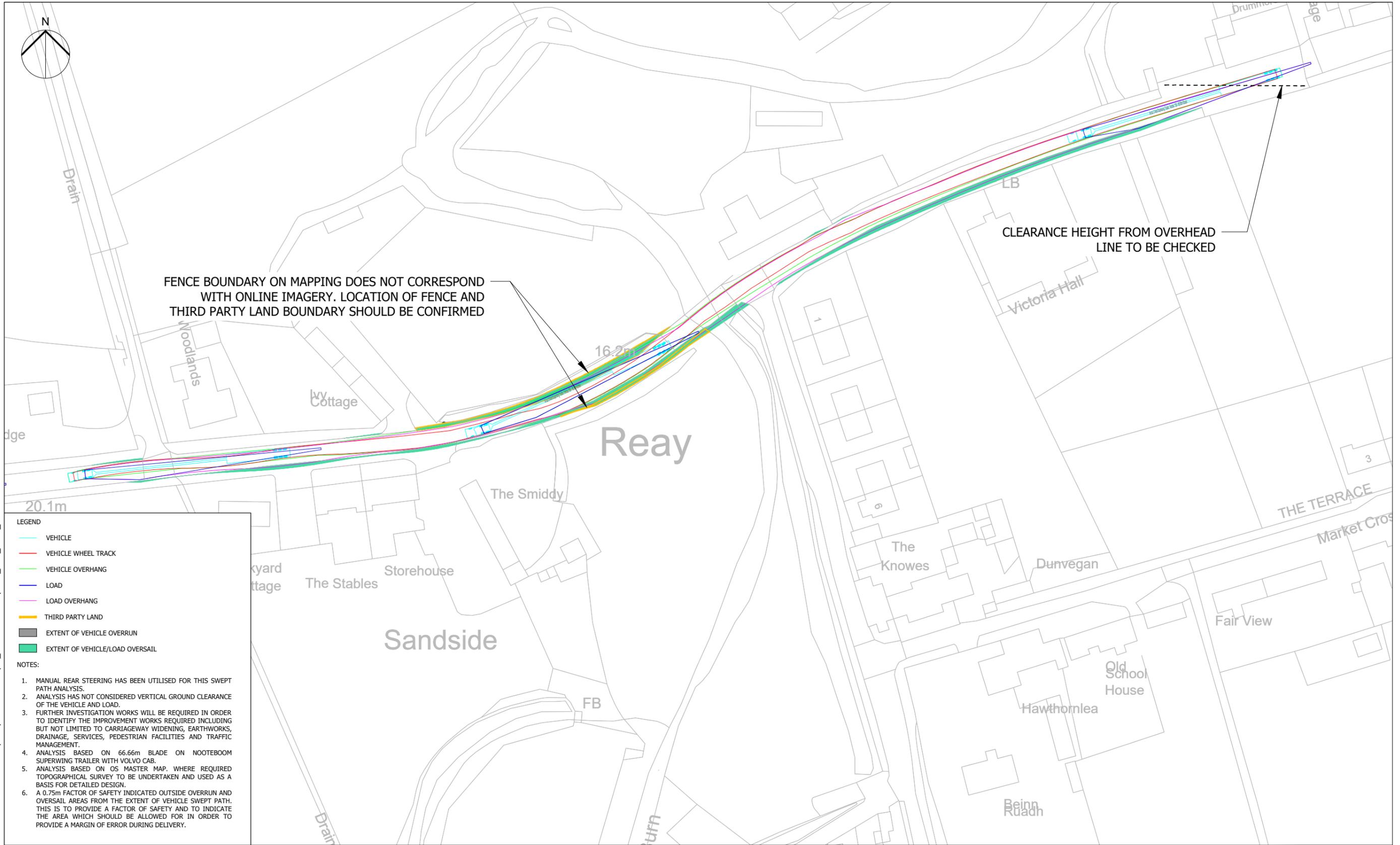
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|---------------|----------------------------|
| Drawing Title | PC/09 A836 REAY |
|---------------|----------------------------|

| | | | |
|--|-------------|------------------|-----------------|
| Purpose of issue FOR INFORMATION | | | |
| Designed GR | Drawn KL | Checked TAT | Approved TAT |
| Arcus Internal Project No. 3138 | | Date 22/05/20 | |
| Scale @ A3 1:2000 | | | |

| | |
|---|----------|
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| Drawing Number 3138_ALR_0009 | Rev - |

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LEGEND

- VEHICLE
- VEHICLE WHEEL TRACK
- VEHICLE OVERHANG
- LOAD
- LOAD OVERHANG
- THIRD PARTY LAND
- EXTENT OF VEHICLE OVERRUN
- EXTENT OF VEHICLE/LOAD OVERSAIL

NOTES:

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Plot Date : 02 November 2020 10:02:50
 File Name P:\PROJECTS\3138 ACKRON WIND FARM\CAD\01-WORKING\01_01-DRAWINGS\3138_ALR_0001_P1

| | | | | | | | | |
|---|--|--|------------------|--|----------|---|--|--|
| Project Title ACKRON WIND FARM ABNORMAL LOAD ROUTE ASSESSMENT | Drawing Title PC/10 A836 BRIDGE OVER SANDSIDE BURN, REAY | Purpose of issue FOR INFORMATION | | | | THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE SCOPE OF ARCUS' APPOINTMENT WITH ITS CLIENT AND IS SUBJECT TO THE TERMS OF THAT APPOINTMENT. ARCUS ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS CLIENT AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED | Arcus Consultancy Services 7th Floor 144 West George Street Glasgow, G2 2HG Tel: +44 (0)141 221 9997 Fax: +44 (0)141 221 5610 www.arcusconsulting.co.uk | |
| | | Designed GR Drawn KL Checked TAT Approved TAT | Date 22/05/20 | Drawing Number 3138_ALR_0010 | Rev - | | | |
| Client ACKRON WIND FARM LTD | Arcus Internal Project No. 3138 Scale @ A3 1:1000 | | | | | | | |

Workings (dis)



LOAD BEARING SURFACE TO BE LAID
IN OVERRUN AREA WITHIN ROAD VERGE

CLEARANCE HEIGHT FROM OVERHEAD
LINE TO BE CHECKED

34.4m

CLEARANCE TO THIRD PARTY LAND BOUNDARY BELOW
FACTOR OF SAFETY. DRY RUN OR TOPOGRAPHICAL
SURVEY RECOMMENDED TO ESTABLISH CLEARANCE.

- LEGEND
- VEHICLE
 - VEHICLE WHEEL TRACK
 - VEHICLE OVERHANG
 - LOAD
 - LOAD OVERHANG
 - THIRD PARTY LAND
 - EXTENT OF VEHICLE OVERRUN
 - EXTENT OF VEHICLE/LOAD OVERSAIL

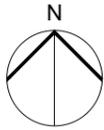
NOTES:

1. MANUAL REAR STEERING HAS BEEN UTILISED FOR THIS SWEEPED PATH ANALYSIS.
2. ANALYSIS HAS NOT CONSIDERED VERTICAL GROUND CLEARANCE OF THE VEHICLE AND LOAD.
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Plot Date : 02 November 2020 10:07:30
File Name P:\PROJECTS\3138 ACKRON WIND FARM\CAD\01-WORKING\01_01-DRAWINGS\3138_ALR_0001_P1

| | | | | | | | | |
|---|--|--|-------------|----------------|-----------------|---|--|------------------|
| Project Title ACKRON WIND FARM ABNORMAL LOAD ROUTE ASSESSMENT | Drawing Title PC/11 A836 BEND AT CREAGAN LOISGTE | Purpose of issue FOR INFORMATION | | | | THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE SCOPE OF ARCUS' APPOINTMENT WITH ITS CLIENT AND IS SUBJECT TO THE TERMS OF THAT APPOINTMENT. ARCUS ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS CLIENT AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED | Arcus Consultancy Services 7th Floor 144 West George Street Glasgow, G2 2HG Tel: +44 (0)141 221 9997 Fax: +44 (0)141 221 5610 www.arcusconsulting.co.uk | |
| | | Designed GR | Drawn KL | Checked TAT | Approved TAT | | Arcus Internal Project No. 3138 | Date 22/05/20 |
| Client ACKRON WIND FARM LTD | Scale @ A3 1:1000 | | | | | | | |





OVERSAIL TO NORTHERN VERGE.

LOAD-BEARING SURFACE TO BE LAID IN OVERRUN AREA.

OVERSAIL TO SOUTEASTERN VERGE , EARTHWORKS MAY BE REQUIRED TO PREVENT CONFLICT WITH VERGE

15.5m

A 836
MS

- LEGEND
- VEHICLE
 - VEHICLE WHEEL TRACK
 - VEHICLE OVERHANG
 - LOAD
 - LOAD OVERHANG
 - THIRD PARTY LAND
 - EXTENT OF VEHICLE OVERRUN
 - EXTENT OF VEHICLE/LOAD OVERSAIL

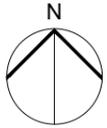
NOTES:

1. MANUAL REAR STEERING HAS BEEN UTILISED FOR THIS SWEEPED PATH ANALYSIS.
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Plot Date : 02 November 2020 10:11:24
File Name P:\PROJECTS\3138 ACKRON WIND FARM\CAD\01-WORKING\01_01-DRAWINGS\3138_ALR_0001_P1

| | | | | | | | | |
|---|--|--|-------------|-------------------------|-----------------|---|--|--|
| Project Title ACKRON WIND FARM ABNORMAL LOAD ROUTE ASSESSMENT | Drawing Title PC/12 A836 / A897 JUNCTION | Purpose of issue FOR INFORMATION | | | | THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE SCOPE OF ARCUS' APPOINTMENT WITH ITS CLIENT AND IS SUBJECT TO THE TERMS OF THAT APPOINTMENT. ARCUS ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS CLIENT AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED | Arcus Consultancy Services 7th Floor 144 West George Street Glasgow, G2 2HG Tel: +44 (0)141 221 9997 Fax: +44 (0)141 221 5610 www.arcusconsulting.co.uk | |
| | | Designed GR | Drawn KL | Checked TAT | Approved TAT | | Date | Drawing Number 3138_ALR_0012 |
| Client ACKRON WIND FARM LTD | | Arcus Internal Project No. 3138 | | Date 22/05/20 | | | | |
| | | Scale @ A3 1:1000 | | | | | | |





Track

A 897

27.4m

Issues

LOAD-BEARING SURFACE TO BE LAID
IN AREA OF VEHICLE OVERRUN.

8m

- LEGEND
- VEHICLE
 - VEHICLE WHEEL TRACK
 - VEHICLE OVERHANG
 - LOAD
 - LOAD OVERHANG
 - THIRD PARTY LAND
 - EXTENT OF VEHICLE OVERRUN
 - EXTENT OF VEHICLE/LOAD OVERSAIL

NOTES:

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Plot Date : 02 November 2020 10:14:16
File Name P:\PROJECTS\3138 ACKRON WIND FARM\CAD\01-WORKING\01_01-DRAWINGS\3138_ALR_0001_P1

| | | | | | | | | |
|---|---|--|-------------|------------------|-----------------|---|--|----------|
| Project Title ACKRON WIND FARM ABNORMAL LOAD ROUTE ASSESSMENT | Drawing Title PC/13 A897 SITE ENTRANCE JUNCTION | Purpose of issue FOR INFORMATION | | | | THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH THE SCOPE OF ARCUS' APPOINTMENT WITH ITS CLIENT AND IS SUBJECT TO THE TERMS OF THAT APPOINTMENT. ARCUS ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS CLIENT AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED | Arcus Consultancy Services 7th Floor 144 West George Street Glasgow, G2 2HG Tel: +44 (0)141 221 9997 Fax: +44 (0)141 221 5610 www.arcusconsulting.co.uk | |
| | | Designed GR | Drawn KL | Checked TAT | Approved TAT | | Drawing Number 3138_ALR_0013 | Rev - |
| Client ACKRON WIND FARM LTD | | Arcus Internal Project No. 3138 | | Date 25/05/20 | | | | |
| | | Scale @ A3 1:1000 | | | | | | |

