# Hill of Fare Wind Farm

## Abnormal Load Routeing Assessment

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| **Sweco UK Limited** | 2888385 |
| **Project Name** | Hill of Fare Wind Farm |
| **Project Number** | 65209565 |
| **Client** | RES Group |
| **Author** | Ian Bullard |
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# Change list

| Ver | Date | Description of the change | Reviewed | Approved by |
|---|---|---|---|---|
| 0 | 29/08/23 | Draft for comment | MD | MD |
| 1 | 02/10/23 | Final | MD | MD |

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# 1 Introduction

## 1.1 Study Area

The proposed Hill of Fare Wind Farm is 21km directly west from Aberdeen and located off the B977, south of Echt, within the Dunecht Estate. The site location is shown below in Figure 1.

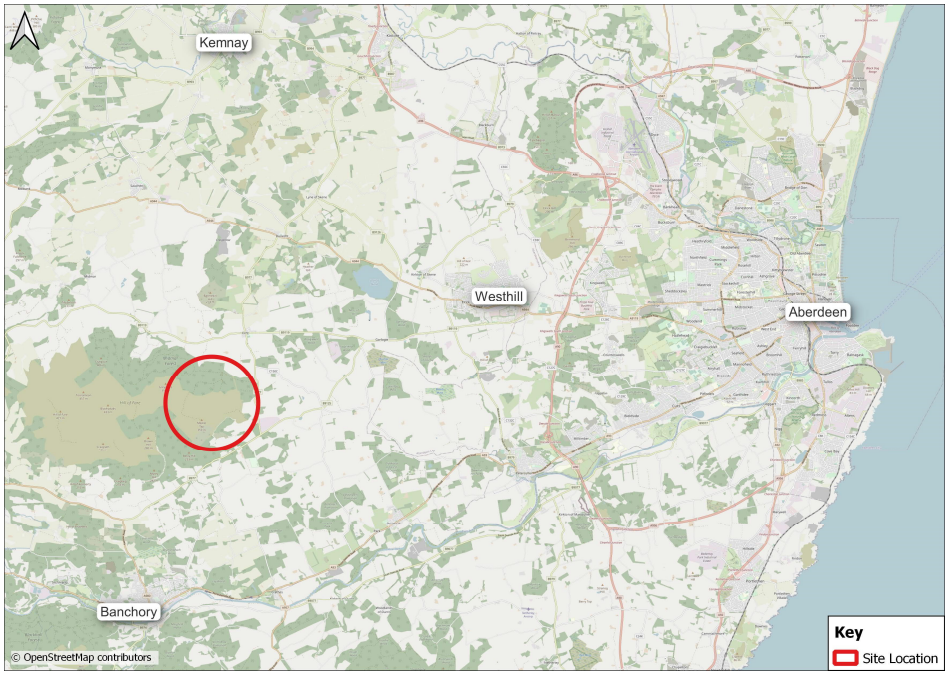


Figure 1.1: Site Location

## 1.2 Port of Entry

Two ports of entry are currently being considered for the delivery of turbine components to the mainland.

### 1.2.1 Aberdeen Port

Although the port has historically been used to land turbine components, it does not currently have any viable routes for egress for turbine components of the size proposed for Hill of Fare. However, the new South Harbour project could provide a suitable access route to the wider road network, subject to third party confirmation.

The Swept Path Analysis (SPA) starts from the Hareness Road / A956 junction, as defined in previous routeing study, although this may need to be revised once, and if, any road improvement schemes are confirmed.

### 1.2.2 Dundee Port

The port has a history of support to both the On and Off-shore wind Industry. Several road mitigation schemes have been implemented to enable the egress of large turbine components on to the wider road network. However, further improvements to the network are required to accommodate turbine components of the size proposed for Hill of Fare.

The exit route from the port runs directly out of the storage area along Broughty Ferry Road and on to Kingsway A972.

## 1.3 Route Description

The proposed routeing for the delivery of turbine components to site considers two main routes from each of the ports of entry. A further sub route has also been considered. The route options are:

**Route Option 1**: from the Port of Aberdeen

- Loads would exit the port onto Hareness Road before turning south onto the A956;
- Loads would continue southwest joining the A90 Aberdeen Western Peripheral Route (AWPR) northbound;
- Loads would proceed north on the A90 AWPR before joining the A944 westbound;
- Loads would exit the A944 at Dunecht and proceed south on the B977;
- Loads would continue on the B977 south for approximately 6km to the proposed site access;
- As required, loads would continue south to join the B9125 eastbound;
- Loads would turn left into Birchmoss Depot for storage.
- Following storage, loads would then return to the site access via the B9125 and the B977.

**Route Option 2**: from the Port of Dundee

- Loads would exit the port of Dundee and proceed westbound on the A972 Kingsway East;
- Loads would turn right from Kingsway East onto the A90 northbound;
- Loads would proceed north on the A90 to the New Mains of Ury before joining the A90 AWPR northbound;
- Loads would proceed north at the A90 / A956 roundabout and follow the route above to the proposed site access.

**Sub Route Option A**: from the point where route options 1 and 2 pass through Westhill

- Loads would instead turn left onto the B9119;
- Loads would then turn left at Garlogie onto the B9125 southbound;
- Loads would then turn right onto the B977 northbound to the proposed site access.

The proposed routes options are illustrated in Figure 1.2 below:

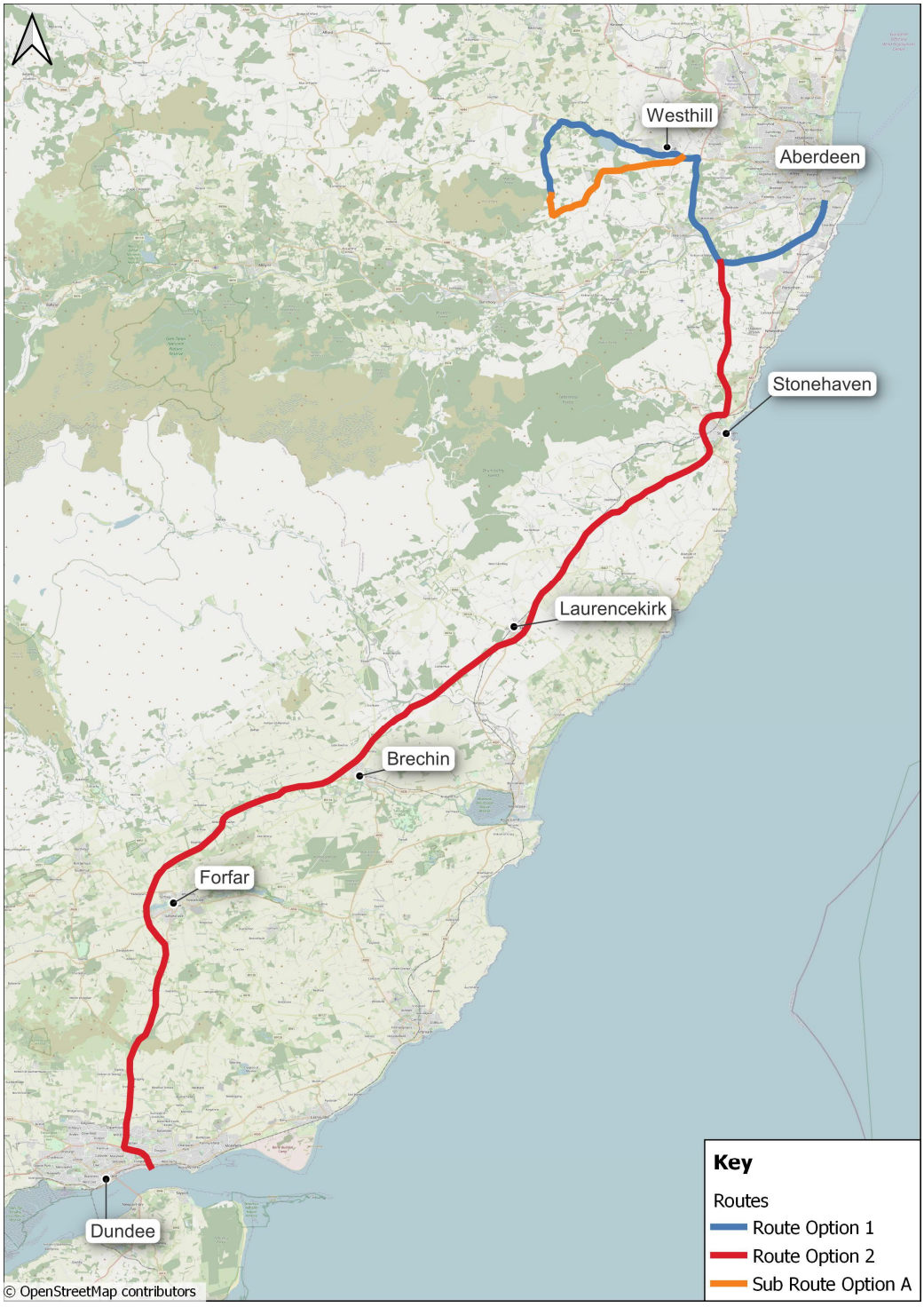


Figure 1.2: Route Options

## 1.4 Vehicle Specifications

The candidate turbine under consideration for the proposed Hill of Fare wind farm is the Siemens Gamesa 6.6MW 155 turbine. The main components are outlined in Table 1-1 below:

| Component | Length (m) | Maximum Width (m) |
|---|---|---|
| Blade (Superwing) | 76.8 | 4.4 |
| Top Tower (low loader) | 27.2 | 4.1 |
| Mid Tower (clamp trailer) | 16.8 | 4.8 |
| Base Tower (clamp trailer) | 11.0 | 4.8 |

Table 1.1: Component Specifications

Turbine details for the Siemens Gamesa 6.6mw 155 are based on technical information provided by, and confirmed in, liaison with RES. The accuracy of the delivery vehicle arrangement and steering capabilities will need to be confirmed by the haulage contractor, for each respective vehicle. It is also recommended that a dry run is undertaken prior to the commencement of deliveries, as this is likely to be a condition of any subsequent planning permission for the wind farm.

A plan showing the details of the vehicle specifications adopted for the swept path analysis is provided in **Appendix A**.

# 2 Network Constraints

This section outlines the potential critical constraint locations to the movement of the proposed turbine components.

Table 2.1 below provides details of the identified constraints on each of the proposed route options. The table also identifies the key elements of the expected road works to enable the manoeuvres of all of the assessed turbine components, namely, the blade and the most onerous column sections.

Plans illustrating the locations of the constraints, referenced as Points of Interest (POI), are provided in **Appendix B** and the SPA figures are provided in **Appendix C**.

| POI | Drawing Ref | Key Constraint | Details |
|---|---|---|---|
| 1 | Not used | Aberdeen Port, Skewed alignment of the railway bridge on Coast Road.<br>  | Given the recent completion of the South Harbour, the potential exists for a new route via an improved bridge alignment over the railway line on Coast Road, and west on to Hareness Road to the A956.<br><br>In addition to any new railway bridge, improvements are likely to be required at the Coast Road/Hareness Road junction. |
| 2 | 65209565-ATR-DRW-002-01 | Hareness Road / A956 Wellington Road<br>  | Loads will turn left onto the A956 and proceed south. The tractor unit of the blade transporter will initially use the northbound carriageway of the A956 before crossing back onto the southbound carriageway.<br><br>Manual Rear Steering Required<br><br>The vehicle will oversail both verges on the Hareness Road approach and the central splitter island. This will require the temporary removal of two lighting columns on the northern verge, a lighting column in the splitter island, and a speed limit sign in the southern verge.<br><br>The vehicle will overrun the central reservation and the western verge of the A956 Wellington Road. This will require the provision of a temporary running surface in the western verge. It will also require the temporary removal of two lighting columns and some road signage in the central reservation.<br><br>The manoeuvre will require the trees in the western verge to be trimmed back and the grass in the verge on the inside of the bend trimmed and the verge inspected for obstacles. It was noted that a decommissioned lighting |

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| | | | column base is currently present in this area. |
| 3 | 65209565-ATR-DRW-002-02 | A956 Roundabout, Altens<br>  | Loads will proceed south on the A956 taking the 3rd exit.<br>The vehicle will partially oversail the central island of the roundabout on its eastern side. This will require the temporary removal of a traffic signal.<br>The loads will need to negotiate the existing pedestrian guard railing on the entry and exit arms although the analyses suggests that these can remain in situ. |
| 4 | 65209565-ATR-DRW-002-03 | A956 / A90 AWPR Roundabout<br>  | All loads will transverse the roundabout central island to take the second exit and proceed north on the A90 AWPR.<br>Manual Rear Steering Required<br>The vehicle will oversail the southern verge of the approach arm. This will require the temporary removal of a lighting column. A pair of control boxes are located in the southern verge although the blade is likely to clear these. It is recommended that the rear tip height of the loaded blade will need to be verified, and box relocated if required. An associated pole may need to be temporary relocated.<br>The vehicle will need to pass directly across the central island of the roundabout. This will require some regrading of the island to provide suitable gradients and the provision of a temporary running surface. The chevron sign for the eastern approach arm will also need to be temporarily removed.<br>The vehicle will oversail a corner of the central reservation on the exit arm. This will require the relocation of a direction sign. |
| 5 | 65209565-ATR-DRW-002-04 | A90 AWPR / A994 Roundabout | Loads will turn left into the first exit, utilising the central reservation of the A994 and proceed westbound.<br>The vehicle will oversail both verges on the approach arm. This will require the temporary removal of traffic signal poles and signage on both sides and at least one lighting column from the inside verge. |

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| | |  | Both verges climb fairly steeply from the carriageway edge and it is recommended that the extent of the swept path is compared against a 3D topographical survey to identify if any regrading of the verge is required.<br><br>The vehicle will overrun the central reservation of the A944. The existing surface will need to be checked to confirm it is suitable to accommodate the proposed vehicles, otherwise an additional load bearing surface will be required. A road sign and a bollard will also need to be temporary removed. |
| 6 | 65209565-ATR-DRW-002-05 | A944 / Endeavour Drive Roundabout<br>  | All loads will traverse the roundabout central island to take the second exit and proceed westbound.<br><br>The vehicles will overrun the central island of the roundabout. This will require the provision of a temporary running surface. Two chevron signs will also need to be temporarily removed. |
| 7 | 65209565-ATR-DRW-002-06 | A944 / Broadstraik Avenue Roundabout<br>  | All loads will need to utilise the full carriageway and traverse the roundabout central island to take the second exit and proceed westbound.<br><br>The vehicles will overrun the central island of the roundabout and the northern verge of the A944 on exit. This will require the provision of a temporary running surface. The works will require the removal of planting on the island and the temporary removal of some bollards. |
| 8 | 65209565-ATR-DRW-002-07 | A944 / Broadstraik Road Roundabout<br>  | All loads will need to utilise the full carriageway and traverse the roundabout central island to take the second exit and proceed westbound.<br><br>The vehicles will overrun the northern verge of the approach arm. This will require the temporary removal of a street lighting column, pedestrian guard railing and pedestrian crossing signal poles. A temporary running surface will also be required to protect the grassed areas.<br><br>The vehicles will overrun the central island of the roundabout. This will require the provision of a temporary running surface. The works will require the removal of planting and the temporary removal of bollards on the island. |
| 9 | 65209565-ATR- | A944 / B977 Left Turn | Loads will turn left, with blade transporters required to cut the inside |

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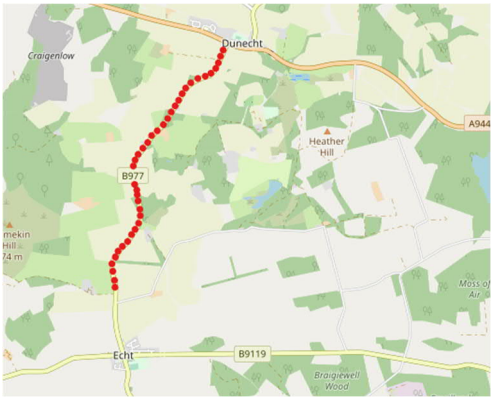
| | DRW-002-08 |  | of the bend, and proceed southbound on the B977.<br><br>Manual Rear Steering Required<br><br>The blade vehicles will need to overrun and oversail the inside of the bend. This will require the regrading of the field and provision of a large section of overrun area. The works will also require the partial removal of the boundary stone wall, post and wire fencing, saplings and established trees. Two lighting columns and speed limit change signs are also located in the overrun area and will need to be temporarily removed.<br><br>In order to avoid the need to remove the trees, the previous studies have shown the loads overrunning the far verge and then tying back into the B977 carriageway. However, it was noted on site that the ground levels will require substantial earthworks to provide a suitable gradient.<br><br>Either solution is feasible and a review of costs and other impacts should be undertaken to establish a preferred option. |
| 10<br><br>A-G | 65209565-ATR-DRW-002-09, 10, 11, 12, 13, 14 & 15 | B977, North of Echt<br>  | Loads will proceed southbound on the B977.<br><br>Manual Rear Steering Required<br><br>The use of manual rear steering ensures that the vehicles can negotiate the section without the need for any overrun.<br><br>However a number of oversail areas are required and, in some places these extent beyond the visible road boundaries, therefore impacting upon third party land.<br><br>It is recommended that any requirements for mitigation works are informed by swept path analyses provided over topographical survey data. |
| 11<br><br>A-B | 65209565-ATR-DRW-002-16 & 17 | B977 Double Bend, North of Echt | Loads will proceed southbound on the B977 including the crossing of a small skewed bridge.<br><br>Manual Rear Steering Required<br><br>The use of manual rear steering ensures that the vehicles can negotiate the majority of this section without the need for any overrun.<br><br>A number of oversail areas are required and, in some places these extent beyond the visible road |

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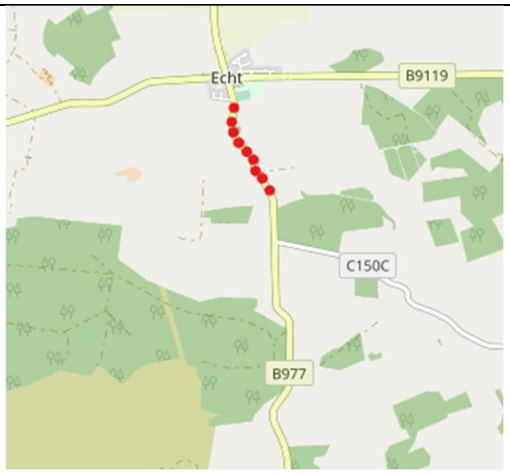
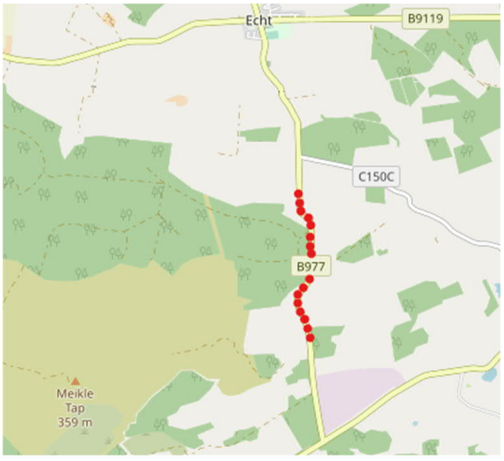
| | |  <br>  | boundaries (third party land) and also oversail into the grounds of private properties.<br><br>The bridge provides a significant constraint which requires overrun on the inside verge. This is likely to require structural support works within third party land. The oversail resulting from the vehicles negotiating the bridge will require clearance of some mature trees and potentially the temporary removal of a private garden wall.<br><br>It is recommended that any requirements for mitigation works are informed by swept path analyses provided over topographical survey data.<br><br>The carriageway over the bridge does not offer any constraint from a vertical perspective. Vertical clearance of the loads from the boundary walls and parapet walls will need to be reviewed with more detailed assessment. |
| 12<br><br>A-C | 65209565-ATR-DRW-002-18, 19 & 20 | B977 Bends close to the site access.<br>  <br>  | Loads will proceed southbound on the B977 before either turning right into the site access or proceeding on to the Birchmoss Depot.<br><br>A notable gradient is present on the inside of the bend where oversail is required for the largest vehicles.<br><br>Manual Rear Steering Required<br><br>The use of manual rear steering ensures that the vehicles can negotiate this section with only a small area of overrun required.<br><br>Oversail is required on both sides of the carriageway at bends and these remain within visible road boundaries avoiding third party land.<br><br>The climb up the hill to the site access is notable but special measures are unlikely to be required for the proposed vehicles.<br><br>Once passed the site access, a right hand bend requires oversail on both sides of the carriageway. This will need a more detailed study to identify whether the verge will need to be reprofiled to provide the necessary ground clearance. Any required reprofiling will impact upon a private track which will also require regrading |

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| | | | to tie back into the carriageway at an appropriate gradient.<br><br>It is recommended that any requirements for mitigation works are informed by swept path analyses provided over topographical survey data. |
| X1 | 65209565-ATR-DRW-002-21 | B977 / B9125 Junction<br>  | Loads will turn left at the junction and overrun and oversail a large portion of the inside of the bend. The loads will then proceed east along the B9125 before returning in the opposite direction from the Birchmoss Depot on leaving the storage facility<br><br>Manual Rear Steering Required<br><br>The blade vehicles will need to overrun and oversail the inside of the bend. This will require the removal of undergrowth and regrading of the scrub area beyond the existing carriageway. The area currently includes a drainage system to feed surface water into the brook to the rear.<br><br>The works will also require the temporary removal of two Give Way signs. A control box is also located within the overrun area and will need to be relocated. |
| X2 | 65209565-ATR-DRW-002-22 | B9125 / Birchmoss Depot Access from the west<br>  | Loads will turn left at the junction and proceed in the site.<br><br>Manual Rear Steering Required<br><br>To accommodate movements to and from the west, the vehicles will overrun a large area on the inside of the bend. A further area beyond will need to be cleared to facilitate oversail.<br><br>This will require the temporary removal of garden planting and private signage. Two lighting columns will need to be temporarily removed as will numerous ground based uplighters.<br><br>Numerous signs and lighting/cctv columns will need to be temporarily removed to facilitate oversail of the central reservation within the site.<br><br>The western boundary of the depot is located adjacent to the B977. The potential of providing a new temporary access directly onto the B977 should be explored to avoid the works identified at POI X1 and X2. |

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| 13 | 65209565-ATR-DRW-002-23 | Broughty Ferry Road / A930, Dundee<br>  | Loads will proceed ahead through the junction and proceed westbound.<br>Manual Rear Steering Required<br>The vehicles will oversail the footways on both sides of the railway bridge. The loads will also oversail beyond the existing roundabout cut-through lane.<br>The bollards which currently block the roundabout cut-through lane will need to be temporarily removed, along with a roundabout direction arrow sign. A low vehicle restraint barrier railing is present on the western side of the bridge but should be easily oversailed by all vehicles. |
| 14 | 65209565-ATR-DRW-002-24 | A972 Strips of Craigie / Kingsway E Roundabout<br>  | Loads will proceed ahead through the junction and proceed westbound.<br>Although a bypass route has already been provided on the southern approach to the roundabout, the proposed vehicles will still overrun both islands to the south of the roundabout. This will require the temporary removal of one of the three lighting columns and a number of traffic signs from the southern most island. Also, the bollards blocking the bypass route from both islands will need to be temporarily removed.<br>The vehicles will oversail the footway on the western side of the exit arm. This will require the temporary removal of a section of pedestrian guard railing. The lighting column may also need to be relocated although more detailed measurements may confirm that these works are not needed. |
| 15 | 65209565-ATR-DRW-002-25 | A972 Kingsway East / Mid Craigie Road Roundabout<br>  | Loads will proceed ahead through the roundabout and proceed westbound.<br>Manual Rear Steering Required<br>The vehicles will oversail the verges on the western frontage of the approach arm and the exit arm. This will require the temporary removal of a section of pedestrian guard railing from each verge.<br>The vehicles will also oversail the central island although no further works are required. |
| 16 | 65209565-ATR-DRW-002-26 | A972 Kingsway East / Pitkerro Rd Roundabout | Loads will proceed directly through the central island.<br>The vehicle will need to pass directly across the central island in order to avoid impacting the pedestrian |

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| | |  | overbridge and associated ramps. This will require the removal of planting and the regrading of the affected section of the island to provide suitable shallow gradients to and from the carriageway.<br><br>The works will also require the provision of a temporary running surface on the island. The two affected chevron signs, including PV panels, will also need to be temporarily removed. |
| 17 | 65209565-ATR-DRW-002-27 | A972 Kingsway East / A90 North, Right Turn<br>  | Loads will turn right directly into the northbound carriageway and proceed northbound.<br><br>Manual Rear Steering Required<br><br>The junction is an extremely busy junction and forms a critical node in the strategic road network. Any works at this junction are likely to be heavily constrained and will require significant liaison and therefore lead in times.<br><br>The vehicles will oversail a number of splitter islands including: the two islands at the stop line of the A929; the island at the stop line of the A90; the central reservation opposite the A90 stop line and the central reservation of the A90.<br><br>This will require the temporary removal of a number of traffic signal poles and pedestrian guard railing. No lighting columns are affected. The signal poles will need to be replaced with removable sockets to ensure the efficient operation of the junction when loads are not passing through. Alternative measures will also need to be provided for pedestrians to ensure their safety whilst the guard railings at crossings are removed.<br><br>The load will also overrun the central reservation opposite the A90 stop line and the very southern tip of the central reservation of the A90. Overrunning the islands will likely require kerb treatments to enable the vehicles to bump up the kerbs with ease. |
| 22 | 65209565-ATR-DRW-002-28 | A90 / Fintry Drive Roundabout | Loads will proceed ahead and continue northbound.<br><br>The vehicles will oversail the footways on the approach and the exit to the roundabout. They will also oversail the central island.<br><br>No physical works are required. |

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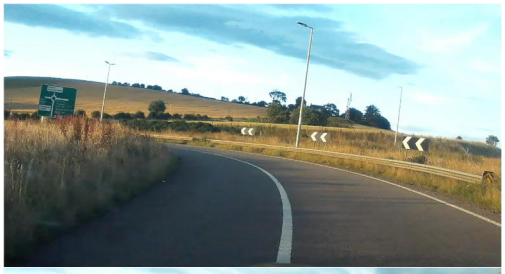
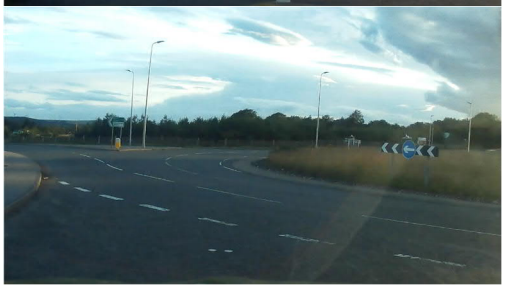
| | |  | |
| 23 | 65209565-ATR-DRW-002-29 | A90 / William Fitzgerald Way Roundabout<br>  | Loads will proceed ahead and continue northbound.<br>Manual Rear Steering Required<br>The vehicles will oversail the western frontages of the approach arm and the exit arm. This will require the temporary removal of two lighting columns from the first verge and a speed camera warning sign, speed limit sign and lighting column from the second verge.<br>The vehicles will also oversail the central island although no further works are required. |
| 24 | 65209565-ATR-DRW-002-30 | A92 / A90 AWPR Slip Road and Roundabout<br>  <br>  | Loads will exit the A92 northbound and take the third exit of the A90 / B979 roundabout.<br>Manual Rear Steering Required<br>The blade vehicles will oversail the verge on both sides of the off-slip carriageway. This will require the temporary removal of the lighting columns, chevron signs, speed limit signs, direction signs and roundabout advanced waning signs.<br>The vehicles will also need to utilise the central island to negotiate the turn. This will require the removal of planting and provision of a temporary running surface. The roundabout features a walled structure on the southern edge which will need to be removed and levelled. The structure's use is currently unknown but suspected as some form of headwall for unseen drainage infrastructure. |

Table 2.1: Identified Works

# 3 Summary and Recommendations

## 3.1 Summary

The assessment has identified that both routes and the sub option are feasible, with the necessary mitigation works being implemented.

**Route 1:** This is dependent on the provision of some form of crossing facility to enable vehicles to cross the railway on Coast Road, adjacent to the new South Harbour.

**Route 2:** Despite the fact that this port has been used for turbine deliveries for a number of years, the scale of the proposed turbine components will result in significant levels of additional mitigation works in order to reach the A90 from the port. The identified works are likely to require intensive design liaison with the roads authorities given the sensitivity of the road network.

**Sub Route Option A:** This provides an alternative to the main routes from Westhill to site. The route avoids some identified constraint points whilst introducing others. The route has the potential to accommodate the identified vehicles.

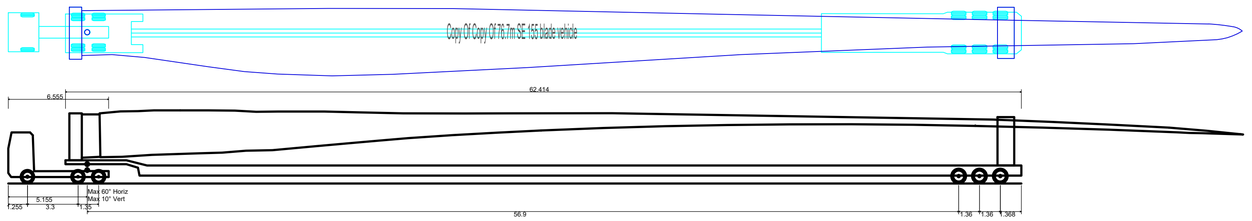
## 3.2 Recommendations

A number of recommendations have been made throughout the descriptions of mitigation works provided in Section 2.

A few highlighted recommendations are listed below.

- Continued liaison with Aberdeen Port Authority to understand progress on any new railway crossing on Coast Road;
- Liaison with a haulage contractor to confirm with more accuracy, the maximum vertical clearance of the blade tip once loaded on level ground. This will inform the identification of additional risk items such as communications/control boxes, parapet walls and vehicle restraint barriers at numerous points on the routes;
- Commission topographical surveys of the following key sections to understand vertical aspects of mitigation works:
    - A90 AWPR / A944 Roundabout;
    - The extent of the B977 identified within POIs 10, 11 and 12.
- Identification of private ownership boundaries on the B977, outwith the control of the Dunecht Estate;
- Liaison with Birchmoss Depot to understand the potential to provide a new/temporary access through to the B977 from its western boundary;
- Early engagement with Transport Scotland to understand lead times and requirements for works on the A90 and A972 within Dundee, A90 at Stonehaven and the A90/A956 from Aberdeen.

# Appendix A – Vehicle Specifications




Copy Of Copy Of 76.7m SE 155 blade vehicle

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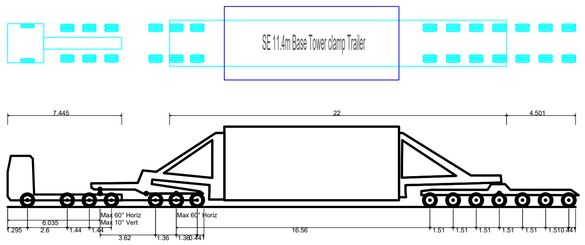
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




SE 11.4m Base Tower clamp Trailer

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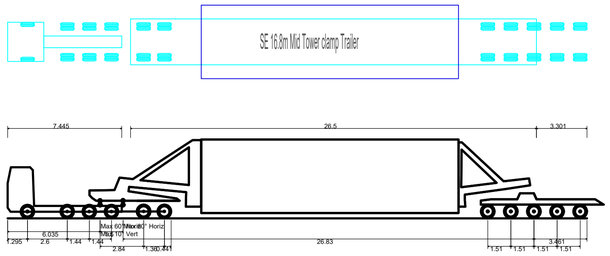
|---|---|
| Overall Length | 37.076m |
| Overall Width | 3.000m |
| Overall Body Height | 5.241m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.520m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




SE 16.8m Mid Tower clamp Trailer

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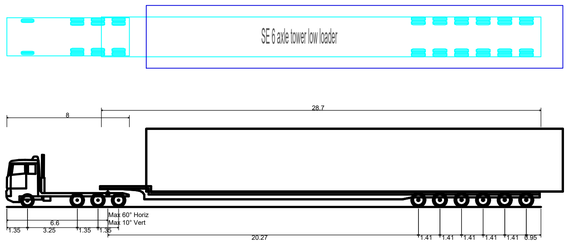
|---|---|
| Overall Length | 37.826m |
| Overall Width | 3.000m |
| Overall Body Height | 5.141m |
| Min Body Ground Clearance | 0.341m |
| Max Track Width | 2.520m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




SE 6 axle tower low loader

| | |
|---|---|
| Overall Length | 34.870m |
| Overall Width | 2.600m |
| Overall Body Height | 5.105m |
| Min Body Ground Clearance | 0.322m |
| Max Track Width | 2.600m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 10.000m |

SCALE 1 : 200

10m 0 10m

## NOTES

1. ALL DIMENSIONS IN METERS, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
3. THE FOLLOWING ASSUMPTIONS HAVE BEEN MADE:
   - 3.1. COUPLER AND KINGPIN LOCATIONS ARE ASSUMED BASED ON ILLUSTRATIVE LAYOUTS
   - 3.2. FIXED REAR AXLE TURNING RATIOS ARE:
   - 3.2.1. 1 to 0.7 (SUPERWING) AND
   - 3.2.2. 1 to 0.75 (CLAMP TRAILER/LOW LOADER)
   - 3.3. LOCK TO LOCK TURNING TIME ASSUMED TO BE 6 SECONDS.
   - 3.4. MAXIMUM ARTICULATION ANGLES ARE 60 DEGREES
4. IF ACTUAL VEHICLES USED FOR THE DELIVERY OF THE TURBINE COMPONENTS DIFFER FROM THOSE SHOWN ON THIS DRAWING THEN ANY DESIGN BASED UPON THIS INFORMATION WILL NEED TO BE REASSESSED TO CONFIRM THAT IT IS ACCEPTABLE.

| Rev. | Date | Amendment Details | Drawn | Chk'd | App'd |
|---|---|---|---|---|---|
| 1 | 03/07/23 | VEHICLE UPDATE | IB | MWD | MWD |
| 0 | | FOR APPROVAL | IB | MWD | MWD |



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Drawing Status

FOR APPROVAL

Project Title

HILL OF FARE

Drawing Title

Turnbine Delivery Vehicles Specifications

| Scale | Designed | Drawn | Checked | Approved |
|---|---|---|---|---|
| 1:200 | IB | IB | MWD | MWD |
| Original Size | Date | Date | Date | Date |
| A1 | 19/06/23 | 19/06/23 | 19/06/23 | 19/06/23 |

Drawing Number: 65209565_ATR_DRW_001

Revision: 1

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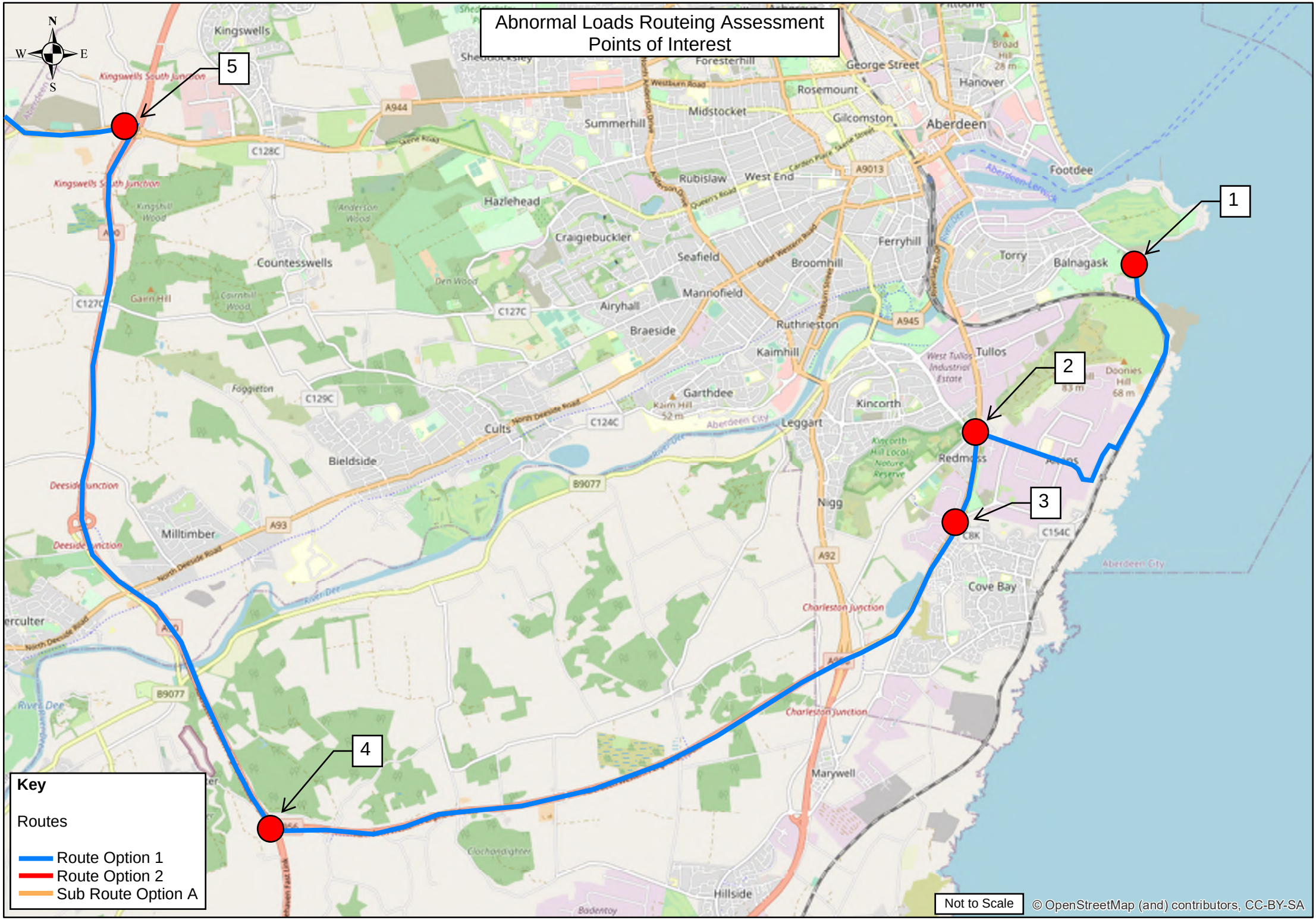
# Appendix B – POI Plan


Abnormal Loads Routeing Assessment
Points of Interest
N
W
E
S
1
2
3
4
5
Key
Routes
Route Option 1
Route Option 2
Sub Route Option A
Not to Scale
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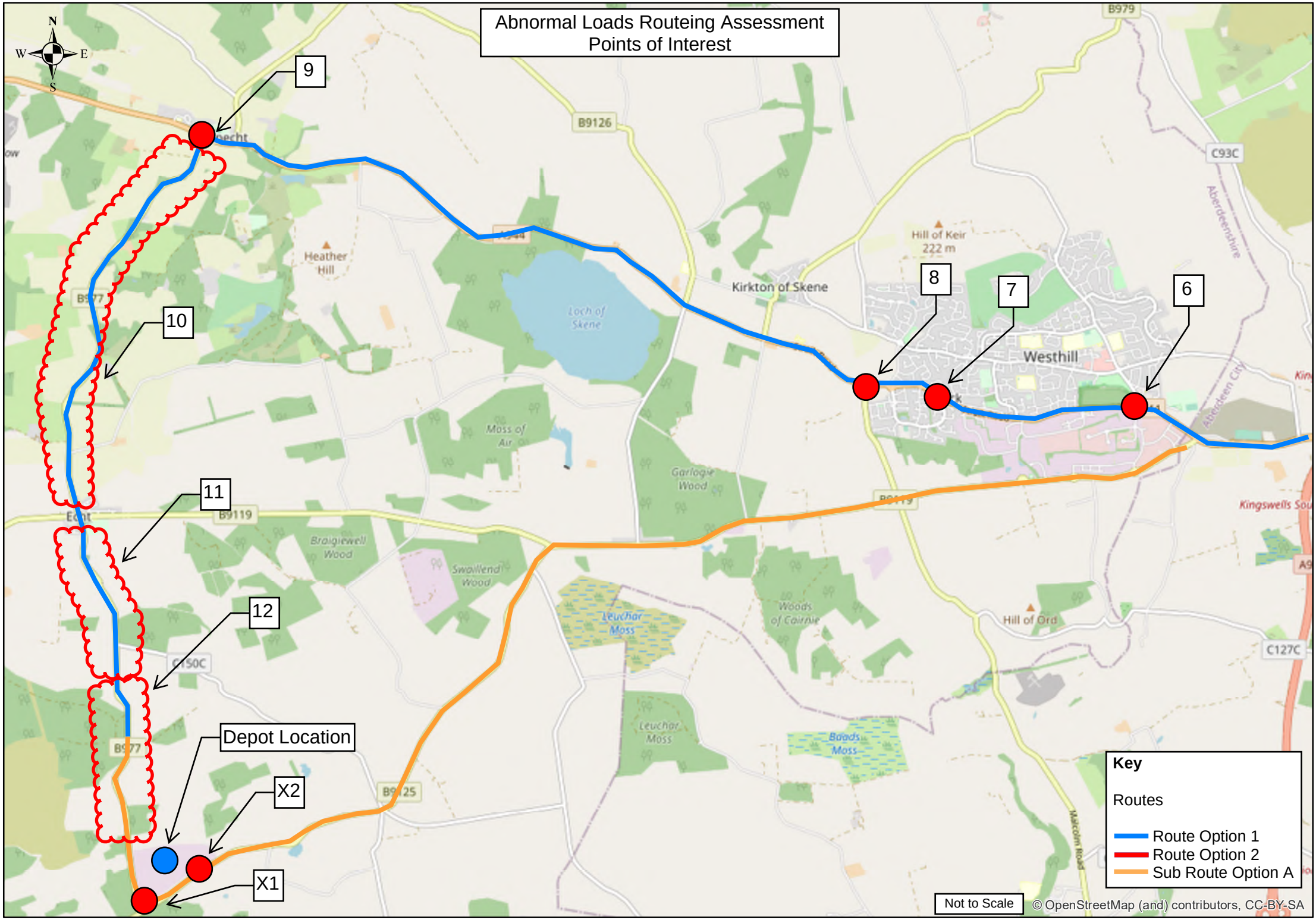
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Points of Interest
N
W
E
S
9
10
11
12
Depot Location
X2
X1
8
7
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B9126
B979
C93C
B9119
C150C
B977
B9125
C127C
Heather Hill
Hill of Keir
222 m
Kirkton of Skene
Westhill
Loch of Skene
Moss of Air
Garlogie Wood
Braigiewell Wood
Swallend Wood
Leuchar Moss
Woods of Cairnie
Hill of Ord
Baads Moss
Aberdeenshire
Aberdeen City
Kingswells
Malcolm Road
Key
Routes
Route Option 1
Route Option 2
Sub Route Option A
Not to Scale
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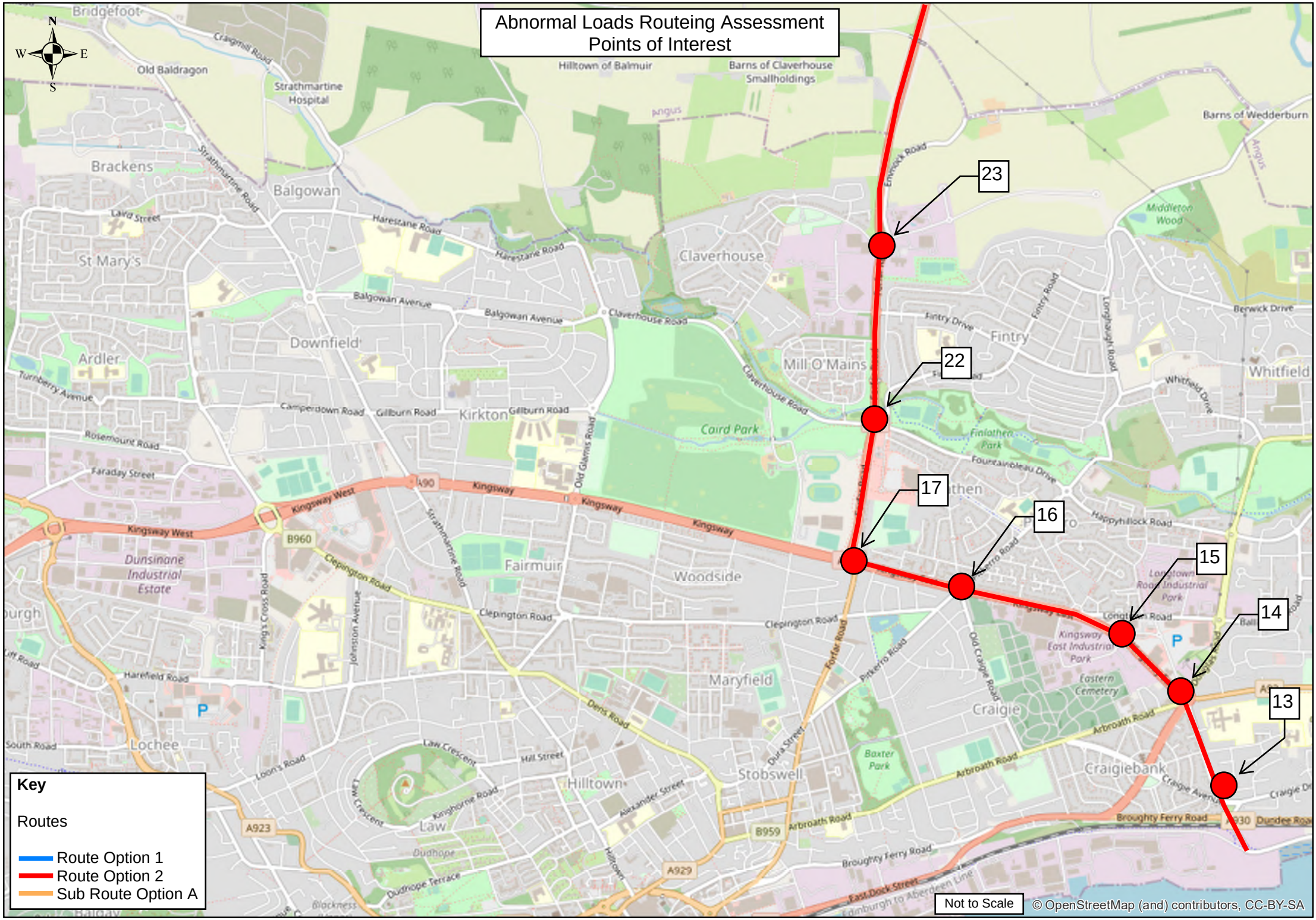
Abnormal Loads Routeing Assessment
Points of Interest
N
W
E
S
23
22
17
16
15
14
13
Key
Routes
Route Option 1
Route Option 2
Sub Route Option A
Not to Scale
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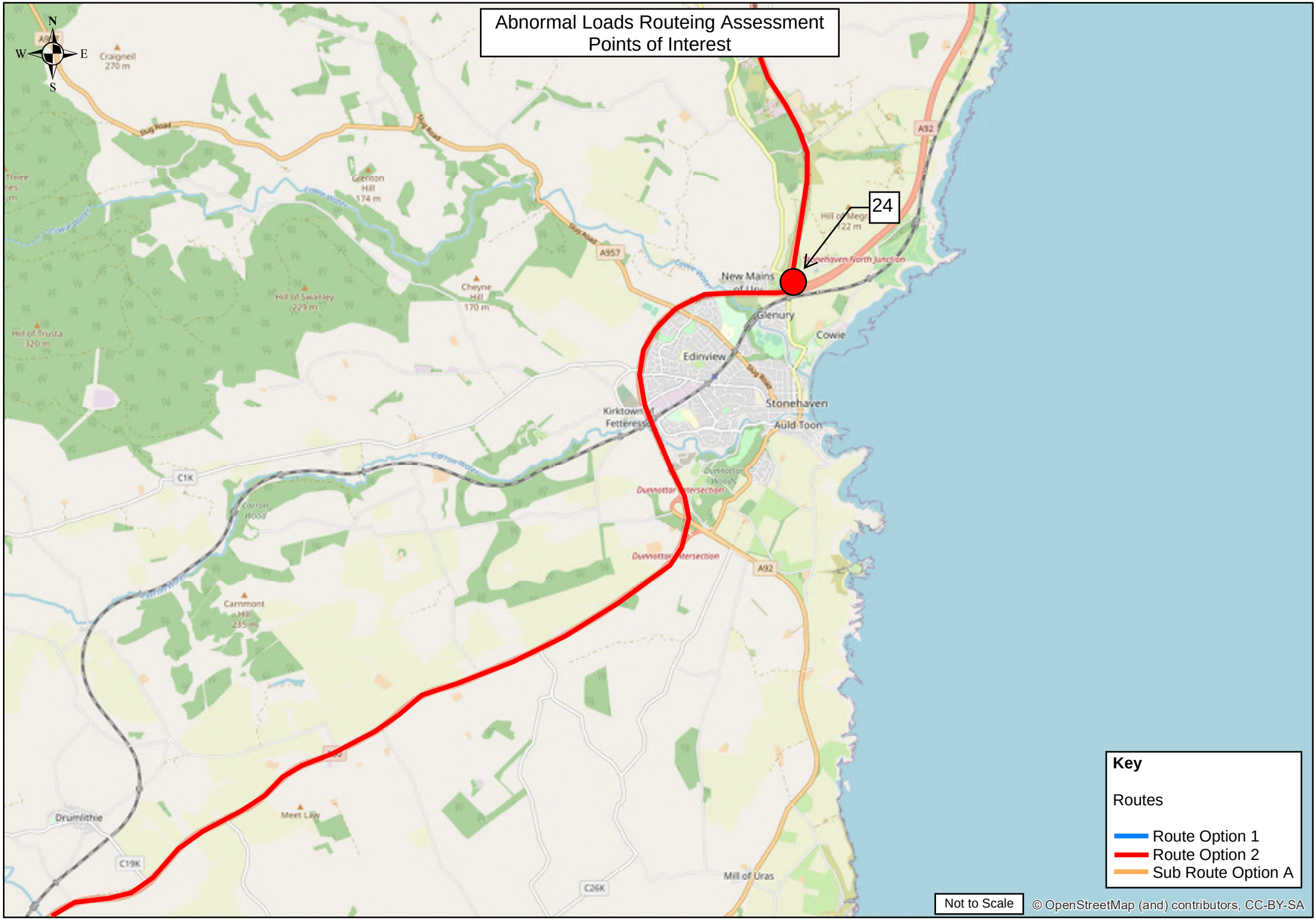
Abnormal Loads Routeing Assessment
Points of Interest
N
W
E
S
24
Craigneil
270 m
Glenon Hill
174 m
Hill of Swatley
229 m
Cheyne Hill
170 m
Hill of Trusta
320 m
New Mains
Glenury
Cowie
Edinview
Stonehaven
Auld Toon
Kirktown of Fetteresso
Carron Wood
Carmmont Hill
235 m
Meet Law
Drumlithie
Mill of Uras
A92
A957
C1K
C19K
C26K
Key
Routes
Route Option 1
Route Option 2
Sub Route Option A
Not to Scale
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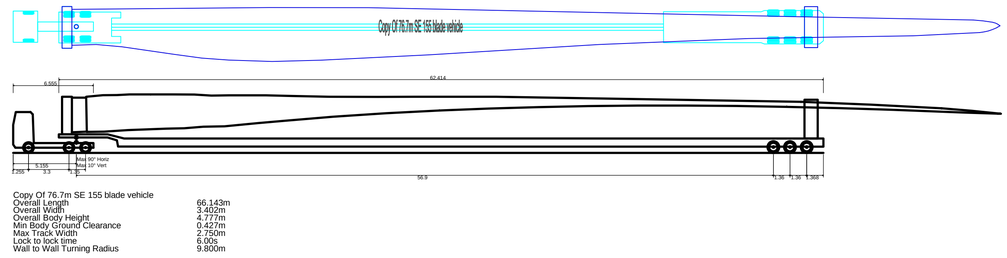
# Appendix C – Swept Path Analysis




Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
3. IF ACTUAL VEHICLES USED FOR THE DELIVERY OF THE TURBINE COMPONENTS DIFFER FROM THOSE SHOWN ON THIS DRAWING THEN ANY DESIGN BASED UPON THIS INFORMATION WILL NEED TO BE REASSESSED TO CONFIRM THAT IT IS ACCEPTABLE.
4. BASED ON OS MASTERMAP. LICENCE 0100031673. 2023
5. PRIOR TO UNDERTAKING FULLY LOADED DELIVERIES, ALL MITIGATION WORKS SHOULD BE UNDERTAKEN TO THE SATISFACTION OF THE ROAD AUTHORITY AND HAULAGE CONTRACTOR. A DRY RUN SHOULD ALSO BE UNDERTAKEN TO ENSURE THE PROPOSED MANOEUVRES ARE POSSIBLE WITHIN THE AVAILABLE SPACE.

**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 02

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:250 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-01

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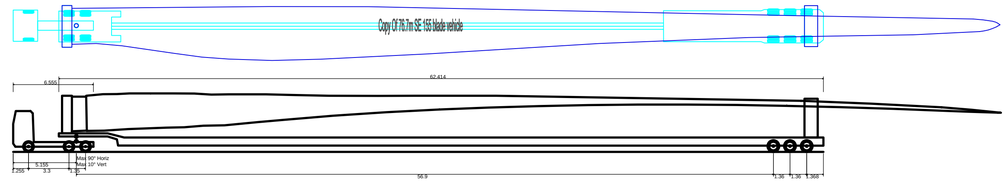


Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




SCALE 1 : 500

10m 0 40m

## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
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4. BASED ON OS MASTERMAP. LICENCE 0100031673. 2023
5. PRIOR TO UNDERTAKING FULLY LOADED DELIVERIES, ALL MITIGATION WORKS SHOULD BE UNDERTAKEN TO THE SATISFACTION OF THE ROAD AUTHORITY AND HAULAGE CONTRACTOR. A DRY RUN SHOULD ALSO BE UNDERTAKEN TO ENSURE THE PROPOSED MANOEUVRES ARE POSSIBLE WITHIN THE AVAILABLE SPACE.

**KEY**

OVERRUN

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|---|---|---|---|---|---|
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ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 03

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
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Drawing Number

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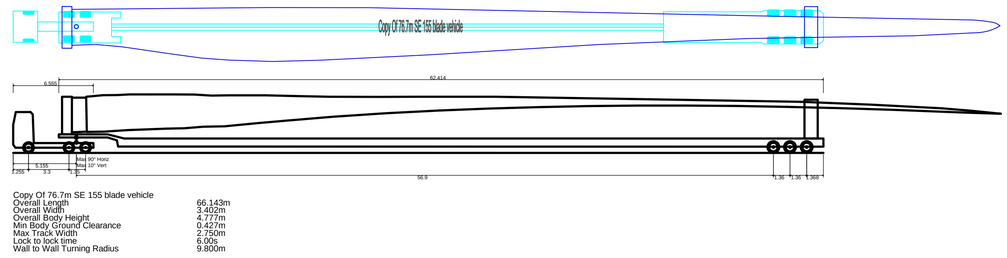


Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




SCALE 1 : 250

10m 0 10m

## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
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Project Title

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Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 04

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
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| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
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Drawing Number

65209565_ATR_DRW_002-03

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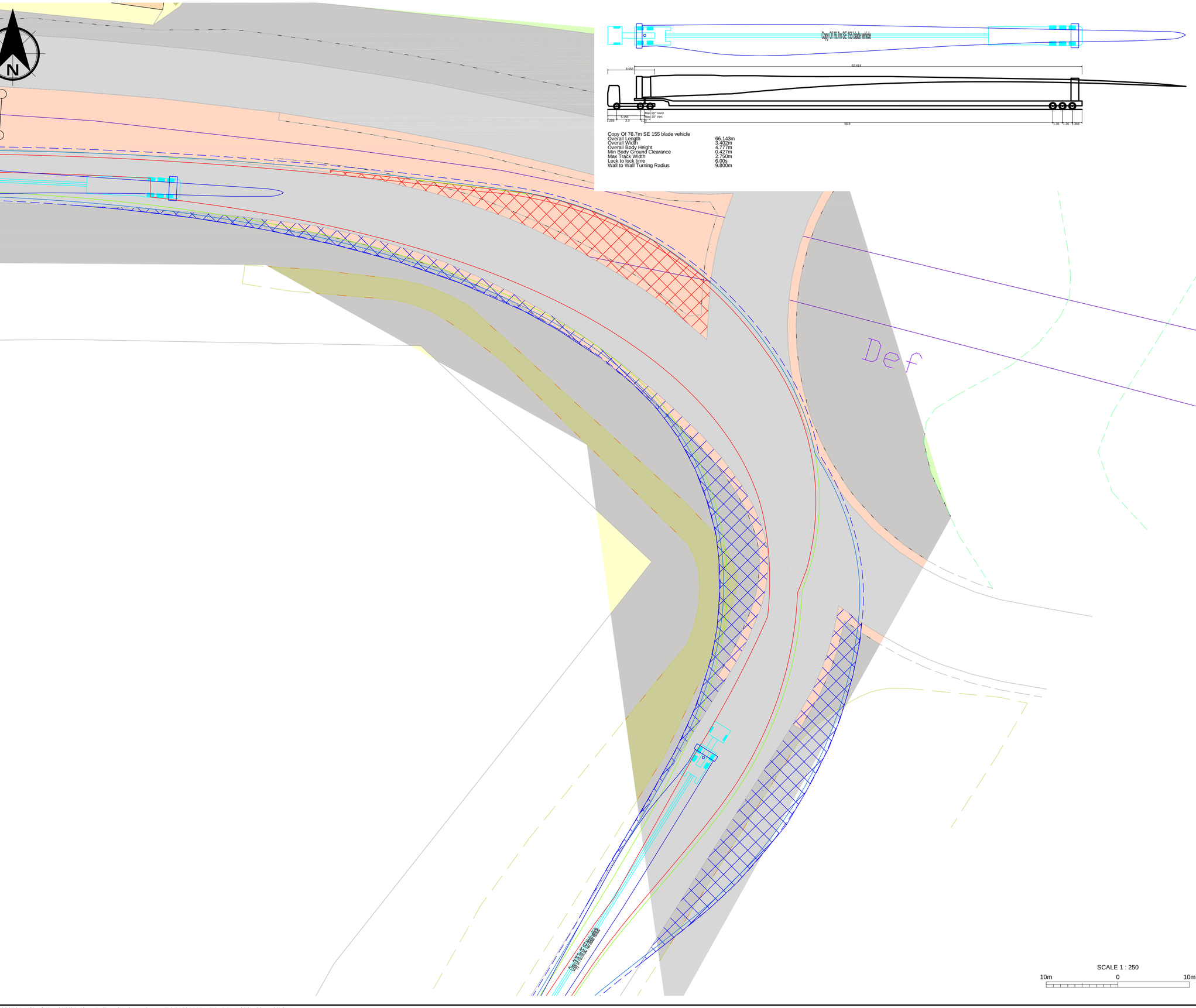


## NOTES

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2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
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**KEY**

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Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 05

Purpose Of Issue

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|---|---|
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| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
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Drawing Number

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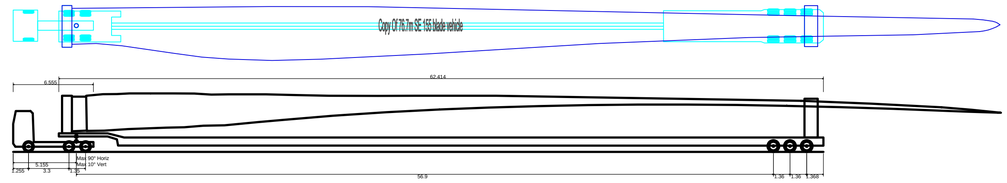
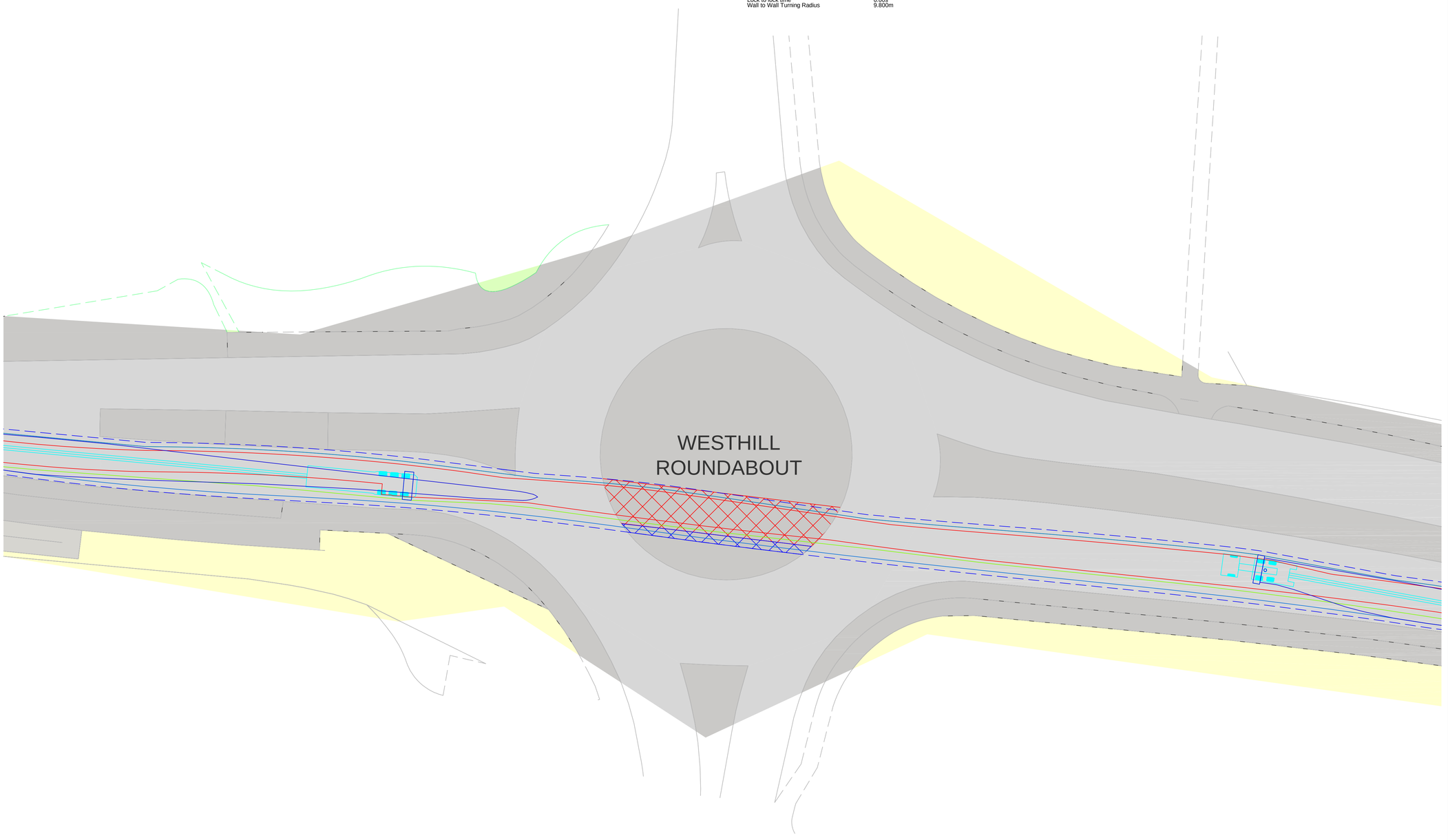



Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




SCALE 1 : 250

10m 0 10m

## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
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### KEY

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Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 06

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
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| A1 | 1:250 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-05

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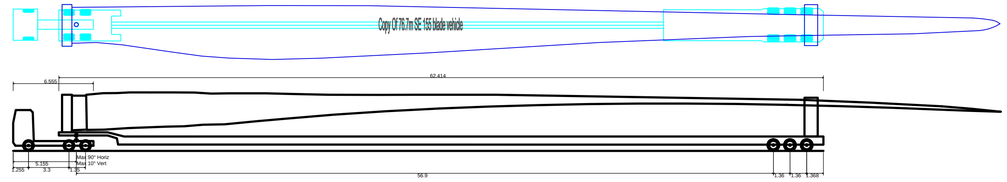


Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |

SCALE 1 : 250

10m 0 10m

## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
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### KEY

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Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 07

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
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Drawing Number

65209565_ATR_DRW_002-06

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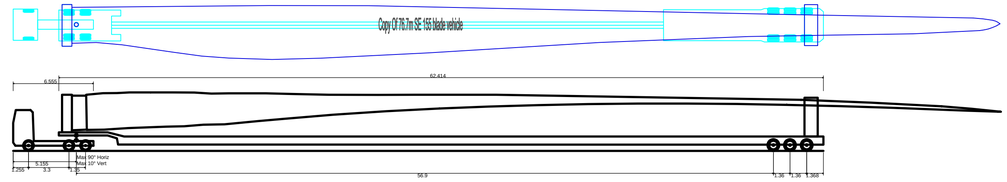


Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
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| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |

SCALE 1 : 250

10m 0 10m

## NOTES

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### KEY

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Project Title

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Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 08

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:250 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-07

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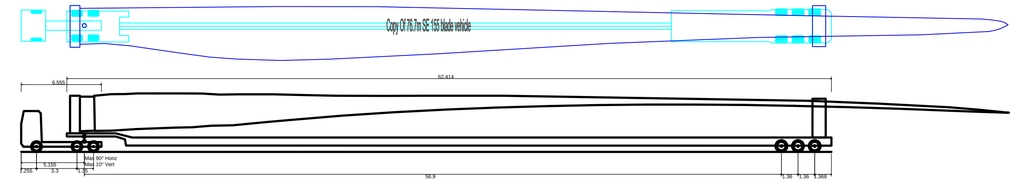


Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |


SCALE 1 : 250

10m 0 10m

## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
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4. BASED ON OS MASTERMAP. LICENCE 0100031673. 2023
5. PRIOR TO UNDERTAKING FULLY LOADED DELIVERIES, ALL MITIGATION WORKS SHOULD BE UNDERTAKEN TO THE SATISFACTION OF THE ROAD AUTHORITY AND HAULAGE CONTRACTOR. A DRY RUN SHOULD ALSO BE UNDERTAKEN TO ENSURE THE PROPOSED MANOEUVRES ARE POSSIBLE WITHIN THE AVAILABLE SPACE.

**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Tel: +44 (0)161 927 4830
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Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 09

Purpose Of issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:250 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-08

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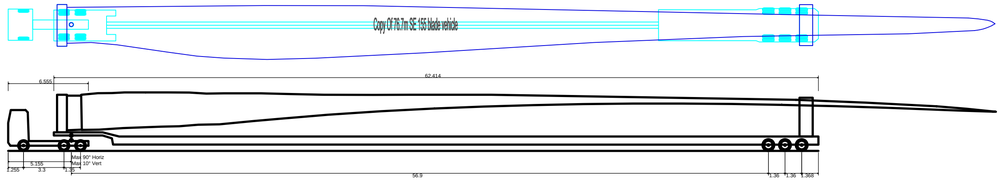
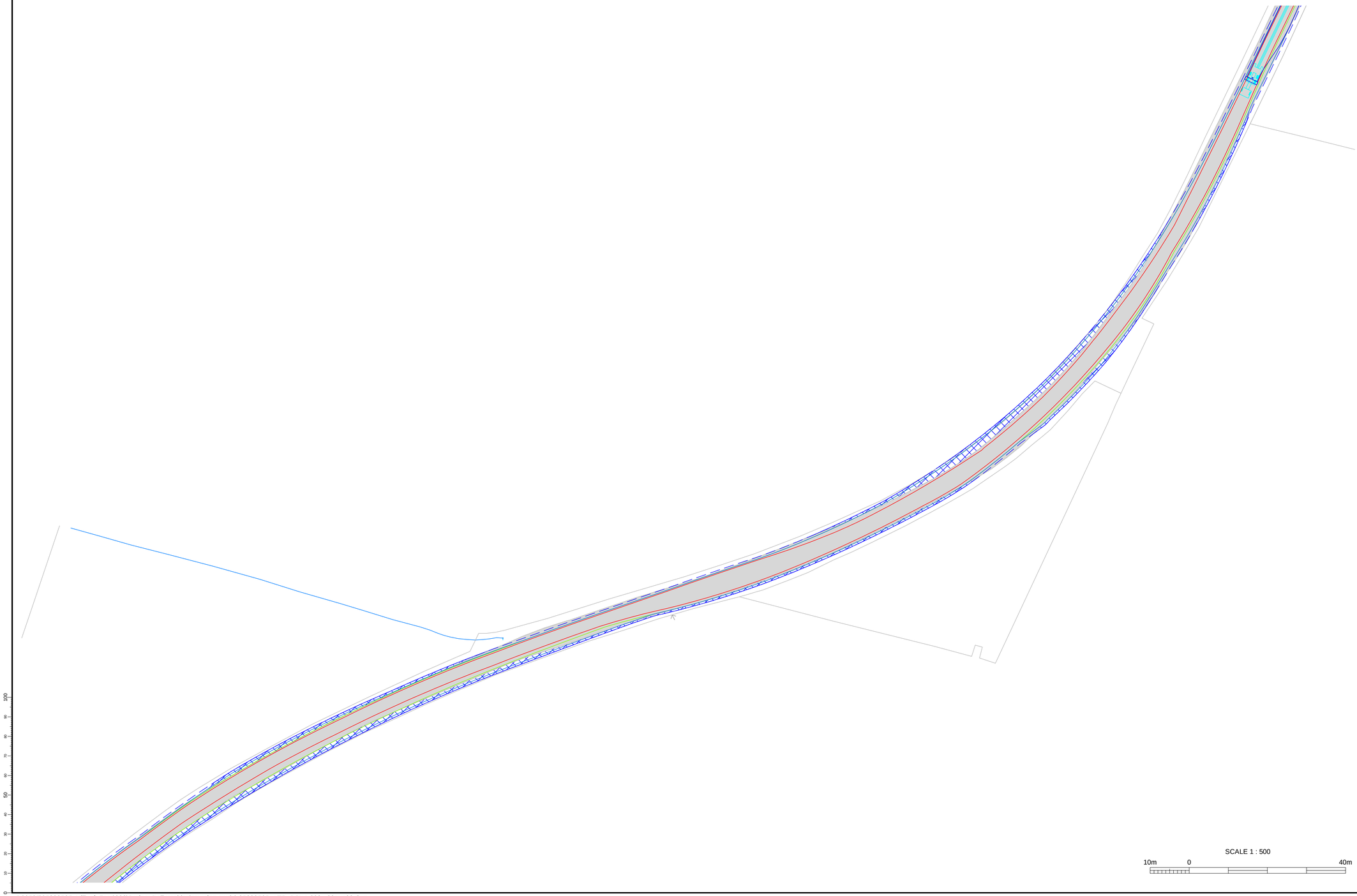



| | |
|---|---|
| Copy Of 76.7m SE 155 blade vehicle | |
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




## NOTES

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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Web: www.sweco.co.uk

Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 10A

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-09

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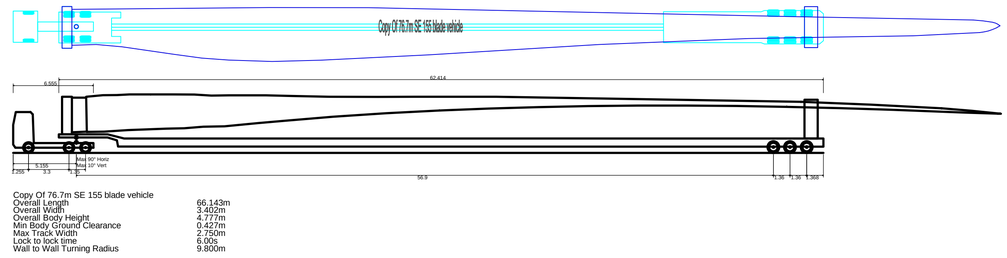


Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |


SCALE 1 : 500

10m 0 40m

## NOTES

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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 10B

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-10

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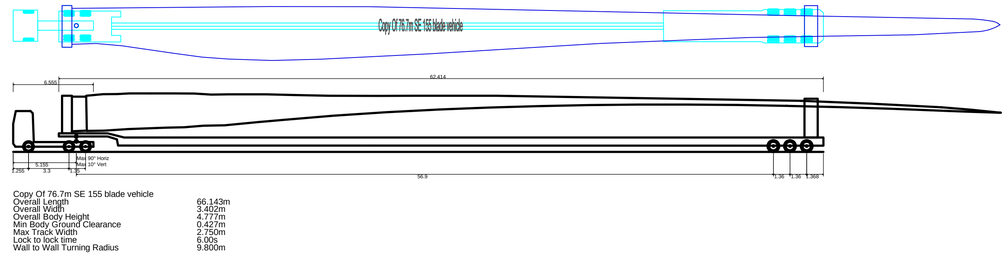
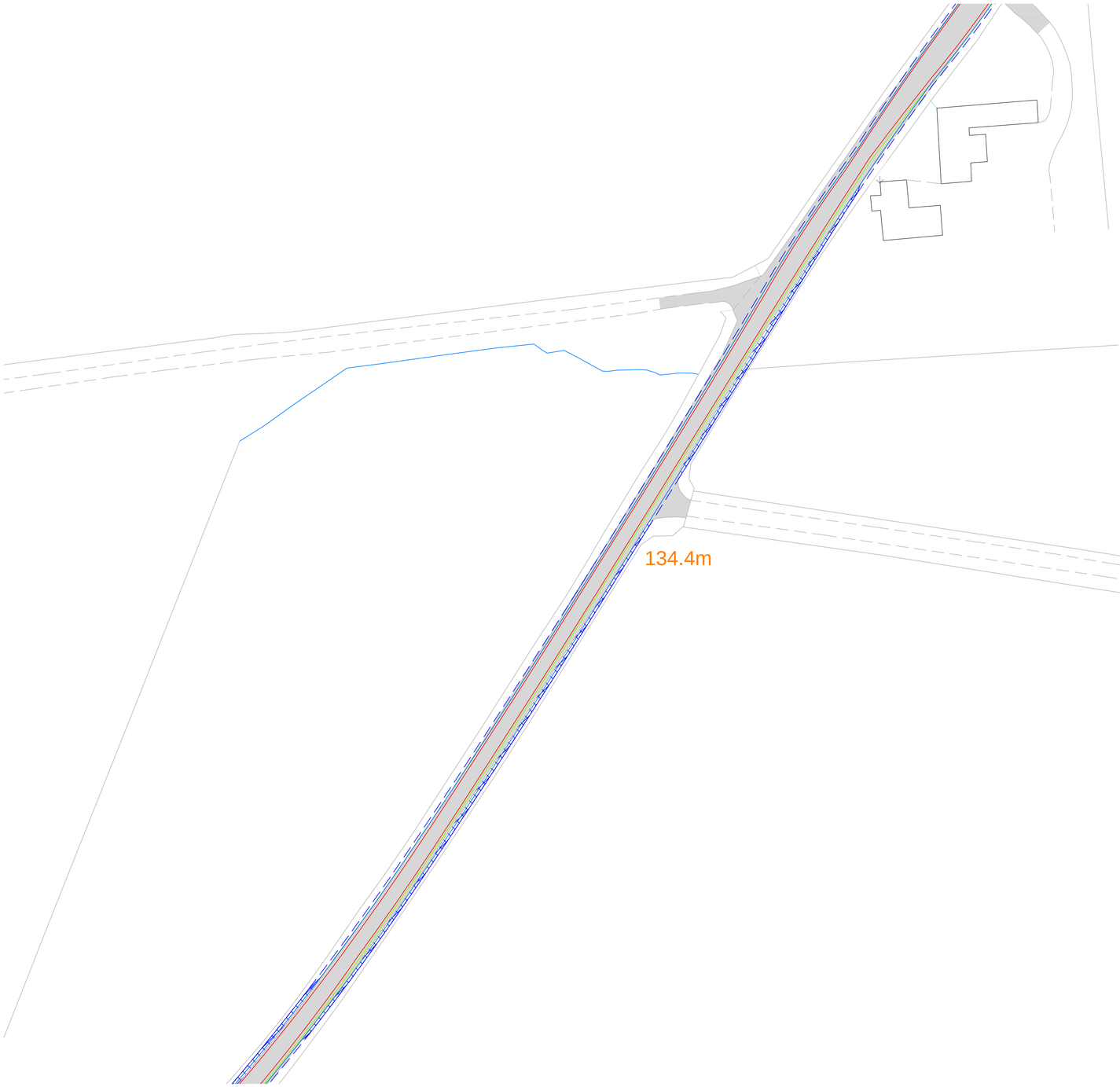



Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




SCALE 1 : 500

10m 0 40m

## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
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### KEY

OVERRUN

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| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
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Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 10C

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-11

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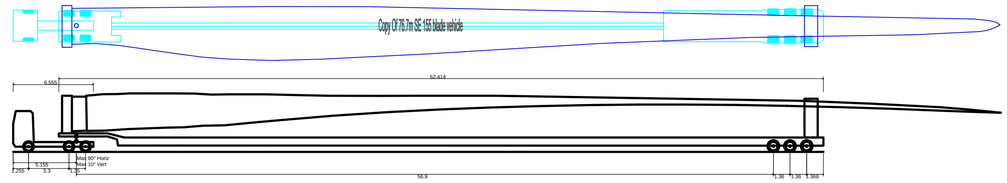
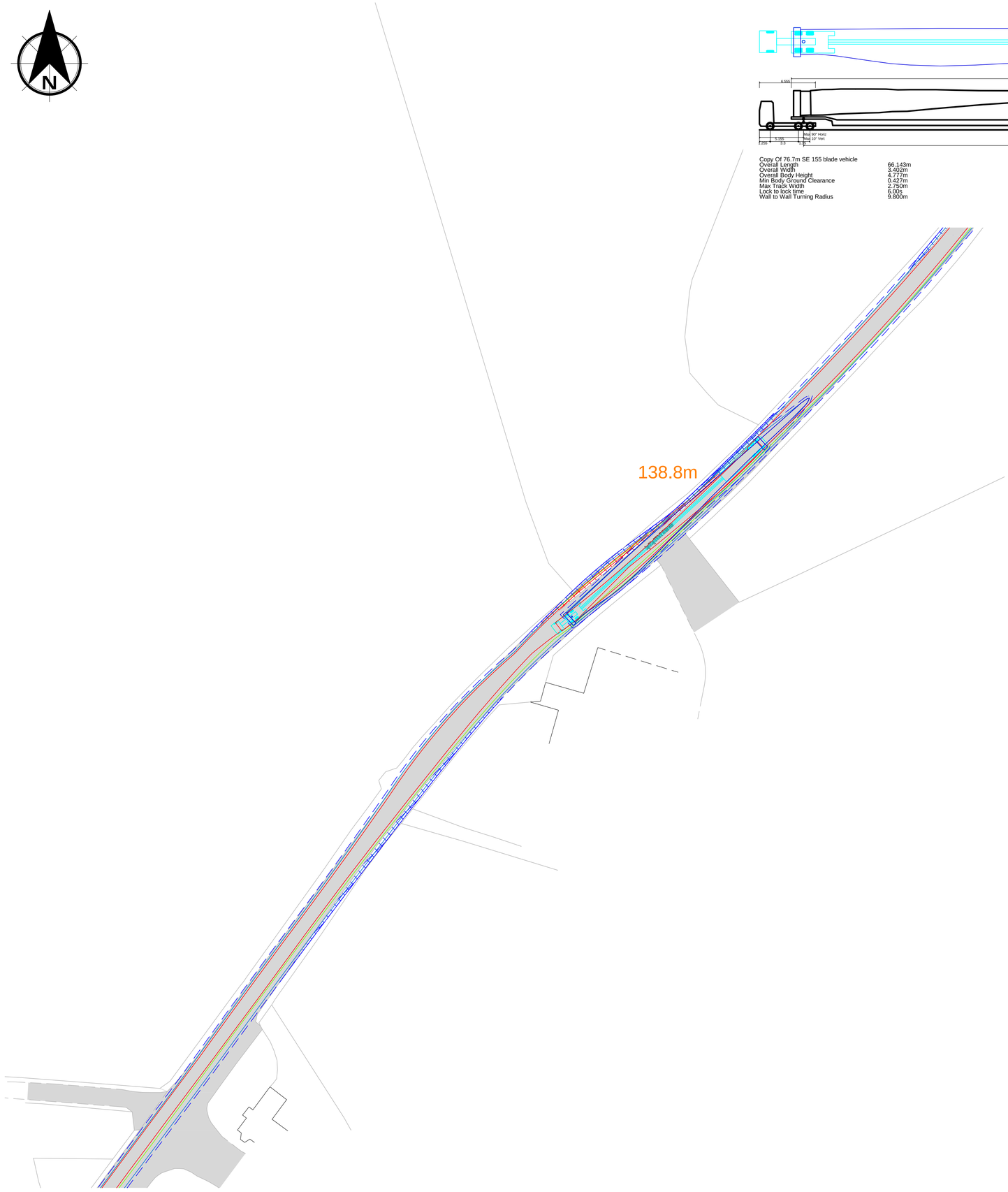



Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




SCALE 1 : 500

10m 0 40m

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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 10D

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-12

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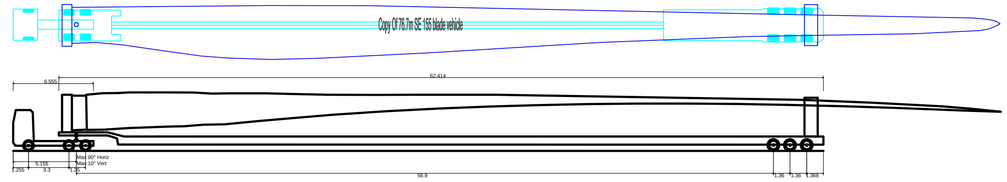


Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |

SCALE 1 : 500

10m 0 40m

## NOTES

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**KEY**

OVERRUN

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| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
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| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Tel: +44 (0)161 927 4830
Web: www.sweco.co.uk

Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 10E

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-13

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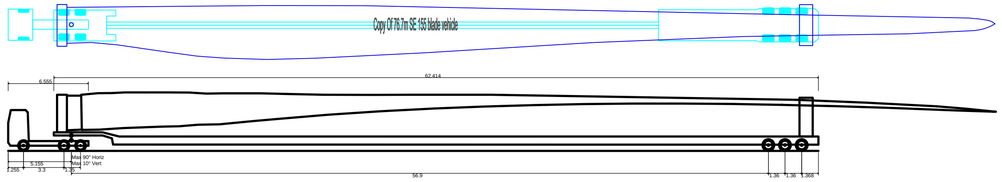


Copy Of 76.7m SE 155 blade vehicle

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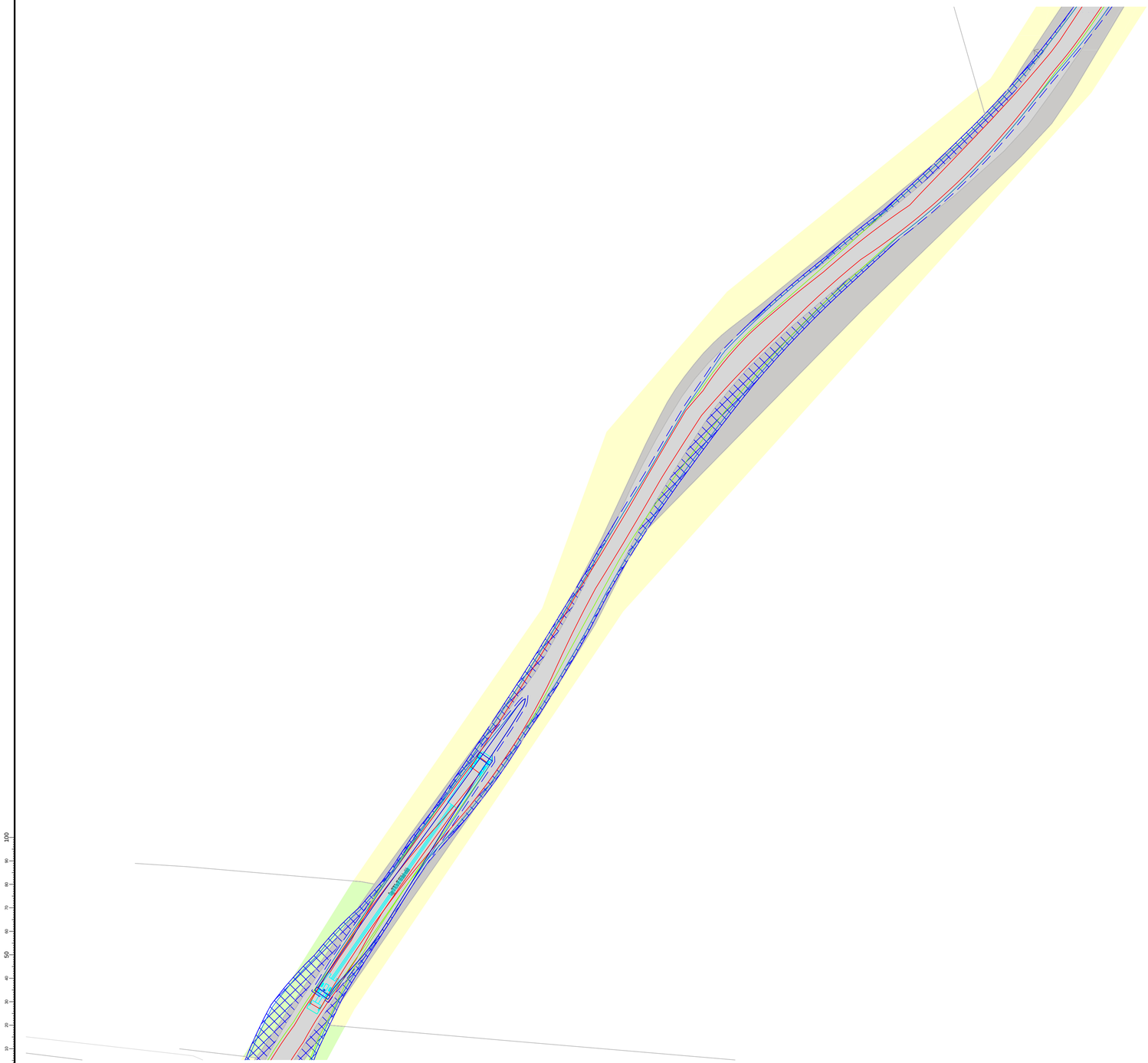


SCALE 1 : 500

10m 0 40m

## NOTES

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**KEY**

OVERRUN

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Web: www.sweco.co.uk

SWECO

Client

res

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 10F

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-14

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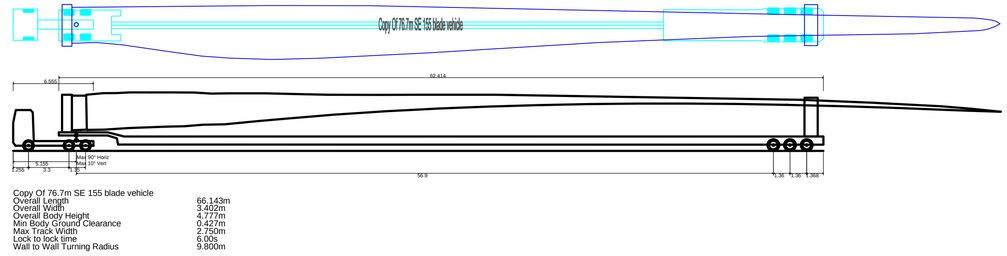


Copy Of 76.7m SE 155 blade vehicle

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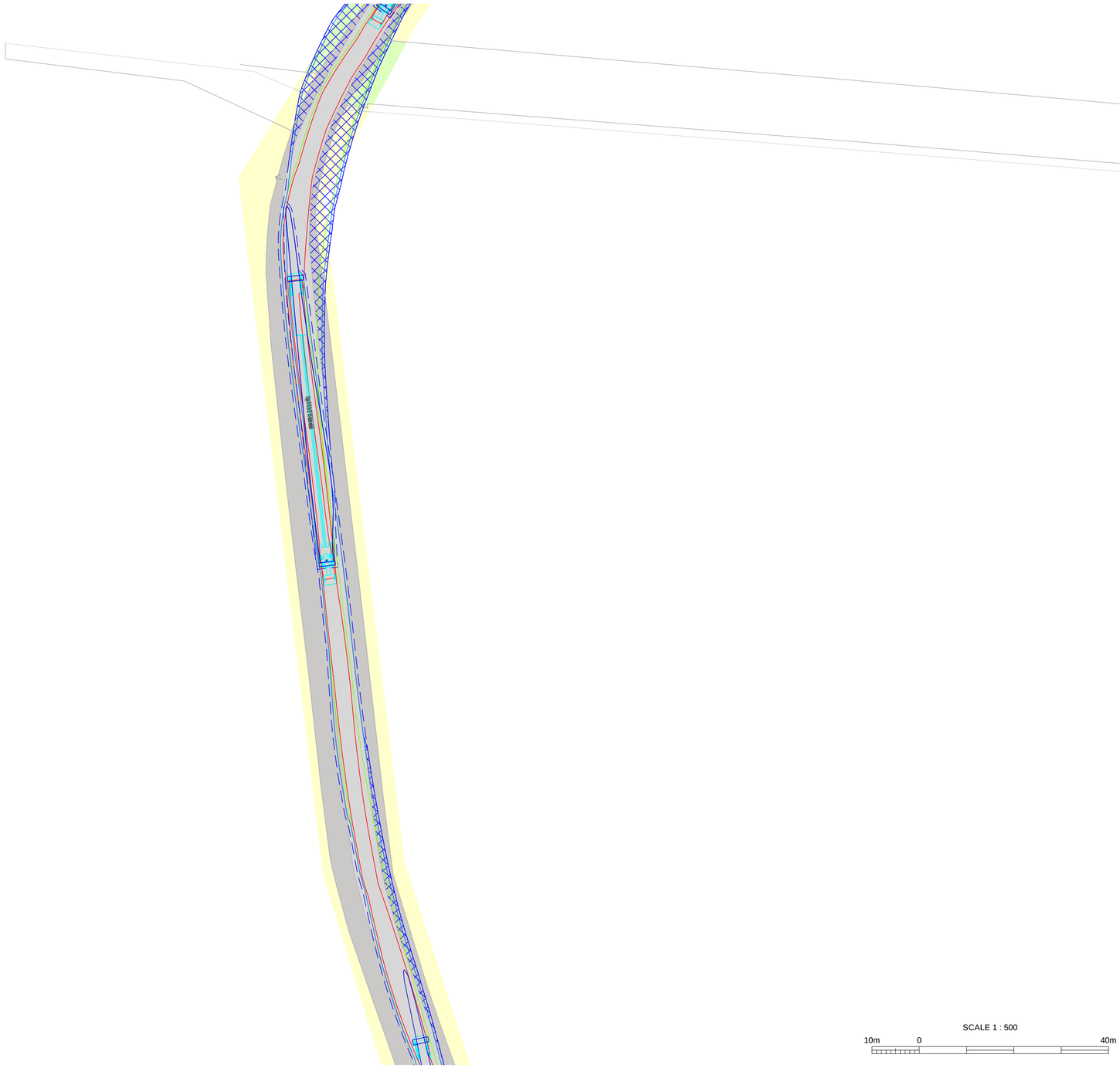


SCALE 1 : 500

10m 0 40m

## NOTES

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**KEY**

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Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 10G

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-15

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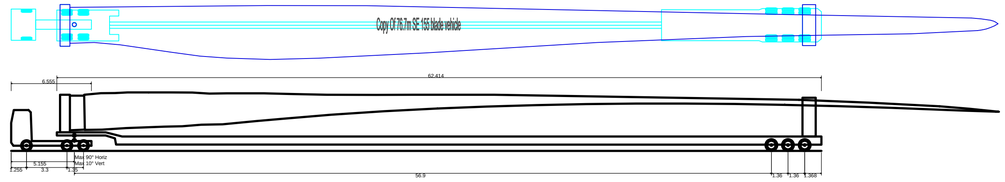


Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |

SCALE 1 : 500

10m 0 40m

## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
3. IF ACTUAL VEHICLES USED FOR THE DELIVERY OF THE TURBINE COMPONENTS DIFFER FROM THOSE SHOWN ON THIS DRAWING THEN ANY DESIGN BASED UPON THIS INFORMATION WILL NEED TO BE REASSESSED TO CONFIRM THAT IT IS ACCEPTABLE.
4. BASED ON OS MASTERMAP. LICENCE 0100031673. 2023
5. PRIOR TO UNDERTAKING FULLY LOADED DELIVERIES, ALL MITIGATION WORKS SHOULD BE UNDERTAKEN TO THE SATISFACTION OF THE ROAD AUTHORITY AND HAULAGE CONTRACTOR. A DRY RUN SHOULD ALSO BE UNDERTAKEN TO ENSURE THE PROPOSED MANOEUVRES ARE POSSIBLE WITHIN THE AVAILABLE SPACE.

**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Web: www.sweco.co.uk

Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 11A

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-16

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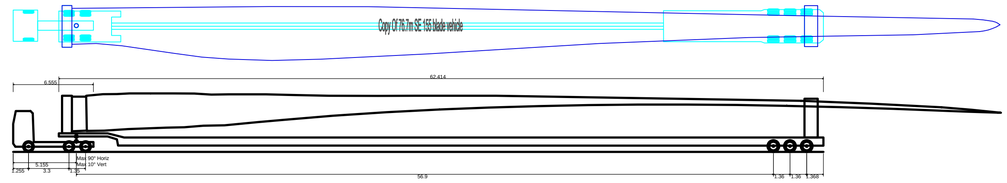


Copy Of 76.7m SE 155 blade vehicle

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| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

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|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 11B

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-17

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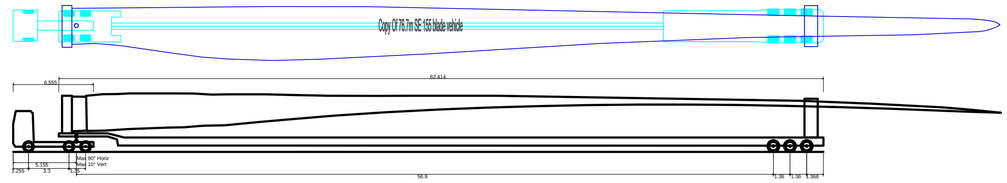


Copy Of 76.7m SE 155 blade vehicle

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| Overall Body Height | 4.777m |
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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 12A

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-18

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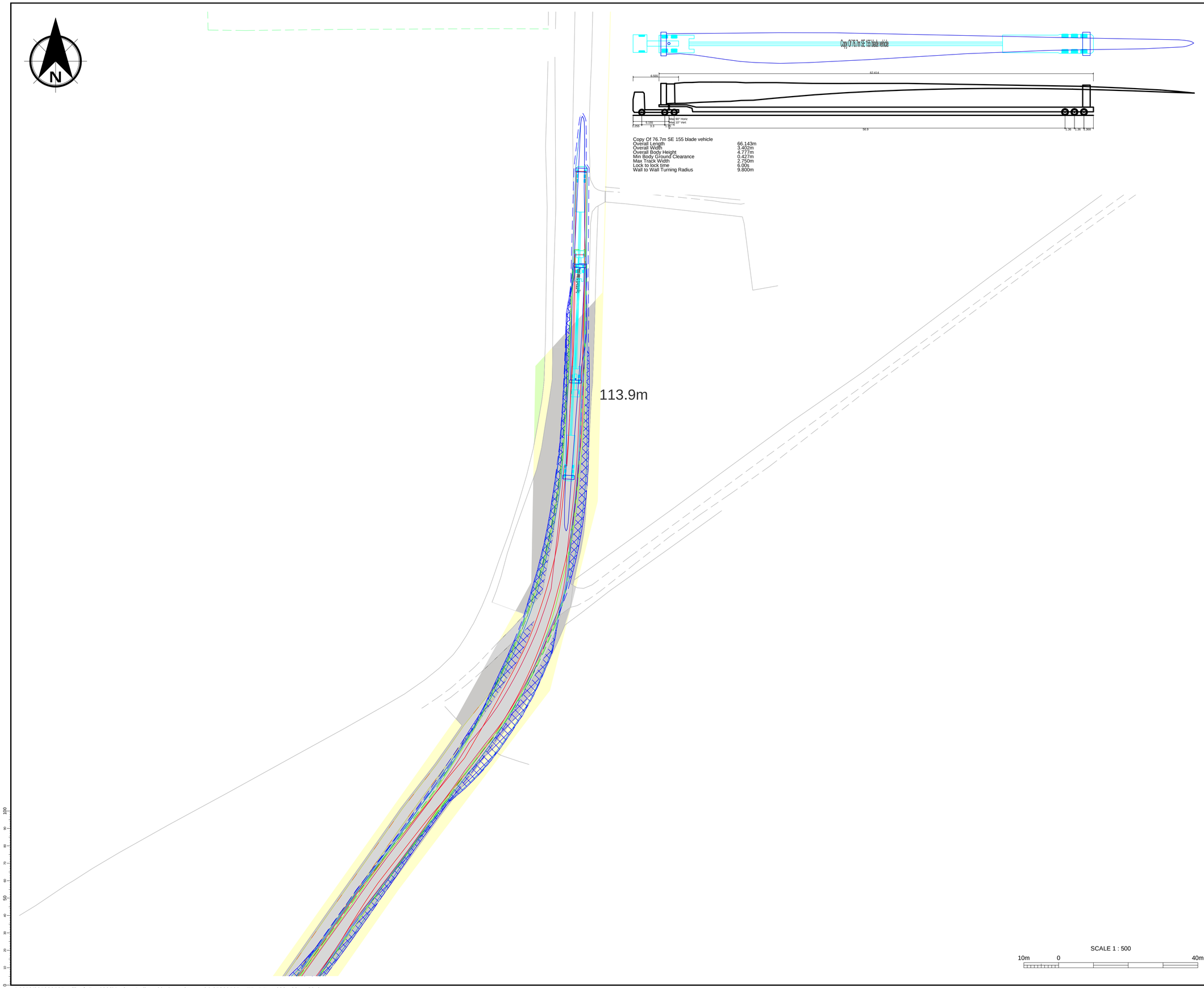


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MANUAL OVERRIDE REAR STEERING

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|---|---|---|---|---|---|
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Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 12B

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-19

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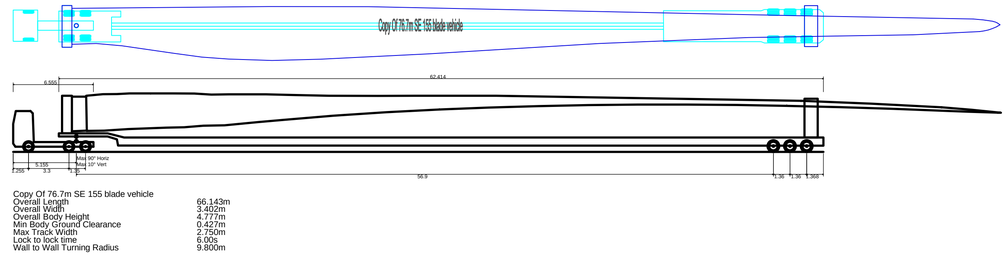


Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
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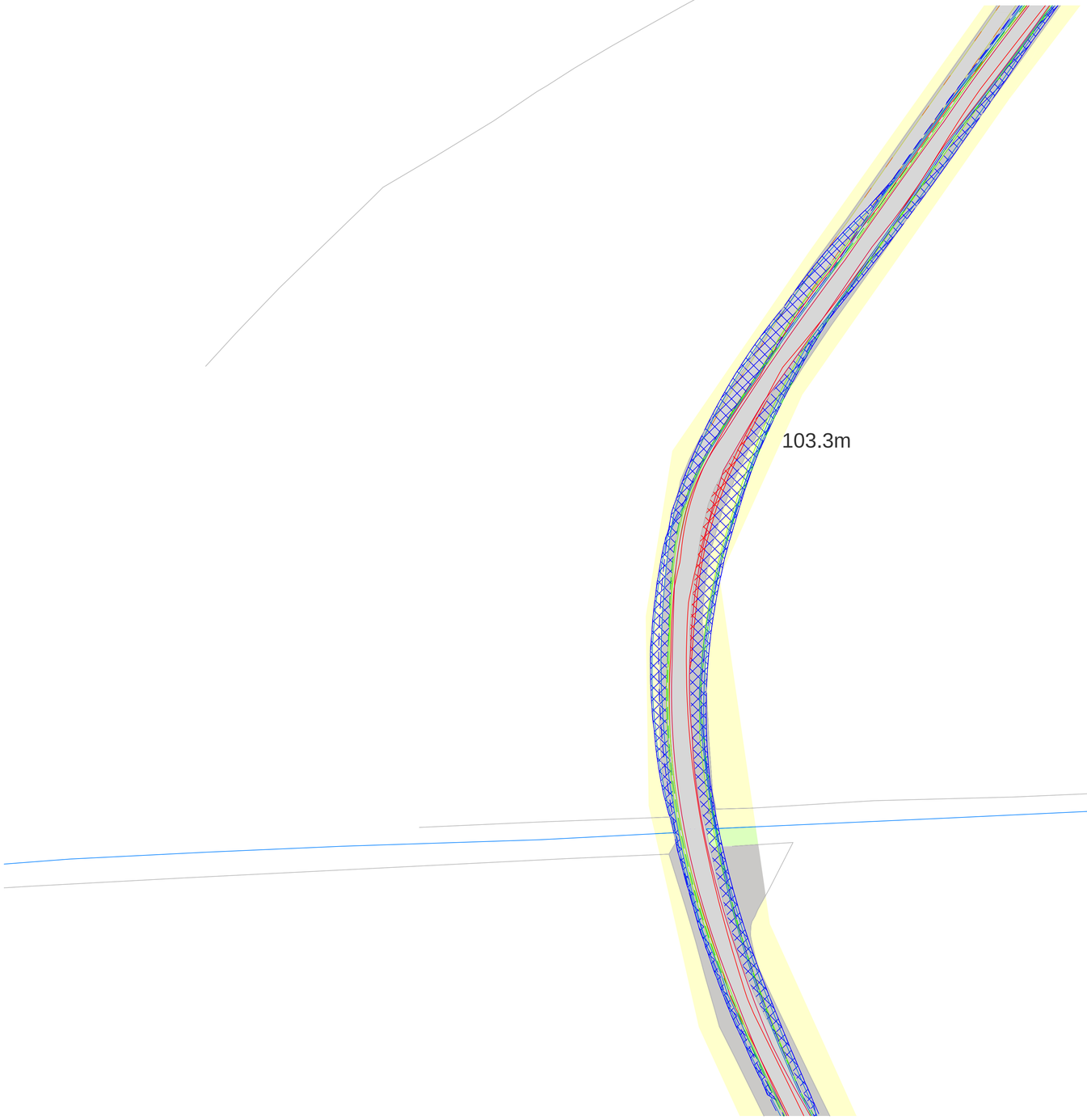


SCALE 1 : 500

10m 0 40m

## NOTES

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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
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| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Client

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Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 12C

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-20

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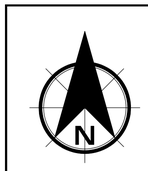


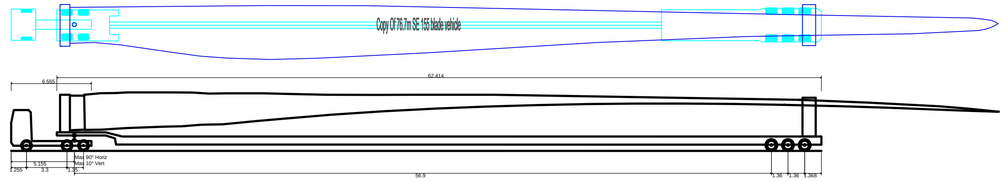


Copy Of 76.7m SE 155 blade vehicle

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SCALE 1 : 250

10m 0 10m

## NOTES

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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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SWECO

Client

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Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI X1

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:250 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-21

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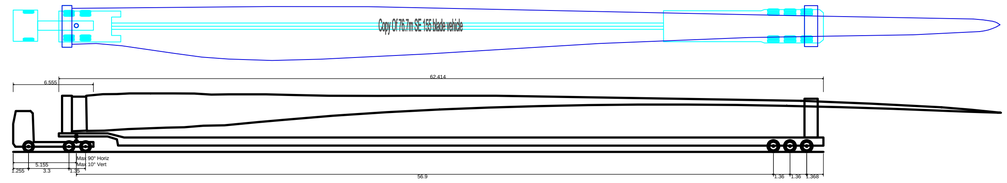


Copy Of 76.7m SE 155 blade vehicle

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| Overall Length | 66.143m |
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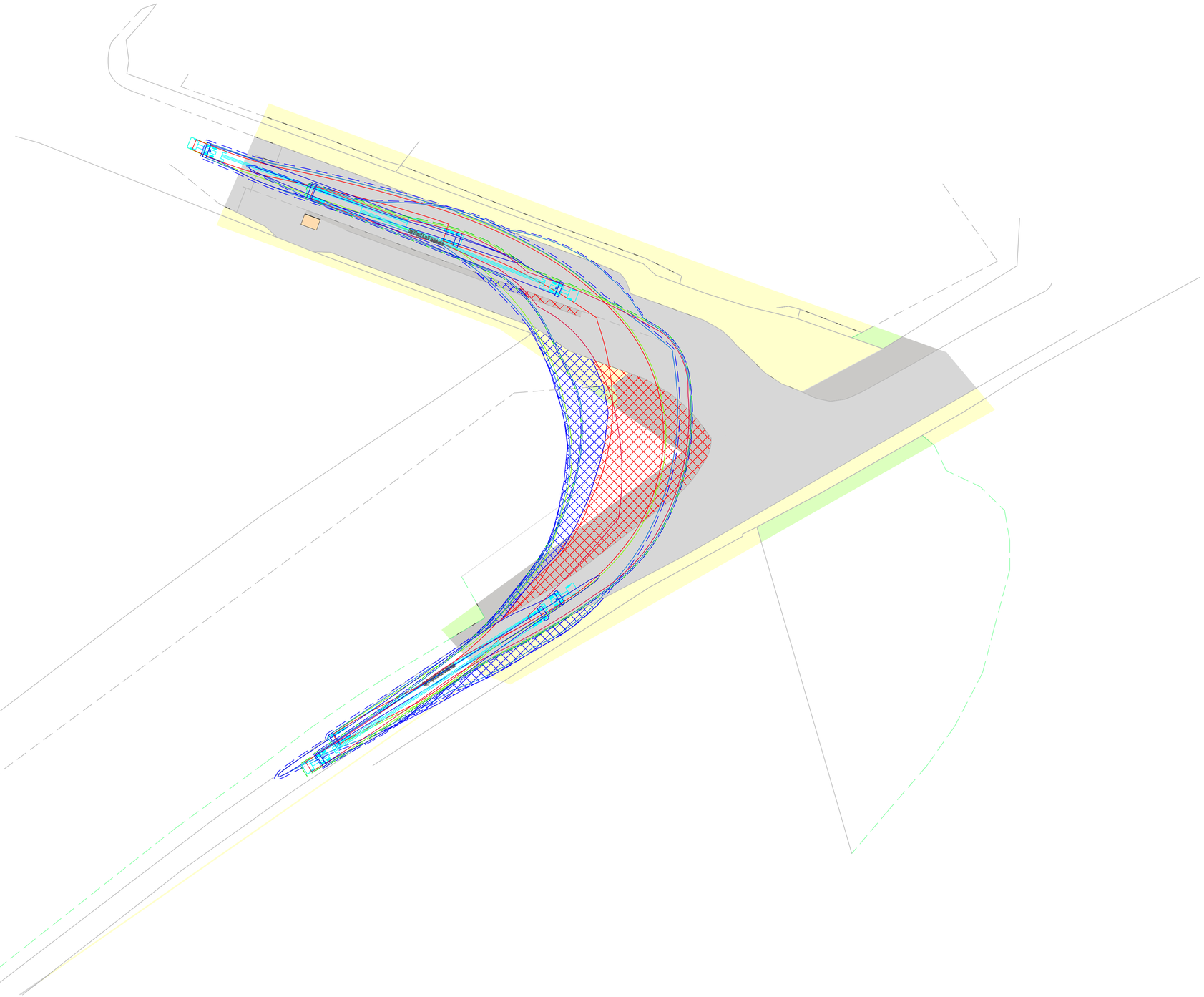

SCALE 1 : 500

10m 0 40m

## NOTES

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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

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|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI X2

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-22

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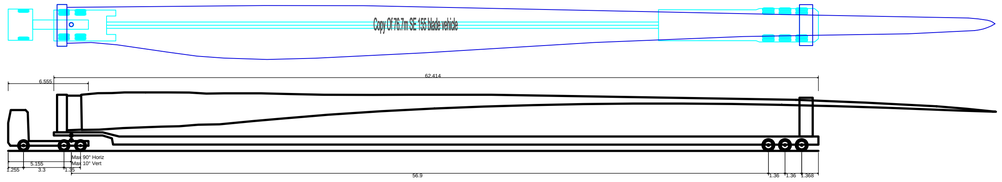


Copy Of 76.7m SE 155 blade vehicle

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| Overall Length | 66.143m |
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SCALE 1 : 500

10m 0 40m

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Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 13

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-23

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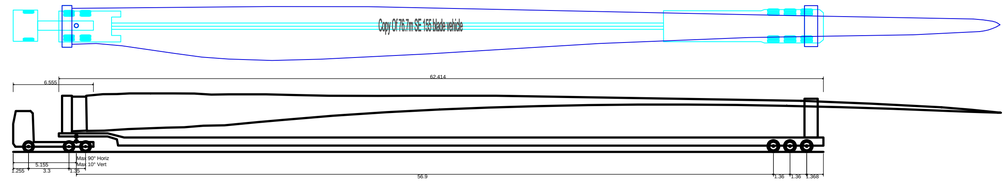


| Copy Of 76.7m SE 155 blade vehicle | |
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SCALE 1 : 250

10m 0 10m

## NOTES

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5. PRIOR TO UNDERTAKING FULLY LOADED DELIVERIES, ALL MITIGATION WORKS SHOULD BE UNDERTAKEN TO THE SATISFACTION OF THE ROAD AUTHORITY AND HAULAGE CONTRACTOR. A DRY RUN SHOULD ALSO BE UNDERTAKEN TO ENSURE THE PROPOSED MANOEUVRES ARE POSSIBLE WITHIN THE AVAILABLE SPACE.

### KEY

OVERRUN

OVERSAIL

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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SWECO

Client

res

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 14

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |
| **Sheet Size** | **Scale** | **Sweco Ref** | **Revision** |
| A1 | 1:250 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-24

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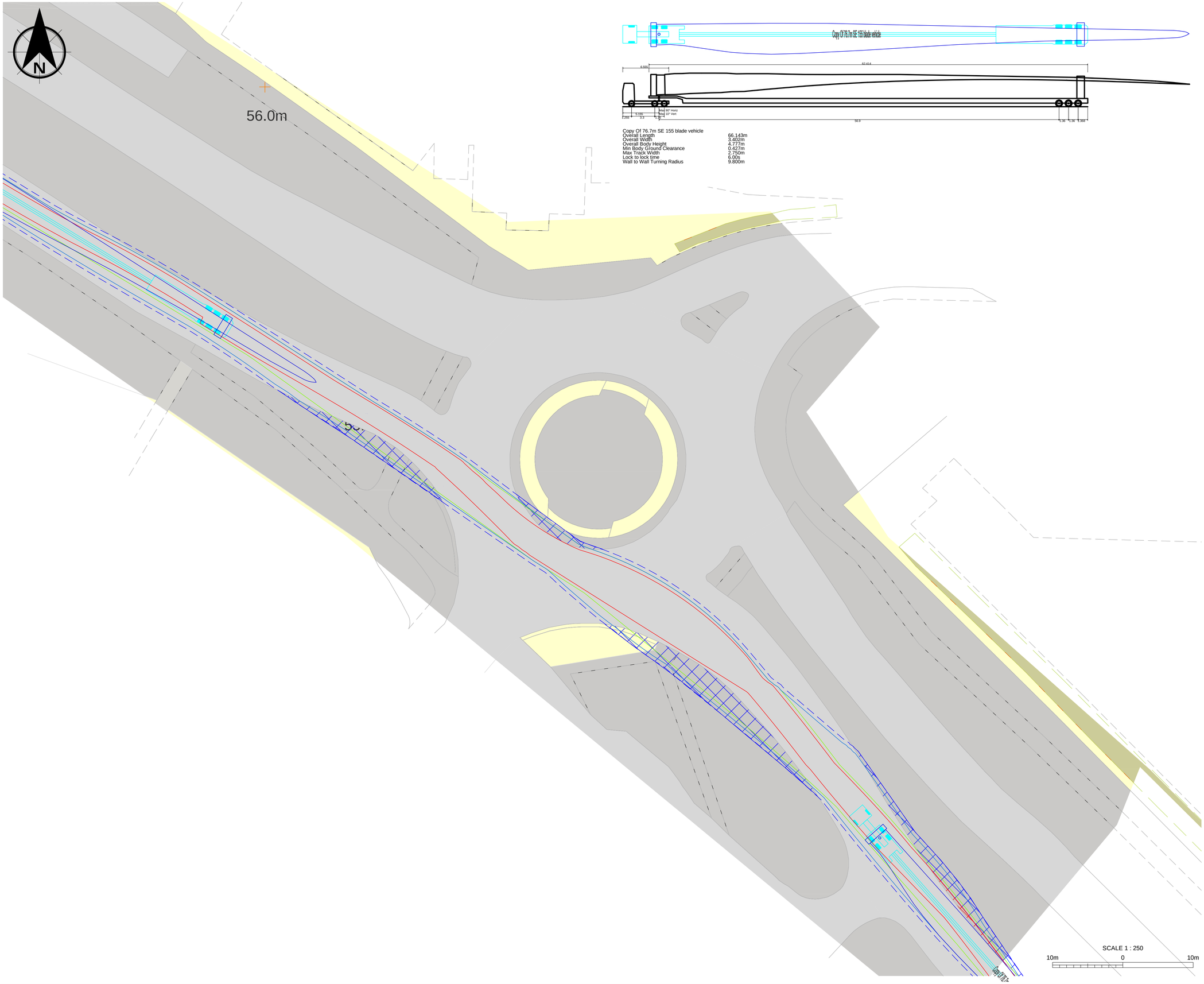


## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
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Project Title

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Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 15

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:250 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-25

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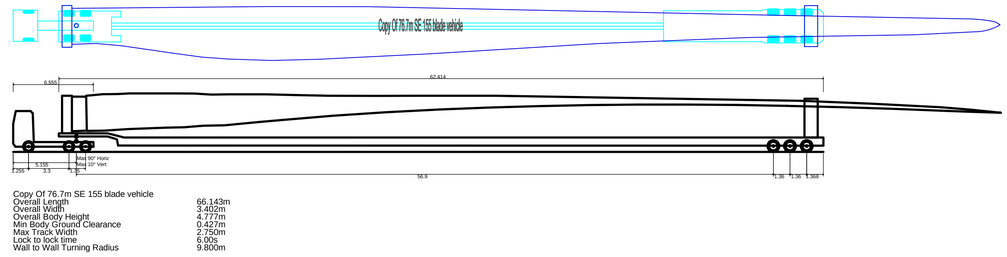
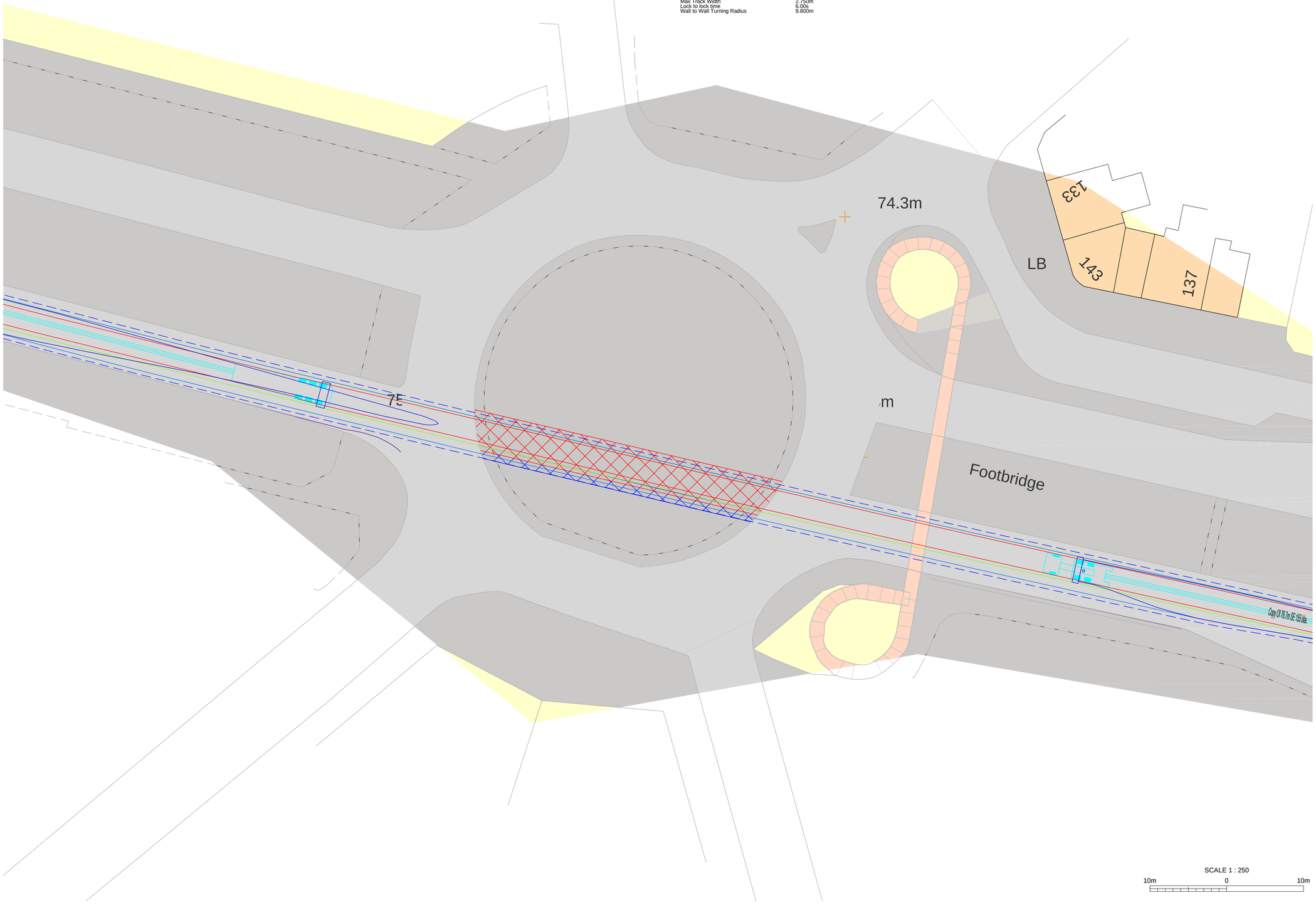



Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |




## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
3. IF ACTUAL VEHICLES USED FOR THE DELIVERY OF THE TURBINE COMPONENTS DIFFER FROM THOSE SHOWN ON THIS DRAWING THEN ANY DESIGN BASED UPON THIS INFORMATION WILL NEED TO BE REASSESSED TO CONFIRM THAT IT IS ACCEPTABLE.
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**KEY**

OVERRUN

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| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 16

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:250 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-26

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Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |

## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
2. TURBINE DETAILS ARE BASED ON TECHNICAL INFORMATION PROVIDED BY RES IN RELATION TO SIEMENS GAMESA 6.6MW 155. THE ACCURACY OF THE DELIVERY VEHICLE ARRANGEMENT AND STEERING CAPABILITIES TO BE CONFIRMED BY THE HAULAGE CONTRACTOR, FOR EACH RESPECTIVE VEHICLE, PRIOR TO DELIVERY OF THE TURBINE COMPONENTS.
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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Client

Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 17

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:250 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-27

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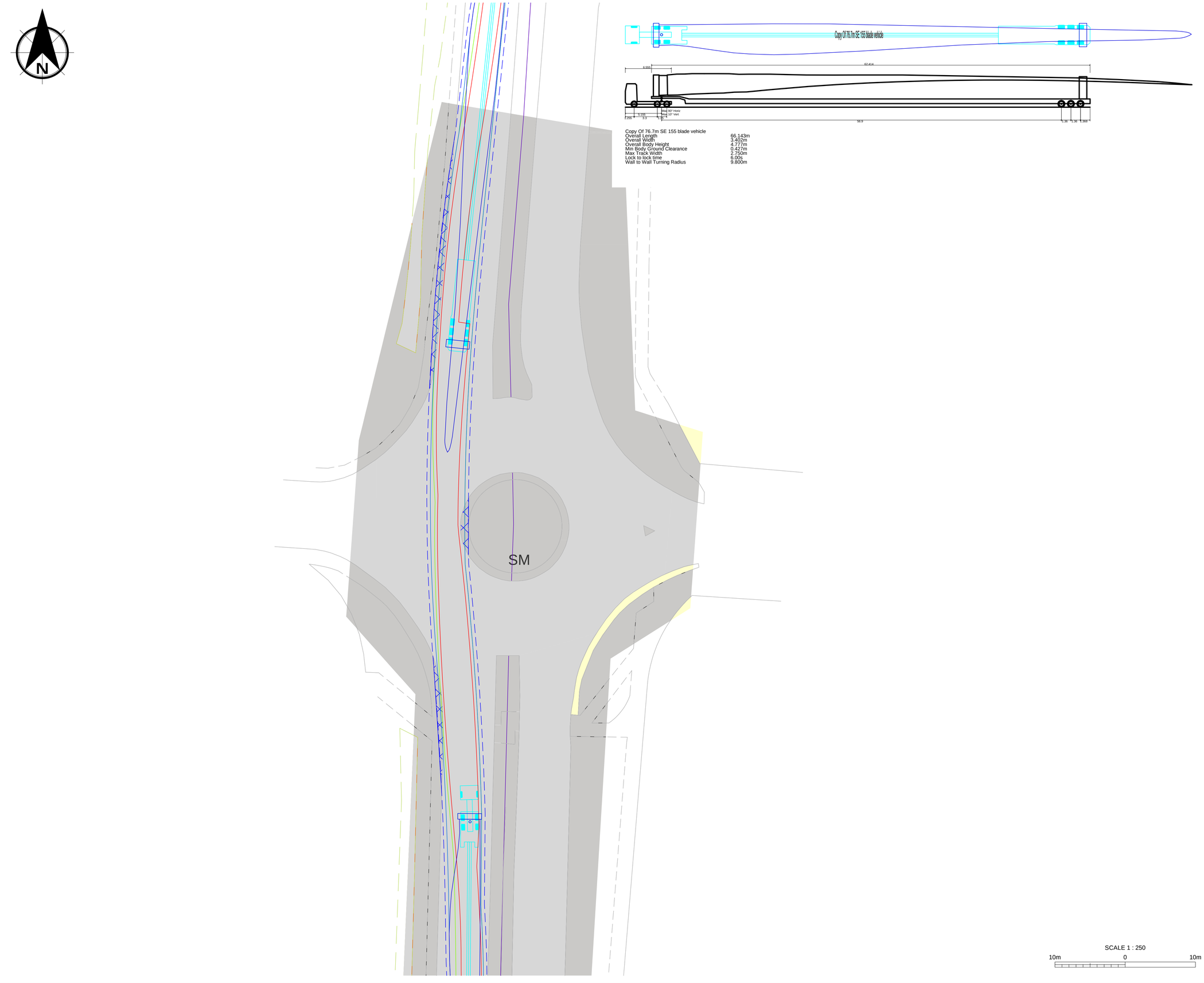





Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |

SCALE 1 : 250

10m 0 10m

## NOTES

1. ALL DIMENSIONS IN METRES, UNLESS STATED OTHERWISE.
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**KEY**

OVERRUN

OVERSAIL

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
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| P01 | 23.08.2023 | FINAL ISSUE | IB | MWD | MWD |



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Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT - BLADE TRANSPORTER POI 22

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:250 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-28

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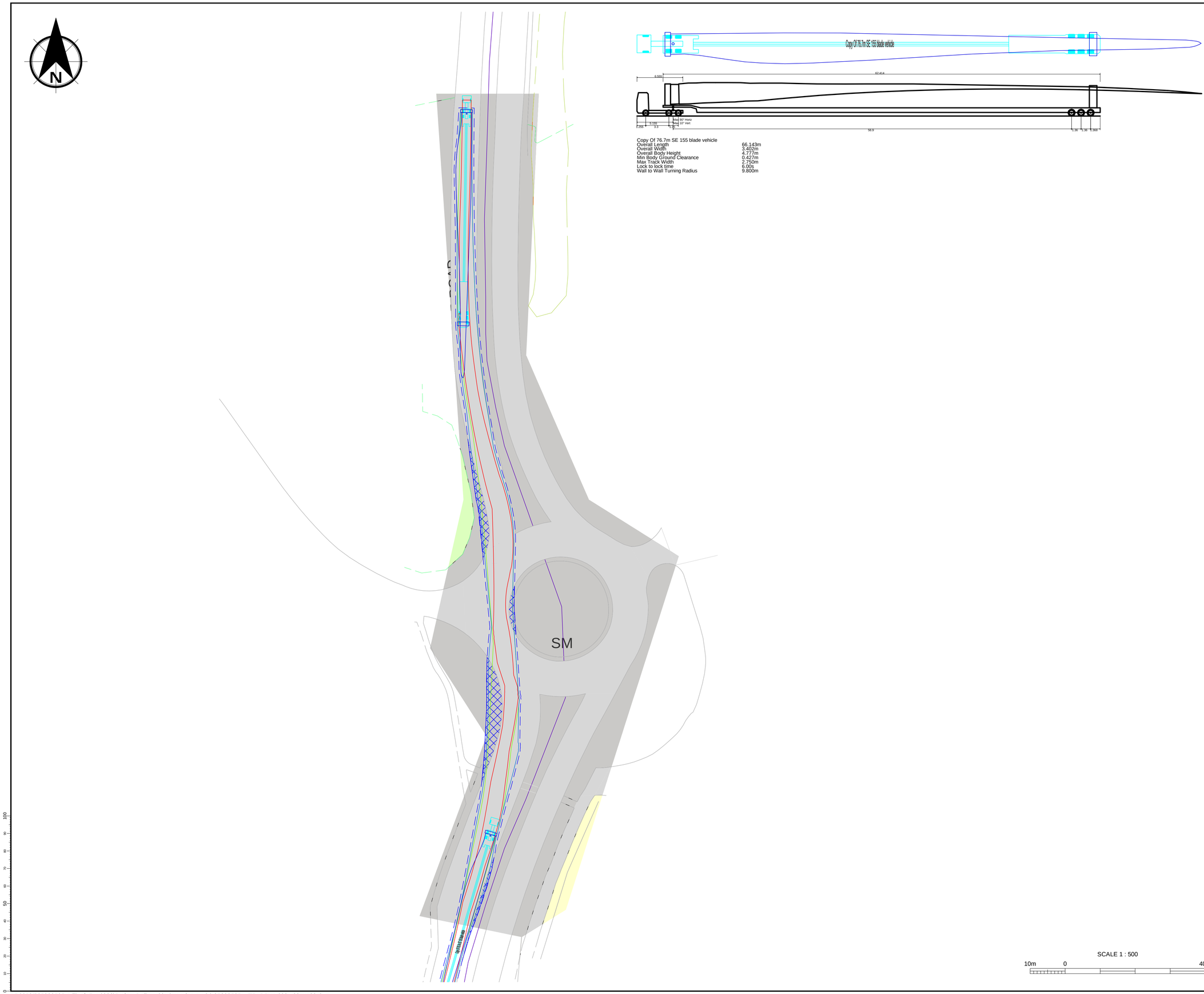


Copy Of 76.7m SE 155 blade vehicle

| | |
|---|---|
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |

SCALE 1 : 500

10m 0 40m

## NOTES

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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

| Rev | Date | Amendment Details | Dr'n | Chk' | App' |
|---|---|---|---|---|---|
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Project Title

HILL OF FARE

Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 23

Purpose Of Issue

CONSTRUCTION

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-29

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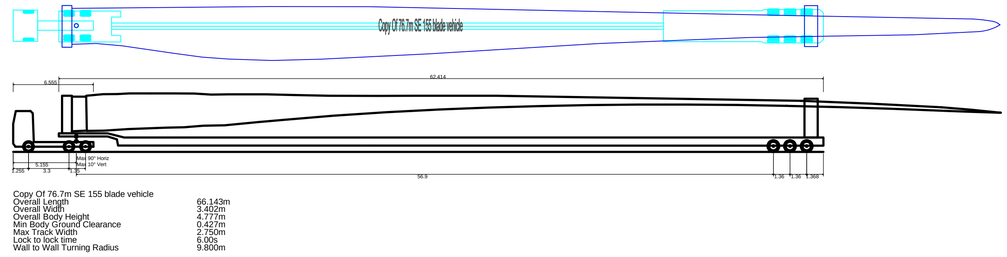


| | |
|---|---|
| Copy Of 76.7m SE 155 blade vehicle | |
| Overall Length | 66.143m |
| Overall Width | 3.402m |
| Overall Body Height | 4.777m |
| Min Body Ground Clearance | 0.427m |
| Max Track Width | 2.750m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 9.800m |

SCALE 1 : 500

10m 0 40m

## NOTES

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**KEY**

OVERRUN

OVERSAIL

MANUAL OVERRIDE REAR STEERING

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Project Title

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Drawing Title

ABNORMAL LOADS ROUTEING ASSESSMENT -
BLADE TRANSPORTER
POI 24

Purpose Of Issue

FINAL

| Status | Status Description |
|---|---|
| S2 | FOR INFORMATION |

| Drawn | Designed | Checked | Approved |
|---|---|---|---|
| IB | IB | MWD | MWD |

| Sheet Size | Scale | Sweco Ref | Revision |
|---|---|---|---|
| A1 | 1:500 | 65209565 | P01 |

Drawing Number

65209565_ATR_DRW_002-30

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