



ROUTE STUDY

CLIENT: GPG

PROJECT: PALING YARDS WIND FARM

PORT OF IMPORT: NEWCASTLE

16/09/2021 REV 02

Rev.	Date	Change	Responsible	Checked
00	11/02/21	Route Assessed	W Andrews	✓
00	12/02/21	Report compiled	W Andrews	✓
00	04/03/21	Report completed	W Andrews	✓
01	06/04/21	Turbine SG170 added	W Andrews	✓
02	16/09/21	Additional blade route added	W Andrews	✓

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1.0 Introduction

This document describes observations and previous experience on sections of this route and explains the Transport of Wind turbine equipment from Newcastle to Paling Yards wind farm.

This Route survey took place on 11-02-21.

2.0 Evaluation

1	No work required
2	Some Work required
3	Moderate amount of works required
4	Large amount of works required

(Mark below boxes with an X)

		1	2	3	4
A	Harbour			X	
B	Road Modification				X
C	Road Furnishings				X
D	Trees			X	
E	Site Entrance				X
F	Bridge Calculations		X		
G	Traffic Control				X

3.0 Project data.

Date of latest Route Assessment. 11/02/2021

Survey undertaken by. (Rex J Andrews P/L)

Project name. Paling Yards Windfarm

Location. Newcastle (NSW) to Paling Yards (NSW)

Possible turbine types.

50 x V150 or V162, with 149 Metre H/H

50 x SG155 or SG170, with 155 Metre H/H

50 x GE158, with 151 Metre H/H

4.0 Transport dimensions for V150 and V162.

Nacelles (18.1l x 4.2 w x 4.3h x 86.0T)
Configuration. Prime mover with 4x8-5x8 extending platform.
Overall dimensions: 37.0l x 4.5w x 5.5h x 153.5T (+ Push truck)

Drive trains (7.5l x 2.7 w x 3.0h x 90.0T)
Configuration. Prime mover with 8x8 Platform.
Overall dimensions: 32.0l x 4.2w x 5.0h x 159.5T (+ Push truck)

Hubs (5.0l x 4.4w x 4.0h x 64.0T)
Configuration. Prime mover with 2x8 Dolly and 4x8 Low loader
Overall dimension: 28.0l x 4.5w x 5.0h x 95.5T.

V162 Blades (80.0l x 4.5w x 3.5h x 32T)
Configuration. Prime mover with 2x8 dolly 4x4 Blade trailer.
Overall dimension: 88.0l x 4.5w x 5.1h x 73.5T.

V150 Blades (73.9l x 4.5w x 3.5h x 26T)
Configuration. Prime mover with 1x4 dolly 3x4 Blade trailer.
Overall dimension: 80.0l x 4.5w x 5.0h x 58.5T.

Base Towers (12.1l x 5.8 x 5.5 x 86T)
Configuration. Prime mover with 4x8-4x8 Bookend.
Overall dimension: 40.0l x 6.0w x 5.9h x 153.5T (+ Push truck)

Section 2 Towers (15.4l x 5.5 x 5.5 x 88T)
Configuration. Prime mover with 4x8-4x8 Bookend.
Overall dimension: 45.0l x 5.5w x 5.7h x 155.5T (+ Push truck)

Section 3 Towers (22.9l x 5.5 x 5.5 x 88T)
Configuration. Prime mover with 4x8-4x8 Bookend.
Overall dimension: 50.0l x 5.5w x 5.7h x 155.5T (+ Push truck)

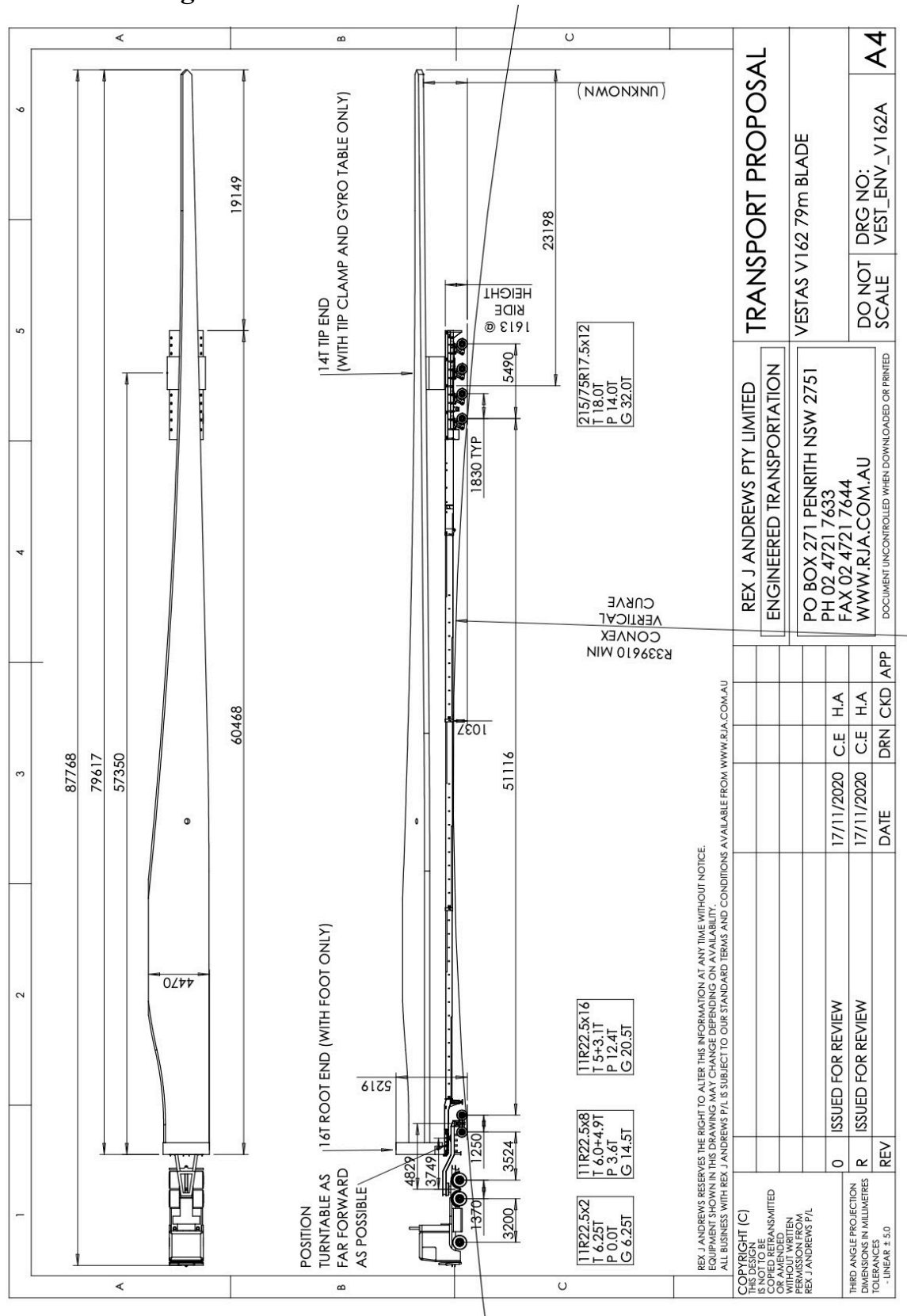
Section 4 Towers (26.6l x 5.5 x 5.5 x 88T)
Configuration. Prime mover with 4x8-4x8 Bookend.
Overall dimension: 55.0l x 5.5w x 5.7h x 155.5T (+ Push truck)

Section 5 Towers (32.2l x 5.5 x 4.4 x 86T)
Configuration. Prime mover with 4x8-4x8 Bookend.
Overall dimension: 60.0l x 5.5w x 5.7h x 153.5T (+ Push truck)

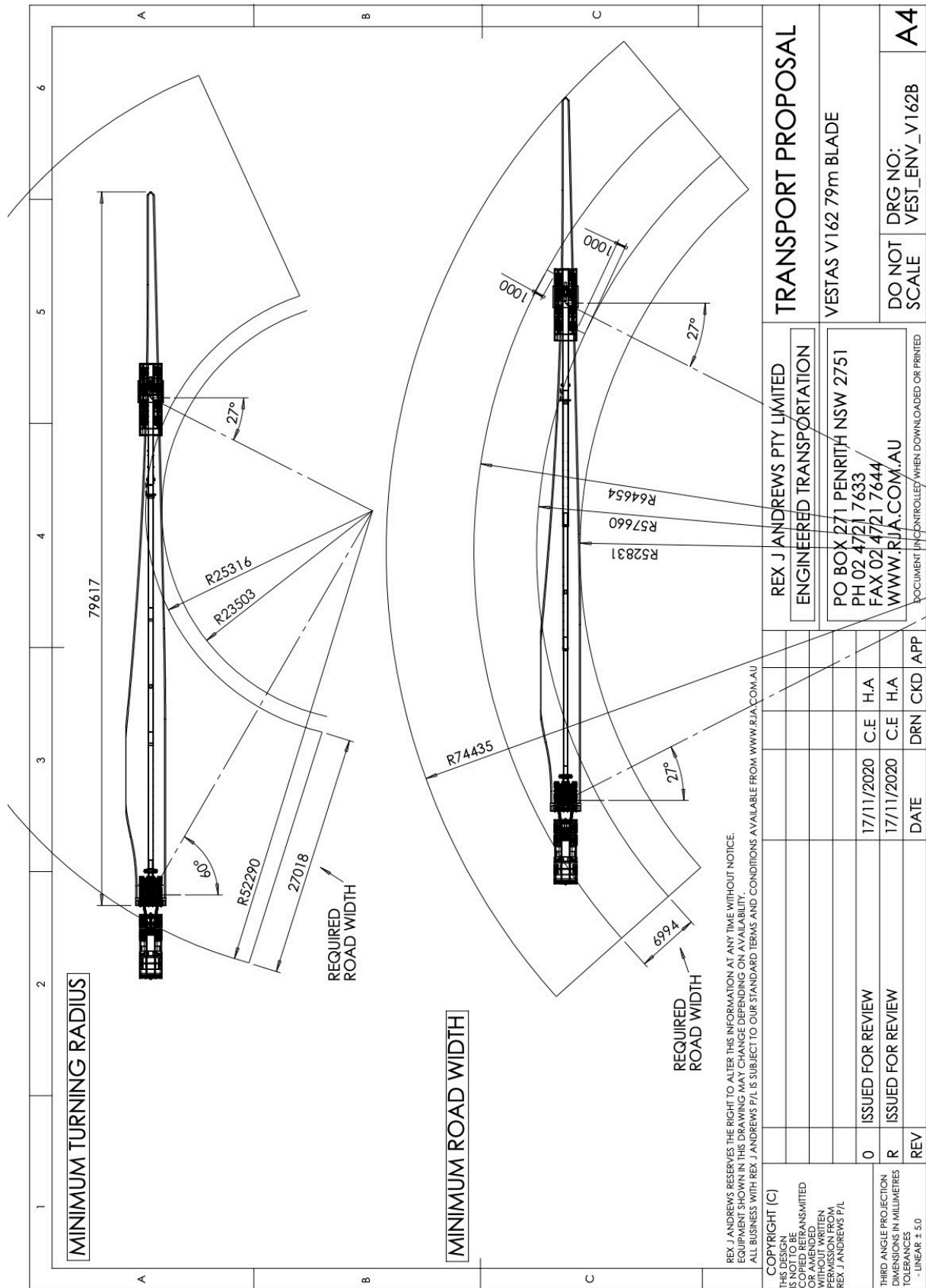
Top Towers (37.0l x 4.4w x 3.98h x 88T)
Configuration. Prime mover with 2x8 dolly 6x8 low platform trailer.
Overall dimension: 47.0l x 4.5w x 5.5h x 136.5T (+ Push truck)

5.0 Transport drawings for V150 & V162. Examples

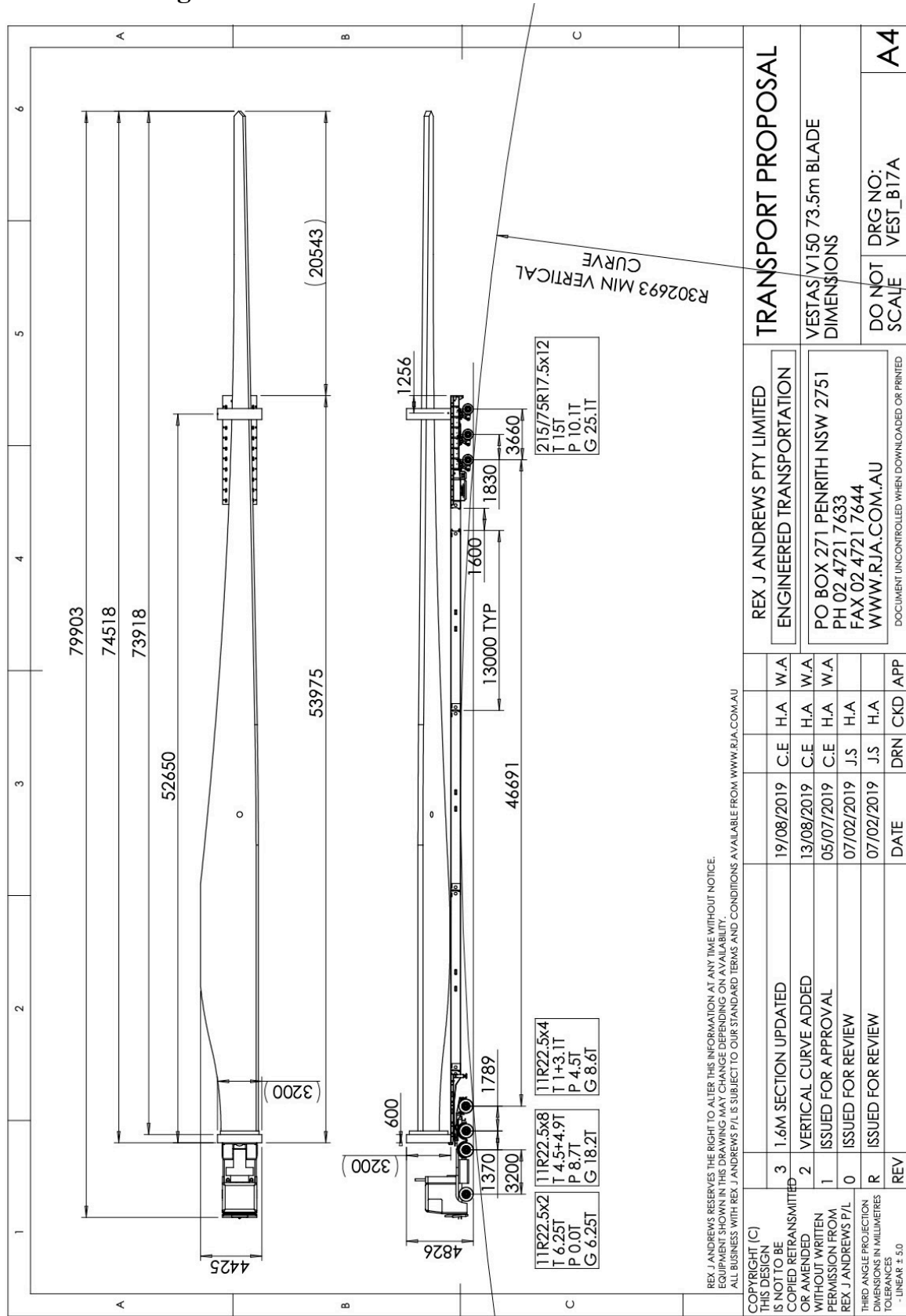
V162 Blade diagram: Profile



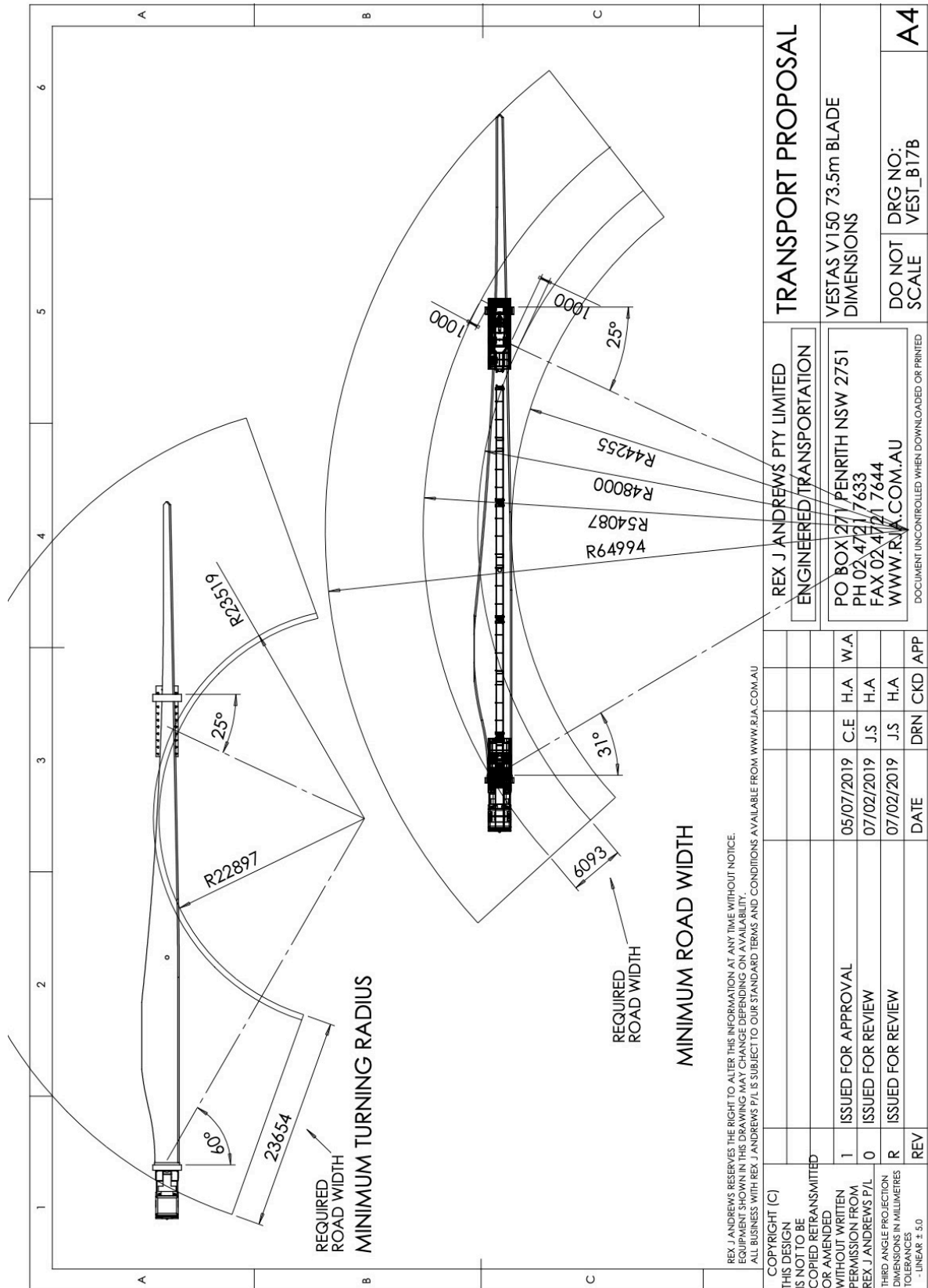
V162 Blade diagram: Swept path



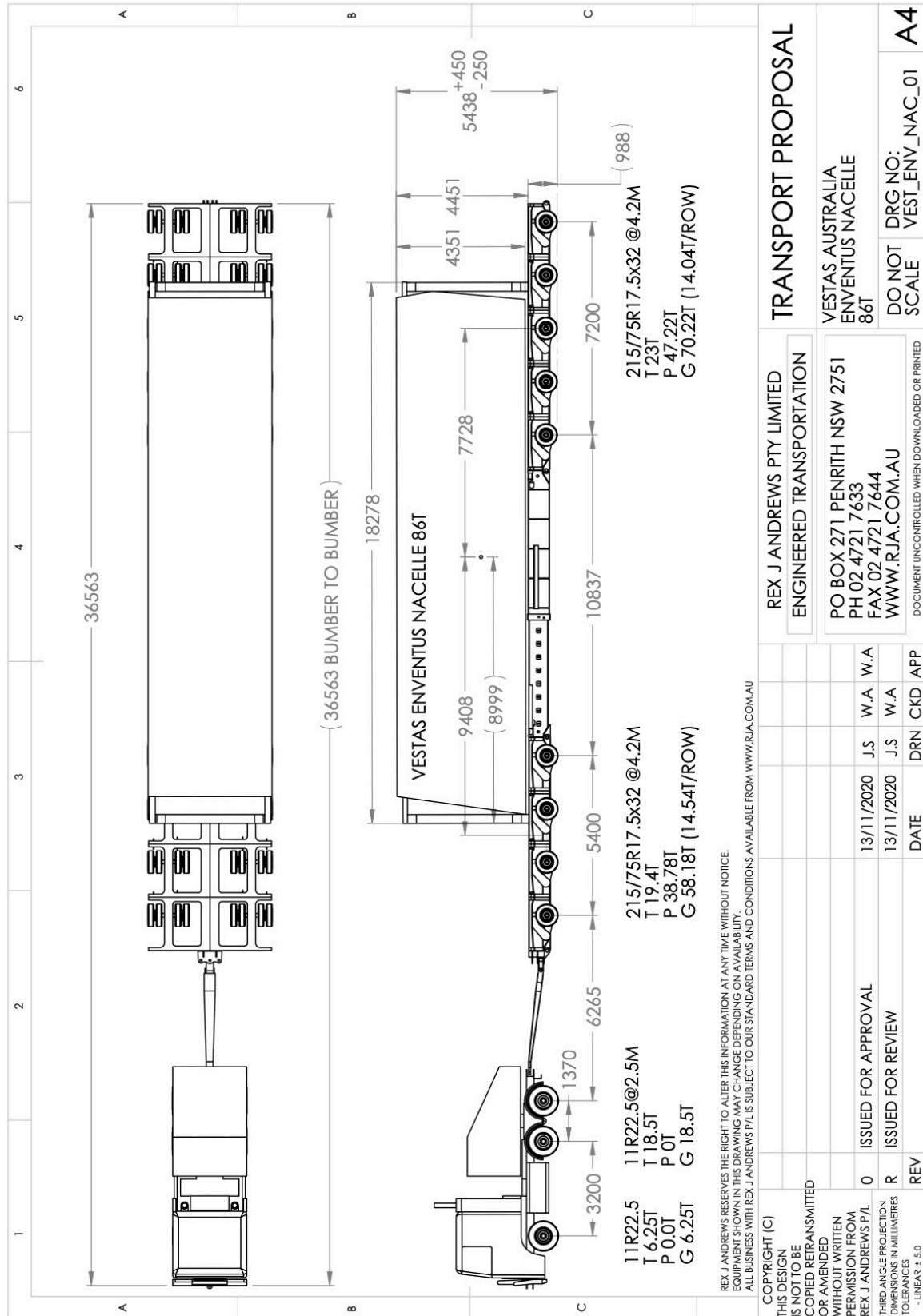
V150 Blade diagram: Profile



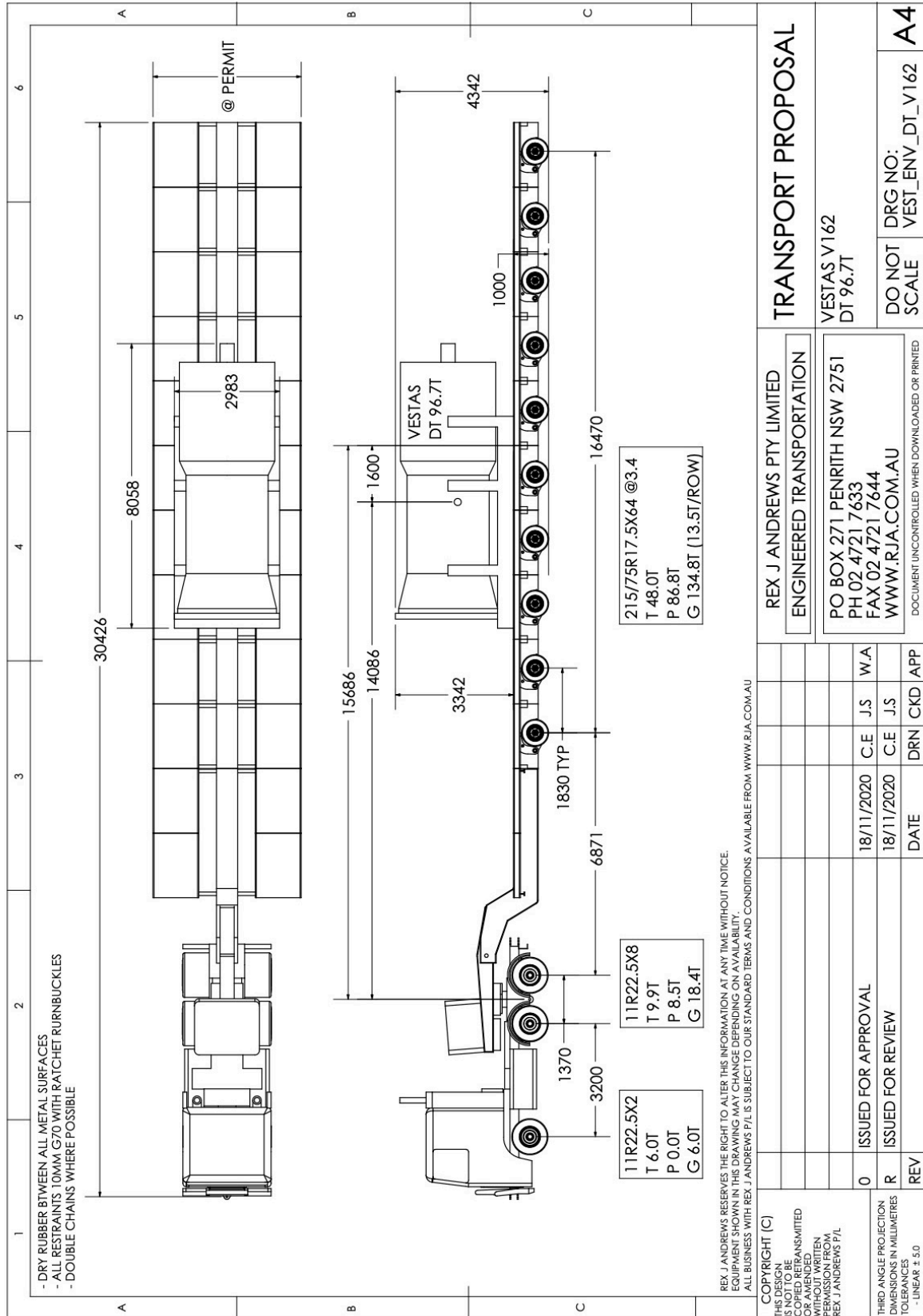
V150 Blade diagram: Swept path



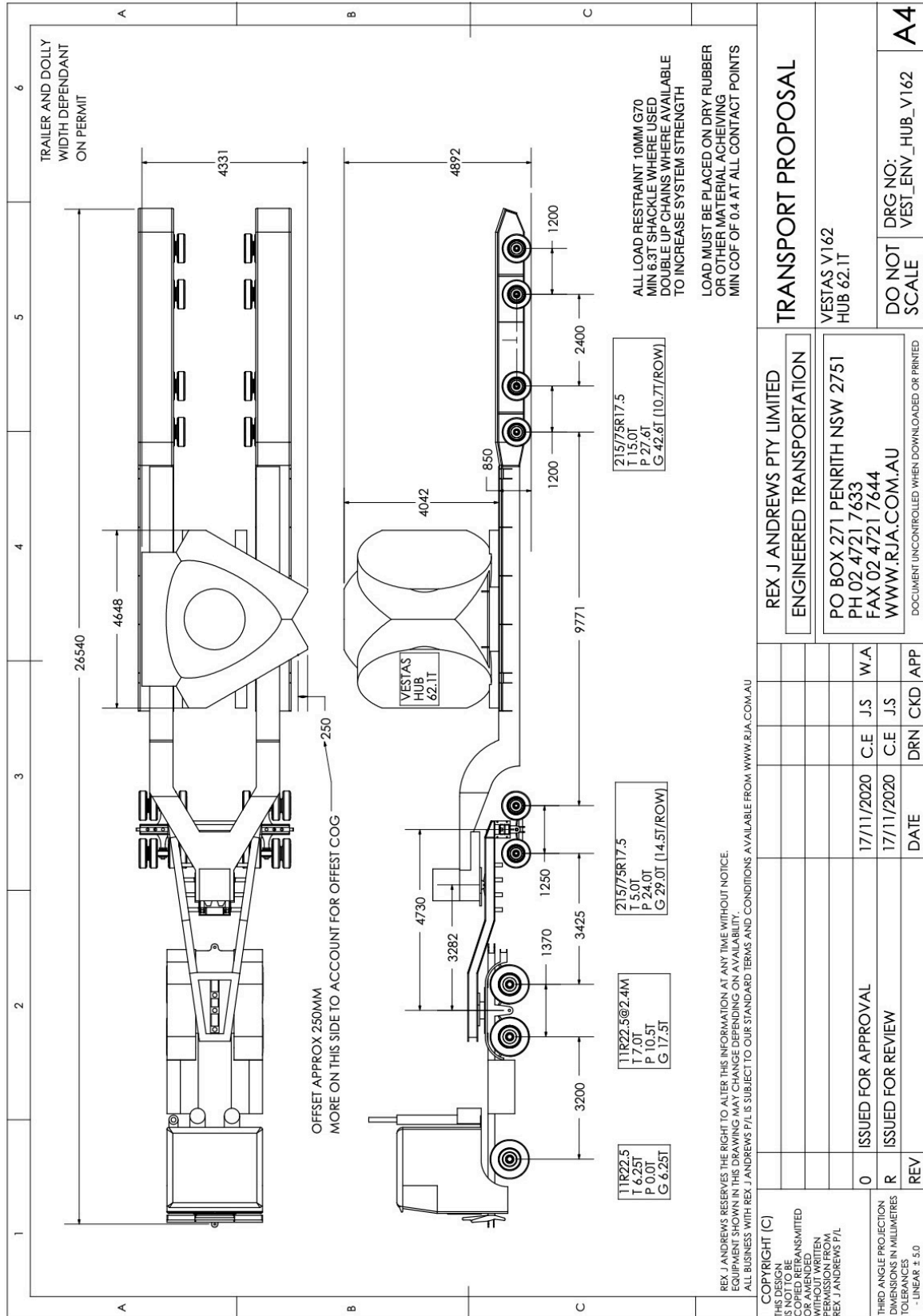
V162 Nacelle diagram:



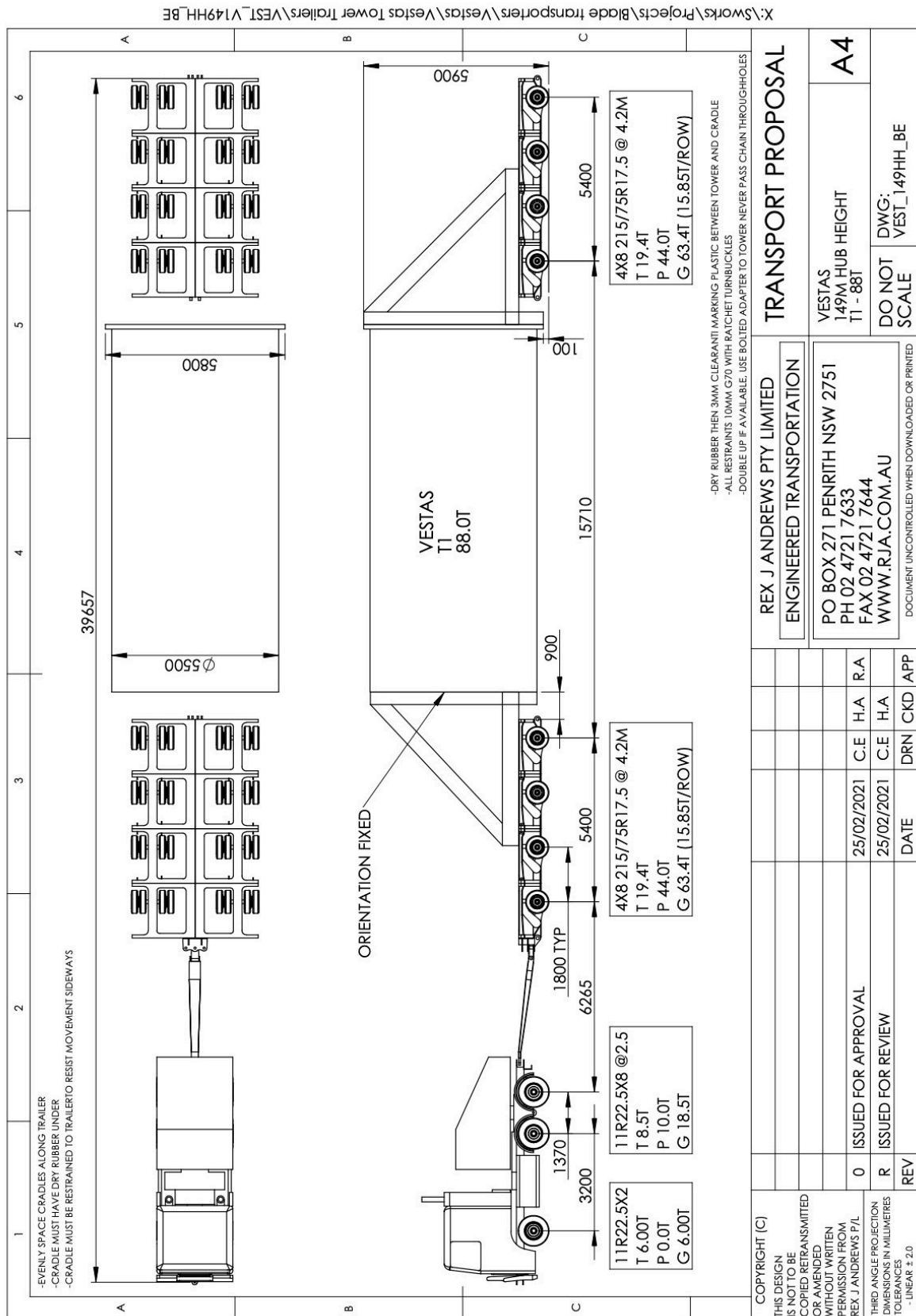
V162 Drive train diagram:



V162 Hub diagram:



V162 bookend tower diagram:



6.0 Transport dimensions for SG155 & SG170.

Machine heads (14.12l x 3.97w x 3.45h x 98T)

Possible transport configuration. Prime mover with 10x8 platform trailer and backup prime mover.

Overall dimensions: 48.0l x 4.3w x 5.0h x 150.0T.

Drivetrains (6.6l x 3.98w x 3.45h x 82.0T)

Possible transport configuration. Prime mover with 8x8 platform trailer.

Overall dimensions: 30.0l x 4.3w x 4.8h x 136.0T.

Hubs (4.6l x 4.2w x 3.85h x 51T)

Possible transport configuration. Prime mover with 5x8 Low Loader.

Overall dimensions: 26.0l x 4.2w x 5.0h x 82.0T.

SG155 Blades (75.0l x 4.4w x 3.5h x 28T)

Possible transport. Prime mover and bookend with 1x4 dolly and 3x4 Jinker.

Overall dimensions: 82.0l x 4.5w x 5.2h x 68.5T.

SG170 Split Blades (68.9l x 4.4w x 3.5h x 28T)

Possible transport. Prime mover and bookend with 1x4 dolly and 3x4 Jinker.

Overall dimensions: 75.0l x 4.5w x 5.2h x 68.5T.

Base Towers (12.1l x 5.8 x 5.5 x 86T)

Configuration. Prime mover with 4x8-4x8 Bookend.

Overall dimension: 40.0l x 6.0w x 5.9h x 153.5T (+ Push truck)

Section 2 Towers (15.4l x 5.5 x 5.5 x 88T)

Configuration. Prime mover with 4x8-4x8 Bookend.

Overall dimension: 45.0l x 5.5w x 5.7h x 155.5T (+ Push truck)

Section 3 Towers (22.9l x 5.5 x 5.5 x 88T)

Configuration. Prime mover with 4x8-4x8 Bookend.

Overall dimension: 50.0l x 5.5w x 5.7h x 155.5T (+ Push truck)

Section 4 Towers (26.6l x 5.5 x 5.5 x 88T)

Configuration. Prime mover with 4x8-4x8 Bookend.

Overall dimension: 55.0l x 5.5w x 5.7h x 155.5T (+ Push truck)

Section 5 Towers (32.2l x 5.5 x 4.4 x 86T)

Configuration. Prime mover with 4x8-4x8 Bookend.

Overall dimension: 60.0l x 5.5w x 5.7h x 153.5T (+ Push truck)

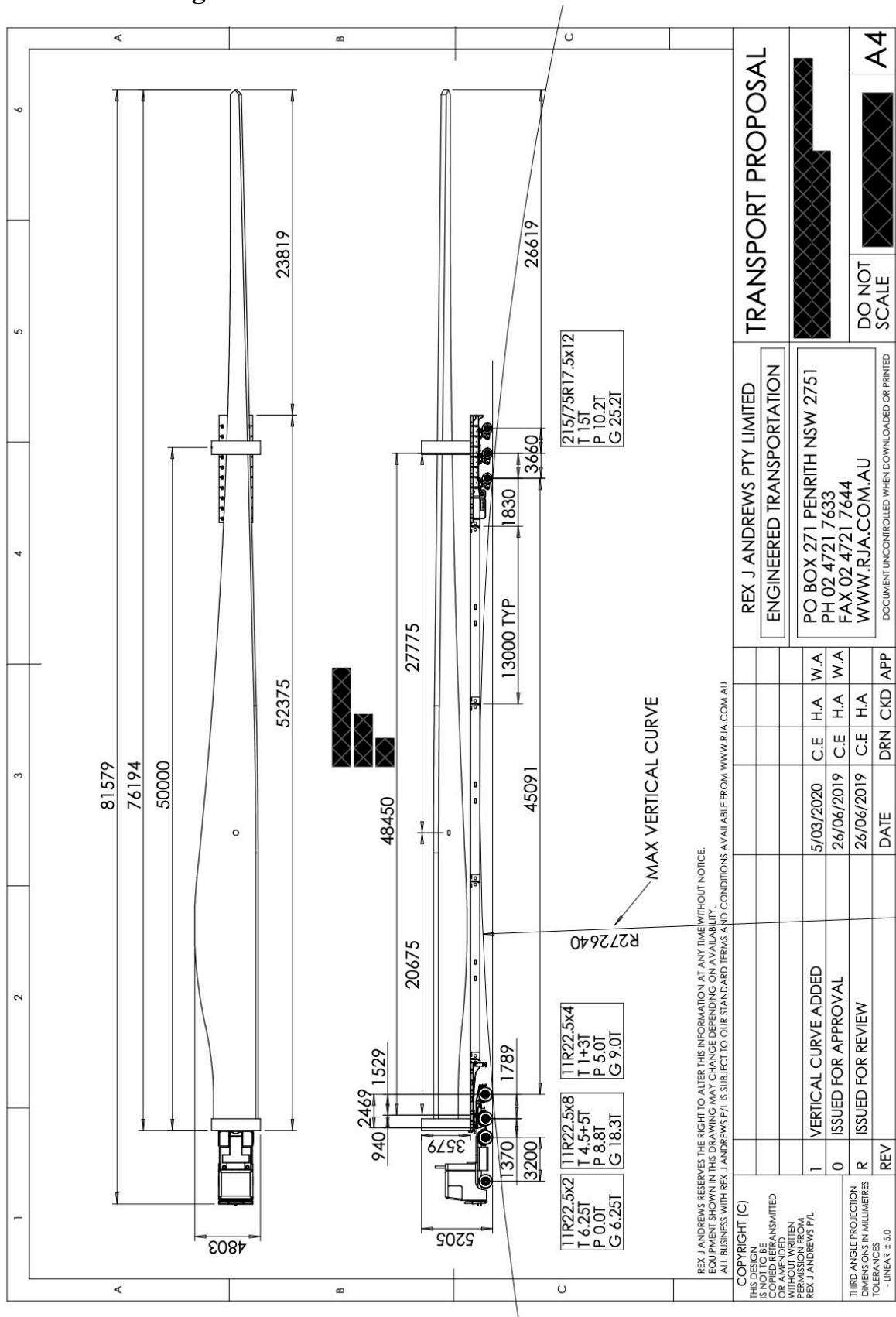
Top Towers (37.0l x 4.4w x 3.98h x 88T)

Configuration. Prime mover with 2x8 dolly 6x8 low platform trailer.

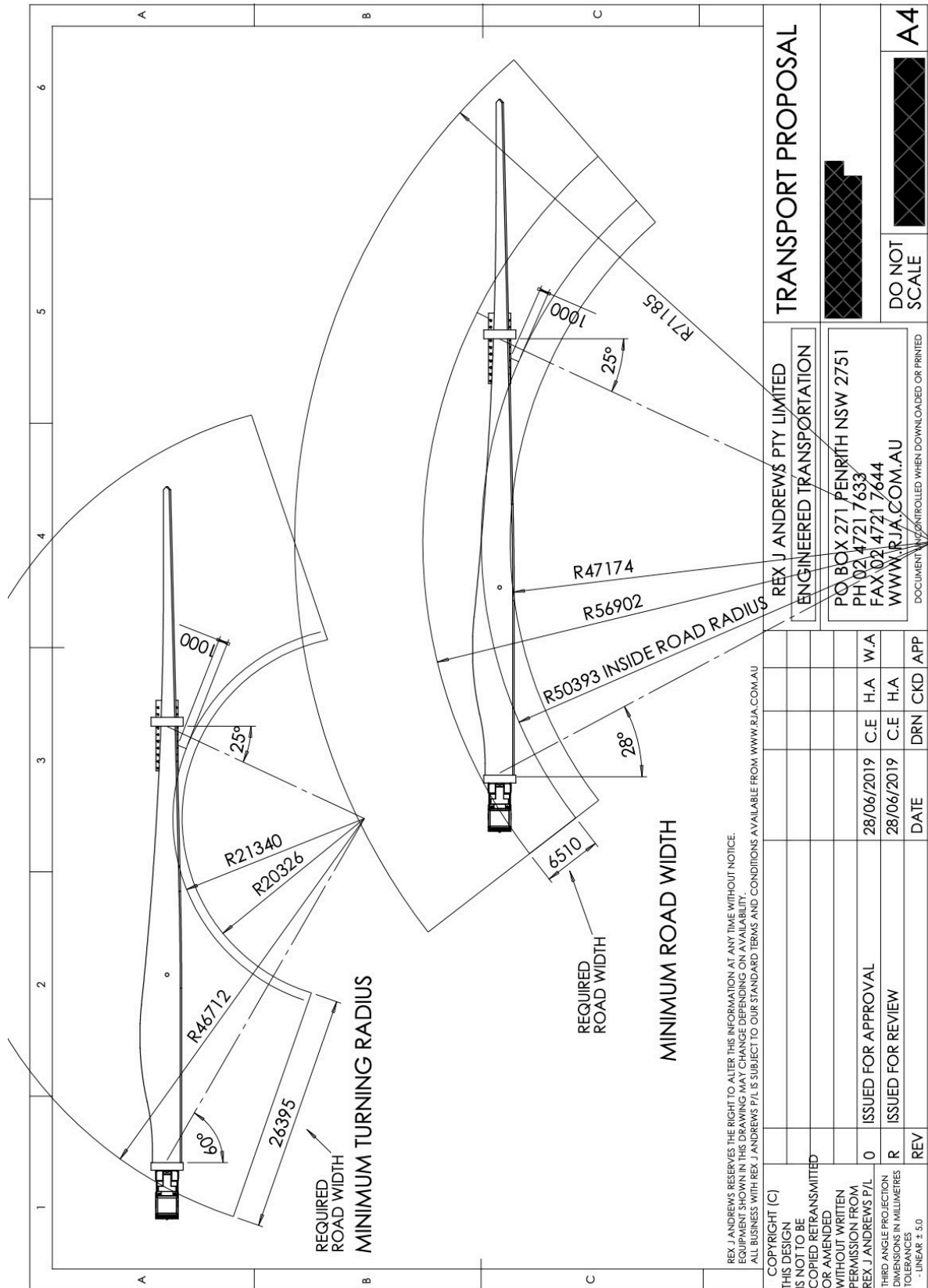
Overall dimension: 47.0l x 4.5w x 5.5h x 136.5T (+ Push truck)

7.0 Transport drawings for SG155 & SG170. Examples

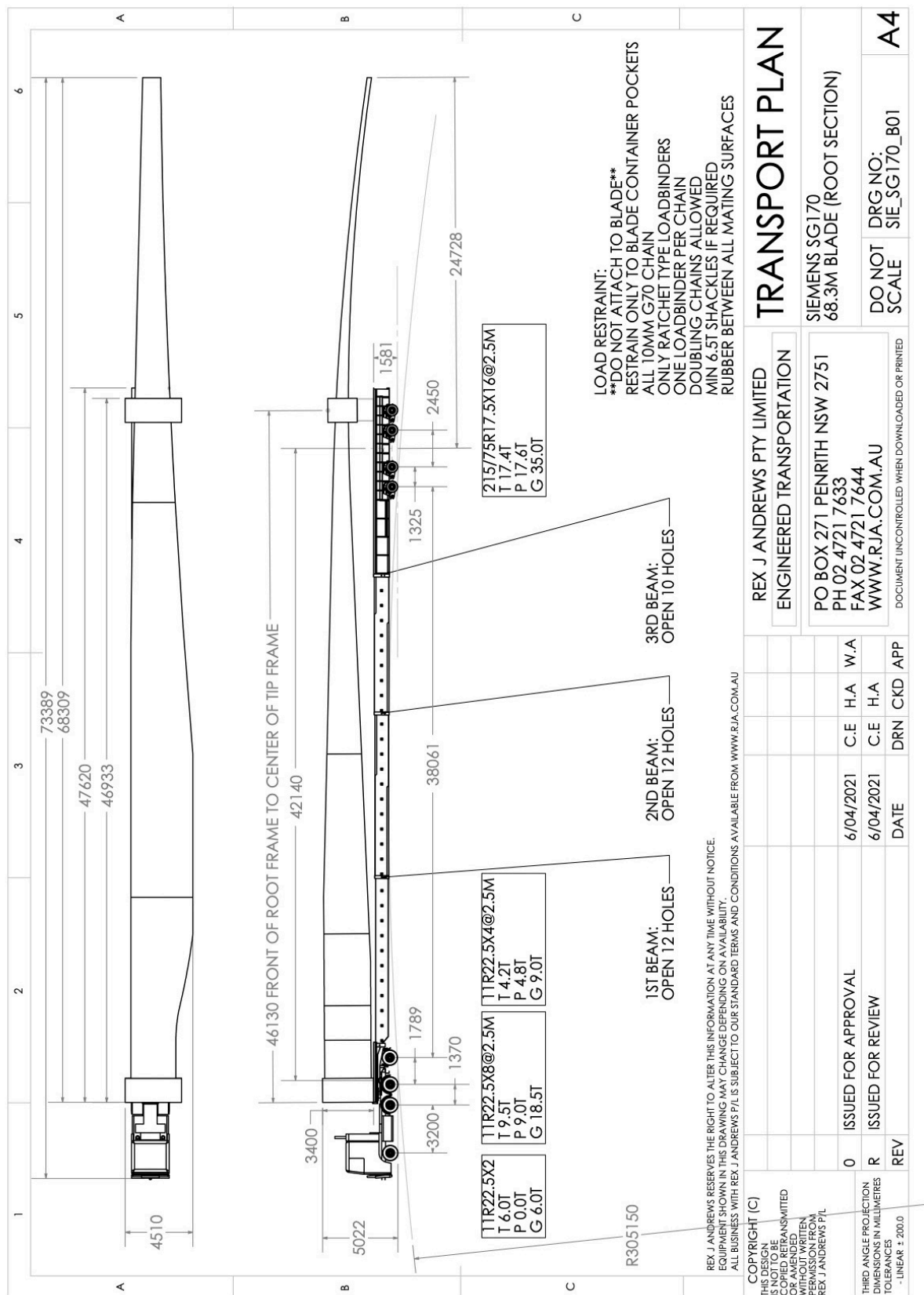
SG155 Blade diagram: Profile



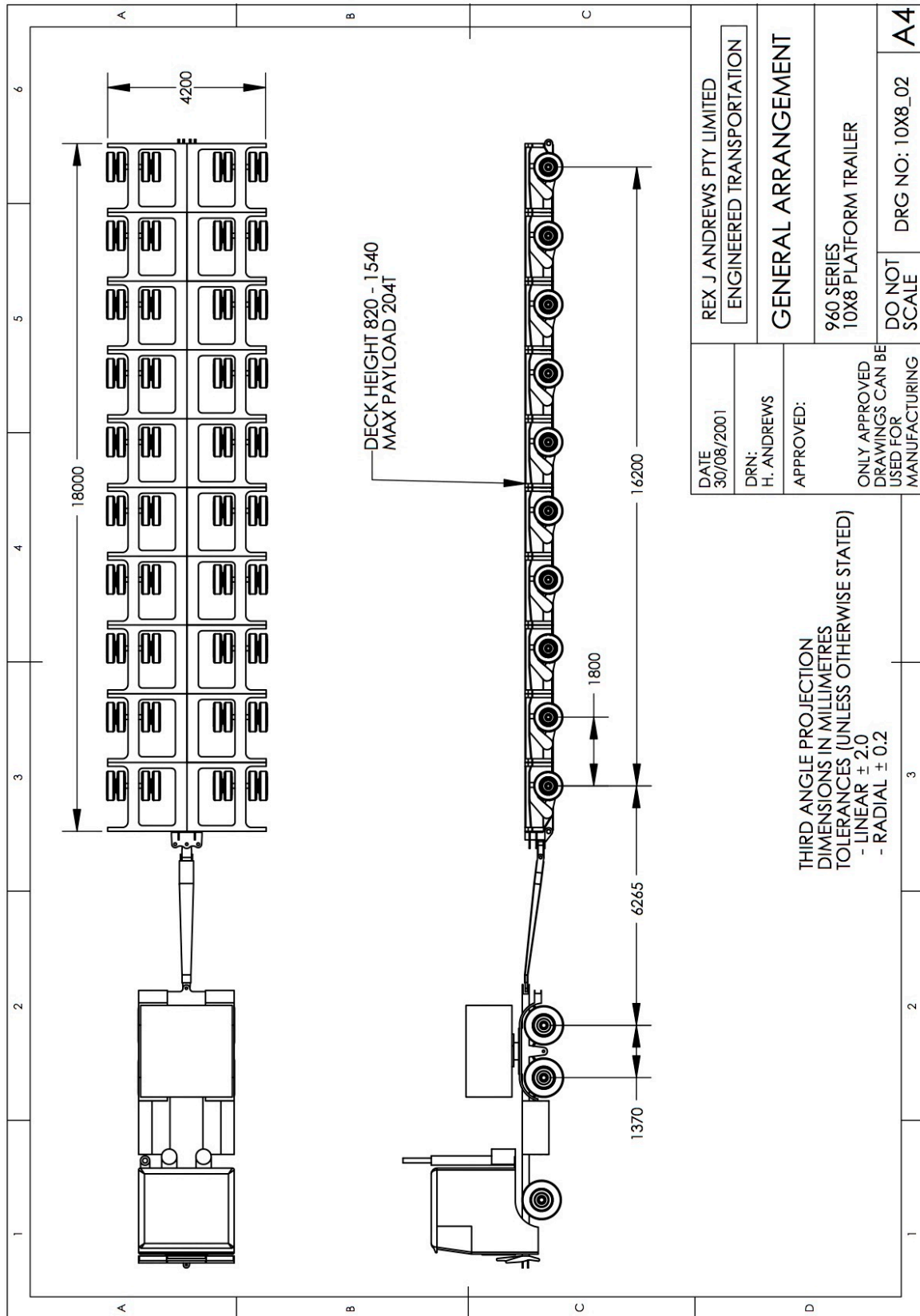
SG155 Blade diagram: Swept path



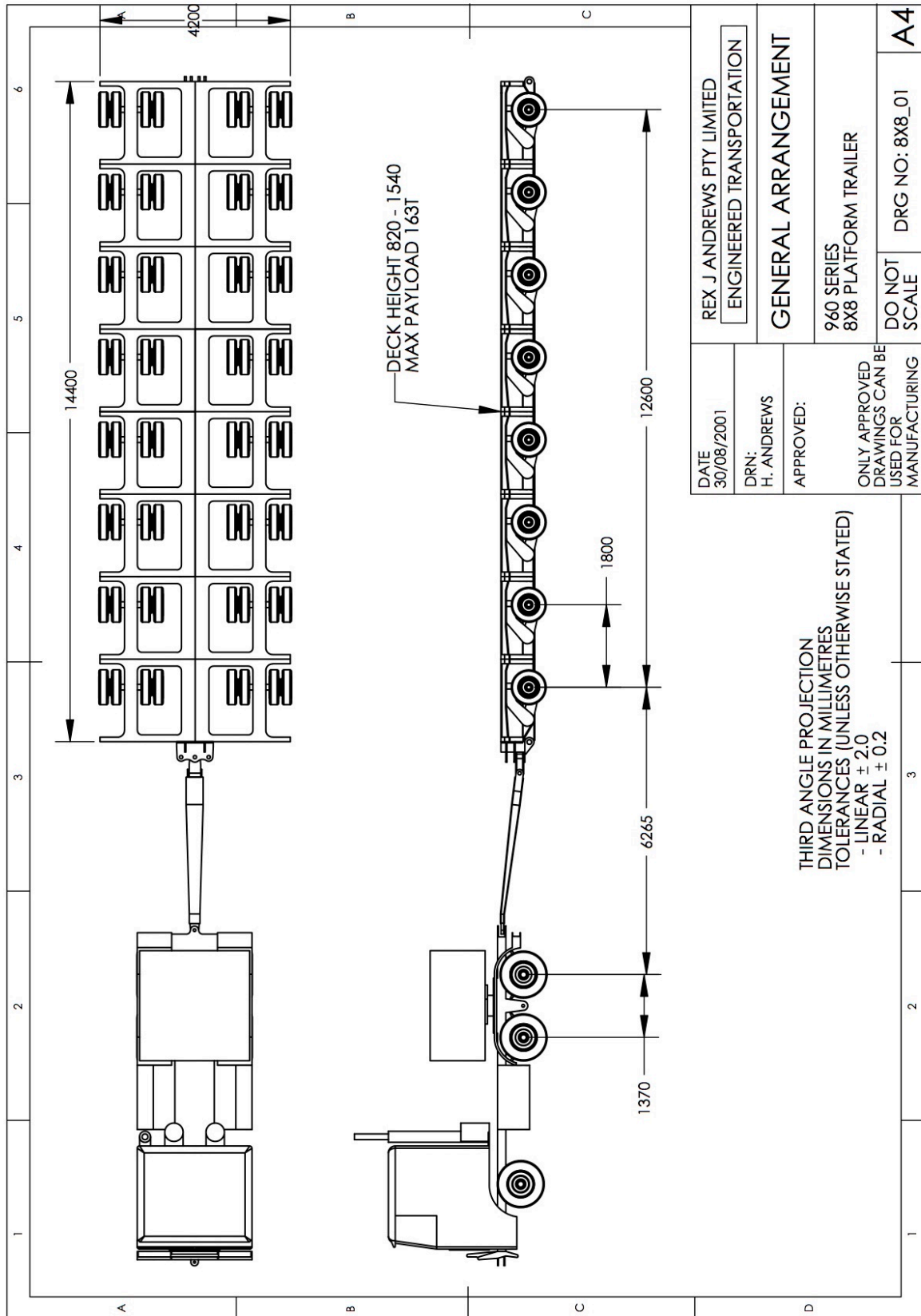
SG170 Blade diagram: Profile



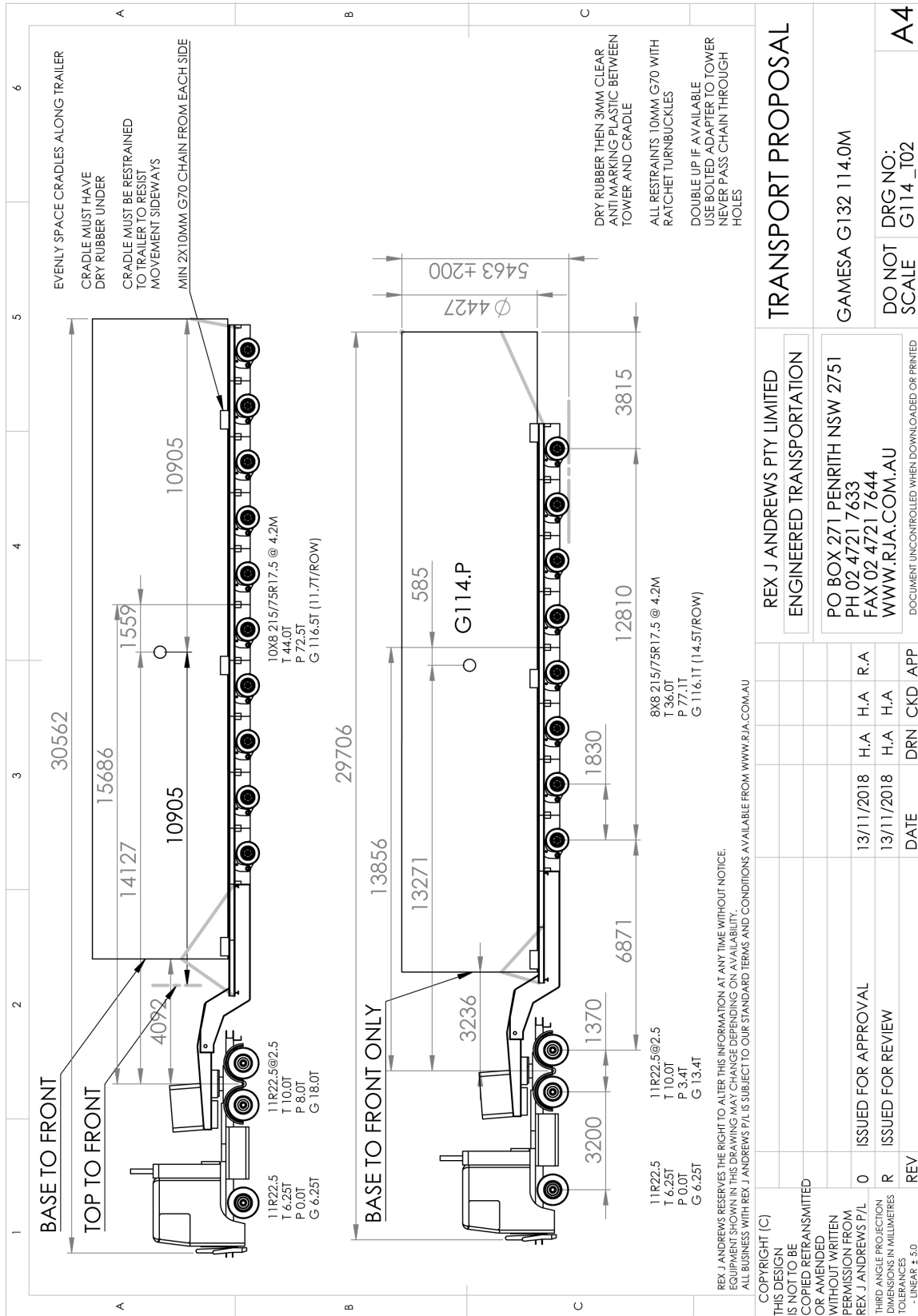
SG155 or SG170 Nacelle diagram:



SG155 or SG170 Drive train diagram:



SG155 metre tower diagram:



8.0 Transport dimensions for GE158.

Machine heads (14.12l x 3.97w x 3.45h x 98T)

Possible transport configuration. Prime mover with 10x8 platform trailer and backup prime mover.

Overall dimensions: 48.0l x 4.3w x 5.0h x 150.0T.

Drivetrains (6.6l x 3.98w x 3.45h x 82.0T)

Possible transport configuration. Prime mover with 8x8 platform trailer.

Overall dimensions: 30.0l x 4.3w x 4.8h x 136.0T.

Hubs (4.6l x 4.2w x 3.85h x 51T)

Possible transport configuration. Prime mover with 5x8 Low Loader.

Overall dimensions: 26.0l x 4.2w x 5.0h x 82.0T.

Blades (Root) (65.4l x 4.0w x 3.3h x 28T)

Possible transport. Prime mover with 2x8 dolly and 4x4 Extending trailer.

Overall dimensions: 77.0l x 4.5w x 5.0h x 68.5T.

Blades (Tip) (15.1l x 2.4w x 2.4h x 2.5T)

Possible transport. Prime mover with 3x4 Extending trailer.

Overall dimensions: 22.0l x 2.5w x 4.0h x 32.5T.

Base Towers (9.3l x 5.5 x 5.0 x 73T)

Configuration. Prime mover with 4x8-4x8 Bookend.

Overall dimension: 40.0l x 6.0w x 5.7h x 140.5T (+ Push truck)

Section 2 Towers (12.6l x 4.85 x 5.0 x 74T)

Configuration. Prime mover with 6x8 Low platform.

Overall dimension: 30.0l x 5.0w x 5.7h x 117.5T

Section 3 Towers (14.0l x 4.6 x 4.85 x 74T)

Configuration. Prime mover with 6x8 Low platform.

Overall dimension: 30.0l x 5.0w x 5.7h x 117.5T

Section 4 Towers (19.8l x 4.6 x 4.3 x 90T)

Configuration. Prime mover with 9x8 Low platform.

Overall dimension: 34.0l x 4.7w x 5.5h x 159.5T (+ Push truck)

Section 5 Towers (23.5l x 4.3 x 4.3 x 82T)

Configuration. Prime mover with 4x8-4x8 platform trailer.

Overall dimension: 38.0l x 4.3w x 5.5h x 149.5T (+ Push truck)

Section 6 Towers (30.8l x 4.3 x 4.3 x 75T)

Configuration. Prime mover with 4x8-4x8 platform trailer.

Overall dimension: 45.0l x 4.3w x 5.5h x 144.5T (+ Push truck)

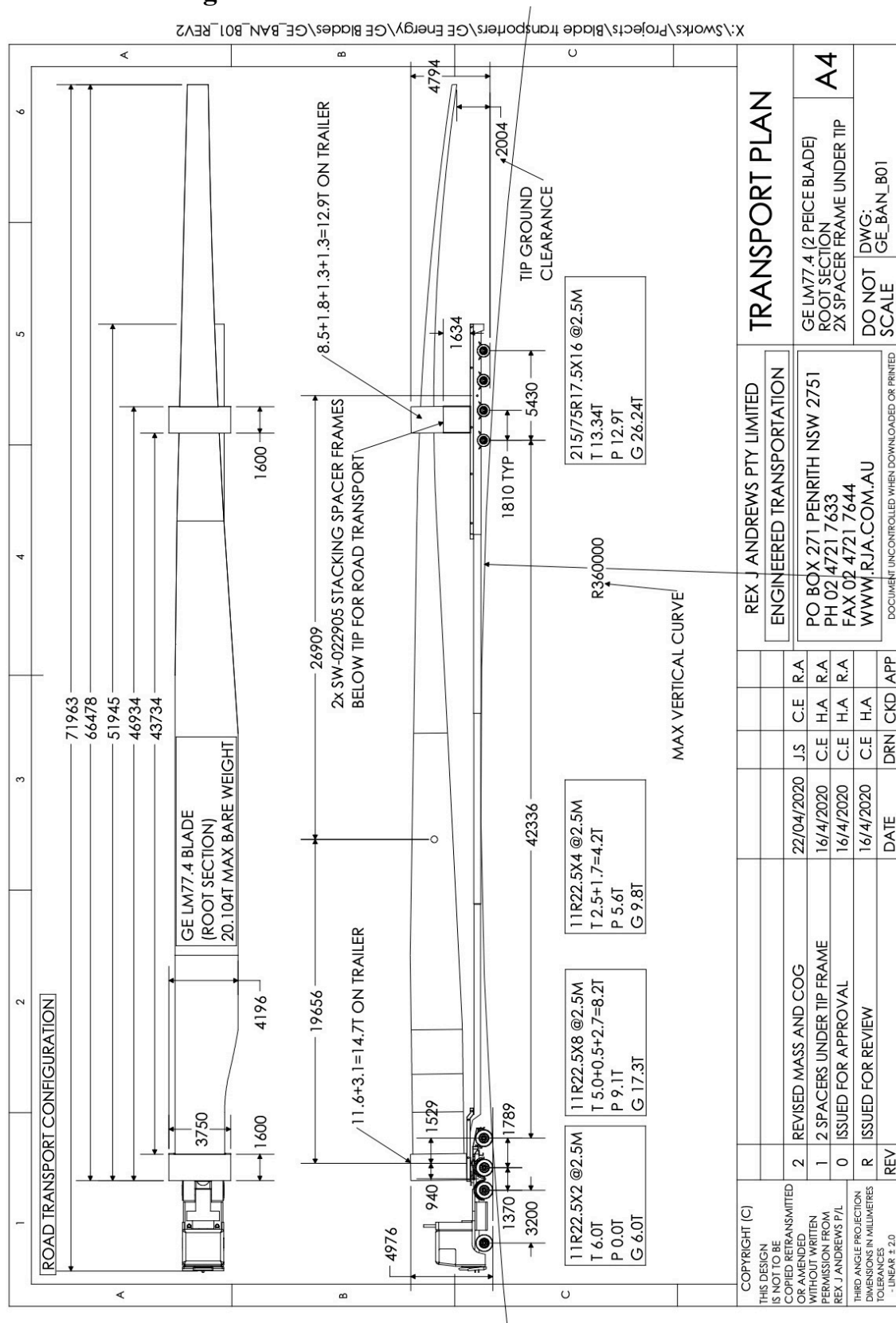
Top Towers (35.9l x 4.3w x 3.7h x 63T)

Configuration. Prime mover with 4x4 dolly 3x8 Jinker trailer.

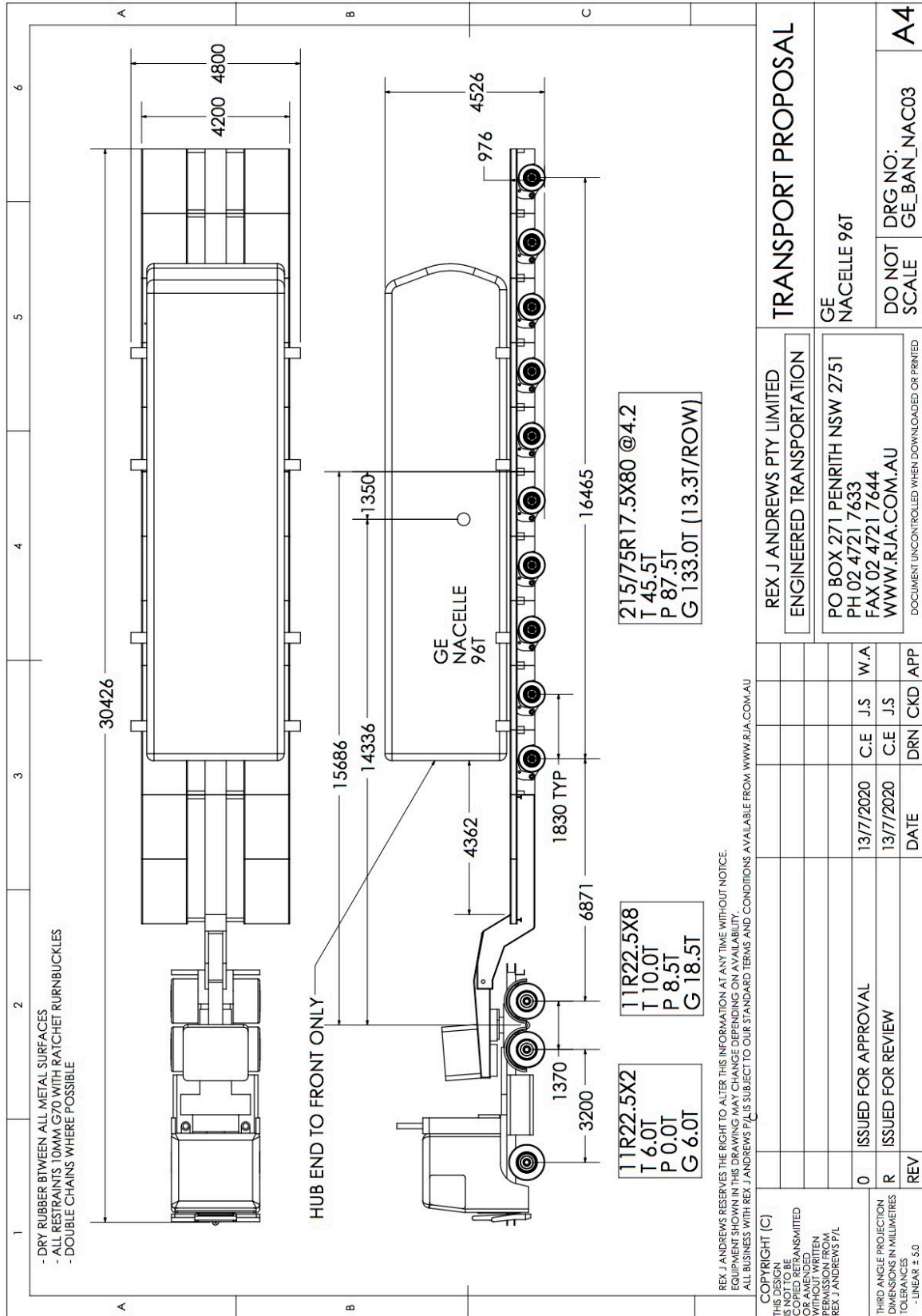
Overall dimension: 49.0l x 4.5w x 5.5h x 102.5T (+ Push truck)

9.0 Transport drawings for GE158. Examples

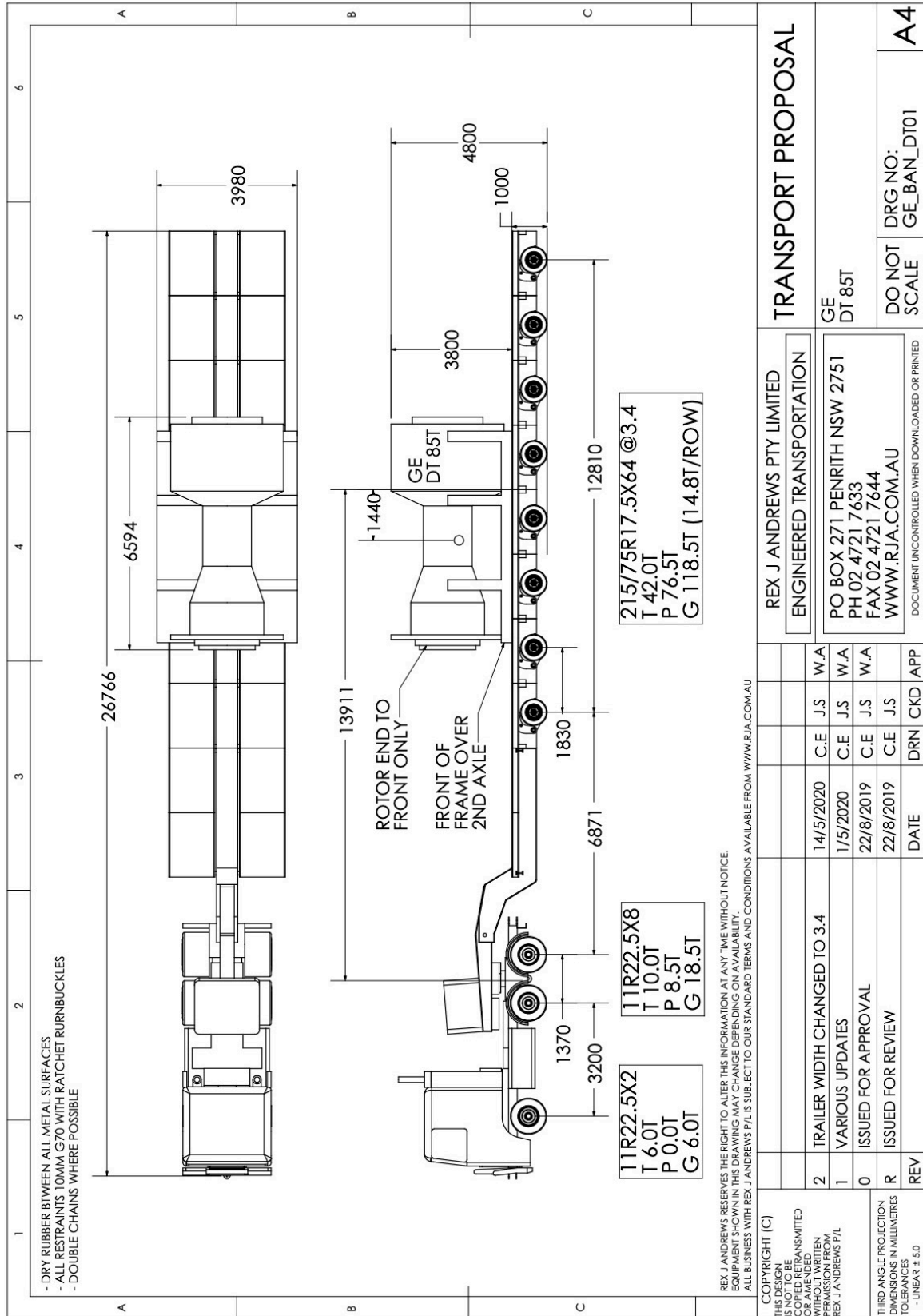
GE158 Blade diagram: Profile



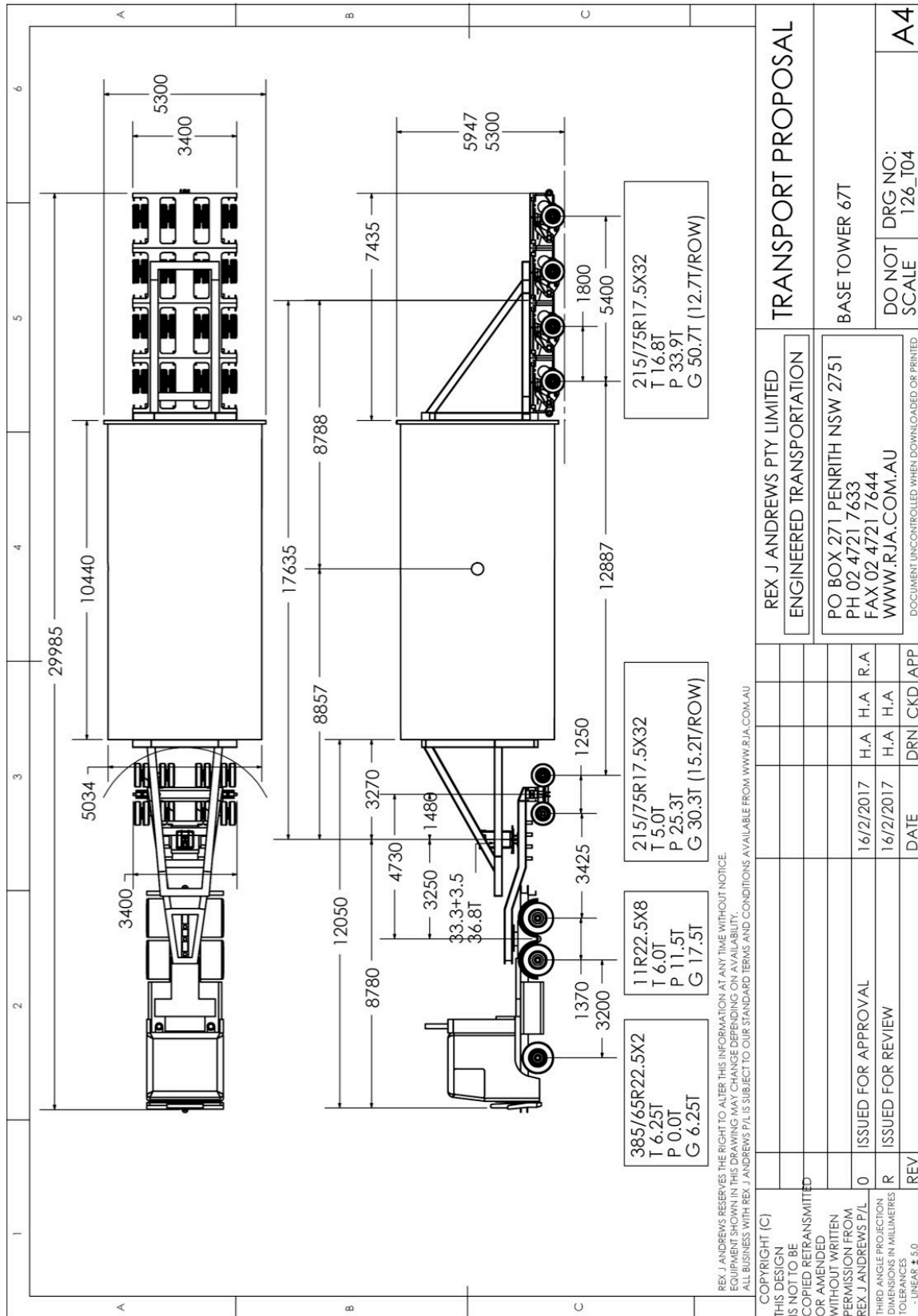
GE158 Machine Head diagram:



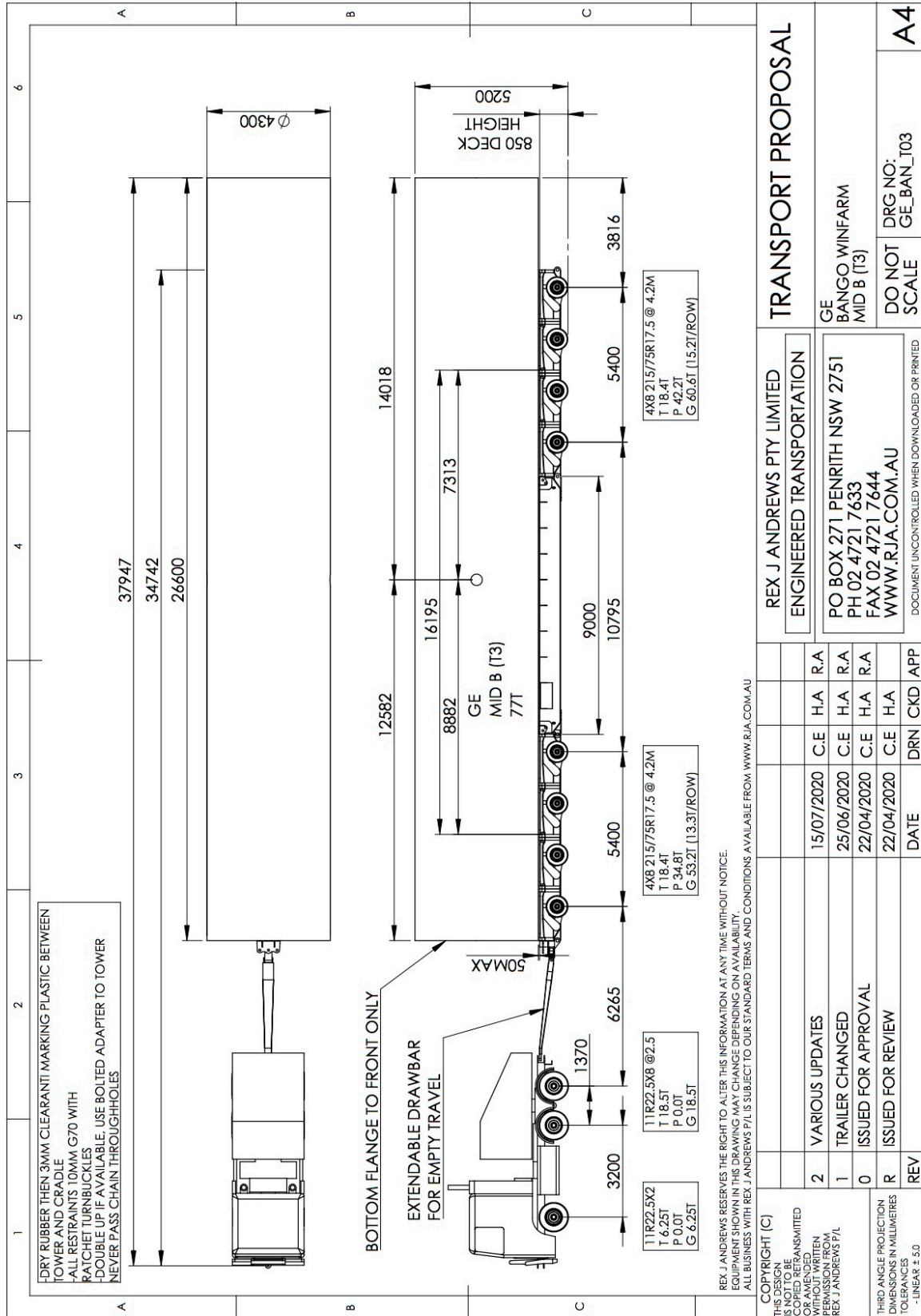
GE158 Drive train diagram:



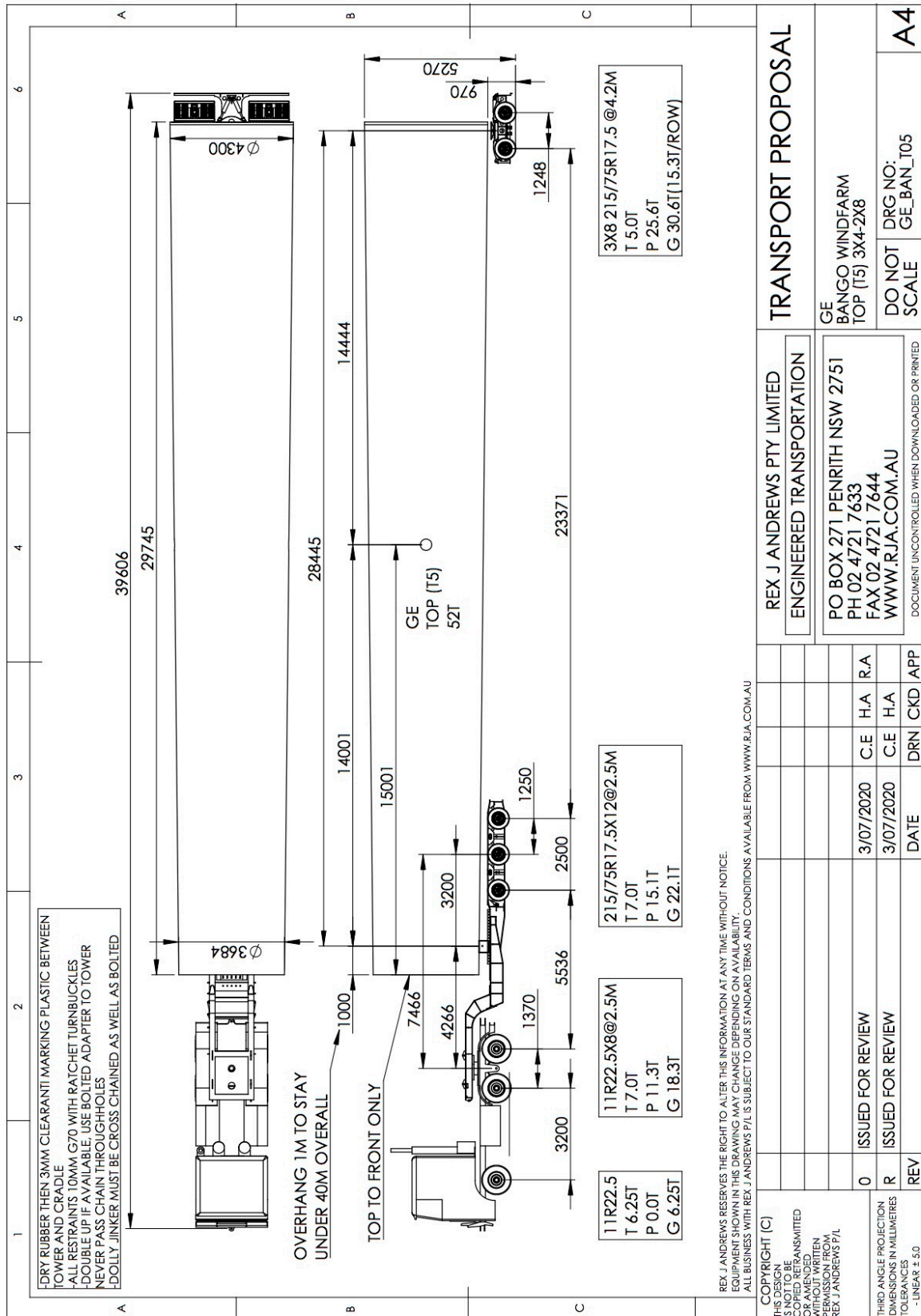
GE158 tower diagram: Bookend



GE158 tower diagram: Extending platform



GE158 tower diagram: Dolly Jinker combo



10.0 Port of Import.

The wind turbine equipment will be imported from various countries and will arrive on ships into the Port of Newcastle. The client may alternately source local towers. The ideal berth for these shipments is the Mayfield #4 Berth. This facility has a hardstand storage area of roughly 100,000 s/q meters, adjacent to the berth.

Access from the storage to the Public roads, is via a port operated road onto Selwyn Street. There will need to be a small amount of road modifications within the port.

Image 1: Port overview.

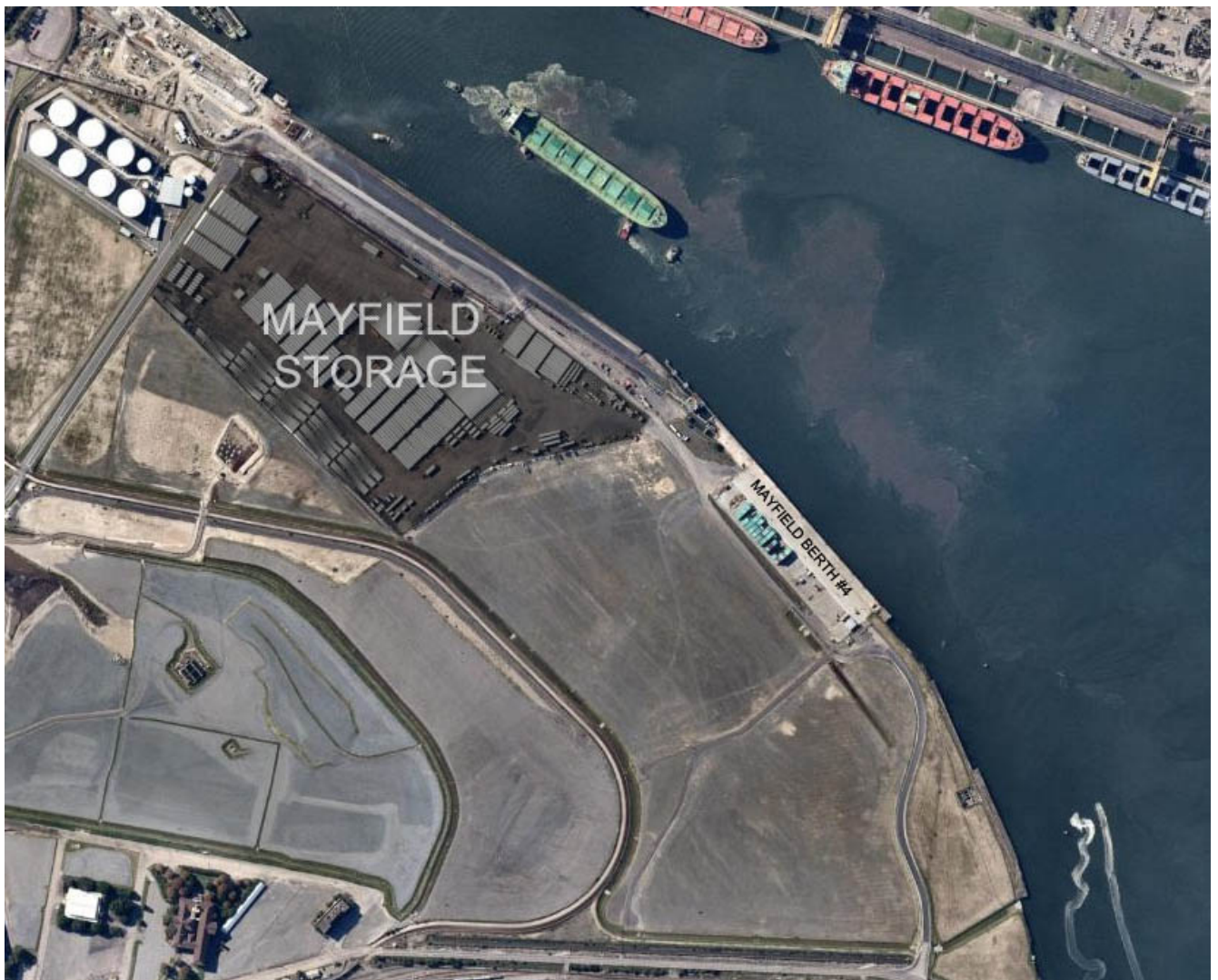
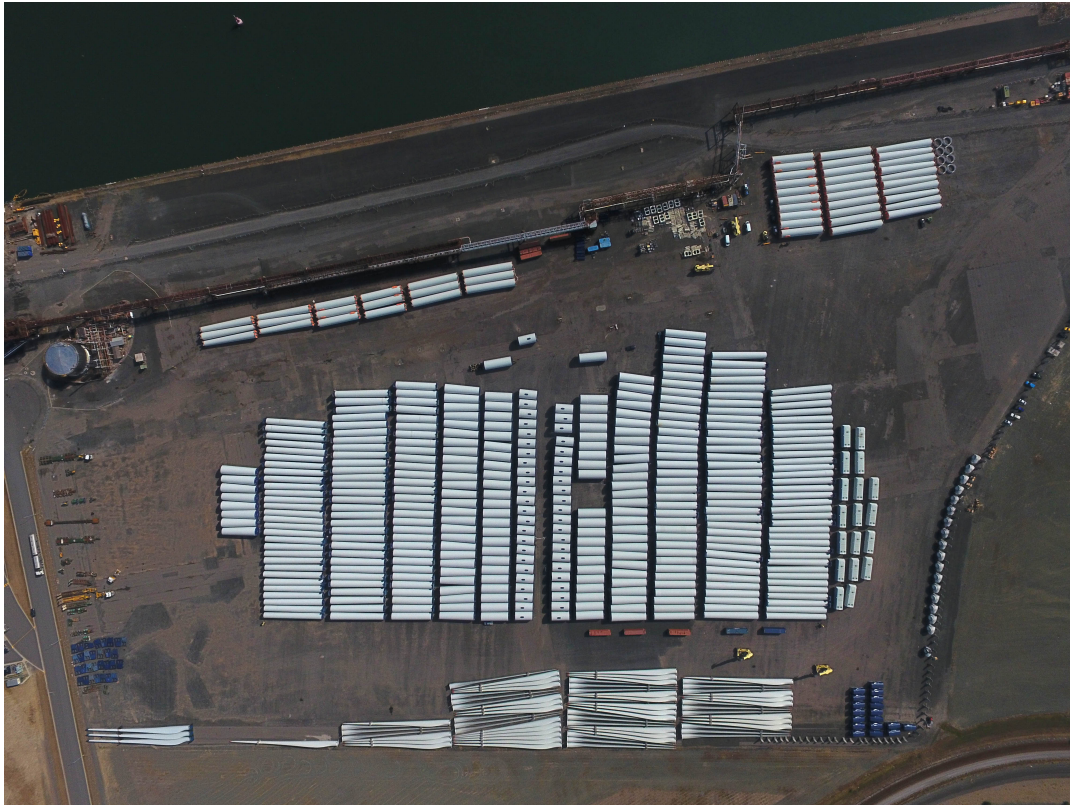


Image 2 & 3: Mayfield #4 Port storage area.

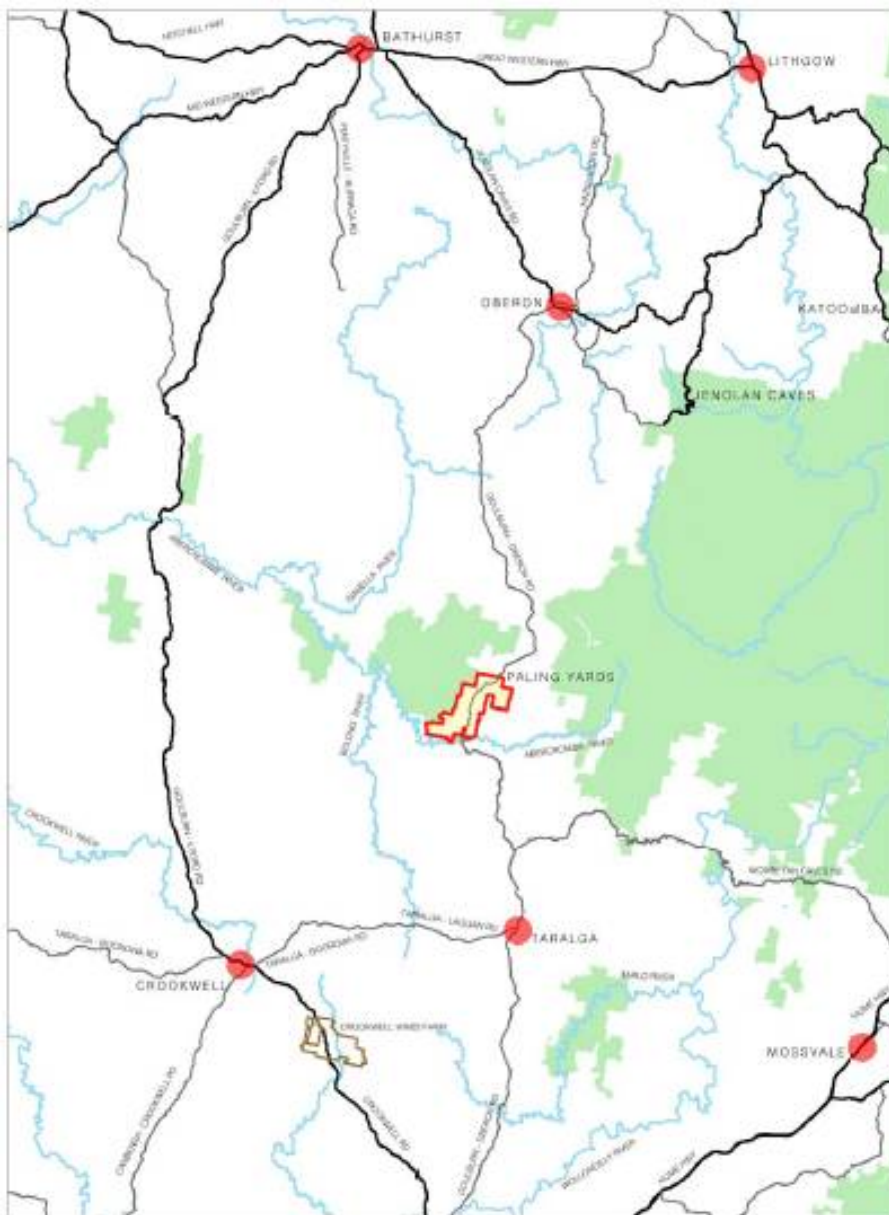


11.0 Site Location and layout.

The project site is proposed to cover three landholdings known as 'Mingary Park', 'Middle Station' and 'Paling Yards', which comprise a total of approximately 3,900 hectares. The site is within the Central Tablelands of NSW, approximately 60km south of Oberon and 60km north of Goulburn and falls within the Oberon LGA.

The Project will involve the following:

- Approximately 50 wind turbines with maximum tip height of 240m
- On-site electrical substation and approximately 9km of overhead transmission line (70m width) of up to 500kV - connecting to the Mt Piper to Bannaby transmission line



12.0 Route studies: Newcastle to Paling Yards Wind Farm.

We have based this study on the turbine components, and all imported towers entering Australia via the Mayfield # 4 Berth at Newcastle. After reviewing the possible transport routes, we believe there should be 3 options. Smaller blades and loads up to 5.1 metres in loaded height could be transported via Sydney using Route Survey A. Loads over 5.1 metres and up to 5.9 metres in height and smaller blades could be delivered via Mudgee using Route Survey B. Blades over 68 metres will need to use route C, via Dubbo.

ROUTE SURVEY A (Loads under 5.1 Metres in height): Newcastle to Paling Yards via Sydney 444.0 kilometres:

This route took us via Selwyn street, George Street, Industrial Drive, Maitland Road, New England Highway, John Renshaw Drive, M1, Pennant Hills Road, M2, M7, M4, Great Western Highway, Littlebourne Street, O,Connell Road, Abercrombie Road.

GPS LINK: <https://goo.gl/maps/wxaPMAxSzGSEKrZZ8>

ROUTE SURVEY B (Loads up to 5.9 Metres in height): Newcastle to Paling Yards via Mudgee 654.0 kilometres:

This route took us via Selwyn street, George Street, Industrial Drive, Maitland Road, New England Highway, John Renshaw Drive, Hunter Expressway, Golden Highway, Denman Road, Bengalla Road, Wybong Road, Golden Highway, Castlereagh Highway, Main Street, Pipers Flat Road, Range Road, Great Western Highway, Littlebourne Street, O,Connell Road, Abercrombie Road.

GPS LINK: <https://goo.gl/maps/8KqByBnVx3f113mk9>

ROUTE SURVEY C (Blades exceeding 68 metres in length) Newcastle to Paling Yards via Dubbo 694.0 kilometres:

This route took us via Selwyn street, George Street, Industrial Drive, Maitland Road, New England Highway, John Renshaw Drive, Hunter Expressway, Golden Highway, Newell Highway, Obley Road, Banjo Paterson Way, Mitchell Highway, Northern Distributor Road, Mitchell Highway, Bradwardine Road, Eglinton Road, Durham Street, Great Western Highway, Littlebourne Street, O,Connell Road, Abercrombie Road.

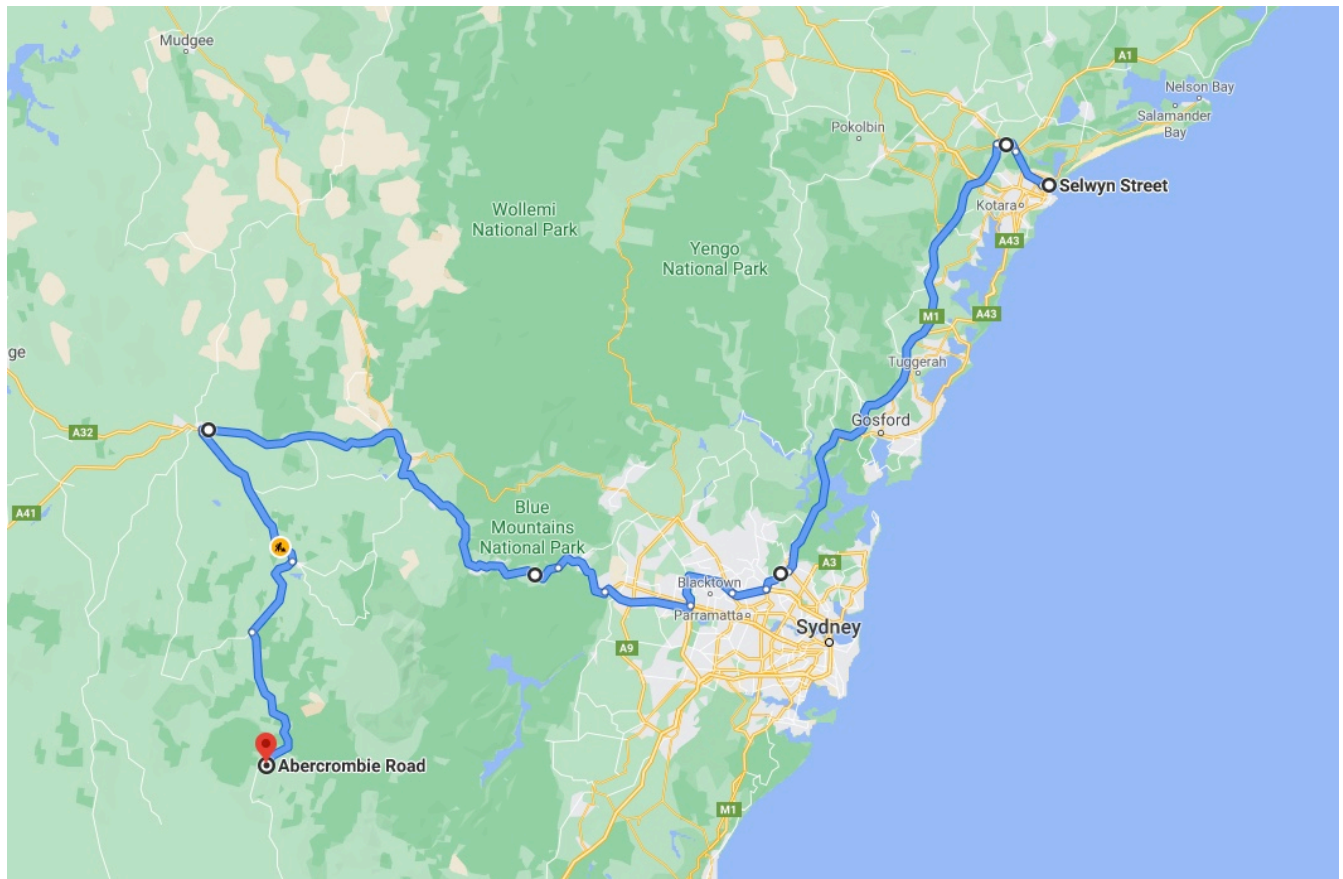
GPS LINK: <https://goo.gl/maps/mayUKaGHk8evRTru7>

13.0 Route Survey A: Loads under 5.1 metres in height.

Newcastle to Paling Yards via Sydney 444.0 kilometres:

This route took us via Selwyn street, George Street, Industrial Drive, Maitland Road, New England Highway, John Renshaw Drive, M1, Pennant Hills Road, M2, M7, M4, Great Western Highway, Littlebourne Street, O,Connell Road, Abercrombie Road.

GPS LINK: <https://goo.gl/maps/wxaPMAxSzGSEKrZZ8>



KEY	
MODIFICATIONS REQUIRED	
PINCH POINT	
EMERGENCY PARKING	
BLADE TYPES	
80 METRE BLADE	V162
75 METRE BLADE	SG155 & V150
65-68 METRE BLADE	SG170 split blade & GE158

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
0.0	Mayfield	Mayfield #4 berth onto Selwyn Street GPS link: https://goo.gl/maps/aJLwPYXuNdm	70.0 metres clearance	Moderate right hand turn	<p>80 Metre Blade: This blade will require the fence to be relocated where the tip travels over the left-hand side of the road, and a large amount of hardstand will need to be added to the entry and exit of the corner.</p> <p>75 Metre Blade: This blade will require the fence to be relocated where the tip travels over the left-hand side of the road, and a large amount of hardstand will need to be added to the exit of the corner.</p> <p>65-68 Metre Blade: This blade will require the fence to be relocated where the tip travels over the left-hand side of the road.</p>
0.4	Mayfield	Selwyn Street rail crossing GPS link: https://goo.gl/maps/AmohE54hKSz	9.0 Metres wide	Travel directly ahead	Loads to travel over the crossing in the center of the road. Approval required crossing this line, likely cross with caution.
1.3	Mayfield	Selwyn Street onto Industrial Drive via George Street GPS link: https://goo.gl/maps/gXehy8iCe4D2	70.0 metres clearance	Right hand turn	<p>80 Metre Blade: Load to travel right from Selwyn Street onto George Street. Entering Industrial Drive, the loads will cross from the correct side to the correct side. A traffic signal in the centre island will need to be relocated and large amount of hardstand to</p> <p>75 Metre Blade: Load to travel right from Selwyn Street onto George Street. Entering Industrial Drive, the loads will cross from the correct side to the correct side. A traffic signal in the centre island will need to be relocated.</p> <p>65-68 Metre Blade: Load to travel right from Selwyn Street onto George Street, before turning to the incorrect side of Industrial Drive. Once onto Industrial Drive the loads will travel over the centre median strip and back onto the correct side of the road. No work required.</p>

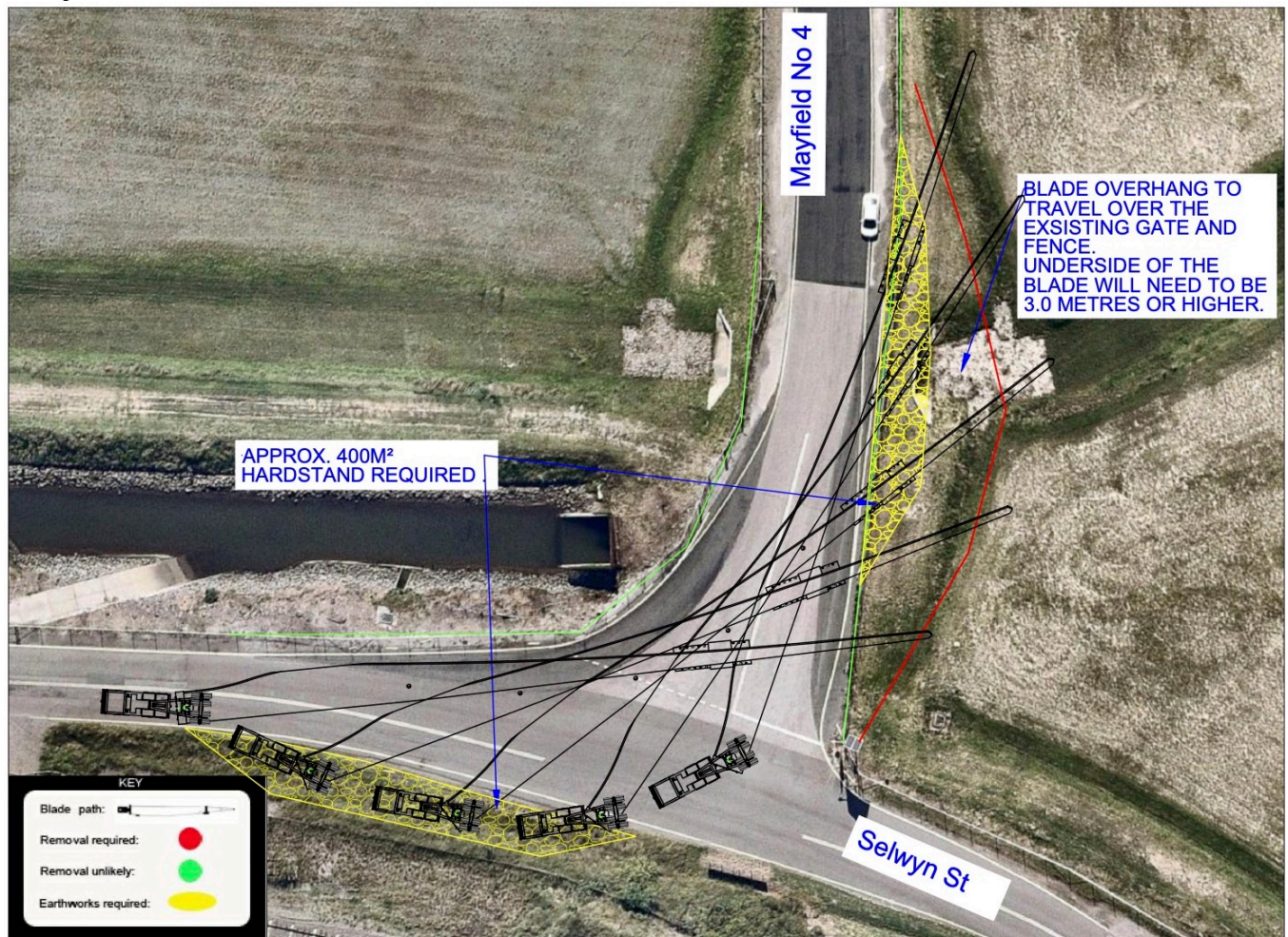
KM index	Location	Section of road	Critical Measurement	Procedure	Notes
5.5	Mayfield West	Industrial Drive onto Maitland Road GPS link: https://goo.gl/maps/Kn49dtWG2nG2	70.0 metres clearance	Right hand turn	80 Metre Blade: The centre median strip will need to be lowered, or the trucks are to cross to the incorrect side of Industrial drive further to the east of the intersection. The blades will need to cross to the incorrect side metres prior to the intersection, then return to the correct side 120 metres past the intersection. 75 Metre Blade: This blade will need to cross to the incorrect side 150 metres prior to the intersection, then return to the correct side 120 metres past the intersection. No work required. 65-68 Metre Blade: This blade will need to cross to the incorrect side 150 metres prior to the intersection, then return to the correct side 120 metres past the intersection. No work required.
17.4	Tarro	New England Highway onto John Renshaw Drive GPS link: https://goo.gl/maps/SRDr5JigkBP	100.0 metres clearance	Left hand merge	No problems with this section of road.
18.5	Beresfield	John Renshaw Drive onto the M1 GPS link: https://goo.gl/maps/A34ihxCjM5wfRDdg6	100.0 metres clearance	Left hand bend	No problems with this section of road.
113.0	Mt White	M1 Motorway under Mt White overpass GPS link: https://goo.gl/maps/K3fPPe4fNx63xB3j7	Left Lane: 5.2 mtrs Centre Lane: 5.3 mtrs Right Lane: 5.4 mtrs	Travel directly ahead	Loads that exceed 5.3 metres high are not to travel under this structure. Loads over 5.2 metres high are to travel under the bridge in the far right lane, and at a speed of no more than 5 km's per hour. Spotter to guide load through this section of road.
122.0	Hawkesbury River	M1 Motorway GPS link: https://goo.gl/maps/yDzjrEKLAbREE8B6	100.0 long x 6.0 wide	Merge to left	Large parking area
146.0	Wahroonga	M1 onto Pennant Hills Rd GPS link: https://goo.gl/maps/bckC8kD4CzW9zmaYA	75.0 metres clearance	Left hand turn	80 and 75 Metre Blade: Blade loads are to turn from the correct side to the incorrect side of the road. Centre medium strip slope to be reduced to allow clearance for truck and trailer. 65-68 Metre Blade: Blade loads are to turn from the correct side to the correct side of the road. No works required.
147.0	Normanhurst	Pennant Hills Road under Pedestrian overpass GPS link: https://goo.gl/maps/nYbikf5AJ9D2xvUt7	Left Lane: 5.15 mtrs Centre Lane: 5.2 mtrs Right Lane: 5.3 mtrs	Travel directly ahead	Loads that exceed 5.25 metres high are not to travel under this structure. Loads over 5.2 metres high are to travel under the bridge in the far right lane, and at a speed of no more than 5 km's per hour. Spotter to guide load through this section of road.

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
151.0	Beecroft	Pennant Hills Road under Pedestrian overpass GPS link: https://goo.gl/maps/sjnLQqYRudUSKqTQ8	Left Lane: 5.3 mtrs Centre Lane: 5.4 mtrs Right Lane: 5.5 mtrs	Travel directly ahead	Loads that exceed 5.3 metres high are not to travel under this structure. Loads over 5.2 metres high are to travel under the bridge in the centre lane, and at a speed of no more than 5 km's per hour. Spotter to guide load through this section of road.
154.0	West Pennant Hills	Pennant Hills Rd onto M2 Motorway GPS link: https://goo.gl/maps/cC6Jw811NsRIS-5v6	75.0 metres clearance	Right hand turn	80 Metre Blade: A traffic signal and lightpole will need to be relocated on the outside of the corner while entering. A barrier will also need to be relocated on the outside of the corner while exiting. 75 Metre Blade: 2x signs to be made removable and slope to be reduced on the island on the outside of the corner to allow prime mover to cross. 65-68 Metre Blade: No works required.
163.0	Winston Hills	M2 Motorway onto M7 Motorway GPS link: https://goo.gl/maps/PC96cBq2xqtW85vG7	75.0 metres clearance	Travel directly ahead	No problems with this section of road.
167.0	Kings Park	M7 Motorway GPS link: https://goo.gl/maps/T8WcbR9T84Zs7WpF7	100.0 long x 6.0 wide	Merge to left	Large parking area
182.0	Minchinbury	M7 Motorway onto M4 Motorway GPS link: https://goo.gl/maps/HMmAWD4x1oDWoNpJ7	Length: 100.0 metres Width: 6.0 metres	Large sweeping left-hand turn	Spotter to watch blade tip on streetlights on the inside and outside of the bend.
202.0	Leonay	M4 Motorway onto Great Western Highway GPS link: https://goo.gl/maps/x8nmtwgjthy2WGEu6	Width: 10.0 metres	Travel directly ahead	No problems with this section of road.
205.0	Glenbrook	Great Western Highway GPS link: https://goo.gl/maps/2B3vQrBUjdrChfxt6	Length: 100.0 metres Width: 6.0 metres	Right merge	Possible emergency Parking on the right-hand side of the road opposite the Information bay
207.0	Glenbrook	Great Western Highway Fletcher St overpass GPS link: https://goo.gl/maps/tL4hD5yXaijq4LkF8	Height Left Lane: 5.1 mtrs Centre Lane: 5.2 mtrs Right Lane: 5.3 mtrs	Travel directly ahead	Loads that exceed 5.15 metres high are not to travel under this structure.
223.0	Faulconbridge	Great Western Highway GPS link: https://goo.gl/maps/hah5F8fqLtXaXeUE7	Length: 75.0 metres Width: 7.0 metres	Left merge	Large parking bay opposite the fruit house. Blades would need to reverse back out of parking bay if used.
253.0	Medlow Bath	Great Western Highway GPS link: https://goo.gl/maps/KC6iBaNuLbEL3WK68	Length: 100.0 metres Width: 6.0 metres	Left merge	Parking on the left-hand side of the road outside the Hydro Majestic.
260.0	Blackheath	Great Western Highway GPS link: https://goo.gl/maps/2yyPjg4ZqSrNBRKa7	Length: 100.0 metres Width: 6.0 metres	Left merge	Possible emergency Parking opposite the Mount Boyce heavy vehicle checking station.

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
263.3	Mt Victoria	Great Western Highway rail overpass GPS link: https://goo.gl/maps/75QsJH1LJENiVmi7A	80.0 metres clearance	S-Bend	80 and 75 Metre Blade: Blades will block entire road while navigating this bend. A light pole will need to be removed on the outside of the second (right hand bend) 65-68 Metre Blade: Blades will block entire road while navigating this bend. No work required.
263.0	Mt Victoria	Great Western Highway GPS link: https://goo.gl/maps/1EeFW4Ks5Pwkbv79	Length: 75.0 metres Width: 6.0 metres	Right hand bend	80 and 75 Metre Blade: Blades will block entire road while navigating this bend. A light pole will need to be removed on the outside of the second (right hand bend) 65-68 Metre Blade: Blades will block entire road while navigating this bend. No work required.
265.0	Mt Victoria	Great Western Highway GPS link: https://goo.gl/maps/b3gWzQg9hpfhBRC6	Length: 100.0 metres Width: 3.0 metres	Left merge	Possible emergency Parking on the left-hand side opposite the service Centre.
266.4	Victoria Pass	Great Western Highway GPS link: https://goo.gl/maps/vtC3xLj36qRMSqMR9	Length: 70.0 metres Width: 6.0 metres	Very tight left hand bend	80 and 75 Metre Blade: Traffic needs to be held at the bottom of Victoria pass while blade is descending. Either the centre jersey curb need to be removed or a section of the inside bank will need to be cut back. See overlays for options. 65-68 Metre Blade: Traffic needs to be held at the bottom of Victoria pass while blade is descending. No work required.
267.1	Victoria Pass	Great Western Highway GPS link: https://goo.gl/maps/qKsEJ8S3W3bsCCTAA	Length: 70.0 metres Width: 6.0 metres	Narrow right hand bend	80 and 75 Metre Blade: Traffic needs to be held at the bottom of Victoria pass while blade is descending. Some trees need trimming on the outside of the corner. 65-68 Metre Blade: Traffic needs to be held at the bottom of Victoria pass while blade is descending. No work required.
275.0-277.5	River Lett	Great Western Highway GPS link: https://goo.gl/maps/ns4q35c7kvUZgPnj6	Length: 70.0 metres Width: 6.0 metres	Steep ascent with several tight turns.	Traffic needs to be held at the top of River Lett hill to allow blade tip to safely cross to eastbound lanes.
277.0	River Lett	Great Western Highway GPS link: https://goo.gl/maps/Xj2aB3cFVN3e3JJp9	Length: 100.0 metres Width: 6.0 metres	Left merge	Parking on the left-hand side of the road.
321.0	Yetholme	Great Western Highway GPS link: https://goo.gl/maps/Ds2WjpbmKCp1rCSA8	Length: 150.0 metres Width: 10.0 metres	Left merge	Parking on the left-hand side of the road.
341.0	Kelso	Great Western Highway Roundabout GPS link: https://goo.gl/maps/wh0PhaHhG45v7eF79	Length: 50.0 metres Width: 6.5 metres	Travel directly ahead through the roundabout	80, 75, 65 & 68 Metre Blade: Options for either a smaller amount of hardstand and removal of high curb on the roundabout itself or large amount of hardstand on the outside entrance to the roundabout to avoid impacting the roundabout. 1x light pole will need removal for the second option.

KM index	Location	Section of road	Critical Measurement	Procedure	Notes
342.0	Kelso	Great Western Highway onto O'Connell Road GPS link: https://goo.gl/maps/E173WmTbXTcnXaFA	Length: 50.0 metres Width: 7.0 metres	Left hand turn	80, 75 , 65 & 68 Metre Blade: Eastbound lanes will need to be blocked as tail swing will cross to wrong side of Great Western Highway. Prime mover will wrong-side O'Connell St traffic island. 3x Signs to be made removable.
346.0	Kelso	O'Connell Road GPS link: https://goo.gl/maps/tE5Mq3onTKm1V9LG8	Length: 100.0 metres Width: 6.0 metres	Left merge	Parking on the left-hand side of the road.
360.0	O'Connell	O'Connell Road GPS link: https://goo.gl/maps/pAAeAGkYPdZnYhf8A	Width: 6.0 metres	Continue on O'Connell Rd	Low trees on either side of the road. Some trimming may be required.
361.0	O'Connell	O'Connell Road GPS link: https://goo.gl/maps/zDc3rvvAUv2IXddo8	Length: 80.0 metres Width: 6.0 metres	Left merge	Parking on the left-hand side of the road.
370.0-371.5	Oberon	O'Connell Road (Range) GPS link: https://goo.gl/maps/3g6yNM3MBwZGqASG2	Length: 70 metres Width: 6.0 metres	Very steep ascent with several very tight turns.	80, 75 , 65 & 68 Metre Blade: If the centre jersey curb can be removed on the range a max 80m blade could navigate the range with moderate work required. If the curb has to remain the corners will need significant work and a complete redesign of the road. See overlays for details of the options.
372.0	Oberon	O'Connell Road GPS link: https://goo.gl/maps/8cjX5U4oL9WJLm2C7	Length: 60.0 metres Width: 10.0 metres	Left merge	Parking on the left-hand side of the road.
383.0	Oberon	O'Connell Road onto Abercrombie Road GPS link: https://goo.gl/maps/nY3ygc1L95Y7cy6k8	Length: 60 metres Width: 6.0 metres	Right hand turn	80, 75 , 65 & 68 Metre Blade: 2x tress and 4x signs need to be removed. A significant amount of hardstand is required on the inside and outside of the corner. Loads will need to wrong side the roundabout.
406.0	Black Springs	Abercrombie Road intersection of Campbells River Road GPS link: https://goo.gl/maps/wPBIVRivWCAy1FU6	Length: Width:	Left hand turn	80, 75 , 65 & 68 Metre Blade: 1x sign needs to be removed on the inside of the corner. A significant amount of hardstand is required on the outside of the corner.
436.0	Gurnang	Abercrombie Road GPS link: https://goo.gl/maps/bfTpcyaorh6CYVs6	Length: 100.0 metres Width: 10.0 metres	Left merge	Parking on the left-hand side of the road.
436.0-441.8	Paling Yards	Abercrombie Road GPS link: https://goo.gl/maps/pTSFwJczPgB319mK7	Length: 100.0 metres Width: 10.0 metres	Undulating section with sweeping bends	No issues with this section for blades up to 80m in length
444.0	Paling Yards	Abercrombie Road into windfarm entrance GPS link: https://goo.gl/maps/wdptanEa7hcQwXSV8	Length: ? Width: ?	Left hand turn	Location of site entrance to be confirmed. Site entrance will need to be designed to suit all components.

0.0 Km's: (80 Meter Blade) (Mayfield #4 onto Selwyn Street at Mayfield.



PROCEDURE: Right hand turn.

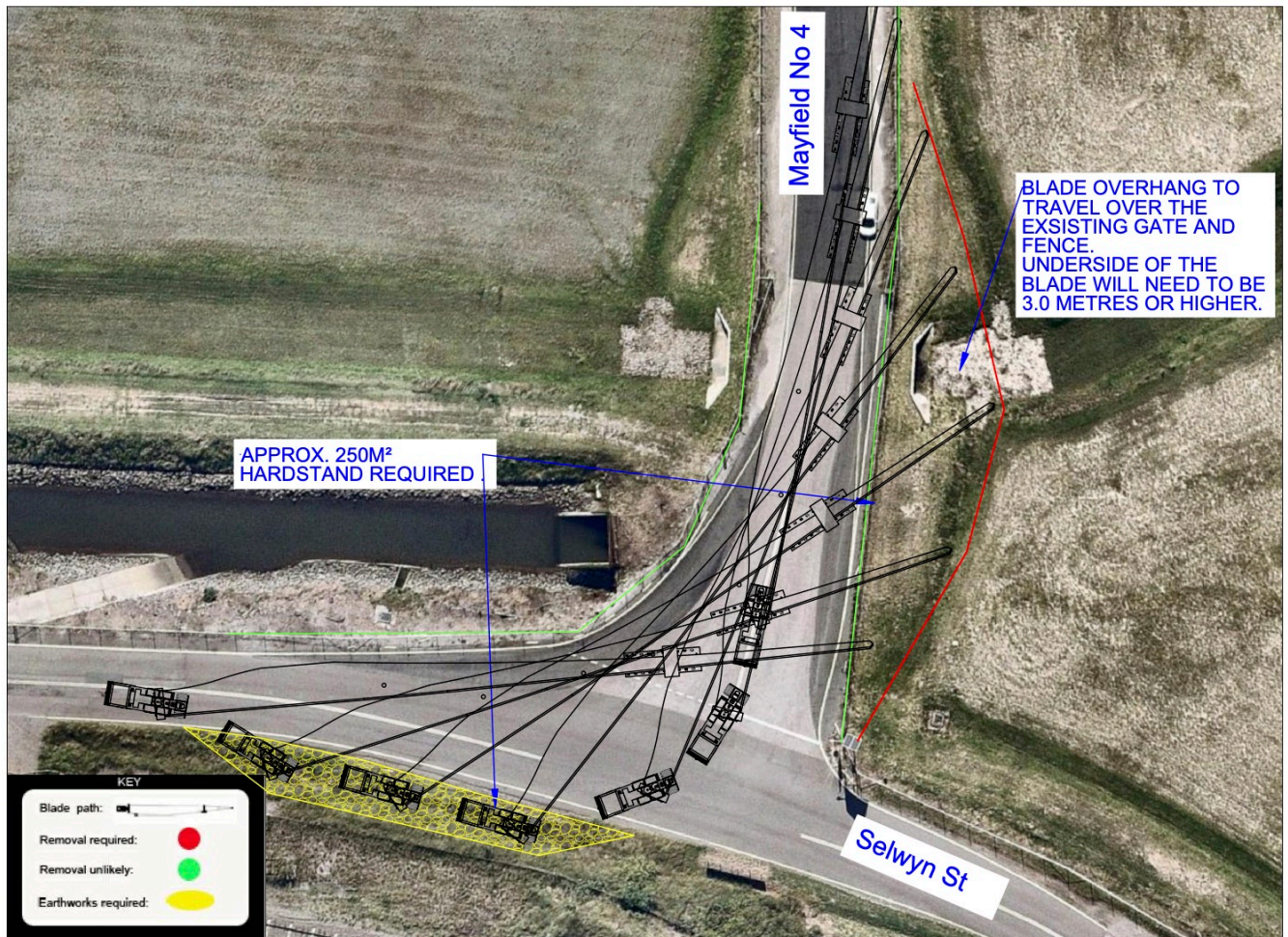
GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/afLwPYKuNdm>

COMMENTS: Large amount of fill will need to be added to the left entry and exit of the corner. Some signs will need to be relocated and or made removable and some fence will need to be relocated.

A spotter will need to keep the driver informed throughout the procedure. Police and escorts to control local traffic either side of the intersection.

ROAD MODIFICATIONS: Yes large amounts of work are required.

0.0 Km's: (75 Meter Blade) (Mayfield #4 onto Selwyn Street at Mayfield.



PROCEDURE: Right hand turn.

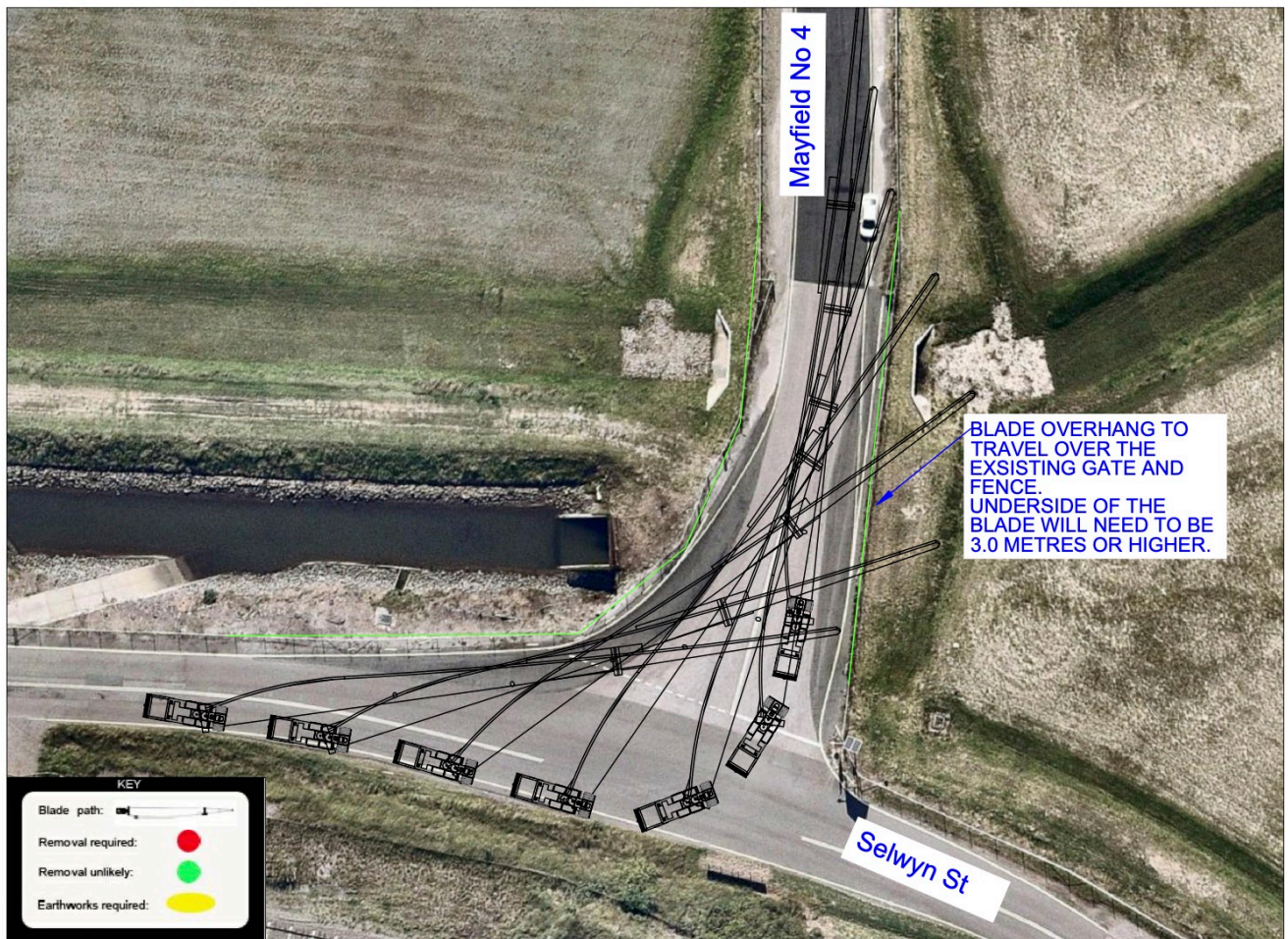
GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/afLwPYKuNdm>

COMMENTS: Large amount of fill will need to be added to the left exit of the corner. Some signs will need to be relocated and or made removable and some fence will need to be relocated.

A spotter will need to keep the driver informed throughout the procedure. Police and escorts to control local traffic either side of the intersection.

ROAD MODIFICATIONS: Yes moderate amounts of work are required.

0.0 Km's: (65-68 Meter Blade) (Mayfield #4 onto Selwyn Street at Mayfield.



PROCEDURE: Right hand turn.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/afLwPYKuNdm>

COMMENTS: This blade will require the fence to be relocated where the tip travels over the left-hand side of the road.

ROAD MODIFICATIONS: Yes, minor amounts of work are required.

0.4 Km's: Rail crossing over Selwyn Street at Mayfield.



PROCEDURE: Travel directly ahead over the crossing.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/864FhMSaF9P2>

COMMENTS: Large width clearance and good ground clearance over this crossing.

Police and escorts to control local traffic either side of the crossing. ARTC approval will need to be obtained to travel over this crossing. Likely to cross with caution, no escort required.

ROAD MODIFICATIONS: No works required.

1.3 Km's: (80 Meter Blade) Selwyn Street onto Industrial Drive, via George Street at Mayfield.

PROCEDURE: Right hand turn from Selwyn Street through George Street and onto Industrial Drive.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/brPRAckLr572>

COMMENTS: Load to travel right from Selwyn Street onto George Street. Entering Industrial Drive, the loads will cross from the correct side to the correct side. A traffic signal will need to be relocated and large amount of hardstand to the right-hand side of George st.

ROAD MODIFICATIONS: Yes, Large amounts of works are required.

1.3 Km's: (75 Meter Blade) Selwyn Street onto Industrial Drive, via George Street at Mayfield.



PROCEDURE: Right hand turn from Selwyn Street through George Street and onto Industrial Drive.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/brPRAckLr572>

COMMENTS: Load to travel right from Selwyn Street onto George Street. Entering Industrial Drive, the loads will cross from the correct side to the correct side. A traffic signal will need to be relocated.

ROAD MODIFICATIONS: Yes, moderate amounts of works are required.

1.3 Km's: (65-68 Meter Blade) Selwyn Street onto Industrial Drive, via George Street at Mayfield.



PROCEDURE: Right hand turn from Selwyn Street through George Street and onto Industrial Drive.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/brPRAckLr572>

COMMENTS: Load to travel right from Selwyn Street onto George Street, before turning to the incorrect side of Industrial Drive. Once onto Industrial Drive the loads will travel over the centre median strip and back onto the correct side of the road.

ROAD MODIFICATIONS: No works required.

5.5 Km's: (80 Meter Blade) Industrial Drive onto Maitland Road at Mayfield West.



GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/Kn49dhWG2qG2>

PROCEDURE: Right hand turn from Industrial Drive onto Maitland Road.

COMMENTS: The centre median strip will need to be lowered, or the trucks are to cross to the incorrect side of Industrial drive further to the east of the intersection.

The blades will need to cross to the incorrect side metres prior to the intersection, then return to the correct side 120 metres past the intersection.

ROAD MODIFICATIONS: Yes, moderate amounts of works are required.

5.5 Km's: (75, 65 & 68 Meter Blade) Industrial Drive onto Maitland Road at Mayfield West.



GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/Kn49dhWG2qG2>

PROCEDURE: Right hand turn from Industrial Drive onto Maitland Road.

COMMENTS: The blades will need to cross to the incorrect side 150 metres prior to the intersection, then return to the correct side 120 metres past the intersection.

ROAD MODIFICATIONS: Yes, moderate amounts of works are required.

18.5 Km's: (80, 75, 65 and 68 Meter Blade) Intersection of John Renshaw Drive and M1 at Beresfield.



PROCEDURE: Merge to the left and travel around a left hand bend before merging to the right onto the M1 Motorway.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/A34ihxCjM5wfRDdq6>

COMMENTS: Loads to turn left onto the slip lane. Spotter to guide the load through the corner.

ROAD MODIFICATIONS: No modifications required.

146.0 Km's: (80 and 75 Meter Blade) M1 Motorway onto Pennant Hills Road at Wahroonga.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/bskC8kD4CdW9xmWYA>

PROCEDURE: Left hand turn from the M1 Motorway onto Pennant Hills Road.

COMMENTS: It is recommended that the centre median strip be modified to allow a suitable clearance for the truck to travel over.

Blade loads are to turn from the correct side to the incorrect side of the road. The prime mover will need to turn from the far-right lane and cross onto the incorrect side of Pennant Hills Road, before returning to the correct side once the trailer has cleared the corner.

ROAD MODIFICATIONS: Yes, moderate amounts of works are required.

146.0 Km's: (65-68 Meter Blade) M1 Motorway onto Pennant Hills Road at Wahroonga.

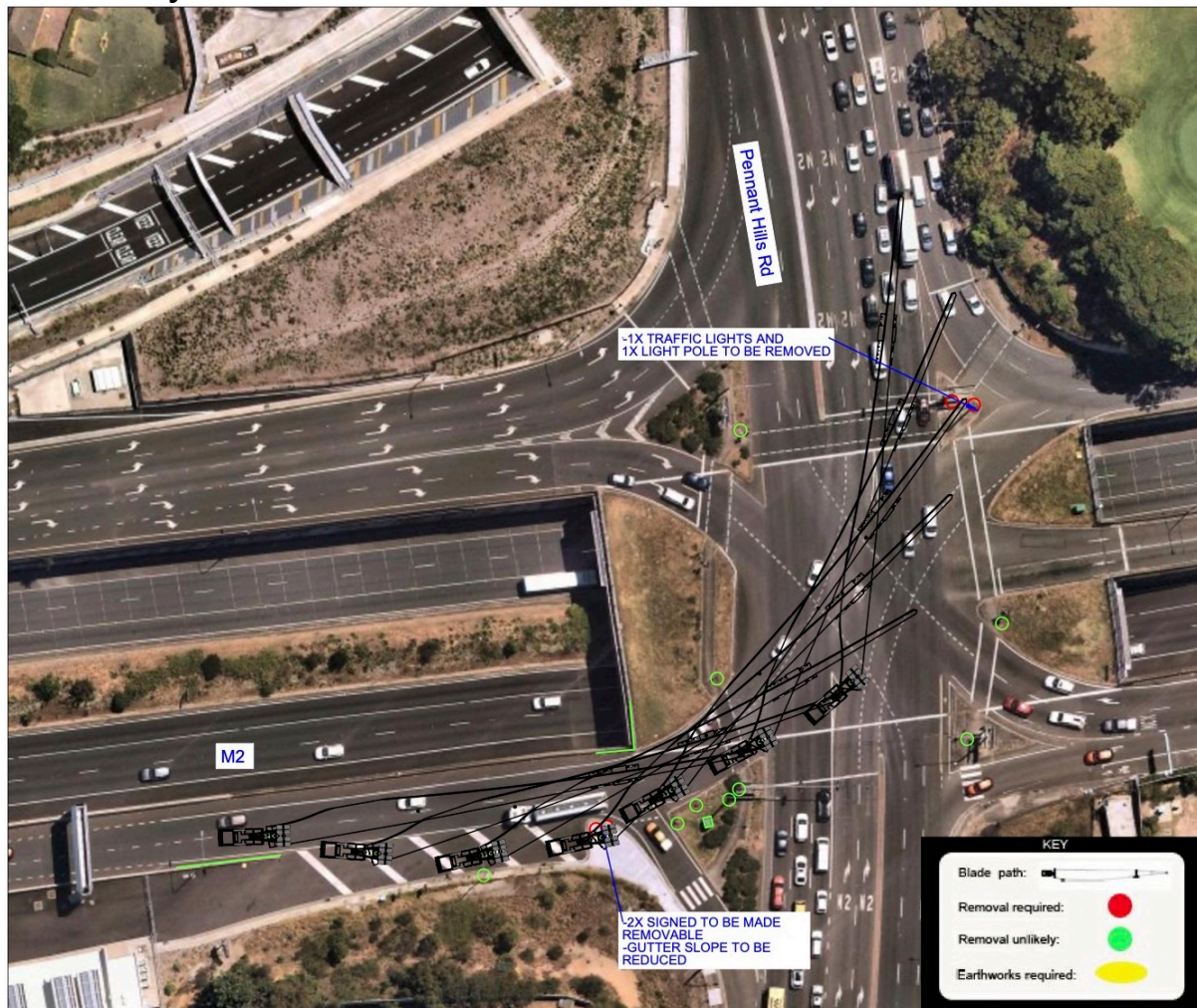


GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/bskC8kD4CdW9xmWYA>

PROCEDURE: Left hand turn from the M1 Motorway onto Pennant Hills Road.

COMMENTS: Blade loads are to turn from the correct side to the correct side of the road. The prime mover will need to turn from the far-right lane and cross onto the correct side of Pennant Hills Road.

ROAD MODIFICATIONS: No modifications required.

154.0 Km's: (80 Meter Blade) Pennant Hills Road onto the M2 Motorway at West Pennant Hills.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/bskC8kD4CdW9xmwYA>

PROCEDURE: Right hand turn from Pennant Hills Road onto the M2 Motorway.

COMMENTS: A traffic signal and lightpole will need to be relocated on the outside of the corner while entering. A barrier will also need to be relocated on the outside of the corner while exiting.

Trucks are to turn from the correct side to the correct side of the road. The prime mover will need to turn from the far-left lane on Pennant Hills Road and enter the on ramp as wide as possible. Spotter to guide the load through the corner.

ROAD MODIFICATIONS: Yes, large amounts of works are required.

154.0 Km's: (75 Meter Blade) Pennant Hills Road onto the M2 Motorway at West Pennant Hills.

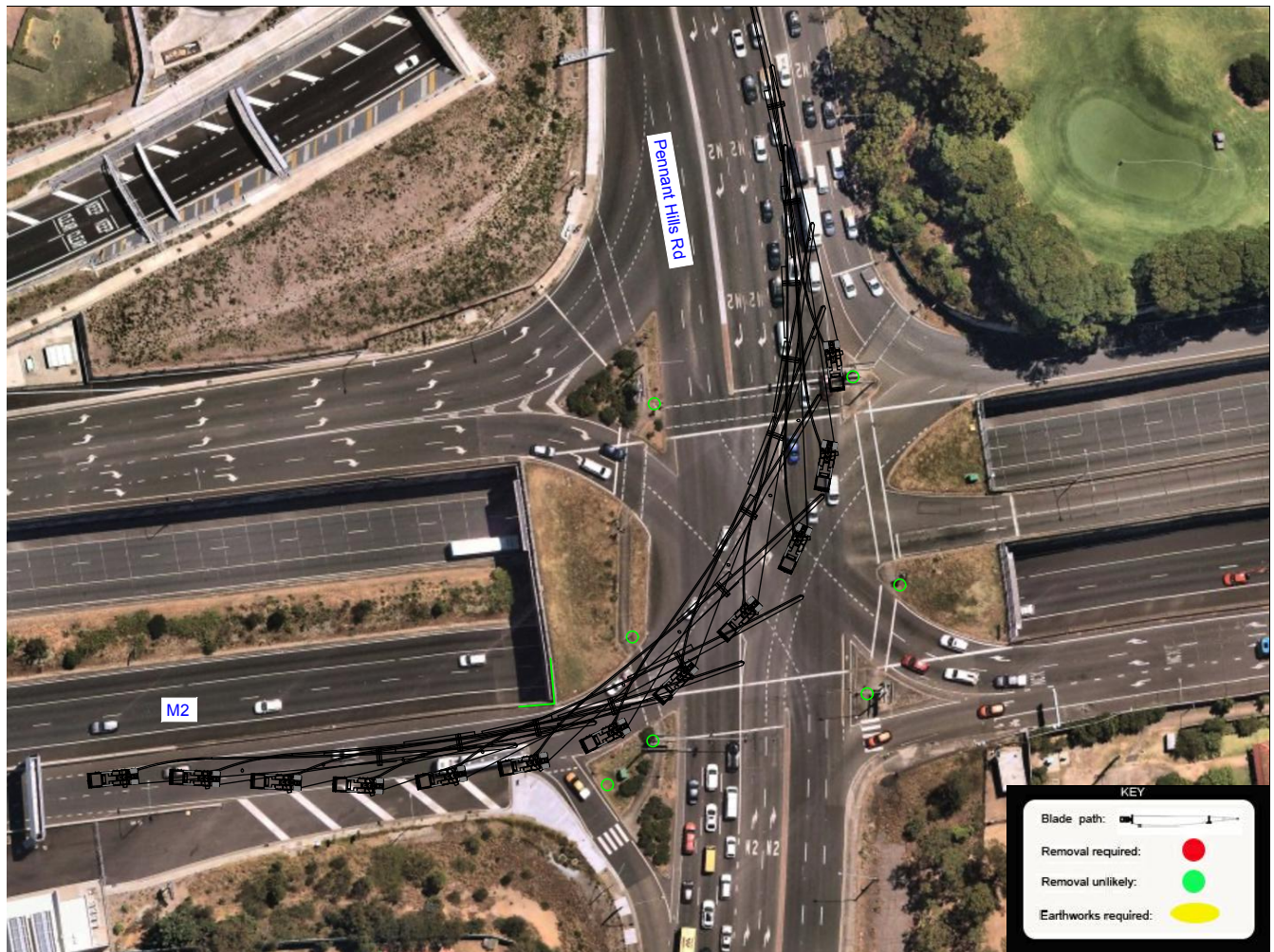
PROCEDURE: Right hand turn from Pennant Hills Road onto the M2 Motorway.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/bskC8kD4CdW9xmWYA>

COMMENTS: 2x signs on the outside of the corner will need to be made removable and the slope of the gutter on the outside island will need to be reduced to allow the prime mover to travel over it. The prime mover will need to turn from the far-left lane on Pennant Hills Road and enter the on ramp as wide as possible. Spotter to guide the load through the corner.

ROAD MODIFICATIONS: Yes, moderate amounts of works are required.

154.0 Km's: (65-68 Meter Blade) Pennant Hills Road onto the M2 Motorway at West Pennant Hills.



PROCEDURE: Right hand turn from Pennant Hills Road onto the M2 Motorway.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/bskC8kD4CdW9xmwYA>

COMMENTS: Blade loads are to turn from the correct side to the correct side of the road. The prime mover will need to turn from the far left lane on Pennant Hills Road and enter the on ramp as wide as possible. Spotter to guide the load through the corner.

ROAD MODIFICATIONS: No modifications required.

263.3 Km's: (80 and 75 Meter Blade) Great Western Highway rail overpass



PROCEDURE: Gradual S-bend over rail overpass at Mt Victoria

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/79QcBK1xJCNiVmF7A>

COMMENTS: Blades will block entire road while navigating this bend. A light pole will need to be removed on the outside of the second (right hand bend). An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, moderate amounts of works are required.

263.3 Km's: (65-68 Meter Blade) Great Western Highway rail overpass



PROCEDURE: Gradual S-bend over rail overpass at Mt Victoria

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/79QcBK1xJCNiVmF7A>

COMMENTS: Blades will block entire road while navigating this bend. Spotter to watch tail swing on outside light pole.

ROAD MODIFICATIONS: No modifications required.

266.4 Km's: (80 and 75 Meter Blade Option 1): Victoria Pass
tight left-hand bend. Centre Jersey curb remains.



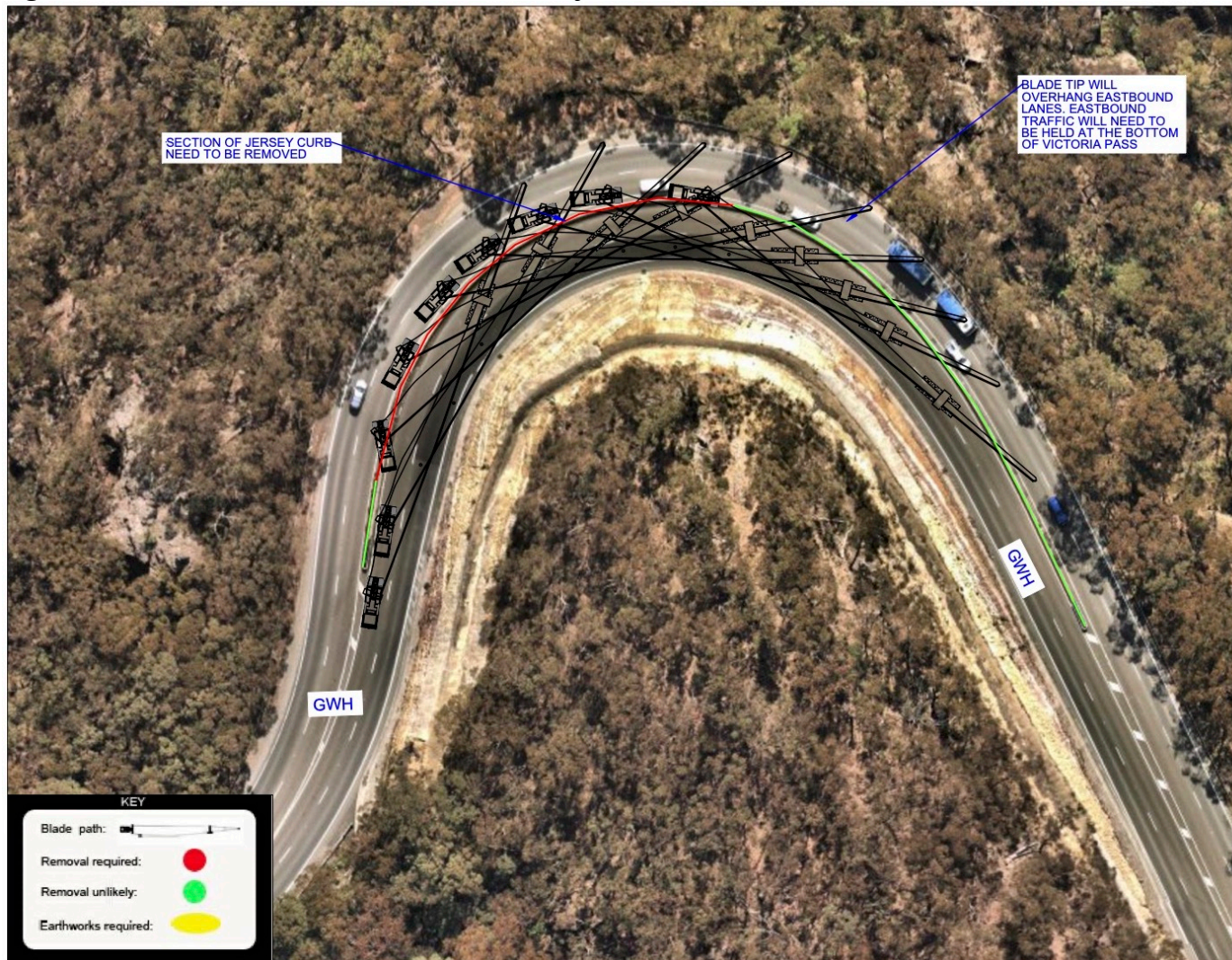
PROCEDURE: Tight left-hand bend on Victoria Pass

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/xtCyxLj36qRMSqMR9>

COMMENTS: Blade will overhang into Eastbound lanes, Traffic will need to be held at the bottom of Victoria Pass. A significant section of the inside bank will need to be cut away to allow the blade body to navigate the corner. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, Large amounts of works are required.

266.4 Km's: (80 and 75 Meter Blade Option 2): Victoria Pass
tight left-hand bend. Centre Jersey curb removed.



PROCEDURE: Tight left-hand bend on Victoria Pass

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/xtCyxLj36qRMSqMR9>

COMMENTS: Blade will overhang into Eastbound lanes, Traffic will need to be held at the bottom of Victoria Pass. The centre Jersey curb will need to be removed to allow the prime move to cross to the incorrect side to make the turn. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, large amounts of works are required.

266.4 Km's: (65-68 Meter Blade) Victoria Pass tight left-hand bend.



PROCEDURE: Tight left-hand bend on Victoria Pass

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/xtCyxLj36qRMSqMR9>

COMMENTS: Blade will overhang into Eastbound lanes, Traffic will need to be held at the bottom of Victoria Pass. No work required.

ROAD MODIFICATIONS: No modifications required.

267.1 Km's: (80 and 75 Meter Blade) Victoria Pass narrow right-hand bend.



PROCEDURE: Narrow right-hand bend on Victoria Pass

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/qKnEjJ8SW4hvCCTAA>

COMMENTS: Blade will overhang into Eastbound lanes, Traffic will need to be held at the bottom of Victoria Pass. Some trees will need to be trimmed on the outside of the corner. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, minor amounts of works are required.

267.1 Km's: (65-68 Meter Blade) Victoria Pass narrow right-hand bend.



PROCEDURE: Narrow right-hand bend on Victoria Pass

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/qKnEjJ8SW4hvCCTAA>

COMMENTS: Blade will overhang into Eastbound lanes, Traffic will need to be held at the bottom of Victoria Pass. No work required.

ROAD MODIFICATIONS: No modifications required.

341.0 Km's: (80, 75, 65 & 68 Meter Blade Option 1): Great Western Highway roundabout at Kelso. Cut into the roundabout.



PROCEDURE: Travel straight through the roundabout

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/eKjPbsNshG4bYeEC9>

COMMENTS: Hardstand will be required on the roundabout. The high gutters will need to be flattened to allow the trailer to drive onto the roundabout. 2x Signs will need to be made removable. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, moderate amounts of works are required.

341.0 Km's: (80, 75, 65 & 68 Meter Blade Option 2): Great Western Highway roundabout at Kelso. Avoid cutting into the roundabout.



PROCEDURE: Travel straight through the roundabout

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/eKjPbsNshG4bYeEC9>

COMMENTS: Large amount of hardstand will be required on the outside entrance to the roundabout. 1x Light pole will need to be removed and 1x sign will need to be made removable. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, large amount of works are required.

342.0 Km's: (80, 75, 65 & 68 Meter Blade): Great Western Highway onto O'Connell Road at Kelso.



PROCEDURE: Left turn at the roundabout.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/iF173WmTbXTcnXsFA>

COMMENTS: Loads will turn from the correct side of Great Western Highways onto the wrong-side of O'Connell Road and cut back to the correct side after the traffic island. The tail swing will overhang onto the Eastbound lanes of the Great Western Highway so the roundabout will need to be blocked from all directs. 3x Signs will need to be made removable. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, minor amount of works are required.

370.4 Km's: O'Connell Road Range (80, 75, 65 & 68 Meter Blade Option 1): O'Connell Rd tight right-hand bend – Centre jersey curb removed.

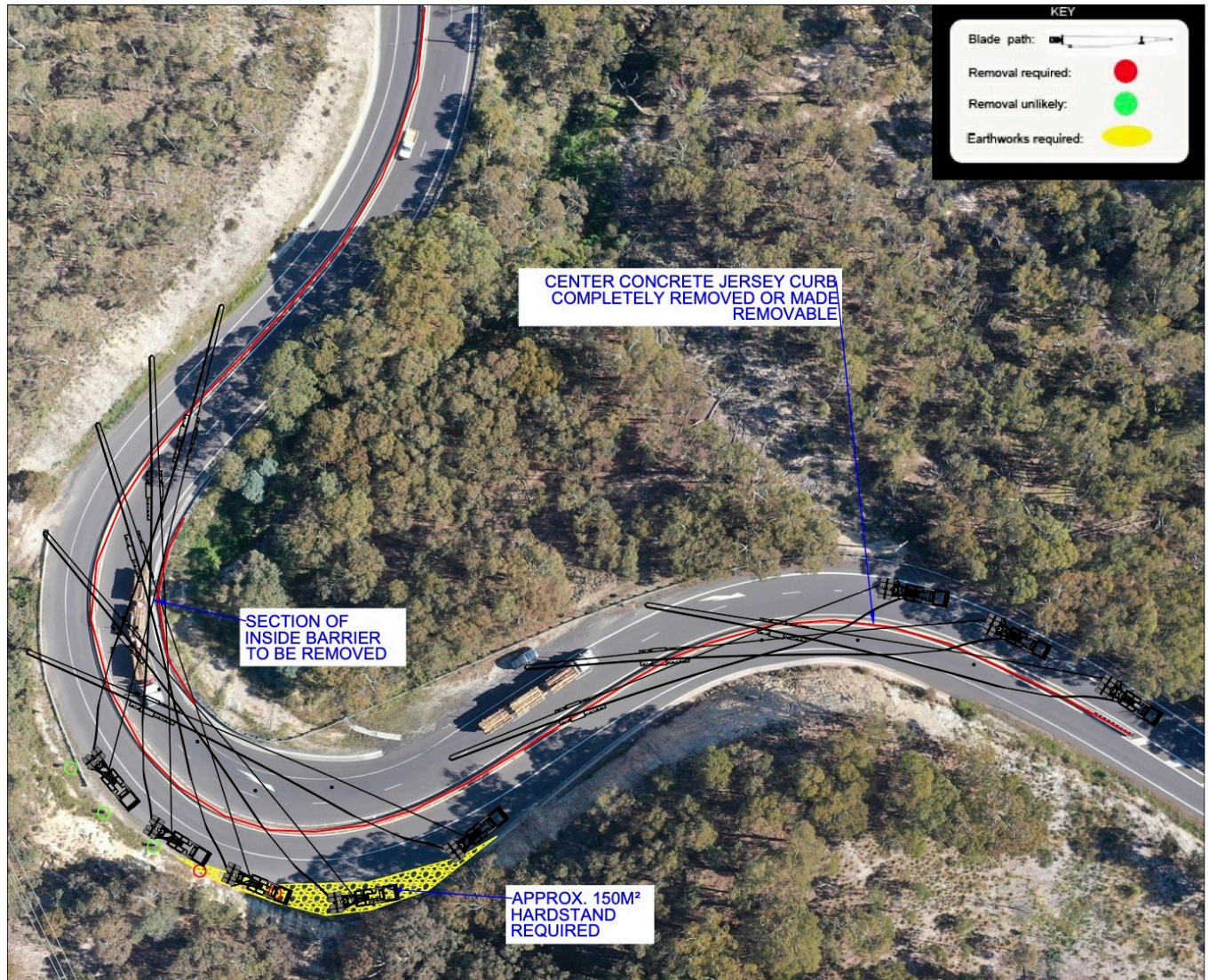


PROCEDURE: Tight right hand bend at the base of the range.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/zyjfQygJLr5uBDFK9>

COMMENTS: A blade of up to 80m can make this turn if the centre barrier is removed. The entire range must be shut off to the public while the blade is navigating the range. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, approval needs to be sought to remove centre barrier.

**371.2 Km's: O'Connell Road Range (80 and 75 Meter Blade
Option 1): O'Connell Rd tight Left-hand bend – Centre jersey
curb removed.**

PROCEDURE: Very tight left hand bend at the top of the range.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/hG5wqfokTkn7jTSn6>

COMMENTS: A blade of up to 80m can make this turn if the centre barrier is removed.

Hardstand will need to be added to the outside of the bend, 2x signs need to be removed and a section of the inside barrier will need to be removed to allow for the swept path of the blade body. The entire range must be shut off to the public while the blade is navigating the range. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, approval needs to be sought to remove centre barrier. Moderate other works required.

371.2 Km's: O'Connell Road Range (65-68 Meter Blade
Option 1): O'Connell Rd tight Left-hand bend – Centre jersey
curb removed.



PROCEDURE: Very tight left hand bend at the top of the range.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/hG5wqfokTkn7jTSn6>

COMMENTS: No work required other than the removal of the centre barrier. The entire range must be shut off to the public while the blade is navigating the range.

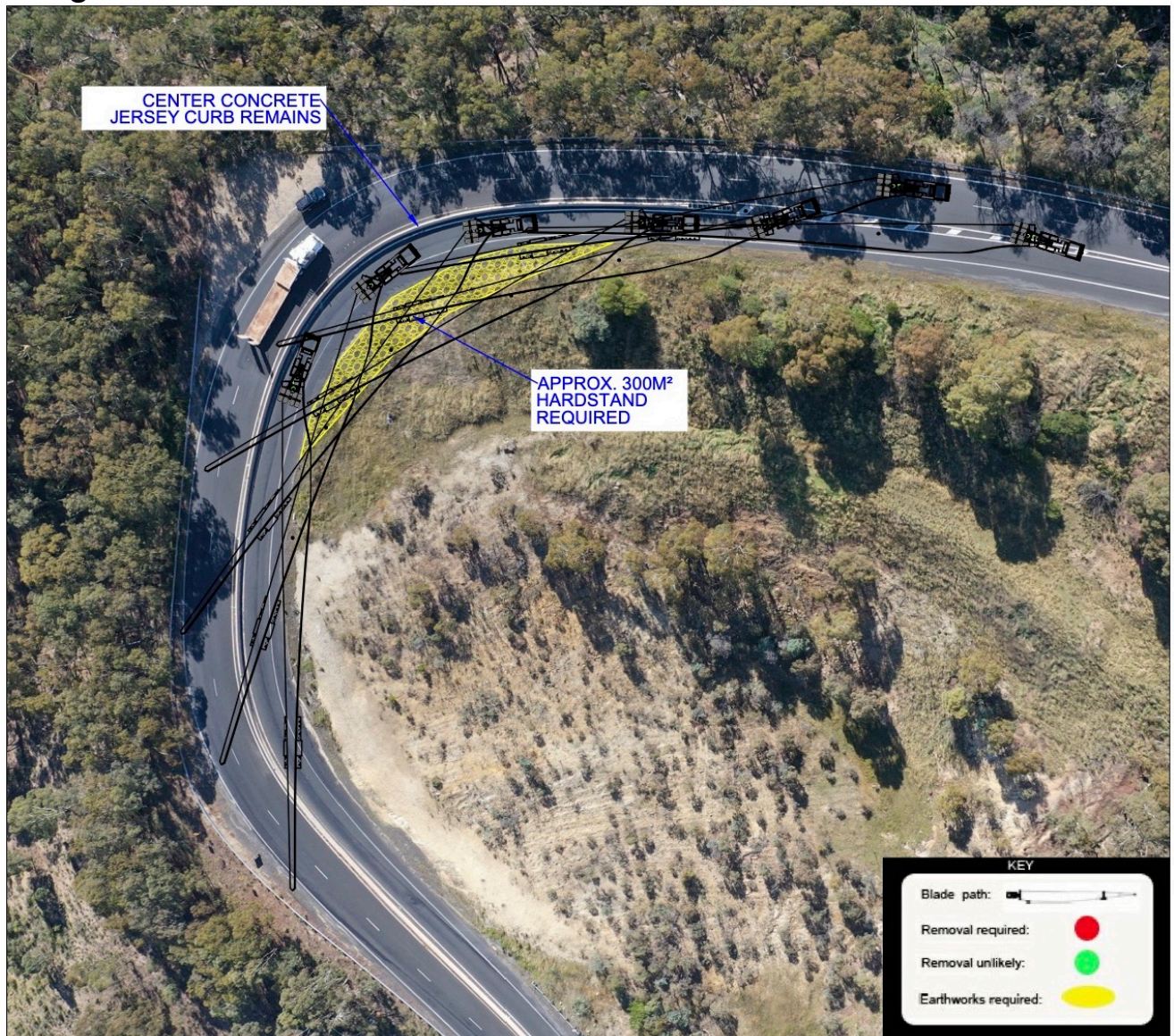
ROAD MODIFICATIONS: Yes, approval needs to be sought to remove centre barrier.

**370.4 Km's: O'Connell Road Range (80 Meter Blade
Option 2):** O'Connell Rd tight right-hand bend – Centre jersey
curb remains.

Image 1:



Image 2:



PROCEDURE: Tight right hand bend at the base of the range.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/zyjfQygJLr5uBDFK9>

COMMENTS: The load will need to travel on the wrong side of this section of road. A section of hardstand is required on the outside of the first right hand bend and a large section of bank will be required to be removed to allow for the blade tip overhang, some tress will also need to be removed. A section of hardstand is required on the inside of the right-hand bend. The entire range must be shut off to the public while the blade is navigating the range.

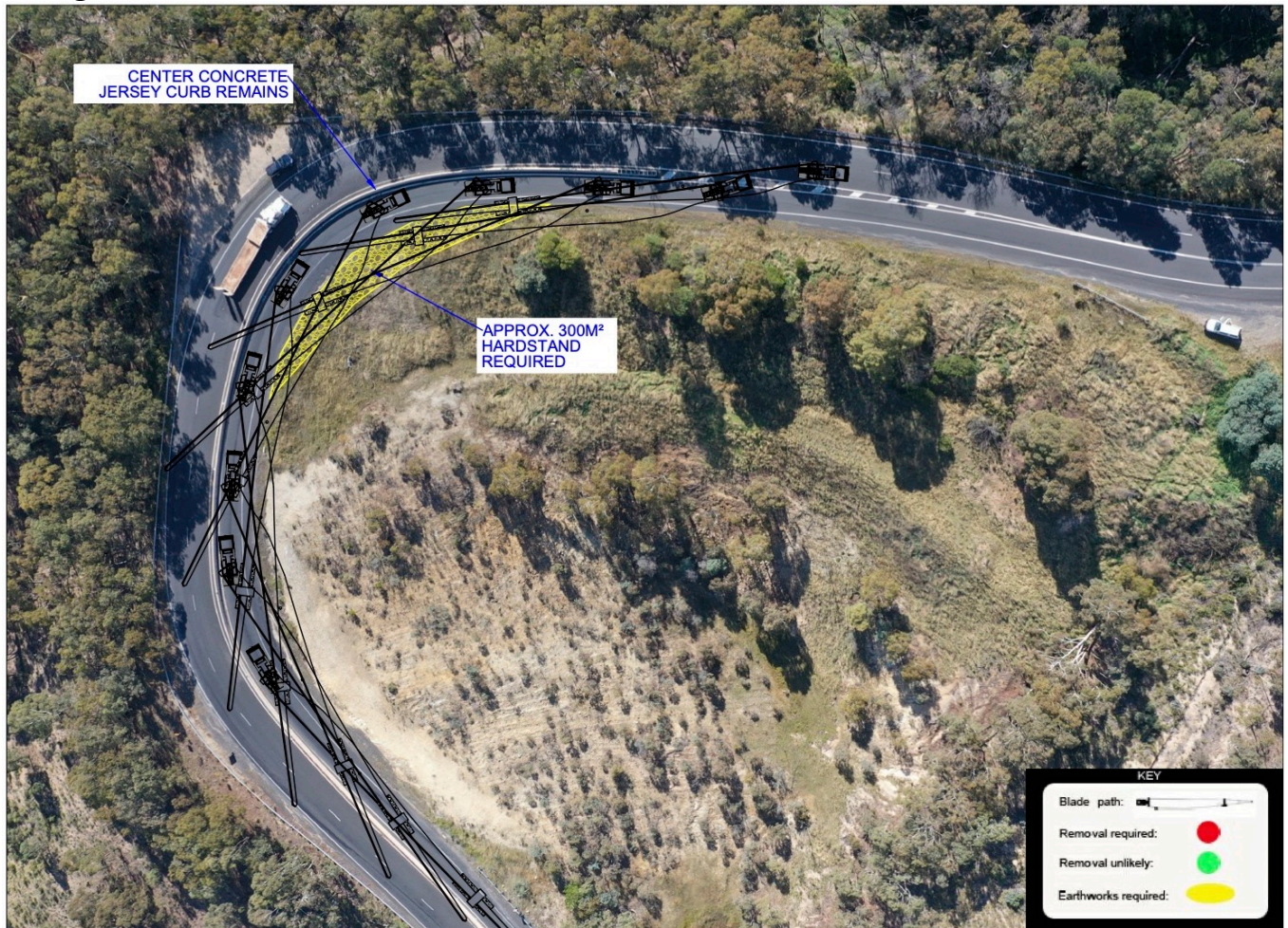
ROAD MODIFICATIONS: Yes, major works required.

370.4 Km's: O'Connell Road Range (75,65 & 68 Meter Blade Option 2): O'Connell Rd tight right-hand bend – Centre jersey curb remains.

Image 1:



Image 2:



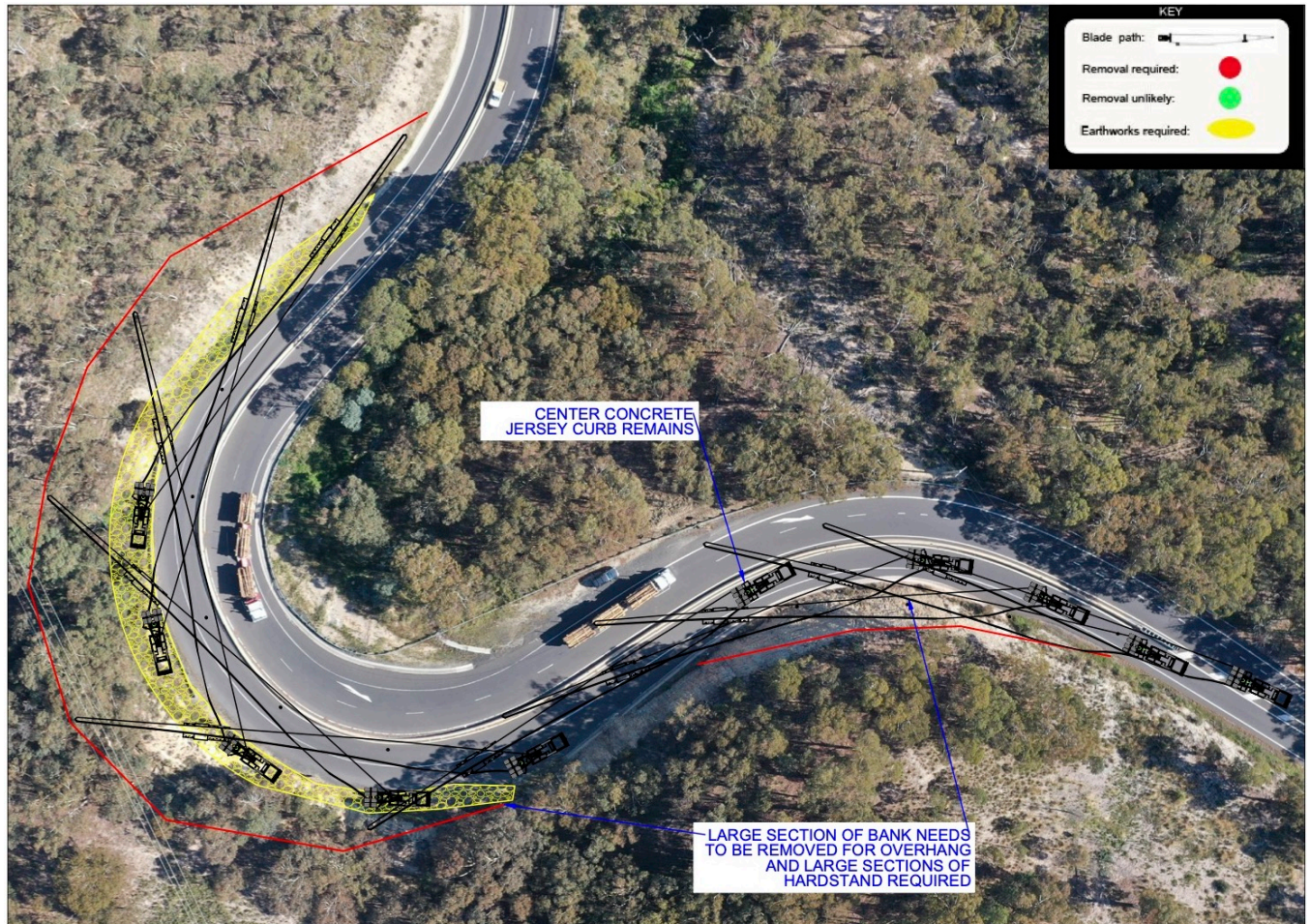
PROCEDURE: Tight right hand bend at the base of the range.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/zyjfQygJLr5uBDFK9>

COMMENTS: The load will need to travel on the wrong side of this section of road. On the outside of the first right hand bend some tress will need to be removed. A section of hardstand is required on the inside of the right-hand bend. The entire range must be shut off to the public while the blade is navigating the range. A 75m blade is shown in the above overlays.

ROAD MODIFICATIONS: Yes, major works required.

371.2 Km's: O'Connell Road Range (80 and 75 Meter Blade Option 2): O'Connell Rd tight Left-hand bend – Centre jersey curb remains.

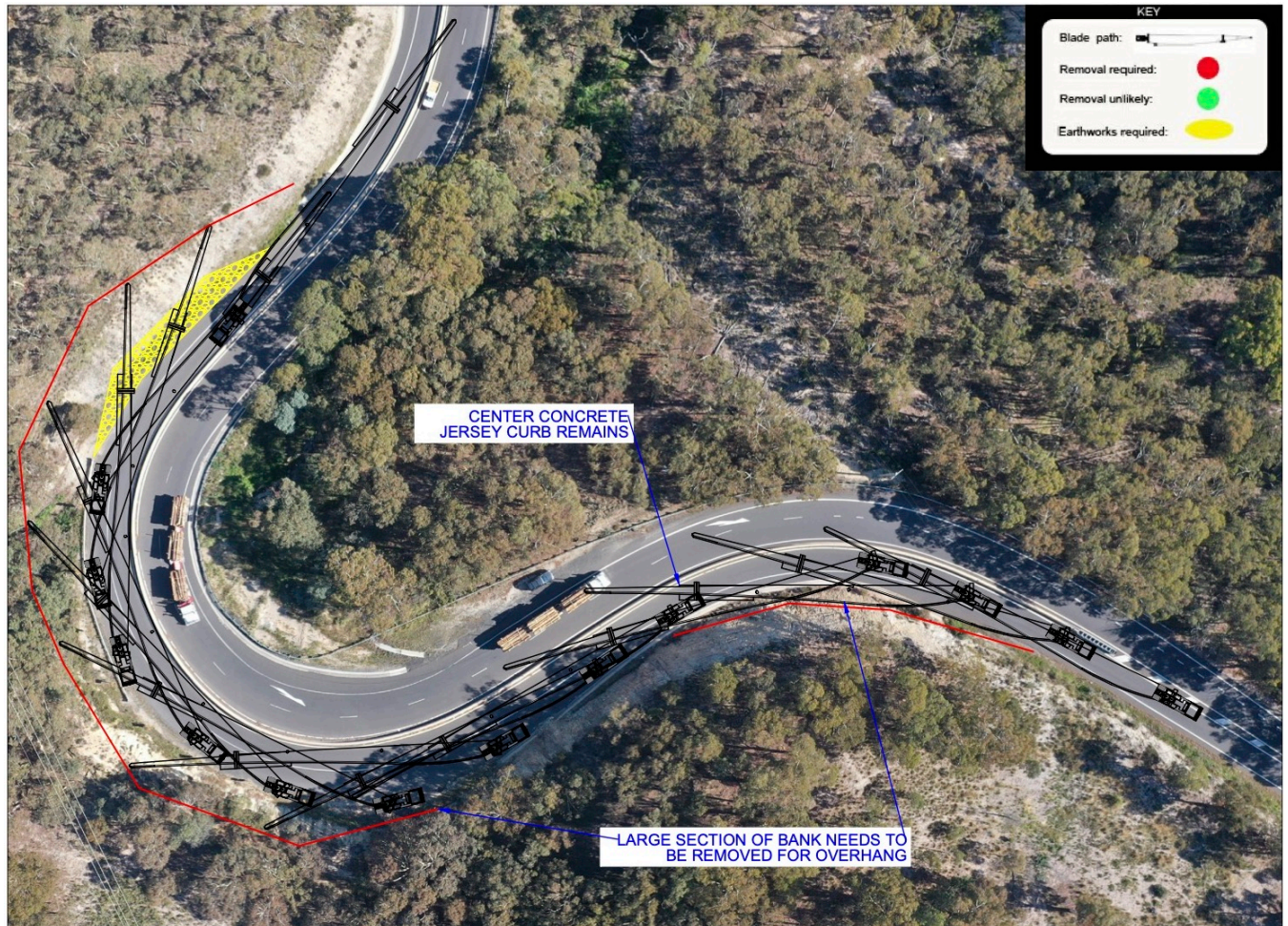


PROCEDURE: Very tight left-hand bend at the top of the range.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/hG5wqfokTkn7jTSn6>

COMMENTS: For a blade of up to 80m to navigate this bend with the centre barrier still in place the bank on the outside of the bend would need to be cut back approx. 15m from the edge of the road. A large amount of hardstand would also be required. The bank on the exiting right-hand bend would also need significant work. The load will need to travel on the wrong side of this section of road. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, major works. whole section of road needs to be redesigned.

371.2 Km's: O'Connell Road Range (65-68 Meter Blade
Option 2): O'Connell Rd tight Left-hand bend – Centre jersey
curb remains.

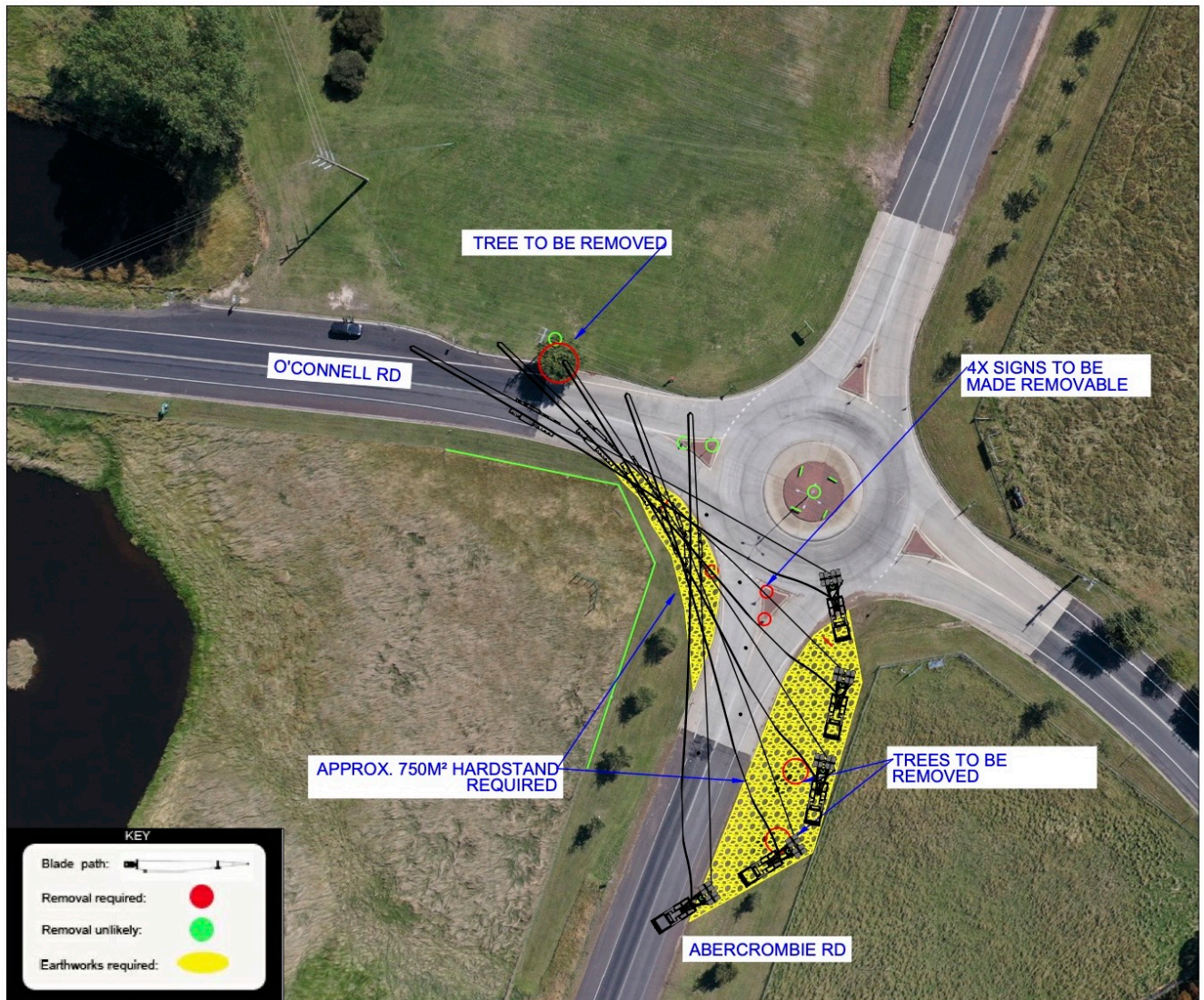
PROCEDURE: Very tight left-hand bend at the top of the range.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/hG5wqfokTkn7jTSn6>

COMMENTS: For a blade of up to 67m to navigate this bend with the centre barrier still in place the bank on the outside of the bend would need to be cut back approx. 10m from the edge of the road. A small amount of hardstand would also be required. The bank on the exiting right-hand bend would also need significant work. The load will need to travel on the wrong side of this section of road.

ROAD MODIFICATIONS: Yes, major works. whole section of road needs to be redesigned.

383.0 Km's: (80, 75, 65 & 68 Meter Blade): O'Connell Road onto Abercrombie Road at Oberon.



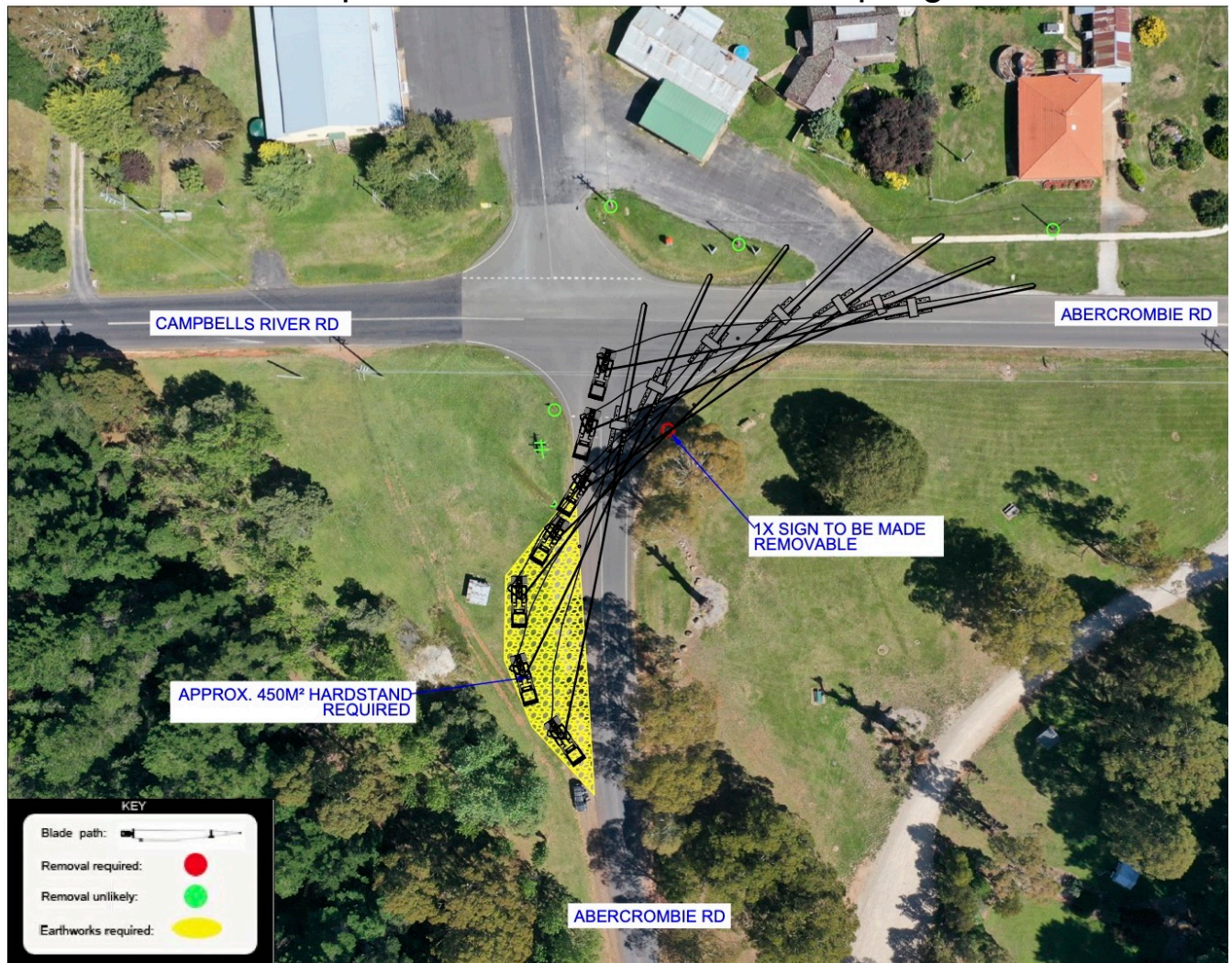
PROCEDURE: Right-hand turn at the roundabout from the wrong side.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/nV3ygxLL9SV7xy6z8>

COMMENTS: The blades will need to wrong side the roundabout. 2x trees and 4x signs will need to be removed. A large amount of hardstand is required on the inside and outside of the corner. The larger the blade the more hardstand area will be required. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, major works required.

406.0 Km's: (80, 75, 65 & 68 Meter Blade): Abercrombie Road intersection of Campbells River Roads at Black Springs.



PROCEDURE: Left-hand turn to stay on Abercrombie Rd.

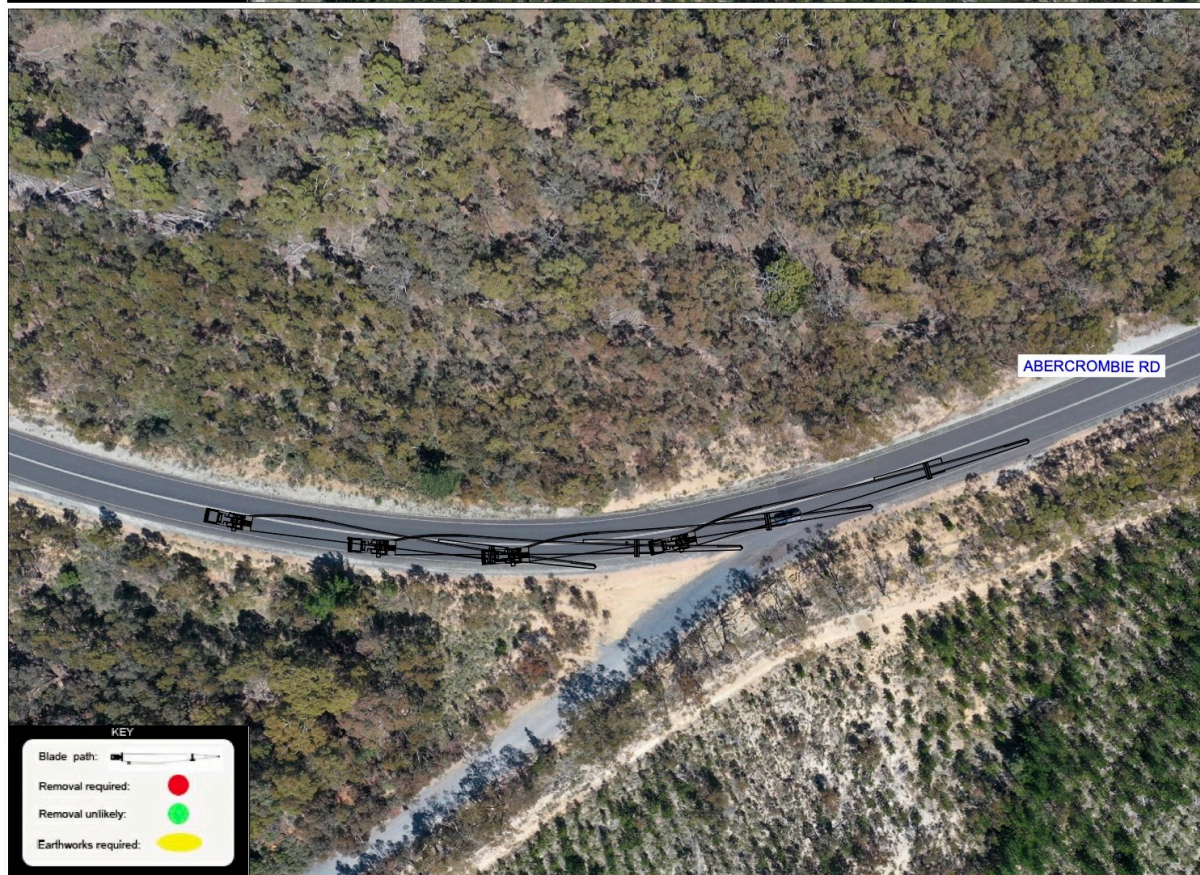
GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/wPBfjVRiyWCrVtFU6>

COMMENTS: 1x sign will need to be removed on the inside of the corner. A large amount of hardstand is required on the outside of the corner. The larger the blade the more hardstand area will be required. An 80m blade is shown in the above overlay.

ROAD MODIFICATIONS: Yes, major works required.

436 – 441.8 Km's: (80, 75, 65 & 68 Meter Blade):
Abercrombie Road near Paling Yards.









PROCEDURE: Continue on Abercrombie Rd.

GPS LINK FOR SECTION OF ROAD: <https://goo.gl/maps/pTSFwJczPgB319mK7>

COMMENTS: This is an undulating section of road with numerous sweeping bends. Blades up to 80m will navigate this section without issue. Tress should be checked closer to commencement to ensure no trimming is required.

ROAD MODIFICATIONS: No works required.

14.0 Route A conclusion:

After studying all options and undertaking a route survey, this route in its current condition will require a large number of upgrades before it could be deemed suitable for transporting the proposed components.

The following are the key points that need to be taken into consideration, if the project moves forward with this route.

BRIDGES:

- There are a large number of bridges on route that will require bridge assessments for the capacity of the listed loads.

OVERHEAD STRUCTURES: (5.1 Maximum loaded height)

- There are a large number of overhead structures between Newcastle and Wallerawang. The lowest of these structures is the Fletcher St Overpass on the Great Western Highway at Glenbrook. There are a number of other structures noted as pinchpoints in the survey. Each of these pinch points will show the height clearance in each lane.

OVERHEAD UTILITIES:

- This route will need to be checked by an authorised scoping company. It is likely that a route of at least 5.3 metres is required for this project.

OVERHEAD TREES:

- The route up until the turnoff onto O'Connell Road is clear of vegetation. All roads from this point through to site will need to be checked for a clear passage of at least 5.3 metres for overhead branches. Some trimming/removal is likely from this point onwards. There is a section of road just before O'Connell that is of particular concern.

WIDTH and PAVEMENT:

- The road is of highway standard up to the turnoff onto Abercrombie Road at Oberon. The width and quality of the pavement will be ok.
- Abercrombie road to site is generally of good quality and there won't be any issues with width up to site. There were lots of sections of road work along Abercrombie road. During the winter months there could be a lot of snow and ice on the road and conditions may become severe enough to stop transport until they improve.

NEWCASTLE:

- A 65-68m blade will not require any modifications to be made to pass through Newcastle.
- A 75-80m blade will require several intersections to have a moderate amount of works to allow the blades a suitable swept path around these corners. 1x traffic light will need to be removed to turn onto Industrial Dr.

SYDNEY:

- A 65-68m blade will not require any modifications to be made to pass through Sydney.
- A 75-80m blade will require 2x intersections to have a moderate amount of works to allow the blades a suitable swept path around these corners. For an 80m blade significant work is required to turn from Pennant Hills Rd to the M2

BLUE MOUNTAINS:

- A 65-68m blade will not require any modifications to be made to pass through the Blue Mountains.
- A 75-80m blade will require major works before they can travel down Victoria Pass. There are options to navigate the tight left hand hairpin on Victoria Pass although approval needs to be sought to determine if the works required are possible.

BATHURST:

- All sized blades will require major works to pass through the first roundabout and minor works to turn onto O'Connell Road.

O'CONNELL ROAD:

- Major works are required to travel up the O'Connell Rd range for any size blades. The most efficient option would be to remove the centre barrier. Approval needs to be sought to determine if this is possible.
- There are some sections along this road that will require trees to be trimmed.

ABERCROMBIE ROAD:

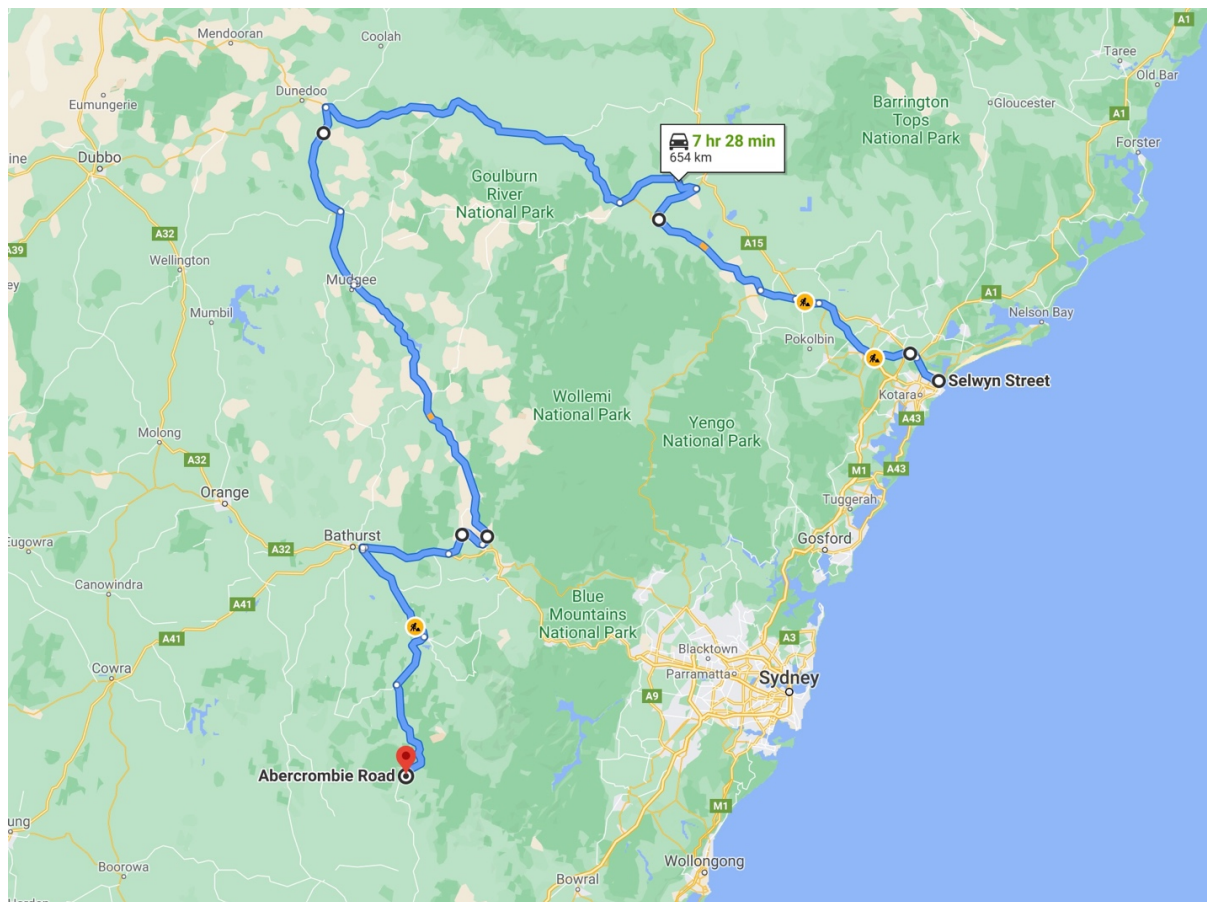
- Major works are required for all sized blades to make the right-turn onto Abercrombie road at Oberon and the left-hand turn at Black Springs.
- Some trees may need trimming closer to the project start date.

15.0 Route Survey B: Loads up to 5.9 metres in height.

Newcastle to Paling Yards via Mudgee 654.0 kilometres:

This route took us via Selwyn street, George Street, Industrial Drive, Maitland Road, New England Highway, John Renshaw Drive, Hunter Expressway, Golden Highway, Denman Road, Bengalla Road, Wybong Road, Golden Highway, Castlereagh Highway, Main Street, Pipers Flat Road, Range Road, Great Western Highway, Littlebourne Street, O,Connell Road, Abercrombie Road.

GPS LINK: <https://goo.gl/maps/8KqByBnVx3f113mk9>



KEY	
CRITICAL	
CAUTION	
EMERGENCY PARKING	

KM index	Location	Section of road	Existing Clearance	Procedure	Notes
0.0	Mayfield	Mayfield #4 berth onto Selwyn Street GPS link: https://goo.gl/maps/aflwPYKuNdm	Length: 70.0 Mtrs Width: 8.0 Mtrs	Moderate right hand turn	No problems with the loads on this section of road.
0.4	Mayfield	Selwyn Street over rail crossing GPS link: https://goo.gl/maps/AmohE54hKSz	Length: 90 metres Width: 9.0 Metres	Travel directly ahead	Loads to travel over the crossing in the center of the road. Approval required crossing this line, likely cross with caution.
1.3	Mayfield	Selwyn Street onto George Street GPS link: https://goo.gl/maps/gXeHvBtCp4D2	Length: 40.0 Mtrs Width: 8.0 Mtrs	Right hand turn	No problems with the loads on this section of road.
1.4	Mayfield	George Street onto Industrial Drive GPS link: https://goo.gl/maps/s4ayrsuoAsD2	Length: 40.0 Mtrs Width: 8.0 Mtrs	Right hand turn	No problems with the loads on this section of road.
4.9	Mayfield	Industrial Drive under traffic signals GPS link: https://goo.gl/maps/YmqhiS2iR582	Height: 5.4 metres	Travel directly ahead in the far right lane.	The lowest traffic signal on route is at the intersection of Steel River Blvd. Trucks that exceed 5.3 metres will need to travel in the right-hand lane. Clearance in the right end lane is 6.0 metres.
5.5	Mayfield West	Industrial Drive onto Maitland Road GPS link: https://goo.gl/maps/Kn49dhWG2qG2	Length: 40.0 Mtrs Width: 7.0 Mtrs	Right hand turn	No problems with the loads on this section of road.
6.4	Sandgate	Maitland Road over rail bridge GPS link: https://goo.gl/maps/W2JWWjhfv5UMviB7	Length: 90 metres Width: 9.0 Metres	Travel directly ahead in the right-hand lane	Approval from Rail company required to cross this structure. Travel over this structure may have specific conditions.
13.9	Hexham	New England Highway under gantry GPS link: https://goo.gl/maps/YTMoFe7Aick	Height: 5.9 metres	Travel directly ahead	This is the lowest structure on route. There is no bypass around the gantry. A maximum loaded height of 5.9 metres should not be exceeded.
15.1	Tarro	New England Highway over rail bridge GPS link: https://goo.gl/maps/tTnWLwQC2hzSPhAp6	Length: 90 metres Width: 7.0 Metres	Travel directly ahead in the right-hand lane	Approval from Rail company required to cross this structure. Travel over this structure may have specific conditions.
17.4	Tarro	New England Highway onto John Renshaw Drive GPS link: https://goo.gl/maps/SRDt5JigkBp	Length: 100.0 Mtrs Width: 12.0 Mtrs	Left hand merge	No problems with the loads on this section of road.
18.4	Beresfield	John Renshaw Drive GPS link: https://goo.gl/maps/N19vJih1Fgr	Length: 100.0 Mtrs Width: 10.0 Mtrs	Travel directly ahead	No problems with the loads on this section of road.
28.7	Buchanan	John Renshaw Drive onto the Hunter Expressway GPS link: https://goo.gl/maps/1STJ1PfQ9E2	Length: 65.0 Mtrs Width: 7.0 Mtrs	Right hand turn	No problems with the loads on this section of road.
58.9	Branxton	The Hunter Expressway onto The New England Highway GPS link: https://goo.gl/maps/7rauNuxzqjq	Length: 100.0 Mtrs Width: 12.0 Mtrs	Travel directly ahead	No problems with the loads on this section of road.

KM index	Location	Section of road	Existing Clearance	Procedure	Notes
67.3	Whittingham	The New England Highway onto the Golden Highway GPS link: https://goo.gl/maps/nAnfkYfeUn42	Length: 70.0 Mtrs Width: 8.0 Mtrs	Left Hand turn	The NSW Government is currently upgrading this intersection. At this stage the data that is available for the upgrades shows that the section of road that we would need to access does not change considerably. However, it is recommended that you monitor the progress of the upgrades, and that any changes are thoroughly looked at.
67.4	Whittingham	Golden Highway GPS link: https://goo.gl/maps/R86RFuPnmFU2	115.0 x 9.0 metres	Parking Bay	Suitable parking for Fatigue breaks.
68.0	Whittingham	Golden Highway over rail bridge GPS link: https://goo.gl/maps/5NwDQofandvvMKfY9	Length: 90 metres Width: 9.0 Metres	Travel directly ahead in the centre of the road.	Approval from Rail company required to cross this structure. Travel over this structure may have specific conditions.
77.3	Mount Thorley	Golden Highway over rail bridge GPS link: https://goo.gl/maps/qTxSbkxPu87L5hx4A	Length: 90 metres Width: 9.0 Metres	Travel directly ahead in the centre of the road.	Approval from Rail company required to cross this structure. Travel over this structure may have specific conditions.
77.4	Whittingham	Golden Highway intersection with the Putty Road GPS link: https://goo.gl/maps/7hQdEmK1EgE2	Length: 65 metres Width: 6.0 Metres	Left hand turn	No problems with the loads on this section of road.
77.5	Mount Thorley	Golden Highway GPS link: https://goo.gl/maps/zGvdupDuixx	100.0 x 10.0 metres	Parking Bay	Suitable parking for Fatigue breaks.
80.6	Mount Thorley	Golden Highway over rail bridge GPS link: https://goo.gl/maps/ipGU4USXmWZ8GkJs6	Length: 90 metres Width: 9.0 Metres Height: 5.2 metres	Travel directly ahead in the centre of the road.	Approval from Rail company required to cross this structure. Travel over this structure may have specific conditions.
80.8	Mount Thorley	Putty Road under Mt Thorley Road GPS link: https://goo.gl/maps/SMzSLP1kvQYDMqa86	Heights: Left: 6.6 metres Centre: 6.3 Metres Right: 6.3 metres	Travel under the bridge in the left lane	Mt Thorley underpass is 6.3 metres in the centre of the road. Towers to pass under this structure on the correct side.
80.8	Mount Thorley	Golden Highway intersection with the Putty Road GPS link: https://goo.gl/maps/QS9quvSyHYWafHoX9	Length: 45 metres Width: 6.0 Metres	Right hand turn	No problems with the loads on this section of road.
98.0	Warkworth	Golden Highway GPS link: https://goo.gl/maps/Y6V6EXaCwxq	100.0 x 8.0 metres	Parking Bay	Suitable parking for Fatigue breaks.
107.0	Jerrys Plains	Golden Highway through Jerrys Plains village GPS link: https://goo.gl/maps/WgSCRsJ9ZGt	Length: 60 metres Width: 6.0 Metres	Left hand than right hand turn	No problems with the loads on this section of road.
126.0	Ogilvy	Golden Highway GPS link: https://goo.gl/maps/58Tj9ojs7CC2	6% gradient	Travel directly ahead	This section of road has a steep mountain range that will require additional pull trucks to assist loads that exceed 80T gross weight.
131.9	Denman	Golden Highway onto Denman Road GPS link: https://goo.gl/maps/sf4PNnycxB32	Length: 55 metres Width: 6.0 Metres	Right hand turn	No problems with the loads on this section of road.
137.9	Muswellbrook	Denman Road onto Bengalla Road GPS link: https://goo.gl/maps/3sK4m6YSHNHgkqn68	Length: 60 metres Width: 8.0 Metres	Left hand turn	No problems with the loads on this section of road.
149.0	Bengalla	Bengalla Road onto Wybong Road GPS link: https://goo.gl/maps/zfDyG4GQq6G37imB9	Length: 90 metres Width: 8.0 Metres	Left hand bend	No problems with the loads on this section of road.

KM index	Location	Section of road	Existing Clearance	Procedure	Notes
158.0 to 183.0	Bengalla	Wybong Road GPS link: https://goo.gl/maps/ekGZA5wFFK55Mvmc7	Length: 60 metres Width: 8.0 Metres	Travel directly ahead	This road is maintained by Muswellbrook Council. Approval will be required to travel on this section of Road.
183.0	Sandy Hollow	Wybong Road onto Golden Highway GPS link: https://goo.gl/maps/5ft3VnWpnPhpeN4u7	Length: 60 metres Width: 8.0 Metres	Right hand turn	No problems with the loads on this section of road.
197.0	Sandy Hollow	Golden highway GPS link: https://goo.gl/maps/2THBuV165xx	50.0 x 4.0 metres	Parking Bay	Suitable parking for Fatigue breaks.
201.0	Sandy Hollow	Golden Highway under safety Cam GPS link: https://goo.gl/maps/b7t9zH2ankJcvWpT6	Height: 6.3 metres	Travel directly ahead on the correct side	No problems with the loads on this section of road.
208.0	Gungal	Golden highway GPS link: https://goo.gl/maps/WDol2LfeCoP2	70.0 x 6.0 metres	Parking Bay	Suitable parking for Fatigue breaks.
214.0	Merriwa	Golden Highway under safety Cam GPS link: https://goo.gl/maps/D9t2rzQ8vnUcYsqj56	Height: 6.4 metres	Travel directly ahead on the correct side	No problems with the loads on this section of road.
231.0	Merriwa	Golden highway GPS link: https://goo.gl/maps/NqrWzTsRmnt	100.0 x 5.0 metres	Parking Bay	Suitable parking for Fatigue breaks.
266.0	Cassilis	Golden highway GPS link: https://goo.gl/maps/vs6YMT6TCA2	200.0 x 8.0 metres	Parking Bay	Suitable parking for Fatigue breaks.
296.0	Leadville	Golden highway GPS link: https://goo.gl/maps/uixMGukhopeFWRhb8	200.0 x 8.0 metres	Parking Bay	Suitable parking for Fatigue breaks.
314.0	Leadville	Golden highway onto the Castlereagh Highway GPS link: https://goo.gl/maps/sCmgFmgEZ621DVrf9	Length: 65.0 metres Width: 11.0 metres	Left hand turn	No problems with the loads on this section of road.
343.0	Birriwa	Castlereagh Highway rail crossing GPS link: https://goo.gl/maps/BTrCz8VaeLN2	Length: 65.0 metres Width: 9.0 metres	Travel directly ahead	Loads to travel over the crossing in the center of the road. Approval required crossing this line, likely cross with caution.
370.0	Gulgong	Castlereagh Highway Goolma Road intersection GPS link: https://goo.gl/maps/US53QJHQ6R92	Length: 80 metres Width: 8.0 metres	Travel directly ahead	Spotter to guide load through this pinchpoint. Police and pilots to supply traffic control as per the procedure for this section of road.
358.0	Gulgong	Fisher Street onto Medley Rd GPS link: https://goo.gl/maps/GxJvNXi8vB6h7oLS6	Length: 45.0 metres Width: 9.0 metres	Right hand turn	No problems with the loads on this section of road.
383.0 to 393.0	Mudgee	Castlereagh Highway GPS link: https://goo.gl/maps/iZ4gK5Mo28KzNSDT7	Width: 6.0 metres	Follow the main Highway through Mudgee	Loaded trailers are to avoid travelling through Mudgee on schooldays between 7:00am and 10:00am and again 2:00pm and 4:30pm
386.0	Mudgee	Market Street onto Douro Street GPS link: https://goo.gl/maps/iZ4gK5Mo28KzNSDT7	Length: 45.0 metres Width: 6.0 metres	Right hand turn	Loads to travel over the centre of the roundabout. No problems with the loads on this section of road.
386.5	Mudgee	Douro Street onto Horatio Street GPS link: https://goo.gl/maps/VARs5R2ooQWShcim6	Length: 50.0 metres Width: 7.0 metres	Left hand turn	No problems with the loads on this section of road.
387.0	Mudgee	Horatio Street GPS link: https://goo.gl/maps/LtMDGuX6cbAL8eri6	Width: 6.5 metres	Travel directly ahead on the correct side of the roundabout	No problems with the loads on this section of road.

KM index	Location	Section of road	Existing Clearance	Procedure	Notes
388.0	Mudgee	Horatio Street onto the Castlereagh Highway GPS link: https://goo.gl/maps/z2USqGmixFP1vfr58	Length: 45.0 metres Width: 9.0 metres	Right hand bend	No problems with the loads on this section of road.
420.0	Cudgegong	Castlereagh highway GPS link: https://goo.gl/maps/uh9zoP97RyC2ie8d6	Length: 250 metres Width: 20.0 metres	Parking Bay	Large parking bay. Suitable for fatigue breaks.
477.0	Ben Bullen	Castlereagh Highway rail crossing GPS link: https://goo.gl/maps/5ZtGAGDHBtq1vX2r8	Length: 60.0 metres Width: 9.0 metres	Left hand than right hand dogleg turn	Loads to travel over the crossing in the center of the road. Approval required crossing this line, likely cross with caution.
499.0	Wallerawang	Castlereagh Highway onto Main Street GPS link: https://goo.gl/maps/TsL2Ur8tUJJ5CfZe9	Length: 60.0 metres Width: 8.0 metres	Right hand turn	No problems with the loads on this section of road.
502.0	Wallerawang	Main Street onto Pipers Flat Road GPS link: https://goo.gl/maps/KvEM8hfSLqAGavq9	Length: 45.0 metres Width: 8.0 metres	Right hand turn	Towers to cross to the inside of the corner. Spotter to guide load through this pinchpoint. Police and pilots to supply traffic control as per the procedure for this section of road.
502.0	Wallerawang	Pipers Flat Road GPS link: https://goo.gl/maps/A5Y7hNkBiRdwU4Gi7	Width: 8.0 metres	Travel directly ahead	Loads to travel over the crossing in the center of the road. Approval required crossing this line, likely cross with caution.
510.0	Portland	Pipers Flat Road onto Range Road. GPS link: https://goo.gl/maps/h61jrKzNjcyZL22A6	Length: 45.0 metres Width: 8.0 metres	Left hand turn	No problems with the loads on this section of road.
510.0 to 520.0	Portland	Range Road GPS link: https://goo.gl/maps/4ackYvGyonYVWwn/T3	Width: 7.0 metres	Travel directly ahead	This section of road will need trees to be pruned.
520.0	Meadow Flat	Wallerawang-Rydal Road onto the Great Western Highway GPS link: https://goo.gl/maps/qF71VXv7L55QfurG9	Length: 50.0 metres Width: 8.0 metres	Right hand turn	No problems with the loads on this section of road.
531.0	Yetholme	Great Western Highway GPS link: https://goo.gl/maps/Ds2WjpbmKcp1rCSA8	Length: 150.0 metres Width: 10.0 metres	Left merge	Parking on the left-hand side of the road.
551.0	Kelso	Great Western Highway GPS link: https://goo.gl/maps/eKjPbsNshG4bYeEC9	Length: 50.0 metres Width: 6.5 metres	Travel directly ahead through the roundabout	No problems with the loads on this section of road.
552.0	Kelso	Great Western Highway onto O'Connell Road GPS link: https://goo.gl/maps/iF173WmTbXTcnXsFA	Length: 50.0 metres Width: 7.0 metres	Left hand turn	No problems with the loads on this section of road.
556.0	Kelso	O'Connell Road GPS link: https://goo.gl/maps/tE5Mq3onTKm1V9LG8	Length: 100.0 metres Width: 6.0 metres	Left merge	Parking on the left-hand side of the road.
571.0	O'Connell	O'Connell Road GPS link: https://goo.gl/maps/zDc3vrvAUv2tXddo8	Length: 80.0 metres Width: 6.0 metres	Left merge	Parking on the left-hand side of the road.
580.0	Oberon	O'Connell Road GPS link: https://goo.gl/maps/Lq6vNM3MBwZGpASC6	Length: 50.0 metres Width: 6.0 metres	Travel around several tight corners while ascending a mountain range.	All loads over 70T gross will require a backup prime mover to assist with the gradient on this section of road. The largest towers will need to have assistance from a steer operator.
582.0	Oberon	O'Connell Road GPS link: https://goo.gl/maps/8cjX5U4oL9WJLm2C7	Length: 60.0 metres Width: 10.0 metres	Left merge	Parking on the left-hand side of the road.

KM index	Location	Section of road	Existing Clearance	Procedure	Notes
593.0	Oberon	O'Connell Road onto Abercrombie Road GPS link: https://goo.gl/maps/LNzzcY93MTxbrg3y8	Length: 45.0 metres Width: 6.0 metres	Right hand turn	Some signs will need to be removed for the longest loads.
616.0	Black Springs	Abercrombie Road intersection of Campbells River Road GPS link: https://goo.gl/maps/wPBfjVRiyWCrVtFU6	Length: 60.0 metres Width: 7.0 metres	Left hand turn	No problems with the loads on this section of road.
646.0	Gurnang	Abercrombie Road GPS link: https://goo.gl/maps/blTpozcyaoth6CYVs6	Length: 100.0 metres Width: 10.0 metres	Left merge	Parking on the left-hand side of the road.
646.0-651.8	Gurnang	Abercrombie Road GPS link: https://goo.gl/maps/pTSFwJczPgB319mK7	Length: 100.0 metres Width: 10.0 metres	Undulating section with sweeping bends	No problems with the loads on this section of road.
654.0	Paling Yards	Abercrombie Road into windfarm entrance GPS link: https://goo.gl/maps/ndpfanEa7hcQwXKw8	Length: 20.0 Width: 5.0	Left hand turn	Site to make adequate access for the largest swept path.

16.0 Route B conclusion:

After studying all options and undertaking a route survey, this route in its current condition will require a moderate number of upgrades before it could be deemed suitable for transporting the proposed components.

The following are the key points that need to be taken into consideration, if the project moves forward with this route.

BRIDGES:

- There are a large number of bridges on route that will require bridge assessments for the capacity of the listed loads.

OVERHEAD STRUCTURES THAT CANNOT BE DETOURED: (5.9 Maximum loaded height)

- The overhead gantry on the New England Highway at Hexham is the lowest structure on route with a maximum clearance of 5.9 metres in height.

OVERHEAD STRUCTURES THAT CAN BE DETOURED: (5.4 in height)

- A traffic signal on Industrial drive has a maximum clearance of 5.4 metres in the left lane. However, if the loads stay in the right hand lanes, they can pass this signal at up to 5.9 metres in height.

OVERHEAD UTILITIES:

- This route will need to be checked by an authorised scoping company. It is likely that a route of at least 5.9 metres is required for this project. This will involve extensive works pre lifting assets.

VEGETATION:

- The state highways have suitable clearance from Vegetation; however, Wybong Road, Main Street, Steeple Flats, Range Road, O'Connell Road and Abercrombie Road will have sections where vegetation will require pruning and possible removal.

WIDTH and PAVEMENT:

- The road has suitable clearance other than Range Road and Abercrombie Road and will require some vegetation pruning. The width and quality of the pavement will be ok for the route; however, several council roads would need to be checked for capacity, these include Wybong Road, Main Street, Steeple Flats, Range Road.

O'CONNELL ROAD:

- If the works undertaken by the blades have been done, then the towers will fit along the proposed route.

ABERCROMBIE ROAD:

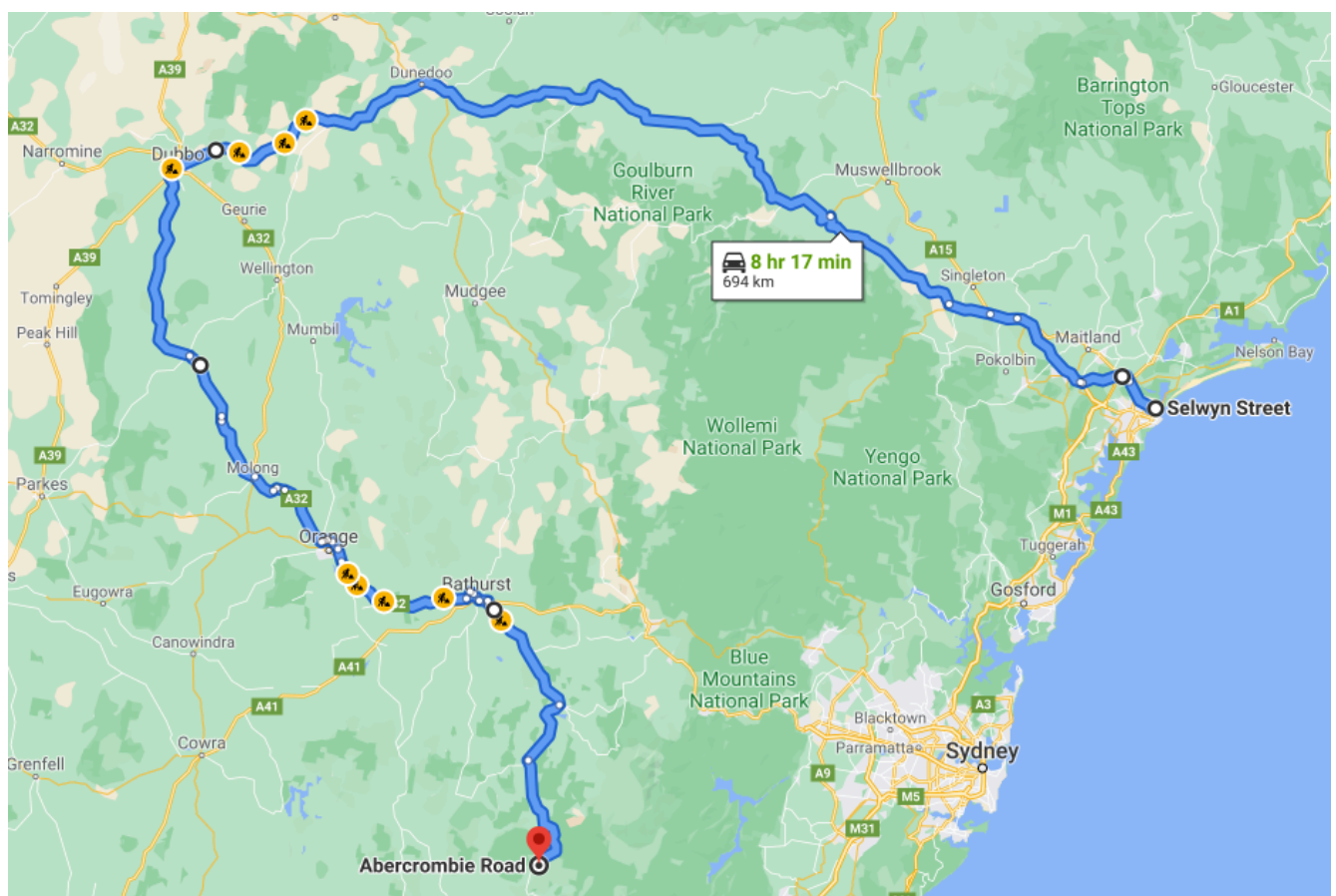
- If the works undertaken by the blades have been done, then the towers will fit along the proposed route.

17.0 Route Survey C: Option for blades longer than 68 metres.

Newcastle to Paling Yards via Dubbo 694.0 kilometres:

This route took us via Selwyn street, George Street, Industrial Drive, Maitland Road, New England Highway, John Renshaw Drive, Hunter Expressway, Golden Highway, Newell Highway, Obley Road, Banjo Paterson Way, Mitchell Highway, Northern Distributor Road, Mitchell Highway, Bradwardine Road, Eglinton Road, Durham Street, Great Western Highway, Littlebourne Street, O,Connell Road, Abercrombie Road.

GPS LINK: <https://goo.gl/maps/mayUKaGHk8evRTru7>



18.0 References:

Australian Load Restraint Guide
Rex J Andrews P/L Drawings
Rex J Andrews route survey # 310 REV01
GPG
Tract
GE Renewables
Siemens Renewables
Vestas
Google Earth/Maps
Nearmaps
NHVR (OSOM)
NHVAS Maintenance Management (NHVAS21193)
NHVAS Basic Fatigue Management (NHVAS21193)

Disclaimer: This route study is a guide only; government approvals would be required before these routes could be deemed suitable for transporting the components over the listed routes.

This study was undertaken using data supplied by Rex J Andrews P/L. Equipment and swept paths might vary if using transport methodology other than the data supplied by Rex J Andrews.