CAMBRAY CONSULTING

TRAFFIC ENGINEERING + TRANSPORT PLANNING

Theodore Wind Farm

PRELIMINARY ROUTE ASSESSMENT REPORT

Prepared for Environmental Resources Management Australia Pty Ltd

9 August 2024

Contents

Appendices

Appendix A

Stage 1 Candidate Routes

Appendix B

PTR1 & PTR2 DTMR Conditions Report

Appendix C

Project Transport Route 1

Swept Path Assessment

Appendix D

Project Transport Route 2

Swept Path Assessment

Appendix E

Route Assessment- Alternative Port

Port Alma

Swept Path Assessment

Appendix F

Route Assessment - Alternative Port

Port of Gladstone – Fishermans Landing

Swept Path Assessment

1.0 Introduction

Theodore Energy Development Pty Ltd (**TED**) (the **Proponent**) is developing the Theodore Wind Farm (the **Project**), located approximately 22 km east of Theodore and 50 km south of Biloela in the Banana Shire Council Local Government Area, Queensland. The closest major town is Gladstone, 150 km northeast of the proposed development, with Queensland's capital Brisbane located 380 km southeast of the Project.

The Project consists of up to 170 Wind turbines and ancillary infrastructure including, but not limited to, access tracks, collector stations, overhead and underground electrical cabling, hardstands, and an operations and maintenance compound.

Environmental Resources Management Australia Pty Ltd (**ERM**) has been engaged by **Theodore Energy Development Pty Ltd** to prepare the Planning Development Application, in accordance with QLD State Development Assessment Provisions (SDAP) and the State Code 23 planning guidelines for wind farm development. ERM has engaged Cambray Consulting Pty Ltd to prepare a Transport Route and Project Area Access Assessment for the Project to support the proposed Development Application for consideration by the Department of State Development, Infrastructure, Local Government and Planning (DSDILGP) for approval, along with the following advice agencies:

- The Department of Transport and Main Roads (DTMR); and
- Banana Shire Council.

The transportation of Over Size and Over Mass (OSOM) items is required for the construction of the wind farm, which will include the wind turbine blades, hubs, power train nacelles, tower sections and supporting infrastructure. The Preliminary Route Assessment takes into consideration how the longest component (wind turbine blades), tallest component (base tower section) and heaviest component (power train) will be transported to determine the potential issues which in turn may dictate the viability of the reviewed routes.

Therefore, this route assessment focuses on the transport of the largest and highest wind turbine components.

1.1 Project Description

1.1.1 Project Area and Location

The Project Area is the land/properties containing the proposed development. It is approximately 46,830 hectares (ha) in size. The Project Area consists of nine lots on three properties. The total development footprint has a maximum area of 1,932.2 ha, which accounts for approximately 4.1% of the Project Area.

The Project Area is comprised of the following lots and is summarized in **Table 2.1**.

Table 2.1 Project Area Property List and Size

Property	Lot on Plan	Tenure	Size (ha)
Landowner 1	Lot 4 on SP131475	Freehold	1,392
	Lot 2 on RP617749	Freehold	1,311
	Lot 1 on RP617748	Freehold	1,072
	Lot 8 on DW2	Lands Lease (currently being converted to freehold)	4,553
Landowner 2	Lot 17 on DW49	Freehold	3,092
	Lot 18 on DW550	Freehold	4,617

Landowner 3	Lot 11 on DW446	Freehold	7,985
	Lot 19 on DW551	Freehold	3,099
	Lot 20 on SP100500	Freehold	19,594
Road Reserves	Part of Defence Road	Road Reserve	333
	Part of Crowsdale Camboon Road	Road Reserve	
	Unnamed Road Reserves	Road Reserve	
		Total	**46,830 ha**

1.2 Project Specifications

The Theodore Wind Farm is proposed to consist of 170 wind turbines, and ancillary infrastructure including:

- WTG foundations and hardstand areas;
- Temporary infrastructure such as concrete batching plants, laydown areas, temporary construction offices and parking and on-site accommodation;
- Access tracks and electrical reticulation;
- Switching stations and substations;
- Battery Energy Storage Systems (BESS);
- Temporary and Permanent meteorological masts; and
- Permanent operations and maintenance facilities, with a variety of associated site facilities and storage laydowns around the proposed site.

The Project Area and Project layout is illustrated in **Figure 1.1.**

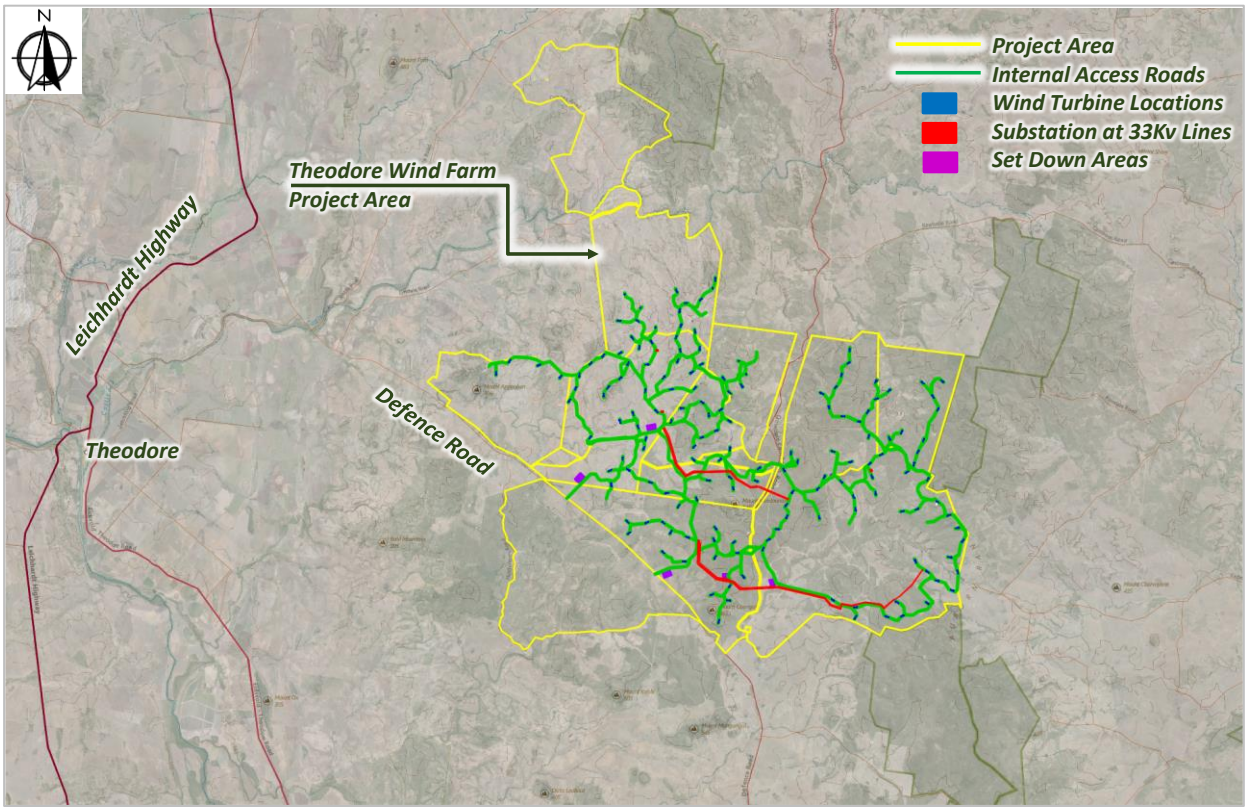


Figure 1.1 The Project Area and Proposed Development Layout

1.3 Application Process

This preliminary route assessment has been undertaken to provide validation to the State Government that the proposed wind turbine components may be successfully delivered to the Project Area from a traffic engineering standpoint.

This report forms part of the Development Application providing information and discussion around the likely transport routes between the Port of Gladstone and the Project Area. The key purpose of this report is to discuss the feasibility of transporting the wind farm components to the Project Area, and to identify any significant works likely to be required to accommodate the longest and highest components, and any properties likely to be impacted.

The Project has been assessed in accordance with State Code 23 and taken into consideration of the future draft State Code 23 V3.1 requirements. for the Planning Development Application.

The sections within this report where the Performance Outcomes are addressed are summarised in **Table 1.2.**

Table 1.2 State Code 23 V3.0 (Current)

Performance Outcome	Acceptable Outcome	Section within report
Vehicular access and movement		
PO6 Development provides suitable vehicular access, manoeuvring areas and parking for the ongoing operation and maintenance activities associated with the wind farm.	No acceptable outcome is prescribed.	Discussions regarding suitable vehicular access, manoeuvring areas, etc., are discussed in this report and further discussed in the Preliminary Traffic Impact Assessment.
Construction management		
PO13 Construction activities associated with the development do not adversely impact **transport networks** and road infrastructure.	No acceptable outcome is prescribed.	This is discussed in the Preliminary Traffic Impact Assessment.

Following approval of the Development Application, a more detailed assessment, and the setting of conditions for the transport of all components and materials will be required once contracts are entered into for the supply and transport of the wind farm components, and are expected to include:

- A Final Traffic Impact Assessment;
- A Pavement Impact Assessment;
- A Road Use Management Plan; and
- A Traffic Management Plan.

The construction phase of the development process will also require a:

- A review of the proposed OSOM Route by a specialist haulage contractor in conjunction with the manufacturer of the wind turbine components;
- Construction Movement Schedules (i.e., commencement of haulage, expected duration of each haulage, total duration of all construction movement activities) and OSOM applications to seek permits for the movement of all OSOM components;
- Design and approvals where works are proposed to public roads or intersections ; and
- A Section 33 application to DMTR for accesses onto State Controlled Roads (SCRs) as part of further State Government approvals.

This report provides a Preliminary Route Assessment to respond to the requirements of the Development Application process.

1.4 DTMR Standard Requirements

Table 1.3 provides a summary of items required by the Department of Transport and Main Roads (DTMR) for a Route Assessment Report with reference to the sections where these items are discussed.

Table 1.3 Summary of DTMR items addressed within the Report.

DTMR Standard Requirement Items	Section within report
In support of the Development Application the Department of Transport and Main Roads (DTMR) will require: a. A Route Assessment Report demonstrating of the feasibility of the proposed route for transport of wind turbine components including the blades, towers, and nacelle (and any other oversize overmass (OSOM) loads from the Port of Gladstone to the subject site. The following must be identified and/or demonstrated via the required Route Assessment Report:	These items have been discussed within this report as outlined in the following items below.
• What the proposed route is.	Discussed in **Section 2.0**
• The location of stopping and/or rest areas.	Discussed in **Section 7.0**
• The location and extent of any mitigation works on the State-Controlled Road (SCR) network.	Discussed in **Section 3.0** and **Section 4.0**
• Any operational impacts on the SCR network resulting from any required mitigation works.	Discussed in **Section 3.0** and **Section 4.0**
• Swept path assessment for all relevant turns along the route.	Discussed in **Section 3.0**
• Timing it takes for vehicles to turn at relevant intersections. It should be noted that closures of this nature under traffic control usually have a maximum limit of 15 minutes.	To be conditioned and reviewed by specialist haulage consultant, following DA approval and once sufficient detail is available.
• Confirmation that the vertical geometry of the route has been considered, given the length of the wind turbine blades.	Discussed in **Section 3.0**
• The extent of vegetation clearing/earthworks required along the route.	Areas of vegetation clearing, and earthworks discussed in **Section 3.0.**
• Information regarding the timing of OSOM movements, including expected travel time from Port to Site. Part 3 and Part 5 of DTMR's Traffic and Road Use Manual are particularly relevant. If movements are to be staged, proposed vehicle storage arrangements need to be identified.	To be conditioned and resolved as part of the construction management planning.
• That the road use management strategy can ensure that emergency vehicles will be able to pass at all times.	To be conditioned and resolved as part of the construction management planning.
• Consideration of impacts on school bus routes. Movements should be routed and/or scheduled to avoid any conflict with school bus services.	To be conditioned and resolved as part of the construction management planning.

• Contingency planning in the event of highway closure due to traffic incident while en route. An OSOM vehicle stopped on the roadway would pose an obstacle due to widths. If the roadway is reduced to single lane due to an accident or roadworks the wider loads would not be able to pass through and possibly block oncoming traffic. This can be alleviated with the inclusion of regular pull over areas.	To be conditioned and resolved as part of the construction management planning.
• A Road Access Location Report demonstrating that the proposed vehicular access point/s to SCR does not worsen the safety and efficiency of the road network. For accesses to a SCR, the Road Access Location Report must be prepared in accordance with section 10.3.1 of the Guide to Traffic Impact Assessment (GTIA), Department of Transport and Main Roads 2018.	Road Access Locations are summarised and discussed in **Section 4.0.**

1.4.1 Preliminary Route Assessment Objective

The objective of this Preliminary Route Assessment is to determine the most suitable route from a point of origin (**Gladstone Port**) to the set-down areas for the proposed wind turbine components.

All route options do require physical works, service relocations, temporary removal of street signage, streetlights, furniture, and property impacts. However, the intent of this review is to minimize such impacts as much as possible by reviewing several routes and route variations and demonstrating general feasibility of at least one route. Different routes may be required to transport different components.

Therefore, this Preliminary Route Assessment has:

- Identified intersections and interchanges where vehicle movements are likely to be impeded;
- Suggested solutions or options at intersections and interchanges to assist the passage of over-length and over-height vehicles transporting indivisible wind farm components; and
- Provided commentary on permanent or temporary works and other measures that may be required to facilitate movement of the wind turbine blades through those intersections and interchanges.

The route assessment specifically considers how the longest component (wind turbine blades) and tallest component (base tower sections) can be transported between the Port of Gladstone and the Project Area, to identify the potential issues which in turn may dictate the viability of the reviewed route(s).

Assumptions regarding the transport vehicle configuration and dimensions, cradle assembly and bogie placement have been made to inform this Preliminary Route Assessment. The chosen transport contractor will need to confirm that its vehicles and configurations are capable of meeting or exceeding these performance requirements or undertake additional work if an alternative configuration or dimensions is proposed.

Further, we note that the mass of the heaviest components (power train) and transport vehicle wheel and axle arrangements is not known with any certainty at this stage. Further, mass limits on roads, bridges and culverts can vary due to floods, condition reports and upgrades and hence can change at any time. Over-Mass transport applications will therefore need to be conditioned and addressed as part of the construction planning phase, post the Development Approval. We have however identified and highlighted load limits from DTMR's published information. This is further discussed in **Section 6.0**.

High-level comment has been made regarding the vertical alignment and vertical clearances of the proposed route at key locations. However, once a route is chosen by the Project contractor, a further detailed route review must be undertaken by the OSOM consultant or transport company that is awarded the contract to move the wind turbine blades and other Wind Turbine Generator (WTG) components.

This report outlines four (4) stages of the route assessment process, which involved:

1. Desktop review to identify candidate route options;
2. Driving the route options, identifying constraints, and summarising findings;
3. Completion of swept path assessment with approximated turbine blade design vehicle to review route options; and
4. Provision of a completed Preliminary Route Assessment Report (this report).

1.4.2 Other Wind Farm Developments

We understand the following other wind farm developments are also considering utilising or are utilising the same route out of the Port of Gladstone Auckland Point, which includes:

- Lotus Creek Wind Farm (LCWF);
- Clarke Creek Wind Farm (CCWF);
- Callide Wind Farm (CWF);
- Banana Range Wind Farm (BRWF); and
- Moah Creek Wind Farm (MCWF).

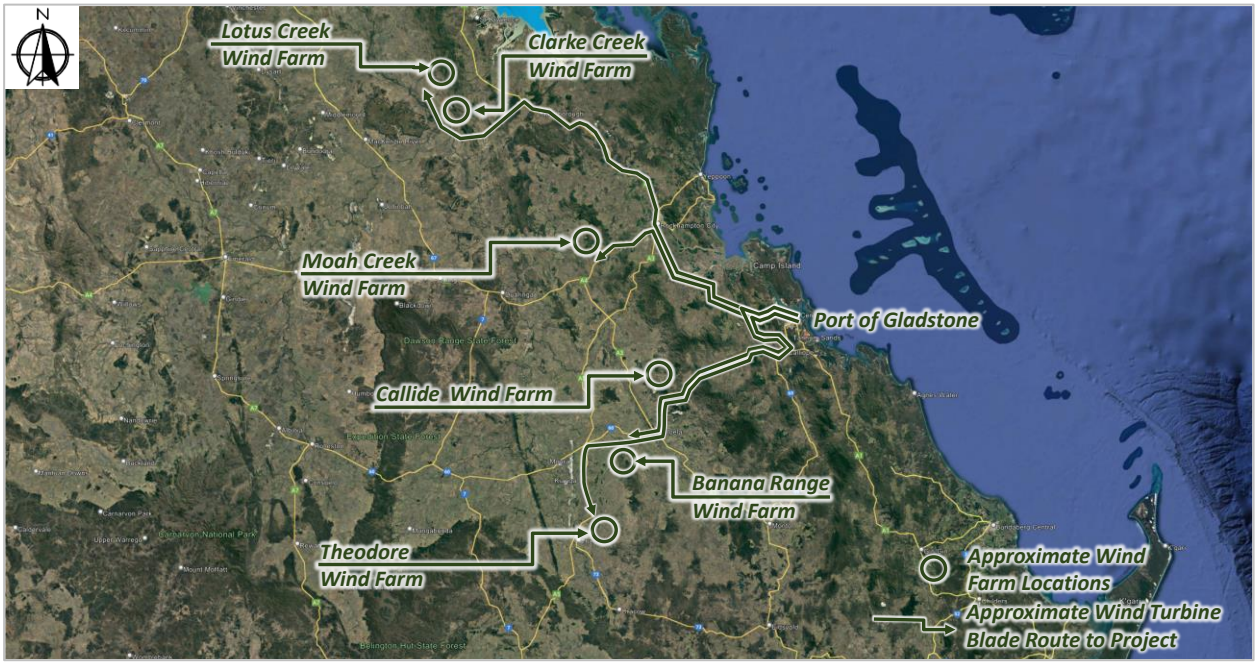


Figure 1.2 Other Wind Farm Developments in Proximity to the Project Area

The Callide Wind Farm (CWF) has recently received planning approval on 21 September 2023 (SARA Reference: 2303-33942 SDA) which lists wind turbine lengths of up to 85 metres and accessed from the Dawson Highway.

1.5 Stage 1 – Desktop Review to Identify Route Options

A number of routes were considered and identified for the potential Project routes. However, Based on the recently utilised route for CCWF, BRWF and MCWF, a desktop review was undertaken to assess the Project transport route for a wind turbine blade up to a V172 84.6m in length from the Port of Gladstone to the Theodore Wind Farm Project Area via Mount Larcom, Gracemere, Westwood, Dululu and Banana, or Calliope, Biloela, and Banana.

Other routes were considered as part of this application, which have been excluded from further review for the purpose of the Theodore Wind Farm due to excessive distance, burden on the Bruce Highway, awaiting commencement of port upgrades, etc. The other routes considered, include:

- Port of Bundaberg via:
    - Option A: Apple Tree Creek, Gin Gin, Miriam Vale Calliope, Mount Larcom, Gracemere to Project Area;
    - Option B: Goodwood, Childers, Apple Tree Creek, Gin Gin, Miriam Vale, Calliope, Mount Larcom, Gracemere to Project Area; and
- Port of Brisbane via:
    - Logan, Toowoomba, Dalby, Miles and Theodore to the Project Area.

Further, Port Alma and Port of Gladstone Fisherman's Landing have been considered as alternative ports as part of the route assessment if capacity is reached at Port of Gladstone - Auckland Port (or the chosen blade length is unable to be transported under the Goondoon Street overpass of the Gladstone Port Access Road).

Whilst beyond the scope of this land transport route assessment we understand that planned upgrade works would be required to be completed at the Fisherman's Landing wharves for it to provide a suitable alternative, and works may also be required at Port Alma to accommodate the size ship and cranage of turbine blades and other equipment. This should be further investigated at the time of procuring the wind farm components in consultation with the Gladstone Port Authority and the heavy haulage contractor.

The identified candidate routes are included in **Appendix B** and reproduced in **Figure 1.3.**

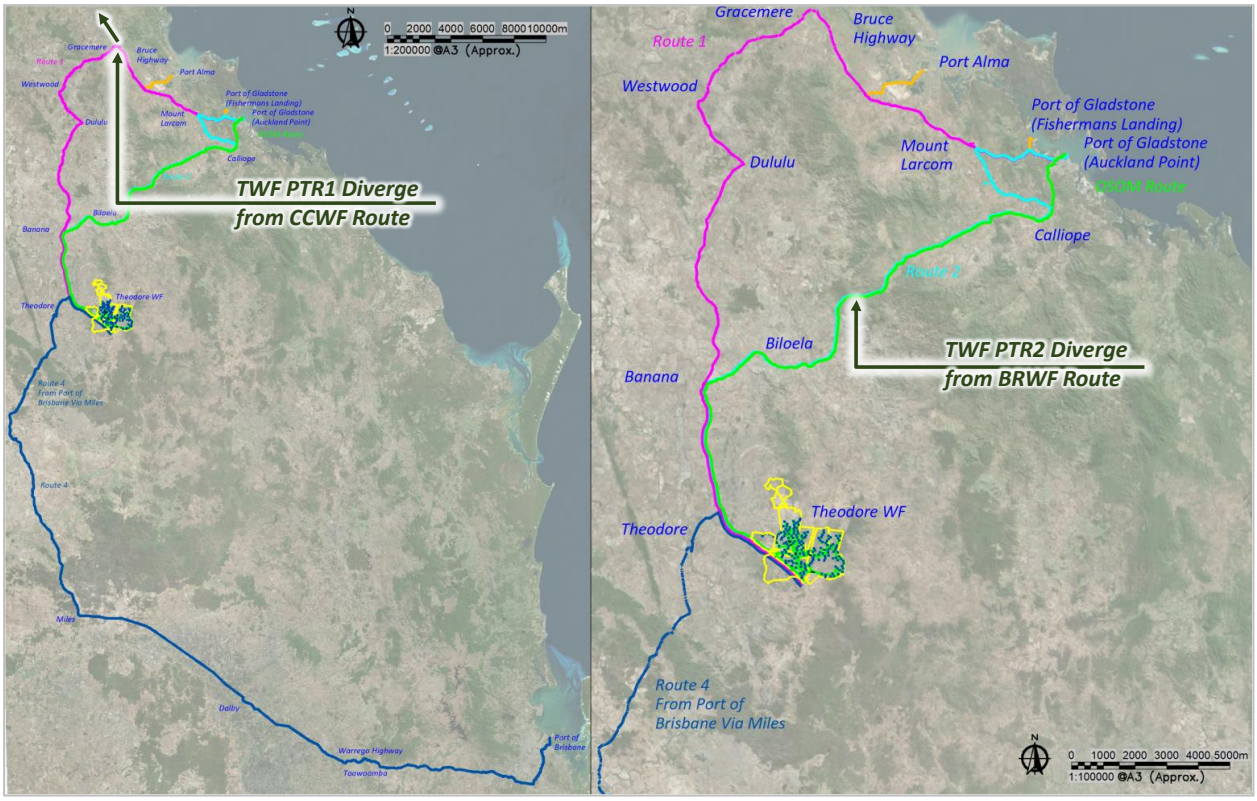


Figure 1.3 Potential Transport Routes (PTRs)

Table 1.4 summarises the approximate route distance for the main routes, and the two (2) alternative seaport routes.

Table 1.4 Approximate Route Distances

Route	Origin	Distance (Approx.)
Primary	Port of Gladstone (Auckland Point)	300km
Alt. Port 1	Port of Gladstone (Fisherman's Landing)	284km
Alt. Port 2	Port Alma	318km
Alt. Port 3	Port of Brisbane	608km

1.6 Stage 2 – Route Review

The routes identified in Stage 1 - Desktop Assessment were driven and inspected by two (2) representatives of Cambray Consulting on the 12th of October 2023 from the Port of Gladstone to the Project Area. We identified further constraints and route considerations not identified during the desktop phase and sought to identify potential methods to mitigate such issues.

For the purpose of this assessment, we have utilised the road network in the vicinity to the Port of Gladstone as a number of upgrades have already been completed to facilitate movements for the CCWF as noted in **Section 1.3.2.** This route is likely to be preferred by road authorities, given it has successfully been used, however as noted above, there is likely to be a maximum blade length able to be accommodated below the Goondoon Street overpass, requiring detailed consideration by the haulage contractor(s) when engaged, so alternative routes from Fisherman's Wharf and Port Alma have also been considered.

The driven route was consistent with the desktop assessment identified route between Gladstone, the Project Area and Rockhampton as illustrated on the right-hand side of **Figure 1.3.** The route between Brisbane and Theodore was not driven.

1.7 Stage 3 – Swept Path Assessment

Autodesk Vehicle Tracking software simulates the movement of a "design vehicle" within a virtual environment based on vehicle specifications provided. The simulated movement produces a “swept path” which illustrates the outline of the vehicle moving through an area of interest.

Swept path diagrams have been prepared to assess the viability of the 84.6m wind turbine blade on the identified Project Transport Routes further discussed in **Section 3.0** onwards.

1.7.1 Design Vehicle

Autodesk’s Vehicle Tracking and AutoCAD was utilised to conduct the swept path assessment with the assistance of Nearmap imagery where available.

Based on similar developments, the *“55 Meter Wind Blade (Rear Bogie Pivot Steer) Rear Steer Capable”* template was adopted from the Vehicle Tracking library and lengthened and widened to represent the proposed 84.6m wind turbine blade, based on the specification provided by the Proponent which is summarised in **Table 1.5**. These wind turbine specifications are provided as indicative of the potential wind turbine components for this Project.

Table 1.5 Vestas 84.6m V172 Wind Turbine Blade and Components

Component	Comment	Weight	Dimensions
Blade	Transport including transport frame (Root Cradle + Tip Clamp) (155° Pitch)	28,602 kg	84,600 mm (Length) 4,380mm (Width along Max Chord) 3,200 mm (Height) (BCD)
	Transport including transport frame (Root Frame + Root Foot + Vessel Root Frame + Vessel Tip Frame + Tip Clamp) (155° Pitch)	41,452 kg	85,390 mm (Length) 4,600 mm (Width along Max Chord) 3,700 mm (Height)
Hub	Transport including transport tools (Road + Sea)	64,900 kg	4,808 mm (Length) 4,345 mm (Width) 4,045 mm (Height)
Power train (incl. Main bearing arrangement + RTM module)	Transport including transport frame	105,140 kg	8,067 mm (Length) 3,100 mm (Width) 3,518 mm (Height)
Nacelle Main house Without Power Train	Transport (No Transport Frame needed)	55,231 kg	1,2730 mm (Length) 4,000 mm (Width) 3,750 mm (Height)
Nacelle Side compartment with Transformer (13T/15T/17T)	Transport (No Transport Frame needed)	36,210 kg / 38,210 kg / 40,210 kg	12,192 mm (Length) 2,438 mm (Width) 2,896 mm (Height without dome)
Tower	Longest tower section	82,361kg	35,000mm long 4,176 mm diameter

	Base tower section	91,704kg	10,905 mm long 6,310 mm diameter

The Vehicle Tracking template has been modified to carry the V172 84.6m wind turbine blade that is 4.6m wide (width along Max Chord) and 3.7m high contained within the vessel root frame.

The profile of the modified Vehicle Tracking template used for the assessment is illustrated in **Figure 1.4,** and the swept path movements (with and without rear steer) are illustrated in **Figure 1.5.**

A 5 km/h design speed was adopted for all movements with clearance envelopes of 300mm at intersections and 500mm on interchanges and curves. The swept paths use a combination of Arc turn and Arc turn with rear steering enabled which are a representation of ideal turning movements using the full widths of roads based on the imagery available.

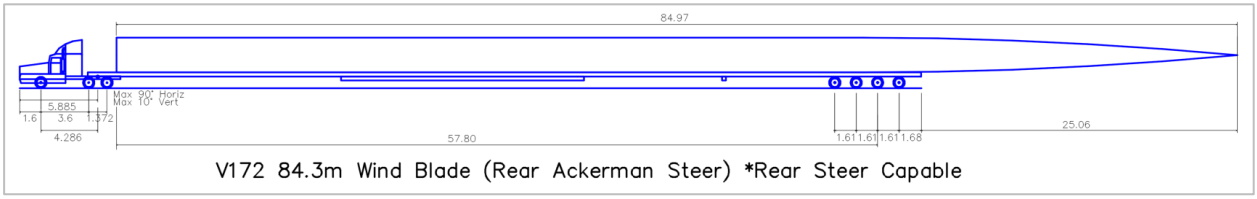


Figure 1.4 Modified Profile

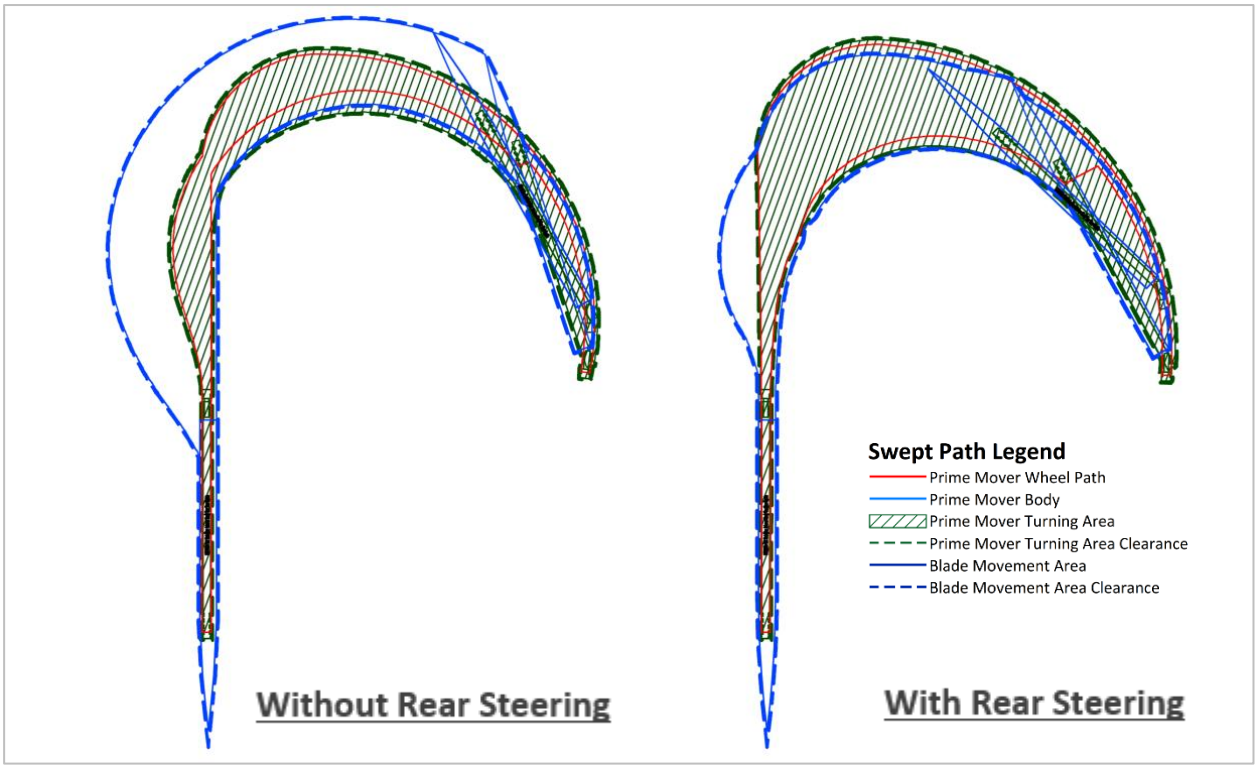


Figure 1.5 Vehicle Swept Path with and Without Rear Wheel Steering

The size of the load is based on the proposed wind turbine blade specifications provided by the proponent, as noted above, and is illustrated in **Figure 1.6.**

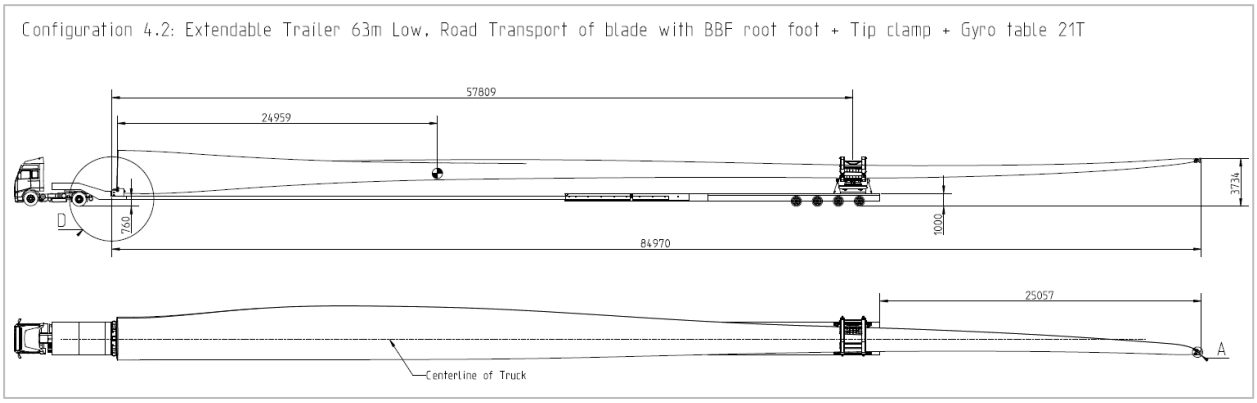


Figure 1.6 Proposed Wind Turbine Blade

The standard height clearance for major roads is 4.6m measured from the pavement to the underside of an overhead structure. However, Department of Transport and Main Roads *Guideline for Multi-combination Vehicles and Queensland Access Conditions Guide: Route and operational access conditions for heavy vehicles* notes: a Multi Combination vehicle can be up to 5.0m on approved roads with appropriate permissions.

Due to the status of the Project and Development Application requirements, an OSOM consultant has not been engaged in the early stages of the development process. Therefore, the size and type of the vehicle to be used and the mounting configuration for the wind turbine blade to the trailer is yet to be determined and cradles refined to suit the final product.

Consideration of potential damage to pavements have not been considered as part of this assessment and will be reviewed during the Traffic Impact Assessment stage of the development prior to construction.

1.7.2 Assumptions and Limitations

The route assessment has been based on available desktop information, site visit photographs and site visit videos. The swept paths are not based on feature, contour or cadastral survey or other means of accurately positioning the vehicle.

No vertical geometric information such as road long sections or vertical curve radii or lengths has been obtained, nor clearances to overhead communications cables or powerlines. Overbridge clearances have been sourced from that available publicly from the Queensland Transport website and height clearance signage we observed, and any other low clearances to overhead structures or sharp grade changes identified from the route inspections.

This Preliminary Route Assessment therefore relies on the available aerial imagery and cadastral boundaries in Queensland Globe, and information published by Queensland Transport and the local road authority (in this case Banana Shire Council). As such there may be additional considerations and constraints that the haulage contractor may need to negotiate through, over or around.

We strongly recommend that once a transport operator has been appointed a trial oversize load(s) be transported along the full length of the proposed route to confirm its suitability and determine any pre-works needed to facilitate the transport of the longest and widest loads. Such trials should be conducted prior to the manufacture of the blades, tower sections, and nacelles and other equipment being committed, so that any adjustments in length, width or transport fixings can be modified if required.

A preliminary application to DTMR and the relevant local road authorities for confirmation that Over-Mass infrastructure will be permitted to cross all bridges and culverts and traverse the routes should also be made. This should identify likely conditions (e.g., transport vehicle and trailer size, number of axles, tyres and axle spacings, traffic control, propping, strengthening, time of day / seasonal restrictions, piloting and police escort requirements etc.).

This will assist in identifying any mass restrictions that may have cost or programming implications or impact the selection of wind farm components, noting that following development approval a specialist heavy haulage contractor will need to be engaged to lead such a process.

1.8 Stage 4 – Route Assessment

The route assessment report has been structured as follows:

- **Section 2.0** summarises the identified route;
- **Section 3.0** to **Section 6.0** includes the swept path assessment for the routes;
- **Section 7.0** includes a discussion on the local road assessment;
- **Section 8.0** discusses identified Over Mass limitations;
- **Section 9.0** includes a discussion on the crossing of the Callide Valley Railway Line; and
- **Section 10.0** Layover and Stopping Area considerations.

2.0 Proposed Route Assessment

The proposed route from the Port of Gladstone to the Project Area access points, comprise of the highest standard roads and is the most direct route available. There are two (2) potential project routes for the wind turbine blade movement which are summarised in **Table 2.1.**

Table 2.1 Project Transport Routes

Route 1 (PTR1)	Route 2 (PTR2)
Macfarlane Road (GRC)	
Mark Fenton Drive (GRC)	
Gladstone Port Access Road (181)	
Gladstone Mount Larcom Road (183)	
Bruce Highway 10E (Benaraby – Rockhampton)	Bruce Highway 10E (Benaraby – Rockhampton)
Capricorn Highway (Rockhampton – Duaringa)	Dawson Highway 46A (Gladstone – Biloela)
Leichardt Highway (26A) (Westwood – Taroom)	
Defence Road (BRC)	

**Council roads highlighted for reference*

2.1 Common Route Considerations

General comments for the route driven between the Port of Gladstone and the Project Area access at Theodore Wind Farm (The Project) is summarised, as follows:

- The route is common with the Clarke Creek Wind Farm (CCWF), currently under construction, and the recently approved Moah Creek Wind Farm (MCWF), from the Port of Gladstone (Auckland Point) to the Capricorn Highway;
- A number of works have been completed to facilitate movements for the CCWF components (as discussed in **Section 1.3.2**);
- The lowest overpass or structure on the route appears to provide 5.2m height clearance to the Goondoon Road overbridge over the Gladstone Port Access Road. This will limit the movement to components lower than this clearance, noting the road is also in a sag curve beneath this bridge, which is likely to further reduce the effective height clearance for very long items, in particular the wind turbine blades;
- Gladstone Port Access Road also has other vertical and horizontal elements to consider when moving the Wind Turbine Blades (WTB); and
- This route has a limited number of overpasses, and they are generally signed or listed in the DTMR Conditions Report which is further discussed in **Section 2.1.2.**

As summarised above, improvements have already been made along the route from the Port of Gladstone to Mount Larcom since the Clarke Creek Wind Farm Project commenced construction.

The proposed route is common between the Port of Gladstone and the Gladstone-Mount Larcom Road / Bruce Highway intersection, and west to the Bruce Highway / Capricorn Highway roundabout. The Project components will then head west along the Capricorn Highway rather than continuing through Rockhampton.

The proposed Route 1 from the Port of Gladstone to the Project Area is illustrated in **Figure 2.1**, along with an alternative Route 2

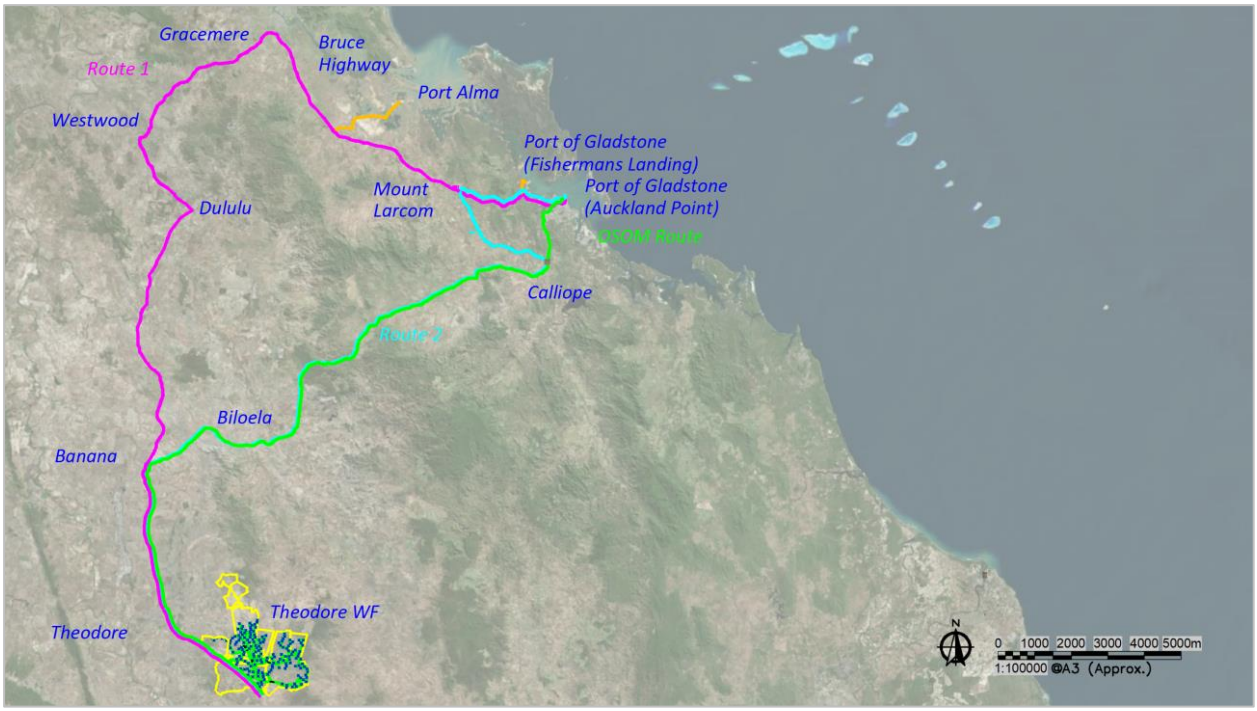


Figure 2.1 Proposed Routes from Port of Gladstone to Theodore Wind Farm

The longer blades proposed for the Project are likely to require further modifications to the intersections above as noted throughout this report. Detailed checking of the height and ground clearances will also be required by the haulage operator along the Gladstone Port Access Road based on the proposed truck, low loader, cradle, and dolly configuration. If this route proves unworkable, the wind turbine blades may need to instead be unloaded at Port Alma or the Port of Gladstones planned Fisherman's Landing wharf.

2.1.3 Clarke Creek Wind Farm Route Assessment

A Road-Use Management Plan was completed by AECOM on 24th of April 2018 (Revision B) for the Clarke Creek Wind Farm (CCWF), which involves transportation of wind turbine blades 82m in length (and associated tower sections, transformers, construction equipment, etc.) from either the Port of Gladstone or Port Alma to the Project Area.

The proposed route for the movement of the wind turbine blades from the Port of Gladstone to CCWF, was identified as:

1. Eastern side of the Port access to Macfarlane Road;
2. Macfarlane Road to Mark Fenton Drive;
3. Mark Fenton Drive to Port Access Road;
4. Port Access Road to Hanson Road;
5. Hanson Road to Gladstone-Mount Larcom Road;
6. Gladstone-Mount Larcom Road to the Bruce Highway;
7. Bruce Highway to Marlborough Road; and
8. Marlborough Road to Marlborough-Sarina Road.

Further, the report identified an alternative Route to the Bruce Highway from the Port of Gladstone for the transport of Over-Height (tower sections) and Over-Mass items (Nacelles etc), via:

1. Western side of the Port access on Macfarlane Road;
2. Macfarlane Road to Flinders Parade;
3. Flinders Parade to Lord Street;
4. Lord Street to Hanson Road;
5. Hanson Road to Red Rover Road;
6. Red Rover Road to Don Young Drive;
7. Don Young Drive to Dawson Highway ;
8. Dawson Highway to the Bruce Highway at Calliope; and
9. Rejoin the turbine blade route on the Bruce Highway at Mount Larcom.

After gaining development approvals, the size of the wind turbine blade for the Clarke Creek Wind Farm was reduced to 76.2m in length and modifications have been made to a number of intersections to facilitate the movements. These modifications have been observed and include:

- **Figure 2.2** – Diverge lane provided at intersection of Macfarlane Road / Mark Fenton Drive;
- **Figure 2.3** – Diverge pavement added for movements through Mark Fenton Drive / Gladstone Port Access Road roundabout;
- **Figure 2.4** – Median island sections removed from intersection of Gladstone Part Access Road / Hanson Road;
- **Figure 2.5** – Widening on eastern approach to Hanson Road / Blain Drive / Alf O'Rourke Drive roundabout;
- **Figure 2.6** – Hardstand added through Hanson Road / Red Rover Road roundabout for through movements;
- **Figure 2.7** – Bypass road around the Hanson Road / Gladstone - Mount Larcom Road roundabout;
- **Figure 2.8** – Median Island sections removed from intersection of Gladstone - Mount Larcom Road / Bruce Highway; and
- **Figure 2.9** – Kerb and median island alterations on eastern approach to Lord Street / Bryan Jordan Drive roundabout.

Figure 2.2 Diverge lane provided to intersection of Macfarlane Road / Mark Fenton Drive.

Figure 2.3 Diverge pavement added for movements through Mark Fenton Drive / Gladstone Port Access Road Roundabout.

Figure 2.4 Median Island sections removed from intersection of Gladstone Port Access Road / Hanson Road.

Figure 2.5 Lane widening on eastern approach to Hanson Road / Blain Drive / Alf O'Rourke Drive roundabout.

Figure 2.6 Hardstand added through Hanson Road / Red Rover Road roundabout for through movements.

Figure 2.7 Bypass road around the Hanson Road / Gladstone Mount Larcom Road roundabout.

Figure 2.8 Median Island sections removed from intersection of Gladstone Mount Larcom Road / Bruce Highway.

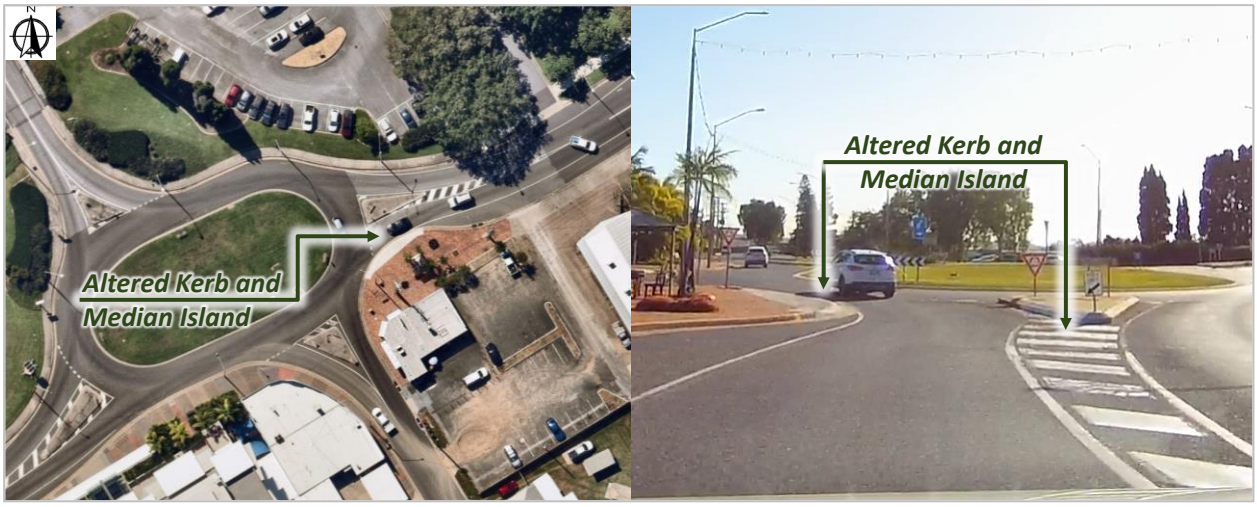


Figure 2.9 Kerb and median island alterations on eastern approach to Lord Street / Bryan Jordan Drive roundabout.

2.1.4 Height Clearance Review

A review of data provided by Public Conditions Report generated from the excess mass and dimension permit management system (DTMR Conditions Report) was undertaken to provide further information regarding overhead obstructions along those parts of the route that are State Controlled Roads (i.e., Gladstone Port Road to the Capricorn Highway turnoff). The DTMR Conditions Report summary is included in **Appendix C**.

Table 2.2 and **Table 2.3** summarise the overpasses that the PTR1 and PTR2 will pass under respectively, except for the directional signage and variable speed limit gantries that span the motorways.

Table 2.2 Height Clearance Review – PTR1

Road ID	Road Name	Structure/ Location	Height Clearance	Reference
183	Port Access Road	Road Bridge over / Goondoon St	5.2m*# 5.2	Signed DTMR
181	Gladstone - Mt Larcom Road	Railway overpass	6.75m	Signed
181	Gladstone - Mt Larcom Road/Hanson Road	Conveyor from Rio Tinto Alcan to Port of Gladstone – Fisherman's Point overhead transport structure	7.0m	Signed
10E	Bruce Highway	Railway overpass	6.9m	Signed
16A	Capricorn Highway	Stanwell Power Station Access Road over Capricorn Highway	6.4m 6.56m	Signed DTMR

**Further review required to determine height clearance of overlength vehicle configurations due to sag curve beneath overbridge*

 # Lowest height clearance identified along the proposed route

Table 2.3 Height Clearance Review – PTR2

Road ID	Road Name	Structure/ Location	Height Clearance	Reference
183	Port Access Road	Road Bridge over / Goondoon St	5.2m*# 5.2	Signed DTMR
181	Gladstone - Mt Larcom Road	Railway overpass	6.75m	Signed
181	Gladstone - Mt Larcom Road/Hanson Road	Conveyor from Rio Tinto Alcan to Port of Gladstone – Fisherman's Point overhead transport structure	7.0m	Signed
10E	Bruce Highway	Railway overpass	6.9m	Signed
16A	Capricorn Highway	Stanwell Power Station Access Road over Capricorn Highway	6.4m 6.56m	Signed DTMR
46A	Dawson Highway	Calliope Crossroads	6.2m	Signed DTMR
46A	Dawson Highway	Railway Overbridge at Deep Ck over Deep Creek Road - Bridge.	6.0m	Signed DTMR
46A	Dawson Highway	Callide Mines Haul Road at Argoon on Dawson Highway.	5.7m	Signed DTMR

**Further review required to determine height clearance of overlength vehicle configurations due to sag curve beneath overbridge*

 # Lowest height clearance identified along the proposed route

The DTMR Conditions Report provides for following disclaimer:

> *The conditions and restrictions outlined in this Conditions of Operation report have been compiled from the most recent information practically available. Conditions are liable to change quickly, particularly due to weather. All care has been taken in providing this information. However, due care still needs to be taken when operating vehicles, particularly those in excess of regulation mass and/or dimension.*

Based on the specifications provided in **Table 1.5** and previous windfarm applications, the height of the V172 wind turbine blade and key components mounted onto a low loader (adopting a 1.0m height from the ground) for transport is as follows:

- Wind turbine blade 3.7m (4.7m on a 1.0m low loader);
- Hub height 4.045m (5.045m on a 1.0m high low loader);
- Longest tower section 4.176m (5.176m on a 1.0m low loader); and
- Base tower section 6.310m (7.310m on a 1.0m low loader).

Therefore, the delivery of components that load higher than 5.045m on a 1.0m low loader will be required to utilise the western side of the Port of Gladstone Auckland Point via a wide pathway (formerly Flinders Parade) through James Cook Park, to overcome this height clearance issue. This alternative route for over height components has been utilised by the Clarke Creek Wind Farm and the same solution has been adopted by other wind farm projects.

2.2 State and Federal Road Infrastructure Projects

A review of infrastructure projects identified in the *Queensland Transport and Roads Investment Program 2023–24 to 2026–27* (QTRIP) has been undertaken to determine if these projects may impact on the wind farm transport routes proposed for the movement of the components from the point of origin to the Project Area during the construction phase.

2.2.1 Infrastructure Projects along Proposed Route

These projects may require consideration as the project approaches completed approvals and initial construction phases:

- The Gladstone – Mt Larcom Road, Calliope River Bridge and Calliope River Anabranch Bridge Project (Investment ID 2188514) is on the proposed route and is under planning stage;
- The Bruce Highway (Benaraby - Rockhampton), Raglan Creek, upgrade bridge (Investment ID 1454810), with allocated funding for the 2023-24, and 2024-25 years;
- Capricorn Highway (Rockhampton - Duaringa), upgrade noise barrier (Investment ID 2028369), with allocated funding for the 2024-25 year; and
- The Rockhampton Ring Road Construction first phase of the project is expected to start in late 2023 with completion in the 2025–26 financial year.

2.2.2 The Access to Gladstone Port Project

In addition to the road infrastructure projects occurring along the proposed route, the Access to Gladstone Port Project (Investment ID 1193429) may impact scheduling. The Project is under planning stage. The options of the Project are shown in **Figure 2.10**. Option A identifies the Gladstone-Mount Larcom Road corridor as a potential access route for targeted upgrades, which is on the proposed route from the Port of Gladstone to the Bruce Highway. Funding has been allocated for the 2023-24, 2024-25, 2025-26, and 2026-27 years.

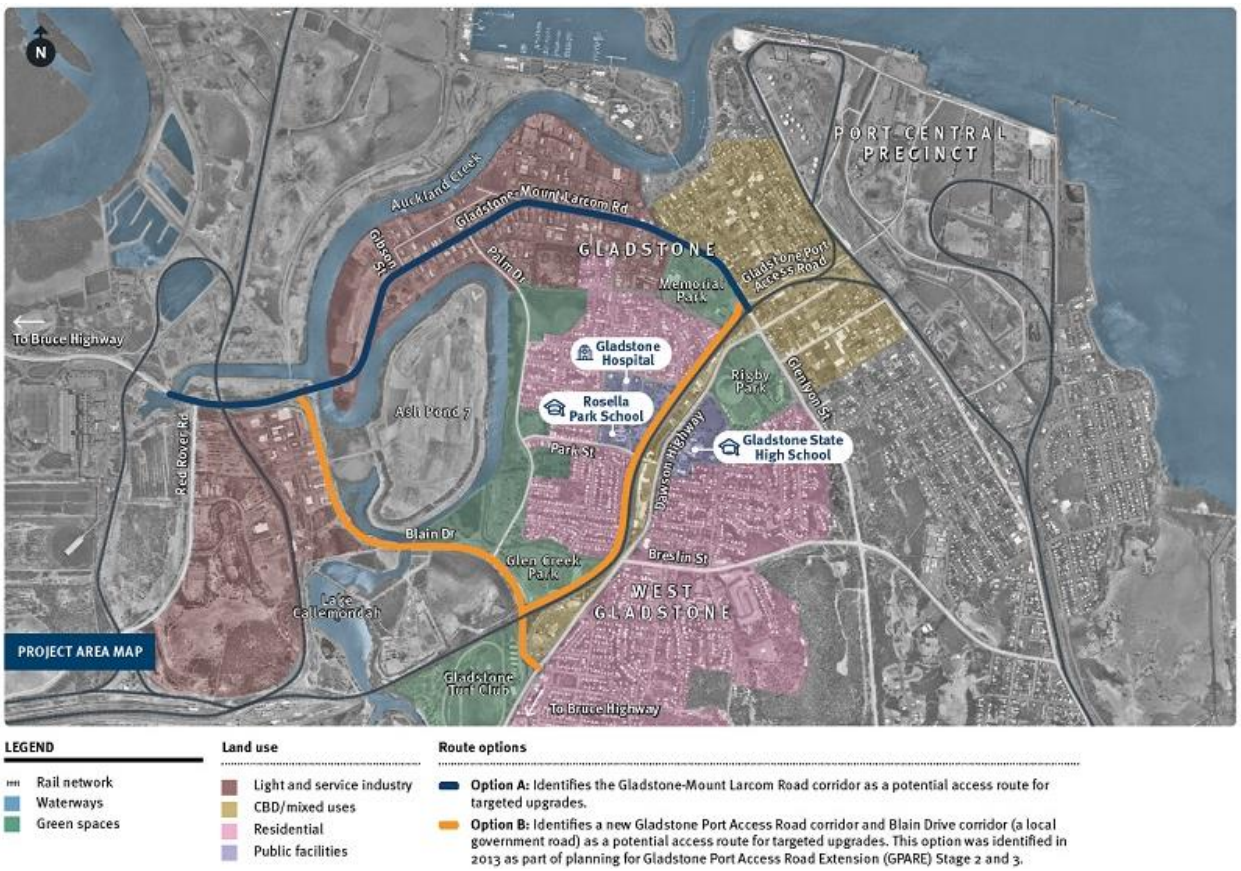


Figure 2.10 Access to Gladstone Port Project Map

2.3 Over Height Alternative Route

Due to the limitation of bridge clearance over Port Access Road, a route for Over Height components has been identified for the CCWF (discussed in **Section 1.3.2**) and understood to be adopted for subsequent wind farm developments. The Over Height alternative route is summarised in **Table 2.4.**

Table 2.4 Project Transport Routes

OSOM Route
Macfarlane Road (GRC)
Mark Fenton Drive (GRC)
Gladstone Port Access Road (181)
Gladstone Mount Larcom Road (183)
Bruce Highway 10E (Benaraby – Rockhampton)
Dawson Highway 46A (Gladstone – Biloela)
Leichardt Highway (26A) (Westwood – Taroom)
Defence Road (BRC)

**Council roads highlighted for reference*

Therefore, we have adopted this route as Route 2 or the '**OSOM Route**' for the transport of loads over 5.0m in height, such as the tower sections and hub units. The Route 2 **OSOM Route** is illustrated in **Figure 2.11** and **Figure 2.12**.

Whilst not assessed, this route may also need to be considered and works undertaken if the wind turbine blades chosen are too long and/or high to traverse the sag curve beneath the Goondoon Street bridge over the Gladstone Port Access Road.

Figure 2.11 Route 2 Over Height Alternative Route: Port of Gladstone to Calliope

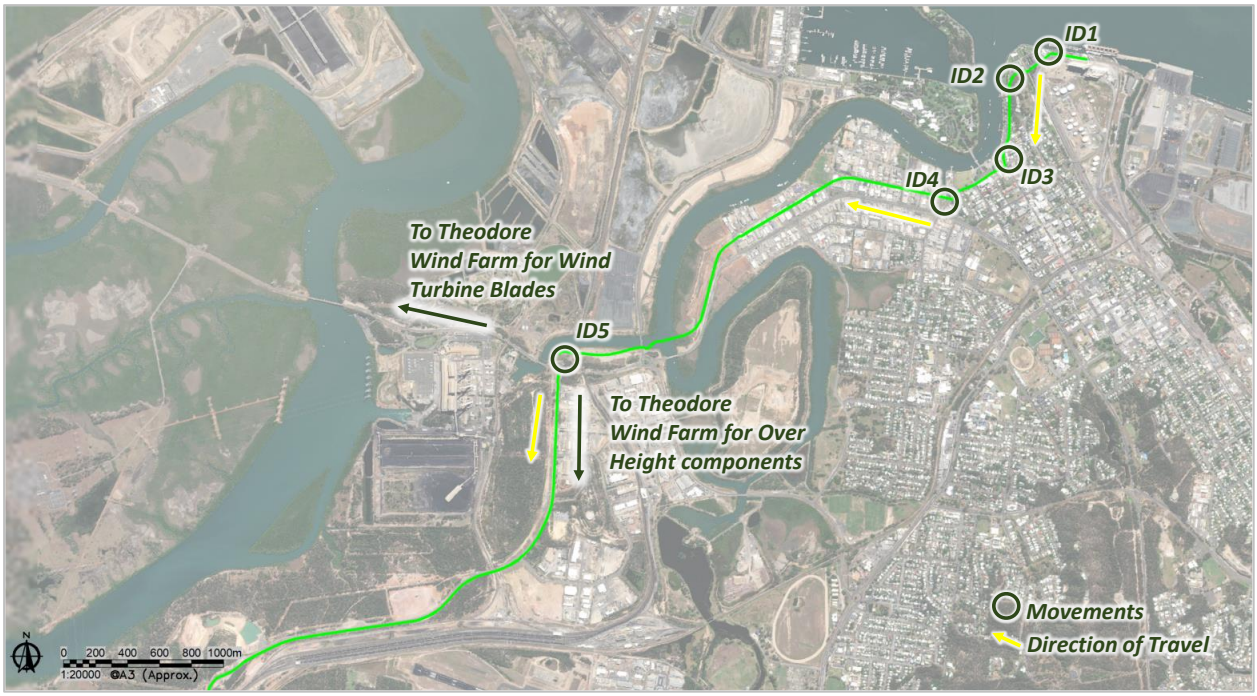


Figure 2.12 OSOM Route Alternative Route: Gladstone

3.0 Project Transport Route 1

3.1 Turning Movement Summary

A swept path assessment was conducted on the following intersections and interchanges along where the roadway alignment appears to restrict the movement of the proposed wind turbine blade on the Project Transport Route 1 (PTR1). These locations include:

- Intersections where a change in direction is required to be undertaken;
- Interchanges between major motorways;
- Segments of the road with shorter horizontal radius curves; and
- Segments of the road where road islands, streetlights, traffic signals or other major street furniture may significantly impact the movement of the wind turbine blade on the transport vehicle.

The locations identified in **Table 3.1** note key intersections and interchanges where further investigation has been conducted.

Table 3.1 Intersection and Interchanges along PTR1

ID	Description	Road 1	Road 2	Long.	Lat.	Required Works
1	Right turn into side road	MacFarlane Road	Hopper Road	151.265°	-23.835°	Recommend relocate nearby power pole and/or light post on either side of added hardstand.
2	Straight through roundabout	Hopper Road	Gladstone Port Access Road	151.265°	-23.842°	Hardstand to be constructed on south-east side of the roundabout and signage and median island to be removed on south-west approach to roundabout.
3	Bridge underpass and right turn into side road	Gladstone Port Access Road	Hanson Road	151.256°	-23.845°	Additional kerb to be trimmed along Gladstone Port Access Road. Hardstand to be added on the northern side of the intersection. Removal/relocation of seven (7) signs.
4	Bridge and straight through roundabout	Hanson Road		151.231°	-23.850°	Hardstand to be added to southern side of roundabout island. Three (3) signs to be removed/relocated from centre and south-west approach splitter islands.
5	Straight through roundabout	Hanson Road		151.225°	-23.850°	Two (2) signs to be removed/relocated from east and west approach splitter islands.
6	Straight through roundabout	Hanson Road	Gladstone Mount Larcom Road	151.156°	-23.823°	No additional works required.

ID	Description	Road 1	Road 2	Long.	Lat.	Required Works
7	Right turn onto Bruce Highway	Gladstone Mount Larcom Road	Bruce Highway	150.982°	-23.813°	Further investigation required to determine if further island trimming is required.
8	Left turn from Bruce Highway onto Capricorn Highway	Bruce Highway	Capricorn Highway	150.497°	-23.415°	Two (2) light posts and one (1) sign to be removed/relocated.
9a	Left turn from Capricorn Highway onto Leichhardt Highway	Capricorn Highway	Leichhardt Highway	150.129°	-23.664°	Hardstand to be added the corner of Capricorn Highway and Leichhardt Highway, and median island to be cutback according to vehicle turning radii. Removal/relocation of one (1) sign.
9b	Left turn from Capricorn Highway onto Leichhardt Highway	Capricorn Highway	Leichhardt Highway	150.129°	-23.664°	Upgrade of the utilised hardstand and clearing of nearby foliage. Removal/relocation of one (1) sign and two (2) light poles.
10	Leichhardt Highway movement in Dululu	Leichhardt Highway		150.262°	-23.846°	Median to be modified and relocation of two (2) signs.
11	Leichhardt Highway movement in Banana			150.127°	-24.478°	Hardstand to be added at the corner. Median to be modified and relocation of three (3) signs.
12	Left turn from Leichhardt Hwy onto Defence Road	Leichhardt Hwy	Defence Road	150.169°	-24.831°	Hardstand to be added at the corner.

The key intersections and interchanges are shown in **Figure 3.1** to **Figure 3.3** and correspond to the ID numbers in **Table 3.1**.

Figure 3.1 Route 1: Port of Gladstone to Mount Larcom

Figure 3.3 Route 1: Mount Larcom to Project Area Accesses

3.2 Project Transport Route1 (PTR1) Movement summary

The following section of the report discusses the movement at each of the key intersections, interchanges and relevant movements along the PTR1. A swept path assessment for each of the key movements has been conducted and the results are provided in **Appendix D.**

3.2.1 PTR1 Movement ID1

Location: Intersection of MacFarlane Road and John Bates Drive.
Movement: Load egresses the Port of Gladstone (Auckland Point) onto John Bates Drive.
Comments: The movement proposes to use the recently added movement hardstand on the south-west side of the intersection. The movement passes very close to the light pole and power poles. Movement between these poles will need to be to be undertaken with extreme care or relocate One of the power poles may need to be relocated to provide sufficient space to accommodate the transport of the blades.

The movement is illustrated in **Figure 3.4** to **Figure 3.6.**

Figure 3.4 PTR Movement ID1 – Overall

Figure 3.5 PTR Movement ID1 – Key Considerations

Figure 3.6 Street view facing North-East from John Bates Drive

3.2.2 PTR1 Movement ID2

Location: Roundabout at the intersection of John Bates Drive, Gladstone Port Access Road, Hopper Road, and Mark Fenton Drive.
Movement: The movement to use the recently constructed hardstand on the eastern side of the roundabout.
Comments: The movement will require hardstand to be constructed across the south-east side of the roundabout and signage to be removed from the roundabout and median island on the other side of the intersection.

The movement is illustrated in **Figure 3.7** to **Figure 3.11.**

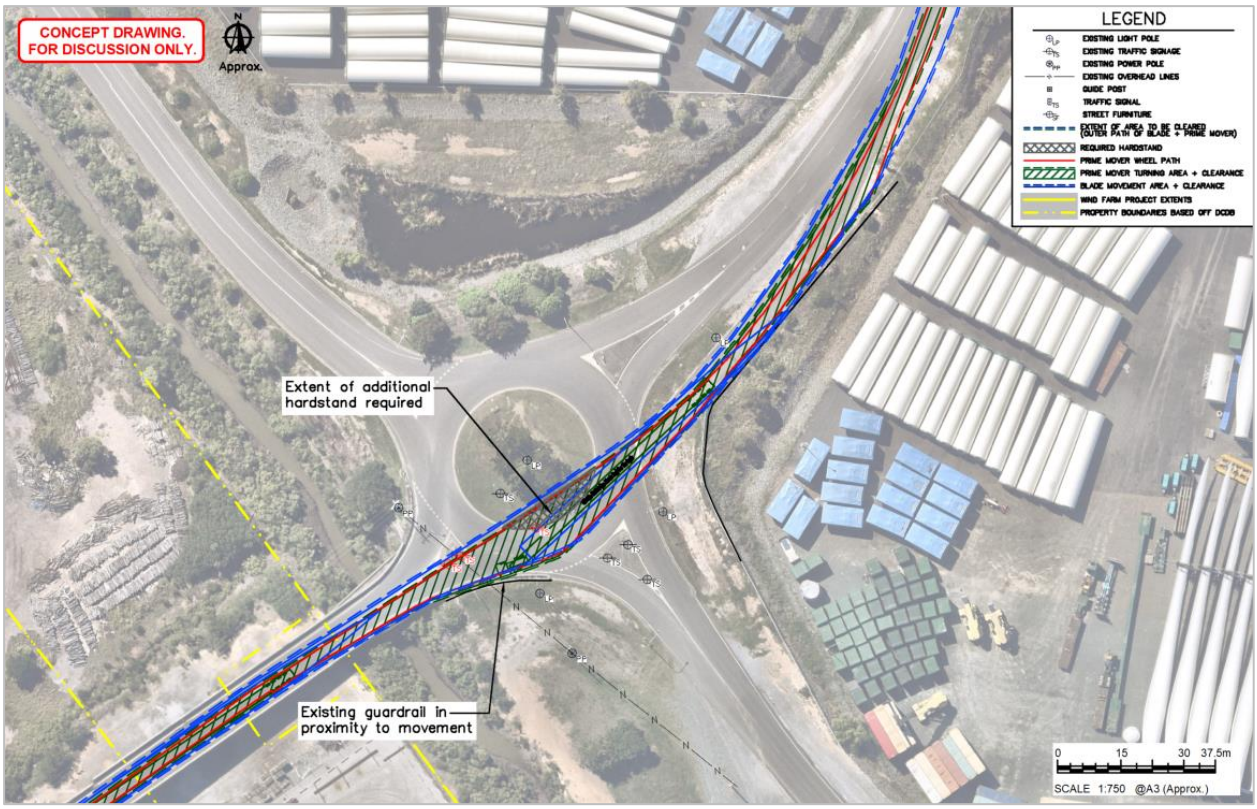


Figure 3.7 PTR Movement ID2 – Overall

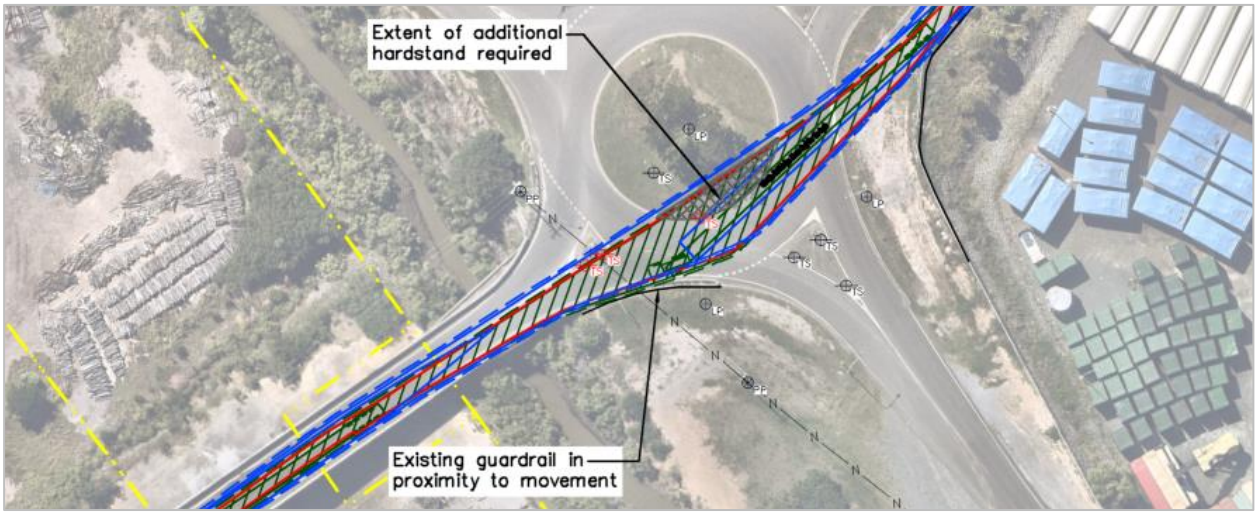


Figure 3.8 PTR Movement ID2 – Key Considerations

Figure 3.9 Street view facing Gladstone Port Access Road

Figure 3.10 Street view facing Gladstone Port Access Road

Figure 3.11 Street view facing Mark Fenton Drive

3.2.3 PTR1 Movement ID3

Location: Intersection of Gladstone Port Access Road, Hanson Road, Glenlyon Street and Railway Street.
Movement: Load moves along Port Access Road and turns right at the intersection of Port Access Road and Hanson Road.
Comments: Port Access Road has both horizontal and vertical geometric elements to consider with limited width also a constraint. The underpass of Goondoon Street is signed at 5.2m height clearance and the vertical geometry (sag curve) further reduces the clearance at this point. Sections of the wind turbine assembly will require an alternative route. The right turn through the intersection requires the use of the south bound lane for the blade to pass between the traffic signals control box and the traffic signal pedestal.

Traffic signs are required to be removed as highlighted in red in **Figure 3.15** and **Figure 3.16.** The items in yellow are highlighted for caution which include the traffic signals and the traffic signals box.

The movement is illustrated in **Figure 3.12** to **Figure 3.16**

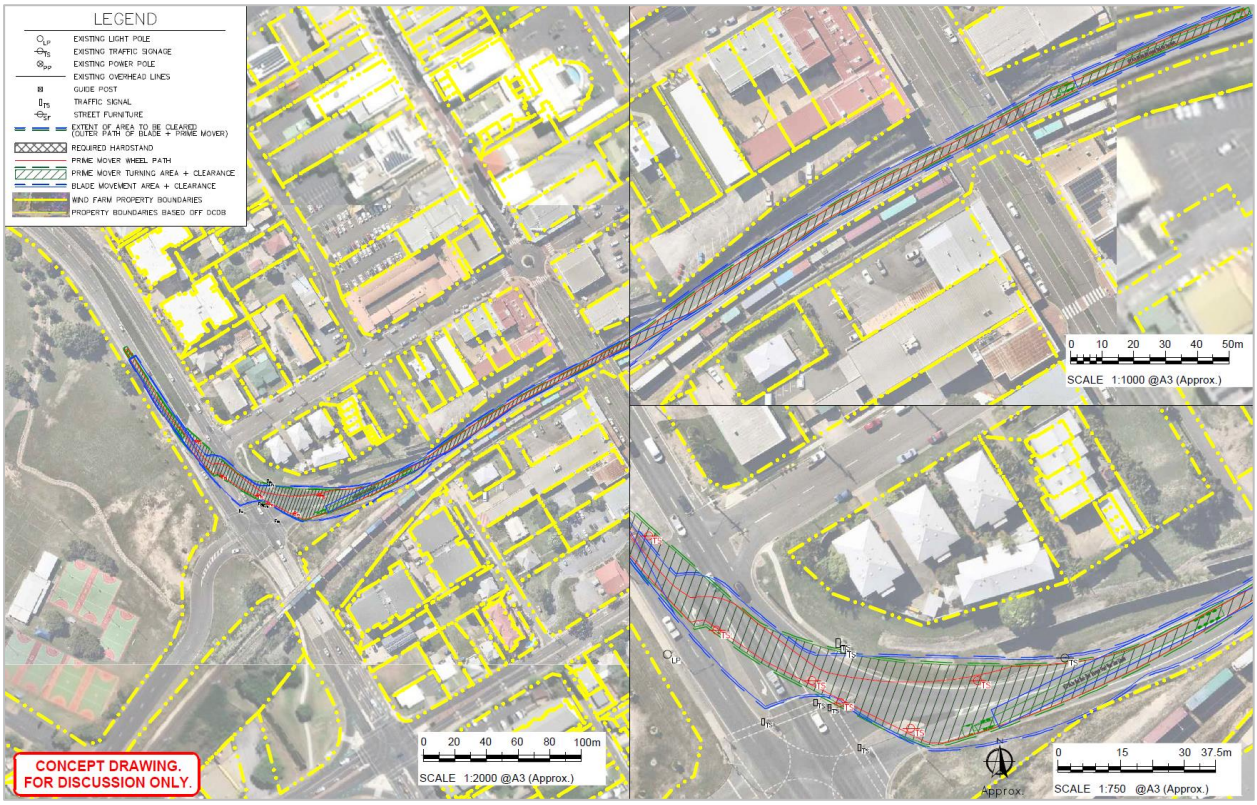


Figure 3.12 PTR Movement ID3 - Overall

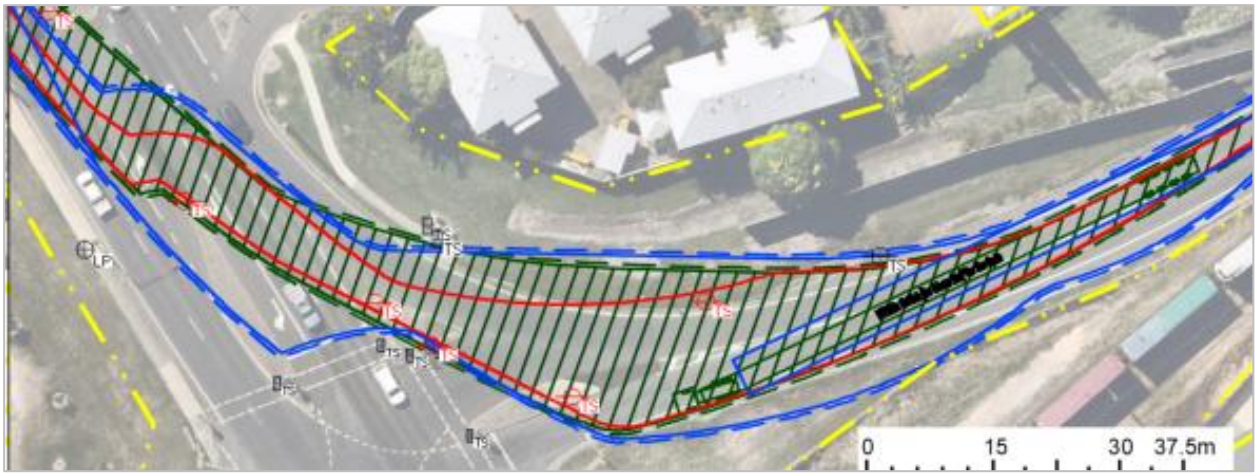


Figure 3.13 PTR Movement ID3 – Key Considerations

Figure 3.14 Street view of Gladstone Port Access Road underpass of Goondoon Street heading west

Figure 3.15 Street view of Gladstone Port Access Road and Hanson Road intersection facing west

Figure 3.16 Street view of Gladstone Port Access Road and Hanson Road intersection facing south-east

3.2.4 PTR1 Movement ID4

Location: Roundabout at the intersection of Hanson Road, Blain Drive and Alf O'Rourke Drive.
Movement: Navigate bridge on approach, and travel straight through roundabout.
Comments: While works have been completed the facilitate movements of the CCWF WTB, the additional length of the proposed Project WTB require the movement to head straight through the roundabout which swings the overhang of the blade over the guard rail on the northern side of the eastern approach. Hardstand will be required on the roundabout to carry the wheel path of the moment. However, this option may limit street the amount of furniture to be taken down during movements to just signage.

The movement is illustrated in **Figure 3.17** to **Figure 3.21.**

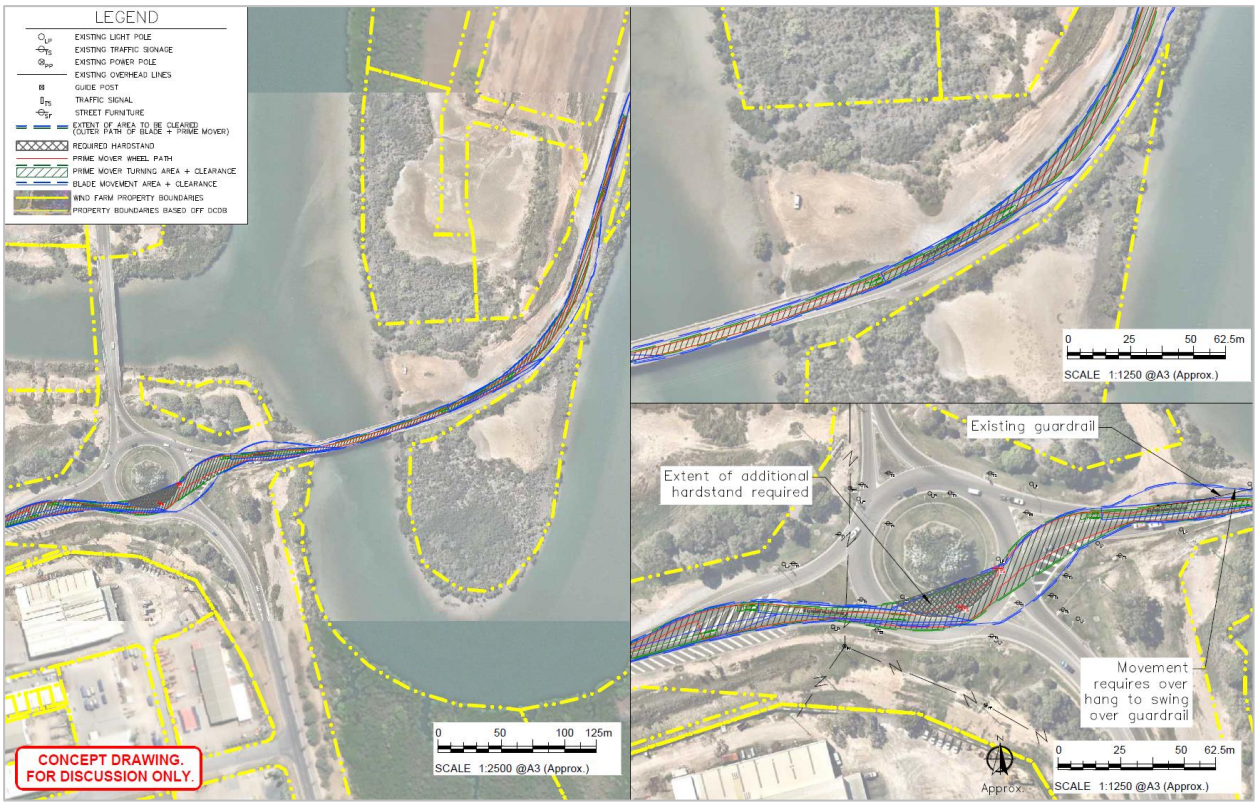


Figure 3.17 PTR Movement ID4 – Overall

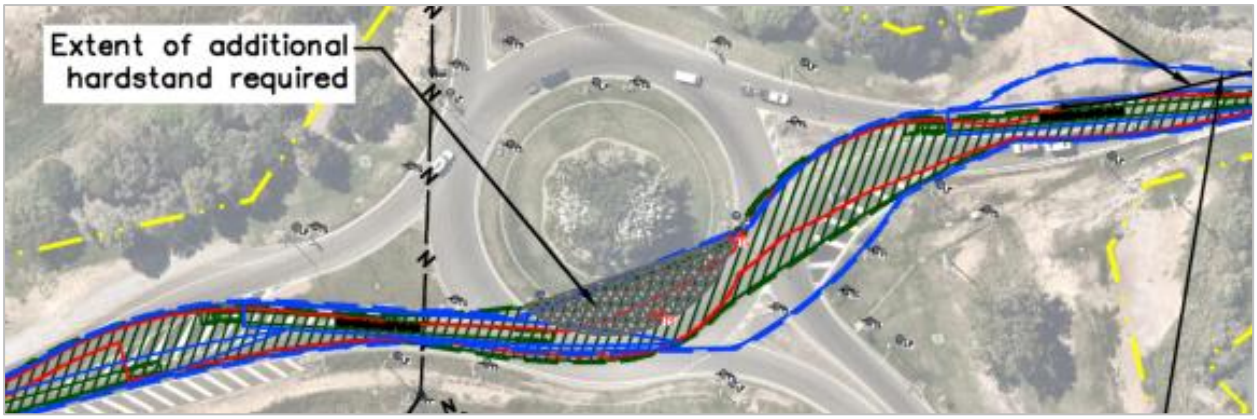


Figure 3.18 PTR Movement ID4 – Key Consideration

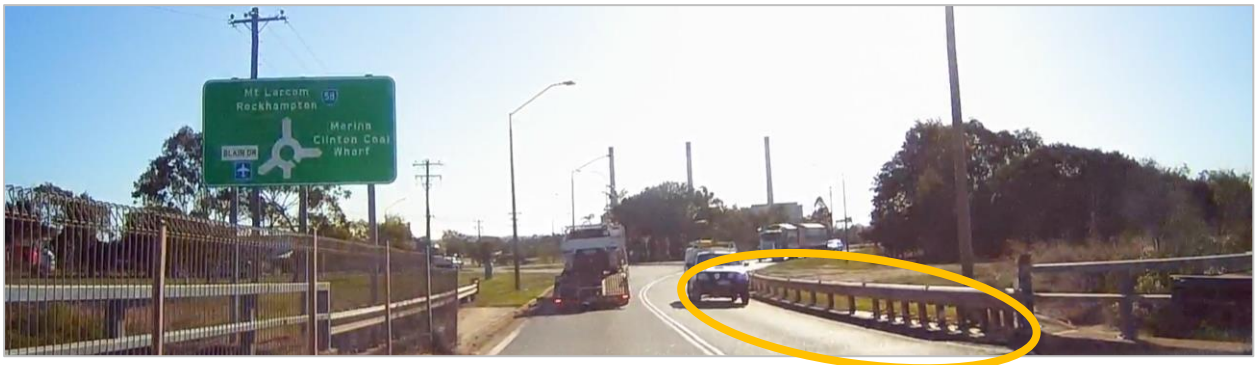


Figure 3.19 Street view of intersection of Hanson Road and Blain Drive facing west

Figure 3.20 Street view of intersection of Hanson Road and Blain Drive facing west

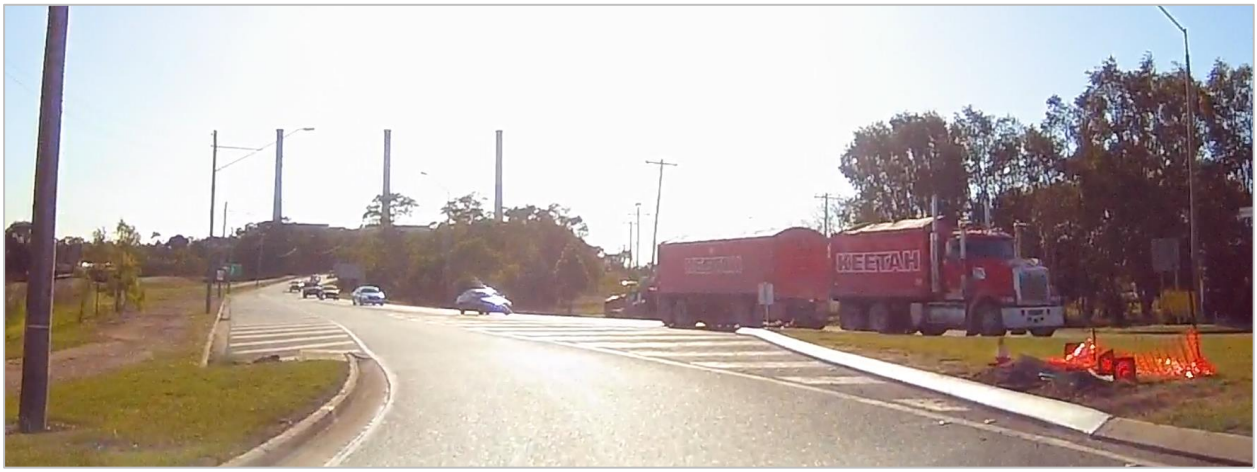


Figure 3.21 Street view of intersection of Hanson Road and Blain Drive facing west

3.2.5 PTR1 Movement ID5

Location: Roundabout at the intersection of Hanson Road and Red Rover Road.
Movement: Travel straight through roundabout and navigate adjacent bridges
Comments: The movement travels across the circulation island to miss the power pole on the left-hand side on approach. Signage on the median islands on either side of the roundabout and additional kerb will be required to be trimmed on the western side of the roundabout for this movement. This path appears able to clear of the guard rails on either side of the roundabout.

The movement is illustrated in **Figure 3.22** to **Figure 3.25.**

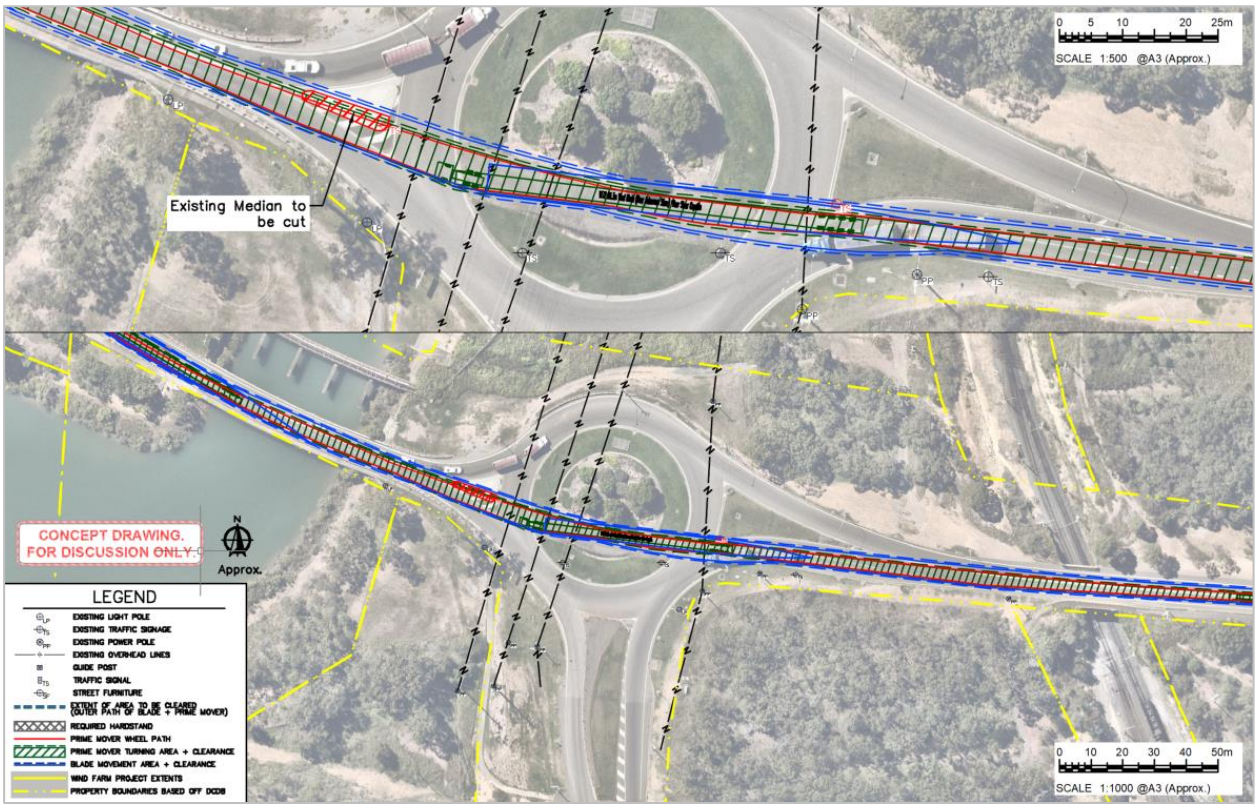


Figure 3.22 PTR Movement ID5 – Overall

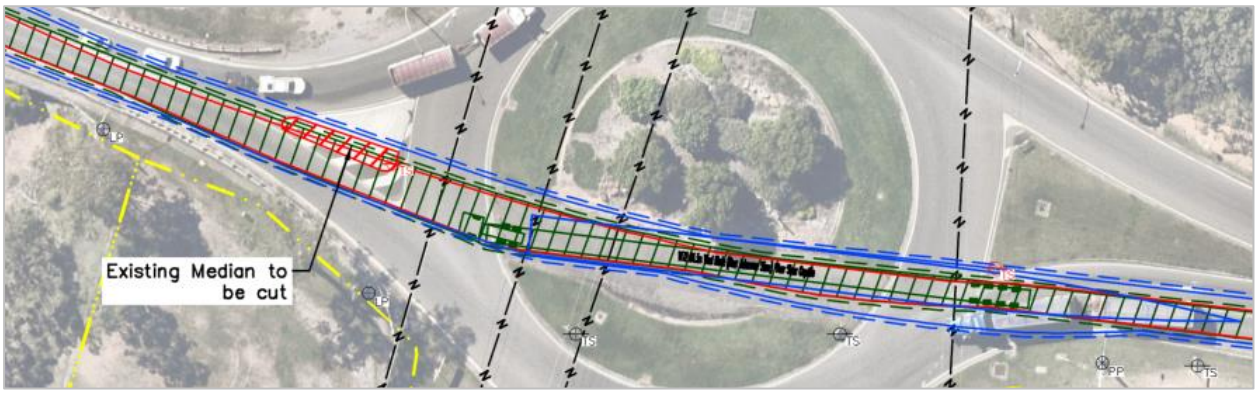


Figure 3.23 PTR Movement ID5 – Key Consideration

Figure 3.24 Street view of Hanson Road and Red Rover Road roundabout facing west

Figure 3.25 Street view of Hanson Road and Red Rover Road roundabout facing east

3.2.6 PTR1 Movement ID6

Location: Roundabout at the intersection of Hanson Road and Gladstone Mount Larcom Road.
Movement: Travel around the roundabout using the newly constructed bypass.
Comments: A bypass has been constructed to remove the necessity of passing through the roundabout centre island. This will make the path through much straighter and less street furniture will require removal to conduct this movement. No changes appear to be required to complete this movement.

The movement is illustrated in **Figure 3.26** to **Figure 3.29.**

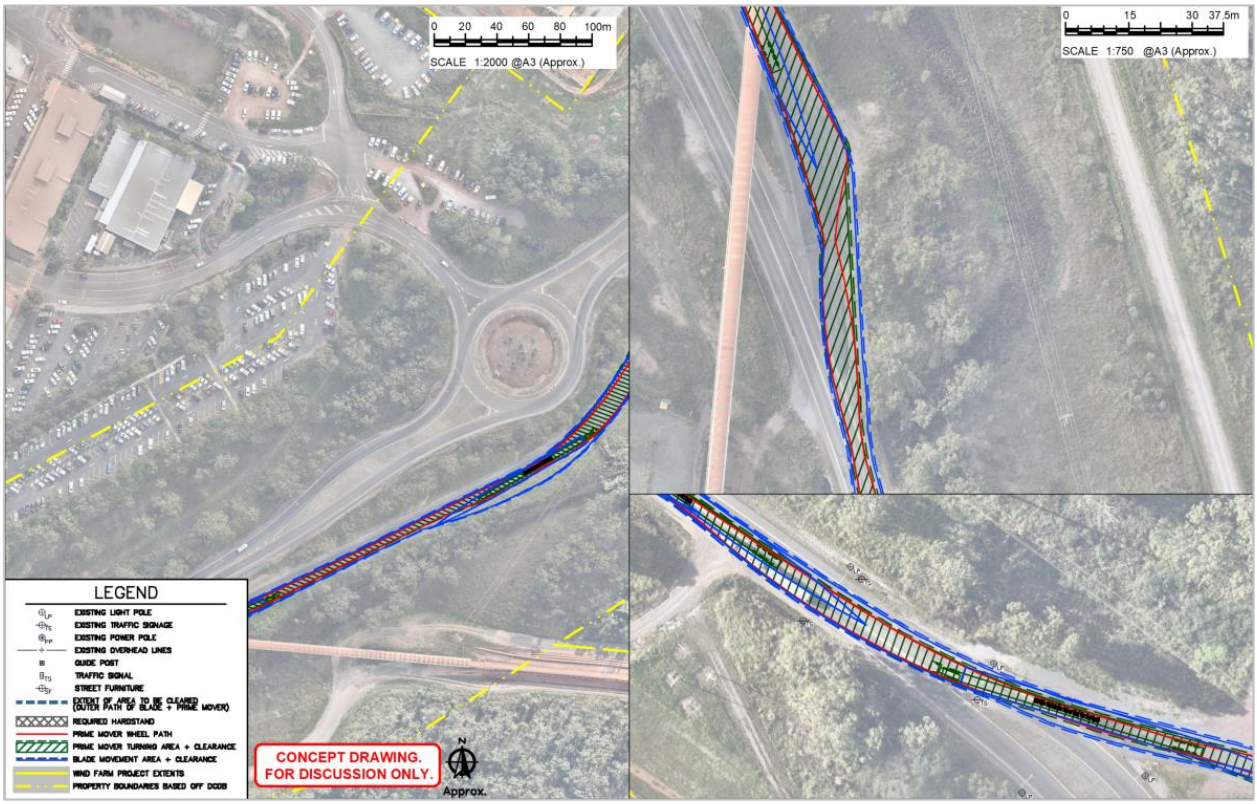


Figure 3.26 PTR Movement ID6 – Overall

Figure 3.27 PTR Movement ID6 – Key Consideration

Figure 3.28 Street view of Hanson Road bypass access of roundabout facing south-east

Figure 3.29 Street view of Hanson Road bypass egress of roundabout facing west

3.2.7 PTR1 Movement ID7

Location: Intersection of Gladstone Mount Larcom Road and Bruce Highway.
Movement: Left turn from Gladstone Mount Larcom Road onto the Bruce Highway.
Comments: The intersection of Gladstone Mount Larcom Road and the Bruce Highway has been upgraded to allow movement of the Clarke Creek Wind Farm (CCWF). The tested WTB for the Project follows a similar path of driving over the median island and utilising the newly constructed break in the Bruce Highway median island. The movement appears constant with the existing CCWF movements. However, there is limited updated aerial imagery for this intersection and further assessment will be required as part of future stages.

The movement is illustrated in **Figure 3.30** to **Figure 3.33.**

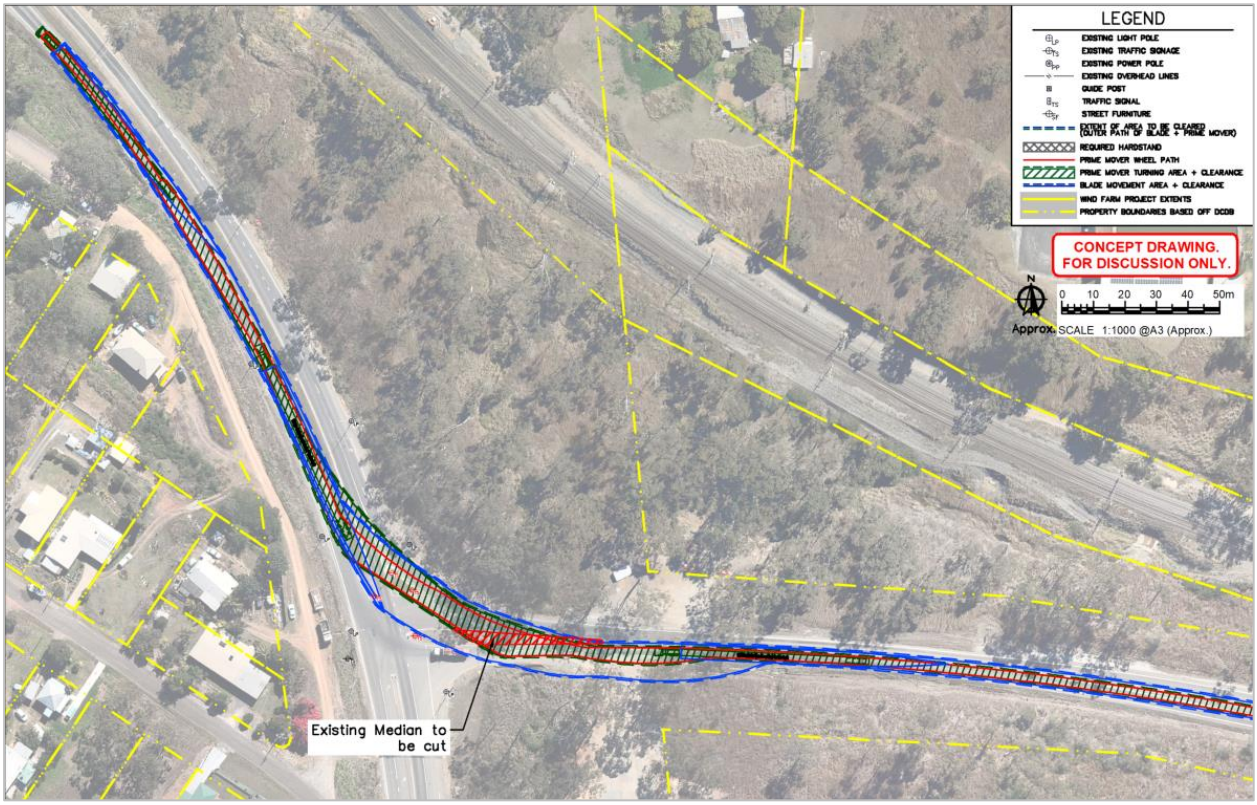


Figure 3.30 PTR Movement ID7 – Overall

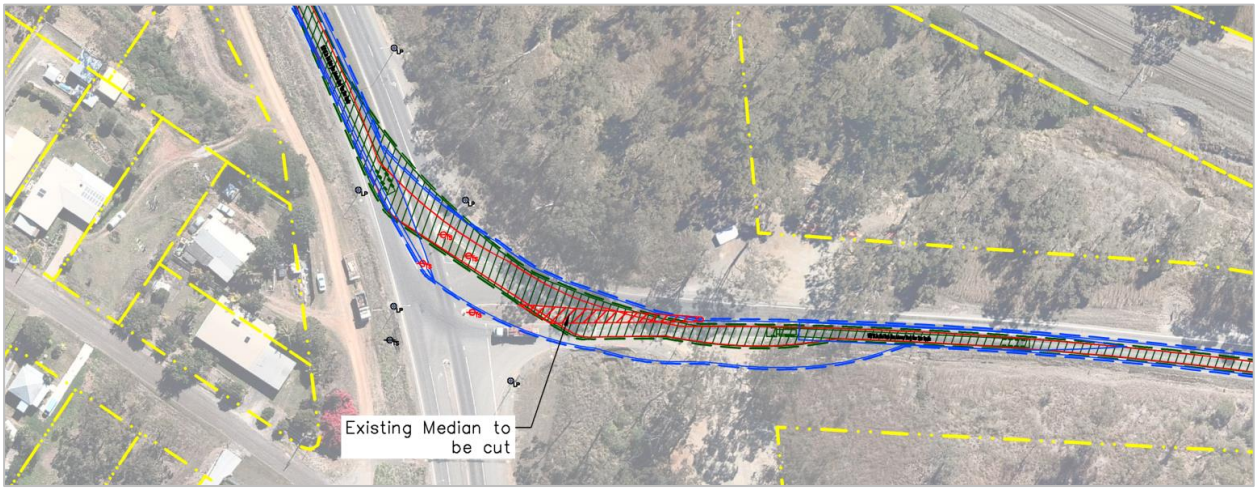


Figure 3.31 PTR Movement ID7 – Key Considerations

Figure 3.32 Street view of Gladstone Mount Larcom Road and Bruce Highway intersection facing south

Figure 3.33 Street view of Gladstone Mount Larcom Road and Bruce Highway intersection facing south

3.2.8 PTR1 Movement ID8

Location: Intersection of Bruce Highway and Capricorn Highway.
Movement: Left turn movement from the Bruce Highway onto the Capricorn Highway.
Comments: The movement requires two (2) streetlights and some street signage to be removed and the rear end to swing over the bollards located on the southern leg of the roundabout based on the swept path assessment to facilitate the movement.

The movement is illustrated in **Figure 3.34** to **Figure 3.35**

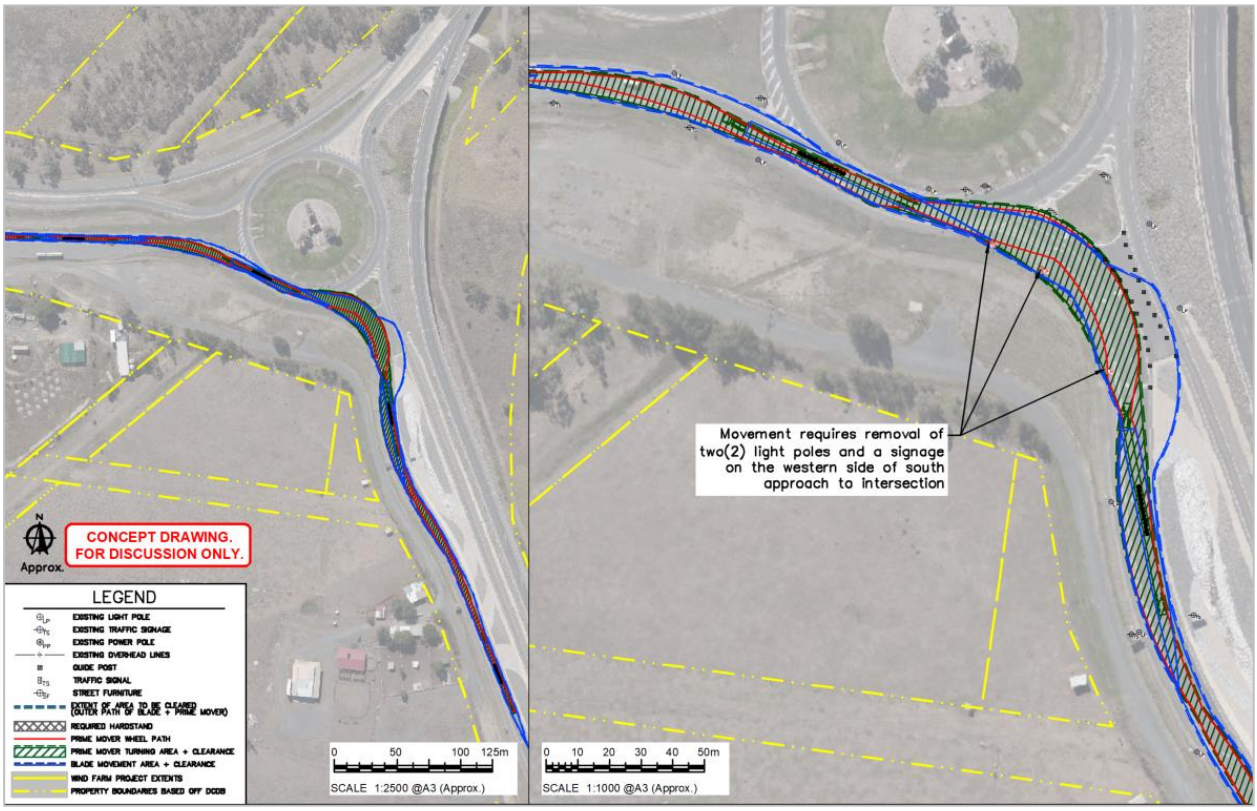


Figure 3.34 PTR Movement ID8 – Overall

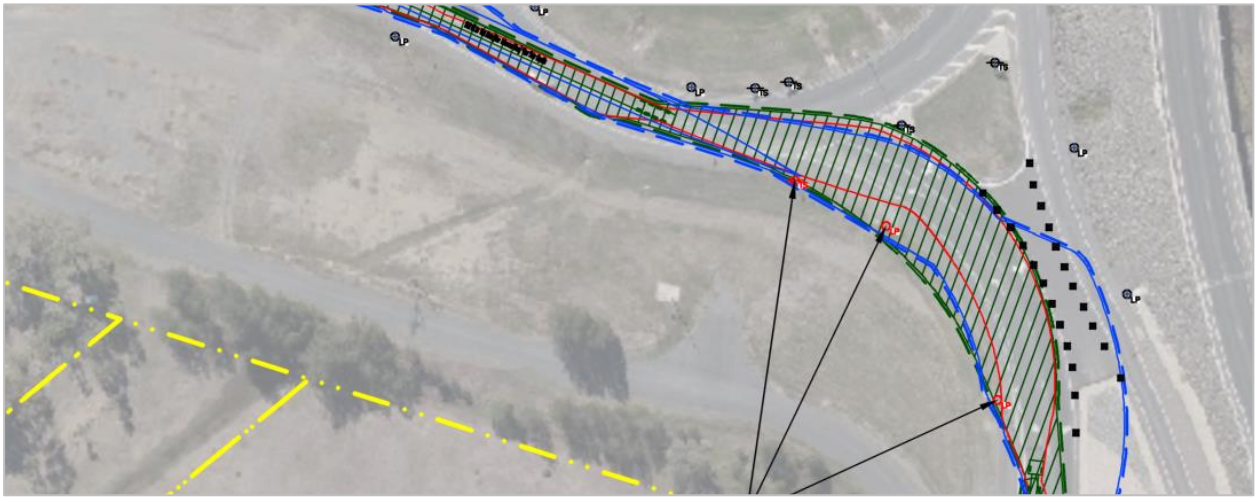


Figure 3.35 PTR Movement ID8 – Key Considerations

Figure 3.36 Street view of Bruce Highway and Street lights to be removed

Figure 3.37 Street view of Bruce Highway and Street sign to be removed

3.2.1 PTR1 Movement ID9a

Location: Intersection of Capricorn Highway and Leichhardt Highway.
Movement: Left turn movement from Capricorn Highway to Leichhardt Highway.
Comments: To facilitate this movement, hardstand will need to be added to the eastern side of Leichhardt Highway. In addition to this, one (1) sign, and the southern approach median island will need to be removed.

The movement is illustrated in **Figure 3.38** to **Figure 3.40**

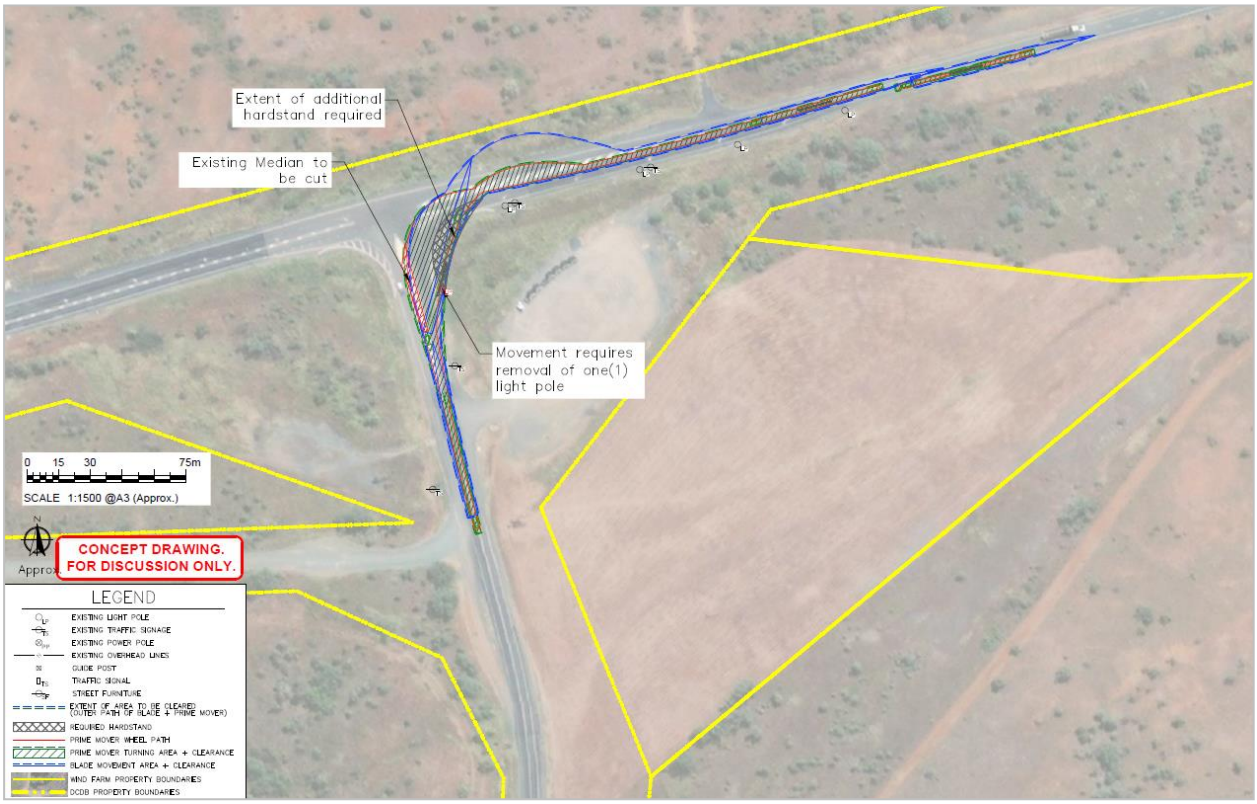


Figure 3.38 PTR Movement ID9a – Overall

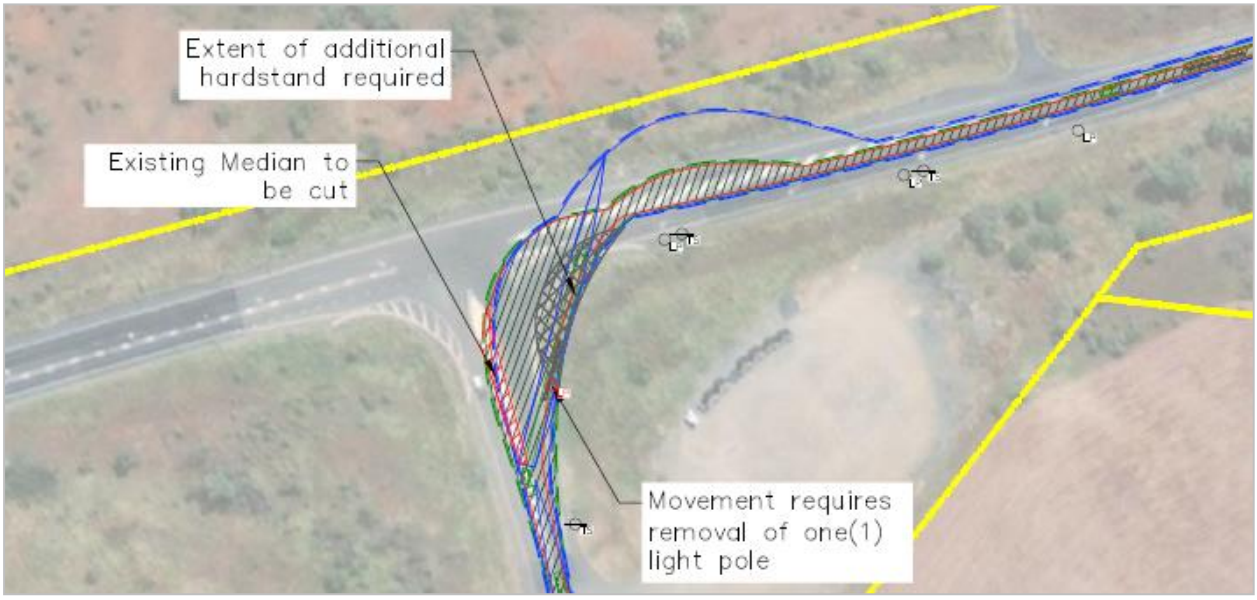


Figure 3.39 PTR Movement ID9a – Key Considerations

Figure 3.40 Street view of reviewed intersection and street sign and island to be removed

3.2.2 PTR1 Movement ID9b

Location: Intersection of Capricorn Highway and Leichhardt Highway.
Movement: Left turn movement from Capricorn Highway to Leichhardt Highway.
Comments: An alternative route can be taken through this intersection to that shown in movement 9a. This movement would instead use the existing truck stop area to minimize the angle travelled on. This however will require graded hardstand bridging the gully from Capricorn Highway, and the removal of up to two (2) light poles, and a sign.

The movement is illustrated in **Figure 3.41** to **Figure 3.44**

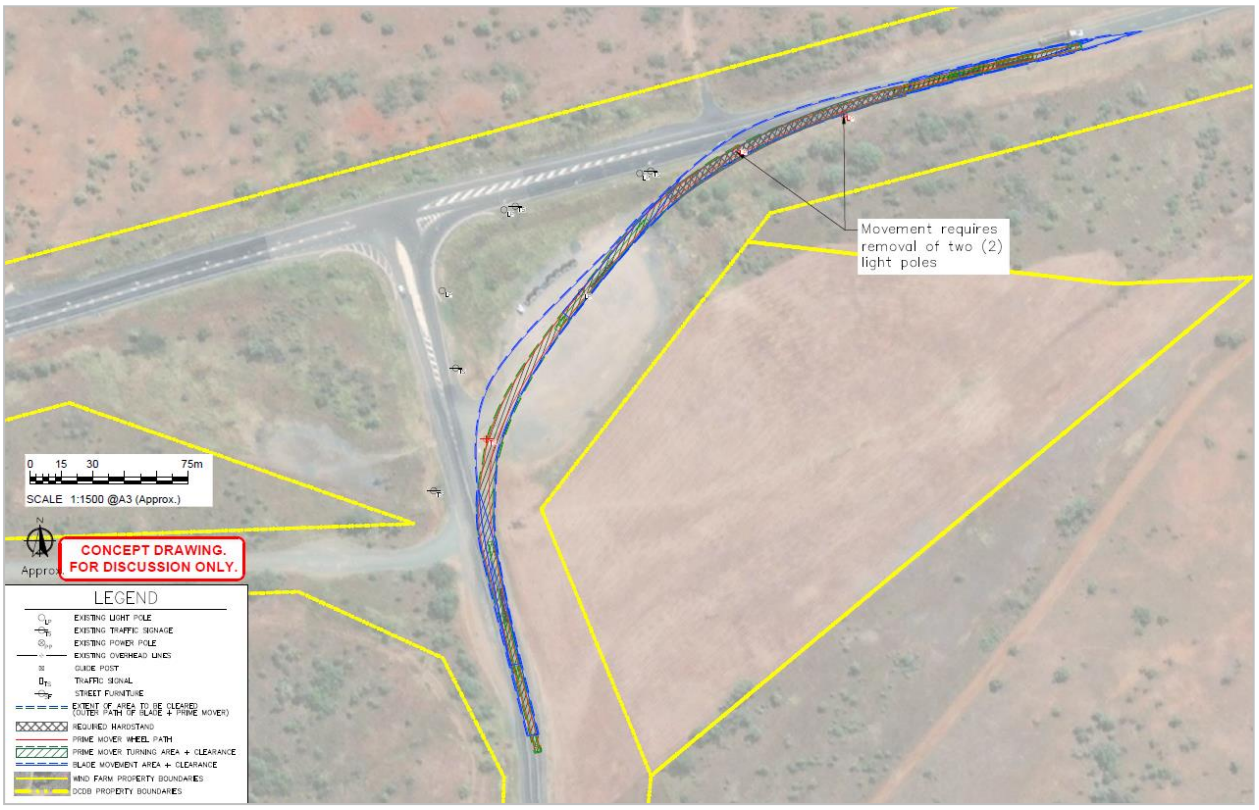


Figure 3.41 PTR Movement ID9b – Overall

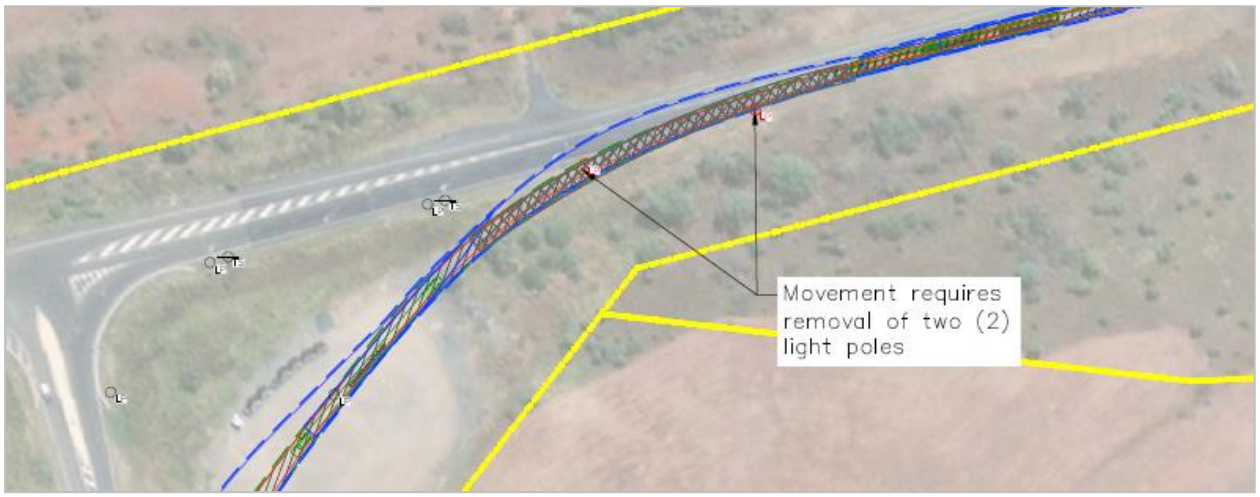


Figure 3.42 PTR Movement ID9b – Key Considerations

Figure 3.43 Street view of reviewed intersection facing west and light poles to be removed

Figure 3.44 Street view of Leichhardt Highway facing south and sign to be removed

3.2.3 PTR1 Movement ID10

Location: Leichhardt Highway through Dululu.
Movement: Right turn along Leichhardt Highway.
Comments: To facilitate this movement, three (3) signs and three (3) raised islands will need to be removed from the intersection.

The movement is illustrated in **Figure 3.45** to **Figure 3.48**

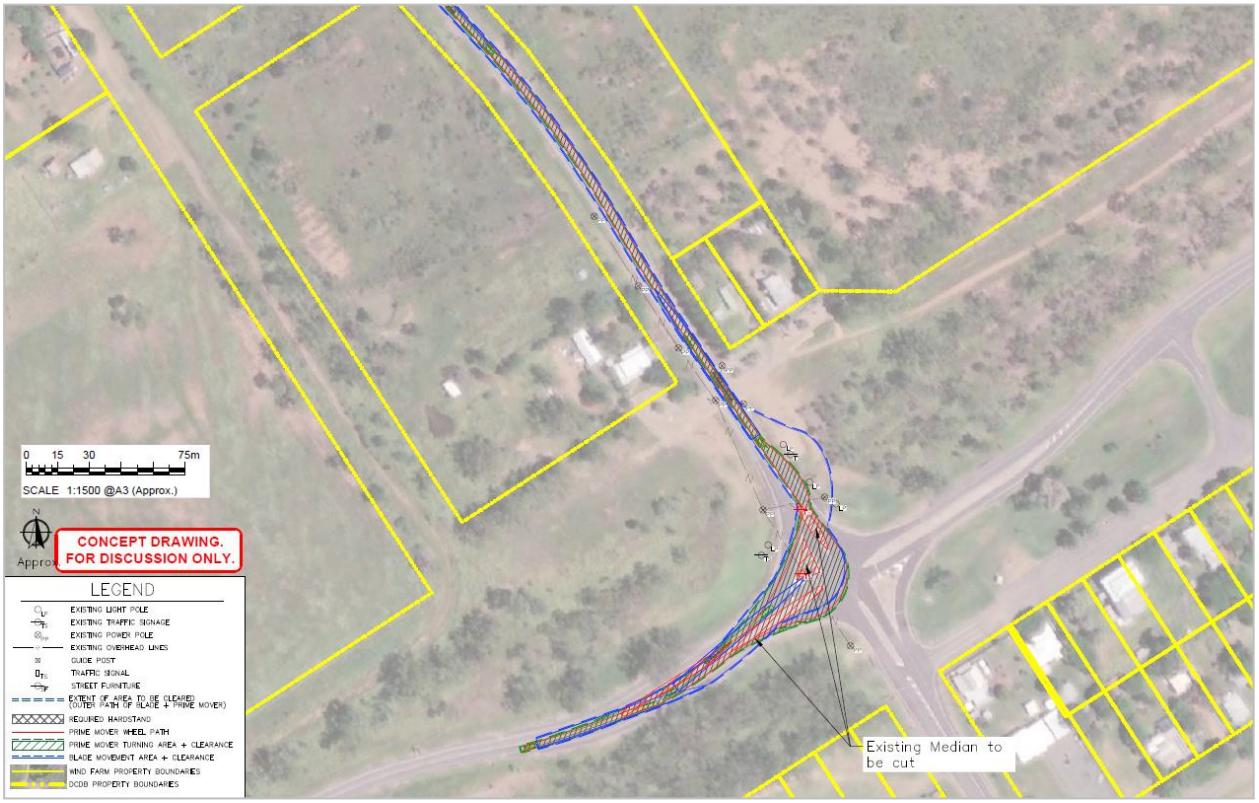


Figure 3.45 PTR Movement ID10 – Overall

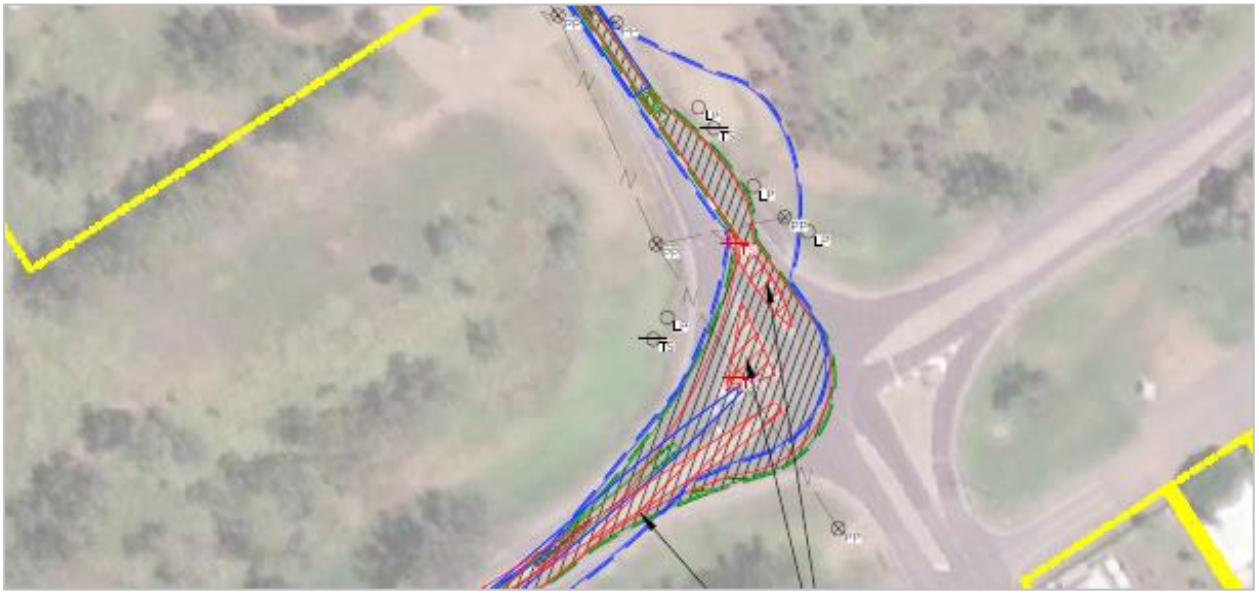


Figure 3.46 PTR Movement ID10 – Key Considerations

Figure 3.47 Street view of reviewed intersection facing south-east and sign/island to be removed

Figure 3.48 Street view of reviewed intersection facing south-west and island to be removed

3.2.4 PTR1 Movement ID11

Location: Leichhardt Highway through Banana.
Movement: Left turn along Leichhardt Highway.
Comments: To facilitate this movement, a total of three (3) signs will need to be removed and a section of the raised centre island on the southern approach will need to be cut. Hardstand will need to be added to the east of the intersection in order to facilitate swept paths.

The movement is illustrated in **Figure 3.49** to **Figure 3.52**

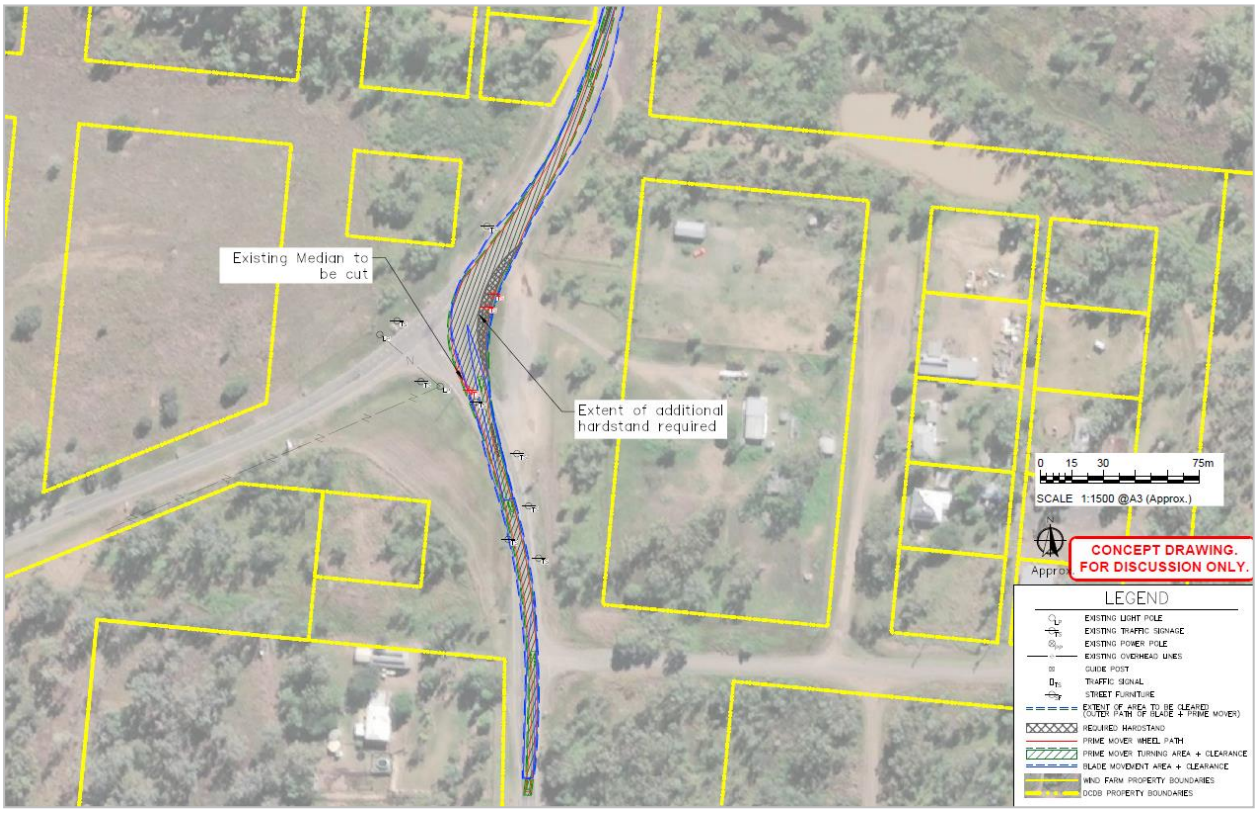


Figure 3.49 PTR Movement ID11 – Overall

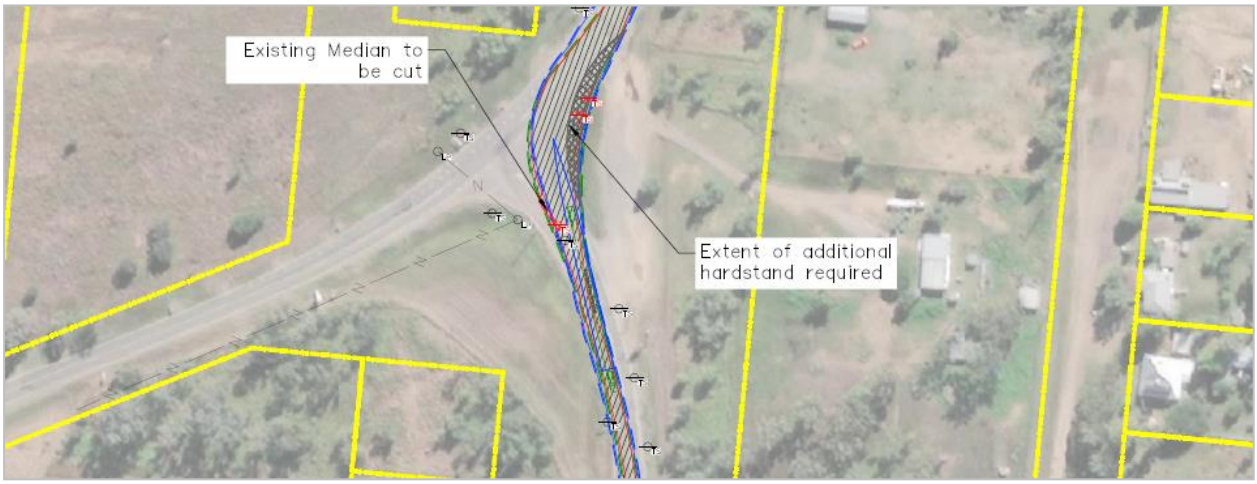


Figure 3.50 PTR Movement ID11 – Key Considerations

Figure 3.51 Street view of reviewed intersection facing south-west and signs to be removed

Figure 3.52 Street view of reviewed intersection facing south and impeding sign and island

3.2.5 PTR1 Movement ID12

Location: Intersection of Leichhardt Highway and Defence Road.
Movement: Left turn from Leichhardt Highway onto Defence Road.
Comments: This movement requires hardstand to be added to the north of the entry to Defence Road. One sign may require re-location as shown in **Figure 3.56**.

The movement is illustrated in **Figure 3.53** to **Figure 3.56**

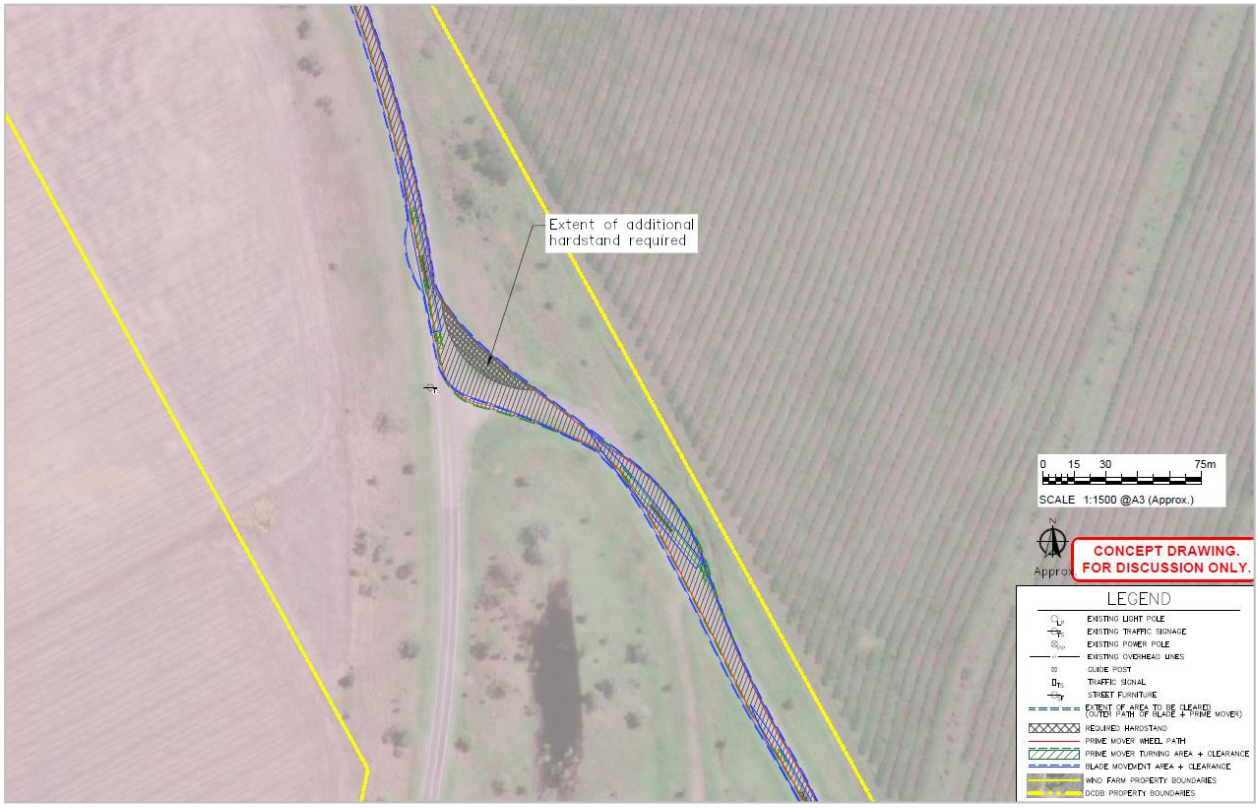


Figure 3.53 PTR Movement ID12 – Overall

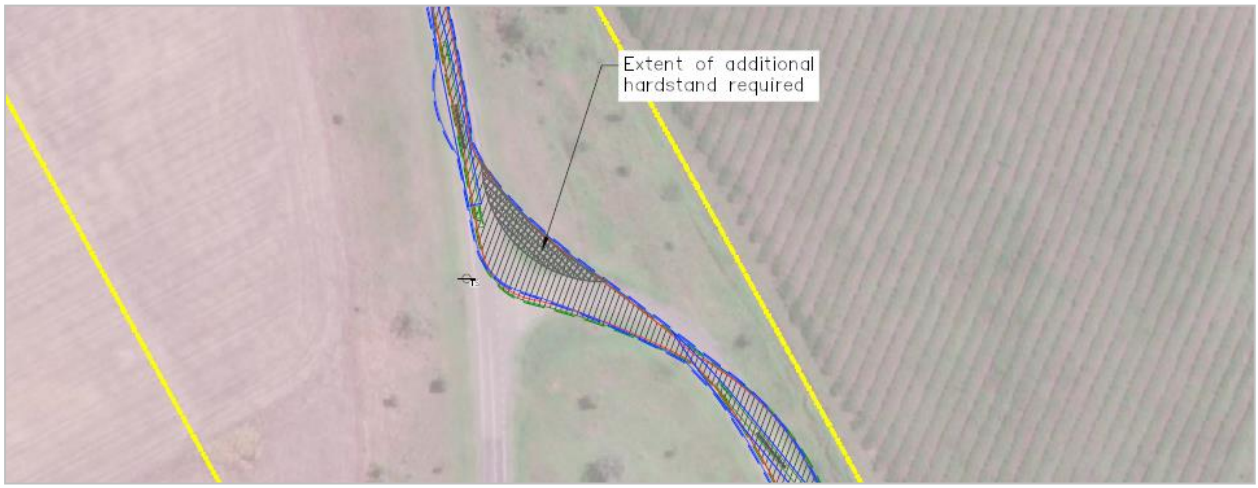


Figure 3.54 PTR Movement ID12 – Key Considerations

Figure 3.55 Street view of Leichhardt Highway and Defence Road intersection facing south

Figure 3.56 Street view of Leichhardt Highway and Defence Road intersection facing north

4.0 Project Transport Route 2

4.1 Turning Movement Summary

A swept path assessment was conducted on the following intersections and interchanges along where the roadway alignment appears to restrict the movement of the proposed wind turbine blade along the Project Transport Route 2 (PTR2). These locations include:

- Intersections where a change in direction is required to be undertaken;
- Interchanges between major motorways;
- Segments of the road with shorter horizontal radius curves; and
- Segments of the road where road islands, streetlights, traffic signals or other major street furniture may significantly impact the movement of the wind turbine blade on the transport vehicle.

The locations identified in **Table 4.1** note key intersections and interchanges where further investigation has been conducted.

Table 4.1 Intersection and Interchanges along PTR2

ID	Description	Road 1	Road 2	Long.	Lat.	Required Works
1	Right turn into side road	MacFarlane Road	Hopper Road	151.265°	-23.835°	**Recommend** relocate nearby power pole and/or light post on either side of added hardstand.
2	Straight through roundabout	Hopper Road	Gladstone Port Access Road	151.265°	-23.842°	Hardstand to be constructed on south-east side of the roundabout and signage and median island to be removed on south-west approach to roundabout.
3	Bridge underpass and right turn into side road	Gladstone Port Access Road	Hanson Road	151.256°	-23.845°	Additional kerb to be trimmed along Gladstone Port Access Road. Hardstand to be added on the northern side of the intersection. Removal/relocation of seven (7) signs.
4	Bridge and straight through roundabout	Hanson Road		151.231°	-23.850°	Hardstand to be added to southern side of roundabout island. Three (3) signs to be removed/relocated from centre and south-west approach splitter islands.
5	Straight through roundabout	Hanson Road		151.225°	-23.850°	Two (2) signs to be removed/relocated from east and west approach splitter islands.
6	Straight through roundabout	Hanson Road	Gladstone Mount Larcom Road	151.156°	-23.823°	No additional works required.

ID	Description	Road 1	Road 2	Long.	Lat.	Required Works
7	Left turn onto Bruce Hwy	Gladstone Mount Larcom Road	Bruce Hwy	150.982°	-23.813°	Median island to be trimmed back and removal/relocation of one (1) light pole.
8	Off ramp from Bruce Hwy and right turn onto Dawson Hwy	Bruce Hwy	Dawson Hwy	150.497°	-23.415°	Median Island to be trimmed and removal/relocation of one (1) light pole.
9	Straight through Kev Colett Bridge at Calliope	Dawson Hwy		151.203°	-24.005°	No additional works required.
10	Roundabout at Dawson Hwy at Biloela			150.526°	-24.387°	Hardstand to be added on the southeast side before the roundabout and central island to be modified. Removal of one (1) light pole
11	Through from Dawson Hwy to Burnett Hwy	Dawson Hwy	Burnett Hwy	150.514°	-24.403°	Median island to be modified.
12	Dawson Hwy at Banana	Dawson Hwy		150.128°	-24.471°	Median island to be modified.
13	Leichhardt Hwy movement in Banana	Leichhardt Hwy		150.127°	-24.478°	Hardstand to be added at the corner. Median to be modified and relocation of three (3) signs.
14	Left turn from Leichhardt Hwy onto Defence Road	Defence Road		150.169°	-24.831°	Hardstand to be added at the corner.

The key intersections and interchanges are shown in **Figure 4.1** to **Figure 4.2** and correspond to the ID numbers in **Table 4.1**.

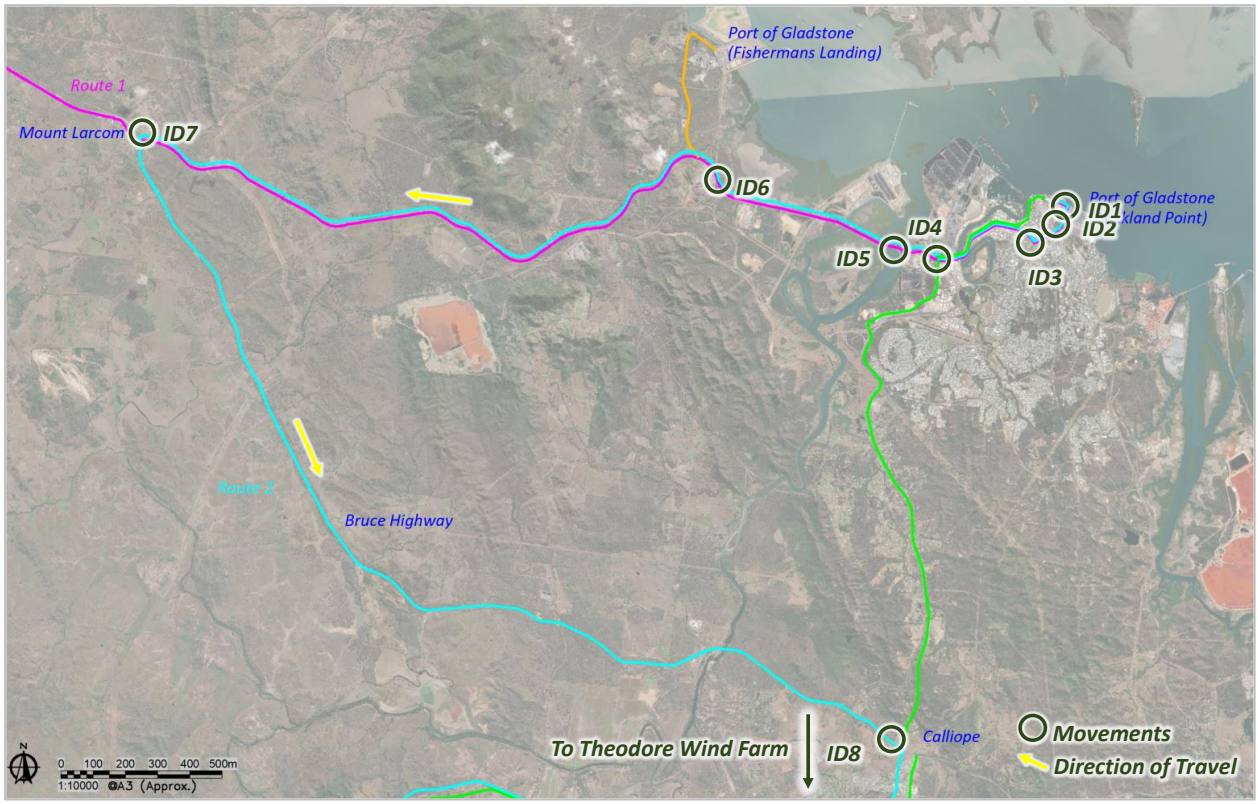


Figure 4.1 Port of Gladstone to Calliope

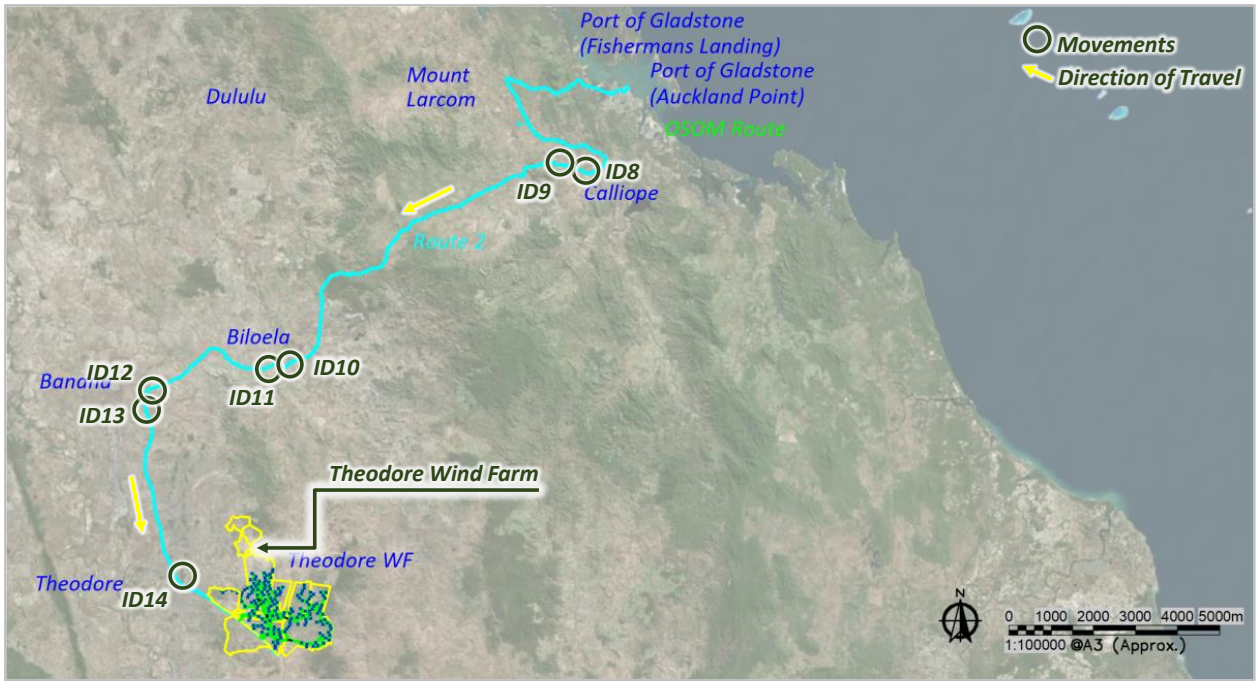


Figure 4.2 Calliope to Theodore

4.2 Project Transport Route 2 (PTR2) Movement summary

The following section of the report discusses the movement at each of the key intersections, interchanges and relevant movements along PTR2. PTR2 diverges from the primary Project Transport Route (PTR), with movement ID1 through ID6 highlighted in **Section 3.0** common to both routes. The PTR1 and PTR2 then rejoin at the intersection of Dawson Highway and Leichhardt Highway with the last two (2) movements common to both routes, as shown in ID 11 and 12 in **Section 3.0**.

A swept path assessment for each of the key movements has been conducted and the results are provided in **Appendix D.**

4.2.1 PTR2 Movement ID7

Location: Intersection of Gladstone Mount Larcom Road and Bruce Highway.
Movement: Left turn from Gladstone Mount Larcom Road on Bruce Highway.
Comments: To facilitate this movement, the raised central island on both the southern and eastern approaches to the intersection will need to be removed, with the associated signage. One (1) light post will also need to be removed from the south-east corner of the intersection to facilitate movement.

The movement is illustrated in **Figure 4.3** to **Figure 4.5.**

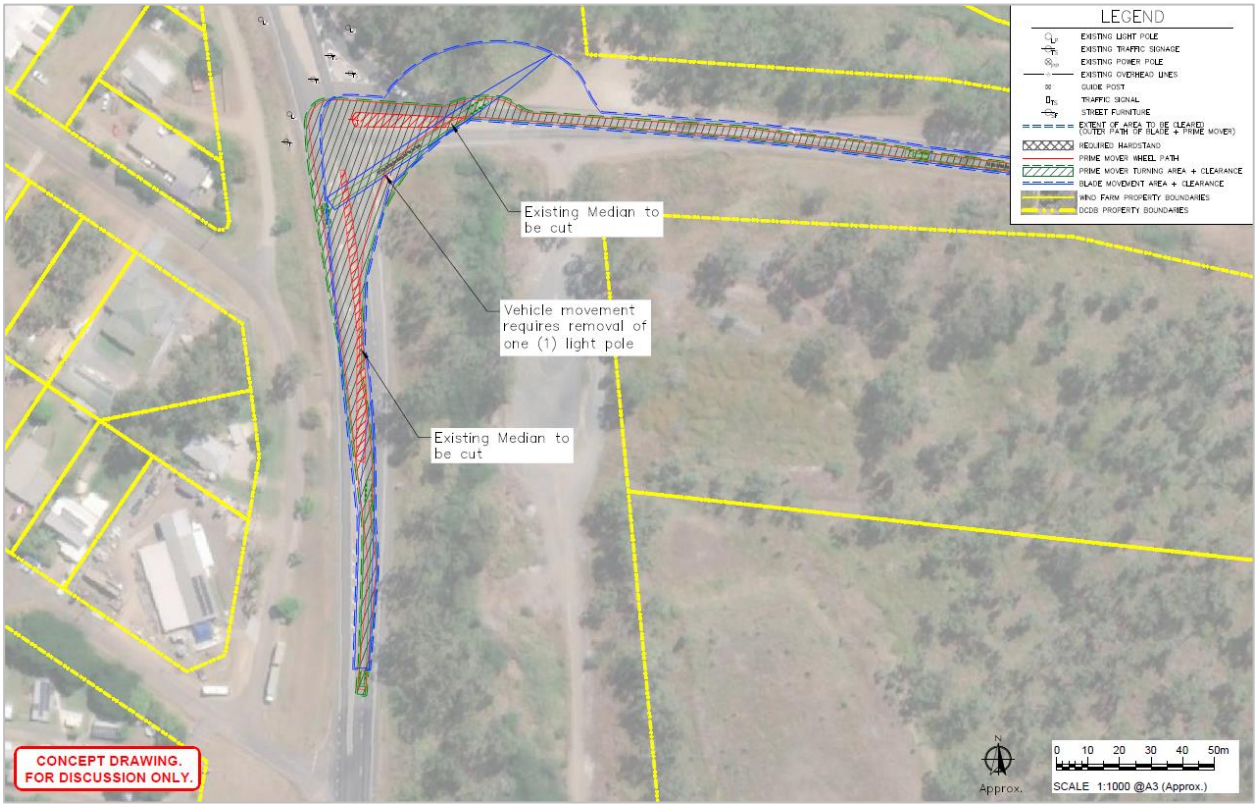


Figure 4.3 PTR2 Movement ID7 – Overall

Figure 4.4 Street View of centre island to be removed from southern approach to intersection

Figure 4.5 Street View from southern approach of centre island, light post and sign to be removed

4.2.2 PTR2 Movement ID8

Location: Intersection of Bruce Highway and Dawson Highway.
Movement: Right turn from Bruce Highway onto Dawson Highway using Dawson Highway exit lane opposing traffic.
Comments: To facilitate this movement, a section of the central island shown in **Figure 4.6** will need to be removed to allow the WTB to cross to the southbound lane. One (1) light post will also need to be removed from this section. Trimming of the raised corner east of the exit lane may also be required. During movements, traffic control will be required to allow safe crossing of the blades through the exit and across the northbound lane of Dawson Highway.

The movement is illustrated in **Figure 4.6** to **Figure 4.8.**

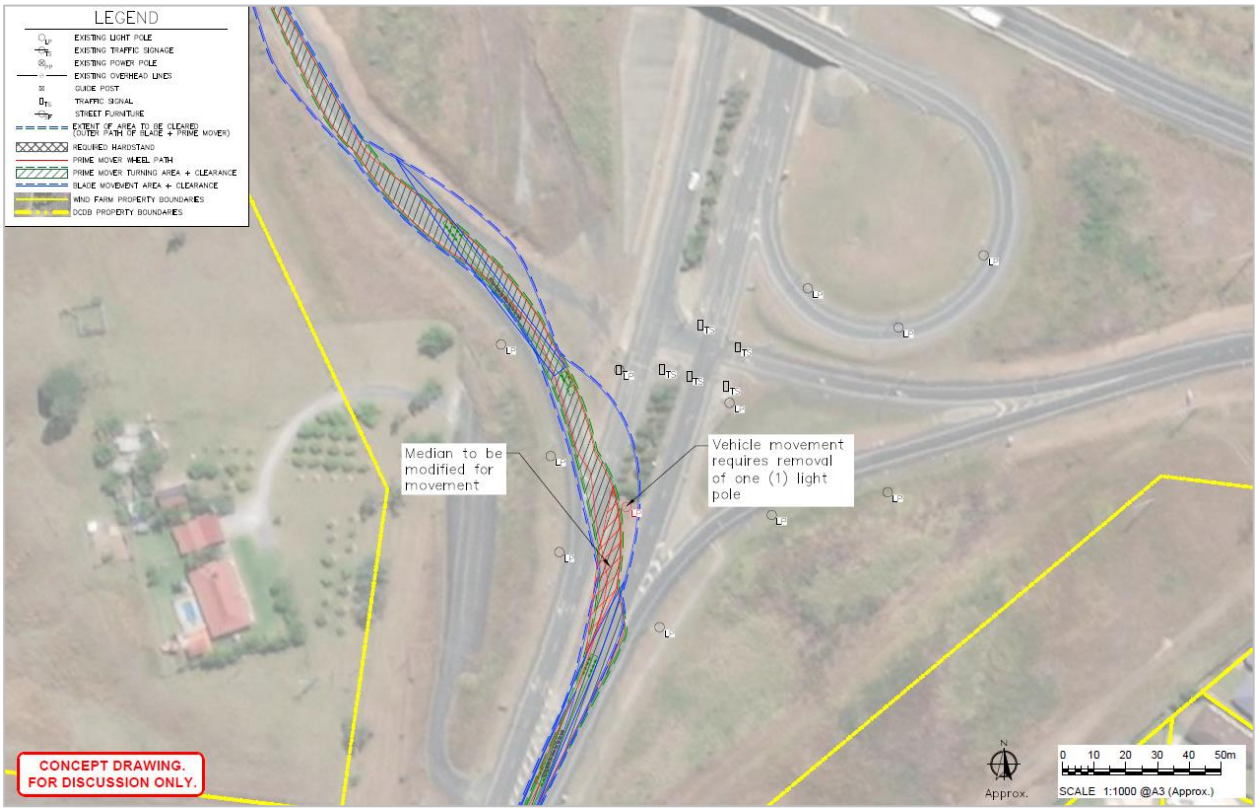


Figure 4.6 PTR2 Movement ID8 – Overall

Figure 4.7 Street View from south of the intersection and light post to be removed

Figure 4.8 Street View of Dawson Highway exit towards Bruce Highway

4.2.3 PTR2 Movement ID9

Location: Dawson Highway through Calliope.
Movement: Crossing Kev Collett Bridge through Dawson Highway.
Comments: While no alterations appear to be required to facilitate this movement, caution should be taken due to the narrow section of road. Both lanes will be required to accommodate this movement.

The movement is illustrated in **Figure 4.9** to **Figure 4.10.**

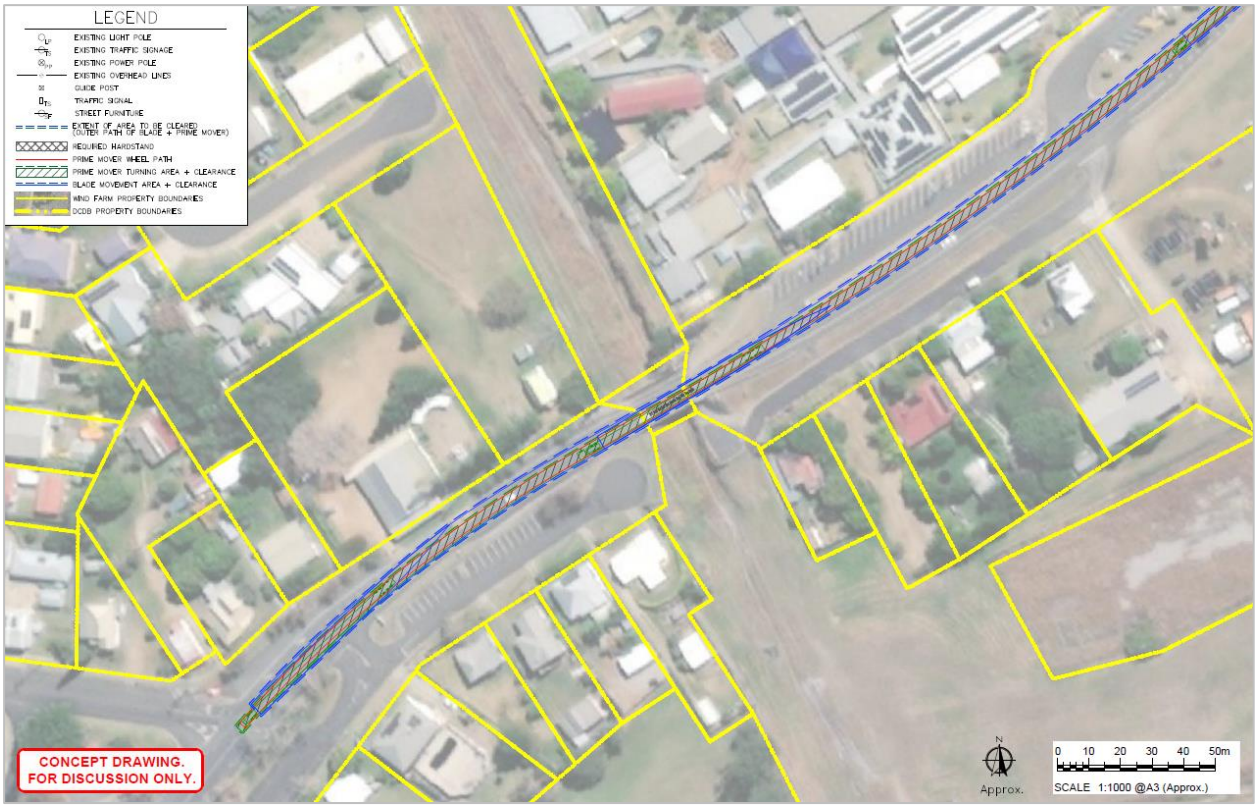


Figure 4.9 PTR2 Movement ID9 – Overall

Figure 4.10 Street view of Kev Collett bridge from the north-east approach

4.2.4 PTR2 Movement ID10

Location: Intersection of Dawson Highway and Vally View Drive.
Movement: Through roundabout along Dawson Highway.
Comments: To facilitate this movement, hardstand will need to be incorporated on the eastern side of the north-east approach, with one (1) light post to be removed from this area. The central island of the roundabout will need to be modified to accommodate the through movement.

The movement is illustrated in **Figure 4.11** to **Figure 4.13.**

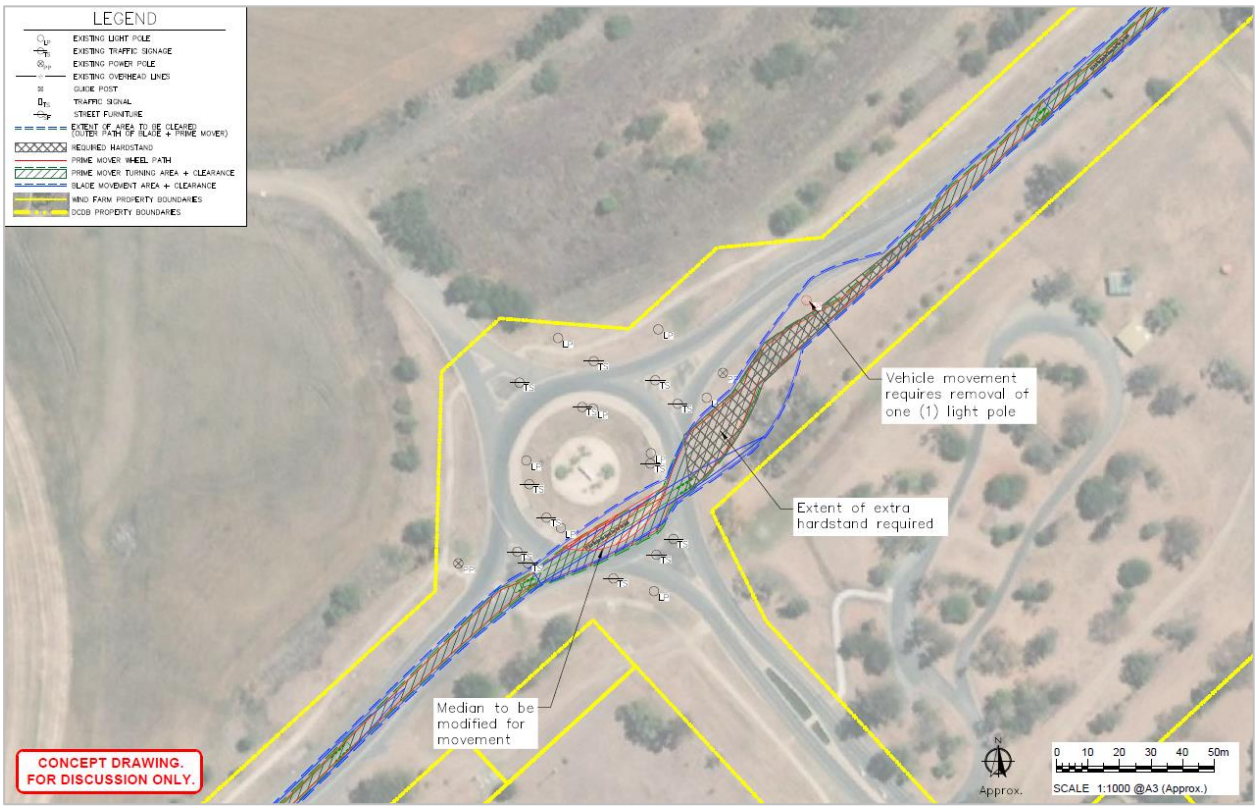


Figure 4.11 PTR2 Movement ID10 – Overall

Figure 4.12 Street view of north-east approach to intersection and light post to be removed

Figure 4.13 Street View from south-west of intersection showing central island to be modified

4.2.5 PTR2 Movement ID11

Location: Intersection of Dawson Highway and Burnett Highway.
Movement: Through intersection along Dawson Highway.
Comments: To facilitate this movement, the centre median island on the south-western approach will need to be modified. On the north-eastern approach, there is a low hanging signal in the direction of travel that should be further reviewed for height clearance.

The movement is illustrated in **Figure 4.14** to **Figure 4.16.**

Figure 4.14 PTR2 Movement ID11 – Overall

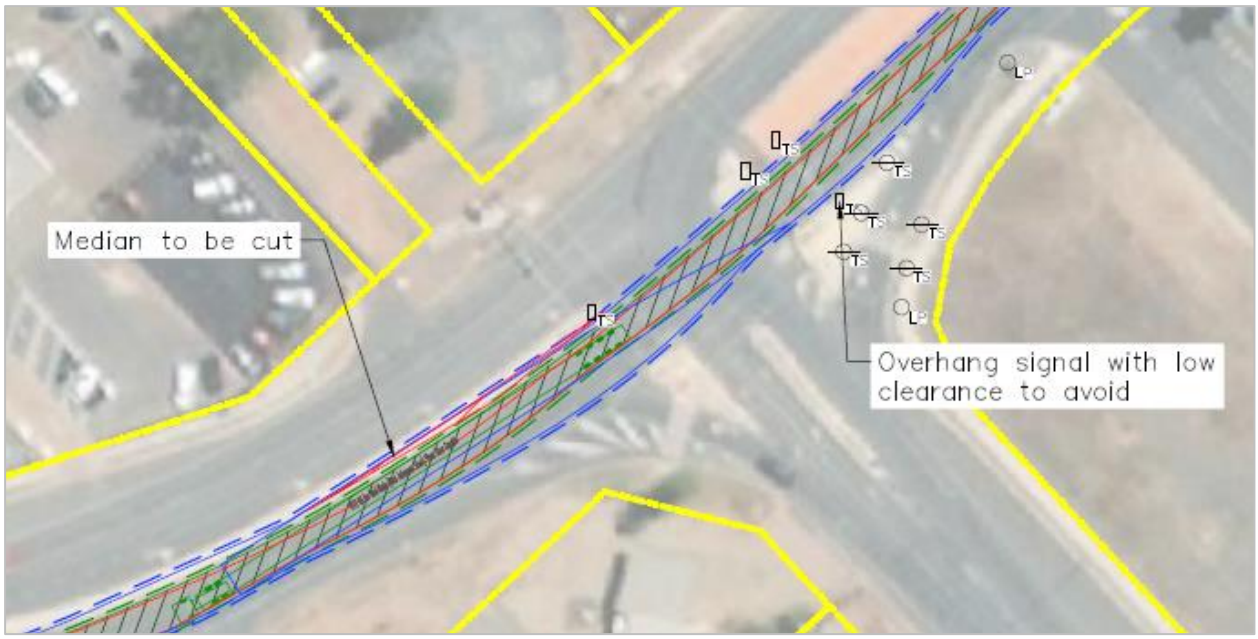


Figure 4.15 PTR2 Movement ID11 – Key Considerations

Figure 4.16 Street View from north-east approach with island to be removed and low clearance signal

4.2.6 PTR2 Movement ID12

Location: Intersection of Dawson Highway and Leichhardt Highway.
Movement: Left turn onto Leichhardt Highway from Dawson Highway.
Comments: To facilitate this movement, a raised centre island and associated sign will need to be removed from the north-east approach. One (1) light post and one (1) sign should be closer inspected to assess if these will need to be re-located.

The movement is illustrated in **Figure 4.17** to **Figure 4.19.**

Figure 4.17 PTR2 Movement ID12 – Overall

Figure 4.18 Street view of Dawson Hwy approach to intersection with island and sign to be removed

Figure 4.19 Street View from southern approach with light post and sign to be further inspected

5.0 PTR Movement Alternative Port 1 – Port Alma

A swept path assessment was also undertaken for the 84.6m Wind Turbine Blade (WTB) to test its possible impacts if transported from the Port of Alma. The following section discusses Project Transport Route Alternative Port 1 (PTR ALT1). The key movements and intersection have been identified in **Figure 5.1** and correspond to the ID numbers in **Table 5.1.**

Table 5.1 Project Transport Route - Alternative Port 1 (PTR ALT1)

ID	Description	Road 1	Road 2	Long.	Lat.	Required Works
ATL1.1	Egress and right turn onto Bajool Port Alma Rd	Port Access	Bajool Port Alma Rd	150.861°	-23.585°	Recommended widening gate at port egress.
ATL1.2	Right horizontal curve	Bajool Port Alma Rd		150.819°	-23.589°	No additional works required.
ATL1.3	Right horizontal curve			150.785°	-23.625°	No additional works required.
ATL1.4	Back-to-back curves			150.745°	-23.620°	Remove/relocate approximately twelve (12) directional signs.
ATL1.5	Left horizontal curve			150.703°	-23.626°	No additional works required.
ATL1.6	Right horizontal curve			150.694°	-23.650°	Remove/relocate approximately ten (10) directional signs.
ATL1.7	Left horizontal curve			150.660°	-23.648°	No additional works required.
ATL1.8	Right turn at intersection	Bajool Port Alma Rd	Bruce Highway	150.646°	-23.658°	Traffic islands on North-East and North-West approach will require trimming. Five (5) signs and one (1) light post will require removal/relocation.

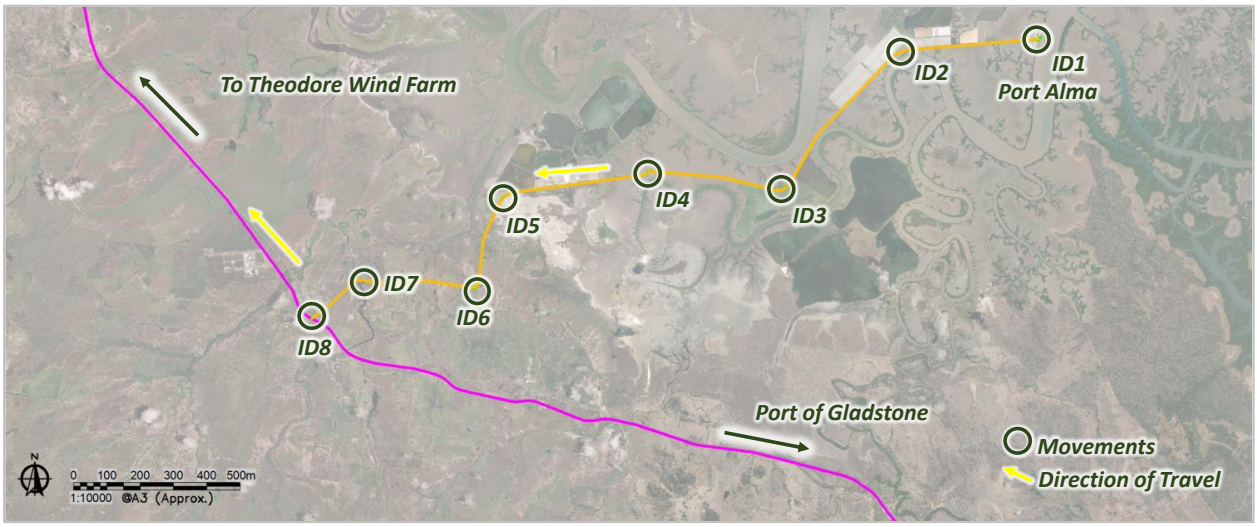


Figure 5.1 Port Alma to the Bruce Highway

The locations identified in **Table 5.1** note key intersections where further investigation has been conducted. A swept path assessment for each of the key intersections and interchanges has been conducted and the results are provided in **Appendix D.**

5.1.1 PTR AP1 Movement ID1

Location: Port Alma access gate, Bajool Port Alma Road.
Movement: Load egresses port through gate onto Bajool Port Alma Road.
Comments: The movement travels through the access gate to Port Alma then requires a right turn. The narrow gap at the gate may become an issue for a turning vehicle and should be closely monitored and widened if necessary, noting there also appears to be a bypass gate.

The movement is illustrated in **Figure 5.2** to **Figure 5.4.**

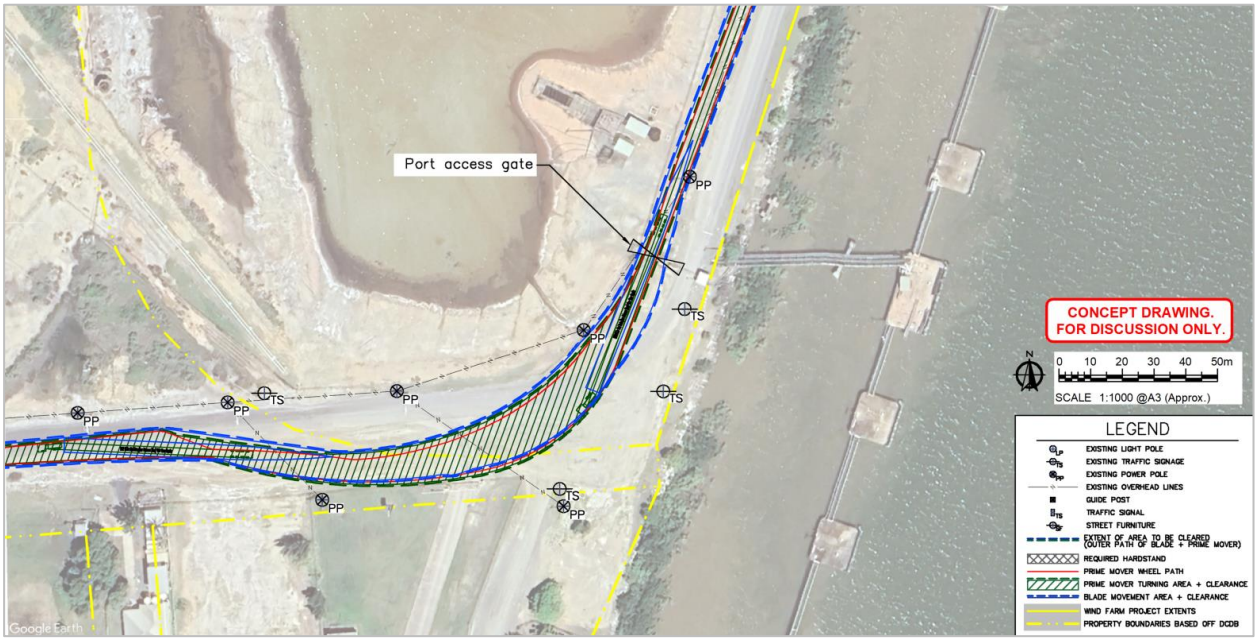


Figure 5.2 Alternate Route 1 - Movement ID1

Figure 5.3 Street View of turn from Bajool Port Alma Road facing east

Figure 5.4 Street View of Port Alma Access Gate facing North

5.1.2 PTR ALT1 Movement ID2

Location: Bajool Port Alma Road.
Movement: Curve to left along Bajool Port Alma Road.
Comments: Due to the length of the vehicle, caution will need to be taken when coming into proximity to the numerous power poles along the path.

The movement is illustrated in **Figure 5.5** to **Figure 5.6.**

Figure 5.5 Alternate Route 1 – Movement ID2

Figure 5.6 Street View of curve on Bajool Port Alma Road facing west

5.1.3 PTR ALT1 Movement ID3

Location: Bajool Port Alma Road.
Movement: Curve to right along Bajool Port Alma Road.
Comments: Due to the length of the vehicle, caution will need to be taken when coming into proximity to the numerous signs and power poles along the path.

The movement is illustrated in **Figure 5.7** and **Figure 5.8.**

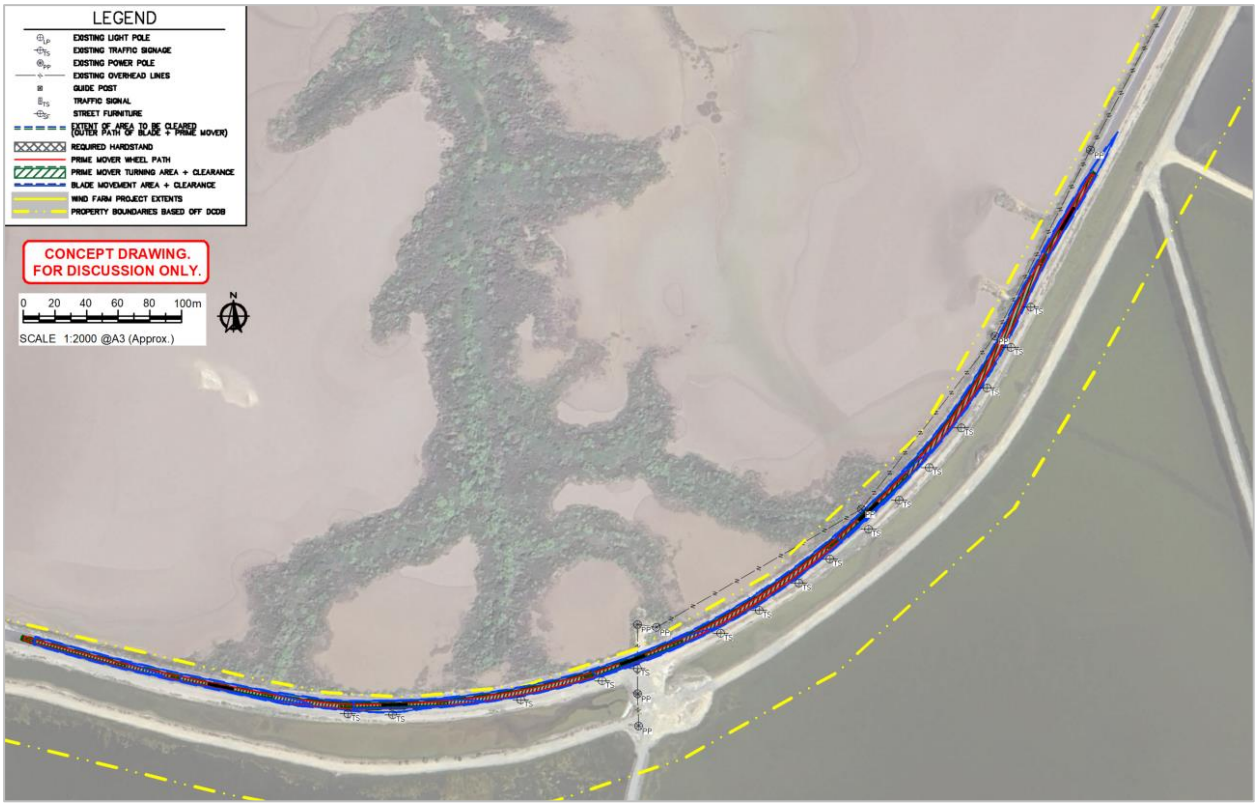


Figure 5.7 Alternate Route 1 – Movement ID3

Figure 5.8 Street View of curve on Bajool Port Alma Road facing south

5.1.4 PTR ALT1 Movement ID4

Location: Bajool Port Alma Road.
Movement: Back-to-back curves over creek.
Comments: Numerous directional signs (approximately 12) will need to be moved or removed to accommodate for the rear swing through these back-to-back curves.

The movement is illustrated in **Figure 5.9** to **Figure 5.11**

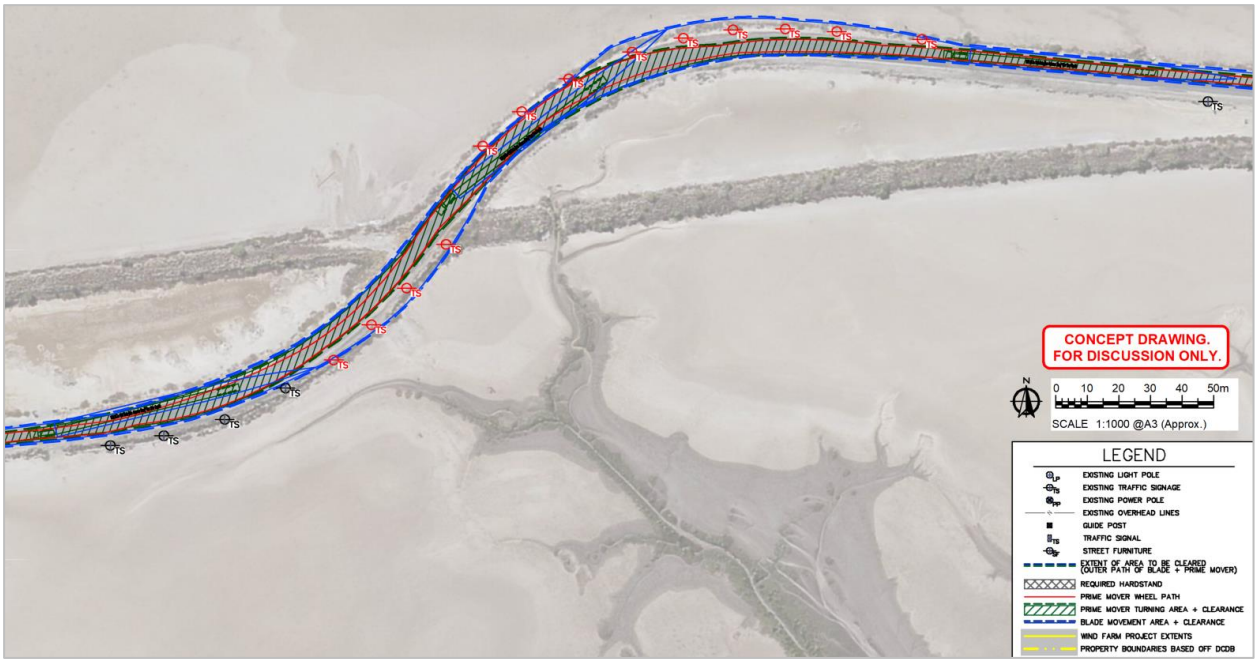


Figure 5.9 Alternative Route 1 – Movement ID4

Figure 5.10 Street View of first curve facing west

Figure 5.11 Street View of second curve facing west

5.1.5 PTR ALT1 Movement ID5

Location: Bajool Port Alma Road.
Movement: Curve to left along Bajool Port Alma Road.
Comments: Due to the length of the vehicle, caution will need to be taken when coming into proximity to the numerous signs along the path.

The movement is illustrated in **Figure 5.12** and **Figure 5.13.**

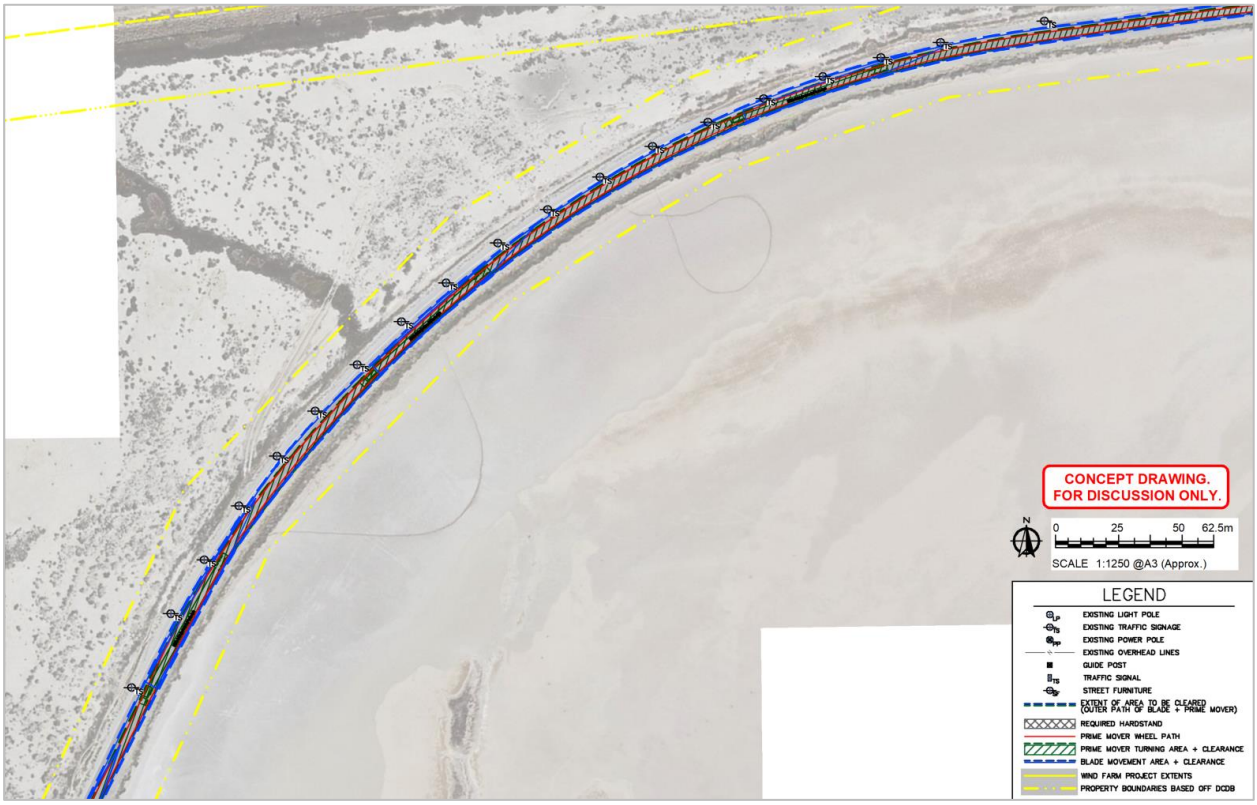


Figure 5.12 Alternative Route 1 – Movement ID5

Figure 5.13 Street View of curve on Bajool Port Alma Road facing west

5.1.6 PTR ALT1 Movement ID6

Location: Bajool Port Alma Road near Bills Road.
Movement: Curve to right along Bajool Port Alma Road.
Comments: Due to the length of the vehicle, numerous directional signs (approximately 10) will need to be moved or removed to accommodate for the rear swing.

The movement is illustrated in **Figure 5.14** and **Figure 5.15.**

Figure 5.14 Alternative Route 1 – Movement ID6

Figure 5.15 Street View of curve on Bajool Port Alma Road facing south

5.1.7 PTR ALT1 Movement ID7

Location: Bajool Port Alma Road crossing Eight Mile Creek.
Movement: Curve to left along Bajool Port Alma Road across raised area.
Comments: The road on either of the Eight Mile Creek crossing drops down, as shown in **Figure 5.17.** Movements through this curve should be taken with caution.

The movement is illustrated in **Figure 5.16** and **Figure 5.17**

Figure 5.16 Alternative Route 1 – Movement ID7

Figure 5.17 Street View of Eight Mile Creek crossing facing west

5.1.8 PTR ALT1 Movement ID8

Location: Intersection of Bajool Port Alma Road and Bruce Highway.
Movement: Load moves along Bajool Port Alma Road and turns right upon reaching the intersection onto Bruce Highway.
Comments: The right turn through the intersection requires removal of a streetlight, some signage, and some sections of traffic island, as highlighted in **Figure 5.20.** The movement itself will require use of both lanes on Bajool Port Alma Road. This will then continue along Bruce Highway before linking to Movement 8 of the primary PTR.

The movement is illustrated in **Figure 5.18** to **Figure 5.20.**

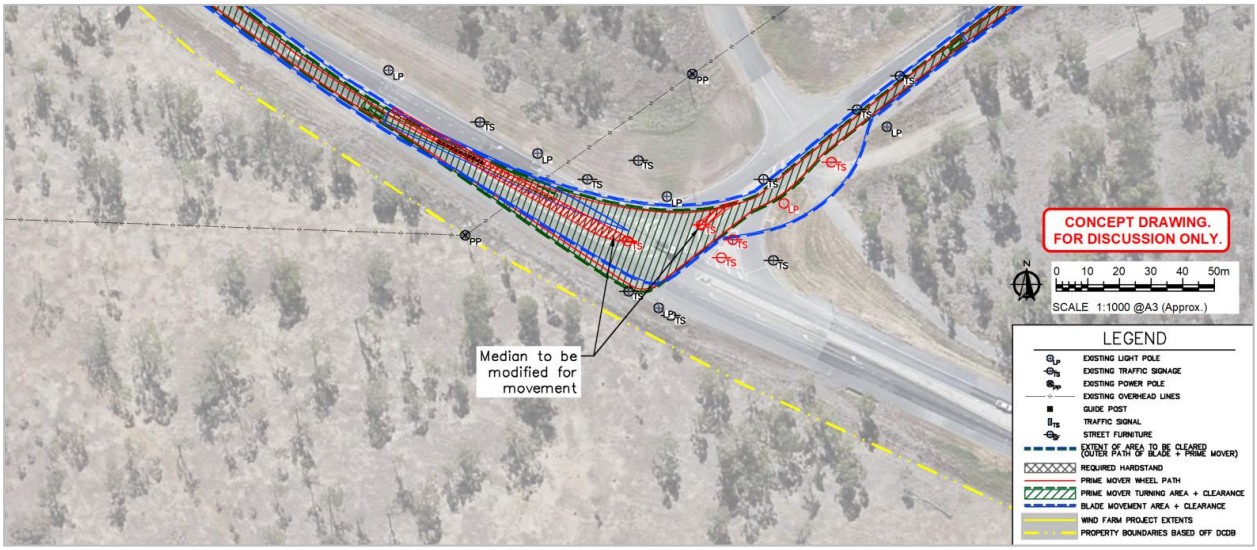


Figure 5.18 Alternative Route 1 – Movement ID8

Figure 5.19 Street View of intersection of Bajool Port Alma Road and Bruce Highway facing south-west

Figure 5.20 Street View of intersection of Bajool Port Alma Road and Bruce Highway north-west

6.0 PTR Movement Alternative Port 2 – Fisherman's Landing

A swept path assessment was undertaken for the 84.6m Wind Turbine Blade (WTB) to test its possible impacts if they are transported from the planned Fisherman's Landing Wharf. The following section discusses Project Transport Route Alternative Port 2 (PTR ALT2). The key movements and intersection have been identified in **Figure 6.1** and correspond to the ID numbers in **Table 6.1.**

Table 6.1 Project Transport Route - Alternative Port 2 (PTR ALT2)

ID	Description	Road 1	Road 2	Long.	Lat.	Required Works
ALT2.1	Right Turn onto Gladstone Mount Larcom Road	Landing Road	Gladstone Mount Larcom Road	151.152°	-23.820°	Hardstand required to be added on inside of curve. Two (2) light posts will need to be removed / relocated.

Figure 6.1 Fisherman's Landing towards Aldoga

The location identified in **Table 6.1** notes where further investigation has been conducted, namely the intersection of Landing Road and the Gladstone Mt Larcom Road. A swept path assessment for the intersection has been conducted and the results are provided in **Appendix E.**

6.1.1 PTR AP2 Movement ID1

Location: Intersection of Landing Road and Gladstone Mount Larcom Road.
Movement: Load moves along Landing Road and turns right upon reaching the intersection onto Gladstone Mount Larcom Road.
Comments: This movement will require use of the opposing lane while conducting the right turn. Approximately two (2) light posts are expected to require removal before movements can be conducted.
Hardstand will be required on the inside of the turn and table drains bridged or diverted for the movement to be undertaken.

The movement is illustrated in **Figure 6.2** and **Figure 6.3.**

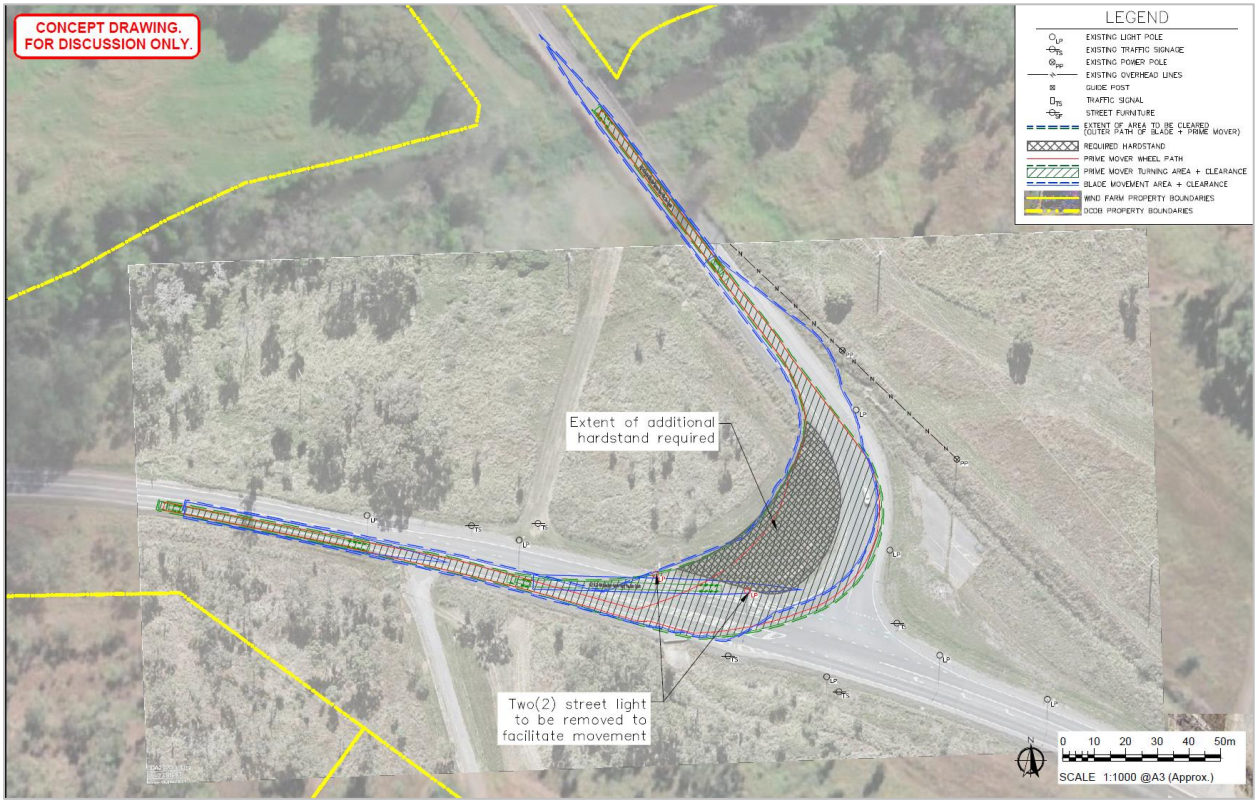


Figure 6.2 Alternative Port 2 – Movement ID1

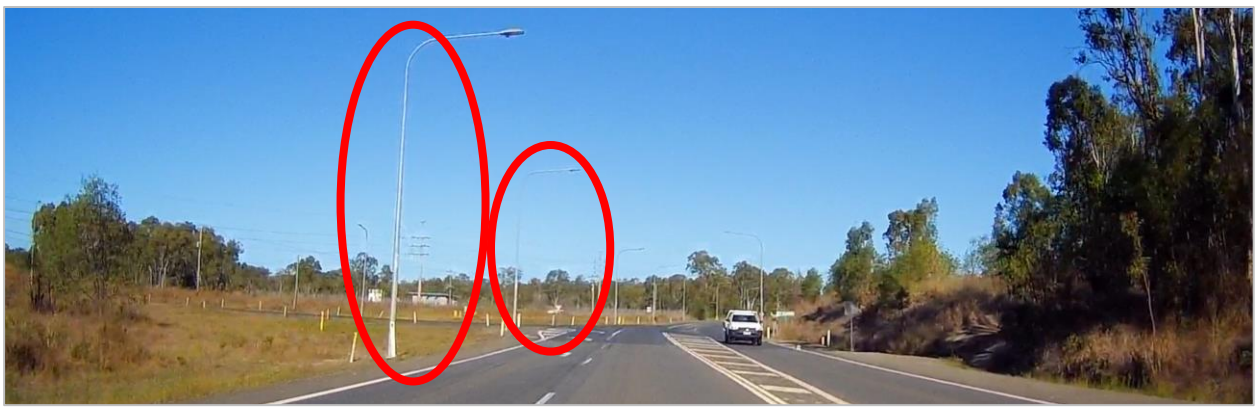


Figure 6.3 Street View of intersection of Landing Road and Gladstone Mount Larcom Road facing east

7.0 Local Road Assessment

A review of the local road network has been undertaken against the following:

- Banana Shire Council Planning Scheme Policy 2021 (Council PSP);
- Banana Shire Council Interactive Mapping;
- Capricorn Municipal Development Guidelines *Geometric Road Design D1* (Issue 10 Dec 2022);
- Australian Standards AS2890.1 to 6 *Parking Facilities*; and
- Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* (AGRD4a).

A review of the Banana Shire Council Planning Scheme refers to Capricorn Municipal Design Guidelines (CMDG) – *Geometric Road Design* for further information regarding geometric road design and classification.

7.1 Road Network Summary

Banana Shire Council does not have a clearly defined road hierarchy map, so details were inferred from a road's inclusion in the 'Local Road of Regional Significance Network.' The design criteria of the type of road can be found from Annexure D01A Revision 1 September 2022 of the Capricorn Municipal Development Guidelines *Geometric Road Design D1* (Issue 10 Dec 2022).

The review of the key characteristics is summarised in **Table 7.1**.

Table 7.1 Banana Shire Council Local Road Network

Road	Surface	Classification	Speed Limit	Traffic Gen. (AADT)*
Defence Road	Sealed from Leichardt Highway to Crowsdale Camboon Road, unsealed past this point	Rural Major Collector[&]	100km/h[#]	>250
Crowsdale Camboon Road	Unsealed	Rural Major Collector[&]		>250
Hamiltons Road	Unsealed	Rural Major Access[&]		40-99

**AADT defined by Capricorn Municipal Development Guidelines Geometric Road Design D01A*
[&]Classification inferred from 'Local Roads of Regional Significance Network'
[#]Unsigned road

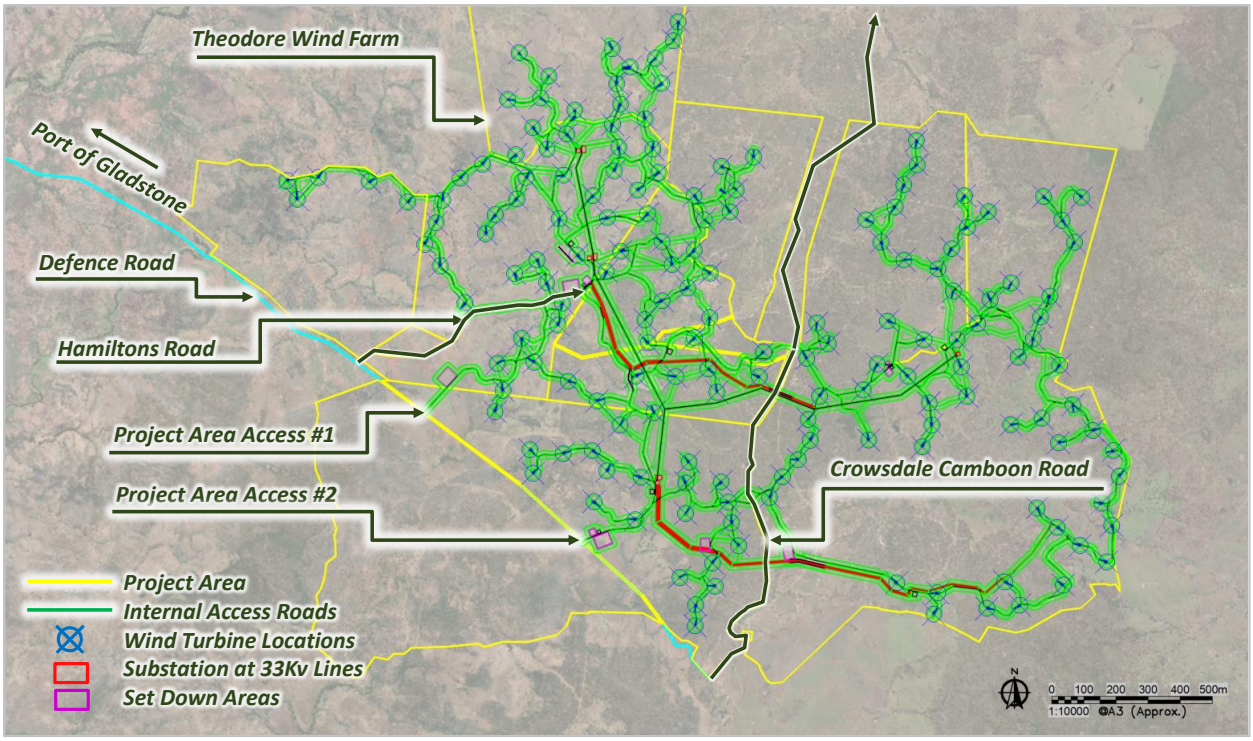


Figure 7.1 Local Road Network

7.2 Local Road Access from the State-Controlled Road Network

Access from the state-controlled Leichardt Highway to the local road network is via the existing intersection with Defence Road. A review of the movement at the local road intersection with the Leichardt Highway was undertaken to review the existing arrangements and highlight potential shortfalls in the existing infrastructure.

The movement is identified as **ID012** which is discussed in **Section 3.2.5** which requires a left turn onto Defence Road from Leichardt Highway.

Table 7.2 provides a summary of the design parameters required for turn treatment and sight distance review.

Table 7.2 Leichardt Highway Design Parameters

Parameter	East Bound	West Bound
Posted speed limit	100km/h	100km/h
Design speed adopted	110km/h (posted + 10km/h)	
Road width	3.5m Approx.	3.5m Approx.
Shoulders	sealed with clear zones on either side	

7.3 SCR Intersection Review

The existing turn treatment arrangement at the intersection of Leichardt Highway and Defence Road is illustrated in **Figure 3.7** and consists of:

- Basic Left (BAL) Turn Treatment; and
- Simple Left (SL) Turn Treatment.

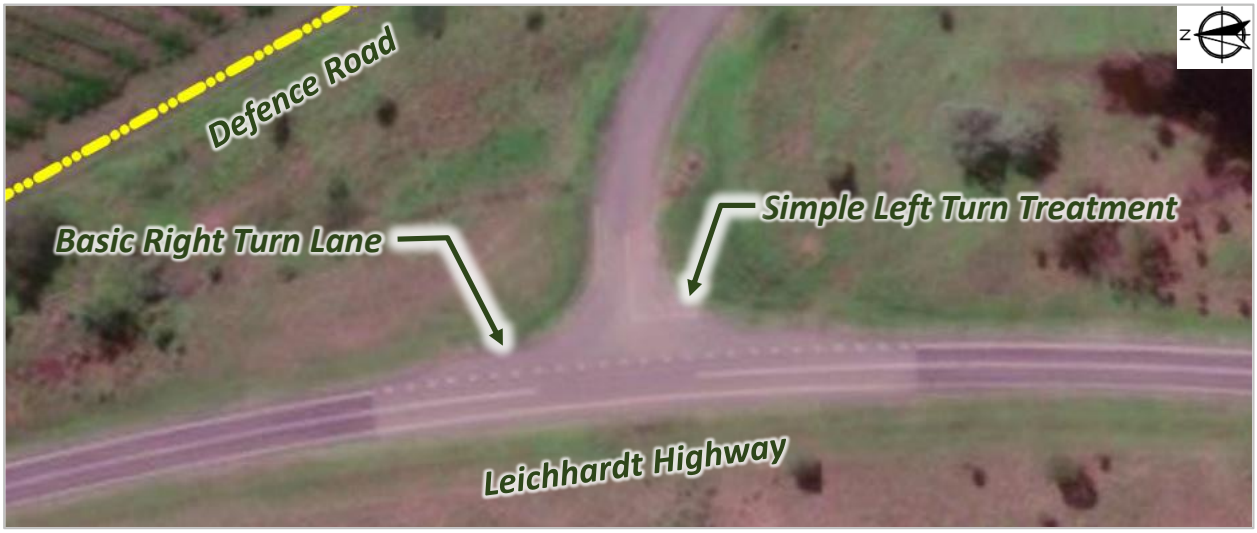


Figure 77.2 Existing Turn Treatment Arrangement

A review of the existing parameters versus the requirements outlined in Austroads Guide to Road Design *Part 4a: Unsignalised and Signalised Intersection* Figure 8.2 for Basic left turn lane configuration has been undertaken. The BAL measures 35m in length which appears appropriate for a design speed of 110km/h in accordance with Table 8.1.

It is noted that the current arrangement may be sufficient for the likely low turn volumes currently generated by Defence Road.

7.3.1 Sight Distance Requirements

Sight distances were assessed at the intersection of Leichardt Highway and Defence Road against the Department of Transport and Main Roads *Road Planning and Design Manual (RPDM) Edition 2: Volume 4a* in accordance with Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* (AGRD4a).

Table 7.3 provides a summary of the recommended Safe Intersection Sight Distance (SISD) to/from the Leichardt Highway and Defence Road.

Table 7.3 Sight Distance Review

Parameter	East bound	West bound
Road Grade	Generally flat	Generally flat
SISD AGRD4a	285m	285m
Reaction Time	2.0s	
Available Sight Distance		
To/From Defence Road	> 285m	> 285m
Sufficient Sight Distance	✓	✓

The available sight distances for both accesses are illustrated in **Figure 7.3** to/from Leichardt Highway to Defence Road.

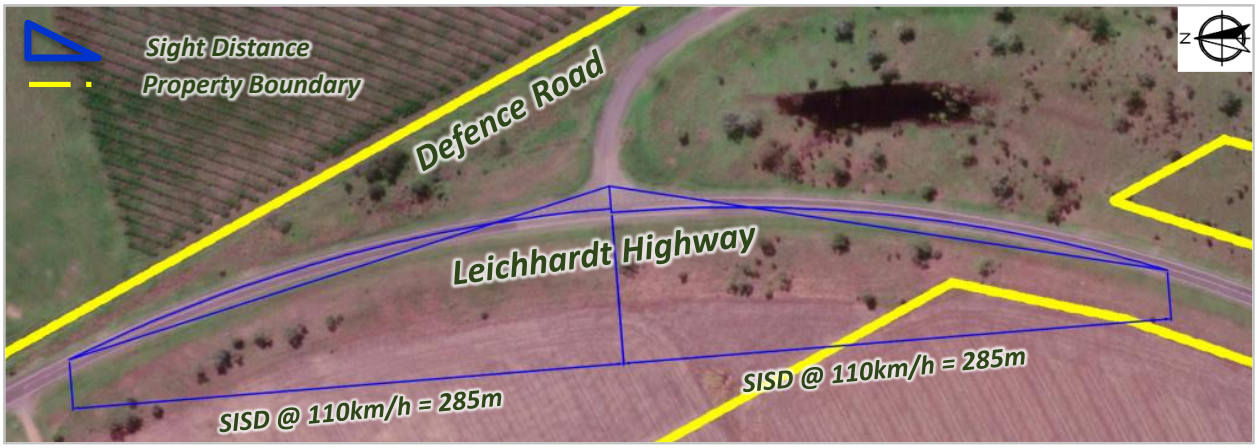


Figure 7.3 Safe Intersection Sight Distance – Leichardt Highway / Defence Road intersection

Sight distances to/from Defence Road were observed on site and are shown in **Figure 7.4** and **Figure 7.5.**

Figure 7.4 From Defence Road facing north along the Leichardt Highway

Figure 7.5 From Defence Road facing south along the Leichardt Highway

Based on the design speed of 110km/h and the available sight distances at the Leichhardt Highway / Defence Road intersection exceed AGRD4a SISD requirements.

7.4 Road Crash History Review

A review of the road crash history on both Leichhardt Highway and Defence Road, within 1500m of the intersection, was undertaken using the road crash data available from the Queensland Globe database (2001-2023).

A total of two (2) road crashes were recorded over the time period with the latest occurring in 2018 in the vicinity of the intersection of Leichhardt Highway and Defence Road as illustrated in **Figure 7.6.**

Figure 7.6 Recoded Road Crashes within 1500m of intersection

A summary of the of the recorded crash data is provided for reference in **Table 7.4.**

Table 7.4 Summary of Roach Crash History (2001 – 2023)

Crash Number	Year	Crash Severity	Crash Type	DCA	Description
Intersection of Leichhardt Highway and Defence Road (Approx. 150.168188°, -24.830715°)					
Nil					
Leichhardt Highway within 1500m of Defence Road					
247651	2005	Medical Treatment	Single Vehicle	704	Off Path-Straight: Right Off Cway Hit Obj
247805	2018	Hospitalisation		801	Off Path-Curve: Off Cway Right Bend

Key items to consider based on the publicly available data as summarised in **Table 7.4**, are as follows:

- There has not been a crash since 2018;
- Both crashes were single vehicle, off-path crashes suggesting other factors were at play; and
- No crashes involved the Leichhardt Highway and Defence Road intersection.

Based on the limited number of crashes recorded in the last 10 years, the current traffic volumes, and the lack of crash clusters, it can be concluded that there is no specific road feature or design deficiency at this location which may be directly contributing to the recorded vehicle crashes.

7.5 Project Area Access Review

The Project Area is proposed to be accessed from Defence Road at the two (2) locations illustrated in **Figure 7.7**.

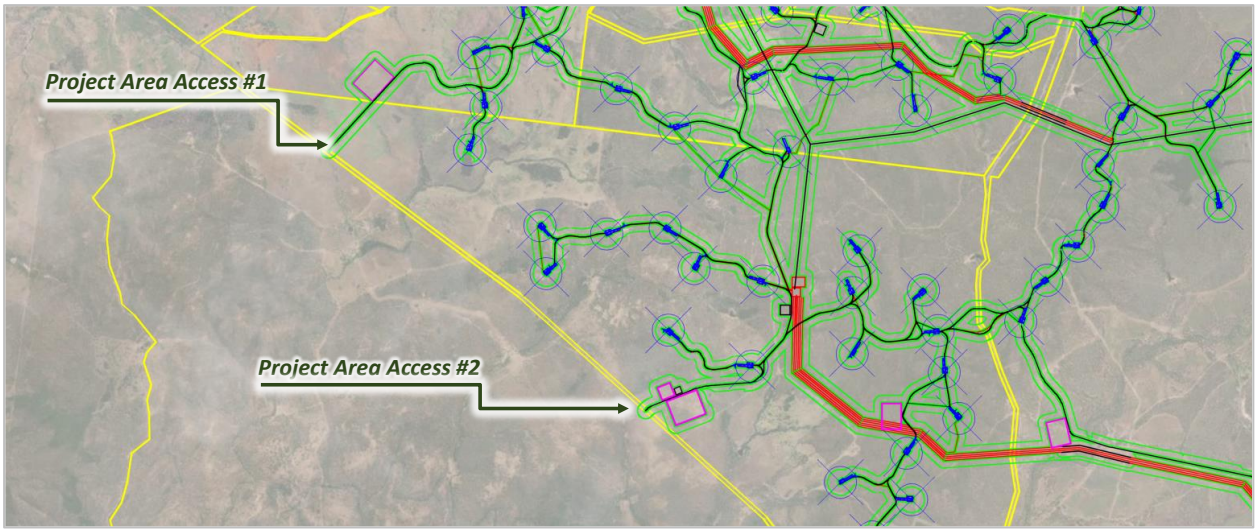


Figure 7.7 Local Access to Theodore Wind Farm

The locations of the proposed Project Area accesses are set out in **Table 5.4** and discussed in **Section 5.0** of the Traffic Impact Assessment (TIA) and summarised in **Table 7.5.**

Table 7.5 Defence Road Project Area Access Locations

Access Point	Long.	Lat.	Access Type
Project Area Access #1	150.335°	-24.968°	New accesses are required to be constructed
Project Area Access #2	150.383°	-25.006°	

A summary of design parameters for review of each access location on Defence Road can be found in **Table 7.6.**

Table 7.6 Defence Road Existing Parameters

Parameter	Existing Conditions
Posted Speed Limit	100km/h
Formation Width	8m approx.
Road Width	6.5m approx. sealed
Shoulders	Unsealed and Grassed with Table Drains

7.5.1 Project Area Access Sight Distance Requirements

Project Area Access #1 and Project Area Access #2 will be constructed as new accesses to the Project Area and have been assessed against in accordance with Australian Standards *Parking facilities Part 1: Off-street car parking* (AS2890.1) and *Part 2: Off-Street Commercial Vehicle Facilities* (AS2890.2).

The sight distance requirements are summarised in **Table 7.7**.

Table 7.7 AS2890.1 Project Area Access Sight Distance Review

Parameter	Speed Limit	Sight Distance
Desirable 5s Gap	100km/h	139m

The Project Area access locations, configurations and sight distance requirements are further discussed in the Traffic Impact Assessment report.

8.0 Heavy Vehicle Restrictions

There are restrictions on the roads along the proposed route to the Theodore Wind Farm Project Area. The following were considered when determining these limitations:

- *Multi-State Class 1 Load Carrying Vehicle Dimension Exemption Notice 2023 (No.1)*;
- *Multi-State Class 1 Load Carrying Vehicle Mass Exemption Notice 2023 (No.1)*;
- *Queensland Access Conditions Guide: Route and operational access conditions (QACG)*.

As defined by the National Heavy Vehicle Regulator (NHVR), the low loaders carrying the up-to-85.0m Wind Turbine Blades assessed in this report are considered a Class 1 Oversize Overmass (OSOM) vehicle. This is because it is a heavy vehicle carrying, or designed for the purpose of carrying, a large indivisible item while exceeding prescribed mass or/or dimension requirements. This is larger than road trains, B-doubles and other vehicles carrying a freight container designed for multi-modal transport (classified as Class 2 vehicles). The maximum dimensions for a Class 1 vehicle in Queensland before being considered an OSOM vehicle are outlined in **Table 8.1**.

Table 8.1 Maximum dimension limits with pilots or escorts – daytime travel

Vehicle	Critical Roads Width (m)	Other Roads Width (m)	Length (m)	Height (m)
Prime mover and trailer combination	4.5	5.5	35.0	5.0

In addition to the dimensions listed in **Table 8.1**, *Multi-State Class 1 Load Carrying Vehicle Dimension Exemption Notice 2023 (No. 1)*, a maximum of 7.60m rear overhang is permitted, with all overhangs greater than 5.5m highlighted with a warning plate on both sides of the projection.

The NHVR also outlines mass limits for heavy vehicles, as outlined in *Multi-State Class 1 Load Carrying Vehicle Mass Exemption Notice 2023 (No.1)*. Section 4 highlights a maximum Gross Combination Mass (GCM) of 59.5t for an eligible vehicle (in which a low loader fitted with 2-4 axles is included), with the additional restrictions highlighted in **Table 8.2** for the trailer.

Table 8.2 Mass Limits for trailers including Dollies

Minimum axle group ground contact width (m)	Number and spacing of axles in axle group (spacing in metres)					
	1	2 @ 1.2 2 @ 1.8	3 @ 1.2	3 @ 1.8 3 @ 1.2, 2.4 3 @ 2.4, 1.2	4 @ 1.2	4 @ 1.2, 2.4, 1.2
	4 tyred axle mass limit (t)					
2.4	9	18.5	25	27	30	35
	8 tyred axle mass limit (t)					
2.4	12	21	25	27	30	35

8.1 State Controlled Road Network Heavy Vehicle Restrictions

As well as the above restrictions, DTMR have additionally listed individual restrictions for Oversize Overmass (OSOM) vehicles on many bridges and culverts throughout Queensland. Along the route highlighted in **Section 3**, there are some bridges that require additional consideration, as outlined in **Table 8.3** and are illustrated in **Figure 8.1** to **Figure 8.5**.

Table 8.3 DTMR Road Access – Bridges on PTR 1

Restriction	Location	Road ID	Restriction Type	Description
632	Bobs Creek	10E	Dimension	Dimension Restriction – 4m width restriction
799	Larcom Creek	181	Special Condition	Requires discussion with DTMR.
800	Calliope River	181	Mass	Load carrying vehicles over 79t must check Conditions Database for further information.
34773	Bill Prest Bridge	183	Mass	Any load carrying vehicle exceeding 59.5t must check conditions database for additional requirements

Figure 8.1 OSOM width restriction 635 over Bobs Creek crossing bridge

Figure 8.2 OSOM restriction 799 over Larcom Creek crossing bridge

Figure 8.3 OSOM mass restriction 800 over Calliope River crossing Bridge

Figure 8.4 OSOM mass restriction 34773 over Bill Prest Bridge

Table 8.4 DTMR Road Access – Bridges on PTR2

Restriction	Location	Road ID	Restriction Type	Description
799	Larcom Creek	181	Special Condition	Requires discussion with DTMR.
800	Calliope River	181	Mass	Load carrying vehicles over 79t must check Conditions Database for further information.
7103	Dawson Highway Culvert	46B	Mass	Vehicles exceeding regulation mass are not permitted to cross
34773	Bill Prest Bridge	183	Mass	Any load carrying vehicle exceeding 59.5t must check conditions database for additional requirements

Figure 8.5 OSOM mass restriction 7103 over culvert along Dawson Highway

8.2 Local Road Network Heavy Vehicle Restrictions

In addition to the restrictions that apply on State Controlled Roads, the NHVR route planner tool also indicates several restrictions for heavy vehicles on Banana Shire Council roads. These roads (summarised previously in **Table 7.1**) are used by all proposed routes.

The relevant restrictions are summarised in **Table 8.5.**

Table 8.5 Banana Shire Local Road Restrictions for OSOM Vehicles

Long.	Lat.	Restriction Type	Description
150.400°	-25.0211°	Restricted Structure - Bridge	Maximum permitted speed: 40km/hr. Load limited 20t
All Banana Shire		Special Condition	The maximum allowable speed is 60km/h on unsealed roads. Vehicle speed is restricted to 40km/h on approaches to any unsealed road intersection. Vehicles must not traverse unsealed roads when the road is visibly wet.

Ox track Creek Bridge, and its position along the proposed route are illustrated in **Figure 8.6.**

Figure 8.7 Approximate location of Oxtrack Creek Bridge

Oxtrack Creek Bridge is located approximately 3.4km north-west of the intersection of Defence Road and Crowsdale Camboon Road and 2.4km south-east of Project Area Access #2. The majority of the heavy vehicle movements are to access the Project Area via the two (2) Project Area Accesses. However, restriction should be noted for light vehicles and the occasional heavy vehicle accessing the site via Crowsdale Camboon Road.

9.0 Railway Line Crossings

A review of the route from the Port of Gladstone (Auckland Point) to the Theodore Wind Farm was undertaken to determine where the proposed routes and OSOM vehicles will cross railway lines at a level crossing.

The routes will encounter one (1) railway open level crossing as summarised **Table 9.1** and shown in **Figure 9.1** and **Figure 9.2**.

Table 9.1 Railway open level crossings summary

Railway Line	Location	Road	Lat.	Long.	Status
Callide Valley Railway Line	Mount Murchison at Dawson Highway	Dawson Highway	150.536°	-24.349°	Operational

Figure 9.1 Plan view of Dawson Highway Railway Crossing

Figure 9.2 View of Dawson Highway Railway Crossing

10.0 Layover Areas Along Proposed Route

The extent of the route to Project Area was reviewed for potential stopping places, including any existing or potential truck parking areas, for their suitability.

10.1 Layover Area along PTR1

The majority of the Project Transport Route 1 between the Port of Gladstone to the Project Area is a two lane, two-way carriageway. Noted in **Table 10.1**, the Port of Gladstone to the Project Area is 270km and appears to have twelve (12) potential stopping locations identified in **Table 10.1**.

Table 10.1 Potential Layover Areas

Area	Location	Description	Long.	Lat.	Comments
1	Yarwun	Existing Truck Stopping Bay along Gladstone Mount Larcom Rd	151.108°	-23.843°	Extension might be required. Requires discussion with TMR.
2	Machine Creek	Existing Truck Stopping Bay along Bruce Highway	150.580°	-23.805°	Extension might be required. Requires discussion with TMR.
3	Raglan	Wide shoulder at Bruce Highway	150.812°	-23.710°	Width to be further investigated. Requires discussion with TMR.
4	Port Curtis	Stopping Area at Bruce Highway	150.527°	-23.452°	Vegetation is to be removed. Requires discussion with TMR.
5	Kabra	Existing compliance Bay	150.394°	-23.468°	Requires discussion with TMR.
6	Wycarbah	Existing Car Stopping Bay	150.218°	-23.542°	Extension might be required. Requires discussion with TMR.
7	Westwood	Existing compliance Bay	150.156°	-23.623°	Requires discussion with TMR.
8	Westwood	Existing Truck Stopping Area	150.126°	-23.664°	Connection from Capricorn Highway required adjustment. Requires discussion with TMR.
9	Westwood	Wide Shoulder	150.161°	-23.754°	Extension might be required. Requires discussion with TMR.
10	Dululu	Existing Truck Stopping Area at Leichhardt Highway	150.257°	-23.848°	Removal of some vegetation might be required. Requires discussion with TMR.
11	Wowan	Existing Vehicle Stopping Bay at Leichhardt Highway	150.144°	-24.011°	Extension might be required. Requires discussion with TMR.
12	Banana	Existing Truck Stopping Area	150.127°	-24.478°	Connection from Leichhardt Highway required adjustment. Requires discussion with TMR.

Figure 10.1 Area 1 Gladstone Mount Larcom Rd (Yarwun) Compliance Bay

Figure 10.2 Area 2 Bruce Highway (Machine Creek) Compliance Bay

Figure 10.3 Area 3 Bruce Highway (Raglan) Shoulder

Figure 10.4 Area 4 Bruce Highway (Port Curtis) Stopping Area

Figure 10.5 Area 5 Kabra Capricorn Highway Stopping Bay

Figure 10.6 Area 6 Wycarbah Capricorn Highway Stopping Bay

Figure 10.7 Area 7 Westwood Capricorn Highway Stopping Bay

Figure10.8 Area 8 Westwood Capricorn Highway Truck Stopping Area

Figure 10.9 Area 9 Westwood Leichhardt Highway Wide Shoulder

Figure 10.10 Area 10 Dululu Truck Stopping Area along Leichhardt Highway

Figure 10.11 Area 11 Wowan Vehicle Stopping Area along Leichhardt Highway

Figure 10.12 Area 12 Banana Truck Stopping Area along Leichhardt Highway

10.2 Layover Area along PTR2

The majority of the Project Transport Route 2 between the Port of Gladstone to the Project Area is a two lane, two-way carriageway. Noted in **Table 10.2**, the Port of Gladstone to the Project Area is 205km and appears to have eight (8) potential stopping locations identified in **Table 10.2**.

Table 10.2 Potential Layover Areas

Area	Location	Description	Long.	Lat.	Comments
1	Calliope	Existing Vehicle Inspection Site	151.199°	-24.008°	Requires discussion with TMR.
2	Calliope	Existing Wider Shoulder	151.135	-24.007°	Extension might be required. Requires discussion with TMR.
3	Wooderson	Existing Wider Shoulder	151.040°	-24.003°	Extension might be required. Requires discussion with TMR.
4	Mt Alma	Existing Truck Stopping Bay	150.889°	-24.074°	Extension might be required. Requires discussion with TMR.
5	Mt Alma	Hardstand being constructed	150.777°	-24.113°	Requires discussion with TMR.
6	Mt Alma	Existing layover lane for slow vehicle	150.741°	-24. 136°	Requires discussion with TMR.
7	Dumgree	Existing layover lane for slow vehicle	150.725°	-24.144°	Requires discussion with TMR.
8	Biloela	Existing Wider Shoulder	150.520°	-24.395°	Extension might be required. Requires discussion with TMR.

Figure 10.13 Calliope Vehicle Inspection Site Along Dawson Highway

Figure 10.14 Calliope Wider Shoulder Along Dawson Highway

Figure 10.15 Wooderson Wider Shoulder Along Dawson Highway

Figure 10.16 Mt Alma Truck Stopping Bay Along Dawson Highway

Figure 10.17 Mt Alma Extra Hardstand Along Dawson Highway

Figure 10.18 Mt Alma Layover Lane for Slow Vehicle

Figure 10.19 Dumgree Layover Lane for Slow Vehicle

Figure 10.20 Biloela Wider Shoulder Along Dawson Highway Area 5 Kabra Capricorn Highway Stopping Bay

11.0 Summary and Recommendations.

11.1 Summary

The Proponent seeks to develop the Theodore Wind Farm, located approximately 25 kilometres (km) east of the township of Theodore and approximately 40 km south-west of Biloela.

The Project is considering longer wind turbine blades (up to 84.6m) than those used at the Clarke Creek Wind Farm (76.2m) and therefore a renewed assessment was required for the additional length of the WTB and additional distance to the Project Area.

This Preliminary Route Assessment (PRA) report has considered how such components might be transported from the Port of Gladstone (Auckland Point) to the Project Area. The transport of wind farm components involves the transport of a large number of Over Size, Over Mass (OSOM) loads. Several routes were reviewed for their viability, and many rejected due to physical constraints based on either desktop or driven assessments.

The Project Transport Route 1 (PTR1) was identified as the primary route which uses the Bruce Highway, Capricorn Highway and Leichhardt Highway between the Port of Gladstone and the Project Area.

The Project Transport Route 2 (PTR2) using the Dawson Highway as an alternative has also been documented which rejoins the PTR1 at the Leichhardt Highway in Banana.

An OSOM Route was also identified for components which may be higher than 5.0m in height which has been identified and utilised for the Clark Creek Wind Farm project.

The Identified Project Transport Routes were driven between the Port of Gladstone, Rockhampton and the Project Area was reviewed in person to seek to identify and understand potential constraints to the transport of materials associated with the proposed Wind Farm Project. In particular constraints likely to limit the delivery of the wind turbine components to Project Area were the focus of swept path analyses.

This report summarises the routes worthy of further consideration and includes photographs and screen captures taken from dash camera footage. It also includes outputs from the swept path assessment undertaken utilising Autodesk Vehicle Tracking software. Key points of the Swept Path Assessment, include:

- An existing Vehicle Tracking template was utilised and modified to approximate the proposed wind turbine blades;
- Nearmap GIS imagery is limited between the point of origin and the development Project Area;
- Feature survey should be obtained for all sections where changes to the road pavement is required; and
- Does not include consideration the potential overloading of existing structures in this route assessment which requires further review from a Civil/Structural engineering perspective.

The route assessment identifies a main viable Project Transport Route 1 (PTR1) that with the roadworks identified in this report (and subject to approval by DTMR and the relevant Councils, particularly Banana Shire Council) appears capable of supporting the transport of the wind turbine blades between the Port of Gladstone and the Project Area, subject to what appear to be feasible physical works and management approaches.

11.2 Next Steps

This report has identified that at a preliminary level there is a viable route for the transport of Project components from the Port of Gladstone to the Project Area.

Following Development Application approval and prior to procuring the wind farm components, an OSOM transport contractor should be engaged to:

- Develop details of the trucks and trailers used to move the various components, including turbine blades, tower sections and nacelles;
- Assess in detail the proposed route with their specific haulage transport equipment and configurations, to further test the route, including the swept paths provided in this report and to further investigate the vertical alignment along the haul route and the ability of their vehicles to traverse vertical crests and dips and overhead structures and services without scraping;
- Carry out feature and cadastral surveys at key intersections, including those noted in this report; and
- Identify with the civil engineer the details and scope of works to be undertaken to facilitate the haulage of the wind farm components to Project Area.

The modifications and temporary impacts identified in this Preliminary Route Assessment report will also ultimately need to be assessed by DTMR's Heavy Vehicle Office in the form of permitting and road-use management prior to the commencement of construction.

This Preliminary Route Assessment has been provided to assist the planning approvals and facilitate the Project entering the Heavy Vehicle Permitting stage. As the haulage will involve works, service relocations and other modifications to State Controlled Roads (SCR), detailed designs and applications will subsequently need to be made and approved in accordance with the requirements of *Section 33 of the Transport Infrastructure Act 1994 (TIA)*. In addition, Council approvals will also subsequently be required to make modifications to and gain approvals to use Council roads.

We note that the above sets out the usual processes and, in our opinion, the Preliminary Route Assessment demonstrates that a viable route is achievable from the Port of Gladstone to the Project Area, subject to reasonable and relevant conditions.

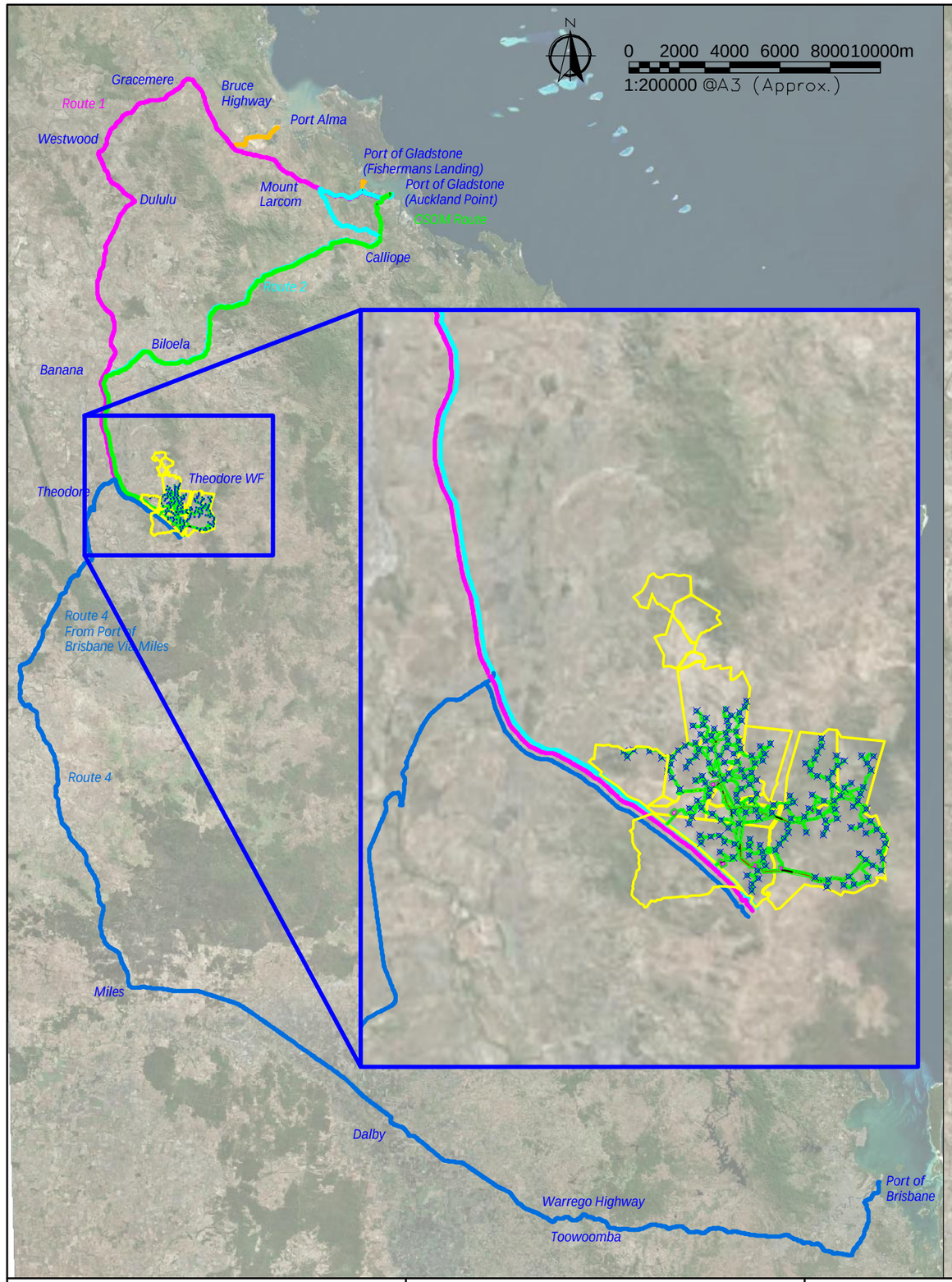
If you have any queries regarding the above information, please do not hesitate to contact the undersigned on 07 3221 3503.

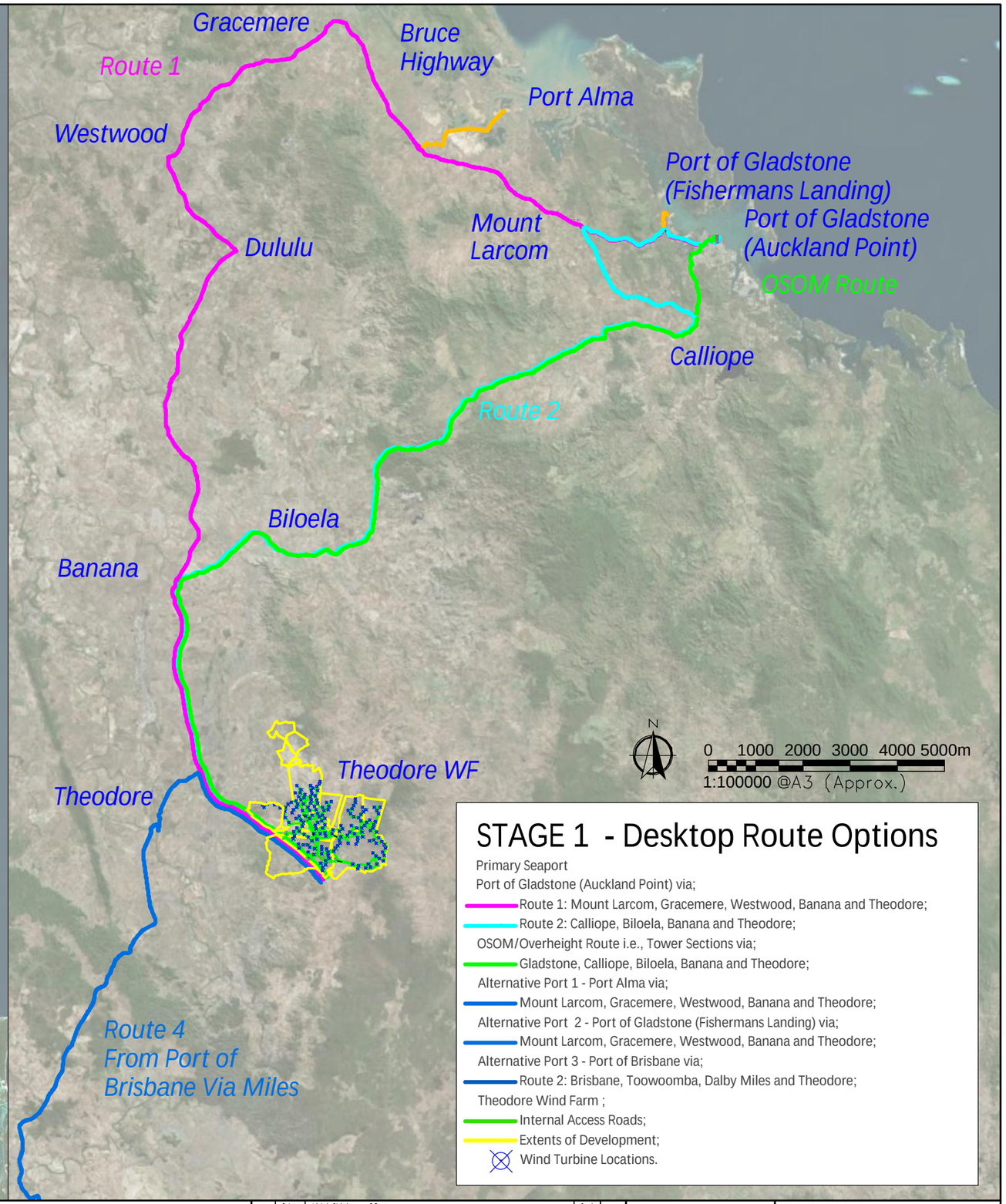
Yours faithfully,

Andrew Douglas
Director | Cambray Consulting Pty Ltd
BECivil (Hons) |MSc Env Man
FIEAust | CPEng | RPEQ 6691

APPENDIX A

Stage 1 Candidate Routes





STAGE 1 - Desktop Route Options

Primary Seaport
Port of Gladstone (Auckland Point) via;

- Route 1: Mount Larcom, Gracemere, Westwood, Banana and Theodore;
- Route 2: Calliope, Biloela, Banana and Theodore;

OSOM/Overheight Route i.e., Tower Sections via;

- Gladstone, Calliope, Biloela, Banana and Theodore;

Alternative Port 1 - Port Alma via;

- Mount Larcom, Gracemere, Westwood, Banana and Theodore;

Alternative Port 2 - Port of Gladstone (Fishermans Landing) via;

- Mount Larcom, Gracemere, Westwood, Banana and Theodore;

Alternative Port 3 - Port of Brisbane via;

- Route 2: Brisbane, Toowoomba, Dalby Miles and Theodore;

Theodore Wind Farm ;

- Internal Access Roads;
- Extents of Development;
- Wind Turbine Locations.

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DRAWING TITLE
Proposed Route Analysis
Stage 1 Desktop Route Options
Candidate Routes - Overall
Wind Turbine Blade on Low Loader

LOCATION
Theorore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	05.07.24	Route Analysis - Preliminary	J.D.	A.D.

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ERM0123-02 // SK0A

DATE
05.07.24

Scale (A3)
As Shown

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APPENDIX B

PTR1 & PTR2 DTMR Conditions Report

Conditions current at 22/12/2023.

Disclaimer: The conditions and restrictions outlined in this Conditions of Operation report have been compiled from the most recent information practically available. Conditions are liable to change quickly, particularly due to weather. All care has been taken in providing this information. However, due care still needs to be taken when operating vehicles, particularly those in excess of regulation mass and/or dimension.

Additional search criteria used

Condition type: All

View mass conditions: Yes

Selected route: 10E - Bruce Highway (Benaraby - Rockhampton)
16A - Capricorn Highway (Rockhampton - Duaringa)
181 - Gladstone - Mount Larcom Road
183 - Gladstone Port Access Road
26A - Leichhardt Highway (Westwood - Taroom)

CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/01	ALL				Height	1.00m	Bridge clearance heights are listed in the conditions below. Any vehicles/loads in excess of these clearances must use alternative routes.

Conditions current at 22/12/2023.

Disclaimer: The conditions and restrictions outlined in this Conditions of Operation report have been compiled from the most recent information practically available. Conditions are liable to change quickly, particularly due to weather. All care has been taken in providing this information. However, due care still needs to be taken when operating vehicles, particularly those in excess of regulation mass and/or dimension.

CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/08	ALL				Mass	Regulation	WET WEATHER RESTRICTIONS Approval to travel shall be automatically suspended in the event of heavy or prolonged rain affecting the route being travelled and the movements of the vehicle and the load shall be deferred until such day and time as may be determined by a representative of the Director-General. See note below regarding Road Closures affecting excess mass vehicles. ROAD CLOSURES AFFECTING EXCESS MASS VEHICLES Current Conditions of Operation for excess mass and excess dimension vehicles may be obtained from the Transport and Main Roads Web Site (www.tmr.qld.gov.au) under Business and industry, Heavy vehicles, Excess mass and dimensions, Excess mass and dimension conditions. IT IS THE OPERATORS RESPONSIBILITY TO BE AWARE OF THESE CONDITIONS AT ALL TIMES. Additional information on Current Road Closures and Current Roadworks is available on the Traffic and travel information 131940 Web Site (http://131940.qld.gov.au)
00/14	ALL				Mass	Regulation	If traffic islands or kerbs are to be crossed by the prime mover or the trailer, suitable heavy timber ramps and running planks are to be placed to prevent damage.

Conditions current at 22/12/2023.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/15	ALL				Width	2.50m	WET WEATHER RESTRICTIONS Approval to travel shall be automatically suspended in the event of heavy or prolonged rain affecting the route being travelled and the movements of the vehicle and the load shall be deferred until such day and time as may be determined by a representative of the Director-General. See note below regarding Road Closures affecting excess dimension vehicles. ROAD CLOSURES AFFECTING EXCESS DIMENSION VEHICLES Current Conditions of Operation for excess mass and excess dimension vehicles may be obtained from the Transport and Main Roads Web Site (www.tmr.qld.gov.au) under Business and industry, Heavy vehicles, Excess mass and dimensions, Excess mass and dimension conditions. IT IS THE OPERATORS RESPONSIBILITY TO BE AWARE OF THESE CONDITIONS AT ALL TIMES. Additional information on Current Road Closures and Current Roadworks is available on the Traffic and travel information 131940 Web Site (http://131940.qld.gov.au)

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/18	ALL				Mass	Regulation	IT IS THE OPERATORS RESPONSIBILITY TO ASSESS WHETHER ROUTE IS SUITABLE FOR MOVEMENT BEFORE MOVEMENT IS UNDERTAKEN Current Conditions of Operation for excess mass and excess dimension vehicles may be obtained from the Transport and Main Roads Web Site (www.tmr.qld.gov.au) under Business and industry, Heavy vehicles, Excess mass and dimensions, Excess mass and dimension conditions. IT IS THE OPERATORS RESPONSIBILITY TO BE AWARE OF THESE CONDITIONS AT ALL TIMES. Additional information on Current Road Closures and Current Roadworks is available on the Traffic and travel information 131940 Web Site (http://131940.qld.gov.au)

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/19	ALL				Height Width	4.30m 2.50m	IT IS THE OPERATORS RESPONSIBILITY TO ASSESS WHETHER ROUTE IS SUITABLE FOR MOVEMENT BEFORE MOVEMENT IS UNDERTAKEN Current Conditions of Operation for excess mass and excess dimension vehicles may be obtained from the Transport and Main Roads Web Site (www.tmr.qld.gov.au) under Business and industry, Heavy vehicles, Excess mass and dimensions, Excess mass and dimension conditions. IT IS THE OPERATORS RESPONSIBILITY TO BE AWARE OF THESE CONDITIONS AT ALL TIMES. Additional information on Current Road Closures and Current Roadworks is available on the Traffic and travel information 131940 Web Site (http://131940.qld.gov.au)
00/33	ALL				Mass	Period Permit	A vehicle combination carrying a special purpose vehicle or agricultural vehicle may also carry up to one (1) tonne of additional equipment to be used in conjunction with the vehicle being carried (e.g. blades, buckets, rippers) PROVIDED period permit masses are not exceeded. Additional equipment does not cover the carriage of fuel other than the fuel contained in the fuel tank of the vehicle being carried or substances which will be spread by the vehicle being carried.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/74	ALL				Mass	Period Permit	When a blade, bucket or ripper attachment is removed for safety reasons, at the direction of a Qld Police officer, the attachment may be carried on the same vehicle as the balance of the load, provided that period permit (B class bridge) excess mass limits are not exceeded.
00/75	ALL				Width	3.10m	Queensland South East Corner An oversize vehicle or combination exceeding 3.1m in width is not permitted to travel on the roads bounded by the area of Coolangatta in the south, Gympie in the north, Toowoomba and Warwick in the west, from; (a) 10.00am to sunset on Saturdays and Sundays; or (b) 7.00am to sunset on a statewide public holiday, which falls on a weekday, or (c) midday to sunset, the day prior to a statewide long weekend and 7.00am to sunset on each day of the long weekend. However, an oversized vehicle or combination exceeding 3.1m in width travelling on the Warrego Highway and Ipswich Road between Toowoomba and Rocklea (radius of 500m from Ipswich Road Rocklea) from 10.00am to 4.00pm on Sundays and 10.00am to sunset on a Saturday or public holiday is exempt from the above requirements.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/76	ALL				Height Width Length	4.30m 2.50m 12.50m	Christmas and New Year Restrictions An oversize vehicle or combination is not permitted to travel throughout Queensland from 24 December to 02 January of the following year inclusive. When Christmas Day falls on a Sunday or a Monday, restrictions applying to oversize vehicles and combinations commencing on the 24 December, will be extended to commence from 12 noon on the Friday prior to Christmas Day. When 1 January falls on a Friday, restrictions applying to oversize vehicles and combinations will be extended to 11.59pm on 03 January of that year. SPVs up to 3.5m wide operating under the National Class 1 Special Purpose Vehicle Notice are exempt from this requirement and can travel throughout Queensland at any time provided the travel complies with the (normal) public holiday, weekend, business day and time/location restrictions in the Notice.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/77	ALL				Height Width Length	4.30m 2.50m 12.50m	Easter Restrictions No movement throughout Queensland, of an oversize vehicle or combination, from Thursday before Easter to the Tuesday after Easter inclusive. SPVs up to 3.5m wide operating under the National Class 1 Special Purpose Vehicle Notice are exempt from this requirement and can travel throughout Queensland at any time provided the travel complies with the normal public holiday, weekend, business day and time/location restrictions in the Notice.
00/83	ALL				Mass	14t Per Axle Group	The drive axle group of a prime mover operating in Queensland under an excess mass permit, guideline or notice must be no less than 14.0 tonne.
00/87	ALL				Mass	59.5t Total Mass	References to the Excess Mass Guideline, Form 11 Guideline, Form 11 Excess Mass Guideline or Form 11 have the same meaning as the Multi-State Class 1 Load Carrying Vehicles Mass Exemption Notice 2016 (Qld Schedule)
00/88	ALL				Height Width Length	5.00m 5.50m 35.00m	References to the Guideline for Excess Dimension Vehicles Carrying Indivisible Articles, Special Purpose Vehicles that require a Pilot or Escort in Queensland, Excess Dimension Guidelines, Form 4 Guideline, Form 4 Excess Dimension Guideline or Form 4 have the same meaning as the Multi-State Class 1 Load Carrying Vehicles Dimension Exemption Notice 2019 (Qld Schedule)

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
04/00	4	ALL			Width	8.00m	All applications for the movement of a house or other building in excess of 8m must provide a letter from a RPEQ, Structural Engineer or Quantity Surveyor confirming the house is structurally sound to withstand movement and travel.
04/00	4	ALL			Width	8.00m	All applications for house/building in excess of 8.0m wide must include a Registered Professional Engineer (RPEQ) letter explaining why the building can't be cut down to reduce the dimensions.
04/00	4	ALL			Height Width Length	5.40m 8.00m 45.00m	All applications for loads in excess of 8.0m wide, 5.4m high or 45m long must include a Traffic Management Plan (TMP). A detailed TMP template can be downloaded from the Queensland Police website via: https://www.police.qld.gov.au/units/police-wide-load-escorts/traffic-management-plans. Applications for access will not be assessed without a TMP.
04/00	4	ALL			Width	8.50m	A Departmental Officer may accompany any loads in excess of 8.5 metres wide. The Departments Roma District Office at 30 McDowall Street, Roma is to be advised of the intended time of movement at least 48 hours in advance and during business hours, 8.30am - 5.00pm Monday to Friday - telephone (07) 4622 9511.
04/00	4	ALL			Width	8.00m	All operators with loads widths of 8m and over must notify the South West District Office on 46229529 at least 48hour (2 business days) prior to commencing travel.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
04/00	4	ALL			Width	6.00m	The Departments Roma District Office at 30 McDowall Street, Roma is to be advised of the intended time of movement at least 24 hours in advance and during business hours, 8.30am - 5.00pm Monday to Friday - telephone (07) 4622 9511.
04/00	4	ALL			Width	2.50m	EXCEPTION TO WET WEATHER RESTRICTIONS: Harvesters being transported by truck or under their own power will be permitted to move during wet weather restriction periods. Operators should note that movement will be entirely at their own risk and they MUST comply with the following condition: 1. For harvesters being transported by truck, a speed limit of 30km/hr will apply wherever there is no edge line.
04/00	4	ALL			Width	3.70m	BRIDGE WIDTH CLEARANCES The bridges throughout South Western District have various bridge rail to bridge rail widths of 3.7 m or more. Rail to rail widths for affected bridges are listed in following road specific conditions. Loads wider than rail to rail widths must be able to be raised at least 1.5 m above the road surface and approval MUST be obtained from the Main Roads District Office in Roma (Ph. 07 4622 9511) prior to movement.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
06/00	6	ALL			Width	8.00m	Signal infrastructure exists on state-controlled roads in the Rockhampton, Gladstone, Yeppoon and Biloela urban areas. As part of the route assessment process, it is the operator's responsibility to ensure there will be no conflicts with TMR signal infrastructure. If a potential conflict is identified, the TMR District Office should be contacted to confirm if temporary alterations to signals can be accommodated. Email Central.Road.Operations@tmr.qld.gov.au to request this information.
06/00	6	ALL			Width	10.00m	The max. allowable width of a load that will be permitted to travel on the roads throughout Central District shall not exceed 10.0m wide. In special circumstances, and at the total discretion of the Department of Transport and Main Roads, loads in excess of 10.0m wide may be approved.
06/00	6	ALL			Width	3.50m	Various bridges throughout Central District have limited widths between the bridge rails. The rails are typically in excess of 1.0m high above the road surface. It is the operator s responsibility to ensure the load can travel the proposed route without impacting the TMR bridge infrastructure.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
06/00	6	ALL			Height Width	5.40m 8.00m	Route Assessments (RAs) For all loads in excess of 8.0m wide and 5.4m high, Route Assessments(RAs) are to be submitted to the Permit Office (Rockhampton - Fax 49278149, or email centralpermits@tmr.qld.gov.au) for District approval. A permit will not be issued until a RA has been approved by the District. Guidelines for the preparation of an RA are available by contacting the Rockhampton Permit Office (ph. 49311637). ACCOMPANIMENT FEES - for Central District are to be. $145 per hour plus GST.
06/00	6	ALL			Width	4.60m	Oncoming traffic is to be managed far enough ahead of the load so that NO oncoming vehicles (trucks or cars etc) are required to get off the bitumen seal area to allow the load to pass.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
15/00	15	ALL			Width	8.00m	Route Assessments (RAs) For all loads in excess of 8.0m wide and 5.4m high, Route Assessments(RAs) are to be submitted to the Permit Office (Rockhampton - Fax 49278149, or email centralpermits@tmr.qld.gov.au) for District approval. A permit will not be issued until a RA has been approved by the District. Guidelines for the preparation of an RA are available by contacting the Rockhampton Permit Office (ph. 49311637). ACCOMPANIMENT FEES - for Central District are to be. $145 per hour plus GST.
15/00	15	ALL			Height Width	5.40m 8.00m	Signal infrastructure exists on state-controlled roads in the Emerald urban area. As part of the route assessment process, it is the operator's responsibility to ensure there will be no conflicts with TMR signal infrastructure. If a potential conflict is identified, the TMR District Office should be contacted to confirm if temporary alterations to signals can be accommodated. Email centralpermits@tmr.qld.gov.au to request this information.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
15/00	15	ALL			Width	0.01m	EXCEPTION TO WET WEATHER RESTRICTIONS: Harvesters being transported by truck or under their own power will be permitted to move during wet weather restriction periods. Operators should note that movement will be entirely at their own risk and they MUST comply with the following condition: 1. For harvesters being transported by truck, a speed limit of 30km/hr will apply wherever there is no edge line.
06/10E	6	10E	Bruce Highway (Benaraby - Rockhampton)		Width	3.50m	Due to peak hour traffic, loads over 3.5m wide are not permitted to travel on the urban section of the Bruce Hwy (10E) between the hours of 0700-0900 and 1500-1800, Monday to Friday. This restriction applies to the section between the intersection with Burnett Hwy (41F) and the intersection with Fitzroy St [Ch 114.400-121.050].
06/10E	6	10E	Bruce Highway (Benaraby - Rockhampton)	East End-Aldoga Rail Overpass - Bridge. Through Distance: 39.558	Height	7.16m	

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
06/16A	6	16A	Capricorn Highway (Rockhampton - Duaringa)		Width	3.50m	Due to peak hour traffic, loads over 3.5m wide are not permitted to travel on the urban section of the Capricorn Highway (16A) between the hours of 0700-0900 and 1500-1800, Monday to Friday. This restriction applies to the section between the intersection with Bruce Hwy (10E) and the turn off to Sommerset Rd [Ch 0.000-8.577].
06/16A	6	16A	Capricorn Highway (Rockhampton - Duaringa)	Gracemere Industrial Overpass - Bridge. Through Distance: 10.401	Height	7.72m	
06/16A	6	16A	Capricorn Highway (Rockhampton - Duaringa)	Stanwell Power Station Access Road - Bridge. Through Distance: 17.992	Height	6.56m	Stanwell Power Station Access Rd over Capricorn Hwy.
06/181	6	181	Gladstone - Mt Larcom Road		Width	3.50m	Due to peak hour traffic, loads over 3.5m wide are not permitted to travel on the urban section of Gladstone-Mt Larcom Rd (181) between the hours of 0700-0900 and 1500-1800, Monday to Friday. This restriction applies to the section between the intersection with the Dawson Hwy (46A) and the intersection with Landing Rd [Ch 0.000-12.292].
06/181	6	181	Gladstone - Mount Larcom Road	Glenlyon St Rail Overpass - Bridge. Through Distance: 0.114	Height	4.70m	Railway Overbridge on Glenlyon St between Bramston St & Railway St Cw2 & Cw3.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
06/181	6	181	Gladstone - Mount Larcom Road	Glenlyon St Rail Overpass - Bridge. Through Distance: 0.123	Height	4.70m	Railway Overbridge on Glenlyon St between Bramston St and Railway St.
06/181	6	181	Gladstone - Mount Larcom Road	Mt Miller-Landing Rail Overpass - Bridge. Through Distance: 10.868	Height	6.84m	Mt Millar Landing Railway Overbridge 14.1 km north of Gladstone.
06/181	6	181	Gladstone - Mount Larcom Road	Conveyor Belt. Through Distance: 11.514	Height	8.00m	
06/183	6	183	Gladstone Port Access Road	Goondoon Street Overpass - Bridge. Through Distance: 0.226	Height	5.20m	Width clearance between concrete barriers under the bridge is limited to 8.2m.
06/26A	6	26A	Leichhardt Highway (Westwood - Taroom)		Height Width	5.00m 4.50m	Wide loads travelling through Taroom Town Centre are required to negotiate with care pass "The Leichhardt Tree" which is heritage listed

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Additional search criteria used

Condition type: All

View mass conditions: Yes

Selected route: 10E - Bruce Highway (Benaraby - Rockhampton)
181 - Gladstone - Mount Larcom Road
183 - Gladstone Port Access Road
26A - Leichhardt Highway (Westwood - Taroom)
46A - Dawson Highway (Gladstone - Biloela)

CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/01	ALL				Height	1.00m	Bridge clearance heights are listed in the conditions below. Any vehicles/loads in excess of these clearances must use alternative routes.

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00/08	ALL				Mass	Regulation	WET WEATHER RESTRICTIONS Approval to travel shall be automatically suspended in the event of heavy or prolonged rain affecting the route being travelled and the movements of the vehicle and the load shall be deferred until such day and time as may be determined by a representative of the Director-General. See note below regarding Road Closures affecting excess mass vehicles. ROAD CLOSURES AFFECTING EXCESS MASS VEHICLES Current Conditions of Operation for excess mass and excess dimension vehicles may be obtained from the Transport and Main Roads Web Site (www.tmr.qld.gov.au) under Business and industry, Heavy vehicles, Excess mass and dimensions, Excess mass and dimension conditions. IT IS THE OPERATORS RESPONSIBILITY TO BE AWARE OF THESE CONDITIONS AT ALL TIMES. Additional information on Current Road Closures and Current Roadworks is available on the Traffic and travel information 131940 Web Site (http://131940.qld.gov.au)
00/14	ALL				Mass	Regulation	If traffic islands or kerbs are to be crossed by the prime mover or the trailer, suitable heavy timber ramps and running planks are to be placed to prevent damage.

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00/15	ALL				Width	2.50m	WET WEATHER RESTRICTIONS Approval to travel shall be automatically suspended in the event of heavy or prolonged rain affecting the route being travelled and the movements of the vehicle and the load shall be deferred until such day and time as may be determined by a representative of the Director-General. See note below regarding Road Closures affecting excess dimension vehicles. ROAD CLOSURES AFFECTING EXCESS DIMENSION VEHICLES Current Conditions of Operation for excess mass and excess dimension vehicles may be obtained from the Transport and Main Roads Web Site (www.tmr.qld.gov.au) under Business and industry, Heavy vehicles, Excess mass and dimensions, Excess mass and dimension conditions. IT IS THE OPERATORS RESPONSIBILITY TO BE AWARE OF THESE CONDITIONS AT ALL TIMES. Additional information on Current Road Closures and Current Roadworks is available on the Traffic and travel information 131940 Web Site (http://131940.qld.gov.au)

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00/18	ALL				Mass	Regulation	IT IS THE OPERATORS RESPONSIBILITY TO ASSESS WHETHER ROUTE IS SUITABLE FOR MOVEMENT BEFORE MOVEMENT IS UNDERTAKEN Current Conditions of Operation for excess mass and excess dimension vehicles may be obtained from the Transport and Main Roads Web Site (www.tmr.qld.gov.au) under Business and industry, Heavy vehicles, Excess mass and dimensions, Excess mass and dimension conditions. IT IS THE OPERATORS RESPONSIBILITY TO BE AWARE OF THESE CONDITIONS AT ALL TIMES. Additional information on Current Road Closures and Current Roadworks is available on the Traffic and travel information 131940 Web Site (http://131940.qld.gov.au)

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00/19	ALL				Height Width	4.30m 2.50m	IT IS THE OPERATORS RESPONSIBILITY TO ASSESS WHETHER ROUTE IS SUITABLE FOR MOVEMENT BEFORE MOVEMENT IS UNDERTAKEN Current Conditions of Operation for excess mass and excess dimension vehicles may be obtained from the Transport and Main Roads Web Site (www.tmr.qld.gov.au) under Business and industry, Heavy vehicles, Excess mass and dimensions, Excess mass and dimension conditions. IT IS THE OPERATORS RESPONSIBILITY TO BE AWARE OF THESE CONDITIONS AT ALL TIMES. Additional information on Current Road Closures and Current Roadworks is available on the Traffic and travel information 131940 Web Site (http://131940.qld.gov.au)
00/33	ALL				Mass	Period Permit	A vehicle combination carrying a special purpose vehicle or agricultural vehicle may also carry up to one (1) tonne of additional equipment to be used in conjunction with the vehicle being carried (e.g. blades, buckets, rippers) PROVIDED period permit masses are not exceeded. Additional equipment does not cover the carriage of fuel other than the fuel contained in the fuel tank of the vehicle being carried or substances which will be spread by the vehicle being carried.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/74	ALL				Mass	Period Permit	When a blade, bucket or ripper attachment is removed for safety reasons, at the direction of a Qld Police officer, the attachment may be carried on the same vehicle as the balance of the load, provided that period permit (B class bridge) excess mass limits are not exceeded.
00/75	ALL				Width	3.10m	Queensland South East Corner An oversize vehicle or combination exceeding 3.1m in width is not permitted to travel on the roads bounded by the area of Coolangatta in the south, Gympie in the north, Toowoomba and Warwick in the west, from; (a) 10.00am to sunset on Saturdays and Sundays; or (b) 7.00am to sunset on a statewide public holiday, which falls on a weekday, or (c) midday to sunset, the day prior to a statewide long weekend and 7.00am to sunset on each day of the long weekend. However, an oversized vehicle or combination exceeding 3.1m in width travelling on the Warrego Highway and Ipswich Road between Toowoomba and Rocklea (radius of 500m from Ipswich Road Rocklea) from 10.00am to 4.00pm on Sundays and 10.00am to sunset on a Saturday or public holiday is exempt from the above requirements.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/76	ALL				Height Width Length	4.30m 2.50m 12.50m	Christmas and New Year Restrictions An oversize vehicle or combination is not permitted to travel throughout Queensland from 24 December to 02 January of the following year inclusive. When Christmas Day falls on a Sunday or a Monday, restrictions applying to oversize vehicles and combinations commencing on the 24 December, will be extended to commence from 12 noon on the Friday prior to Christmas Day. When 1 January falls on a Friday, restrictions applying to oversize vehicles and combinations will be extended to 11.59pm on 03 January of that year. SPVs up to 3.5m wide operating under the National Class 1 Special Purpose Vehicle Notice are exempt from this requirement and can travel throughout Queensland at any time provided the travel complies with the (normal) public holiday, weekend, business day and time/location restrictions in the Notice.

Conditions current at 22/12/2023.

Disclaimer: The conditions and restrictions outlined in this Conditions of Operation report have been compiled from the most recent information practically available. Conditions are liable to change quickly, particularly due to weather. All care has been taken in providing this information. However, due care still needs to be taken when operating vehicles, particularly those in excess of regulation mass and/or dimension.

CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
00/77	ALL				Height Width Length	4.30m 2.50m 12.50m	Easter Restrictions No movement throughout Queensland, of an oversize vehicle or combination, from Thursday before Easter to the Tuesday after Easter inclusive. SPVs up to 3.5m wide operating under the National Class 1 Special Purpose Vehicle Notice are exempt from this requirement and can travel throughout Queensland at any time provided the travel complies with the normal public holiday, weekend, business day and time/location restrictions in the Notice.
00/83	ALL				Mass	14t Per Axle Group	The drive axle group of a prime mover operating in Queensland under an excess mass permit, guideline or notice must be no less than 14.0 tonne.
00/87	ALL				Mass	59.5t Total Mass	References to the Excess Mass Guideline, Form 11 Guideline, Form 11 Excess Mass Guideline or Form 11 have the same meaning as the Multi-State Class 1 Load Carrying Vehicles Mass Exemption Notice 2016 (Qld Schedule)
00/88	ALL				Height Width Length	5.00m 5.50m 35.00m	References to the Guideline for Excess Dimension Vehicles Carrying Indivisible Articles, Special Purpose Vehicles that require a Pilot or Escort in Queensland, Excess Dimension Guidelines, Form 4 Guideline, Form 4 Excess Dimension Guideline or Form 4 have the same meaning as the Multi-State Class 1 Load Carrying Vehicles Dimension Exemption Notice 2019 (Qld Schedule)

Conditions current at 22/12/2023.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
04/00	4	ALL			Width	8.00m	All applications for the movement of a house or other building in excess of 8m must provide a letter from a RPEQ, Structural Engineer or Quantity Surveyor confirming the house is structurally sound to withstand movement and travel.
04/00	4	ALL			Width	8.00m	All applications for house/building in excess of 8.0m wide must include a Registered Professional Engineer (RPEQ) letter explaining why the building can't be cut down to reduce the dimensions.
04/00	4	ALL			Height Width Length	5.40m 8.00m 45.00m	All applications for loads in excess of 8.0m wide, 5.4m high or 45m long must include a Traffic Management Plan (TMP). A detailed TMP template can be downloaded from the Queensland Police website via: https://www.police.qld.gov.au/units/police-wide-load-escorts/traffic-management-plans. Applications for access will not be assessed without a TMP.
04/00	4	ALL			Width	8.50m	A Departmental Officer may accompany any loads in excess of 8.5 metres wide. The Departments Roma District Office at 30 McDowall Street, Roma is to be advised of the intended time of movement at least 48 hours in advance and during business hours, 8.30am - 5.00pm Monday to Friday - telephone (07) 4622 9511.
04/00	4	ALL			Width	8.00m	All operators with loads widths of 8m and over must notify the South West District Office on 46229529 at least 48hour (2 business days) prior to commencing travel.

Conditions current at 22/12/2023.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
04/00	4	ALL			Width	6.00m	The Departments Roma District Office at 30 McDowall Street, Roma is to be advised of the intended time of movement at least 24 hours in advance and during business hours, 8.30am - 5.00pm Monday to Friday - telephone (07) 4622 9511.
04/00	4	ALL			Width	2.50m	EXCEPTION TO WET WEATHER RESTRICTIONS: Harvesters being transported by truck or under their own power will be permitted to move during wet weather restriction periods. Operators should note that movement will be entirely at their own risk and they MUST comply with the following condition: 1. For harvesters being transported by truck, a speed limit of 30km/hr will apply wherever there is no edge line.
04/00	4	ALL			Width	3.70m	BRIDGE WIDTH CLEARANCES The bridges throughout South Western District have various bridge rail to bridge rail widths of 3.7 m or more. Rail to rail widths for affected bridges are listed in following road specific conditions. Loads wider than rail to rail widths must be able to be raised at least 1.5 m above the road surface and approval MUST be obtained from the Main Roads District Office in Roma (Ph. 07 4622 9511) prior to movement.

Conditions current at 22/12/2023.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
06/00	6	ALL			Width	8.00m	Signal infrastructure exists on state-controlled roads in the Rockhampton, Gladstone, Yeppoon and Biloela urban areas. As part of the route assessment process, it is the operator's responsibility to ensure there will be no conflicts with TMR signal infrastructure. If a potential conflict is identified, the TMR District Office should be contacted to confirm if temporary alterations to signals can be accommodated. Email Central.Road.Operations@tmr.qld.gov.au to request this information.
06/00	6	ALL			Width	10.00m	The max. allowable width of a load that will be permitted to travel on the roads throughout Central District shall not exceed 10.0m wide. In special circumstances, and at the total discretion of the Department of Transport and Main Roads, loads in excess of 10.0m wide may be approved.
06/00	6	ALL			Width	3.50m	Various bridges throughout Central District have limited widths between the bridge rails. The rails are typically in excess of 1.0m high above the road surface. It is the operator s responsibility to ensure the load can travel the proposed route without impacting the TMR bridge infrastructure.

Conditions current at 22/12/2023.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
06/00	6	ALL			Height Width	5.40m 8.00m	Route Assessments (RAs) For all loads in excess of 8.0m wide and 5.4m high, Route Assessments(RAs) are to be submitted to the Permit Office (Rockhampton - Fax 49278149, or email centralpermits@tmr.qld.gov.au) for District approval. A permit will not be issued until a RA has been approved by the District. Guidelines for the preparation of an RA are available by contacting the Rockhampton Permit Office (ph. 49311637). ACCOMPANIMENT FEES - for Central District are to be. $145 per hour plus GST.
06/00	6	ALL			Width	4.60m	Oncoming traffic is to be managed far enough ahead of the load so that NO oncoming vehicles (trucks or cars etc) are required to get off the bitumen seal area to allow the load to pass.
06/10E	6	10E	Bruce Highway (Benaraby - Rockhampton)		Width	3.50m	Due to peak hour traffic, loads over 3.5m wide are not permitted to travel on the urban section of the Bruce Hwy (10E) between the hours of 0700-0900 and 1500-1800, Monday to Friday. This restriction applies to the section between the intersection with Burnett Hwy (41F) and the intersection with Fitzroy St [Ch 114.400-121.050].

Conditions current at 22/12/2023.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
06/10E	6	10E	Bruce Highway (Benaraby - Rockhampton)	East End-Aldoga Rail Overpass - Bridge. Through Distance: 39.558	Height	7.16m	
06/181	6	181	Gladstone - Mt Larcom Road		Width	3.50m	Due to peak hour traffic, loads over 3.5m wide are not permitted to travel on the urban section of Gladstone-Mt Larcom Rd (181) between the hours of 0700-0900 and 1500-1800, Monday to Friday. This restriction applies to the section between the intersection with the Dawson Hwy (46A) and the intersection with Landing Rd [Ch 0.000-12.292].
06/181	6	181	Gladstone - Mount Larcom Road	Glenlyon St Rail Overpass - Bridge. Through Distance: 0.114	Height	4.70m	Railway Overbridge on Glenlyon St between Bramston St & Railway St Cw2 & Cw3.
06/181	6	181	Gladstone - Mount Larcom Road	Glenlyon St Rail Overpass - Bridge. Through Distance: 0.123	Height	4.70m	Railway Overbridge on Glenlyon St between Bramston St and Railway St.
06/181	6	181	Gladstone - Mount Larcom Road	Mt Miller-Landing Rail Overpass - Bridge. Through Distance: 10.868	Height	6.84m	Mt Millar Landing Railway Overbridge 14.1 km north of Gladstone.
06/181	6	181	Gladstone - Mount Larcom Road	Conveyor Belt. Through Distance: 11.514	Height	8.00m	
06/183	6	183	Gladstone Port Access Road	Goondoon Street Overpass - Bridge. Through Distance: 0.226	Height	5.20m	Width clearance between concrete barriers under the bridge is limited to 8.2m.

Conditions current at 22/12/2023.

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
06/26A	6	26A	Leichhardt Highway (Westwood - Taroom)		Height Width	5.00m 4.50m	Wide loads travelling through Taroom Town Centre are required to negotiate with care pass "The Leichhardt Tree" which is heritage listed
06/46A	6	46A	Dawson Highway (Gladstone - Biloela)		Width	3.50m	Due to peak hour traffic, loads over 3.5m wide are not permitted to travel on the urban section of the Dawson Hwy (46A) between the hours of 0700-0900 and 1500-1800, Monday to Friday. This restriction applies to the section between the intersection with Gladstone-Mt Larcom Rd (181) and the intersection with the Bruce Hwy (10E) [Ch 0.000-19.050].
06/46A	6	46A	Dawson Highway (Gladstone - Biloela)	Dawson Highway Overpass - Bridge. Through Distance: 19.07	Height	6.52m	
06/46A	6	46A	Dawson Highway (Gladstone - Biloela)	Dawson Highway Overpass - Bridge. Through Distance: 19.09	Height	6.75m	
06/46A	6	46A	Dawson Highway (Gladstone - Biloela)	Dawson Hwy Calliope Overpass Over Bruce Hwy - Bridge. Through Distance: 19.108	Height	6.35m	
06/46A	6	46A	Dawson Highway (Gladstone - Biloela)	Dawson Hwy Calliope Overpass Over Bruce Hwy - Bridge. Through Distance: 19.127	Height	6.67m	

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CODE	DISTRICT NUMBER	ROAD NUMBER	ROAD NAME	STRUCTURE/ LOCATION	RESTRICTION TYPE	SIZE/ MASS	RESTRICTION
06/46A	6	46A	Dawson Highway (Gladstone - Biloela)	Moura Short Line Deep Creek Overpass - Bridge. Through Distance: 31.491	Height	6.10m	Railway Overbridge at Deep Ck over Deep Creek Road Bridge.
06/46A	6	46A	Dawson Highway (Gladstone - Biloela)	Callide Mines Haul Road Overpass - Bridge. Through Distance: 100.855	Height	5.70m	Callide Mines Haul Road at Argoon on Dawson Hwy.

APPENDIX C

Project Transport Route 1
Swept Path Assessment

CONCEPT DRAWING. FOR DISCUSSION ONLY.

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Traffic Engineering and Transport Planning
Suite 2601, 21 Mary Street Brisbane Q 4000
t : 07 3221 3503 | e : contact@cambray.com.au

DRAWING TITLE
Candidate Route Assessment
Port of Gladstone to TWF
84.3m V172 Blade(R59) on 63m Trailer
ID1 - MacFarlane Rd & Hanson Rd

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	05.07.24	Route Analysis - Preliminary	J.D.	A.D.

PRELIMINARY
NOT FOR CONSTRUCTION

JOB No. // DRAWING No.
ERM0123-02 // SK01

DATE
05.07.24

SCALE (A3)
As Shown

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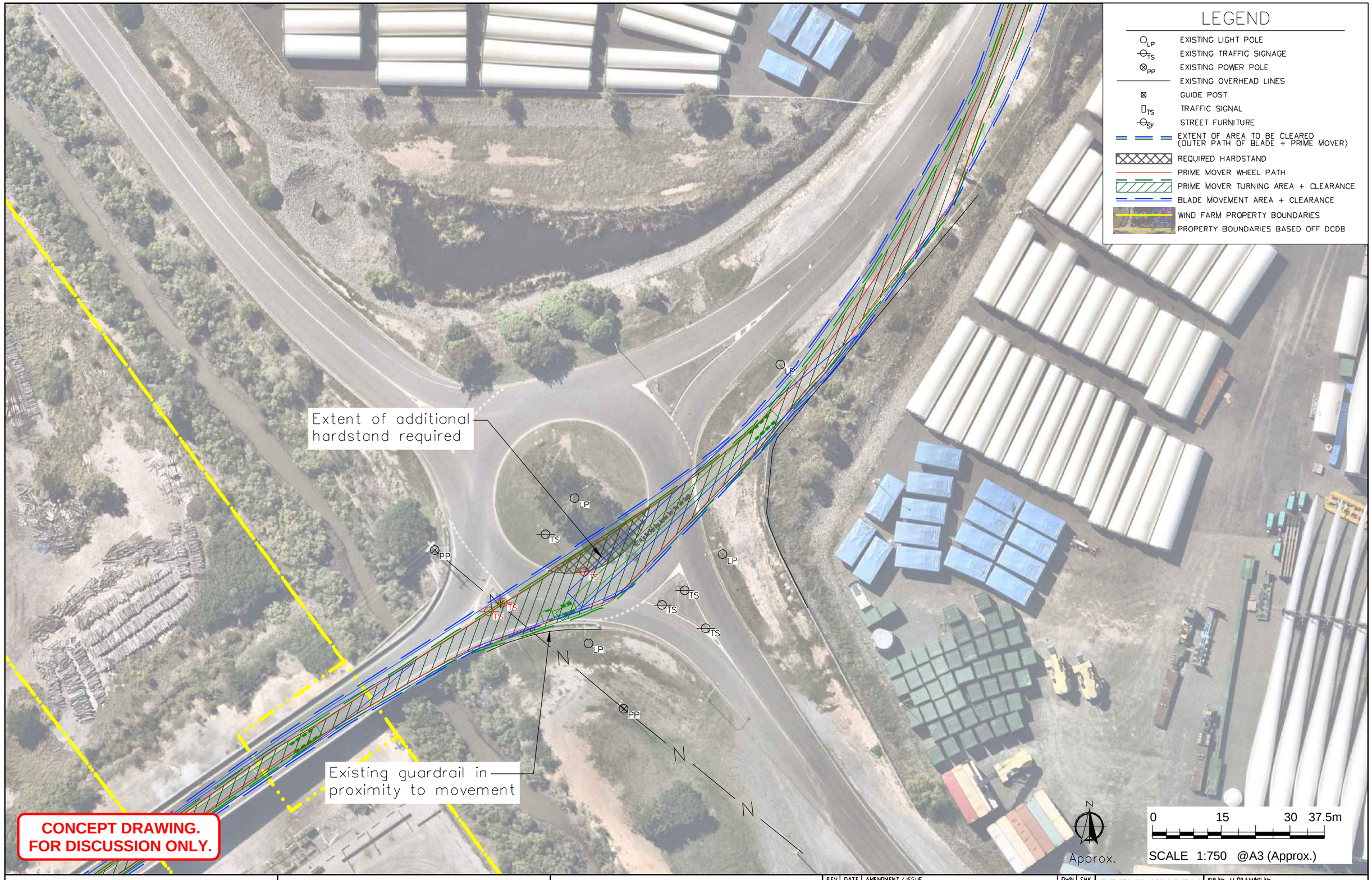

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone to TWF
84.3m V172 Blade(R59) on 63m Trailer
ID2 - Hopper Rd Roundabout

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	05.07.24	Route Analysis - Preliminary	J.D.	A.D.

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JOB No. // DRAWING No.
ERM0123-02 // SK02

DATE
05.07.24

SCALE (A3)
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LEGEND

- EXISTING LIGHT POLE
- EXISTING TRAFFIC SIGNAGE
- EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TRAFFIC SIGNAL
- STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- PROPERTY BOUNDARIES BASED OFF DCDB

0 20 40 60 80 100m

SCALE 1:2000 @A3 (Approx.)

0 10 20 30 40 50m

SCALE 1:1000 @A3 (Approx.)

0 15 30 37.5m

SCALE 1:750 @A3 (Approx.)

Approx.

CONCEPT DRAWING.
FOR DISCUSSION ONLY.

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID3 - Port Access Rd & Hanson Rd

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	05.07.24	Route Analysis - Preliminary	J.D.	A.D.

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JOB No. // DRAWING No.
ERM0123-02 // SK03

DATE
05.07.24

SCALE (A3)
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LEGEND

- EXISTING LIGHT POLE
- EXISTING TRAFFIC SIGNAGE
- EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TRAFFIC SIGNAL
- STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- PROPERTY BOUNDARIES BASED OFF DCDB

0 50 100 125m

SCALE 1:2500 @A3 (Approx.)

CONCEPT DRAWING. FOR DISCUSSION ONLY.

0 25 50 62.5m

SCALE 1:1250 @A3 (Approx.)

Existing guardrail

Extent of additional hardstand required

Movement requires over hang to swing over guardrail

N

Approx.

0 25 50 62.5m

SCALE 1:1250 @A3 (Approx.)

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID4 - Hanson Rd Roundabout

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	05.07.24	Route Analysis - Preliminary	J.D.	A.D.

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ERM0123-02 // SK04

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DATE
05.07.24

SCALE (A3)
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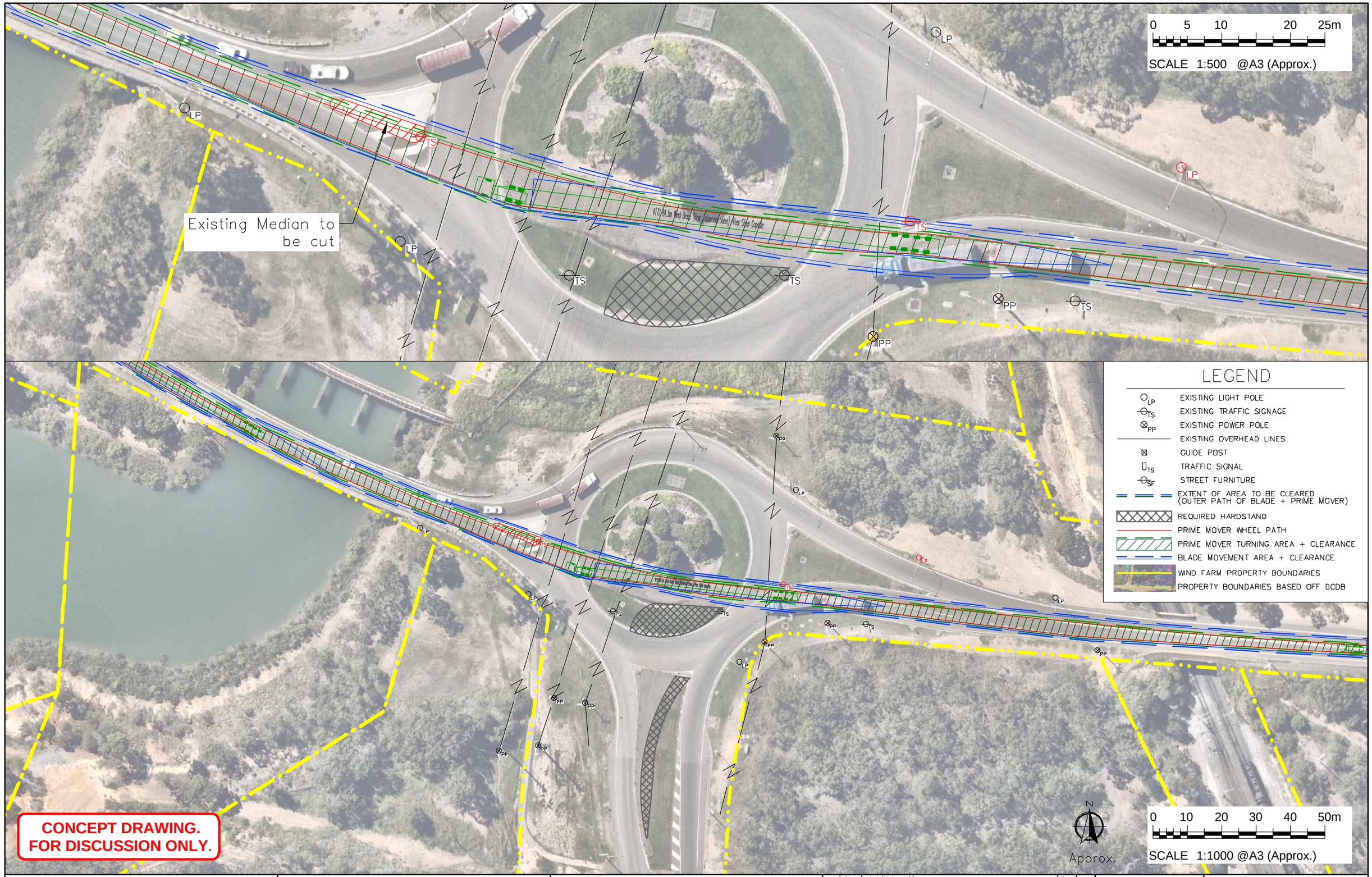

LEGEND

- LP — EXISTING LIGHT POLE
- TS — EXISTING TRAFFIC SIGNAGE
- PP — EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TS — TRAFFIC SIGNAL
- SF — STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- PROPERTY BOUNDARIES BASED OFF DCDB

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID5 - Hanson Rd Roundabout

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	05.07.24	Route Analysis - Preliminary	J.D.	A.D.

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DATE
05.07.24

Scale (A3)
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LEGEND

- EXISTING LIGHT POLE
- EXISTING TRAFFIC SIGNAGE
- EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TRAFFIC SIGNAL
- STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- PROPERTY BOUNDARIES BASED OFF DCDB

0 20 40 60 80 100m

SCALE 1:2000 @A3 (Approx.)

**CONCEPT DRAWING.
FOR DISCUSSION ONLY.**

0 15 30 37.5m

SCALE 1:750 @A3 (Approx.)

N

Approx.

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID6 - Hanson Rd Roundabout

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	05.07.24	Route Analysis - Preliminary	J.D.	A.D.

PRELIMINARY
NOT FOR CONSTRUCTION

JOB No. // DRAWING No.
ERM0123-02 // SK06

DATE
05.07.24

SCALE (A3)
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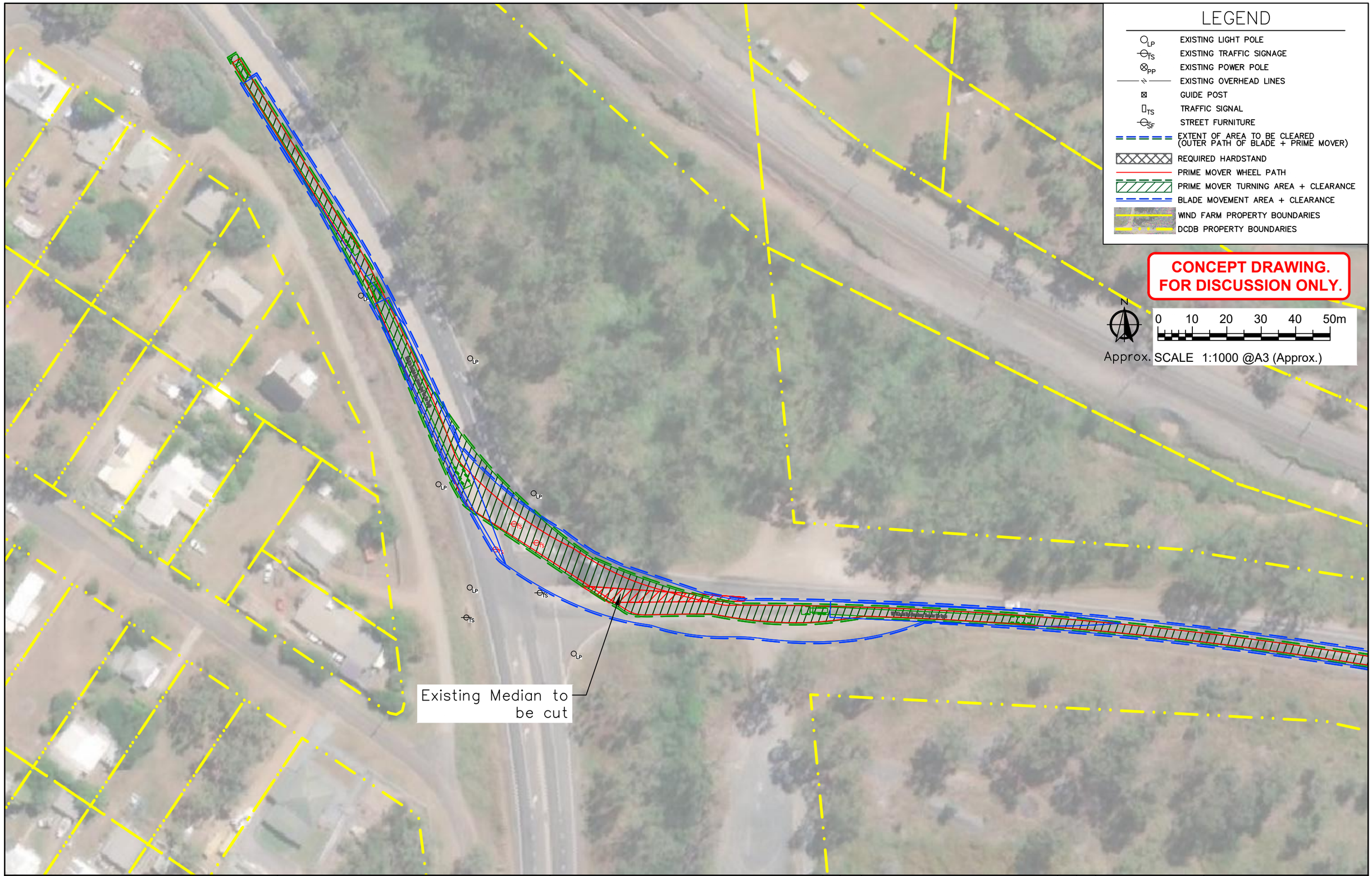

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID7 - Gladstone Mount Larcome Rd & Bruce Hwy

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	08.12.23	Route Analysis - Preliminary	V.L.	J.D.

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JOB No. // DRAWING No.
ERM0123-02 // SK07

DATE
08.12.23

~Scale (A3)
As Shown

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Movement requires removal of two(2) light poles and a signage on the western side of south approach to intersection

N

Approx.

CONCEPT DRAWING. FOR DISCUSSION ONLY.

LEGEND

- EXISTING LIGHT POLE
- EXISTING TRAFFIC SIGNAGE
- EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TRAFFIC SIGNAL
- STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- DCDB PROPERTY BOUNDARIES

0 50 100 125m

SCALE 1:2500 @A3 (Approx.)

0 10 20 30 40 50m

SCALE 1:1000 @A3 (Approx.)

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID8 - Bruce Hwy & Capricorn Hwy

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	08.12.23	Route Analysis - Preliminary	V.L.	J.D.

PRELIMINARY
NOT FOR CONSTRUCTION

JOB No. // DRAWING No.
ERM0123-02 // SK08

DATE
08.12.23

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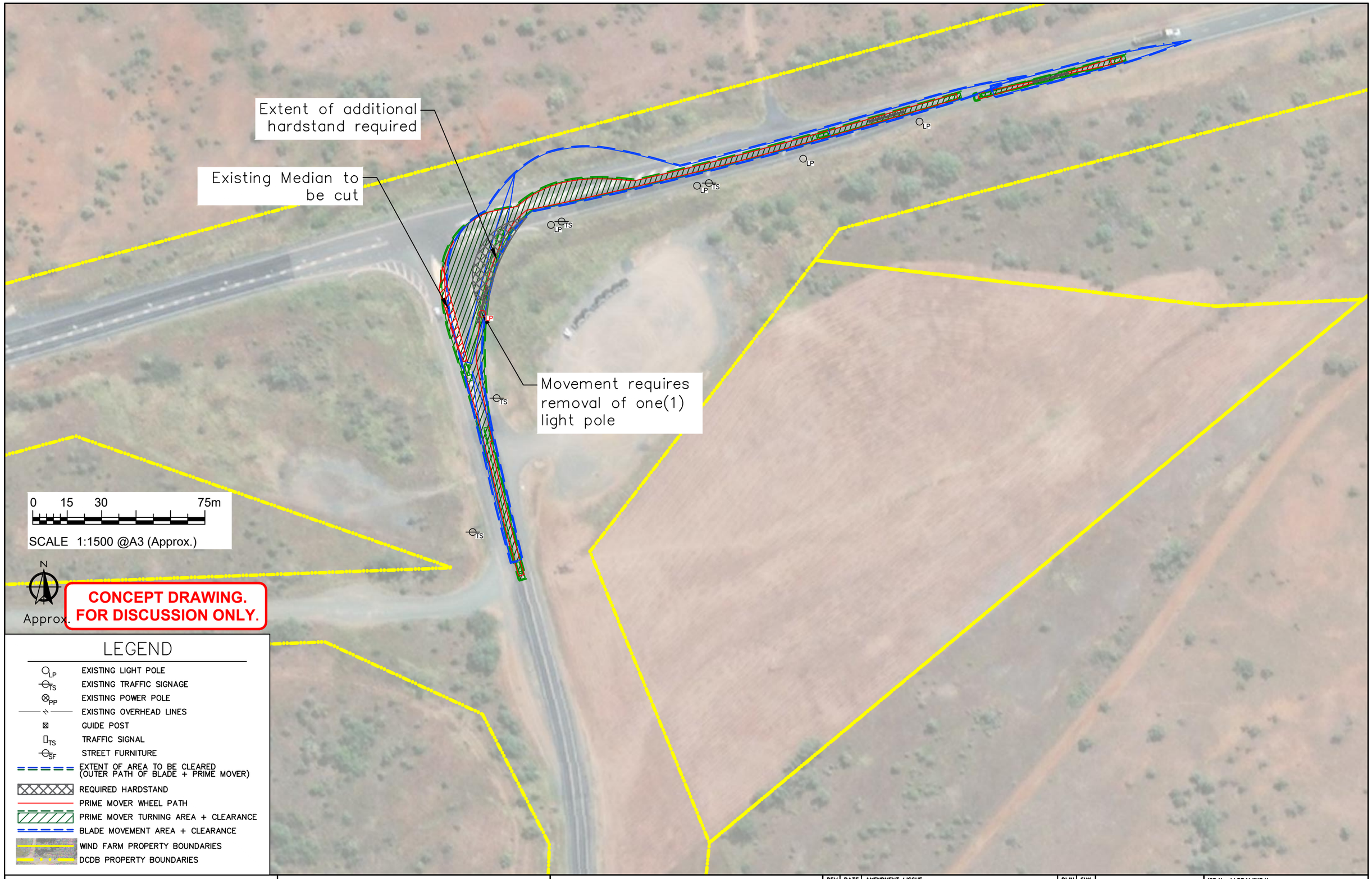

LEGEND

- EXISTING LIGHT POLE
- EXISTING TRAFFIC SIGNAGE
- EXISTING POWER POLE
- EXISTING OVERHEAD LINES
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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID9 - Capricorn Highway onto Leichhardt Highway

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	08.12.23	Route Analysis - Preliminary	V.L.	J.D.

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JOB No. // DRAWING No.
ERM0123-02 // SK09

DATE
08.12.23

~Scale (A3)
As Shown

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Movement requires removal of two (2) light poles

0 15 30 75m

SCALE 1:1500 @A3 (Approx.)

N

Approx.

CONCEPT DRAWING. FOR DISCUSSION ONLY.

LEGEND

- LP — EXISTING LIGHT POLE
- TS — EXISTING TRAFFIC SIGNAGE
- PP — EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TS — TRAFFIC SIGNAL
- SF — STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- DCDB PROPERTY BOUNDARIES

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID9b - Capricorn Hwy onto Leichhardt Hwy

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	08.12.23	Route Analysis - Preliminary	V.L.	J.D.

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JOB No. // DRAWING No.
ERM0123-02 // SK09b

DATE
08.12.23

~Scale (A3)
As Shown

PREPARED FOR
Discussion Only

0 15 30 75m

SCALE 1:1500 @A3 (Approx.)

N

Approx.

**CONCEPT DRAWING.
FOR DISCUSSION ONLY.**

Existing Median to be cut

LEGEND

- O_{LP} EXISTING LIGHT POLE
- $\ominus_{TS}$ EXISTING TRAFFIC SIGNAGE
- $\otimes_{PP}$ EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- $\square_{TS}$ TRAFFIC SIGNAL
- $\ominus_{SF}$ STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- DCDB PROPERTY BOUNDARIES

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID10 - Leichhardt Highway Movement in Dululu

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	08.12.23	Route Analysis - Preliminary	V.L.	J.D.

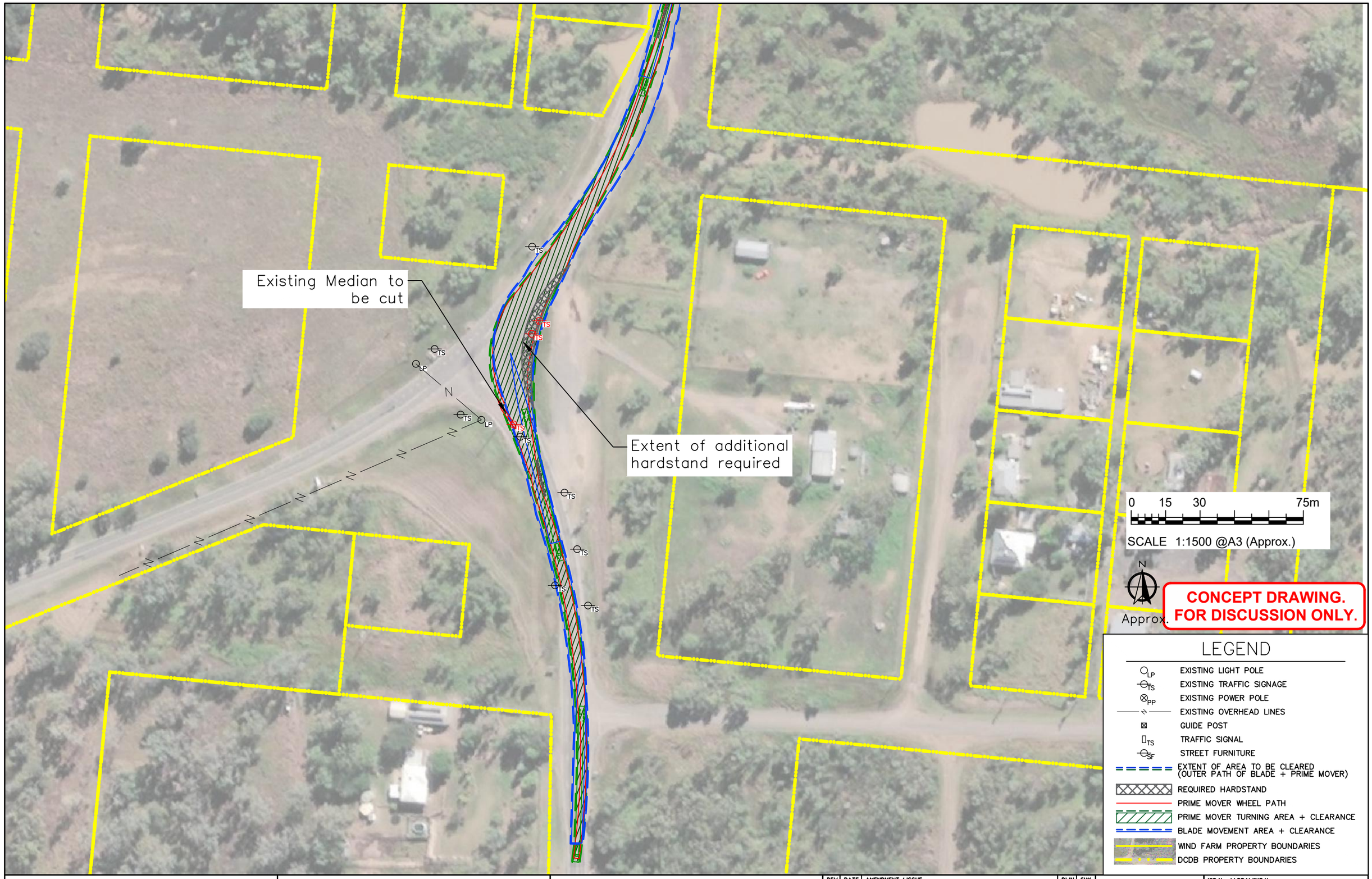
PRELIMINARY
NOT FOR CONSTRUCTION

JOB No. // DRAWING No.
ERM0123-02 // SK10

DATE
08.12.23

~Scale (A3)
As Shown

PREPARED FOR
Discussion Only



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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID11 - Leichhardt Highway movement in Banana

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	08.12.23	Route Analysis - Preliminary	V.L.	J.D.

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08.12.23

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID12 - Leichhardt Highway & Defence Road

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	08.12.23	Route Analysis - Preliminary	V.L.	J.D.

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ERM0123-02 // SK12

DATE
08.12.23

~Scale (A3)
As Shown

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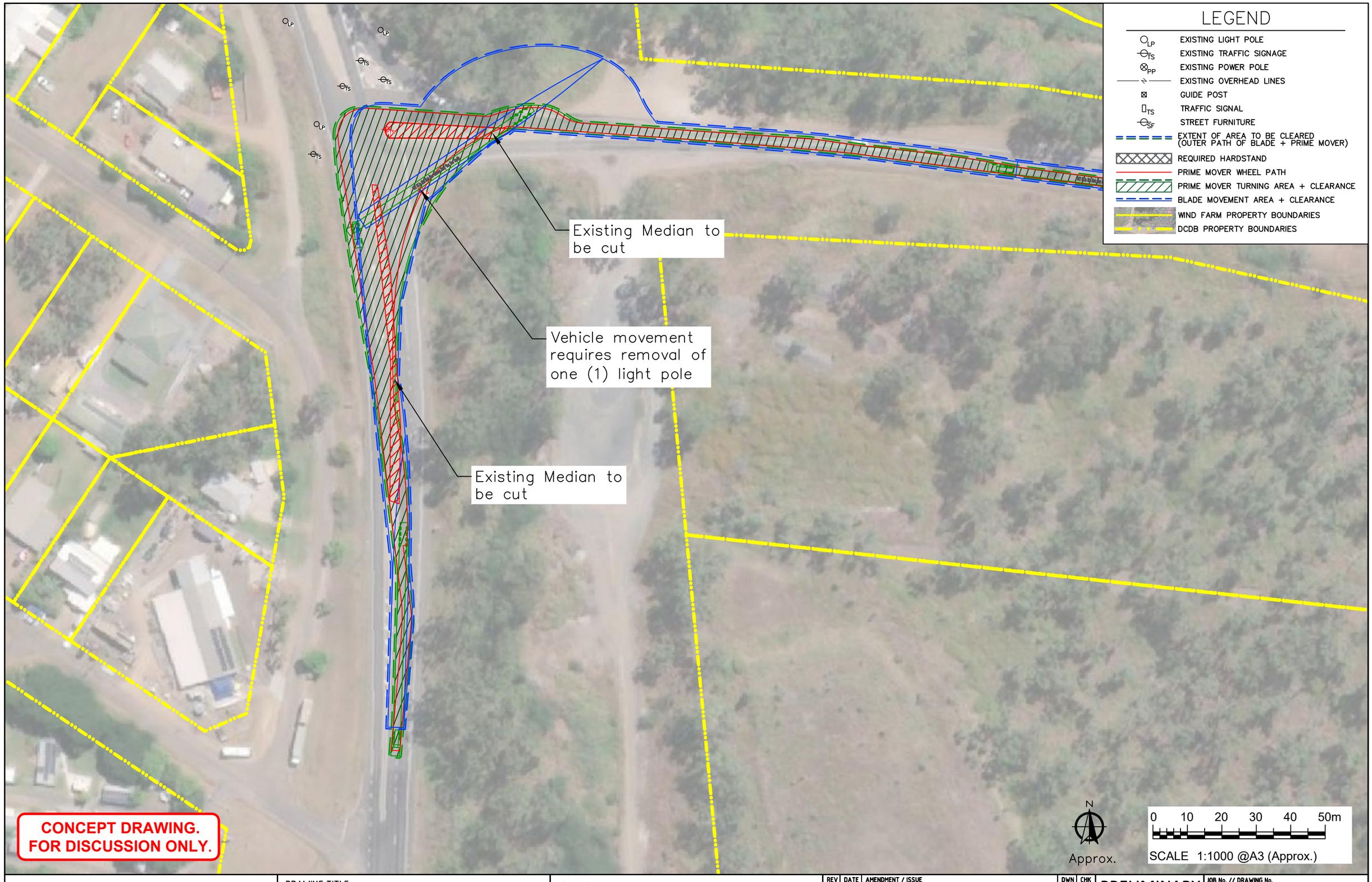
APPENDIX D

Project Transport Route 2
Swept Path Assessment



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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade (R59) on 63m Trailer
ID7 - Gladstone Mount Larcom Rd & Bruce Hwy

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	14.12.23	Route Analysis - Preliminary	V.L.	J.D.

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ERM0123-02 // SK07

DATE
14.12.23

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LEGEND

- EXISTING LIGHT POLE
- EXISTING TRAFFIC SIGNAGE
- EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TRAFFIC SIGNAL
- STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- DCDB PROPERTY BOUNDARIES

Median to be modified for movement

Vehicle movement requires removal of one (1) light pole

N

Approx.

0 10 20 30 40 50m

SCALE 1:1000 @A3 (Approx.)

CONCEPT DRAWING. FOR DISCUSSION ONLY.

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade (R59) on 63m Trailer
ID8 - Bruce Hwy to Dawson Hwy

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	14.12.23	Route Analysis - Preliminary	V.L.	J.D.

PRELIMINARY
NOT FOR CONSTRUCTION

JOB No. // DRAWING No.
ERM0123-02 // SK08

DATE
14.12.23

~Scale (A3)
As Shown

PREPARED FOR
Discussion Only

LEGEND

- EXISTING LIGHT POLE (LP)
- EXISTING TRAFFIC SIGNAGE (TS)
- EXISTING POWER POLE (PP)
- EXISTING OVERHEAD LINES
- GUIDE POST
- TRAFFIC SIGNAL (TS)
- STREET FURNITURE (SF)
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- DCDB PROPERTY BOUNDARIES

CONCEPT DRAWING.
FOR DISCUSSION ONLY.

N
Approx.

0 10 20 30 40 50m
SCALE 1:1000 @A3 (Approx.)

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID9 - Kev Collett Bridge at Calliope

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	14.12.23	Route Analysis - Preliminary	V.L.	J.D.

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NOT FOR CONSTRUCTION

JOB No. // DRAWING No.
ERM0123-02 // SK09

DATE: 14.12.23
~Scale (A3): As Shown
PREPARED FOR: Discussion Only

LEGEND

- EXISTING LIGHT POLE
- EXISTING TRAFFIC SIGNAGE
- EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TRAFFIC SIGNAL
- STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- DCDB PROPERTY BOUNDARIES

Vehicle movement requires removal of one (1) light pole

Extent of extra hardstand required

Median to be modified for movement

CONCEPT DRAWING. FOR DISCUSSION ONLY.

N

Approx.

0 10 20 30 40 50m

SCALE 1:1000 @A3 (Approx.)

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID10 - Roundabout at Dawson Hwy at Bioela

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	14.12.23	Route Analysis - Preliminary	V.L.	J.D.

PRELIMINARY
NOT FOR CONSTRUCTION

JOB No. // DRAWING No.
ERM0123-02 // SK10

DATE
14.12.23

~Scale (A3)
As Shown

PREPARED FOR
Discussion Only

LEGEND

- LP — EXISTING LIGHT POLE
- TS — EXISTING TRAFFIC SIGNAGE
- PP — EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TS — TRAFFIC SIGNAL
- SF — STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- DCDB PROPERTY BOUNDARIES

Median to be cut

Overhang signal with low clearance to avoid

CONCEPT DRAWING.
FOR DISCUSSION ONLY.

N
Approx.

0 15 30 37.5m

SCALE 1:750 @A3 (Approx.)

N
Approx.

0 20 40 60 80 100m

SCALE 1:2000 @A3 (Approx.)

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID11 - Burnett Hwy and Dawson Hwy

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	14.12.23	Route Analysis - Preliminary	V.L.	J.D.

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NOT FOR CONSTRUCTION

JOB No. // DRAWING No.
ERM0123-02 // SK11

DATE
14.12.23

~Scale (A3)
As Shown

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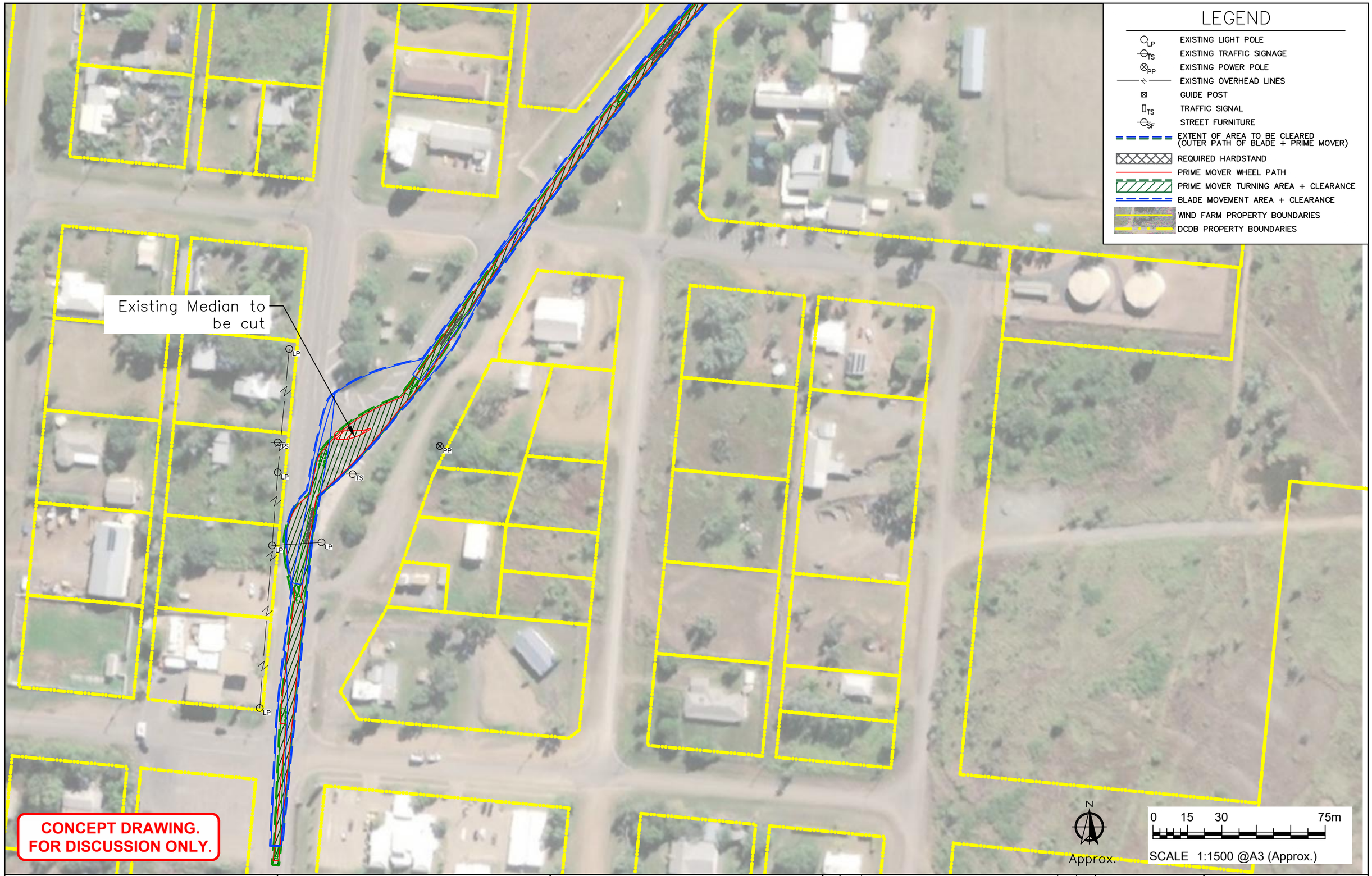

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DRAWING TITLE
Candidate Route Assessment
Port of Gladstone To TWF
84.3m V172 Blade(R59) on 63m Trailer
ID12 - Dawson Highway at Banana

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	14.12.23	Route Analysis - Preliminary	V.L.	J.D.

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~Scale (A3)
As Shown

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APPENDIX E

Route Assessment- Alternative Port
Port Alma
Swept Path Assessment

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DRAWING TITLE
Candidate Route Assessment
Alternative Port - Port Alma to TWF
84.6m V172 Blade (R59) on 63m Trailer
ID1 - Port Access Gate

LOCATION
Theodore Wind Farm
Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	19.12.23	Route Analysis - Preliminary	J.D.	A.D.

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ERM0123-02 // SK01

DATE
19.12.23

Scale (A3)
As Shown

PREPARED FOR
Discussion Only

Untitled Map

Write a description for your map.

Legend

Port Alma

PP

Google Earth

CONCEPT DRAWING.
FOR DISCUSSION ONLY.

N

0 20 40 60 80 100m

SCALE 1:2000 @A3 (Approx.)

LEGEND

- O_{LP} EXISTING LIGHT POLE
- O_{TS} EXISTING TRAFFIC SIGNAGE
- $\otimes_{PP}$ EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- $\square_{TS}$ TRAFFIC SIGNAL
- O_{SF} STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROJECT EXTENTS
- PROPERTY BOUNDARIES BASED OFF DCDB

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DRAWING TITLE

Candidate Route Assessment

Alternative Port - Port Alma to TWF

84.6m V172 Blade (R59) on 63m Trailer

ID2 - Bajool Port Alma Road

LOCATION

Theodore Wind Farm

Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	19.12.23	Route Analysis - Preliminary	J.D.	A.D.

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JOB No. // DRAWING No.
ERM0123-02 // SK02

DATE
19.12.23

SCALE (A3)
As Shown

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LEGEND

- EXISTING LIGHT POLE
- EXISTING TRAFFIC SIGNAGE
- EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TRAFFIC SIGNAL
- STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROJECT EXTENTS
- PROPERTY BOUNDARIES BASED OFF DCDB

CONCEPT DRAWING.
FOR DISCUSSION ONLY.

0 20 40 60 80 100m

SCALE 1:2000 @A3 (Approx.)

N

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DRAWING TITLE
Candidate Route Assessment
Alternative Port - Port Alma to TWF
84.6m V172 Blade (R59) on 63m Trailer
ID3 - Bajool Port Alma Road

LOCATION
Theodore Wind Farm
Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	19.12.23	Route Analysis - Preliminary	J.D.	A.D.

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ERM0123-02 // SK01

DATE
19.12.23

SCALE (A3)
As Shown

PREPARED FOR
Discussion Only

CONCEPT DRAWING.
FOR DISCUSSION ONLY.

N

0 10 20 30 40 50m

SCALE 1:1000 @A3 (Approx.)

LEGEND

- LP — EXISTING LIGHT POLE
- TS — EXISTING TRAFFIC SIGNAGE
- PP — EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TS — TRAFFIC SIGNAL
- SF — STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROJECT EXTENTS
- PROPERTY BOUNDARIES BASED OFF DCDB

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DRAWING TITLE
Candidate Route Assessment
Alternative Port - Port Alma to TWF
84.6m V172 Blade (R59) on 63m Trailer
ID4 - Bajool Port Alma Road

LOCATION
Theodore Wind Farm
Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	19.12.23	Route Analysis - Preliminary	J.D.	A.D.

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ERM0123-02 // SK04

DATE
19.12.23

SCALE (A3)
As Shown

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FOR DISCUSSION ONLY.

N

0 25 50 62.5m

SCALE 1:1250 @A3 (Approx.)

LEGEND

- LP — EXISTING LIGHT POLE
- TS — EXISTING TRAFFIC SIGNAGE
- PP — EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TS — TRAFFIC SIGNAL
- SF — STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROJECT EXTENTS
- PROPERTY BOUNDARIES BASED OFF DCDB

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DRAWING TITLE
Candidate Route Assessment
Alternative Port - Port Alma to TWF
84.6m V172 Blade (R59) on 63m Trailer
ID5 - Bajool Port Alma Road

LOCATION
Theodore Wind Farm
Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	19.12.23	Route Analysis - Preliminary	J.D.	A.D.

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ERM0123-02 // SK05

DATE
19.12.23

SCALE (A3)
As Shown

PREPARED FOR
Discussion Only

LEGEND

- EXISTING LIGHT POLE
- EXISTING TRAFFIC SIGNAGE
- EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TRAFFIC SIGNAL
- STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROJECT EXTENTS
- PROPERTY BOUNDARIES BASED OFF DCDB

CONCEPT DRAWING.
FOR DISCUSSION ONLY.

0 10 20 30 40 50m

SCALE 1:1000 @A3 (Approx.)

N

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DRAWING TITLE
Candidate Route Assessment
Alternative Port - Port Alma to TWF
84.6m V172 Blade (R59) on 63m Trailer
ID6 - Bajool Port Alma Road

LOCATION
Theodore Wind Farm
Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	19.12.23	Route Analysis - Preliminary	J.D.	A.D.

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ERM0123-02 // SK06

DATE
19.12.23

SCALE (A3)
As Shown

PREPARED FOR
Discussion Only

CONCEPT DRAWING.
FOR DISCUSSION ONLY.

N

0 10 20 30 40 50m

SCALE 1:1000 @A3 (Approx.)

LEGEND

- O_{LP} EXISTING LIGHT POLE
- $\ominus_{TS}$ EXISTING TRAFFIC SIGNAGE
- $\otimes_{PP}$ EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- $\square_{TS}$ TRAFFIC SIGNAL
- $\ominus_{SF}$ STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROJECT EXTENTS
- PROPERTY BOUNDARIES BASED OFF DCDB

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DRAWING TITLE
Candidate Route Assessment
Alternative Port - Port Alma to TWF
84.6m V172 Blade (R59) on 63m Trailer
ID7 - Bajool Port Alma Road

LOCATION
Theodore Wind Farm
Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	19.12.23	Route Analysis - Preliminary	J.D.	A.D.

DISCLAIMER
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PRELIMINARY
NOT FOR CONSTRUCTION

JOB No. // DRAWING No.
ERM0123-02 // SK07

DATE
19.12.23

SCALE (A3)
As Shown

PREPARED FOR
Discussion Only

Median to be modified for movement

CONCEPT DRAWING. FOR DISCUSSION ONLY.

N

0 10 20 30 40 50m

SCALE 1:1000 @A3 (Approx.)

LEGEND

- LP — EXISTING LIGHT POLE
- TS — EXISTING TRAFFIC SIGNAGE
- PP — EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TS — TRAFFIC SIGNAL
- SF — STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROJECT EXTENTS
- PROPERTY BOUNDARIES BASED OFF DCDB

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DRAWING TITLE
Candidate Route Assessment
Alternative Port - Port Alma to TWF
84.6m V172 Blade (R59) on 63m Trailer
ID8 - Bajool Port Alma Road & Bruce Highway

LOCATION
Theodore Wind Farm
Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	19.12.23	Route Analysis - Preliminary	J.D.	A.D.

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JOB No. // DRAWING No.
ERM0123-02 // SK33

DATE
19.12.23

SCALE (A3)
As Shown

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APPENDIX F

Route Assessment - Alternative Port
Port of Gladstone – Fishermans Landing
Swept Path Assessment

CONCEPT DRAWING.
FOR DISCUSSION ONLY.

LEGEND

- EXISTING LIGHT POLE
- EXISTING TRAFFIC SIGNAGE
- EXISTING POWER POLE
- EXISTING OVERHEAD LINES
- GUIDE POST
- TRAFFIC SIGNAL
- STREET FURNITURE
- EXTENT OF AREA TO BE CLEARED (OUTER PATH OF BLADE + PRIME MOVER)
- REQUIRED HARDSTAND
- PRIME MOVER WHEEL PATH
- PRIME MOVER TURNING AREA + CLEARANCE
- BLADE MOVEMENT AREA + CLEARANCE
- WIND FARM PROPERTY BOUNDARIES
- DCDB PROPERTY BOUNDARIES

Extent of additional hardstand required

Two(2) street light to be removed to facilitate movement

N

0 10 20 30 40 50m

SCALE 1:1000 @A3 (Approx.)

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DRAWING TITLE
Candidate Route Assessment
Alternative Port - Fishermans Landing to TWF
84.3m V172 Blade(R59) on 63m Trailer
ID1

LOCATION
Theodore Wind Farm
West of Theodore, Queensland

REV	DATE	AMENDMENT / ISSUE	DWN	CHK
A	08.12.23	Route Analysis - Preliminary	V.L.	J.D.

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08.12.23

~Scale (A3)
As Shown

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