



Traffic & Transportation Direction

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MAD Project (nee Dedicated Connection)

442-542 Mount Atkinson Road, Truganina

Traffic Impact Assessment

December 2025

Ref: 1140d rep 251216 final

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442-542 Mount Atkinson Road, Truganina

Traffic Impact Assessment

Prepared for: MVC Services

Status: Final report

Date: 16 December 2025

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Appendix A

Swept Path Assessment

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1. Background

1.1 Introduction

Amber Organisation has been engaged by MVC Services to advise on the traffic and parking matters of the proposed dedicated 220kV connection (The Project) between the Truganina Terminal Station (TNTS) development located at 442-542 Mount Atkinson Road, Truganina and the Data Centre development (MAD) located at 1 Oroya Drive, Truganina, collectively referred to as the Project Area. Figure 1 shows the proposed layout of the sites.

The Project involves three components as follows:

- 220kV connection to the Shared Connection 220kV switchyard at the TNTS site.
- Approximately 600m Underground 220kV cable between the TNTS and the Data Centre.
- 220kV / 33kV substation at the Data Centre site.

Construction is expected to take approximately 18 months. A maximum workforce of 50 people would be on-site during peak construction periods.

Construction materials, plant and equipment will generally be sourced from across the Melbourne metropolitan area. Substation transformers may be delivered from Port of Melbourne, Port of Geelong or Glen Waverley.

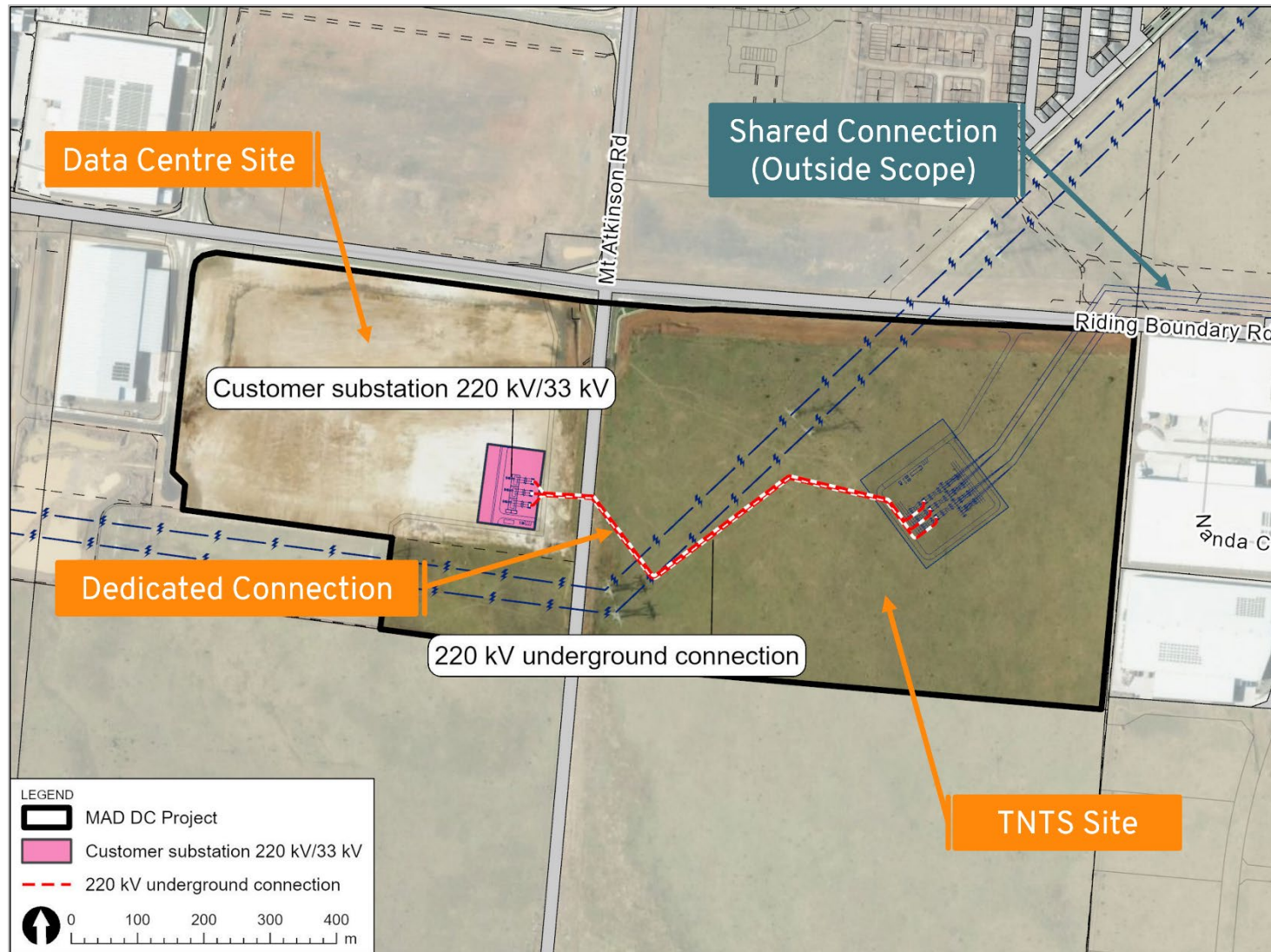
The impacts and proposed mitigation for traffic generated by the construction and operation phases of the dedicated connection are addressed in this report in accordance with relevant regulatory requirements and guidelines.

The development of the TNTS along with three separate customer sites were previously assessed in a Traffic Impact Assessment (TIA) prepared by Amber, dated 10 June 2025. A separate TIA will also be prepared for a proposed shared connection between TNTS and Deer Park Terminal Station (DPTS), which is outside the scope of this report.

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Figure 1: Overview of Dedication Connection between TNTS and the Data Centre



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Source: AusNet Mt Atkinson Development (MAD) Project Overview Site Plan



1.2 Precinct Structure Plan

The TNTS and Data Centre sites are located within the Mt Atkinson & Tarneit Plains Precinct Structure Plan (PSP).

The PSP guides development within the Mt Atkinson and Tarneit Plains Precincts and was developed by the Victorian Planning Authority (VPA) in consultation with Melton City Council and various other agencies and stakeholders. The future urban structure of the PSP area and the location of the TNTS and Data Centre can be seen in Figure 2.

The PSP includes a variety of land uses, including residential, educational, industrial, commercial, and community uses. There is a Major Town Centre proposed in the northern section of the PSP, south of the Western Freeway. The TNTS site is identified for this use within the PSP, and the Data Centre is earmarked as 'industrial' land.

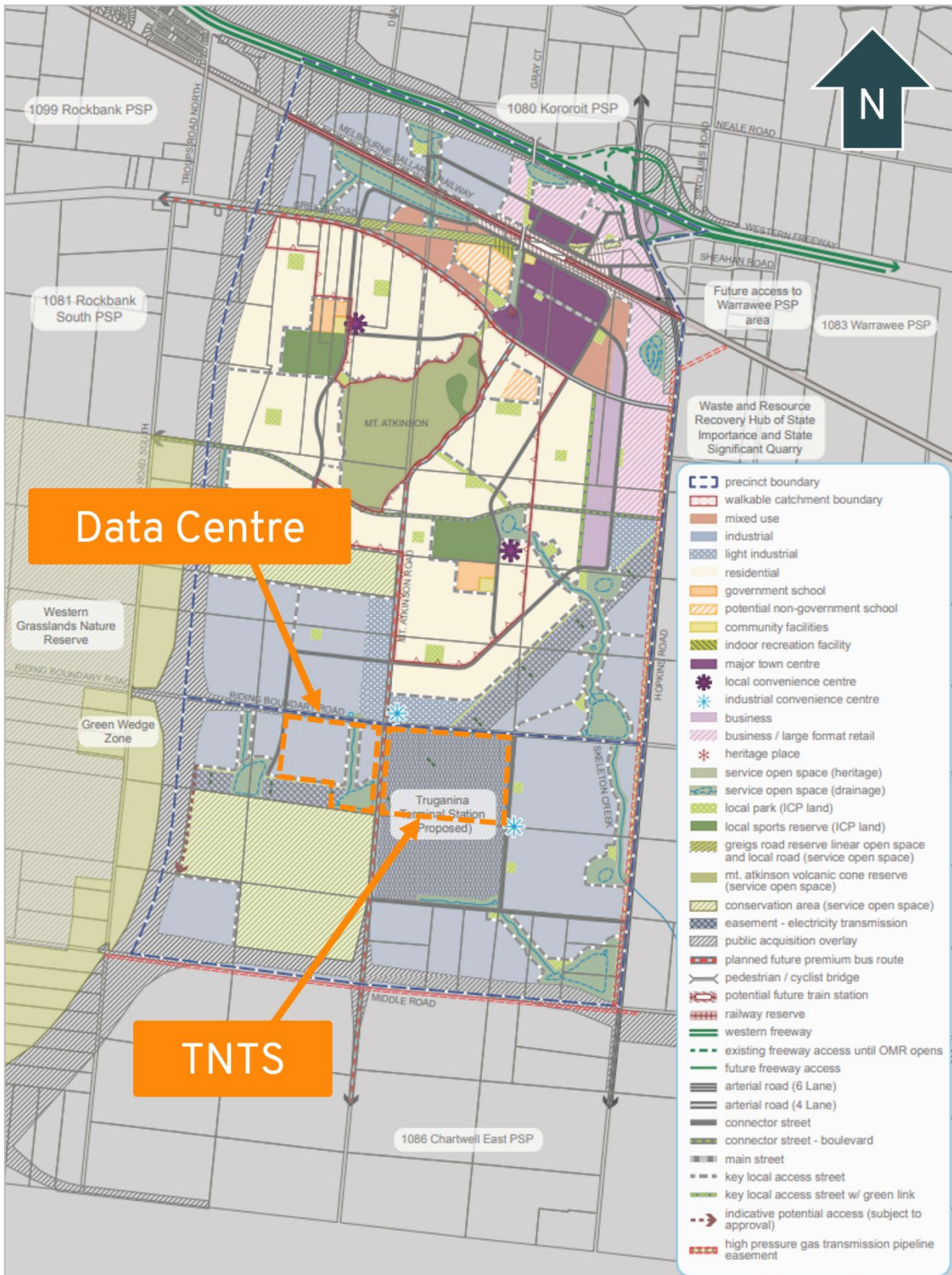
The construction of the TNTS will facilitate development of refrigerated logistics operations, food processing plants, and data centres. The PSP provides flexibility for the development of the TNTS, and allows the remaining land currently designated as Special Use Zone (Schedule 3) to be converted into industrial land if it is not needed for the Terminal Station.

The PSP also features an Infrastructure Contributions Plan (ICP), which has been incorporated into the Planning Scheme. The ICP specifies contributions from landowners and developers to support the development of roads, intersections, services, or facilities within the PSP area. These contributions primarily consist of a financial component and/or land allocation.

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Figure 2: Future Urban Structure



Source: Mt Atkinson & Tarneit Plains PSP (January 2020)

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2. Existing Conditions

2.1 Site Location

The TNTS site is located on the southeast corner of the Riding Boundary Road / Mount Atkinson Road intersection in Truganina, while the Data Centre is on the southwest corner of the intersection. Figure 3 shows the location of the sites in relation to the surrounding transport network.

Figure 3: Site Location



Source: OpenStreetMap

The TNTS site is zoned Special Use Zone – Schedule 3 (SUZ3) while the Data Centre site is zoned Urban Growth Zone – Schedule 9 (UGZ9). Other land across the PSP area is generally zoned for rural conservation.

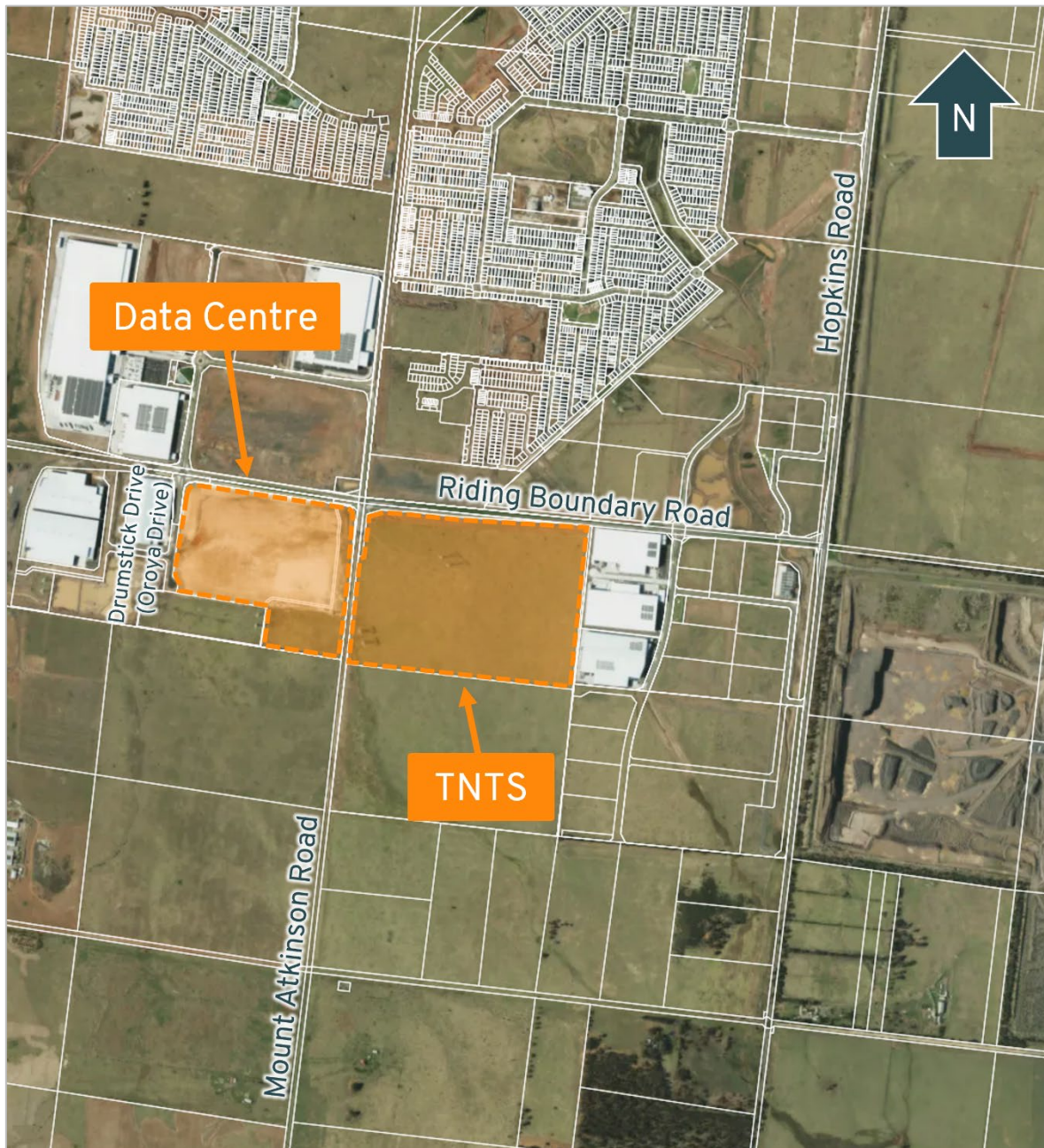
Areas of residential and industrial infill are progressively being constructed across the PSP as shown in Figure 4, which shows an aerial photograph view of the site and the surrounding area.

The TNTS site has an area of approximately 45.6ha while the Data Centre site has an area of approximately 27.8ha. The TNTS and Data Centre sites are currently vacant, with the exception of transmission towers in the TNTS site.

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Figure 4: Aerial Photograph



Source: MetroMap

2.2 Road Network

Riding Boundary Road under existing conditions is a Council Road aligned in an east-west arrangement between Robinsons Road and Drumstick Drive. Adjacent to the TNTS site it has a 7.0 metre carriageway and provides a single lane of traffic in each direction. A 3.0-metre-wide shared path is provided on the south side of the road. Under the PSP this road is identified as a four-lane arterial road and continues further west. The road is anticipated to be handed over to the Department of Transport and Planning (DTP) to manage.

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Mount Atkinson Road is currently constructed between Evolution Road and approximately 100 metres south of Riding Boundary Road. Adjacent to the Data Centre site it has a 23.0 metre carriageway and provides two through lanes of traffic in each direction, a central median, as well as an additional lane northbound for a left and right turn movement at the signalised intersection with Riding Boundary Road. A 3.0-metre-wide shared path is provided on both sides of the road. Under the PSP this road is identified as a four-lane arterial road and will ultimately connect between Grand Boulevard in the north and Tarneit Road in the south. The road is anticipated to be handed over to DTP to manage.

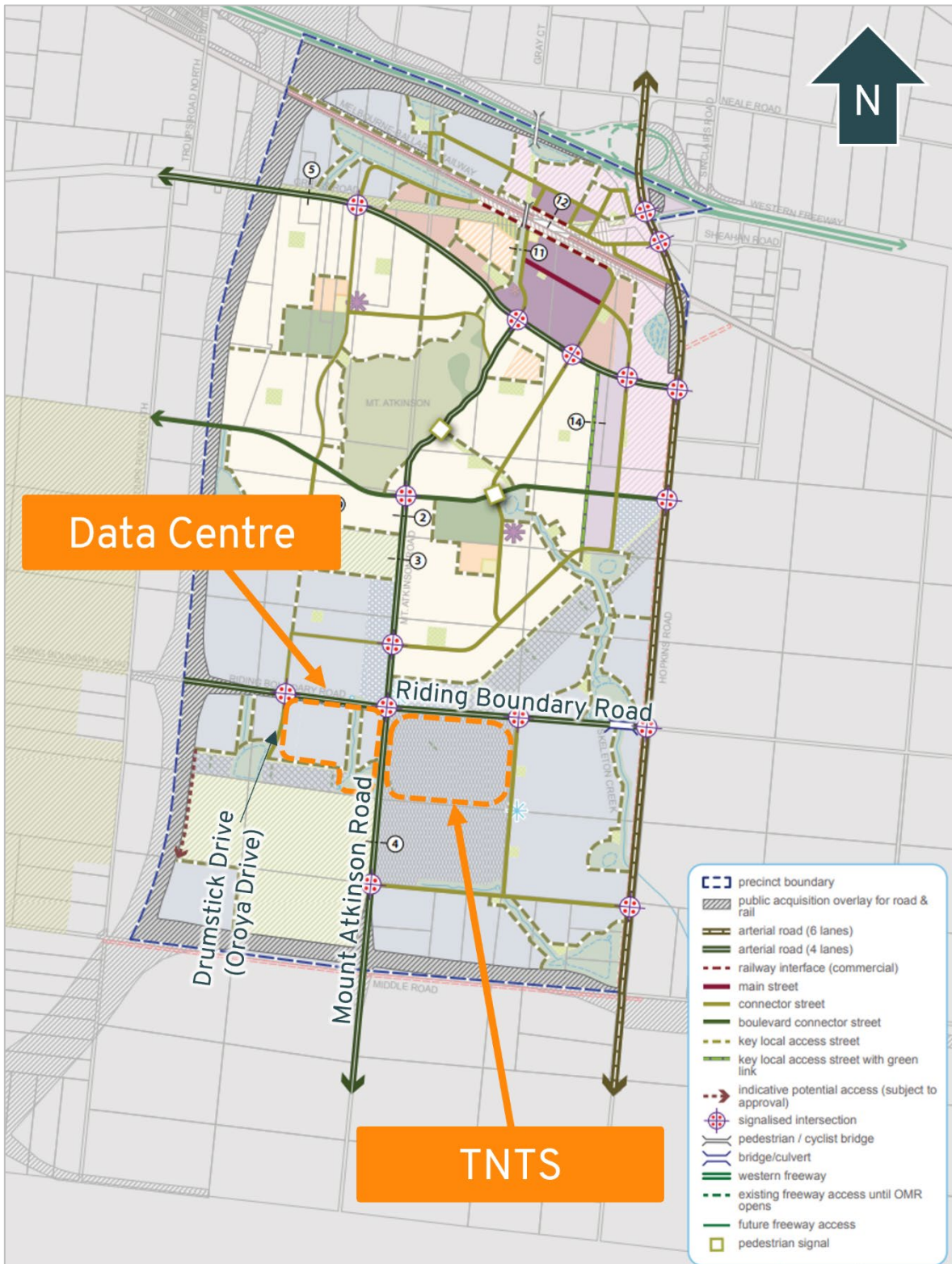
Drumstick Drive (Oroya Drive) is a Council Road aligned in a north-south arrangement between Riding Boundary Road and its court bowl termination in the south. An extension to the west of the north-south alignment exists but is not yet fully constructed or operational. Adjacent to the Data Centre access point, it has a carriageway width of approximately 12.0 metres accommodating one lane of traffic in each direction and kerbside parallel parking on both sides. A 3.0-metre-wide shared path is provided on the west side of the road, and a footpath is provided along the east side of the road.

The intersections of Riding Boundary Road with Mount Atkinson Road and Drumstick Drive are signalised. The future road network as outlined in the PSP can be seen in Figure 5.

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Figure 5: Future Road Network Plan



Source: Mt Atkinson & Tarneit Plains PSP (January 2020)

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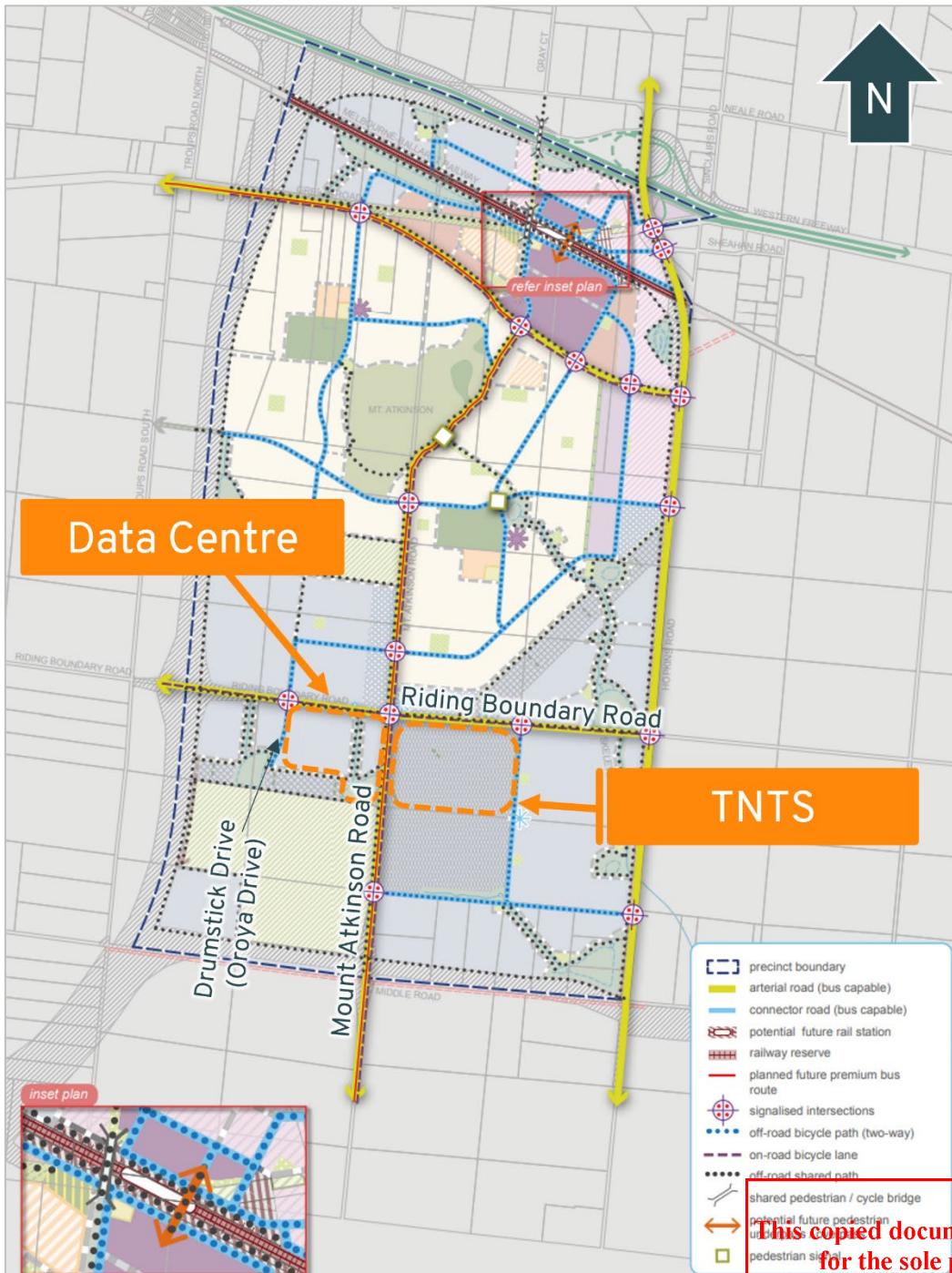
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2.3 Sustainable Transport

There are currently no public transport services available in the nearby area. A 3.0-metre-wide shared path is provided on the south side of Riding Boundary Road and on both sides of Mount Atkinson Road.

The future public transport and path network plan can be seen in Figure 6, which indicates that Mount Atkinson Road will accommodate a premium bus route and that Riding Boundary Road is bus capable should a route be provided in future.

Figure 6: Future Public Transport and Path Network Plan



Source: Mt Atkinson & Tarneit Plains PSP (January 2020)

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2.4 Restricted Vehicle Access

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2.4.1 Class 1 OSOM Vehicles

The Victoria Class 1 Oversize Overmass Load Carrying Vehicles Network map for the surrounding area is provided within Figure 7. The map shows approved routes for eligible vehicles operating under the Multi-State Class 1 Load Carrying Vehicles Mass and Mass Exemption Notices. A summary of the allowances under each exemption within Victoria is provided below:

- Dimension: up to 5.0m wide, 5.0m high, 30.0m long and 7.6m rear overhang on approved (state owned) routes in VIC.
- Mass: up to 100.0 tonnes gross mass.

Vehicles operating in the daytime and not exceeding 3.5m wide or 26m long generally do not require a pilot vehicle.

The green lines indicate approved Class 1 OSOM Vehicle routes. Accordingly, the site has access to the Class 1 OSOM approved road network via Western Freeway, Hopkins Road, and Riding Boundary Road (east of Hopkins Road). Riding Boundary Road (west of Hopkins Road), Mount Atkinson Road and Drumstick Drive are unrated for Class 1 OSOM vehicles.

Figure 7: Victoria Class 1 OSOM Vehicle Network Approved Roads



Source: NHVR

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2.4.2 Special Purpose Vehicles (SPVs)

Vehicles built for a purpose other than carrying goods such as a mobile crane, a concrete pump or drill rig are defined as Special Purpose Vehicles (SPVs). Victoria's Class 1 gazetted 4 & 5-Axle All Terrain Mobile Cranes (48/60 tonnes) Network map for the surrounding area is provided in Figure 8. The network map provides details of the approved roads as well as approved routes with conditions of access and travel restrictions.

SPV movements on roads that are not approved on the map will require an access permit from the National Heavy Vehicle Regulator (NHVR) or the relevant road manager (Melton City Council or Transport Victoria).

The approved routes for 4 & 5-Axle All Terrain Mobile Cranes travelling within the surrounding area are identified within Figure 8.

Figure 8: Victoria 4 & 5-Axle All Terrain Mobile Cranes Approved Roads



Source: NHVR

The figure shows that Riding Boundary Road west of Hopkins Road and Mount Atkinson Road are unrated for 4 & 5-Axle All Terrain Mobile Cranes.

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2.5 Crash History

Amber has conducted a review of the road crash statistics published by DTP for the most recent five years of available data up to November 2025. The review area included:

- Riding Boundary Road between Christies Road and Troups Road South.
- The entire length of Drumstick Drive (Oroya Drive).
- Mount Atkinson Road between Boundary Road and Grand Boulevard.
- All respective intersections.

It is noted that the crash history in the nearby area is limited given that much of the road network has been recently constructed. Accordingly, there was one crash recorded within the review area, which was a 'collision with vehicle' crash type on Riding Boundary Road, 50 metres west of the intersection with Christies Road, which resulted in one serious injury.

Given the extent of the search area, the road classifications and the associated traffic volumes, and low number of crashes identified, it is concluded that the road network is currently operating in a relatively safe manner.

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3. The Proposal

It is proposed to construct a dedicated 220kV connection (The Project) between the TNTS development located at 442-542 Mount Atkinson Road, Truganina, and the Data Centre development located at 1 Oroya Drive, Truganina, collectively referred to as the Project Area.

The Project involves three components as follows:

- 220kV connection to the Shared Connection 220kV switchyard at the TNTS site.
- Approximately 600m Underground 220kV cable between the TNTS and the Data Centre.
- 220kV / 33kV substation at the Data Centre site.

Vehicular access for the TNTS is via the proposed crossover along the northern frontage of the TNTS site connecting with Riding Boundary Road, with access to the Data Centre site via the proposed crossover along the western frontage of the Data Centre site to Drumstick Drive (Oroya Dive). Vehicular access for the underground cable connection works within the road reserve will be undertaken under traffic control on Mount Atkinson Road.

Construction is expected to take approximately 18 months in total with a maximum workforce of 50 personnel on-site during peak construction periods. The underground cable connection works, which will occur within the total construction period, is anticipated to have a construction period of approximately 60 days with a peak of 15 personnel on-site.

Construction materials, plant and equipment will generally be sourced from across the Melbourne metropolitan area. Substation transformers may be delivered from Port of Melbourne, Port of Geelong or Glen Waverley.

The development of the TNTS along with three separate customer sites were previously assessed in a Traffic Impact Assessment (TIA) prepared by Amber, dated 10 June 2025. A separate TIA will also be prepared for a proposed shared connection between TNTS and Deer Park Terminal Station (DPTS), which is outside the scope of this report.

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4. Traffic Assessment

4.1 Overview

Traffic generated by the Project can be separated into construction and operational phases. The peak traffic generating potential is during construction which generates trips associated with the workforce accessing the Project Area and the delivery of construction materials and plant. During operation the Project is expected to generate a significantly lower amount of traffic associated with up to two maintenance personnel accessing the Project Area periodically as required for maintenance activities.

The following provides an assessment of the potential traffic impacts of the Project on the road network for the construction phase. It is noted that the Project involves two types of construction works including on-site works at the respective TNTS and Data Centre sites as well as the connection works within the road reserve.

For the purposes of this assessment, a vehicle trip is defined as a one-way movement to or from the site, i.e. a round-trip (inbound and outbound) is considered to be two trips.

4.2 Construction Vehicle Types

General construction traffic generated by the Project on a day-to-day basis can be broadly separated into the following categories as outlined in Table 1.

Table 1: Construction Traffic Types

Terminology	Definition
General Access Vehicles (GAV)	
Light Vehicles	The use of light vehicles will be associated with transporting the workforce to/from the Project Area. A conservative vehicle occupancy of one person per vehicle has been adopted to calculate the light vehicle traffic generation.
Rigid Trucks	Rigid Trucks will be used to deliver raw materials and smaller plant and have a typical length between 8 and 13 metres.
Truck and Dog	Truck and Dog vehicles consist of a rigid truck towing either a dog trailer or a pig trailer and are not more than 19 metres in length. A dog trailer is a trailer with axles at either end of the trailer, a pig trailer has the axles centred on the trailer. These vehicles will be utilised to transport raw materials to/from the site.
Semi-trailers	Semi-trailers will be used to transport larger equipment and materials. These vehicles consist of a truck and a single trailer with a total length of 19 metres.
Restricted Access Vehicles (RAV)	
Class 1 Heavy Vehicles	Class 1 vehicles include OSOM vehicles which can operate on the approved network outlined in Section 2.4.1 subject to travel conditions, as well as vehicles built for a purpose other than carrying goods such as a mobile crane, a concrete pump or drill rig which are defined as SPVs and can also operate on the relevant approved networks subject to travel conditions.

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4.3 On-Site Connection Works (TNTS and Data Centre)

4.3.1 Traffic Generation

The construction traffic volumes for the dedicated connection works on-site at the TNTS and Data Centre sites have been conservatively estimated by the Applicant. It is anticipated that the Project would generate up to 100 light vehicle trips and 28 heavy vehicle trips per day throughout the peak construction period (two-way totals). Table 2 summarises the forecast traffic volumes expected to be generated during the construction period of the Project.

Table 2: Traffic Generation During Construction Period – TNTS and Data Centre Construction Works

Vehicle Type		Average Construction Periods		Peak Construction Periods	
		Vehicle Trips per Day (vpd)	Peak Hour Trips (vph)	Vehicle Trips per Day (vpd)	Peak Hour Trips (vph)
Light Vehicles (LV)		60	30	100	50
Heavy Vehicles (HV)	Rigid Trucks	15	2	18	2
	Truck and Dog	1	1	2	1
	Semi-trailer	1	1	2	1
	Special Purpose Vehicle	1	1	2	1
	Other Class 1 OSOM	1	1	4	1
	<i>HV Subtotal</i>	19	6	28	6
Total		79	36	128	56

Overall, the Project is expected to generate up to 56 vehicle trips per hour (vph) in the morning and evening peak hours during the peak construction periods, which would reduce to 36 vph during the average construction periods.

4.3.2 OSOM Vehicles

OSOM vehicles will be required for the delivery of large equipment including substation transformers. The Applicant has advised that three 220 kV substation transformers would be transported to the Data Centre site from either Port of Melbourne, Port of Geelong or Glen Waverley.

These vehicles will contribute the smallest percentage of vehicles accessing the Project Area during the construction period and are subject to separate permit applications and regulations, including the use of escort vehicles and travel outside peak periods (as required). The movement and impact of these vehicles on the road transport network would be determined prior to construction as part of the transport permit application process with stakeholder input from DTP and NHVR.

The following assessment focuses on the impacts of the light and heavy vehicles specified within Table 2 which generate the bulk of the traffic and represent the typical traffic impacts of the Project on a day-to-day basis.

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4.3.3 Traffic Distribution and Assessment

It is anticipated that the workforce involved in the construction of the Project will be located within the greater metropolitan region of Melbourne. General construction materials and plant are also generally expected to be sourced across the Melbourne metropolitan area.

The majority of personnel and construction plant are expected to be transported to the area via the Western Freeway and Hopkins Road and distributed to the respected works sites via Riding Boundary Road and potentially Drumstick Drive or Mount Atkinson Road.

For the purposes of this assessment, it is conservatively assumed that the Project traffic volumes during the evening peak hour are the same as the morning peak hour, and that the Project peak hours coincide with the peak hours of the road network, although this may not necessarily occur. Accordingly, the peak construction period would add 56 vehicles per hour onto Riding Boundary Road, Hopkins Road and the Western Freeway during the morning and evening peak hours which represents approximately one additional vehicle per minute. These vehicles may be further distributed to the work sites via Drumstick Drive or Mount Atkinson Road.

Traffic volume data sourced from the DTP Open Data Hub indicates that Hopkins Road currently caters for approximately 23,000 vehicles per day. Peak hour volumes are typically around 10% of daily volumes, which results in approximately 2,300 vehicles in each of the peak hours on Hopkins Road. The additional 56 trips generated in each peak hour during the peak construction period represents approximately 2.4% of the current peak hour traffic volume and is therefore not expected to have any notable impact on the operation of the road.

Traffic volumes along Riding Boundary Road would be lower than Hopkins Road. However, given the Project traffic volumes are conservatively estimated to add approximately one vehicle trip per minute in the peak hours during the peak construction period, no significant impact to the operation of this road is anticipated.

The applicant has advised that the traffic generated from this project will not have overlapping timelines with the TNTS development (assessed previously by Amber in a Traffic Impact Assessment report, dated 10 June 2025) or the shared connection project, and therefore no cumulative traffic impacts are expected across the various projects.

Accordingly, the temporary increase in traffic generated by the Project during the construction period is not expected to have any material impact on the current operation of the road network.

4.4 Underground Connection Cable Works

4.4.1 Traffic Generation

The construction traffic volumes generated by the connection cable works are generally lower than that required at the sites described above as the works are limited by the size of the work zone. However, it is anticipated more heavy vehicles will be required for the delivery and collection of materials (e.g. spoil removal, cable drums, concrete and asphalt) to maintain progress of the works.

Table 3 summarises the forecast daily traffic volumes expected to be generated during the connection cable works. These daily traffic volumes are separate (i.e. additional) to the volumes specified in Table 2. It is noted that peak hour volumes are not provided as construction start and

finish times will be governed by management plans depending on the road environment and work zones.

Table 3: Traffic Generation During Construction Period – Connection Cable Works

Vehicle Type		Vehicle Trips per Day (vpd)
Light Vehicles (LV)		24
Heavy Vehicles (HV)	Rigid Trucks	36
	Semi-trailer	3
	Special Purpose Vehicle	1
	Other Class 1 OSOM	2
	<i>HV Subtotal</i>	42
Total		66

Overall, the underground connection cable works within the road reserve are expected to generate up to 66 vehicle trips per day.

4.4.2 Traffic Distribution and Assessment

Similarly to the on-site works detailed in Section 4.3, the majority of personnel and construction plant are expected to be transported via the Western Freeway, Hopkins Road, Riding Boundary Road and Mount Atkinson Road.

The off-site connection works will add an average of 66 vehicles per day onto Riding Boundary Road, Hopkins Road and the Western Freeway which represents an average of approximately six to seven additional vehicles per hour spread throughout the typical workday. Assuming that all light vehicles travel to the site in the morning peak hour and depart the site in the evening peak hour and all heavy vehicles travel outside of the peak hours, this represents an additional 12 light vehicles in each peak hour, or an average of one light vehicle every 5 minutes, which is considered negligible and will not have a material impact on the function of these roads.

4.4.3 Anticipated Construction Details

The traffic impacts of the connection cable works will primarily be related to the occupation of the road and traffic lanes during a minor proportion of the construction period. High-level estimates have been provided for the anticipated construction arrangement as follows:

- Total construction period of 60 days, based on approximately 600 metres of connection cable works.
- To safely undertake works, a works zone on Mount Atkinson Road south of Riding Boundary Road, inclusive of affected turn lanes on Riding Boundary Road, is required (with barriers to protect traffic and other road users).
- Traffic management arrangements would be put in place to undertake the works in accordance with the requirements of the relevant road authorities to ensure the safety of construction personnel and road users.

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4.4.4 Impacts of Road Occupation

As a result of the size of the work zone, lane occupation and closures would be required on Mt Atkinson Road to safely undertake works for the connection cable route through the road reserve.

As Mount Atkinson Road is currently only constructed to its termination approximately 110 metres south of its intersection with Riding Boundary Road and is in a newly developing industrial area in general, the vehicular traffic in this road segment is expected to be minimal and any lane closures would not be expected to have a major impact on other road users.

Therefore, the anticipated construction works within the road reserve are anticipated to be managed through suitable traffic management arrangements to ensure acceptable impacts to the surrounding road network.

4.5 Summary

The Project is expected to generate the highest level of traffic and impact during the construction period. The assessment presented above shows that:

- Construction traffic generated to the work sites at the TNS and Data Centre sites would be within the daily variation of existing traffic volumes along Hopkins Road and the additional traffic generated by the construction works would not be expected to have a significant impact.
- The traffic impacts of the connection cable works will primarily be related to the occupation of the road and traffic lanes during a minor proportion of the construction period. Based on the current constructed extent and traffic volumes along Mount Atkinson Road south of Riding Boundary Road, road occupation to accommodate the works zone would not be expected to have a major impact on other road users.

During operation, the Project is expected to generate a negligible amount of traffic associated with up to two maintenance personnel accessing the Project Area periodically as required for maintenance activities. This would result in an insignificant change to the traffic environment.

Accordingly, traffic generated by the Project is not expected to have any material impact on the current operation of the road network during the construction and operational periods.

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5. Haulage Route Assessment

5.1 Heavy Vehicle Access Routes

5.1.1 General Access Vehicles

Construction materials and plant are generally expected to be sourced across the Melbourne metropolitan area and transported to the site using General Access Vehicles up to 19m semi-trailers (noting that no B-Doubles are currently expected to be utilised for the Project). General Access Vehicles don't require a permit or notice to access road networks and are therefore expected to be able to suitably access the Project Area via Hopkins Road and Riding Boundary Road. Vehicles accessing the Data Centre would also utilise Drumstick Drive and vehicles accessing the cable connection works within the road reserve would also utilise Mount Atkinson Road. It is considered that the local road network has been designed to accommodate heavy vehicles in accordance with the PSP and the industrial nature of the surrounding area.

5.1.2 Class 1 OSOM Vehicles

Class 1 OSOM vehicles would typically transport equipment such as the smaller transformers, control buildings, electrical cables and site sheds. These vehicles would access the site via Hopkins Road and the broader approved network which is rated to accommodate complying vehicles. It is noted that Riding Boundary Road (west of Hopkins Road), Mount Atkinson Road and Drumstick Drive are unrated for Class 1 OSOM access and permits would be sought from Council/NHVR for these vehicles to travel on each road.

Special Purpose Vehicles (SPVs) including mobile cranes would also be required for loading/unloading and general construction purposes. These vehicles would access the site via the approved network for the relevant vehicle configuration which generally includes Western Freeway, with some configurations also approved to use Hopkins Road. Any use of unrated sections of the road network including Riding Boundary Road, Mount Atkinson Road and Drumstick Drive would require a permit which would be sought prior to construction.

5.1.3 OSOM Vehicles – Transformers

OSOM vehicles will also be required for the delivery of large equipment including substation transformers. The Applicant has advised that three 220kV substation transformers would be transported to the Data Centre site from either Port of Melbourne, Port of Geelong or Glen Waverley. These vehicles would access the site via Hopkins Road, Riding Boundary Road and Drumstick Drive. The estimated specifications of the transformers which will be supplied to the Data Centre are outlined in Table 4.

Table 4: Estimated Transformer Specifications for the Data Centre

Length (m)	Width (m)	Height (m)	Mass	Estimated Transport Configuration
7.80	4.20	4.30	121 T	10 x 8 Low Loader with Dolly (38 metres long)

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The movement and impact of these vehicles, and the subsequent road upgrades required, would be determined prior to construction as part of the transport permit application process with stakeholder input from DTP and NHVR. It is estimated that the vehicles would predominantly utilise the Western Freeway and Western / Metropolitan Ring Roads to access the site, noting these roads consist of multi-lane highways which have been utilised for the transport of similar loads in the past.

A swept path assessment has been undertaken for the estimated transformer transport vehicle for the Data Centre and is included in Appendix A. The assessment demonstrates that the vehicle can suitably access the site from Drumstick Drive under traffic management but that additional measures including driveway widening and/or installation of temporary hardstand may be required within the site internally to facilitate access for the transformer deliveries to the substation. Further assessment of the transport route would be undertaken as part of the permit process for these vehicles.

5.2 Loading

All loading/unloading activities for the TNS and Data Centre sites will occur on-site where sufficient space is available adjacent to work areas to safely accommodate these movements. Both sites provide sufficient trafficable areas to allow for heavy vehicles to undertake loading/unloading activities and turn-around to allow for all vehicles to exit in a forward direction. Loading/unloading for the cable connection works within the road reserve will occur under appropriate traffic management arrangements.

5.3 Mitigation Measures

Subject to the conditions of the Development Consent, a Traffic Management Plan (TMP) is expected to be required to be developed in consultation with key stakeholders including Council and DTP. Recommendations for inclusion within the TMP are outlined within Section 7.

Therefore, it is concluded that the road network is suitable to accommodate the future light and heavy vehicle traffic volumes generated by the Project, subject to the establishment of detailed traffic management measures which would be carried out prior to construction.

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6. Intersection and Site Access Assessment

6.1 Key Intersections

Riding Boundary Road connects with the arterial road network at Hopkins Road. The intersection is provided as a T-intersection arrangement and is signalised with dedicated right and left turn lanes on each approach. Mount Atkinson Road and Drumstick Drive connect with Riding Boundary Road as cross-intersection arrangements and are also signalised with dedicated right and left turn lanes on each approach, apart from the left-turn from Mount Atkinson Road onto Riding Boundary Road).

Accordingly, it is considered that the intersections are suitably designed to accommodate safe and efficient vehicle movement.

6.2 Site Access – Data Centre

The site access design and sight distance assessment for the TNTS site has been assessed in the previous Traffic Impact Assessment report prepared by Amber, dated 10 June 2025, and found to be suitable to accommodate vehicles entering and exiting the site. Assessment of the site access for the Data Centre is provided as follows.

6.2.1 Design

The proposed vehicular site access location for the Data Centre is via a crossover along the western frontage connecting with the eastern side of Drumstick Drive.

Drumstick Drive is a Council-managed local road that has been recently constructed. It is noted that large sections of the surrounding area and road network are yet to be developed in accordance with the PSP. Accordingly, it is estimated that traffic volumes along this road are currently low, and it is reasonable to expect vehicles would turn in and out of adjoining properties directly to and from the road. Additionally, the vast majority of the traffic generated by the Project will occur during the construction phase which is temporary.

In light of the above, it is considered unnecessary to provide formal turn treatments as part of the Project with vehicles instead proposed to turn directly to/from the existing carriageway of the road, similar to other existing developments across the nearby local road network.

A swept path assessment has been carried out for the Data Centre site access and is provided within Appendix A. The assessment indicates the proposed crossover allows for an entering semi-trailer to pass another semi-trailer waiting to exit the site. It is noted that the majority of vehicle movements would be to/from the north on Drumstick Drive and the probability of two heavy vehicles meeting at the site access is low as heavy vehicle trips would be distributed throughout the day with an average of one semi-trailer movement per hour (two-way total) anticipated at the construction peak. Accordingly, it is considered suitable for an exiting vehicle to wait for an entering vehicle to pass in the unlikely event that two vehicles meet at the site access, which would also maintain road safety by preventing possible sight distance issues associated with general traffic which may be following behind an entering vehicle.

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A swept path assessment has also been undertaken for the estimated transformer transport vehicle for the Data Centre, based on a platform trailer configuration, and is included in Appendix A. The assessment demonstrates that the vehicle can suitably access the site from Drumstick Drive under traffic management but that additional measures including driveway widening and/or installation of temporary hardstand may be required within the site internally to facilitate access for the transformer deliveries to the substation. Further assessment of the transport route would be undertaken as part of the permit process for these vehicles.

Accordingly, it is concluded that the site access on Drumstick Drive is suitably designed to accommodate the vehicles expected to access the site. Additional measures may also be required to facilitate access for the transformer deliveries. It is noted that the final design of the crossovers would be subject to the relevant Council permit process.

6.2.2 Sight Distance

An assessment of the sight distance requirements has been carried out at the site access against the requirements set out in AS 2890.2:2018 to ensure vehicles are able to safely enter the road network.

A design speed of 60km/hr has been adopted along Drumstick Drive for the purposes of the assessment which requires a sight distance of 83 metres based on gap of 5 seconds. The available sight distances at the proposed site access location exceed the requirements of the Australian Standard given the straight and flat alignment of the road and proximity to nearby intersections. Accordingly, vehicles are expected to be able to safely enter the road network from the proposed site access location.

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7. Traffic Management Plan

Subject to the appointment of suppliers, construction contractors and other considerations, aspects of the development may be subject to review. In addition, construction work programs for the Project will likely not be fully resolved until closer to the Project commencement. As such, there may be changes to the assumptions underpinning this report.

It is expected that a detailed Traffic Management Plan (TMP) will need to be prepared prior to the commencement of the Project to confirm any mitigation measures and management works required at the time and to ensure the construction traffic would have a minimal impact to the capacity and safety of the surrounding road network. The TMP should be prepared and implemented in accordance with *Australian Standard 1742.3 Manual of Uniform Traffic Control Devices - Part 3: Traffic control for works on roads*, the *Code of Practice for Worksite Safety - Traffic Management (CoP)* and *Austrroads Guide to Temporary Traffic Management*.

The TMP would be implemented as a condition of any planning permit issued for the development and would be developed in consultation with the City of Melton, DTP, AusNet and any other relevant stakeholders to provide a more accurate indication of traffic impacts and generally identify responsibilities for road maintenance and upgrades throughout the construction period. TMP/s will also be required as a part of the Work Within the Road Reserve Permits.

The TMP would confirm the construction timeframe, work stages and project traffic details, as well as setting out any specific traffic management measures required to safely carry out the proposed works with minimal impact to the surrounding environment.

Traffic Guidance Schemes (TGS) would also be prepared to outline the physical arrangement of signage and traffic control devices to warn/guide traffic in the vicinity of any works within the road reserve which would include the connection cable route works.

In general, the TMP should include:

- Confirmation of the construction timeframe and work staging.
- Confirmation of the expected traffic volumes generated by the development for all work stages.
- Identification of all heavy vehicle and over-dimensional vehicle haulage routes for all work stages.
- A mechanism to review identified haulage route road conditions prior to the commencement of works.
- Mechanisms/agreements (if deemed necessary) to maintain haulage route roads and road infrastructure, including local public roads used by site traffic, during construction works and to reinstate roads to at least pre-construction conditions.
- Qualify any requirements for specific work stage construction Traffic Management Plans.
- Qualify and identify any relevant mechanisms for over-dimensional vehicle permits and traffic management requirements.
- Specific warning signs, if deemed necessary, advising of the changed traffic operations and heavy vehicle movements to be appropriately located on approaches to and from the transport routes on Council roads.
- On-site mitigation measures targeted at safety and reducing the impact of on-site transport.
- An induction process for vehicle operators and regular toolbox meetings.

- A complaint resolution and disciplinary procedure.
- Local climatic conditions that may impact road safety of employees throughout all project phases (e.g. fog, wet and significant dry, dusty weather).

It is noted that the above is not an exhaustive list, and that the final TMP requirements will be as outlined in the planning permit.

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8. Parking Assessment

8.1 On-Site Works at TNTS and Data Centre

The highest demand for parking is anticipated to occur during the construction phase. During this time, vehicles will typically be parked at designated on-site areas or where construction activities are occurring. Given the large areas available across each site and maximum number of 50 construction personnel on site at any one time, it is anticipated that the parking demand can be primarily accommodated on each of the work sites. Should there be on-site constraints to parking for personnel, there is ample opportunity for parking on-street nearby the Project Area, including on-street along Drumstick Drive at the Data Centre site frontage. Given the largely undeveloped and industrial nature of the surrounding area, any on-street parking demand would have a negligible impact on the surrounding road environment, which currently experiences a very low demand.

During operation, minimal car parking demand is expected associated with maintenance activities, which can be suitably accommodated on either site.

8.2 Underground Connection Cable Works

Parking demands for the connection cable works are expected to be relatively low given the reduced number of personnel at the work zones. Parking and delivery activities are expected to be undertaken behind jersey barriers and under traffic control, where required. It is noted that there is additional on-street parking capacity along Mount Atkinson Road and the surrounding area to accommodate temporary overflow parking demands, if required.

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9. Conclusion

Amber Organisation has been engaged by MVC Services to advise on the traffic and parking matters of the dedicated 220kV connection (The Project) between the Truganina Terminal Station (TNTS) development located at 442-542 Mount Atkinson Road, Truganina and the Data Centre development located at 1 Oroya Drive, Truganina.

Vehicular access for the TNTS is via the proposed crossover along the northern frontage of the TNTS site connecting with Riding Boundary Road, with access to the Data Centre site via the proposed crossover along the western frontage of the Data Centre site to Drumstick Drive (Oroya Dive). Vehicle access for the underground cable connection works within the road reserve will be undertaken under traffic control on Mount Atkinson Road.

Construction is expected to take approximately 18 months in total. A maximum workforce of 50 people would be on-site during peak construction periods. The underground cable connection works, which will occur within the total construction period, is anticipated to have a construction period of approximately 60 days with a peak of 15 personnel on-site.

Construction materials and plant are generally expected to be sourced from across the Melbourne metropolitan area. Substation transformers may be delivered from Port of Melbourne, Port of Geelong or Glen Waverley.

The above assessment determined the following:

- The peak traffic generating potential is during construction which generates trips associated with the workforce accessing the Project Area and the delivery of construction materials and plant.
- The Project's on-site connection works is expected to generate up to 128 vehicle trips per day (two-way total) during the peak construction period, including 28 heavy vehicle trips.
- The Project's underground connection works is expected to generate up to 66 vehicle trips per day (two-way total), including 42 heavy vehicle trips per day.
- The construction traffic generated to the TNTS and Data Centre sites is expected to be within the daily variation of existing traffic volumes along Hopkins Road and the impacts to Riding Boundary Road and Drumstick Drive would also be considered insignificant.
- Given the partially constructed nature of Mount Atkinson Road and subsequent minimal traffic volumes, any closures south of Riding Boundary Road required for the underground cable connection works are anticipated to have a negligible impact to the surrounding road network.
- A small number of Class 1 OSOM vehicles and Special Purpose Vehicles are anticipated to access the site of which their movement and impact on the road network will be determined prior to construction as part of the transport permit application process with stakeholder input from DTP and NHVR.
- All loading/unloading activities will occur on-site, except for the underground connection works within the road reserve which will occur under appropriate traffic management arrangements.
- All intersections along the proposed access routes are suitably designed to accommodate safe and efficient vehicle movement.
- All proposed site access locations provide suitable sight distance and can be designed to accommodate the largest vehicles expected to access the site, subject to Council's Road Opening Permit process.



- Subject to the conditions of the Development Consent, a TMP is expected to be required to be developed in consultation with key stakeholders including Council and DTP.
- The parking demands during the construction period can be suitably accommodated within the on-site areas, as well as on the surrounding road network if required.

Accordingly, based on the assessment above, it is concluded that the road network and proposed access arrangements are suitable to accommodate the expected vehicle types and traffic volumes during the construction and operational phases of the Project subject to the preparation of a TMP and further approvals from relevant road authorities.

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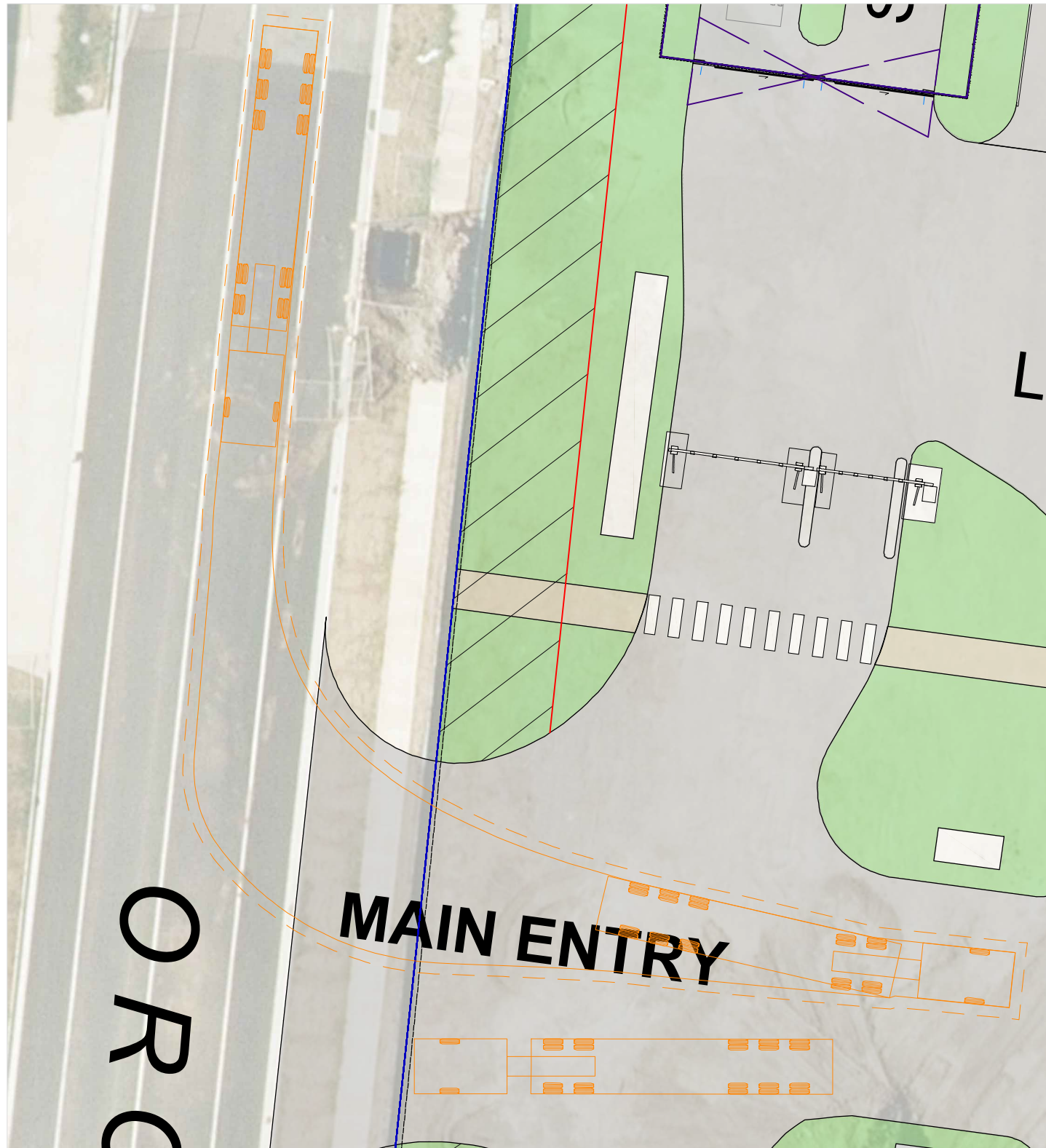
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Appendix A

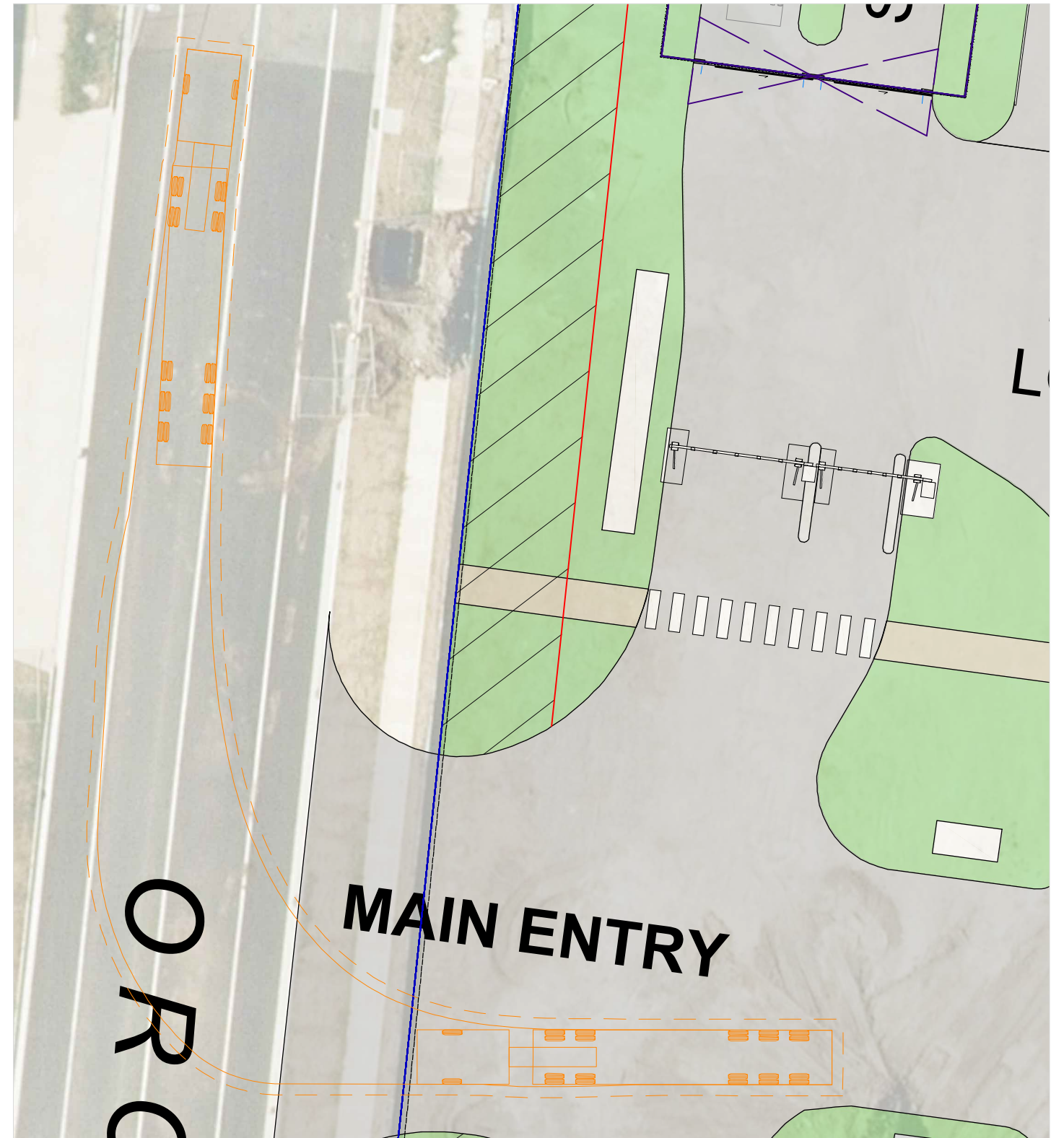
Swept Path Assessment

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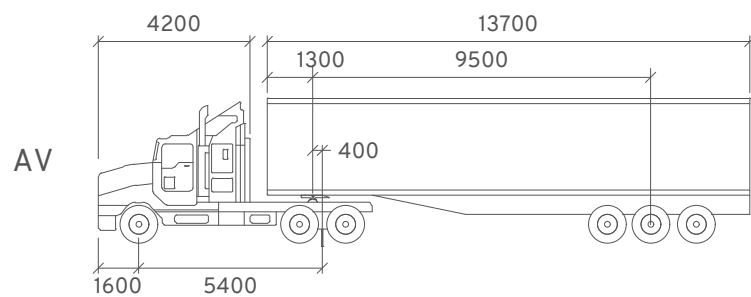


Entry Manoeuvre - Oroya Drive (Drumstick Drive)



Exit Manoeuvre - Oroya Drive (Drumstick Drive)

- Vehicle Envelope
- 500mm Clearance
- Load Outlines
- Load Path



	mm
Tractor Width	: 2500
Trailer Width	: 2500
Tractor Track	: 2500
Trailer Track	: 2500
Lock to Lock	: 6.0s
Steering Angle	: 28.3
Articulating Angle	: 70.0

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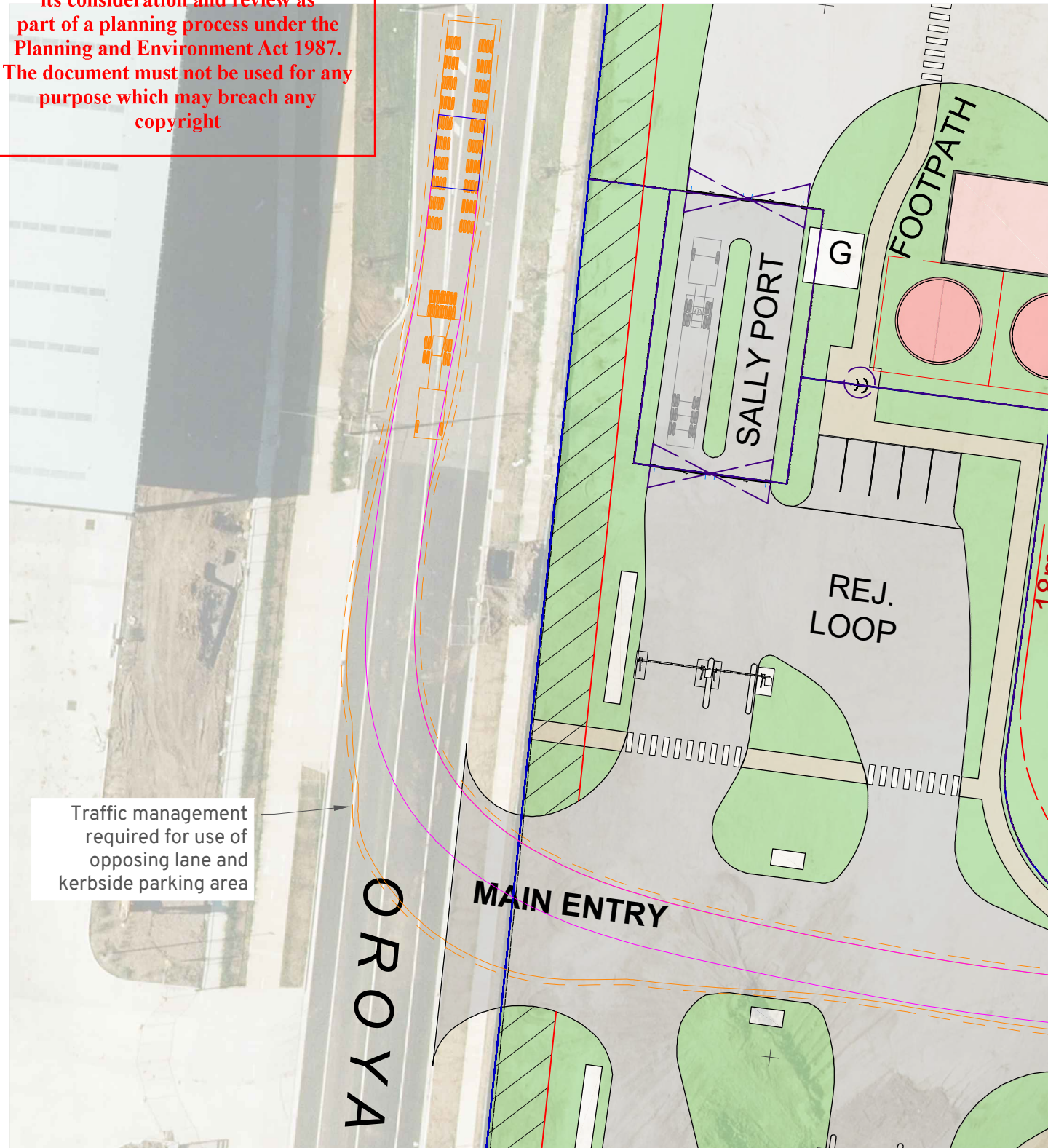
Truganina Terminal Station (TNTS)
442-542 Mount Atkinson Road, Truganina
Swept Path Assessment

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DATE: 26/08/2025
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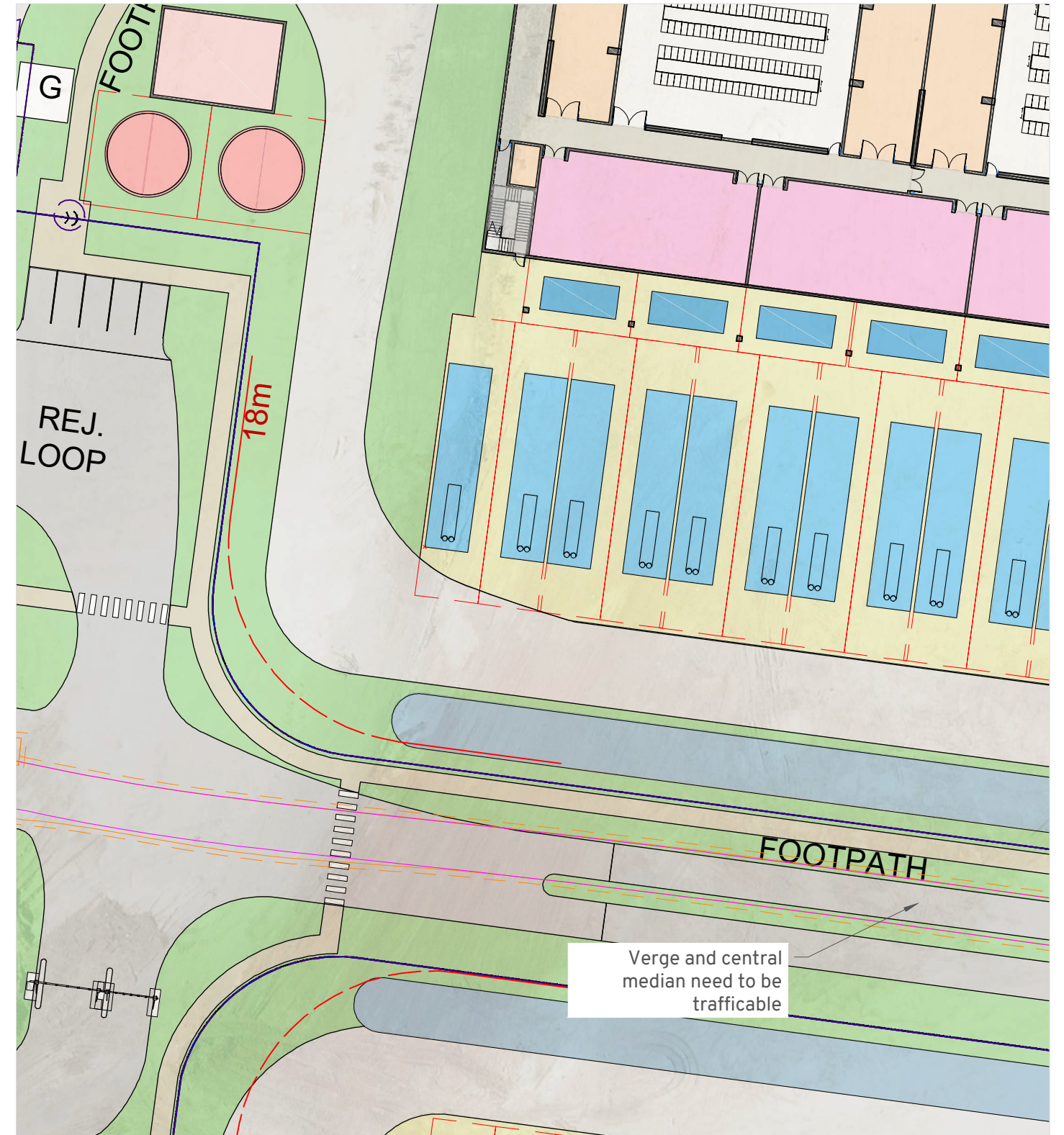


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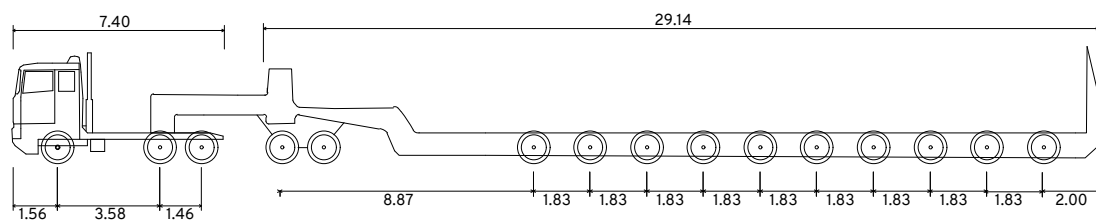


Entry Manoeuvre - Oroya Drive (Drumstick Drive)



Entry Manoeuvre - Oroya Drive (Drumstick Drive)

- Vehicle Envelope
- 500mm Clearance
- Load Outlines
- Load Path



10 X 8 Low Loader with Dolly
 Overall Length 38.000m
 Overall Width 4.270m
 Overall Body Height w/ Load 5.380m
 Lock-to-lock time 6.00s
 Wall to Wall Turning Radius 20.925m

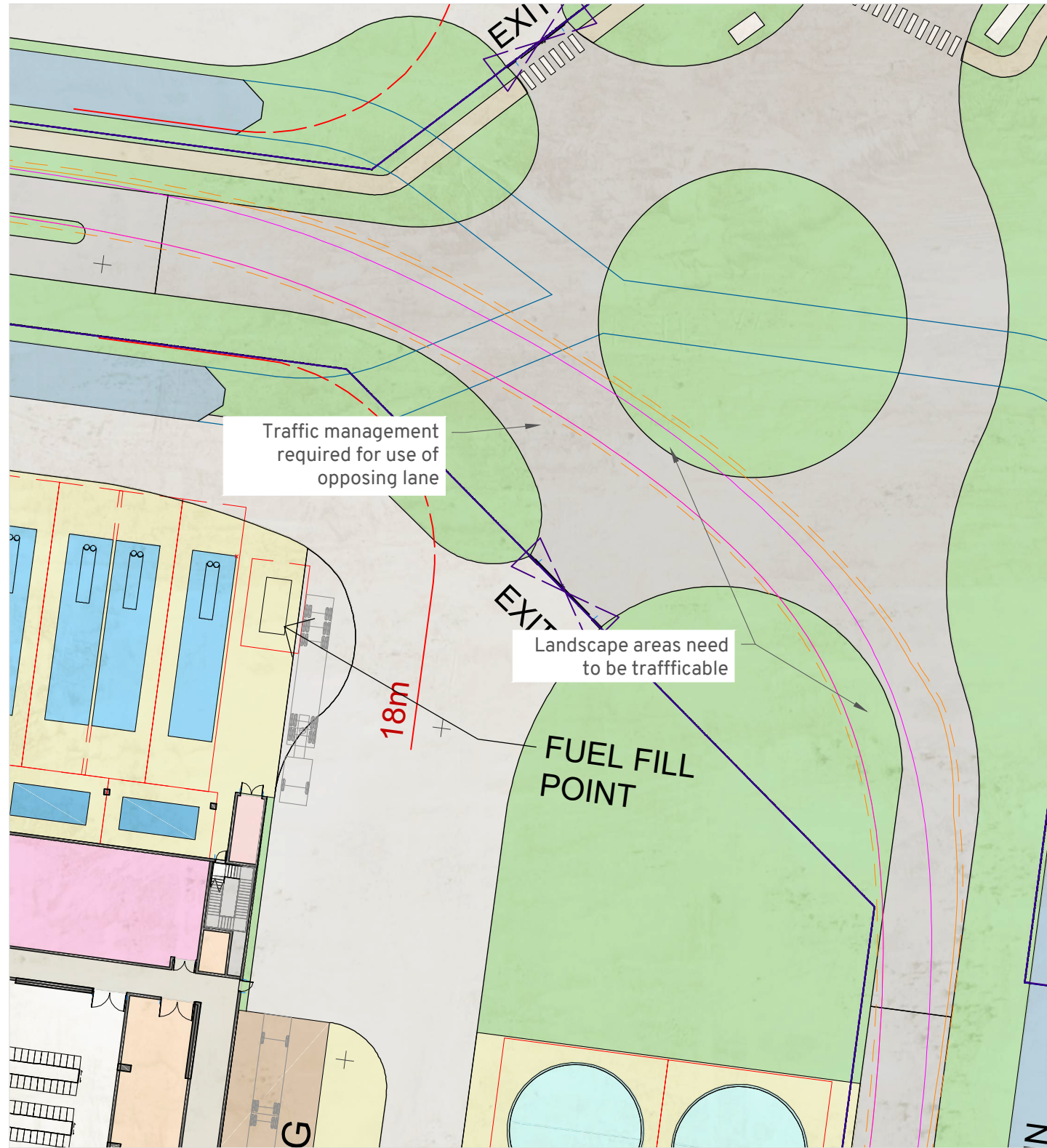


Truganina Terminal Station (TNTS)
 442-542 Mount Atkinson Road, Truganina
 Swept Path Assessment

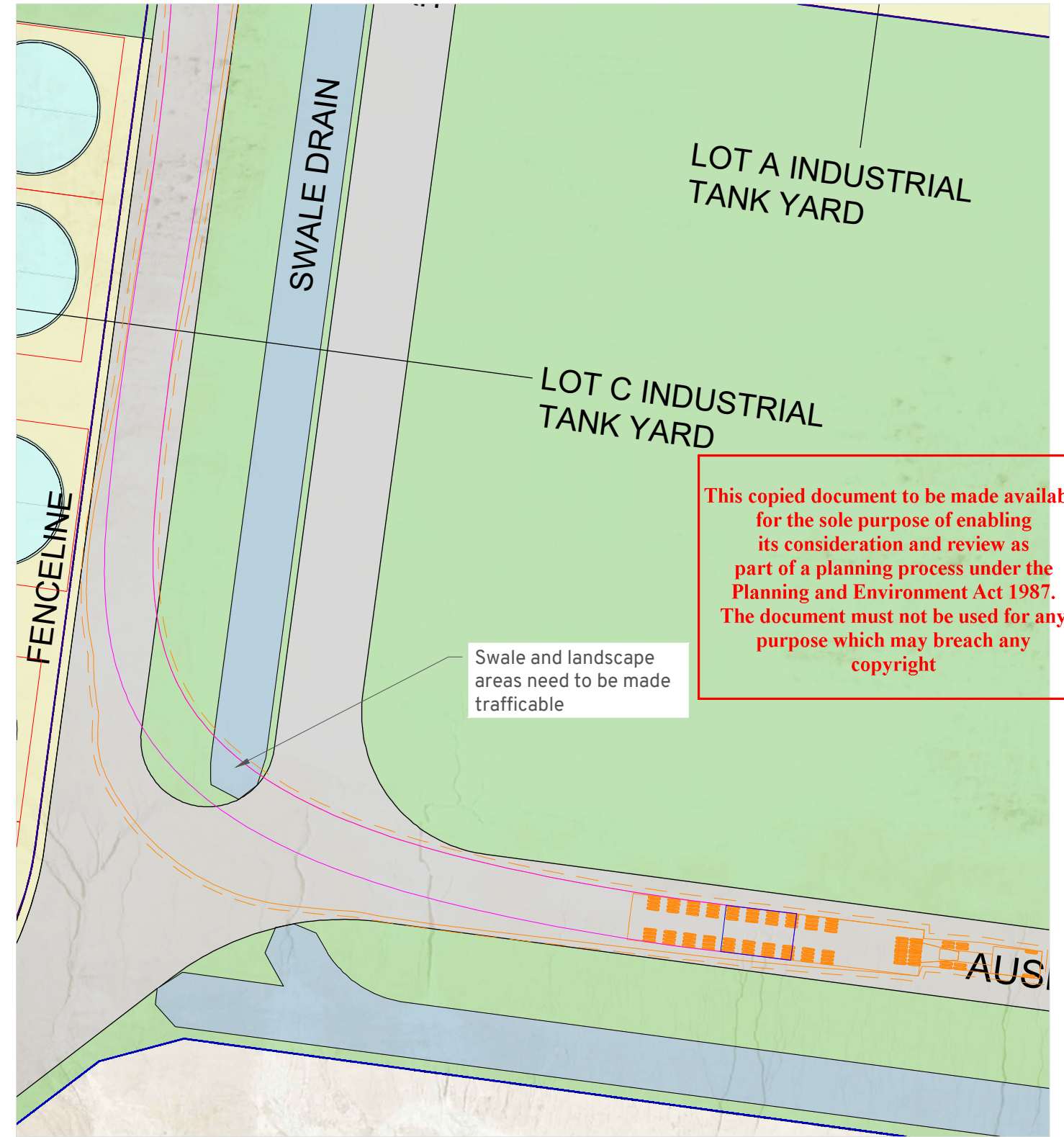
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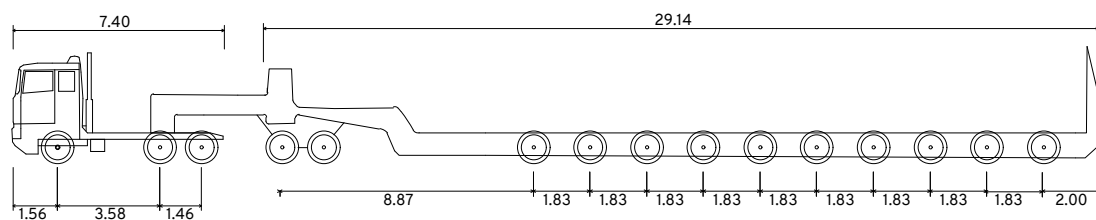


Entry Manoeuvre - Oroya Drive (Drumstick Drive)



Entry Manoeuvre - Oroya Drive (Drumstick Drive)

- Vehicle Envelope
- 500mm Clearance
- Load Outlines
- Load Path



10 X 8 Low Loader with Dolly

Overall Length	38.000m
Overall Width	4.270m
Overall Body Height w/ Load	5.380m
Lock-to-lock time	6.00s
Wall to Wall Turning Radius	20.925m



Truganina Terminal Station (TNTS)
 442-542 Mount Atkinson Road, Truganina
 Swept Path Assessment

DRAWN: RK
 DATE: 26/08/2025
 DWG NO: 1140 S01C
 SCALE at A3: 1:500m



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