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Grieve Gillet Architects

Tasmanian Youth Justice Facility
Traffic Impact Assessment

October 2025

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1. Introduction

1.1 Background

Midson Traffic were engaged by Grieve Gillet Architects to prepare a traffic impact assessment for a proposed Youth Justice Facility development at 466 Brighton Road and 36 Rifle Range Road.

1.2 Traffic Impact Assessment (TIA)

A traffic impact assessment (TIA) is a process of compiling and analysing information on the impacts that a specific development proposal is likely to have on the operation of roads and transport networks. A TIA should not only include general impacts relating to traffic management, but should also consider specific impacts on all road users, including on-road public transport, pedestrians, cyclists and heavy vehicles.

This TIA has been prepared in accordance with the Department of State Growth (DSG) publication, *Traffic Impact Assessment Guidelines*, August 2020. This TIA has also been prepared with reference to the Austroads publication, *Guide to Traffic Management,* Part 12: *Integrated Transport Assessments for Developments*, 2020.

Land use developments generate traffic movements as people move to, from and within a development. Without a clear understanding of the type of traffic movements (including cars, pedestrians, trucks, etc), the scale of their movements, timing, duration and location, there is a risk that this traffic movement may contribute to safety issues, unforeseen congestion or other problems where the development connects to the road system or elsewhere on the road network. A TIA attempts to forecast these movements and their impact on the surrounding transport network.

A TIA is not a promotional exercise undertaken on behalf of a developer; a TIA must provide an impartial and objective description of the impacts and traffic effects of a proposed development. A full and detailed assessment of how vehicle and person movements to and from a development site might affect existing road and pedestrian networks is required. An objective consideration of the traffic impact of a proposal is vital to enable planning decisions to be based upon the principles of sustainable development.

This TIA also addresses the relevant clauses of C2.0, *Parking and Sustainable Parking Code*, and C3.0, *Road and Railway Assets Code*, of the Tasmanian Planning Scheme – Brighton, 2021.

1.3 Statement of Qualification and Experience

This TIA has been prepared by an experienced and qualified traffic engineer in accordance with the requirements of Council's Planning Scheme and The Department of State Growth's, *Traffic Impact Assessment Guidelines*, August 2020, as well as Council's requirements.

The TIA was prepared by Keith Midson. Keith's experience and qualifications are briefly outlined as follows:

- 29 years professional experience in traffic engineering and transport planning.
- Master of Transport, Monash University, 2006
- Master of Traffic, Monash University, 2004

- Bachelor of Civil Engineering, University of Tasmania, 1995
- Engineers Australia: Fellow (FIEAust); Engineering Executive (EngExec)

1.4 Project Scope

The project scope of this TIA is outlined as follows:

- Review of the existing road environment in the vicinity of the site and the traffic conditions on the road network.
- Provision of information on the proposed development with regards to traffic movements and activity.
- Identification of the traffic generation potential of the proposal with respect to the surrounding road network in terms of road network capacity.
- Review of the parking requirements of the proposed development. Assessment of this parking supply with Planning Scheme requirements.
- Traffic implications of the proposal with respect to the external road network in terms of traffic efficiency and road safety.

1.5 Subject Site

The subject site is located at 466 Brighton Road and 36 Rifle Range Road. The site is currently a vacant lot with road access at Brighton Road and Rifle Range Road.

The subject site and surrounding road network is shown in Figure 1.

Figure 1 Subject Site & Surrounding Road Network

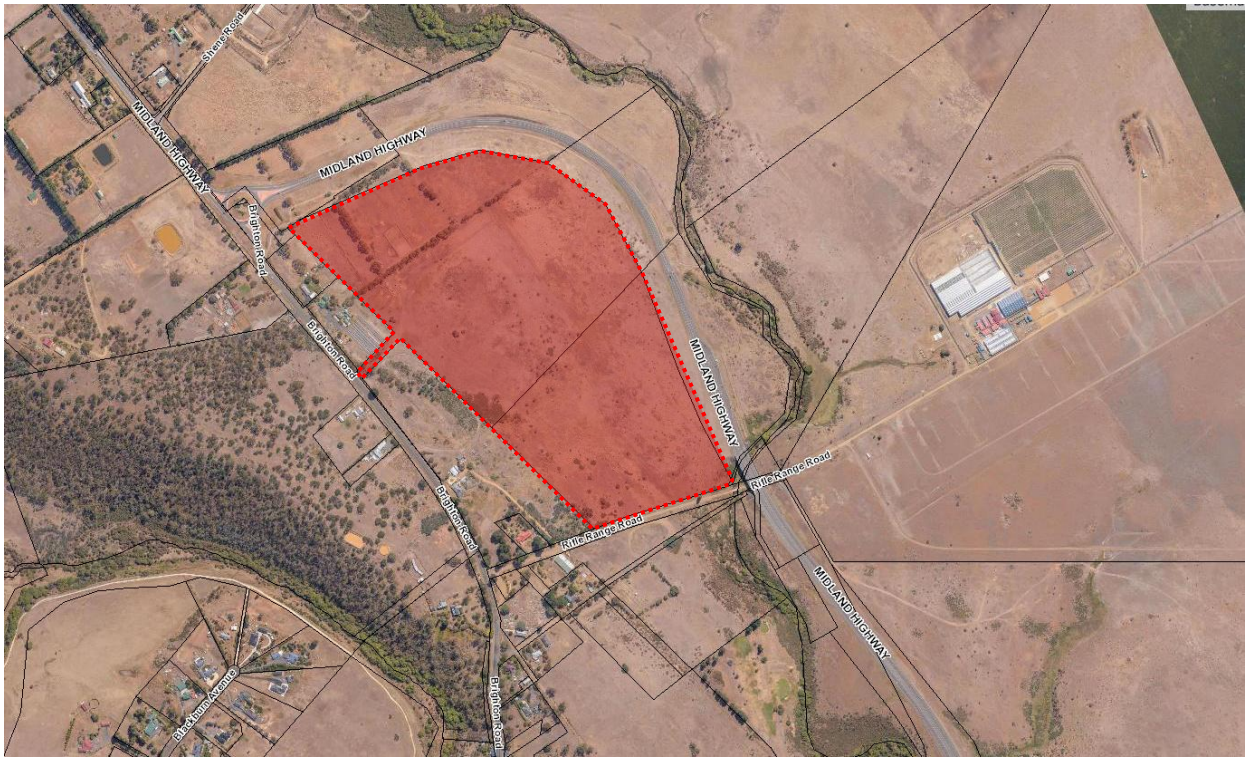


Image Source: LIST Map, DPIPWE

1.6 Reference Resources

The following references were used in the preparation of this TIA:

- Tasmanian Planning Scheme – Brighton, 2021 (Planning Scheme)
- Austroads, *Guide to Traffic Management,* Part 12: *Integrated Transport Assessments for Developments*, 2020
- Austroads, Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections, 2021
- Department of State Growth, *Traffic Impact Assessment Guidelines*, 2020
- Transport NSW, *Guide to Traffic Impact Assessment*, 2024 (TfNSW Guide)
- Australian Standards, AS2890.1, *Off-Street Parking*, 2004 (AS2890.1)
- Australian Standards, AS2890.2, *Off-street Commercial Vehicle Facilities*, 2018

2. Existing Conditions

2.1 Transport Network

The transport network relevant to this report consists of Brighton Road and Rifle Range Road only.

2.1.1 Brighton Road

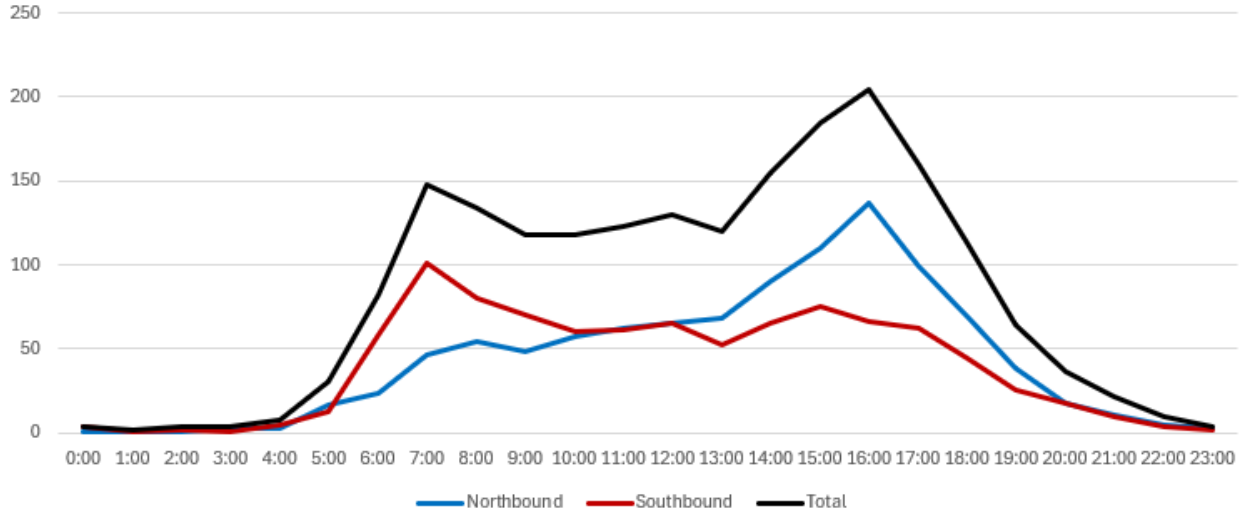
Brighton Road is a collector road that once formed part of the Midland Highway. It connects between Glenstone Road at its southern end and Midland Highway at its northern end. It provides access to the Brighton town centre, as well as the residential catchments in Brighton and Pontville.

Brighton Road has a daily traffic volume of approximately 2,000 vehicles per day, with peaks of approximately 150 and 200 vehicles per hour during the AM and PM peaks respectively. The weekday hourly flow on Brighton Road is shown in Figure 2.

Brighton Road has a sealed carriageway width of approximately 7-metres. It has centre and edge line marking, with 1-metre sealed verges. It has a posted speed limit of 60-km/h near the subject site.

Brighton Road at the Rifle Range Road junction is shown in Figure 3.

Figure 2 Brighton Road Weekday Hourly Volumes



Source: Department of State Growth

Figure 3 Brighton Road

2.1.2 Rifle Range Road

Rifle Range Road connects to Brighton Road at its western end at a T-junction. It extends approximately 1.5-kilometres to the east, passing beneath the Midland Highway and provides access to an agricultural facility and rural land. Rifle Range Road also provides access to several residential properties along its western section.

Rifle Range Road has a sealed pavement width of approximately 6-metres towards its western end near Brighton Road. It has an unsealed pavement for the majority of its length.

Rifle Range Road carries a relatively low traffic volume in the order of 200 to 300 vehicles per day. The general urban speed limit of 50-km/h is applicable within the sealed western section of the road.

Rifle Range Road near the Brighton Road junction is shown in Figure 4.

Figure 4 Rifle Range Road

2.2 Road Safety Performance

Crash data can provide valuable information on the road safety performance of a road network. Existing road safety deficiencies can be highlighted through the examination of crash data, which can assist in determining whether traffic generation from the proposed development may exacerbate any identified issues.

Crash data was obtained from the Department of State Growth for a 5+ year period between 1st January 2020 and 31st March 2025 for the full length of Rifle Range Road and Brighton Road between Midland Highway and Ford Road.

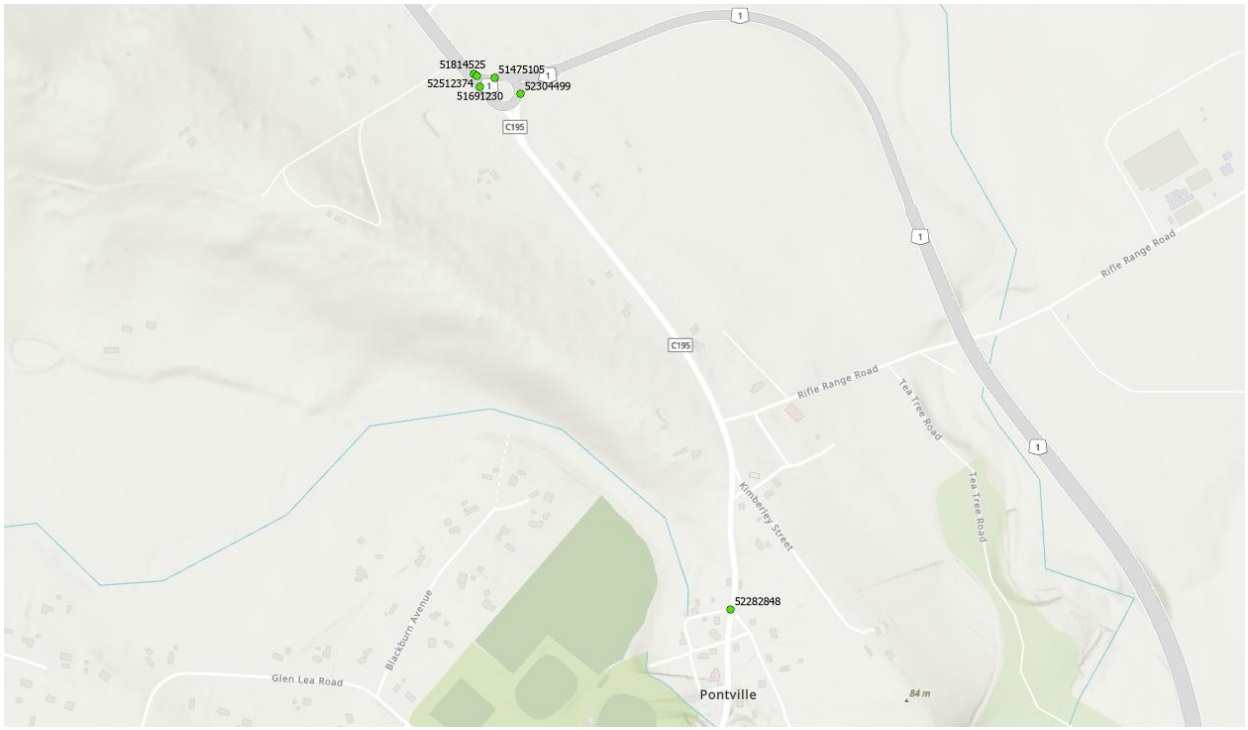
The findings of the crash data is summarised as follows:

- No crashes were reported in Rifle Range Road. A total of 6 crashes were reported in Brighton Road.
- Severity. 3 crashes involved minor injury; 3 crashes involved property damage only.
- Time of day. Crashes were generally reported outside of normal work hours. 2 crashes were reported between 3:00am and 4:10am; 3 crashes were reported between 5:00pm and 8:00pm; 1 crash was reported at 11:20pm.
- Day of week. No crash trends were noted by day of week. 2 crashes were reported on Saturdays; 1 crash was reported on a Monday, Wednesday, Friday and Sunday; no crashes were reported on Tuesdays or Thursdays.
- Crash types. Four crashes involved a single vehicle losing control on the carriageway. Two crashes did not have a crash type recorded.

- Crash locations. 5 crashes were reported at the Midland Highway/ Brighton Road roundabout. 1 crash was reported on Brighton Road near the Glebe Street intersection. The crash locations are shown in Figure 5.
- Vulnerable road users. No crashes involved vulnerable road users (pedestrians, cyclists or motorcyclists).

The Crash data is consistent with the crash rate of a low volume rural collector road with a speed limit of 60-km/h. The crash rate at the Midland Highway roundabout is considered typical of a major highway junction in a rural setting with relatively high volumes (Midland Highway approaches) and unbalanced flows. The crash data does not indicate that there are any pre-existing road safety deficiencies in the network.

Figure 5 Crash Locations



Source: Department of State Growth

3. Proposed Development

3.1 Development Proposal

The proposed development involves the construction of a new Youth Justice Facility located at 466 Brighton Road and 36 Rifle Range Road, Pontville. The facility is designed to replace the existing Ashley Youth Detention Centre and will be developed in accordance with the State Government's Youth Justice Blueprint and Commission of Inquiry commitments.

The proposed facility will include:

- 20 residential beds, 2 health beds and 2 orientation beds with capacity for future expansion.
- Medical facilities.
- Support facilities for education and rehabilitation services.
- Administration and operational areas.
- Security infrastructure.
- On-site car parking for 111 spaces, comprising of 12 visitor parking spaces (including 1 disabled space) and 99 staff and government vehicles (including 2 disabled spaces). An additional overflow car park with capacity for approximately 10 spaces is also provided at the northeastern corner of the car park.

The proposed development plans are shown in Figure 6.

Figure 6 Proposed Development Plans

4. Traffic Impacts

4.1 Trip Generation

The traffic generation associated with the proposed development was determined from first principles.

4.1.1 Staff Movements

The facility will accommodate various staff roles across multiple departments including management, operations, security, administration, programs, health services, and education. There will be a total daily staff presence of a maximum of 107 staff members, with an additional 38 staff attending the site during shift changes.

Other vehicle movements include service vehicles (linen, food, etc).

4.1.2 Peak Hour Estimation

Based on the shift patterns, the following peak hour movements are anticipated:

Morning Peak (shift change/business hours commencement):

- Arrival of day shift staff (approximately 55-60 vehicles)
- Departure of night shift staff (approximately 20 vehicles)
- Total peak hour movements: 75-80 vehicles

Afternoon Peak (shift change/business hours conclusion):

- Arrival of evening shift staff (approximately 25-30 vehicles)
- Departure of day shift staff (approximately 55-60 vehicles)
- Total peak hour movements: 80-90 vehicles

4.1.3 Additional Traffic Considerations

Beyond regular staff movements, additional traffic will be generated by:

- Visitor Traffic: Family visits to detained youth
- Service Deliveries: Catering, supplies, and maintenance
- Professional Visits: Legal representatives, case workers, and other support services
- Emergency Services: Occasional access by emergency vehicles

It's estimated these additional movements would generate approximately 10-15 vehicle trips per day, primarily during business hours.

4.1.4 Summary of Daily Traffic Generation

The proposed youth detention facility in Brighton is expected to generate:

- Daily generation 350 vehicle movements per day
- Morning peak hour: ~80 vehicle movements
- Afternoon peak hour: ~85 vehicle movements

These estimates are based on the staffing information, assuming typical vehicle occupancy rates for staff of 1.1 persons per vehicle, acknowledging that some staff may carpool or use alternative transportation.

4.2 Trip Assignment

All traffic will access the site via Rifle Range Road. At the Rifle Range Road junction, all traffic will access the site via left-in/ right-out manoeuvres.

At the Brighton Road/ Rifle Range Road junction, the peak hour turning movements are summarised in Table 1.

Table 1 Brighton Road/ Rifle Range Road Turning Movements

Peak	Left In	Right In	Inward Total	Left Out	Right Out	Out Total
AM Peak	44 vph	21 vph	65 vph	7 vph	13 vph	20 vph
PM Peak	12 vph	5 vph	17 vph	21 vph	47 vph	68 vph

4.3 Traffic Capacity Analysis

The key intersection associated with the proposed development is the Brighton Road/ Rifle Range Road junction. Existing volumes of Rifle Range Road are in the order of 200 vehicles per day, with negligible background traffic growth due to the dead-end nature of the road and limited property access along its length. The existing peak flows of Rifle Range Road are in the order of 20 vehicles per hour.

The increased volume at the junction will be in the order of 350 vehicles per day. The peak increase will be up to 90 vehicles per hour (two-way flow). This peak flow will result in the intersection continuing to operate at a high level of efficiency following the completion of the proposed development.

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4.4 Access Impacts

The proposed development will remove the current access on Rifle Range Road, and reinstate a new driveway access connecting to Rifle Range Road.

The Acceptable Solution A1.2 of Clause C3.5.1 of the Planning Scheme states "*For a road, excluding a category 1 road or a limited access road, written consent for a new junction, vehicle crossing, or level crossing to serve the use and development has been issued by the road authority*".

A new access on Rifle Range Road will therefore require road authority approval from road authority (Council). No written approval has been provided and therefore the proposed access is assessed under the Performance Criteria P1 of Clause C3.5.1 of the Planning Scheme, which states:

> *"Vehicular traffic to and from the site must minimise any adverse effects on the safety of a junction, vehicle crossing or level crossing or safety or efficiency of the road or rail network, having regard to:*
>
> *(a) any increase in traffic caused by the use;*
>
> *(b) the nature of the traffic generated by the use;*
>
> *(c) the nature of the road;*
>
> *(d) the speed limit and traffic flow of the road;*
>
> *(e) any alternative access to a road;*
>
> *(f) the need for the use;*
>
> *(g) any traffic impact assessment; and*
>
> *(h) any advice received from the rail or road authority".*

The following is relevant with respect to the proposed access:

a. Increase in traffic. The facility is estimated to generate up to 280 vehicles per day, with a peak of up to 70 vehicles per hour. This level of traffic generation can be accommodated safely and efficiently with appropriate redesign.

b. Nature of traffic. The traffic will predominantly consist of light vehicle traffic (staff and visitors).

c. Nature of road. Rifle Range Road is a local access road. The function of the road is compatible with the access function.

d. Speed limit and traffic flow. Rifle Range Road has a speed limit of 50-km/h near the access and has an average daily traffic volume of approximately 200 vehicles per day. The traffic flow conditions of Rifle Range Road are compatible with the access that will service the facility.

e. Alternative access. Alternative access is available at the site's connection to Brighton Road. It was deemed more appropriate to utilise an existing road junction.

f. Need for use. The access is required to service the transport requirements associated with the proposed facility.

g. Traffic impact assessment. This report documents the findings of a traffic impact assessment.

h. Road authority advice. Council (as road authority) require a TIA to be prepared for the proposed development.

Based on the above assessment, the development meets the requirements of Performance Criteria P1 of Clause C3.5.1 of the Planning Scheme.

4.5 Number of Accesses

The Acceptable Solution A1 of Clause C2.6.3 of the Planning Scheme states "*the number of accesses provided for each frontage must: (a) be no more than 1; or (b) be no more than the existing number of accesses, whichever is greater*".

The proposed development will rely upon a single access on Rifle Range Road. The subject site will retain the existing access on Brighton Road, however this will be for rural use and not available for the facility.

The Acceptable Solution A1 of Clause C2.6.3 of the Planning Scheme is met.

4.6 Access Design

The proposed development will gain vehicular access via Rifle Range Road, which intersects Brighton Road at a simple T-junction. The intersection and adjoining road network have been assessed in accordance with *Austroads Guide to Road Design Part 4A – Unsignalised and Signalised Intersections (2021)* and *Guide to Traffic Management Part 6 – Intersections, Interchanges and Crossings (2020)* to determine whether any upgrades are warranted to accommodate the additional traffic generated by the Youth Justice Facility.

It is noted that the proposed development site straddles two municipal areas:

- The access road and internal site works are located within the Southern Midlands Council (SMC) municipality.
- The Rifle Range Road corridor and the Brighton Road / Rifle Range Road junction are located wholly within the Brighton Council municipality.

Accordingly, matters relating to the junction design and Rifle Range Road upgrades fall under Brighton Council's jurisdiction as the relevant road authority, while the internal access connection within the site lies within Southern Midlands Council area of responsibility.

4.6.1 Traffic Volumes and Turning Movements

Brighton Road currently carries approximately 2,000 vehicles per day with peak-hour volumes of around 200 vehicles per hour, while Rifle Range Road carries around 200 – 300 vehicles per day. The proposed Youth Justice Facility is expected to add up to 350 vehicle movements per day, including peak-hour two-way flows of approximately 80–90 vehicles per hour.

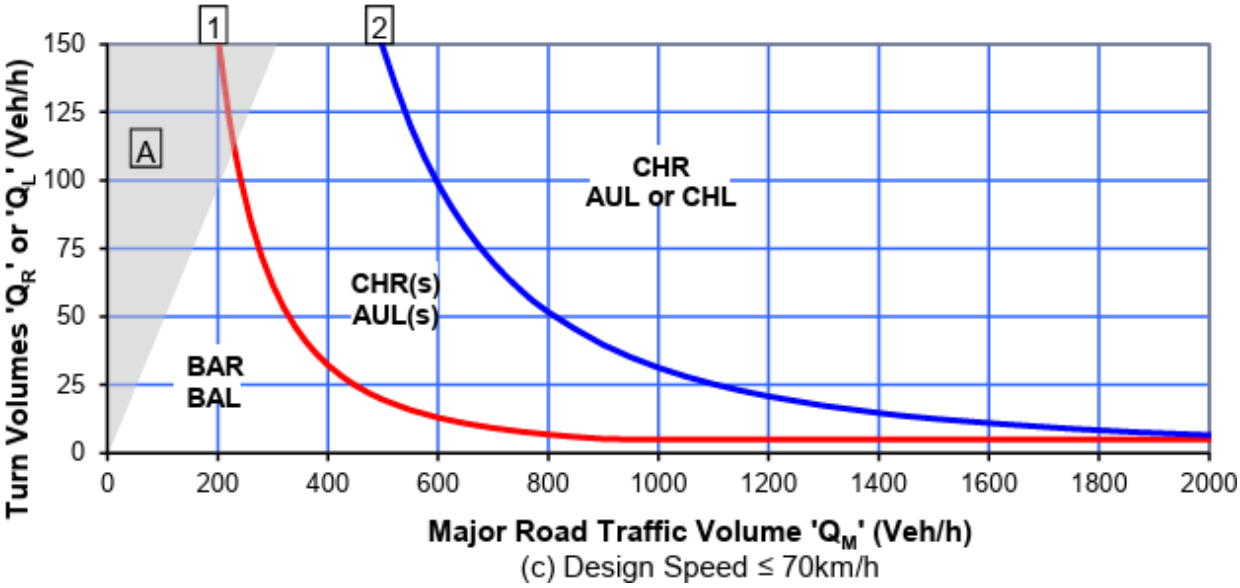
Of this total, right-turns from Brighton Road into Rifle Range Road are anticipated to be in the order of 20 – 25 vehicles per hour, inclusive of both existing and development-related traffic.

4.6.2 Austroads Assessment

According to Figure 5.5 of *Austroads Part 4A* (Warrants for Right-Turn Treatments on Major Roads, reproduced in Figure 7), the combination of a 60 km/h operating speed, 200 vph on the major road, and fewer than 25 vph right-turns lies within the Basic Auxiliary Right-turn (BAR) region, well below the threshold at which a Channelised Right-turn Lane (CHR) or more extensive treatment is required. This indicates that the existing simple-T layout is sufficient from a capacity and safety perspective.

The posted speed environment of 60 km/h and the semi-urban setting promote a high level of driver awareness approaching the junction, with low approach speeds and good sight distance. Observed 85th-percentile speeds confirm the design assumption of 60 km/h, giving a Safe Intersection Sight Distance (SISD) requirement of 114 metres. The available sight distance is approximately 120 metres to the south and more than 200 metres to the north, comfortably satisfying Austroads criteria.

Figure 7 Austroads Warrants for Turn Lanes



4.6.3 Implementation and Environmental Constraints

A detailed design review by Pitt & Sherry (October 2025) examined the feasibility of constructing a BAR treatment at this junction. The investigation identified several **significant constraints** that render such a treatment impractical

- Heritage impacts: The eastern side of Brighton Road adjoins St Mark's Anglican Church and Graveyard, while the western side adjoins the heritage-listed Brooksby property. Any widening to

provide a BAR would encroach into the Brooksby property, affecting its curtilage and screening vegetation.

- Topographic limitation: Brighton Road is in cut along its western side. Widening would require excavation of the existing cutting or construction of a retaining wall, both extending beyond the property boundary.
- Service relocation: A DN200 cast-iron water main runs parallel to the western verge and would require relocation into a widened verge to maintain connection to Rifle Range Road.
- Property acquisition and vegetation loss: Both a widened cut or retaining-wall option would extend into private land and require removal of mature trees providing landscape screening.
- Cost and benefit: The combination of heritage, geotechnical, and service-relocation constraints would lead to substantial construction costs that are disproportionate to the modest level of right-turn demand.

The junction currently operates safely and efficiently, with **no recorded crashes** in the most recent five-year dataset. Post-development volumes remain well within capacity, and the modest increase in right-turn demand can be accommodated under **gap-acceptance behaviour** without delay or queuing issues. The 60 km/h environment and urban-rural transition promote high driver awareness.

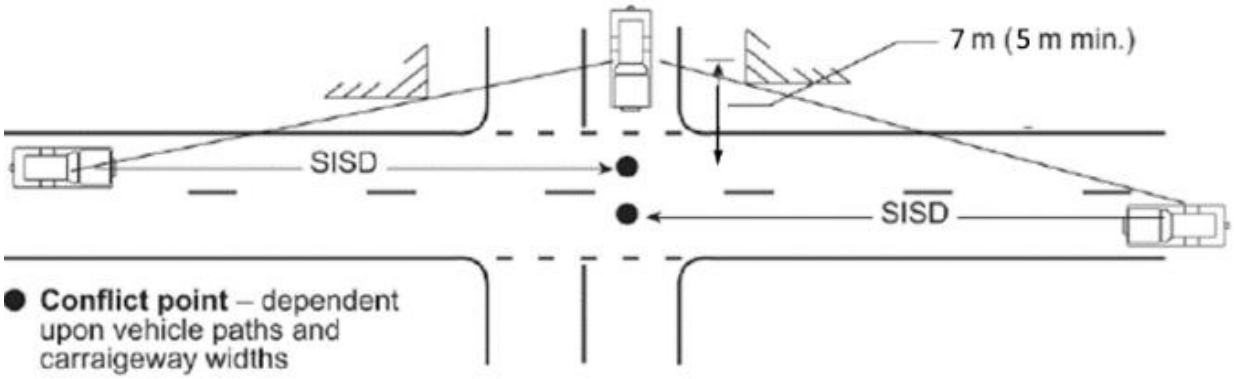
Taking into account the Austroads warrant assessment, traffic volumes, and Pitt & Sherry's engineering review of physical constraints, provision of a BAR treatment is not feasible nor warranted. The existing simple-T configuration provides safe and efficient operation for the projected development traffic.

4.7 Sight Distance

Austroads Part 4A provides the sight distance requirements for road junctions. The existing junction of Rifle Range Road with Brighton Road was assessed against Austroads sight distance requirements.

Safe Intersection Sight Distance (SISD) is the minimum sight distance which should be provided on the major road at any intersection. SISD is measured along the carriageway from the approaching vehicle to the conflict point; the line of sight having to be clear to a point 7.0 metres (5.0 metres minimum) back along the side road from the conflict point as shown in Figure 8.

Figure 8 Austroads SISD Requirements



A small sample of vehicle speeds were obtained for vehicles travelling along Brighton Road, confirming that the 85th percentile speed of vehicles is equal to the posted speed limit of 60-km/h. The required SISD is therefore 114 metres (with an alerted driver reaction time of 1.5 seconds). The available sight distance is approximately 120 metres to the south of the junction. Sight distance is unrestricted (more than 200 metres) to the north of the junction.

The Austroads SISD requirements are met at the existing junction.

4.8 Pedestrian Impacts

The Acceptable Solution A1 of Clause C2.6.5 of the Planning Scheme addresses pedestrian infrastructure requirements for developments requiring 10 or more car parking spaces. This clause contains two components: A1.1 relating to general pedestrian pathways, and A1.2 relating to accessible pathways for disabled parking spaces.

4.8.1 General Pedestrian Pathways (A1.1)

Acceptable Solution A1.1 of Clause C2.6.5 states:

> *"Uses that require 10 or more car parking spaces must:*
>
> *(a) have a 1m wide footpath that is separated from the access ways or parking aisles, excluding where crossing access ways or parking aisles, by:*
>
> *(i) a horizontal distance of 2.5m between the edge of the footpath and the access way or parking aisle; or*
>
> *(ii) protective devices such as bollards, guard rails or planters between the footpath and the access way or parking aisle; and*
>
> *(b) be signed and line marked at points where pedestrians cross access ways or parking aisles".*

Assessment of A1.1 Compliance:

(a) Footpath separation requirements:

The car park design incorporates pedestrian pathways with the following characteristics:

- Pedestrian paths are provided along the front of all parking spaces in both the visitor parking area and staff parking areas.
- The pedestrian paths have a minimum width exceeding 1 metre.
- The paths are located at the front edge of parking spaces, positioning them more than 2.5 metres from the parking aisles, thereby satisfying requirement (a)(i).
- This separation distance ensures pedestrian safety by providing adequate clearance from vehicular traffic in the aisles.

(b) Crossing points:

- A central marked pedestrian crossing is provided through the two aisles of the staff parking area.
- This crossing point will be appropriately signed and line marked in accordance with AS2890.1 and Australian Standards for pedestrian crossing treatments.
- The crossing provides safe pedestrian connectivity between different sections of the parking area.

4.8.2 Accessible Pedestrian Pathways (A1.2)

Acceptable Solution A1.2 of Clause C2.6.5 states:

> *"In parking areas containing accessible car parking spaces for use by persons with a disability, a footpath having a width not less than 1.5m and a gradient not steeper than 1 in 14 is required from those spaces to the main entry point to the building".*

Assessment of A1.2 Compliance:

The development provides 3 accessible parking spaces (2 staff disabled spaces and 1 visitor disabled space) and incorporates dedicated accessible pedestrian infrastructure as follows:

(a) Footpath width:

- The pedestrian footpath connecting the accessible parking spaces to the main building entry has a width of 1.5 metres, meeting the minimum requirement.
- This width provides adequate clearance for wheelchair users and mobility aids.

(b) Footpath gradient:

- The accessible pedestrian path has been designed with a gradient not exceeding 1 in 14 (7.1%), complying with the maximum gradient requirement.
- The relatively flat topography of the site facilitates compliance with gradient requirements.

(c) Connectivity:

- The accessible pathway provides direct connectivity from all accessible parking spaces to the main entry point of the facility.
- The pathway is separated from vehicular traffic areas by more than 2.5 metres, ensuring pedestrian safety.
- The path design incorporates appropriate tactile indicators and accessible design features in accordance with Australian Standards.

4.8.3 Pedestrians Conclusion

The pedestrian infrastructure within the car parking areas satisfies the requirements of both Acceptable Solution A1.1 and A1.2 of Clause C2.6.5 of the Planning Scheme. The design provides safe, accessible, and compliant pedestrian connectivity throughout the parking areas and ensures appropriate access for all users, including persons with disabilities.

4.9 Road Safety Impacts

No significant road safety impacts are foreseen for the proposed development. This is based on the following:

- The surrounding road transport network is capable of absorbing the estimated traffic generation of the developed development. The peak traffic generation of the development is estimated to be up to 60 vehicles per hour. The operational efficiency of the existing junction arrangement will continue to operate at a high level of efficiency as a result of the proposed development.
- The crash history of the surrounding road network near the subject site does not indicate that there are any specific road safety issues that are likely to be exacerbated by the proposed development.

4.10 Construction Impacts

The construction of the Tasmanian Youth Justice Facility is anticipated to take approximately 18 months to complete. During this period, the construction activities will generate moderate traffic generation, including heavy vehicle movements.

4.10.1 Construction Vehicle Access

Construction vehicles, including frequent heavy vehicle movements, will access the site via two primary routes:

- Rifle Range Road junction - Heavy vehicles will utilise the existing Brighton Road/ Rifle Range Road junction to access the construction site via Rifle Range Road.
- Brighton Road access - Construction vehicles may also utilise the existing site access point directly from Brighton Road, depending on the specific construction requirements and site layout.

The use of both access points will provide flexibility for construction operations while distributing construction traffic to minimise concentrated impacts on any single access route.

4.10.2 Construction Traffic Management

The specific nature and scale of construction activity, including detailed construction vehicle movements, delivery schedules, and construction methodology, are not yet determined as these will depend on the contractor engaged to undertake the construction works.

Given the scale of the development and the anticipated heavy vehicle movements during construction, a comprehensive Construction Traffic Management Plan (CTMP) will be required to be prepared by the contractor prior to commencement of construction activities.

The CTMP should address, but not be limited to, the following elements:

- Detailed construction vehicle routes and access arrangements
- Construction vehicle types, frequencies, and timing
- Traffic control measures during construction activities
- Coordination with road authorities regarding any temporary traffic management requirements
- Measures to minimise impacts on local traffic, residents, and businesses
- Procedures for oversized or overweight vehicle movements (if required)
- Site access protocols and on-site traffic management
- Communication strategies with affected stakeholders

4.10.3 Temporary Traffic Impacts

During the construction period, temporary increases in traffic volumes are anticipated on both Brighton Road and Rifle Range Road. These impacts will be managed through the implementation of the CTMP and will be temporary in nature.

The existing road network has adequate capacity to accommodate construction traffic movements, provided appropriate traffic management measures are implemented in accordance with the approved CTMP.

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5. Parking Assessment

5.1 Parking Provision

The facility proposes a total of 111 on-site car parking spaces, comprising of 12 visitor parking spaces and 99 staff car parking spaces. Additional overflow parking is provided at the northeastern end of the car park, with capacity for approximately 10 cars.

The parking layout is shown in Figure 9.

5.2 Planning Scheme Requirements

The Acceptable Solution A1 of NOR-S1.6.6 of the Planning Scheme (Northern Midlands Local Provisions) states:

> *"The number of on-site car parking spaces must be*
>
> *no less than the number specified in Table C2.1, excluding if:*
>
> *(a) the site is subject to a parking plan for the area adopted by council, in which case parking provision (spaces or cash-in-lieu) must be in accordance with that plan;*
>
> *(b) the site is contained within a parking precinct plan and subject to Clause C2.7;*
>
> *(c) it relates to an intensification of an existing use or development or a change of use where:*
>
> > *(i) the number of on-site car parking spaces for the existing use or development specified in Table C2.1 is greater than the number of car parking spaces specified in Table C2.1 for the proposed use or development, in which case no additional on-site car parking is required; or*
> >
> > *(ii) the number of on-site car parking spaces for the existing use or development specified in Table C2.1 is less than the number of car parking spaces specified in Table C2.1 for the proposed use or development, in which case on-site car parking must be calculated as follows:*
> >
> > *(iii) N = A + (C- B) N = Number of on-site car parking spaces required*
> >
> > *(iv) A = Number of existing on site car parking spaces*
> >
> > *(v) B = Number of on-site car parking spaces required for the existing use or development specified in Table C2.1*
> >
> > *(vi) C = Number of on-site car parking spaces required for the proposed use or development specified in Table C2.1.".*

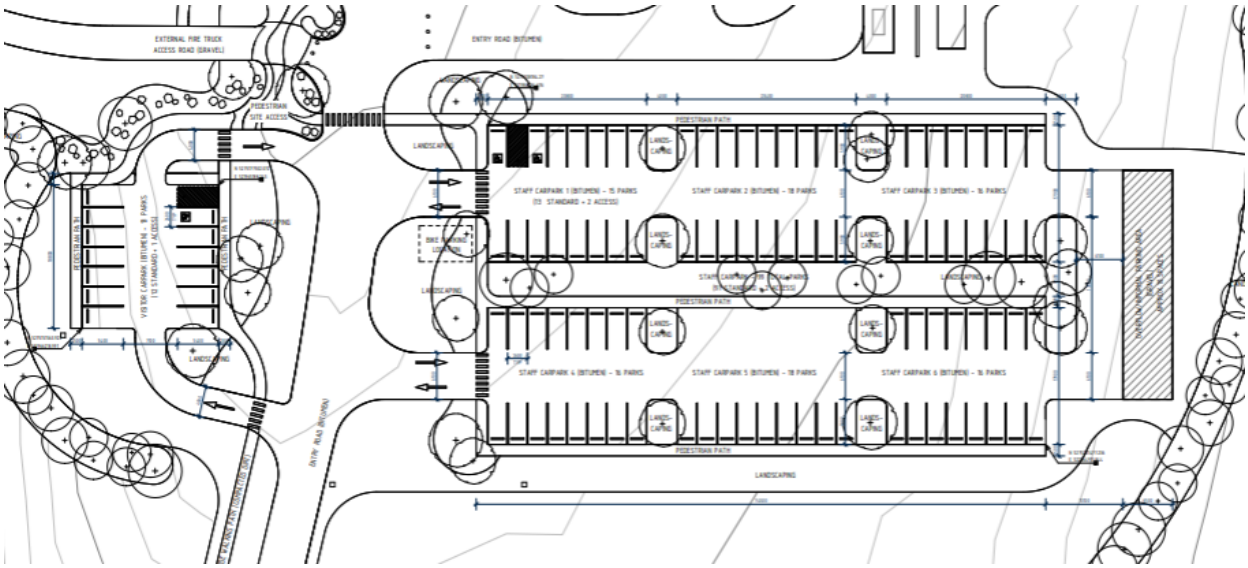
In this case, sub-points (a), (b), and (c) are not applicable.

Table C2.1 defines the facility as 'custodial facility', which requires 1 space per 2 employees plus 1 space per 5 inmates. This is a requirement for 58 spaces based on 107 staff and 24 youths. The provision of 111 spaces therefore satisfies the requirements of Acceptable Solution A1 of Clause C2.5.1 of the Planning Scheme.

5.3 Car Parking Layout

The car parking layout consists of 12 visitor parking spaces located on the western side of the access, and 99 staff and government parking spaces located in two interconnected parking aisles on the eastern side of the access. The parking layout is shown in Figure 9.

Figure 9 Car Parking Layout



The Acceptable Solution A1.1 of Clause C2.6.2 of the Planning Scheme states:

"Parking, access ways, manoeuvring and circulation spaces must either:

(a) comply with the following:

(i) have a gradient in accordance with Australian Standard AS 2890 - Parking facilities, Parts 1-6;

(ii) provide for vehicles to enter and exit the site in a forward direction where providing for more than 4 parking spaces;

(iii) have an access width not less than the requirements in Table C2.2;

(iv) have car parking space dimensions which satisfy the requirements in Table C2.3;

(v) have a combined access and manoeuvring width adjacent to parking spaces not less than the requirements in Table C2.3 where there are 3 or more car parking spaces;

(vi) have a vertical clearance of not less than 2.1m above the parking surface level; and

(vii) excluding a single dwelling, be delineated by line marking or other clear physical means; or

(b) comply with Australian Standard AS 2890- Parking facilities, Parts 1-6".

The car parking was assessed against the requirements of A1.1(b), using AS2890.1 as detailed in the following sections.

5.3.1 Driveway Grade

Section 2.5.3(b) of AS2890.1 states the following regarding the maximum grade of straight ramps:

i. Longer than 20 metres – 1 in 5 (20%) maximum.

ii. Up to 20 metres long – 1 in 4 (25%) maximum. The allowable 20 m maximum length shall include any parts of the grade change transitions at each end that exceed 1 in 5 (20%).

The maximum grade of the access is well below the maximum AS2890.1 requirements.

5.3.2 Parking Grade

Section 2.4.6 of AS2890.1 states that the maximum grades within a car park shall be:

- Measured parallel to the angle of parking 1 in 20 (5%)
- Measured in any other direction 1 in 16 (6.25%)

The grades of the parking spaces are effectively level, thus complying with the AS2890.1 grade requirements.

5.3.3 Parking Dimensions

AS2890.1 classifies the parking spaces as User Class 1A (staff) and User Class 2 (visitors). The dimensional requirements of User Class 2 (the largest sized spaces) is as follows:

- Space width 2.5 metres
- Space length 5.4 metres
- Aisle width 5.8 metres

All dimensions comply with or exceed AS2890.1 requirements.

5.3.4 AS2890.1 Summary

The parking space dimensions generally comply with the requirements of AS2890.1. The Acceptable Solution A1.1(b) of Clause C2.6.2 of the Planning Scheme is satisfied.

5.4 Disabled Parking

The Building Code of Australia (BCA) defines the commercial component of the development as a 'Class 9B' building.

As a Class 9b facility, the proposed Youth Justice Facility must provide accessible parking spaces in accordance with the requirements of the Tasmanian Planning Scheme and the Building Code of Australia (BCA).

The Acceptable Solution A1.1 of Clause C2.6.1 of the Planning Scheme requires that "*the number of accessible car parking spaces for people with disabilities must be not less than the number specified in Table C2.4*" For Class 9b buildings, Table C2.4 typically requires:

- 1 space for every 50 car parking spaces or part thereof for buildings requiring more than 50 parking spaces.

With a total provision of 111 parking spaces, the development is required to provide a minimum of 2 accessible parking spaces.

The provision of 3 disabled parking spaces satisfies the requirements of Acceptable Solution A1 of Clause C2.6.1 of the Planning Scheme.

5.5 Service Vehicle Access

The site will be accessed by various service vehicles, including emergency services (ambulance, fire, etc), and deliveries. A perimeter road is provided around the secured areas of the site for emergency vehicle access.

Swept paths of appropriate service vehicles were tested within the site. The swept paths confirm accessibility for each of the required design vehicles within each section of the site. The main service areas include:

- Delivery point and storage located at the Sallyport/ External Yard.
- Deliveries to Building B.
- Hardstands provided to Building B for fire truck access to booster pump, and to external transformer + generator plant.
- Secure ambulance access is required within the external yard. Access to the area is via the Sallyport. The swept path of this manoeuvre is shown in Figure 11.

5.6 Commercial Parking and Loading Areas

The Acceptable Solution A1 of Clause C2.5.4 of the Planning Scheme states "*a loading bay must be provided for uses with a floor area of more than 1,000m2 in a single occupancy*".

The development incorporates a designated loading area located adjacent to Building A. This area will accommodate delivery vehicles and enable the efficient receipt of various supplies including food provisions, linen services, equipment, and other materials essential to the facility's operations.

Deliveries will also be made to Building B, with vehicles able to enter the building, load/ unload, turn and exit in a forward direction.

This satisfies the requirements of Acceptable Solution A1 of Clause C2.5.4 of the Planning Scheme.

The Acceptable Solution A1 of Clause C2.6.6 of the Planning Scheme states: "*The area and dimensions of loading bays and access way areas must be designed in accordance with Australian Standard AS 2890.2–2002, Parking facilities, Part 2: Off-street commercial vehicle facilities, for the type of vehicles likely to use the site*".

AS2890.2 requires that the loading bay service area is dependent on a combination of:

(a) The maximum size of vehicle likely to use the facility.
(b) The frequency with which vehicles of different classification use the facility; and
(c) Whether the public road from which the facility is accessed is a major or minor road.

The following points are relevant for the site:

- Swept paths of an 8.8 metre truck (Medium Rigid Vehicle, MRV), the design vehicle) were tested through the site, to and from the site access. Swept paths of MRV vehicles within the site are detailed in Figure 10.
- The frequency of access to the site will be several times per day by vehicles of differing sizes.
- Access into the site is via a minor road. This access has been assessed to be appropriate in following sections of AS2890.2

AS2890.2 states that where providing regular service from a minor road, manoeuvring on-street, if permitted by the relevant authority, shall be strictly limited to one reverse movement either onto or off the street, and be subject to determination of both safety and obstruction to other on-street traffic. In this case, no manoeuvring is required in Rifle Range Road, all turning and manoeuvring is achieved within the site.

The loading area is also separated from the main car park and pedestrian accesses, with a dedicated manoeuvring area to facilitate forward entry and exit.

The loading area therefore complies with the requirements of AS2890.2 and thus satisfies the Acceptable Solution A1 of Clause C2.6.6 of the Planning Scheme.

Figure 10 MRV Swept Path Loading Area Access

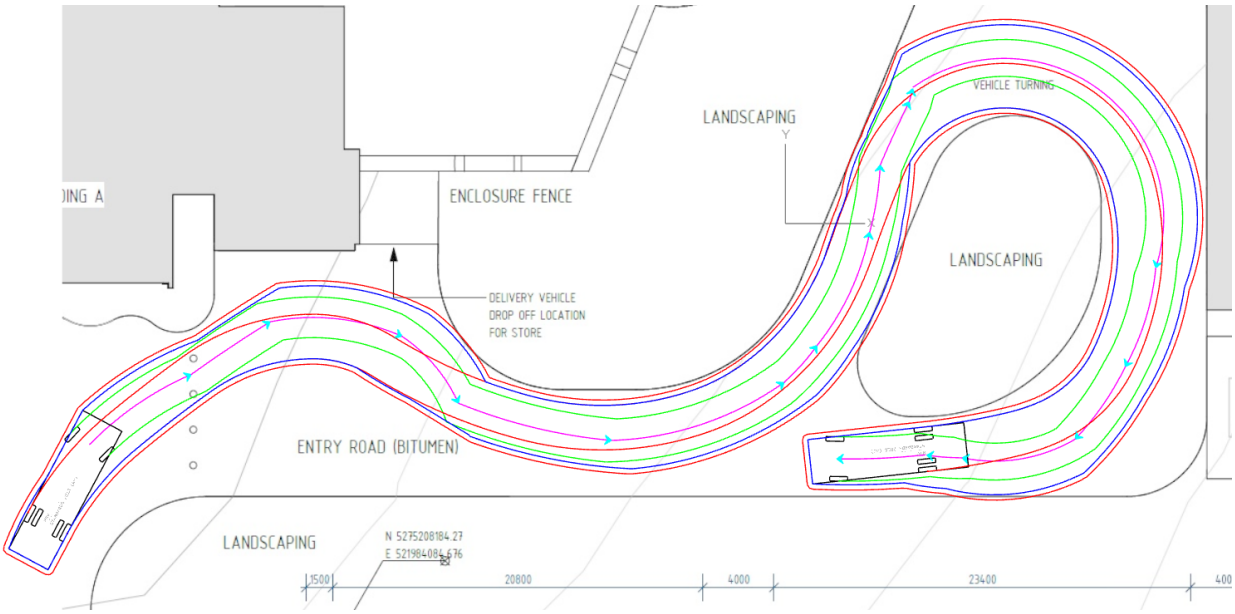
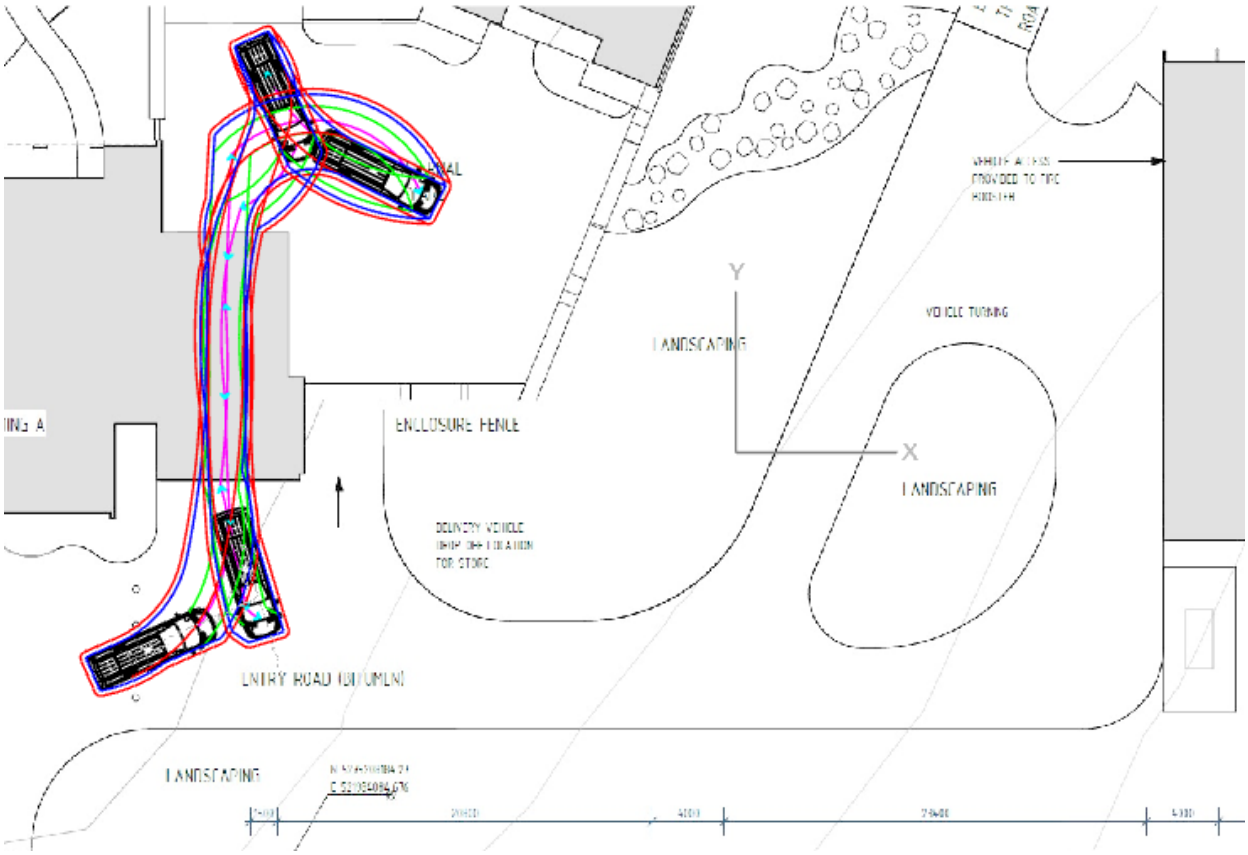


Figure 11 Ambulance Access

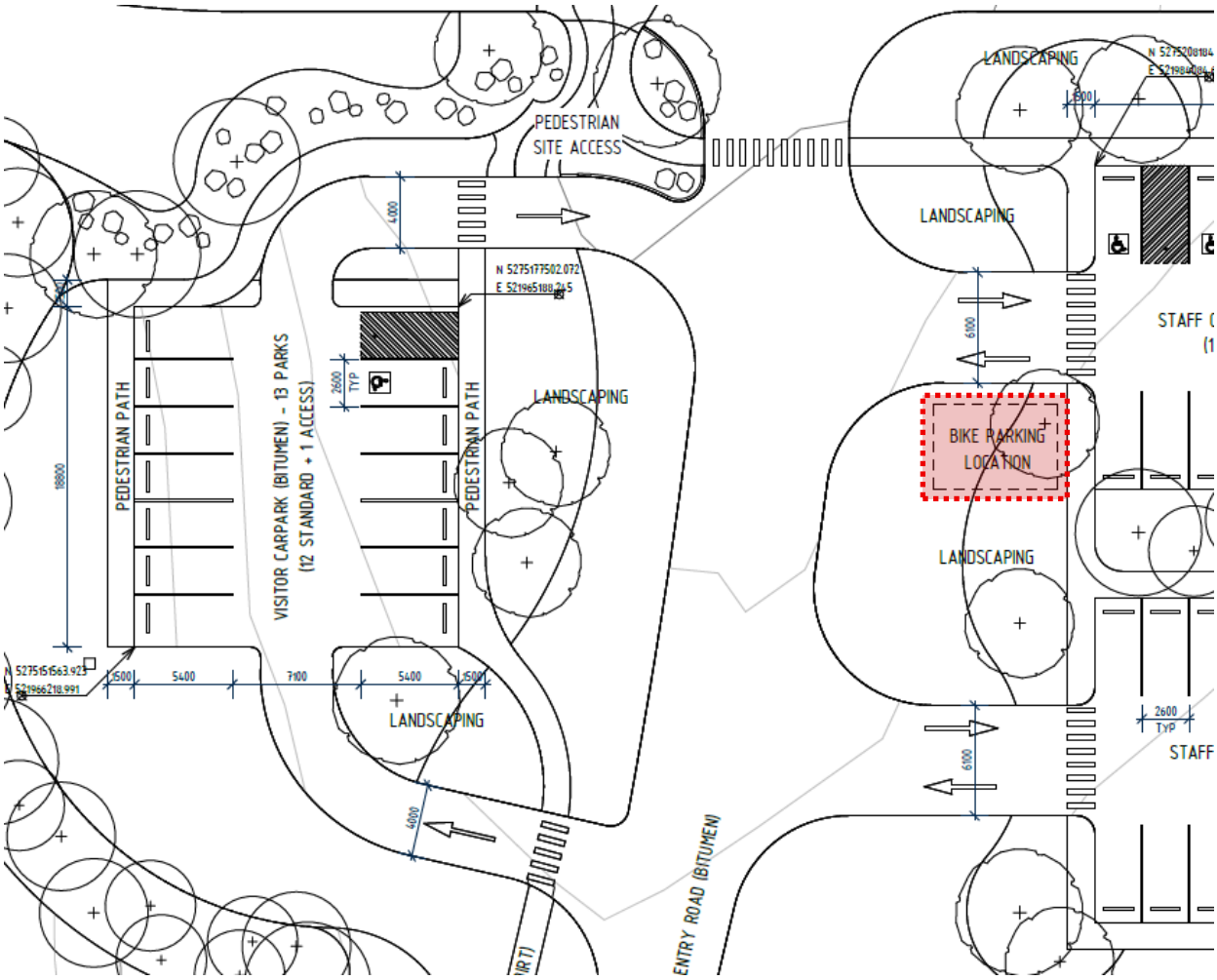


5.7 Bicycle Parking

The Acceptable Solution A1 of Clause C2.5.2 of the Planning Scheme states "*Bicycle parking must be provided on the site or within 50m of the site and be no less than the number specified in Table C2.1*".

Table C2.1 specifies '*no requirement*' for a custodial facility, therefore bicycle parking is not required. Bicycle parking is provided within the main car park however, as shown in Figure 12. Acceptable Solution A1 of Clause C2.5.2 of the Planning Scheme is satisfied.

Figure 12 Bicycle Parking



5.8 Motorcycle Parking

The Acceptable Solution A1 of Clause C2.5.3 of the Planning Scheme states "*the number of on-site motorcycle parking spaces for all users must: (a) be no less than the number specified in Table C2.4; and (b) if an existing use or development is extended or intensified, the number of on-site motorcycle parking spaces must be based on the proposed extension or intensification, provided the existing number of motorcycle parking spaces is maintained*".

Table C2.4 states a requirement for 1 space for every additional 20 spaces above 41 spaces. This is a requirement for 5 motorcycle parking spaces. The proposed development does not provide any motorcycle parking spaces and therefore does not satisfy the requirements of Acceptable Solution A1 of Clause C2.5.3 of the Planning Scheme.

The Performance Criteria P1 of Clause C2.5.3 of the Planning Scheme states:

> *"Motorcycle parking spaces for all uses must be provided to meet the reasonable needs of the use, having regard to:*
>
> *(a) the nature of the proposed use and development;*
>
> *(b) the topography of the site;*
>
> *(c) the location of existing buildings on the site;*
>
> *(d) any constraints imposed by existing development; and*
>
> *(e) the availability and accessibility of motorcycle parking spaces on the street or in the surrounding area".*

The following is relevant with respect to the development proposal:

(a) Nature of the proposed use and development

The proposed Youth Justice Facility is a specialised custodial facility with controlled access and high security requirements. The primary users are:

- Staff members (approximately 95 total across all shifts)
- Limited controlled visitor access for family visits and professional services
- Youths do not have vehicle access requirements

Given the security-sensitive nature of the facility and controlled access protocols, motorcycle usage by staff and visitors is anticipated to be minimal. The facility's operational requirements prioritise security and controlled movement, which may discourage motorcycle use by staff for safety and security reasons.

It is further noted that the development provides an excess of parking provision in accordance with Planning Scheme requirements. Motorcycles are permitted to park within car parking spaces.

(b) Topography of the site

The site topography is relatively flat and does not present any constraints that would necessitate motorcycle parking over standard car parking provision.

(c) Location of existing buildings on the site

The site is currently vacant with no existing buildings. The proposed development provides adequate space for car parking provision without spatial constraints that would require motorcycle parking as an alternative.

(d) Constraints imposed by existing development

As a greenfield site, there are no existing development constraints that would necessitate motorcycle parking provision.

(e) Availability and accessibility of motorcycle parking spaces in the surrounding area

The facility is located in a semi-rural area of Brighton/ Pontville with limited surrounding development. The nearest commercial or public facilities that might provide alternative motorcycle parking are located several kilometres away in Brighton township, making external motorcycle parking options impractical for facility users.

Conclusion

The reasonable needs of the use are adequately met without dedicated motorcycle parking provision. The specialized nature of the facility, security requirements, controlled access protocols, and semi-rural location result in minimal anticipated motorcycle usage. The substantial provision of car parking (111 spaces compared to the 52 spaces required) more than adequately accommodates the transportation needs of all facility users.

On this basis, the development meets the requirements of Performance Criteria P1 of Clause C2.5.3 of the Planning Scheme.

6. Conclusions

Based on the assessment of the proposed Tasmanian Youth Justice Facility, the following conclusions can be drawn regarding traffic impacts:

- Traffic Generation: The proposed facility will generate approximately 350 vehicle movements per day, with peak hour movements of 75-80 vehicles during the AM peak and 80-90 vehicles during the PM peak. This level of traffic generation is relatively modest and can be accommodated by the surrounding road network.
- Traffic Distribution: All traffic will access the site via Rifle Range Road, with 70% of traffic traveling to/ from the north (Midland Highway direction) and 30% to/ from the south. The turning movement analysis indicates that the Brighton Road/ Rifle Range Road junction can accommodate the anticipated traffic volumes with minimal impact on efficiency or safety.
- Junction Performance: The existing Brighton Road/ Rifle Range Road junction will continue to operate at a high level of efficiency following the completion of the facility. No changes are recommended to the junction layout.
- Sight Distance: The available sight distance at the Brighton Road/ Rifle Range Road junction exceeds the Austroads Safe Intersection Sight Distance (SISD) requirements for the posted speed limit, ensuring safe operation of the junction with the increased traffic movements resulting from the proposed development.
- Parking Provision & Layout: The facility provides 111 car parking spaces, which substantially exceeds the 58 spaces required under the Planning Scheme for a custodial facility. The parking layout complies with AS2890.1 requirements.

Based on the findings of this report the proposed development is supported on traffic and parking grounds.

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