

Traffic and Transport Assessment

120 Russells Road, Mount Duneed

V180551



Prepared for
St Quentin Consulting

8 February 2019

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Table of Contents

1	Introduction	1
2	Background and Existing Conditions	2
	2.1 Location and Land Use	2
	2.2 Planning Zones	3
	2.3 Road Network	4
	2.4 Public Transport	4
3	Proposed Development	5
4	Design Considerations	6
	4.1 Car Parking and Access	6
	4.2 Loading and Waste Collection Facilities	8
5	Car Parking Considerations	9
6	Bicycle Parking Considerations	10
7	Traffic Considerations	11
	7.1 Data Collection	11
	7.2 Traffic Generation	12
	7.3 Traffic Impact	12
8	Conclusion	13

Tables

Table 2-1	Public Transport Provision	4
Table 4-1	Design Standard 1 - Accessway	6
Table 4-2	Design Standard 2 – Car Parking Spaces	7
Table 4-3	Design Standard 3 – Gradients	7
Table 7-1	Existing Traffic Generation – Russells Road	11
Table 7-2	Existing Traffic Generation - 61 Williams Road	11

Figures

Figure 2-1	Site Locality	2
Figure 2-2	The Greater Geelong Planning Scheme Zone Report	3
Figure 2-3	Russells Road, looking west at the intersection of Ghazeepore Road and Russells Road	4

1 Introduction

Cardno has been engaged to prepare a Traffic and Transport Assessment for the proposed Residential Alcohol and Drug Rehabilitation Centre development located at 120 Russells Road, Mount Duneed.

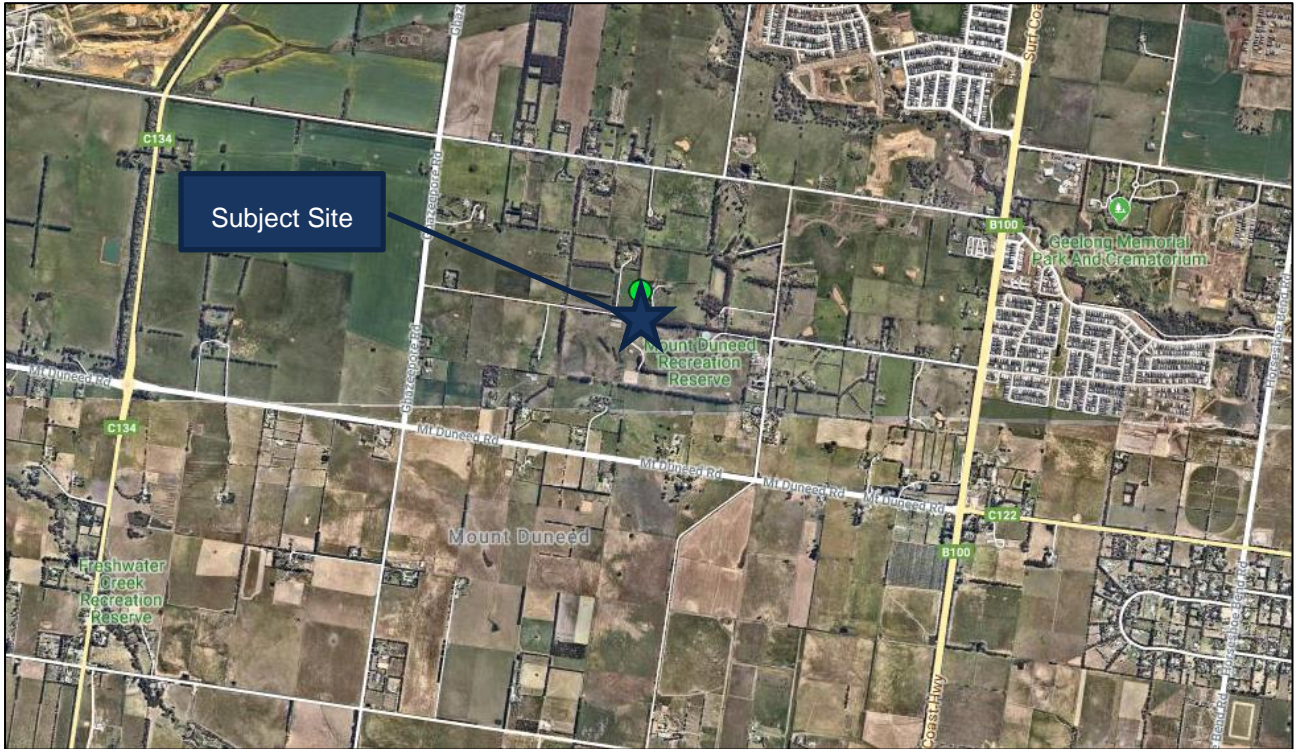
In the course of this assessment, the conceptual plan provided by St Quentin Consulting has been reviewed, the site and its surrounding area have been inspected and relevant traffic data has been collected and analysed.

2 Background and Existing Conditions

2.1 Location and Land Use

The subject site is located at 120 Russells Road in Mount Duneed as shown in Figure 2-1.

Figure 2-1 Site Locality



The subject site is rectangular in shape and has abutments to Russells Road of approximately 80 metres to the north and 100 metres to the west, and abutments to the Mount Duneed Reserve to the east and south.

Land use surrounding the site is predominantly farming zones and undeveloped. The nearest residential areas are located approximately 2 km to the east and north of the subject site. Mount Duneed Reserve is located adjacent to the subject site.

2.2 Planning Zones

Figure 2-2 shows the location of the site and the Greater Geelong Planning Scheme Zones.

Figure 2-2 The Greater Geelong Planning Scheme Zone Report

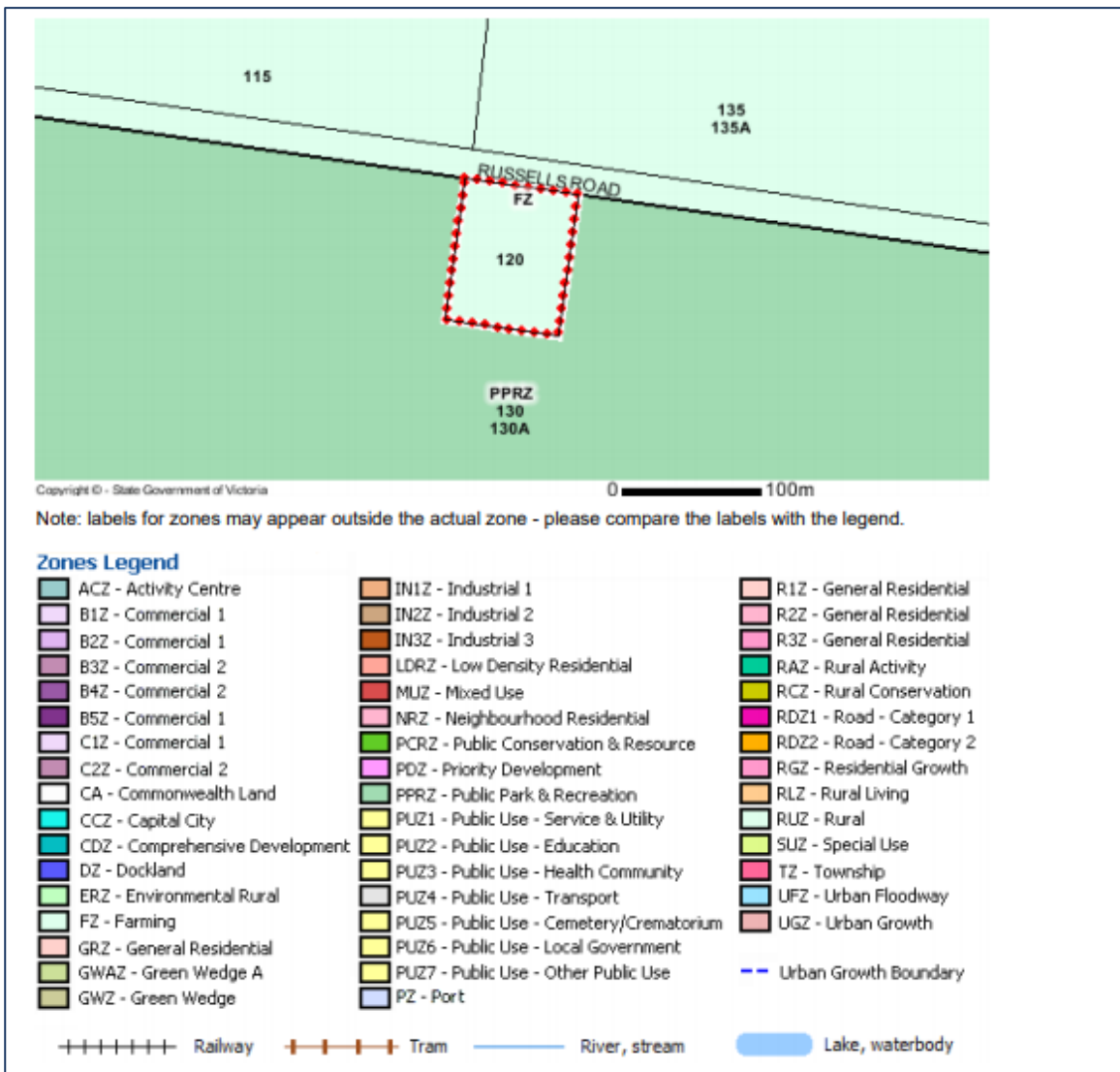


Figure 2-2 demonstrates that the subject site is located within an FZ, and as such the site falls within the Farming Zone of the Greater Geelong Planning Scheme. The permitted uses for FZ are listed in Clause 35.07 of the Greater Geelong Planning Scheme.

2.3 Road Network

2.3.1 Russells Road

Russells Road is an unsealed local road aligned to the east from Ghazeepore Road, as shown in Figure 2-3. It currently provides access to a small number of rural lots with frontages to it.

The T-intersection of Russells Road and Ghazeepore Road is controlled by the “give-way” road rule with priority provided to Ghazeepore Road.

Figure 2-3 Russells Road, looking west at the intersection of Ghazeepore Road and Russells Road



2.4 Public Transport

The subject site has limited access to public transport with a number of bus services located within the vicinity of the subject site as detailed in Table 2-1.

Table 2-1 Public Transport Provision

Service	Service	Operator
Bus	Geelong Station - Jan Juc via Marshall Station and Fischer St (Route 50)	McHarrys
	Geelong Station - Jan Juc via Marshall Station (Route 51)	McHarrys

3 Proposed Development

Based on the plan provided by St Quentin Consulting, it is proposed to develop the site for the purpose of a residential alcohol and drug rehabilitation centre.

The Centre is anticipated to accommodate a maximum of 6-8 adults on site. The Centre will include facilities that will enable children of adults who are participating in the rehabilitation program to also be accommodated on site (2-3 children maximum). Staff quarters for a single or a couple will also be provided enabling 24/7 live-in support, as well as space for family visits. Finally, during the day there will be 3 operational (not resident) staff on site.

- Program Participants: 6-8
- Children: 2-3
- Staff: 2 residential, 3 operational

The proposed car park is located on the southern side of the development site.

4 Design Considerations

4.1 Car Parking and Access

4.1.1 Design Standard 1 – Accessway

Design Standard 1 of Clause 52.06-9 of the Greater Geelong Planning Scheme lists a number of design requirements in relation to accessway. These requirements are assessed against the proposed development in Table 4-1.

Table 4-1 Design Standard 1 - Accessway

Requirement	Comments
Be at least 3 metres wide	Satisfied. Accessway is 4 metres wide.
Have an internal radius of at least 4 metres at changes of direction or intersection or be at least 4.2 metres wide	Satisfied.
Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forward direction with one manoeuvre	Satisfied.
Provide at least 2.1 metres headroom beneath overhead obstructions, calculated for a vehicle with a wheel base of 2.8 metres	N/A
If the accessway serves four or more car spaces or connects to a road in a Road Zone, the accessway must be designed so that cars can exit the site in a forward direction	N/A
Provide a passing area at the entrance at least 6.1 metres wide and 7 metres long if the accessway serves ten or more car parking spaces and is either more than 50 metres long or connects to a road in a Road Zone	Satisfied. Having considered the location of the site and the numbers of vehicles accessing Russells Road throughout the day, it is anticipated that the provision of a passing area at the entrance is not required. Considering the length of the accessway, it is proposed to provide a passing area on the western side of the accessway to allow vehicles to simultaneously pass each other.
Have a corner splay or area at least 50 per cent clear of visual obstructions extending at least 2 metres along the frontage road from the edge of an exit lane and 2.5 metres along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height	Satisfied. Pedestrian visibility splays on both sides of the accessways are able to be provided, with the requirement of the area to have no obstructions greater than 900mm in height within this area.
If an accessway to four or more car parking spaces is from land in a Road Zone, the access to the car spaces must be at least 6 metres from the road carriageway	N/A
If entry to the car space is from a road, the width of the accessway may include the road	N/A

As demonstrated in Table 4-1, the accessway for the proposed development is considered to be compliant with the requirements of Design Standard 1 of Clause 52.06-9 of the Greater Geelong Planning Scheme.

4.1.2 Design Standard 2 – Car Parking Spaces

The design requirements relating to dimensions of car parking spaces are stipulated in Design Standard 2 of Clause 52.06-9 of the Greater Geelong Planning Scheme. The subject development provisions in terms of car parking spaces are assessed in Table 4-2 below.

Table 4-2 Design Standard 2 – Car Parking Spaces

Requirement	Comments
Car parking spaces and accessways must have the minimum dimensions as outlined in Table 2 of Clause 52.06-8	Satisfied. All car spaces meet the minimum dimension requirement of the Greater Geelong Planning Scheme, being at least 2.6 metres wide and 4.9 metres long, with an aisle width of 6.9 metres.
A wall, tree or tree guard or any other structure that abuts a car space must not encroach into the area marked 'clearance required' on Diagram 1 within Clause 52.06-8 other than: <ul style="list-style-type: none"> > A column, tree or tree guard, which may project into a space if it is within the area marked 'tree or column permitted' on Diagram 1 of the design standard; and > A structure, which may project into the space if it is at least 2.1 metres above the space. 	Satisfied. All spaces are designed to satisfy the clearance requirement shown on Diagram 1.
Car spaces in garages or carports must be at least 6 metres long and 3.5 metres wide for a single space and 5.5 metres wide for a double space measured inside the garage or carport.	N/A
Where parking spaces are provided in tandem (one space behind the other) an additional 500mm in length must be provided between each space.	N/A
Where two or more car parking spaces are provided for a dwelling, at least one space must be undercover.	N/A
Disabled car parking spaces must be designed in accordance with AS 2890.6-2009 (disabled) and the Building Code of Australia. Disabled car parking spaces may encroach into an accessway width specified in Table 2 by 500mm.	N/A

It is recommended to provide a wheel stop for the proposed parking spaces to limit the travel of vehicles into parking spaces.

4.1.3 Design Standard 3 – Gradients

Table 4-3 Design Standard 3 – Gradients

Requirement	Comments
Accessway grades must not be steeper than 1:10 (10 per cent) within 5 metres of the frontage to ensure safety for pedestrians and vehicles. The design must have regard to the wheelbase of the vehicle being designed for; pedestrian and vehicular traffic volumes; the nature of the car park; and the slope and configuration of the vehicle crossover at the site frontage. This does not apply to accessways serving three dwellings or less.	N/A. No grading proposed across the site.
Ramps (except within 5 metres of the frontage) must have the maximum grades as outlined in Table 3 and be designed for vehicles travelling in a forward direction.	N/A. No ramps contained within the site.

4.2 Loading and Waste Collection Facilities

It is anticipated deliveries to the site would be made using VAN type or similar design vehicles, which can easily be accommodated in the on-site parking.

It is understood that the proposal is to store the bins on-site, and place bins kerbside along Russells Road out the front of the site for Council rubbish collection weekly.

5 Car Parking Considerations

Clause 52.06 of the Greater Geelong Planning Scheme does not specify the statutory requirements of a rehabilitation centre for car parking. According to Clause 52.06-6 of the Planning Scheme, where a use of land is not specified or where a car parking requirement is not specified for the use in another provision of the Planning Scheme or in a schedule to the Parking Overlay, before a new use commences or the floor area or site area of an existing use is increased, car parking spaces must be provided to the satisfaction of the responsible authority.

Case study data of an existing rehabilitation centre which has a similar size and location to the proposed development indicates that car parking demands of a typical rehabilitation centre are depending on the proposed numbers of staff and the anticipated visitors accessing the site on a day. It is advised that the existing 61 Williams Road rehabilitation centre in Mt Duneed is currently facilitating 15 participants and 6 staff on site and the existing parking provision of 12 car parking spaces, which is adequate to accommodate the parking demands of both visitors and staff.

Accordingly, it is proposed to provide 23 car parking spaces to the proposed development. The proposed parking spaces are considered adequate for both staff and visitor parking demands of the site.

6 Bicycle Parking Considerations

Clause 52.34 of the Greater Geelong Planning Scheme does not specify the statutory requirements of a rehabilitation centre for bicycle parking. Having considered the proposed site location and the bicycle infrastructure of the surrounding road network, it is anticipated that the proposed land use is not expected to generate bicycle parking demands, and therefore, is not required to provide a bicycle parking area for the proposed residential alcohol and drug rehabilitation centre.

7 Traffic Considerations

7.1 Data Collection

7.1.1 Russells Road Survey

Cardno has organised traffic volume surveys that were undertaken between 15th October and 21st October 2018 at the intersection of Russells Road and Ghazeepore Road to analyse the existing traffic volumes generated by the properties located along Russells Road. The survey results are shown in Table 7-1.

Table 7-1 Existing Traffic Generation – Russells Road

Location	Total Traffic (Pre-development) veh/day			AM Peak Hour Volumes (Pre-development) veh/day (10AM)			PM Peak Hour Volumes (Pre-development) veh/day (5PM)		
	Entry	Exit	Total	Entry	Exit	Total	Entry	Exit	Total
Russells Road access	44	44	88	2	5	7	3	3	6

Considering the above table, Russells Road is currently being accessed by a total of 88 trips per day, 7 trips during the morning peak period and 6 trips during the afternoon peak period.

7.1.2 61 Williams Road Mt Duneed

Due to the similarities of the size, location and uses of an existing Rehabilitation Centre at 61 Williams Road in Mt Duneed, a traffic volume survey which was conducted between 14th May and 20th May 2018 is provided by St Quentin, as shown in Table 7-2.

Table 7-2 Existing Traffic Generation - 61 Williams Road

Location	Total Traffic (Pre-development) veh/day			AM Peak Hour Volumes (Pre-development) veh/day (8:30AM)			PM Peak Hour Volumes (Pre-development) veh/day (5:30PM)		
	Entry	Exit	Total	Entry	Exit	Total	Entry	Exit	Total
61 Williams Road	10	11	21	2	1	3	1	3	4

Considering the above table, the existing 61 Williams Road Residential Alcohol and Drug Rehabilitation Centre is currently generating a total of 21 trips per day, 3 trips during the morning peak period and 4 trips during the afternoon peak period.

7.2 Traffic Generation

The anticipated traffic movements are expected to be generated predominantly by staff and visitors to/from the site. For the purpose of this assessment and due to the similarities of the proposed numbers of staff and the anticipated numbers of visitors accessing the site, it has been assumed that the traffic movements generated by the proposed development are likely to be similar to the traffic movements of the existing rehabilitation centre at 61 Williams Road in Mt Duneed which are 3 movements during the AM peak period and 4 movements during the PM peak period.

7.3 Traffic Impact

Based on the above survey results at Russells Road and the existing Rehabilitation Centre at 61 Williams Road in Mt Duneed, the traffic movements of the proposed development and the existing residential properties within the vicinity of the site onto Russells Road and Ghazeepore Road are anticipated to be 10 movements during the AM peak period and 10 movements during the PM peak period, equating to approximately 1 movement per 6 minutes during the peak periods which is considered low in traffic engineering terms.

8 Conclusion

The proposal includes the development of the site to provide a residential drug and alcohol rehabilitation centre which can facilitate up to 8 program participants, 3 children, 2 residential staff and 3 operational staff. As part of the development, a car parking area is proposed at the southern side of the development and access to the site is provided via Russells Road. Based on the foregoing assessment, it is concluded that:

- The design of the car parking, loading and waste collection area and access arrangements are designed in accordance with the Greater Geelong Planning Scheme and the requirements of the Australian Standards;
- Land use of the proposed development is not specified in Clause 52.34 of the Planning Scheme for bicycle parking requirements, and a bicycle parking is therefore not required;
- Land use of the proposed development is also not specified in Clause 52.06 of the Planning Scheme for car parking requirements. However, an adequate amount of car parking spaces are recommended to provide to the proposed development in accordance with Clause 52.06-6 of the Greater Geelong Planning Scheme. Based on the parking provision of an existing rehabilitation centre which has a similar size and location to the proposed development, it is proposed to provide 23 car parking spaces to staff and visitors in order to facilitate that parking demands of the site;
- The future traffic movements generated by the site onto the surrounding road network have been assessed and are considered low in traffic engineering terms. Therefore, the development is anticipated to not have any significant impacts on the surrounding road network within the vicinity of the site.