Traffix Group

Traffic Engineering Assessment

Proposed Residential Subdivision

41 & 43 Hoddle Street, Yarra Junction

Prepared for
Dancamnic Pty Ltd

October 2024

G32713R-01C

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1. Introduction

Traffix Group has been engaged by Dancamnic Pty Ltd to undertake a traffic engineering assessment for a proposed residential subdivision at 41 & 43 Hoddle Street, Yarra Junction.

2. Proposal

The proposal is for a 25-lot residential subdivision at 41 & 43 Hoddle Street, Yarra Junction. The lot sizes range between 500m^2 and 1,500m^2, with the exception of Lot 10, which is 21,614m^2 and will remain undeveloped.

Vehicle access to residential lots is provided to Hoddle Street at the midpoint of the site's western boundary.

An internal access road is proposed through the site, which provides a connection to each individual lot. This road is proposed a public road.

Vehicle access across the subdivision has been designed to accommodate the 8.8m long Medium Rigid Vehicle (MRV). This vehicle is equivalent to the Council waste truck, a CFA fire appliance and a large moving truck.

Hoddle Street will also be widened to 6.1m along the site's frontage as a part of the development, which will match up with the existing width to the north of the site.

An extract detailing the road network and lot configuration is provided at Figure 1 below, with full development plans provided at Appendix A.

Figure 1: Amended Subdivision Layout

3. Existing Conditions

3.1. Subject Site

The subject site is 41 & 43 Hoddle Street, Yarra Junction. The table below summarises the key characteristics of the subject site.

Table 1: Subject Site Description

Characteristic	Description
Address	41 & 43 Hoddle Street, Yarra Junction
Area	45,700m^2
Frontages	75m to Hoddle Street
Zoning	Neighbourhood Residential Zone, Schedule 2 – NRZ2

Current use of site	2 x Single dwellings
Car parking and loading provision	41 Hoddle Street – double garage and 4 car garage 43 Hoddle Street – single garage
Vehicle access	4 x Single width crossovers to Hoddle Street
On-street parking along site frontage	9 unrestricted car spaces

A locality plan, aerial photograph, photographs of the site's frontage and land use zoning map is provided at Figure 2 to Figure 6, respectively.

Significant nearby land uses include:

- **CYC ADANAC Camp,** located 100m south of the site on Hoddle Street.
- **Yarra Junction Memorial Reserve,** located 200m west.
- **Yarra Junction Town Centre** located 800m north.

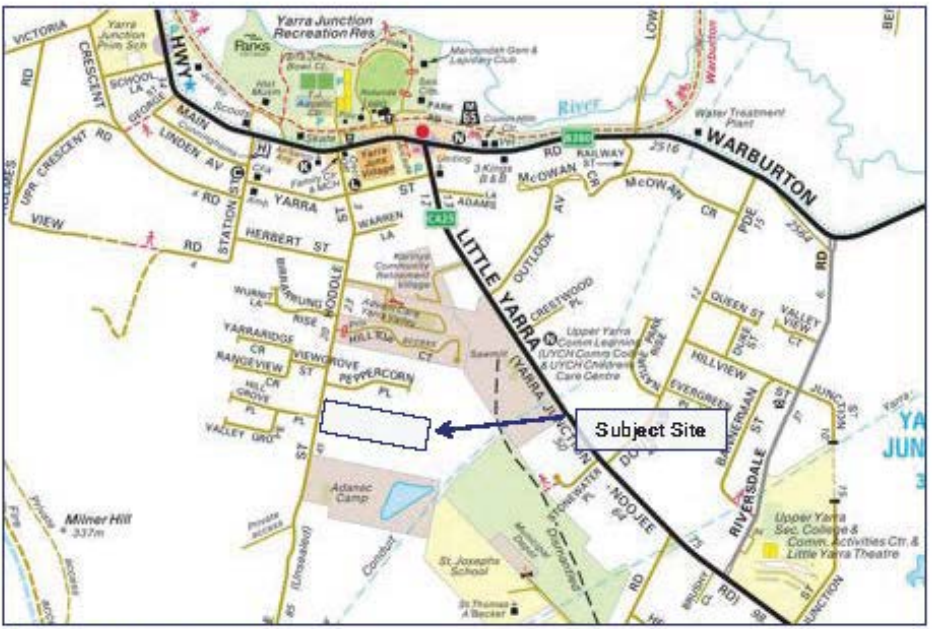


Figure 2: Locality Plan (Source: Melway)

Figure 3: Aerial Photograph (Source: Nearmap)

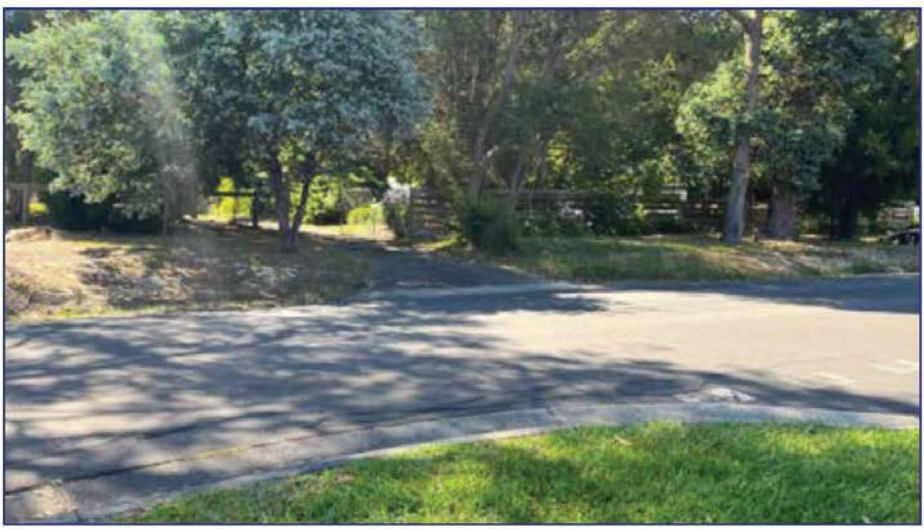


Figure 4: 41 Hoddle Street (view south-east from Hoddle Street)

Figure 5: 43 Hoddle Street (view north-east from Hoddle Street)

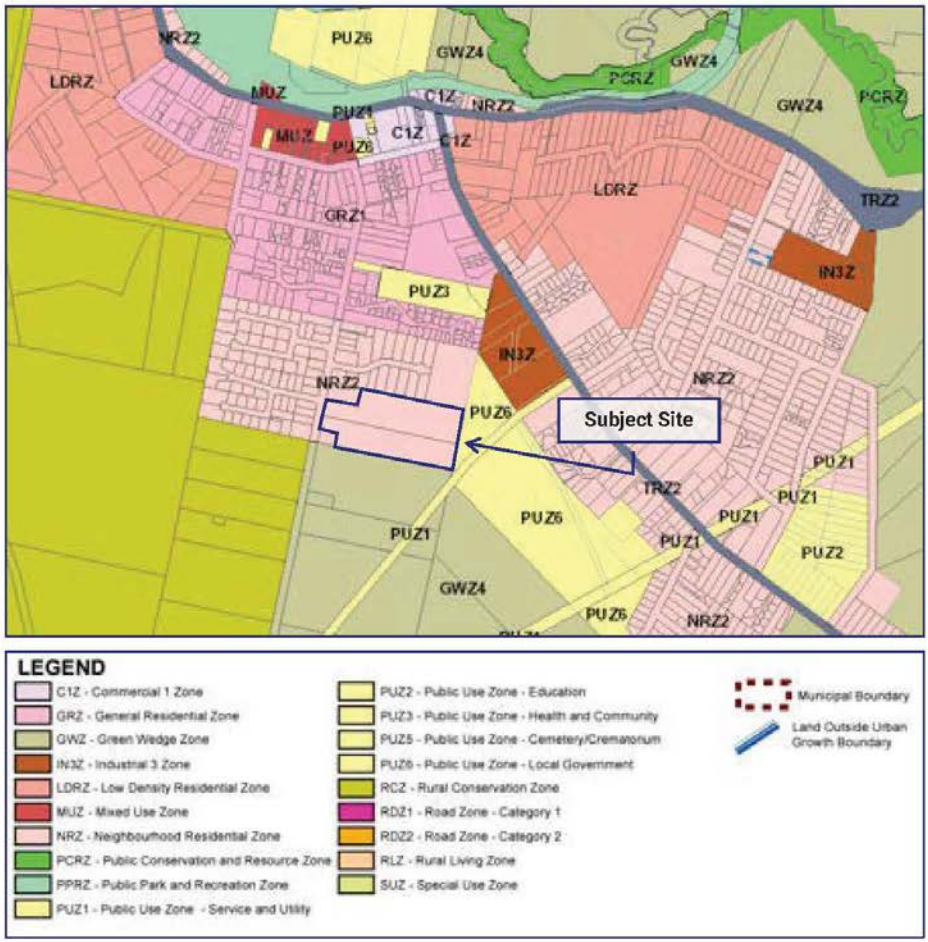


Figure 6: Land Use Zoning Map (Source: Planning Schemes Online)

3.2. Transport Network

3.2.1. Road Network

A summary of the local road network is provided in the table below.

Photos of the surrounding road network are presented following the table.

Table 2: Road Network

Road Name	Agency	Classif-ication	Transport Zone	Configuration	Speed Limit	On-Street Parking
Hoddle Street	Council	Collector Road[1]	No	6.2m carriageway directly adjacent of the subject site varying width throughout the street	50km/h	Unrestricted both sides[2]
Warburton Highway	DTP	Arterial Road	TRZ2	2 traffic lanes Undivided carriageway with parallel parking on each side	50km/h	Time restricted parking

Notes:

1. As per Yarra Ranges Shire Council Road Register (dated 28th June, 2021)
2. Due to carriageway width, vehicles can only park on one side of the road while still maintain a traffic lane

Figure 7: Warburton Highway – view north-west

Figure 8: Warburton Highway – view east

Figure 9: Hoddle Street – view north

Figure 10: Hoddle Street– view south

3.2.2. Car Parking Conditions

Traffix Group completed an inventory of on-street parking during the site inspection on Wednesday 25th January, 2023 at 10:00am.

The purpose of the inventory was to ascertain the supply and management of car parking in the area, not to assess the demand for car parking.

The detailed parking inventory is presented at Appendix B.

The parking inventory area is presented in the figure below.

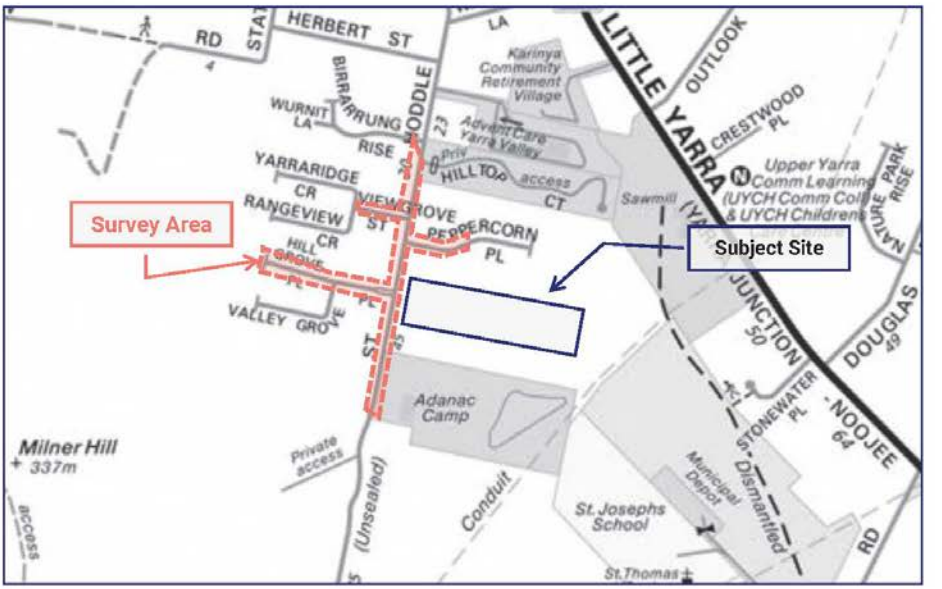


Figure 11: Parking Survey Inventory (Source: Melway)

The key findings of the inventory were:

- There are 163 on-street car spaces within approximately 200m of the subject site with a maximum of 102 spaces at any one time (due to the width of Hoddle Street and Peppercorn Place parking is only possible on one side at a time).
- Parking within the area is not controlled, with all car spaces unrestricted.

3.3. Public Transport

The site is not located within the Principal Public Transport Network (PPTN) area, however, the site is located approximately 750m from Yarra Junction Recreation Reserve bus stop located along Warburton Highway.

This bus stop is served by Bus Route 683, which travels to Warburton, Launching Place, Lilydale and Mooroolbark.

Figure 12: Public Transport Map (Source: PTV)

4. Traffic Engineering Assessment

A detailed review of the proposed subdivision against the requirements of Clause 56.06 is provided at Appendix C, with the key elements discussed in detail in the following sections.

4.1. Subdivision Layout

It is proposed to provide a new public road through the site, which provides access to Hoddle Street and each lot. This road will be constructed as a public road, to be managed by Council.

Clause 56.06 of the Planning Scheme recommends a minimum carriageway width of 5.5m, 'Access Place'.

The Victoria Planning Authority's (VPA's) *The Engineering Design and Construction Manual for Subdivision in Growth Areas (2011)* also has general requirements for an 'Access Place', and also requires a 5.5m wide carriageway.

The proposed internal road will be 5.5m, and the road reserve will be 16m, satisfying all of the above requirements. The only exception to this is the section of road along the southern side of the site, which has a road reserve of 14m, rather than 16m. This is a function of there being no lots fronting south side of this section of road (i.e. it is open space) meaning that a footpath is not required, and the slightly reduced road reserve is therefore appropriate. The road will also reduce to 4.0m for a small section of road in front of Lots 20-22. As this reduction is for a short length, and does not impact vehicle access (see swept paths attached at Appendix D), we are satisfied that these arrangements are appropriate.

At the intersection between Hoddle Street and the internal road, 3m x 3m splays are provided in accordance with Clause 56.06.

These are detailed in the plans attached at Appendix A.

Accordingly, we are satisfied that the proposed road layout is appropriate and accords with the requirements of the VPA Guidelines and Clause 56.06.

4.1.1. Sight Distance Assessment

The AustRoads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections provides requirements for the minimum sight distances at unsignalised intersections.

For a 50km/h road (which Hoddle Street is), and considering a critical acceptance gap of 5 seconds (i.e. one traffic lane in each direction), the safe intersection sight distance (SISD) and the minimum gap sight distance (MGSD) are 97m and 69m, respectively.

At the Hoddle Street / proposed internal road intersection, the road carriageway is flat, straight, and sight lines in excess of 200m are achieved to both the north and south. These sight distances are shown in Figure 13 and Figure 14.

Figure 13: Sight Distance to the North from Proposed Access

Figure 14: Sight distance to the South of Proposed Access

We are satisfied that there are adequate sight lines along Hoddle Street at the proposed site access location, and that this location is appropriate.

4.2. On-Street Car Parking

Visitor parking can be accommodated on-street within the carriageway of the internal road. Clause 56.06 typically requires that on-street parking is available at '1 hard standing verge parking space per 2 lots'.

It is proposed to construct 24 dwellings (as there is no dwelling proposed on Lot 10), meaning that at least 12 car spaces need to be provided within the internal road. This level of on-street parking is generally considered appropriate for visitor demands in residential subdivisions of this scale.

The proposed internal road will have a 5.5m wide carriageway along the majority of its width, which is sufficient for parking to readily occur on one side of the road whilst maintaining a single through lane (two-way) for traffic. The subdivision will allow for on-street parking well in excess of the minimum requirement for 12 car spaces.

Accordingly, we are satisfied that the on-street car parking requirements for the subdivision are met.

4.3. Pedestrian and Cycling Facilities

Clause 56.06 (and the VPA Guidelines) requires a 1.5m wide footpath on each side of the carriageway.

It is proposed to provide a 1.5m wide footpath on both sides of the internal road along the entire length. The only exception to this is along the south side of the southern section of road, as there are no lots fronting this side of the road, and accordingly, a pedestrian path is not required.

We are satisfied that these arrangements are appropriate.

Based on the above, we consider that the pedestrian facilities for the proposed subdivision are appropriate.

A 5.5m carriageway will allow for the road to be shared between vehicles and cyclists, and we do not consider a dedicated bicycle lane for a subdivision of the size proposed to be necessary.

Accordingly, we are satisfied that the proposed road network provides adequate cyclist provisions.

4.4. Public Transport Facilities

The nearby public transport services to the site are discussed in detail at Section 3.3. The closest bus service operates along Warburton Highway, approximately 750m north of the site.

We do not consider that additional public transport services are necessary for the proposed subdivision, given its relatively small size.

4.5. Waste and Emergency Services

Waste will be collected on-street from each individual lot within the site via Council's existing services. The internal street 'loops' around meaning that the waste truck can enter the site in a forward direction, proceed around the loop, and exit back onto Hoddle Street in a forward direction. Swept path diagrams demonstrating this movement by the 8.8m Medium Rigid Vehicle (MRV), which is comparable to Council's waste truck, are provided at Appendix D.

This vehicle profile is also comparable to CFA fire truck and is larger than other emergency service vehicles.

Accordingly, we are satisfied that the proposed internal road network facilitates adequate access for waste and emergency service vehicles.

4.6. Traffic Generation and Impacts

The RTA Guide to Traffic Generating Development (2002) (RTA Guide) sets out traffic generation rates based on survey data collected in New South Wales for a range of land uses and is generally regarded as the standard for development characteristics.

The RTA Guide (2002) sets out the following trip generation rates for residential houses:

- Daily vehicle trips = 9.0 per dwelling
- Weekday peak hour vehicle trips = 0.85 per dwelling

However the RTA Guide states that ... *"The Australian Model Code for Residential Development (AMCORD) assumes a daily vehicle generation rate of 10.0 per dwelling, with 10% of that taking place in the commuter peak period. The use of these figures provides some allowance for later dual occupancy development."*

Having regard to the RTA Guide, we have conservatively adopted a rate of 10 vehicle trip-ends per dwelling per day, with 10% occurring during the peak hour.

Based on the above, the proposed 24 lots (Lot 10 does not propose a dwelling) are anticipated to generate a total of 240 vehicle movements per day, and in the order of 24 vehicle movements in the peak hours.

This level of traffic is low, and is not expected to have any significant impact on the surrounding road network.

All vehicles will travel via the internal public road, which connects to Hoddle Street (a Collector Road), and onto the wider road network.

As discussed in Section 4, the internal public road is proposed as a 'Access Place'. This type of road is intended to carry 300-1,000 vehicles per day (as per Clause 56.06 and the VPA Guidelines).

This road connects to Hoddle Street, which Council considers as a higher order Collector Road under Council's Road Register, which are designed to service high levels of residential traffic.

As the development is only expected to generate 240 daily vehicle trips, we consider that the internal road network can readily accommodate the subdivision traffic, and that the road will operate well within its environmental capacity.

5. Conclusions

Having undertaken a detailed traffic engineering assessment of the proposed residential subdivision at 41 & 43 Hoddle Street, Yarra Junction, we are of the opinion that:

a) proposed internal road layout is generally in accordance with the Planning Scheme requirements, VPA guidelines and current practice,

b) on-street parking and pedestrian facilities are identified in a manner that is consistent with the typical requirements of relevant standards and other nearby residential streets,

c) adequate provisions have been made through the subdivision to facilitate access via emergency services and waste collection vehicles,

d) the expected traffic generation of the development will be low, and can be accommodated within the proposed internal and surrounding road network, and

e) there are no traffic engineering reasons why a planning permit for the proposed residential subdivision at 41 & 43 Hoddle Street, Yarra Junction should be refused, subject to appropriate conditions.

Appendix A

Development Plans


37 Hoddle Street
6 Peppercorn Place
10 Peppercorn Place
12 Peppercorn Place
14 Peppercorn Place
16 Peppercorn Place
18 Peppercorn Place
20 Peppercorn Place
39 Hoddle Street
VALLEY GROVE PLACE
HODDLE STREET
ROAD A
ROAD A
ROAD A
16m
16m
16m
14m
26m
1
2
3
4
5
6
7
8
9
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
45 Hoddle Street
47A Hoddle Street
CREEK CENTRELINE
CREEK CENTRELINE

Appendix B

Car Parking Inventory

41 43 Hoddle Street, Yarra Junction
REF: GRP32713
Parking Inventory

Traffix Group

Surveyed By: Sarah Stephenson

Survey Dates & Times: See below

Location		Restriction	Capacity Min - Max	25th January, 2023 10am
ON-STREET CARPARKING				
Map Ref.	**HODDLE STREET**			
	West Side	**(due to the width of Hoddle Street parking is only possible on one side at a time in locations where the road is less than 7m wide).**		
A	SB #40 to Valley Grove Place	Unrestricted (verge)	18	0
		No Stopping (10m)	-	0
B	Valley Grove Place to Viewgrove Street	No Stopping (10m)	-	0
		Unrestricted (verge)	2	0
		Unrestricted	16	2
		No Stopping (10m)	-	0
C	Viewgrove Street to Birrarrung Rise	No Stopping (10m)	-	0
		Unrestricted	12	0
		No Stopping (10m)	-	0
	East Side			
D	SB #47 to NB #43	CYC ADANAC Visitor Parking (90degree)	16	3
		Unrestricted (verge)	6	0
	Subject Site	**Unrestricted (verge)**	**9**	**0**
E	SB #41 to Peppercorn Place	Unrestricted (verge)	4	0
		No Stopping (10m)	-	0
F	Peppercorn Place to Hilltop Court	No Stopping (10m)	-	0
		Unrestricted (verge)	11	0
		No Stopping (10m)	-	0
HODDLE STREET		**Capacity**	**48 - 48**	**48**
		Total Number of Cars Parked		**2**
		Total Number of Vacant Spaces		**46**
		Percentage Occupancy		**4%**

Nb/Sb - Northern/Southern Property Boundary
Eb/Wb - Eastern/Western Property Boundary
Mid pt - Mid point
ROW - Right of Way

Traffix Group

Surveyed By: Sarah Stephenson

Survey Dates & Times: See below

Location		Restriction	Capacity Min - Max	25th January, 2023 10am
Map Ref.	**VALLEY GROVE PLACE**			
	South Side			
G	Hoddle Street to Hill Grove Place	No Stopping (10m)	-	0
		Unrestricted	11	0
	North Side			
H	Hoddle Street to Hill Grove Place	No Stopping (10m)	-	0
		Unrestricted	10	0
VALLEY GROVE PLACE		**Capacity**	**21 - 21**	**21**
		Total Number of Cars Parked		**0**
		Total Number of Vacant Spaces		**21**
		Percentage Occupancy		**0%**
Map Ref.	**HILL GROVE PLACE**			
	South Side			
I	Valley Grove Place to END	No Stopping (10m)	-	0
		Unrestricted	11	0
	North Side			
J	Valley Grove Place to END	No Stopping (10m)	-	0
		Unrestricted	10	4
HILL GROVE PLACE		**Capacity**	**21 - 21**	**21**
		Total Number of Cars Parked		**4**
		Total Number of Vacant Spaces		**17**
		Percentage Occupancy		**19%**

Nb/Sb - Northern/Southern Property Boundary
Eb/Wb - Eastern/Western Property Boundary
Mid pt - Mid point
ROW - Right of Way

Traffix Group

Surveyed By: Sarah Stephenson

Survey Dates & Times: See below

Location		Restriction	Capacity Min - Max	25th January, 2023 10am
Map Ref.	**VIEWGROVE STREET**			
	South Side			
K	Hoddle Street to Rangeview Crescent	No Stopping (10m)	-	0
		Unrestricted	10	1
	North Side			
L	Hoddle Street to Yarraridge Crescent	No Stopping (10m)	-	0
		Unrestricted	8	0
VIEWGROVE STREET		**Capacity**	**18 - 18**	**18**
		Total Number of Cars Parked		**1**
		Total Number of Vacant Spaces		**17**
		Percentage Occupancy		**6%**
Map Ref.	**PEPPERCORN PLACE**			
	South Side	**(due to the width of Peppercorn Place parking is only possible on one side at a time in locations where the road is less than 7m wide).**		
M	Hoddle Street to #10	No Stopping (10m)	-	0
		Unrestricted	13	0
	North Side			
N	Hoddle Street to #9	No Stopping (10m)	-	0
		Unrestricted	12	0
PEPPERCORN PLACE		**Capacity**	**13 - 13**	**13**
		Total Number of Cars Parked		**0**
		Total Number of Vacant Spaces		**13**
		Percentage Occupancy		**0%**
SUMMARY => ON-STREET CARPARKING				
Car Parking Supply			**121 - 121**	**121**
Total Number of Cars Parked				**7**
Total Number of Vacant Spaces				**114**
Percentage Occupancy				**6%**

Note: Public parking includes spaces that are available to the general public and excludes 'No Stopping' and 'No Parking' areas, etc., during the relevant enforcement periods

LEGEND: Public Parking

Not available to the general public

Not Available, illegally parked cars included in analysis

No Stopping/ Other No Parking

Nb/Sb - Northern/Southern Property Boundary
Eb/Wb - Eastern/Western Property Boundary
Mid pt - Mid point
ROW - Right of Way

Traffix Group

Appendix C

Clause 56.06 Assessment

The following table provides my review of the proposal against the Development Plan.

Table 1: Development Plan Objectives and Responses

Objectives	Standard	Response
Clause 56.06-2 **Walking and cycling network objectives** To contribute to community health and well being by encouraging walking and cycling as part of the daily lives of residents, employees and visitors. To provide safe and direct movement through and between neighbourhoods by pedestrians and cyclists. To reduce car use, greenhouse gas emissions and air pollution.	**Standard C15** The walking and cycling network should be designed to: • Implement any relevant regional and local walking and cycling strategy, plan or policy for the area set out in this scheme. • Link to any existing pedestrian and cycling networks. • Provide safe walkable distances to activity centres, community facilities, public transport stops and public open spaces. • Provide an interconnected and continuous network of safe, efficient and convenient footpaths, shared paths, cycle paths and cycle lanes based primarily on the network of arterial roads, neighbourhood streets and regional public open spaces. • Provide direct cycling routes for regional journeys to major activity centres, community facilities, public transport and other regional activities and for regional recreational cycling. • Ensure safe street and road crossings including the provision of traffic controls where required. • Provide an appropriate level of priority for pedestrians and cyclists. • Have natural surveillance along streets and from abutting dwellings and be designed for personal safety and security particularly at night. • Be accessible to people with disabilities.	It is proposed to provide a 1.5m wide footpath on both sides of the internal road along the entire length, with the only exception being the south side of the southern section of road, which does not front any lots. There is currently no footpath along the east side of Hoddle Street. Pram crossings should be constructed to connect the proposed pedestrian path to the existing footpath on the west side of Hoddle Street. Accordingly, we are satisfied that the proposed pedestrian connections are appropriate.
Clause 56.06-3 **Public transport network objectives** To provide an arterial road and neighbourhood street network that supports a direct, efficient and	**Standard C15** The public transport network should be designed to: • Implement any relevant public transport strategy, plan or policy for the area set out in this scheme. • Connect new public transport routes to existing and proposed routes to the	Currently no bus routes enter Hoddle Street and as the subdivision is 750m from the from Yarra Junction Recreation Reserve bus stop it is not necessary to provide a new bus route. The depth of the site would allow for all

Objectives	Standard	Response
safe public transport system. To encourage maximum use of public transport.	satisfaction of the relevant public transport authority. • Provide for public transport links between activity centres and other locations that attract people using the Principal Public Transport Network in Metropolitan Melbourne and the regional public transport network outside Metropolitan Melbourne. • Locate regional bus routes principally on arterial roads and locate local bus services principally on connector streets to provide: ○ Safe and direct movement between activity centres without complicated turning manoeuvres. ○ Direct travel between neighbourhoods and neighbourhood activity centres. ○ A short and safe walk to a public transport stop from most dwellings.	dwellings to be located within 200m of a bus route, if one were to be provided along Hoddle Street at a later stage. Accordingly, we are satisfied with the public transport network provided.
Clause 56.60-4 **Neighbourhood street network objective** To provide for direct, safe and easy movement through and between neighbourhoods for pedestrians, cyclists, public transport and other motor vehicles using the neighbourhood street network.	**Standard C17** The neighbourhood street network must: • Take account of the existing mobility network of arterial roads, neighbourhood streets, cycle paths, shared paths, footpaths and public transport routes. • Provide clear physical distinctions between arterial roads and neighbourhood street types. • Comply with the Head, Transport for Victoria's arterial road access management policies. • Provide an appropriate speed environment and movement priority for the safe and easy movement of pedestrians and cyclists and for accessing public transport. • Provide safe and efficient access to activity centres for commercial and freight vehicles. • Provide safe and efficient access to all lots for service and emergency vehicles. • Provide safe movement for all vehicles. • Incorporate any necessary traffic control measures and traffic management infrastructure. The neighbourhood street network should be designed to:	The internal street network is appropriately designed in that it allows for circulation via service and emergency vehicles, waste vehicles, and facilitates safe and efficient access for resident/visitor vehicles.

Objectives	Standard	Response
	• Implement any relevant transport strategy, plan or policy for the area set out in this scheme. • Include arterial roads at intervals of approximately 1.6 kilometres that have adequate reservation widths to accommodate long term movement demand. • Include connector streets approximately halfway between arterial roads and provide adequate reservation widths to accommodate long term movement demand. • Ensure connector streets align between neighbourhoods for direct and efficient movement of pedestrians, cyclists, public transport and other motor vehicles. • Provide an interconnected and continuous network of streets within and between neighbourhoods for use by pedestrians, cyclists, public transport and other vehicles. • Provide an appropriate level of local traffic dispersal. • Indicate the appropriate street type. • Provide a speed environment that is appropriate to the street type. • Provide a street environment that appropriately manages movement demand (volume, type and mix of pedestrians, cyclists, public transport and other motor vehicles). • Encourage appropriate and safe pedestrian, cyclist and driver behaviour. • Provide safe sharing of access lanes and access places by pedestrians, cyclists and vehicles. • Minimise the provision of cul-de-sac. • Provide for service and emergency vehicles to safely turn at the end of a dead-end street. • Facilitate solar orientation of lots. • Facilitate the provision of the walking and cycling network, integrated water management systems, utilities and planting of trees. • Contribute to the area's character and identity.	

Objectives	Standard	Response
	• Take account of any identified significant features.	
Clause 56.06-5 **Walking and cycling network detail objectives** To design and construct footpaths, shared path and cycle path networks that are safe, comfortable, well constructed and accessible for people with disabilities. To design footpaths to accommodate wheelchairs, prams, scooters and other footpath bound vehicles.	**Standard C18** Footpaths, shared paths, cycle paths and cycle lanes should be designed to: • Be part of a comprehensive design of the road or street reservation. • Be continuous and connect. • Provide for public transport stops, street crossings for pedestrians and cyclists and kerb crossovers for access to lots. • Accommodate projected user volumes and mix. • Meet the requirements of Table C1. • Provide pavement edge, kerb, channel and crossover details that support safe travel for pedestrians, footpath bound vehicles and cyclists, perform required drainage functions and are structurally sound. • Provide appropriate signage. • Be constructed to allow access to lots without damage to the footpath or shared path surfaces. • Be constructed with a durable, non-skid surface. • Be of a quality and durability to ensure: • Safe passage for pedestrians, cyclists, footpath bound vehicles and vehicles. • Discharge of urban run-off. • Preservation of all-weather access. • Maintenance of a reasonable, comfortable riding quality. • A minimum 20 year life span. • Be accessible to people with disabilities and include tactile ground surface indicators, audible signals and kerb ramps required for the movement of people with disabilities.	A pedestrian path is provided along one side along the full length of the proposed road. Following this, the central accessways have been designed to be generally 5.5m wide and act as shared zones for both cyclist and vehicles. Accordingly, we are satisfied that these pedestrian and cycling arrangements are appropriate for a development of this scale.
Clause 56.60-6 **Public transport network detail objectives**	**Standard C19** Bus priority measures must be provided along arterial roads forming part of the existing or proposed Principal Public Transport Network in Metropolitan Melbourne and the regional public transport network outside Metropolitan	As no new public bus routes/stops are proposed these requirements are not applicable to this development.

Objectives	Standard	Response
To provide for the safe, efficient operation of public transport and the comfort and convenience of public transport users. To provide public transport stops that are accessible to people with disabilities.	Melbourne to the requirements of the relevant roads authority. Road alignment and geometry along bus routes should provide for the efficient, unimpeded movement of buses and the safety and comfort of passengers. The design of public transport stops should not impede the movement of pedestrians. Bus and tram stops should have: • Surveillance from streets and adjacent lots. • Safe street crossing conditions for pedestrians and cyclists. Safe pedestrian crossings on arterial roads and at schools including the provision of traffic controls as required by the roads authority. • Continuous hard pavement from the footpath to the kerb. • Sufficient lighting and paved, sheltered waiting areas for forecast user volume at neighbourhood centres, schools and other locations with expected high patronage. • Appropriate signage. Public transport stops and associated waiting areas should be accessible to people with disabilities and include tactile ground surface indicators, audible signals and kerb ramps required for the movement of people with physical disabilities.	
Clause 56.60-7 **Neighbourhood street network detail objective** To design and construct street carriageways and verges so that the street geometry and traffic speeds provide an accessible and safe neighbourhood	**Standard C20** The design of streets and roads should: • Meet the requirements of Table C1. Where the widths of access lanes, access places, and access streets do not comply with the requirements of Table C1, the requirements of the relevant fire authority and roads authority must be met. • Provide street blocks that are generally between 120 metres and 240 metres in length and generally between 60 metres to 120 metres in width to facilitate pedestrian movement and control traffic speed.	Table C1 provides requirements for the design of public roads. Clause 56.06 of the Planning Scheme recommends a minimum carriageway width of 5.5m for an 'Access Place'. The proposed internal road will be generally be 5.5m, and the road reserve will be 16m, satisfying all

Objectives	Standard	Response

street system for all users.	• Have verges of sufficient width to accommodate footpaths, shared paths, cycle paths, integrated water management, street tree planting, lighting and utility needs.
	• Have street geometry appropriate to the street type and function, the physical land characteristics and achieve a safe environment for all users.
	• Provide a low-speed environment while allowing all road users to proceed without unreasonable inconvenience or delay.
	• Provide a safe environment for all street users applying speed control measures where appropriate.
	• Ensure intersection layouts clearly indicate the travel path and priority of movement for pedestrians, cyclists and vehicles.
	• Provide a minimum 5 metre by 5 metre corner splay at junctions with arterial roads and a minimum 3 metre by 3 metre corner splay at other junctions unless site conditions justify a variation to achieve safe sight lines across corners.
	• Ensure streets are of sufficient strength to:
	  ○ Enable the carriage of vehicles.
	  ○ Avoid damage by construction vehicles and equipment.
	• Ensure street pavements are of sufficient quality and durability for the:
	  ○ Safe passage of pedestrians, cyclists and vehicles.
	  ○ Discharge of urban run-off.
	  ○ Preservation of all-weather access and maintenance of a reasonable, comfortable riding quality.
	• Ensure carriageways of planned arterial roads are designed to the requirements of the relevant road authority.
	• Ensure carriageways of neighbourhood streets are designed for a minimum 20 year life span.
	• Provide pavement edges, kerbs, channel and crossover details designed to:
	  ○ Perform the required integrated water management functions.
	  ○ Delineate the edge of the carriageway for all street users.
		of the above requirements.
		Table C1 specifies that one side of the street should have a 1.5m footpath constructed, and footpaths are largely provided on both sides of the road, satisfying this requirement.

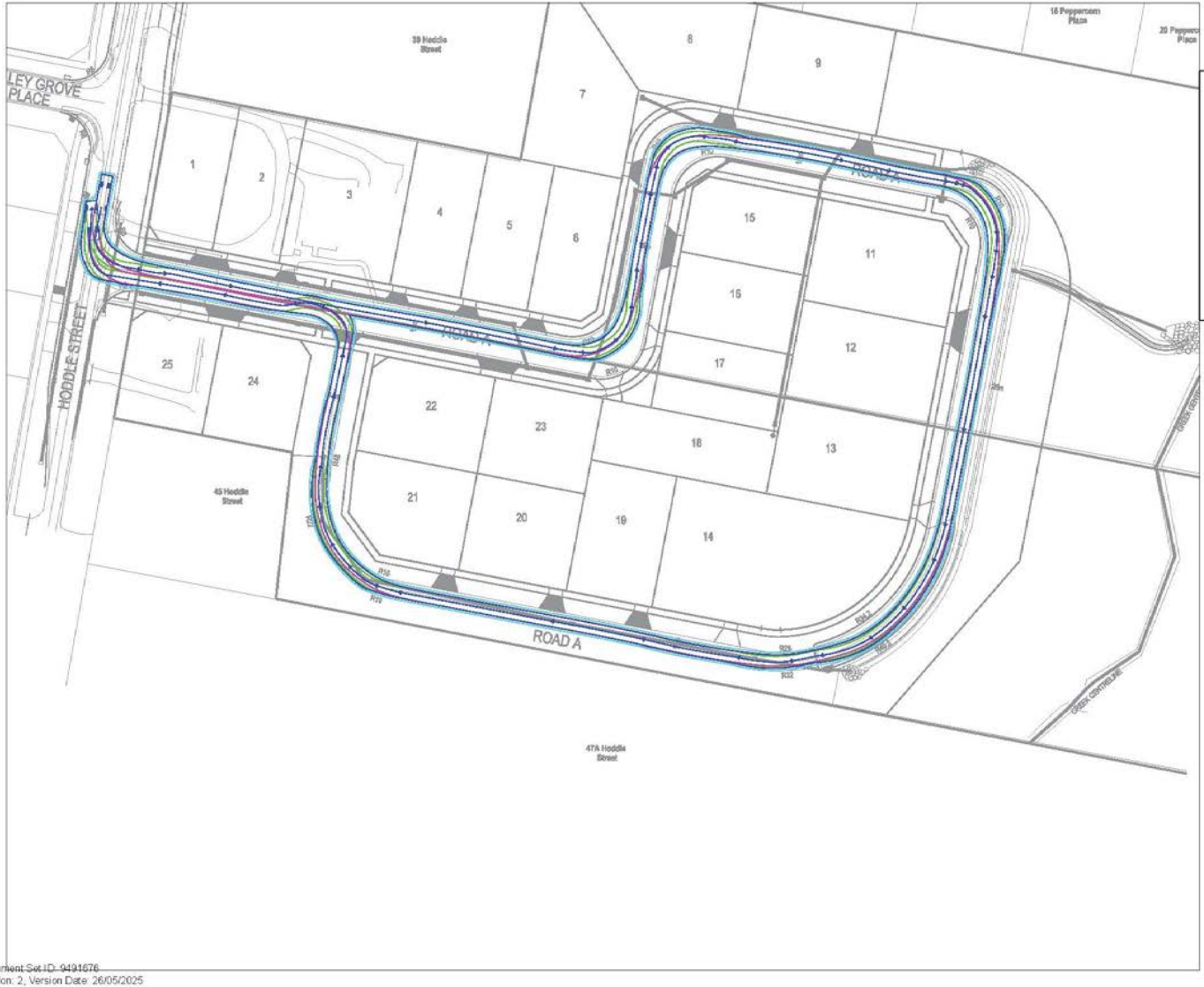
Objectives	Standard	Response
	○ Provide efficient and comfortable access to abutting lots at appropriate locations. ○ Contribute to streetscape design. • Provide for the safe and efficient collection of waste and recycling materials from lots. • Be accessible to people with disabilities. • Meet the requirements of Table C1. Where the widths of access lanes, access places, and access streets do not comply with the requirements of Table C1, the requirements of the relevant fire authority and roads authority must be met. Where the widths of connector streets do not comply with the requirements of Table C1, the requirements of the relevant public transport authority must be met. A street detail plan should be prepared that shows, as appropriate: • The street hierarchy and typical cross-sections for all street types. • Location of carriageway pavement, parking, bus stops, kerbs, crossovers, footpaths, tactile surface indicators, cycle paths and speed control and traffic management devices. • Water sensitive urban design features. • Location and species of proposed street trees and other vegetation. • Location of existing vegetation to be retained and proposed treatment to ensure its health. • Any relevant details for the design and location of street furniture, lighting, seats, bus stops, telephone boxes and mailboxes.	
Clause 56.06-8 **Lot access objective** To provide for safe vehicle access between roads and lots.	**Standard C21** Vehicle access to lots abutting arterial roads should be provided from service roads, side or rear access lanes, access places or access streets where appropriate and in accordance with the access management requirements of the relevant roads authority. Vehicle access to lots of 300 square metres or less in area and lots with a frontage of 7.5	No lots abut arterial roads. Design of the crossover meets the requirements of the Planning Scheme.

Objectives	Standard	Response
	metres or less should be provided via rear or side access lanes, places or streets. The design and construction of a crossover should meet the requirements of the relevant road authority.	

Appendix D

Swept Path Diagrams

8.8m MRV CIRCULATION



Traffix Group

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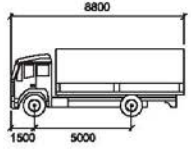
www.traffixgroup.com.au

VEHICLE USED IN SIMULATION
(VEHICLE SPEED - 5KM/H)



MRV (AS 2890.2)		mm
Width	:	2500
Track	:	2500
Lock to Lock Time	:	6.0
Steering Angle	:	34.0

LEGEND
- REAR WHEELS
- FRONT WHEELS
- VEHICLE BODY
- BODY CLEARANCE

41-43 HODDLE STREET, YARRA JUNCTION

PROPOSED RESIDENTIAL SUBDIVISION

GENERAL NOTES:

BASE INFORMATION FROM: F_1799_PrelimDesign_20241022.dwg
PREPARED BY Charlton Degg

DESIGNED BY	CHECKED BY
J. YOUNG	L. FURNESS

REV	DATE	NOTES
A	23/10/2024	UPDATED DESIGN

FILE NAME: G32713-02
SHEET NO.: 01

N

SCALE: 1:400 (A3)
0 8 16