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Туре А
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Туре Е
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ENTRY MANOEUVRES
---- DESIGN VEHICLE SWEPT PATHS SHOWN DASHED



Preliminiary Traffic Assessment, swept paths are subject to change as design develops.

Torawing Title
2 COLLEGIUM AVENUE, WHEELERS HILL
GARAGE ACCESS - B85 DESIGN VEHICLE
SWEPT PATH ANALYSIS

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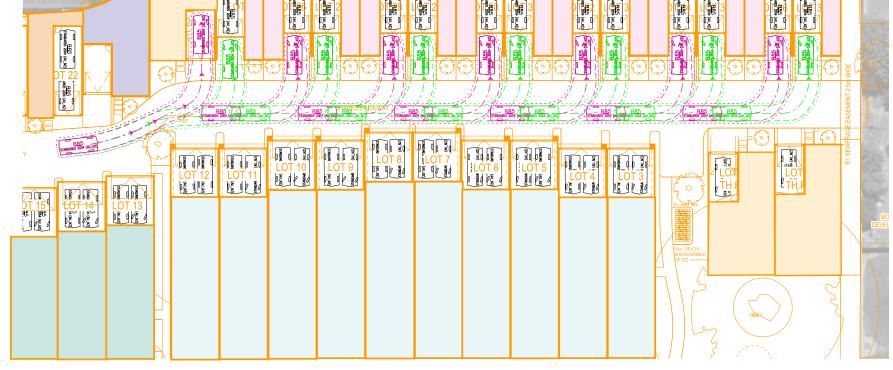
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SWEPT PATH ANALYSIS

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Torawing Title
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GARAGE ACCESS - B85 DESIGN VEHICLE
SWEPT PATH ANALYSIS

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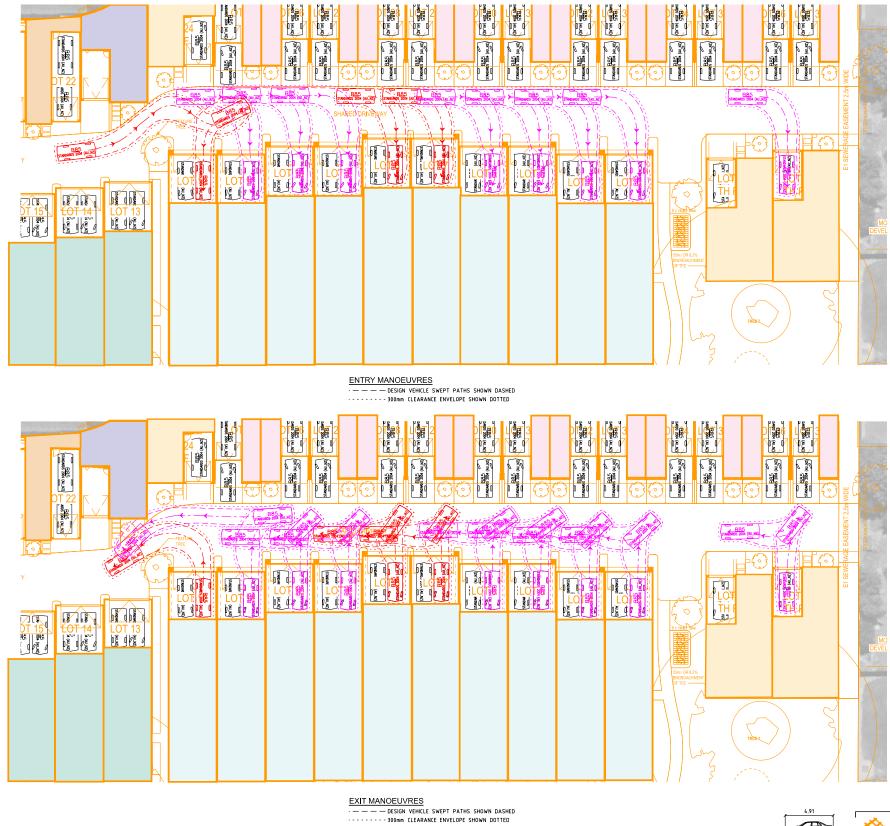
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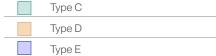
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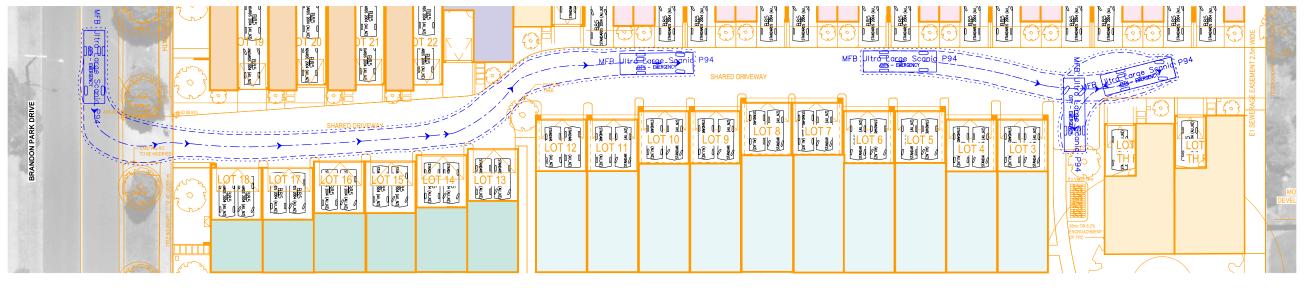
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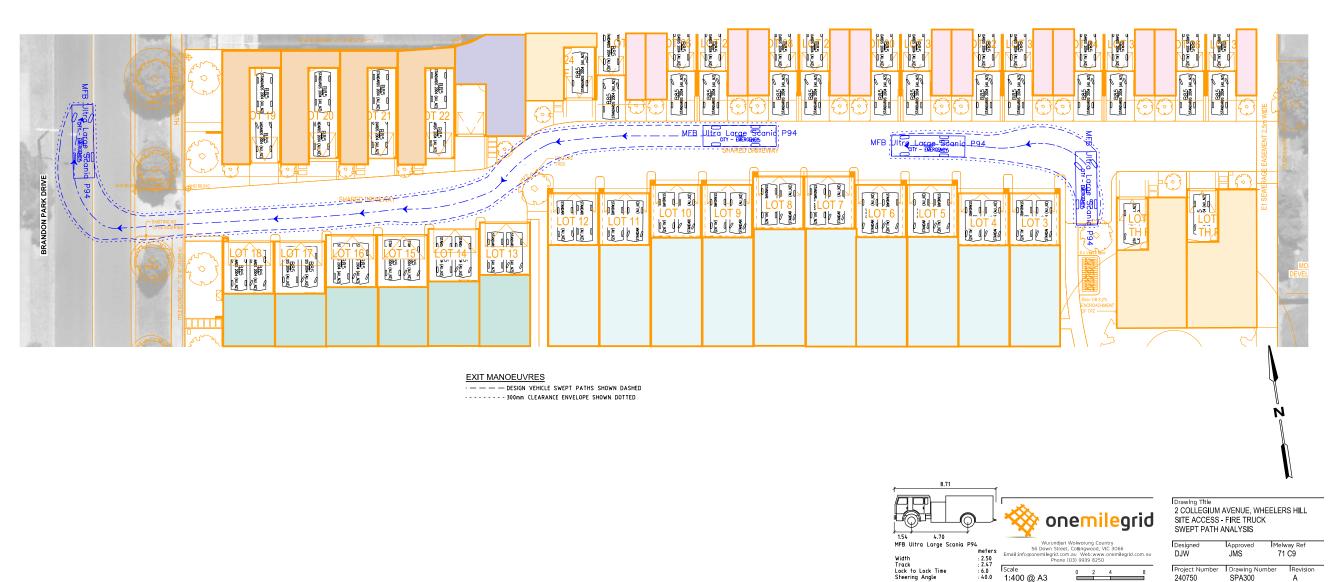
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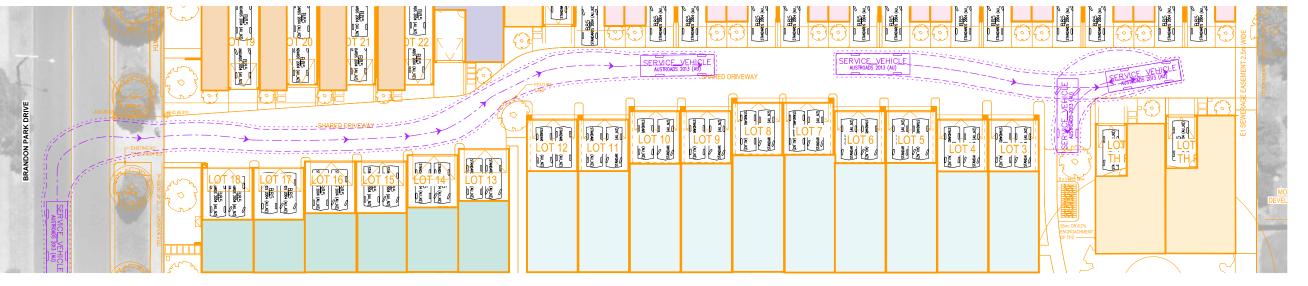
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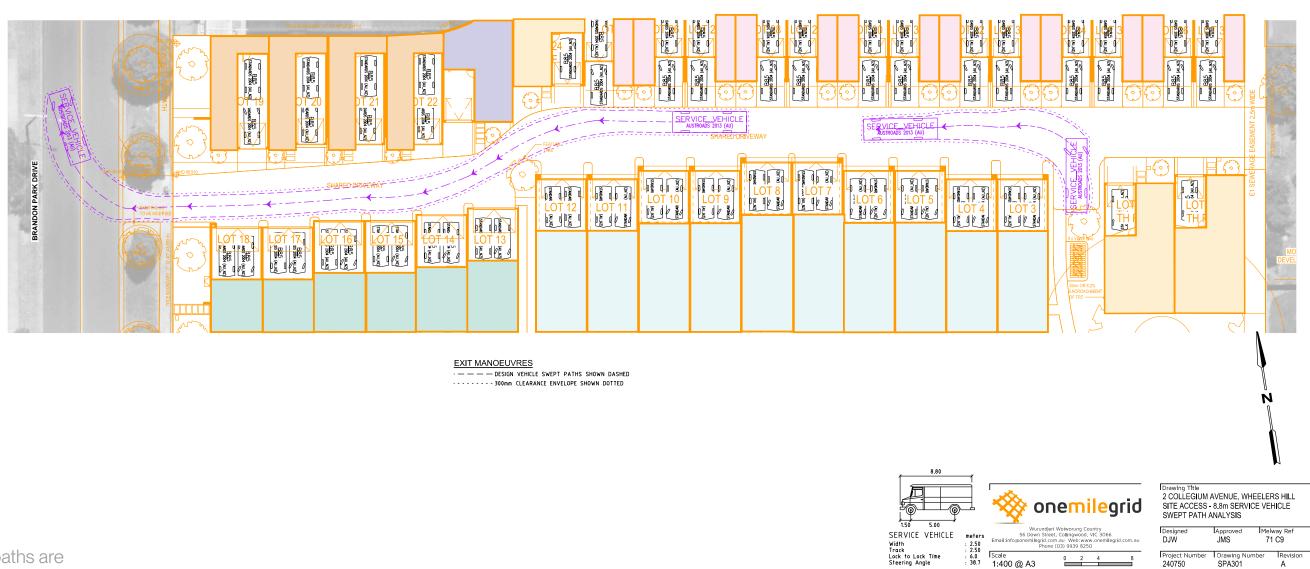
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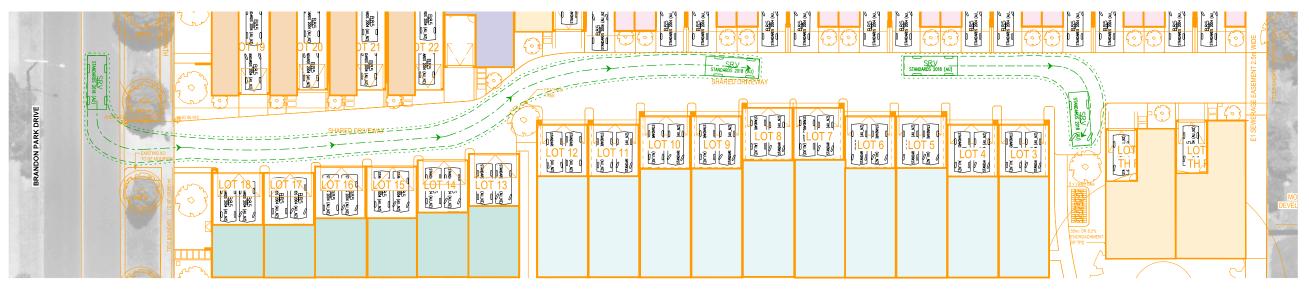
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Preliminiary Traffic Assessment, swept paths are subject to change as design develops.



Attachment E

Transport Impact Assessment prepared by Onemilegrid



2 Collegium Avenue, Wheelers Hill

Transport Impact Assessment



240750TIA001C-F.docx 29 January 2025



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1 INTRODUCTION

onemile**grid** has been requested by DM Property to undertake a Transport Impact Assessment of the development strategy for the supplementary development plan application at 2 Collegium Avenue, Wheelers Hill.

As part of this assessment the subject site has been inspected with due consideration of the existing approved development plan, and relevant background information has been reviewed.

A supplementary Development Plan application has been lodged (application number: TPA/56704) and a Request for Further Information has been issued by the City of Monash. Specifically for traffic engineering, the RFI included the following requests:

- > Revised Transport Impact Assessment to provide:
 - + Total numbers of vehicles to be provided on the site and associated traffic volumes.
 - + Number of car spaces allocated to each dwelling.
 - + Swept path analysis demonstrating a waste collection vehicle and all vehicles associated with the dwellings can leave the site in a forward direction.



2 EXISTING DEVELOPMENT PLAN

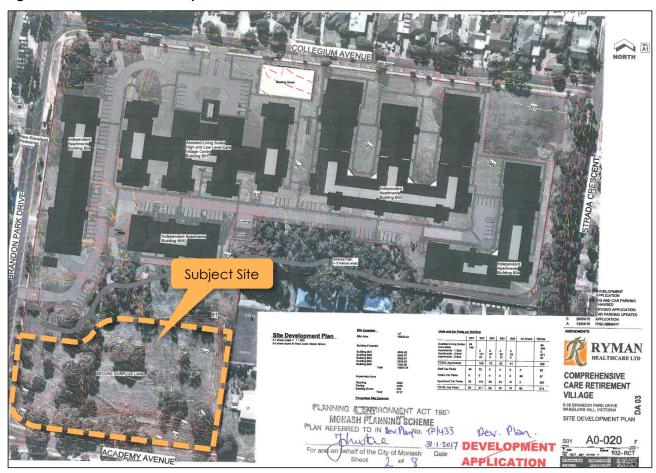
A Development Plan was previously prepared and endorsed for the broader site at 2 Collegium Avenue, for which the subject site was labelled as 'secure surplus land'.

The development plan generally indicates the development of a retirement village across the northern portion of the broader site at 2 Collegium Avenue. Construction is currently underway for this component of the existing development plan.

No connections are sought between the two sites, and as such the subject site will operate independently with a separate access point from Brandon Park Drive.

The endorsed development plan is shown below in Figure 1.

Figure 1 Endorsed Development Plan



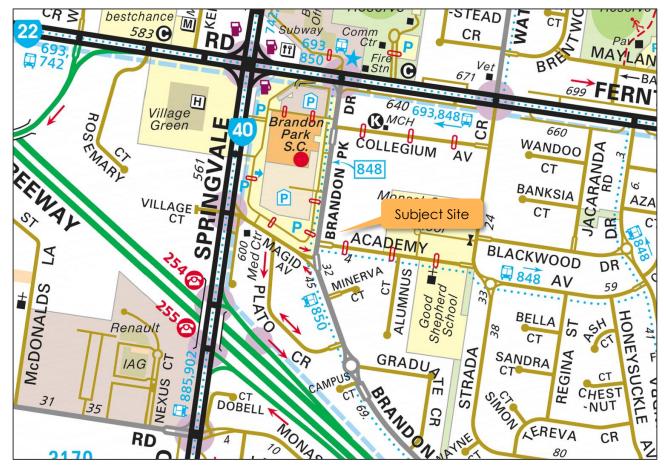


3 EXISTING CONDITIONS

3.1 Site Location

The <u>subject site</u> is addressed as 2 Collegium Avenue, Wheelers Hill, and is located on the northeastern corner of the intersection between Brandon Park Drive and Academy Avenue, as shown in Figure 2.

Figure 2 Site Location



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The site subject to this supplementary application is irregular in shape and contains road frontages of approximately 50 m to Brandon Park Drive, and approximately 120 m to Academy Avenue. The site forms part of the broader development plan area, which currently identifies it as 'surplus land'.

The site is currently generally vacant, however is currently used for construction storage and vehicles for works occurring in associated with the more broad use and development works approved through the current development plan and associated planning permits.

Site access is currently provided via a double width crossover to Brandon Park Drive.

The site forms part of the Brandon Park Major Activity Centre with land use in the immediate vicinity of the site is residential in nature, and includes commercial uses to the west, including the Brandon Park Shopping Centre, which is located directly opposite the site, off Brandon Park Drive.

An aerial view of the subject site is provided in Figure 3.



Figure 3 Site Context (13th October 2024)



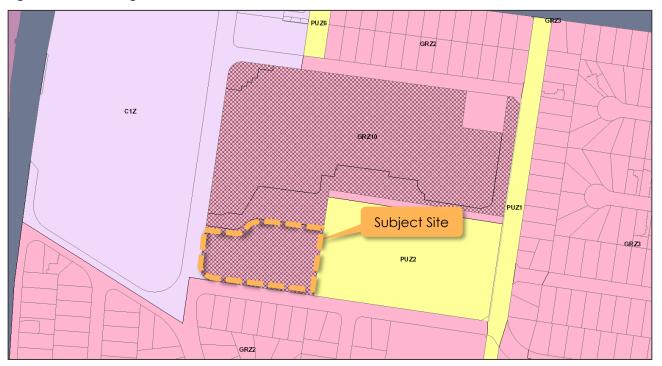
Copyright Nearmap



3.2 Planning Zones and Overlays

It is shown in Figure 4 that the site is located within a General Residential Zone (GRZ10). The site falls within the Principal Public Transport Network (PPTN) area. The broader site is subject to the Development Plan Overlay – Schedule 4 (DPO4).

Figure 4 Planning Scheme Zones



The site is subject to a Development Plan Overlay (Schedule 4 to Clause 43.04). The Development Plan Overlay requires a Development Plan which includes the following:

- > A traffic management report and car parking plan and where required traffic management measures which includes:
 - + Identification of roads and typical cross sections of the road network (including connections with the existing road network), pedestrian, cyclist and vehicle access locations, including parking areas, both internal and external to the site.
 - + Location and linkages to public transport.
 - + Car parking rates for all uses, including visitor parking.
 - + Provision for bicycle facilities.



3.3 Road Network

3.3.1 Brandon Park Drive

Brandon Park Drive is a local road generally aligned north-south, running between Ferntree Gully Road in the north, and Wellington Road in the south. Brandon Park Drive provides a single traffic lane in each direction across a 10 m wide pavement adjacent to the site. Kerbside parking is not permitted on either side of the road.

The default 50 km/h speed limit applies to Brandon Park Drive in the vicinity of the site.

The cross-section of Brandon Park Drive at the frontage of the site is shown in Figure 5.

Figure 5 Brandon Park Drive, looking north from adjacent to the subject site



Image date: December 2024



3.3.2 Academy Avenue

Academy Avenue is a local road generally aligned east-west, running between Strada Crescent in the east, and Brandon Park Drive in the west. Academy Avenue facilitates two-way traffic movements in each direction, across a 6.5 m wide pavement adjacent to the site. Kerbside parking is not permitted on either side of the road.

A 40 km/h speed limit applies to Academy Avenue in the vicinity of the site.

The cross-section of Academy Avenue at the frontage of the site is shown in Figure 6.

Figure 6 Academy Avenue, looking east from adjacent to the subject site



Image date: December 2024



3.4 Sustainable Transport

3.4.1 Public Transport

The full public transport provision in the vicinity of the site is shown in Figure 7 and detailed in Table 1. It is shown that public transport in the area is limited to bus services. As mentioned above, the site is located within the Principal Public Transport Network (PPTN) area.

Figure 7 Public Transport Provision

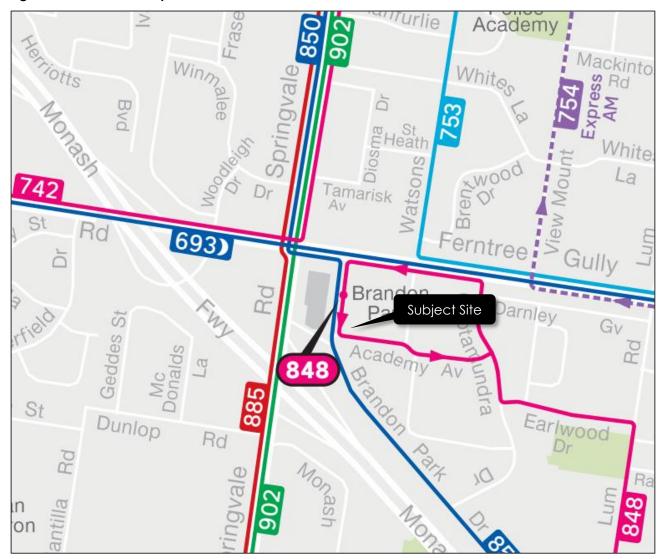


Table 1 Public Transport Provision

Mode	Route No.	Route Description	Nearest Stop/Station
	693	Belgrave - Oakleigh via Ferntree Gully & Brandon Park	
	742	Ringwood - Chadstone SC via Vermont South & Glen Waverley & Oakleigh	Ferntree Gully
Bus	753	Glen Waverley - Bayswater via Wheelers Hill & Knoxfield & Boronia	Road
	754	Rowville - Glen Waverley via Caulfield Grammar & Wheelers Hill	-



Mode	Route No.	Route Description	Nearest Stop/Station
	848	Dandenong - Brandon Park Shopping Centre via Waverley Gardens Shopping Centre	Brandon Park
8.50		Dandenong - Glen Waverley via Mulgrave & Brandon Park	Drive
	885	Glen Waverley – Springvale via Wanda Street	
	902	Chelsea Railway Station - Airport West Shopping Centre (SMARTBUS Service)	Springvale Road

3.4.2 Bicycle Facilities

On-road bicycle lanes are currently provided along Watsons Road and Strada Crescent, with an off-road shared path along Dandenong Creek Trail. These provide further connection to a wider bicycle network, providing excellent bicycle access for the subject site.

3.4.3 Walkability

Walkability is a measure of how friendly an area is to walking. Walkability has many health, environmental, and economic benefits. Factors influencing walkability include the presence or absence and quality of footpaths or other pedestrian rights-of-way, traffic and road conditions, land use patterns, building accessibility, and safety.

The site has a Walk Score rating of 77/100 and is very walkable, with most errands able to be accomplished on foot.



4 DEVELOPMENT PROPOSAL

The supplementary Development Plan contemplates the development of the 'secure surplus land' site for the purposes of medium-density residential development, comprising 37 townhouses.

The internal arrangement of the townhouses is subject to future design, however will comprise the dwellings as detailed in Table 2.

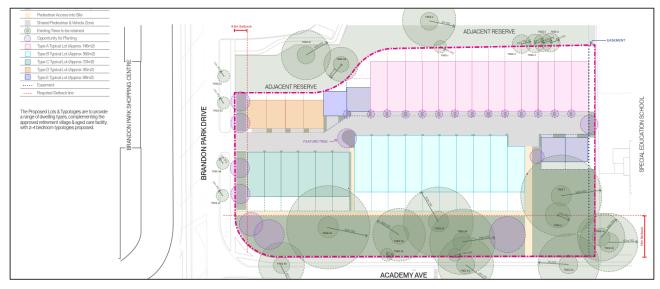
Table 2 Proposed Development Schedule

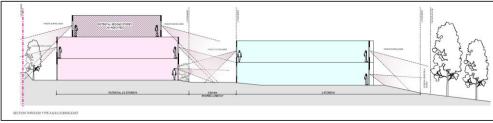
Dwelling Type	Number	Parking Provision
2 bedroom	4	4 (1 per dwelling)
3+ bedroom	33	66 (2 per dwelling)
	37	70

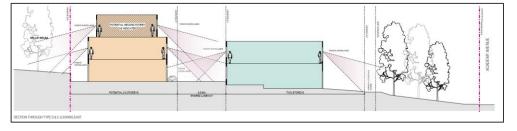
Vehicular access is proposed via a shared driveway from Brandon Park Drive. The shared driveway will provide access to each of the garages for the respective dwellings.

The indicative site plan is shown in Figure 8 below.

Figure 8 Indicative Site Plan









5 BICYCLE PARKING

Clause 52.34 of the Monash Planning Scheme does not specify bicycle parking provision requirements for dwellings or townhouse style developments of 2-3 storey scale.

6 CAR PARKING

The car parking requirements for the subject site are identified in Clause 52.06 of the Monash Planning Scheme. As mentioned above, the site is located within the Principal Public Transport Network (PPTN) area, and therefore, the Column B rates apply, as shown in Table 3 below.

Table 3 Clause 52.06 – Car Parking Requirements

Use	Number	Rate	Car Parking Measure	Requirement
Dwelling	4	1	to each one or two bedroom dwelling, plus	4
	33	2	to each three or more bedroom dwelling (with studies or studios that are separate rooms counted as bedrooms), plus	66
		0	for visitors to every 5 dwellings for developments of 5 or more dwellings	0
Total				70

As shown above, given that the site is located within PPTN area, the proposed development will not generate a requirement for any visitor parking.

Each two-bedroom dwelling will generate a requirement for 1 parking space, and each three or more bedroom dwellings will generate a requirement for 2 parking space. Car parking will be provided for each dwelling in accordance with the Planning Scheme requirements.

A swept path assessment will be undertaken as part of the Planning Permit application stage to demonstrate access to the respective parking spaces.

7 TRAFFIC

7.1 Traffic Generation

7.1.1 Existing Broader Site

Reference has been made to the Development Plan that was prepared in August 2016 for the retirement village in the northern portion of the overall site. The development plan included an assessment of the traffic movements projected to be generated by the retirement village, as summarised in Table 4.

Table 4 Retirement Village Projected Traffic Generation

Peak Hour	Time	Vehicle Trips
AM Commuter Peak Hour	8:15-9:15am	56
AM Subject Site Peak Hour	10:00-11:00am	168
PM Subject Site Peak Hour	2:00-3:00pm	112
PM Commuter Peak Hour	2:45-3:45pm	112

The endorsed Development Plan indicated that "the level of additional traffic generated by the proposed retirement village is predicted to have minimal impact on intersection capacity surrounding the site."

7.1.2 Subject Medium Density Residential

Surveys undertaken by **one**mile**grid** and other traffic engineering firms at residential dwellings have shown that the daily traffic generation rates vary depending on the size, location and type of the dwelling, the parking provision and proximity to local facilities and public transport.

Generally, where a site is closer to high-quality public transport, or local services and amenities (e.g., a full-line supermarket), lower traffic generation rates occur.

Medium to high density dwelling in inner areas generate traffic with rates between 3.0 and 6.0 movements per dwelling. Considering the location of the subject site and moreover the excellent access to public transport, it is expected that generation rates will be towards the lower end of the range. Nevertheless, for the purposes of this assessment a daily rate of in the order of 5.0 movements per day per dwelling will be adopted with 10% occurring during the peak hours.

Application of the above rates indicates that the potential development of 37 dwellings with car parking will generate 185 movements per day, inclusive of 19 vehicle movements during the morning and afternoon peak hours.

7.1.3 Combined Traffic Generation

The combined traffic generated by the existing retirement village and the subject proposed medium density residential dwellings is summarised in Table 5.

Table 5 Combined Traffic Generation

Period	Retirement Village	Townhouses	Combined
AM Commuter Peak Hour	56	19	75
PM Commuter Peak Hour	112	19	131



The additional projected traffic generation associated with the subject townhouses reflects a marginal increase to the total traffic generated by the overall site.

The generation of up to 19 peak hour movements equates to less than 1 movement every 3 minutes during the peak hours and as such is expected to have a negligible impact on the operation of the surrounding road network.

7.2 Site Access Operation

The development of the site contemplates a shared driveway from a separate standalone access point from Brandon Park Drive. As a result, no other road connection will be made to the site, including from the retirement village development on the northern portion of the broader site. As a result, the subject site will be able to operate independently from the other developments within the broader site at 2 Collegium Drive. In this regard, the proposed access to Brandon Park Drive will not cater for any other vehicle movements beyond the subject site.

The RFI also included comments relating to built form of the development which suggested exploring the potential to provide access off Academy Avenue to break up the buildings and reduce the length of the shared accessway. From a traffic carrying perspective, the vehicle access to Brandon Park Drive provides sufficient capacity for the level of traffic to be generated (185 daily vehicle movements) and a secondary vehicle access to Academy Avenue would provide little to no benefit for the development. Furthermore, there are additional challenges associated with a potential vehicle access to Academy Avenue due to the natural grade of the land and impacts to driveway grades. In light of the above, the proposed accessway to Brandon Park Drive is considered appropriate and suitable to facilitate the traffic movements associated with the development of the site.

A swept path assessment will be provided as part of the Planning Permit application which demonstrates vehicle access to the site from the external road network for resident and waste vehicles, demonstrating that all vehicles can enter and exit in a forward direction.

8 DEVELOPMENT PLAN OVERLAY REQUIREMENTS

The development plan requirements for the subject site are identified in Clause 43.04 of the Monash Planning Scheme.

Section 4.0 of Schedule 4 to the Development Plan Overlay indicates that the Brandon Park Residential Development Plan is to include a traffic management report and car parking plan which includes the following items shown in Table 6.



Table 6 Development Plan Overlay Requirements

ltem	Response
Identification of roads and typical cross-sections of the road network (including connections with the existing road network), pedestrian, cyclist and vehicle access locations, including parking areas, both internal and external to the site.	Refer to Section 4. The development of the site will include a shared accessway to access the respective townhouses. The shared accessway will be used by residents of the site and not serve any other purposes for broader street connections. The cross sections for the shared accessway are included within Figure 8.
Location and linkages to public transport	Refer to Section 3.4.1. The site has access to the existing bus route and stops on Brandon Park Drive to the north. There is a signalised pedestrian crossing to access the stop on each side of the road.
Car parking rates for all uses, including visitor parking	Refer to Section 6. Car parking will be provided in accordance with Clause 52.06 of the Planning Scheme.
Provision for bicycle facilities	Refer to Section 5. Bicycle parking is not required for townhouse style dwellings, notwithstanding, bicycle parking can readily be accommodated within garages and visitor rails may be accommodated within surrounding landscape areas.

9 CONCLUSIONS

The subject application seeks to update the existing Development Plan for the broader site, to develop the subject area for 37 townhouses.

Considering the analysis presented above, it is concluded that:

- > The Planning Scheme does not specify bicycle parking provision requirements for dwellings or townhouse style developments;
- > The townhouses will provide car parking in accordance with the requirements of Clause 52.06 of the Planning Scheme;
- Vehicle access will be achieved via a shared accessway and crossover to Brandon Park Drive, with no additional connectivity to the other uses to the north;
- > The additional traffic movements generated by the proposed townhouses reflect a marginal increase to the overall traffic movements generated by the site. The generation of up to 19 peak hour movements equates to less than 1 movement every 3 minutes during the peak hours and as such is expected to have a negligible impact on the operation of the surrounding road network; and
- > The supplementary Development Plan satisfies the traffic engineering elements of the Development Plan overlay.