

# Traffix Group

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## Traffic Engineering Assessment

Proposed Residential Development  
52 Golf Road, Oakleigh South

Golf Road Project Development Pty Ltd

June 2020

G25977R-04A

# Document Control

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|           |       |            |             |             |
|           |       |            |             |             |

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## 1. Introduction

Traffix Group has been engaged by Golf Road Project Development Pty Ltd to prepare a traffic engineering report for a proposed residential development at 52 Golf Road, Oakleigh South.

This report provides a detailed traffic engineering assessment of the parking and traffic issues associated with the proposed development.

## 2. Proposal

The proposal is for a medium density residential development comprising 86 townhouses. A development summary is provided in the table below.

*Table 1: Development Summary*

| Use                     | No.          | Car Parking Allocation | Resultant Car Parking Rate           |
|-------------------------|--------------|------------------------|--------------------------------------|
| Two-bedroom townhouse   | 20           | 20                     | 1 car space per dwelling             |
| Three-bedroom townhouse | 24           | 48                     | 2 car spaces per dwelling            |
| Four-bedroom townhouse  | 42           | 84                     | 2 car spaces per dwelling            |
| <i>Subtotal</i>         | 86           | 145                    | <i>1.69 car spaces per dwelling.</i> |
| Visitor Car Parking     | 86 dwellings | 12                     | 0.14 car spaces per dwelling.        |
| <b>Total</b>            |              | <b>157</b>             | -                                    |

Vehicle access to the internal road network is provided via a 5.8m wide accessway to Golf Road located at the approximate mid-point along the site's frontage to Golf Road. Ten dwellings located along the site's southern boundary will have direct vehicle access to Beryl Avenue, and a further two dwellings will have direct vehicle access to Bakers Road, along the site's eastern boundary.

A total of 24 bicycle spaces are provided within horizontal spaces across the development for visitors.

Pedestrian access is provided to Beryl Avenue at the site's approximate mid-point and to Bakers Road at the site's approximate mid-point. Individual pedestrian access is also provided to all townhouses with a street frontage to Golf Road, Beryl Avenue and Bakers Road

Post development, a total of 19 on-street car spaces will be available along the site's combined frontages (i.e. net loss of 9 spaces), including 18 spaces along Beryl Avenue (loss of 7 spaces) and 1 space along Bakers Road (loss of 2 spaces).

A copy of the development plans prepared by Plus Architecture (dated May, 2020) which form the basis of our assessment is attached at Appendix A to this report.

## **3. Existing Conditions**

### **3.1. Subject Site**

The subject site is located on the north-east corner of Golf Road and Beryl Avenue in Oakleigh South. A locality plan, aerial photograph and photograph of the site's frontage to Golf Road are provided at Figure 1 to Figure 3, respectively.

The site is irregular in shape, currently vacant with a total area of approximately 1.8ha. The site has frontages to Golf Road, Beryl Avenue and Bakers Road of 63.8m, 169.8m and 42.7m respectively.

Three crossovers are provided along the site's frontages, including a single width crossover to Beryl Avenue and two single width crossovers to Bakers Road.

A total of 28 unrestricted car spaces are provided along the site's combined frontages, including 25 spaces along Beryl Avenue and 3 spaces along Bakers Road.

The site is located within a General Residential Zone – Schedule 1 (GR1Z) under the Planning Scheme as presented at Figure 4. The site is also subject to Development Plan Overlay – Schedule 5 (DPO5). The site is located within the Principal Public Transport Network Area (PPTN). Land surrounding the site is predominantly residential.

Significant land uses in the nearby area include:

- **Bright Beginnings Child Care Centre**, located 50m walking distance south-west of the site,
- **Stan Riley Reserve**, located 100m walking distance south-west of the site,
- **South Oakleigh College**, located 150m walking distance south-east of the site, and
- **Oakleigh South Primary School**, located 650m walking distance south-east of the site.

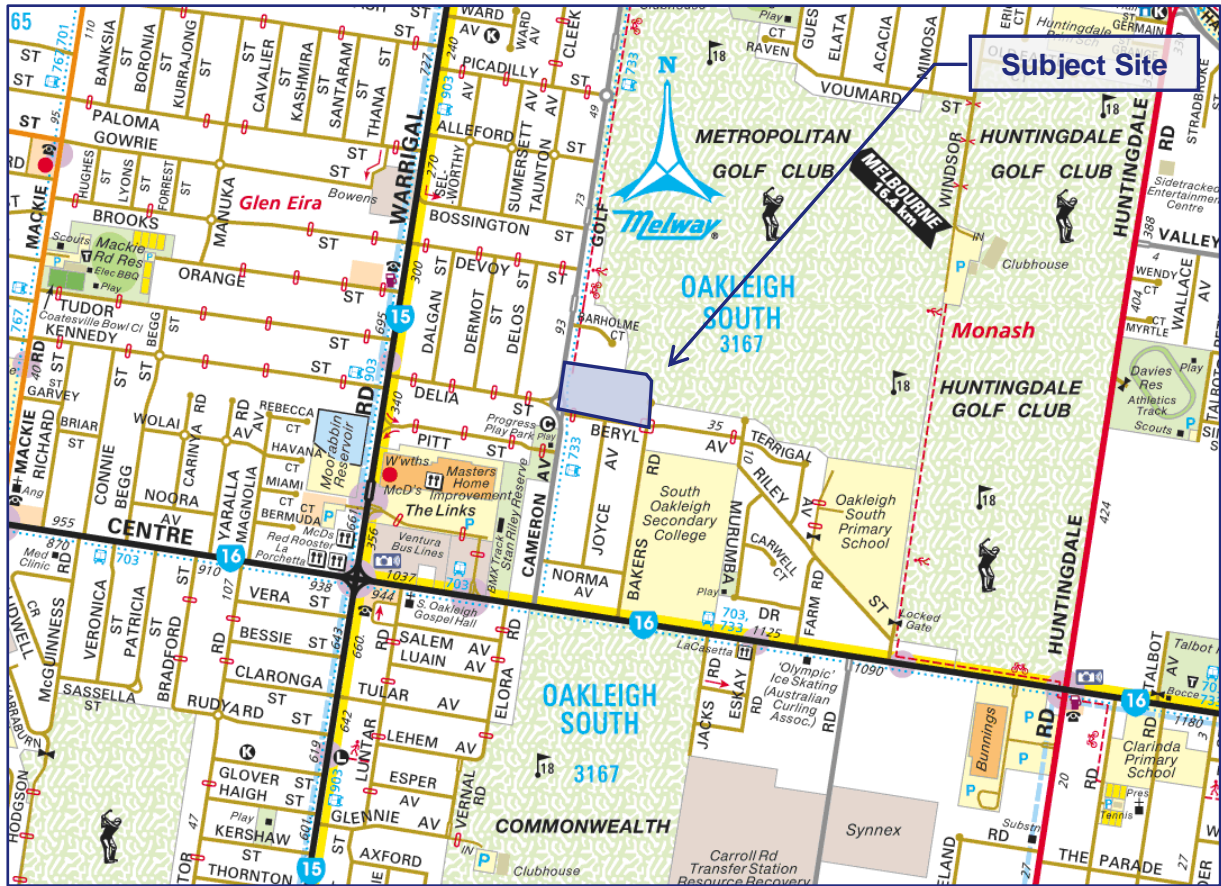


Figure 1: Locality Plan

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Figure 2: Aerial Photograph

Source: [www.nearmap.com](http://www.nearmap.com)



Figure 3: Site Frontage to Golf Road





Figure 4: Land Use Zoning Map

Source: Planning Schemes Online

## 3.2. Road Network

**Golf Road** is a 'local collector road'<sup>1</sup> extending in a north-south direction between North Road in the north and Beryl Avenue in the south, where it continues as Cameron Street to Centre Road.

To the north of the site, Golf Road generally has a 7m wide carriageway, which accommodates a single traffic lane in both directions and indented kerbside parking along the west side. Indented parking is generally unrestricted. 'No Stopping' restrictions apply along the east side.

To the south of the site, Golf Road, which extends as Cameron Street to the south of Beryl Avenue, generally has a 6.8m wide carriageway, which accommodates a single lane of traffic in each direction. Alternatively, it accommodates a shared lane of through traffic and kerbside parking on one side of the road only.

In the vicinity of the site, the default urban speed limit of 50km/h applies to Golf Road.

**Beryl Avenue** is a 'local road'<sup>1</sup> extending in an east-west direction between Riley Street in the east and Golf Road in the west.

In the vicinity of the site, Beryl Avenue has a 6.8m wide carriageway which accommodates a shared lane of through traffic and kerbside parking on one side of the road only. On-street parking along Beryl Avenue is unrestricted in the vicinity of the site.

In the vicinity of the site, the default urban speed limit of 50km/h applies to Beryl Avenue.

The intersection between Beryl Avenue and Cameron Avenue is governed by a give way sign facing Beryl Avenue.

**Bakers Road** is a 'local road'<sup>1</sup> extending in a north-south direction between a dead end in the north and Centre Road in the south.

In the vicinity of the site, Bakers Road has a 6.8m wide carriageway which accommodates a shared lane of through traffic and kerbside parking on one side of the road only. On-street parking along Bakers Road is unrestricted in the vicinity of the site.

In the vicinity of the site, the default urban speed limit of 50km/h applies to Beryl Avenue.

The intersection between Bakers Road and Beryl Avenue is governed by a give way sign facing Bakers Road.

Photographs depicting the surrounding road network are presented in Figure 5 to Figure 10.

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<sup>1</sup> As confirmed by Monash City Council

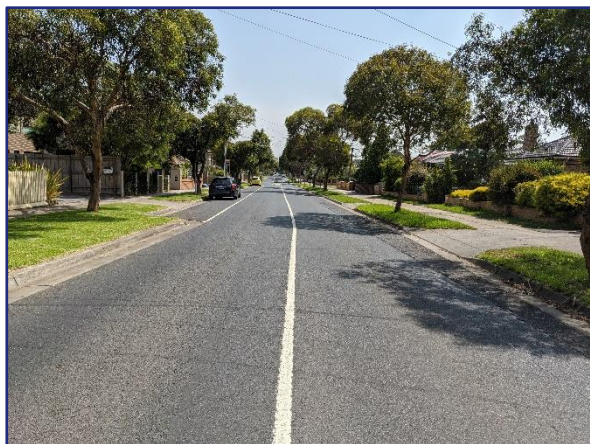


Figure 5: Golf Road - view north



Figure 6: Golf Road - view south

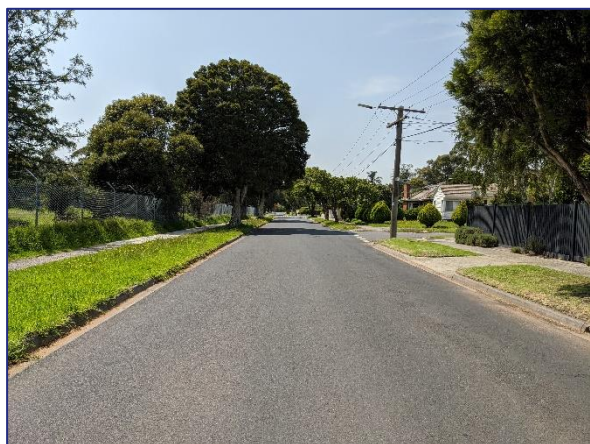


Figure 7: Beryl Avenue - view east



Figure 8: Beryl Avenue - view west



Figure 9: Bakers Road - view north



Figure 10: Bakers Road - view south

## 3.2.1. Existing Traffic Conditions

Traffix Group undertook 7-day automatic tube count surveys at the following locations:

- Golf Road, at proposed site access, and
- Beryl Avenue, east of Cameron Avenue.

The counts were undertaken between Monday 3<sup>rd</sup> February, 2020 and Sunday 9<sup>th</sup> February, 2020. Summaries of the results are presented below at Table 2 and Table 3.

Table 2: Tube Count Data Summary - Golf Road at Proposed Site Access

| Characteristic                         | Vehicles per day                                    |              |              |
|--|---|--------------|--------------|
|  | Golf Road, Oakleigh South – at Proposed Site Access |              |              |
|  | Northbound  | Southbound   | Total        |
| 24hr Weekday Average                   | 3,361   | 2,446        | 5,805        |
| Recorded AM Peak Hour Volume (Weekday) | 452<br>8-9am  | 370<br>8-9am | 822<br>8-9am |
| Recorded PM Peak Hour Volume (Weekday) | 353<br>3-4pm  | 267<br>3-4pm | 619<br>3-4pm |
| PM Peak Hour Volume (Weekday 5-6pm)    | 296   | 247          | 543          |
| Commercial Vehicle %                   | 4.4%  | 4.3%         | 4.3%         |
| 85 <sup>th</sup> Percentile Speed      | 49.3km/h  | 45.9km/h     | 47.6km/h     |

Table 3: Tube Count Data Summary - Beryl Avenue, east of Cameron Avenue

| Characteristic                       | Vehicles per day                                      |           |          |
|--------------------------------------|---|-----------|----------|
|                                      | Beryl Avenue, Oakleigh South – east of Cameron Avenue |           |          |
|                                      | Eastbound   | Westbound | Total    |
| 24hr Weekday Average                 | 1,024   | 1,347     | 2,371    |
| Recorded AM Peak Hour Volume (8-9am) | 270   | 234       | 504      |
| Recorded PM Peak Hour Volume (3-4pm) | 178   | 215       | 393      |
| PM Peak Hour Volume (Weekday 5-6pm)  | 80  | 111       | 191      |
| Commercial Vehicle %                 | 0.8%  | 0.7%      | 0.8%     |
| 85 <sup>th</sup> Percentile Speed    | 29.2km/h  | 27.7km/h  | 28.4km/h |

The above table summaries outline the following characteristics:

- Golf Road at proposed site access carries an average traffic volume of 5,805 vehicles per day. This is consistent with its classification as a Connector Street – Level 2, which can accommodate between 3,000-7,000 vehicles per day.
- Beryl Avenue at Cameron Avenue carries an average traffic volume of 2,371 vehicles per day. This is consistent with its classification as an Access Street – Level 2, which can accommodate 2,000-3,000 vehicles per day.
- The recorded peak hour periods occurred between 8-9am and 3-4pm for both roads.

### 3.3. Existing Parking Conditions

As the requisite number of car spaces under Clause 52.06-5 are provided on the site, it is not necessary to consider the ability of on-street parking areas to accommodate overflow demands. However, for completeness we have undertaken a parking survey to determine the existing car parking conditions for the area surrounding the site.

The parking surveys were undertaken at the following times:

- 12noon, 1pm, 7pm & 8pm on Thursday 6<sup>th</sup> February, 2020,
- 12noon, 1pm, 7pm & 8pm on Saturday 8<sup>th</sup> February, 2020, and
- 3pm on Thursday 13<sup>th</sup> February, 2020.

The survey times encompass the peak times associated with the proposed development, the surrounding residential area (ie. evenings and weekends) and the nearby schools (during pick-up time). The parking survey area is presented in Figure 11 and the detailed parking survey is provided at Appendix B.

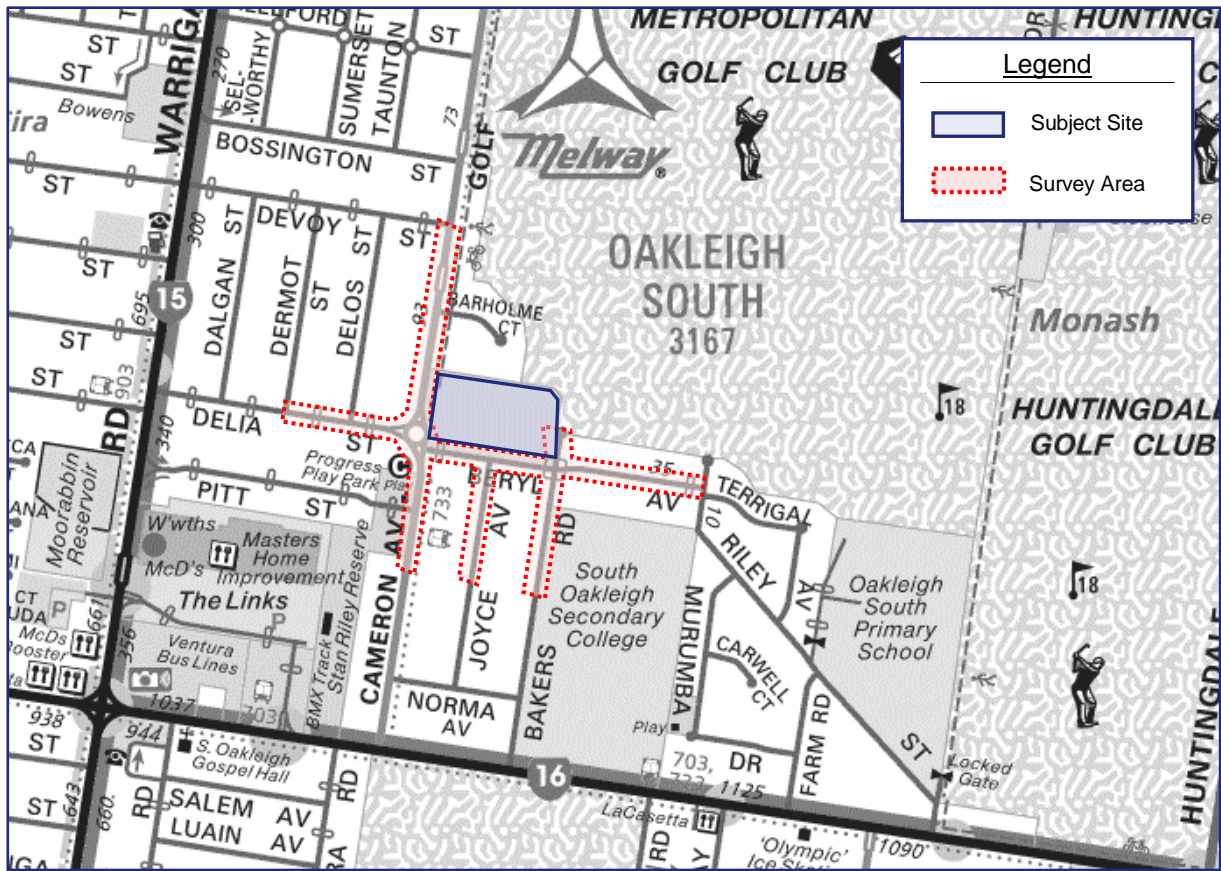


Figure 11: Parking Survey Area

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A total of 124 car spaces are available to the general public within the survey area<sup>2</sup>. On-street parking within the survey area is predominantly unrestricted.

Twenty-eight unrestricted on-street car spaces are located along the site’s frontages to Beryl Avenue and Bakers Road.

The overall profile of on-street parking demand is provided at Figure 12.

<sup>2</sup> The following analysis only includes car spaces available to the general public and excludes ‘Permit Zones’, ‘Loading Zones’ and other ‘No Stopping’ areas during the relevant enforcement times.

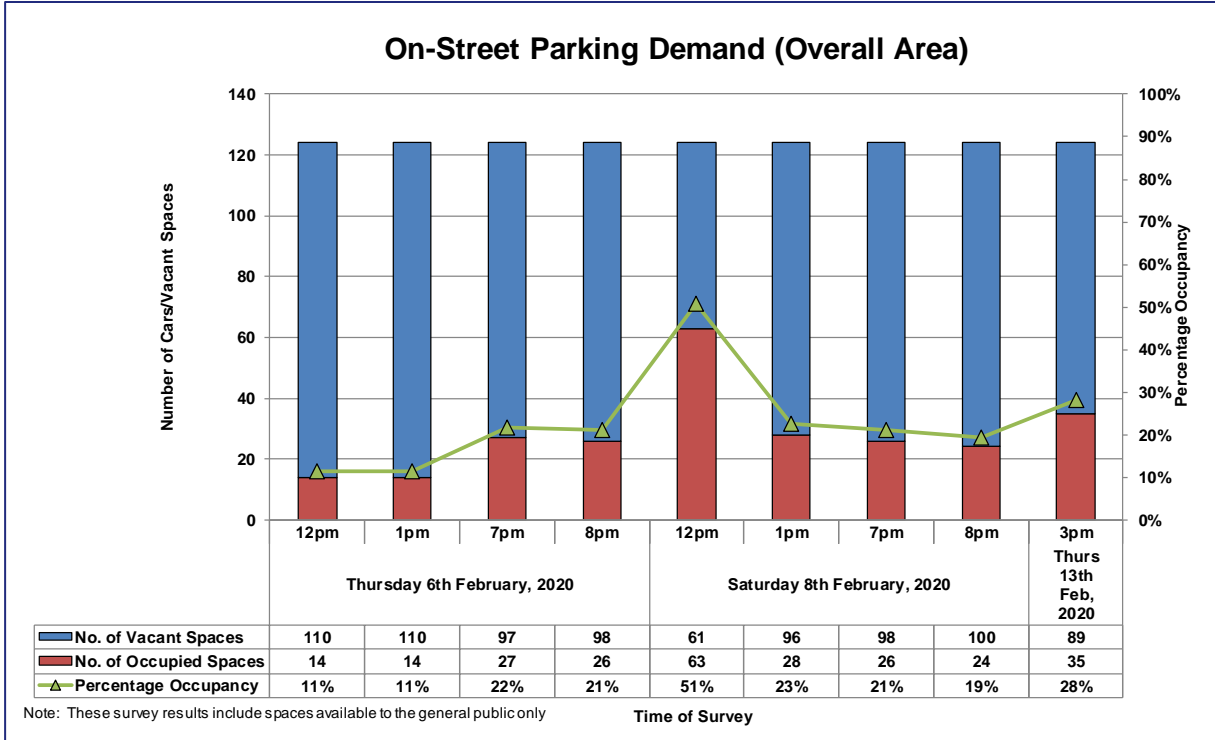


Figure 12: Profile of On-Street Parking Demand (Overall Area)

The results of the surveys indicate that there is a low to moderate demand for on-street parking throughout the survey period with occupancy recorded between 11-51% (61-110 vacant car spaces).

The minimum number of vacant spaces recorded across the survey period was 61 spaces at 12pm on Saturday 8<sup>th</sup> February, 2020 (51% occupancy).

We understand that the spike in car parking demand at this time was due to an event held at South Oakleigh Secondary College on Saturday.

### 3.4. Public Transport

The site is located within the PPTN area as shown in Figure 13 and as such has access to several bus services within convenient walking distance of the site. The available bus service provides a link to Oakleigh and Clayton Railway Station, which has access to a greater number of public transport services. The closest railway station is Huntingdale Station, which is located 2.3km walking distance from the site.

A summary of the accessible public transport services is provided in Table 4.

The available public transport services within close proximity of the site are shown at Figure 15.

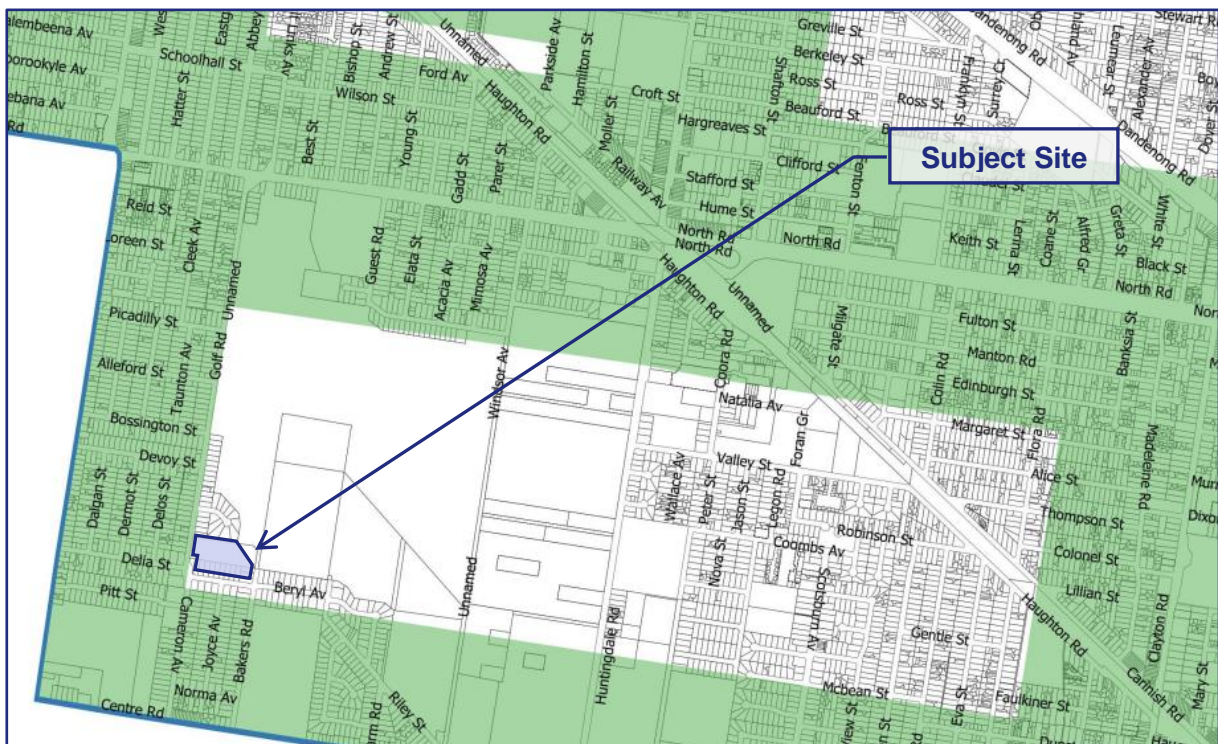


Figure 13: Principal Public Transport Network Map

Source: ptv.vic.gov.au





Figure 14: PPTN Map (Zoomed on Site)

Source: VicPlan

Table 4: Summary of Public Transport Services

| Service   | Between                             | Via   | Operating Times (Frequency)     |                               |                             |
|---|-------------------------------------|---|---------------------------------|-------------------------------|-----------------------------|
|   |                                     |   | Weekday                         | Saturday                      | Sunday                      |
| <b>Golf Road – approximately 100m walking distance north of the site</b>    |                                     |   |                                 |                               |                             |
| Bus Route 733   | Oakleigh Station & Box Hill Station | Clayton, Monash University & Mt Waverley  | 6:35am-9:50pm<br>30-40 minutes  | 7:45am-9:40m<br>30-40 minutes | 9:40am-9:40m<br>60 minutes  |
| <b>Warrigal Road – approximately 500m walking distance west of the site</b> |                                     |   |                                 |                               |                             |
| Bus Route 903 (SmartBus)  | Altona & Mordialloc                 | Sunshine, Essendon, Coburg, Preston, Heidelberg, Doncaster, Box Hill & Oakleigh | 5:05am-12:20am<br>15-20 minutes | 5:25am-11:35pm<br>30 minutes  | 6:30am-9:20pm<br>30 minutes |

# Traffic Engineering Assessment

52 Golf Road, Oakleigh South

| Service  | Between                     | Via                                    | Operating Times (Frequency)     |                                |                             |
|--|-----------------------------|--|---------------------------------|--------------------------------|-----------------------------|
|  |                             |  | Weekday                         | Saturday                       | Sunday                      |
| <b>Centre Road – approximately 550m walking distance south of the site</b> |                             |  |                                 |                                |                             |
| Bus Route 703  | Middle Brighton & Blackburn | Bentleigh, Clayton & Monash University | 7:00am-10:30pm<br>15-30 minutes | 7:30am-9:50am<br>20-30 minutes | 9:45am-9:55pm<br>30 minutes |

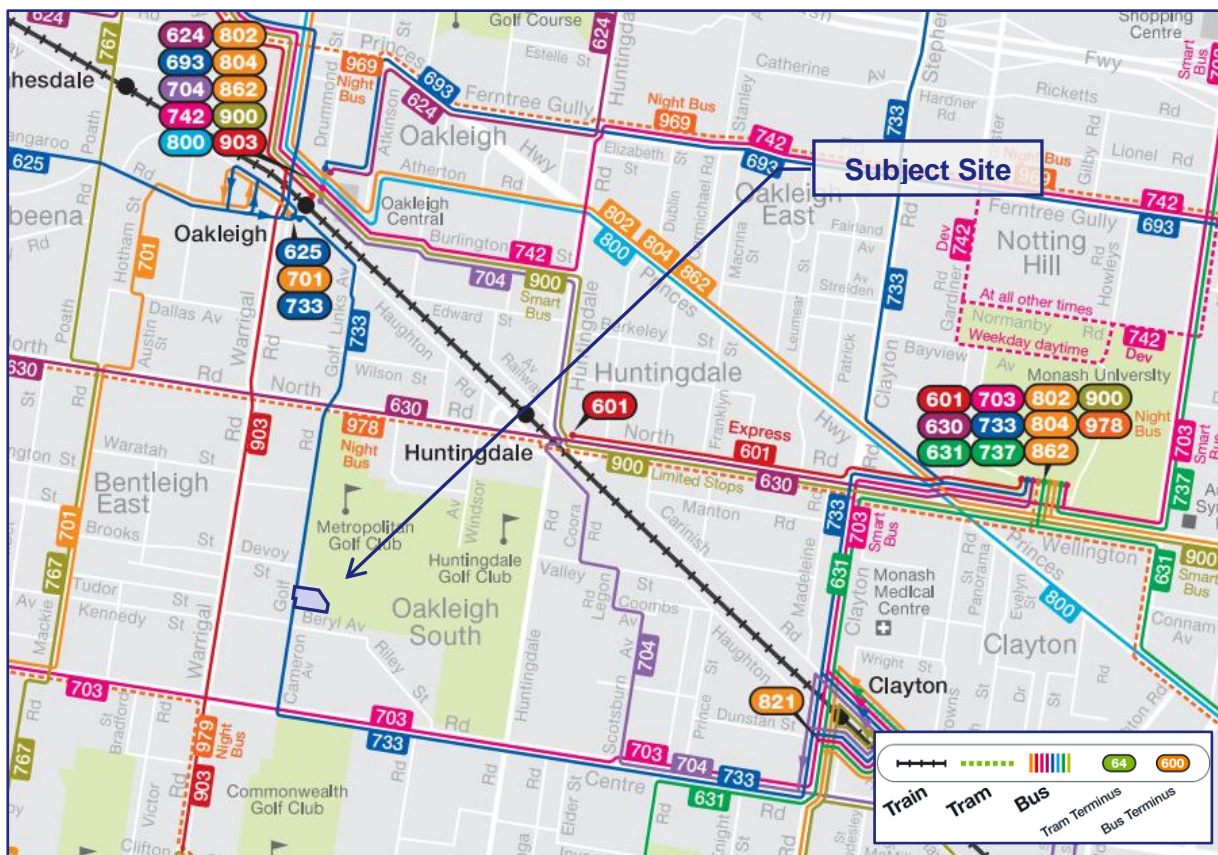


Figure 15: Public Transport Map

Source: ptv.vic.gov.au

## 4. Traffic Engineering Assessment

### 4.1. Statutory Car Parking Assessment

The proposed development falls under the land-use category of 'dwelling' under Clause 73.03 of the Planning Scheme.

The Planning Scheme sets out the parking requirements for new developments under Clause 52.06.

The purpose of Clause 52.06 is:

- *To ensure that car parking is provided in accordance with the Municipal Planning Strategy and the Planning Policy Framework.*
- *To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.*
- *To support sustainable transport alternatives to the motor car.*
- *To promote the efficient use of car parking spaces through the consolidation of car parking facilities.*
- *To ensure that car parking does not adversely affect the amenity of the locality.*
- *To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.*

The site is located within the Principal Public Transport Network and accordingly, Column B rates apply to the site.

The assessment of car parking requirements associated with the proposed development is set out in Table 5.

Table 5: Statutory Car Parking Assessment – Clause 52.06

| Proposed Use            | No.          | Statutory Parking Rate (Column B)           | Car Parking Requirement <sup>(Note 1)</sup> | Car Parking Provision | Shortfall (-) /Surplus (+) |
|-------------------------|--------------|---|---|-----------------------|----------------------------|
| Two-bedroom Townhouse   | 20           | 1 space per one or two bedroom dwelling     | 20  | 20                    | -                          |
| Three-bedroom Townhouse | 24           | 2 spaces per three or more bedroom dwelling | 48  | 48                    | -                          |
| Four-bedroom Townhouse  | 42           |   | 84  | 84                    | -                          |
| Residential Visitors    | 86 dwellings | No requirement                              | 0   | 12                    | +12                        |
| <b>TOTAL</b>            |              |   | <b>152</b>                                  | <b>164</b>            | <b>+12</b>                 |

Note 1: Clause 52.06-5 specifies that where a car parking calculation results in a requirement that is not a whole number, the number of spaces should be rounded down to the nearest whole number.

The development has a statutory car parking requirement under Clause 52.06-05 for 152 car spaces. No visitor car parking is required.

The provision of 164 car spaces, including 152 spaces for residents and 12 spaces for visitors results in a surplus of 12 visitor car spaces. Accordingly, a car parking reduction is not required for the development under Clause 52.06-7.

### **Other Considerations – Availability of Alternative Car Parking**

Whilst there is no requirement under Clause 52.06-5 (Column B) for visitor car parking to be provided on the site, there is likely to be some level of visitor car parking generated by the development.

Some visitor car parking will be accommodated on the site within the 12 spaces. Any overflow demands above the provision of 12 will be accommodated on-street. The reliance on off-site car parking areas for visitors of the development is consistent with the approach to residential developments in PPTN areas. In addition to on-site car parking, the site also has access to a total of 19 on-street car spaces along the site's combined frontages.

Accordingly, the development has access to a total of 31 spaces either on-site or along the site's frontage.

## 4.2. Bicycle Parking Assessment

Clause 52.34 of the Planning Scheme specifies bicycle parking requirements for new developments and changes in use. Residential developments do not have a statutory bicycle parking requirement in buildings of less than four storeys in height.

Accordingly, as the development has a maximum building height of three-storeys, no bicycle parking is required for the development.

Notwithstanding this, the development has provided a total of 24 bicycle spaces across the site for visitors.

We are satisfied that residents could also store bicycles informally within garages or storage area or choose to install an above-bonnet style bicycle rack above their individual garages, as required.

The space allowed for bicycle parking on the plans satisfies the specifications of the 'Bicycle Victoria Bicycle Parking Handbook' and AS2890.3-2015 and is satisfactory.

Based on the above, we are satisfied with the provision of bicycle parking in this development.

## 4.3. Review of Car Parking Layout and Access Arrangements

Traffic Group has provided design advice to the project architect to achieve a satisfactory carpark layout. The proposed parking layout has been assessed under the following guidelines:

- Clause 52.06-9 of the Planning Scheme (Design Standards for car parking),
- Clause 55.03-9 & 10 (Standards B14 and B15) of the Planning Scheme, and
- AS2890.1-2004 – Part 1: Off-Street Car Parking, where relevant.

The key elements of the design include:

### **Clause 55.03-9 (Standard B14) & Clause 55.03-10 (Standard B15)**

- The width of the accessways do not exceed 33% of the site's frontages to Golf Road, Beryl Avenue and Bakers Road in accordance with Standard B14 (Clause 55.03-9).
- Standard B15 of Clause 55.03-10 requires that shared accessways or carparks of other dwellings and residential buildings should be located at least 1.5m from the windows of habitable rooms. This requirement is satisfied.

### **Clause 52.06-9 Design Standard 1 – Accessways**

- Vehicle access to the site is provided via a 5.8m wide crossover between kerbs to Golf Road in accordance with Clause 52.06-9 (Design Standard 1) and AS2890.1-2004 for a two-lane, two-way accessway.
- Internal accessways are generally 5.5m wide between kerbs in accordance with Clause 52.06-9 (Design Standard 1) and AS2890.1-2004 for a two-lane, two-way accessway.

The accessway narrows to 3.6m on either side of the central communal open space. This width is in accordance with Clause 52.06-9 (Design Standard 1) and AS2890.1-2004 for a one-lane, two-way accessway

- All vehicles will be able to enter and exit the site in a forwards direction in accordance with Clause 52.06-9 (Design Standard 1).

- Pedestrian sight triangles are provided on both sides of the accessway in accordance with Clause 52.06-9.

### **Clause 52.06-9 Design Standard 2 – Car Parking Spaces**

- Garages are provided in accordance with the minimum requirements of Clause 52.06-9, specifically:
  - Single garages are provided with dimensions of at least 6m long x 3.5m wide,
  - Single tandem garages are provided with dimensions of 10.9m long x 3.5m wide when measured inside the garage, meeting the Planning Scheme requirements. In some cases, the rear tandem space is provided at 3.2m wide rather than 3.5m. We are satisfied that this is acceptable, as this width satisfies Diagram 1 of Clause 52.06-9 (Design Standard 2) and allows for the opening of car doors.
  - Double garages are provided with dimensions of at least 6m long x 5.5m wide.
  - Tandem car spaces are provided at 5.4m long and 3.2m wide. This width accommodates
- Tandem spaces are provided with additional 0.5m in length between each space in accordance with Clause 52.06-9.
- Visitor car spaces are provided in accordance with the minimum requirements of Clause 52.06-9, specifically:
  - Parallel car spaces are provided at 2.3m wide x 6.7m long with a minimum 3.6m accessway, and
  - 90° car spaces are provided at 2.8m wide x 4.9m long with a minimum 5.8m accessway.
- Access to and from the critical car spaces have been checked for access by the B85 design car (specified at Appendix B of AS2890.1-2004) and found to be acceptable. Some car spaces may require an additional manoeuvre to access. However, this is expressly permitted by AS2890.1-2004 for long term parking (i.e. resident parking) and is acceptable. A copy of the swept path diagrams demonstrating access to a number of typical car spaces are attached at Appendix D.

### **Clause 52.06-9 Design Standard 3 – Gradients**

- Accessway grades across the site are naturally flat and accord with Clause 52.06-9, including maximum grades and transitions.

Based on the above, we are satisfied that the layout of the proposed parking spaces as detailed in the plans at Appendix A is satisfactory and that the access arrangements for the development are acceptable and accord with requirements of Clause 55.03-9/10, Clause 52.06-9 and AS2890.6-2009, where relevant.

## Other Considerations

Whilst no subdivision has been applied for at this stage, we have used Clause 56.06 as a guide given the nature of the development.

Clause 52.06-9 specifies that before deciding on an application, the Responsible Authority must also consider:

*The relevant standards of Clauses 56.06-2, 56.06-4, 56.06-5, 56.06-7 and 56.06-8 for residential developments with accessways longer than 60m or serving 16 or more dwellings.*

A response to each of these requirements is set out in the following table.

| Planning Scheme Requirement  | Development Response  |
|--|---|
| <p>Clause 56.06-2 – Walking and Cycling Network Objectives<br/>                     Clause 56.06-5 – Walking and Cycling Network Detail Objectives</p>     | <p>The site has three street frontages and accordingly, the dwellings located around the east, south and west boundaries of the site have direct access to a footpath.<br/>                     The dwellings located within the centre of the site have access to footpaths which extend in a north-south direction through the site. The dwellings located along the north boundary of the site also have access to the footpaths which extend in a north-south direction through the site.<br/>                     Further, the internal access road will function as a low speed ‘shared zone’ and will be able to facilitate bicycle, pedestrian and vehicle movements within the site.<br/>                     Connections to the broader pedestrian and bicycle networks will be facilitated via the existing infrastructure on Golf Road and Beryl Avenue.<br/>                     Accordingly, we are satisfied that the development plans meets the objectives and standards of Clause 56.06-2 in regards to pedestrian and bicycle access.</p>  |
| <p>Clause 56.06-4 – Neighbourhood and Street Network Objective<br/>                     Clause 56.06-7 – Neighbourhood Street Network Detail Objective</p> | <p>The proposed internal access road has a minimum carriageway width of 5.5m, which is akin to an ‘Access Street – Level 1’ under Clause 56.06-8 of the Planning Scheme. This road width is appropriate and will allow two-way traffic throughout the site. The accessway reduces to a width of 3.6m in two locations which accords with the minimum carriageway width requirement as specified in Clause 52.06 of the Planning Scheme. This width only allows for one direction of traffic at a time.<br/>                     While the ‘verge’ requirements of Clause 56.06-8 are not met, the proposed road network within the site will be private roads under the control of the Owners’ Corporation and will not be public ‘Council’ roads. Accordingly, these requirements are not applicable.<br/>                     Furthermore, we understand that the proposed ‘road reservation’ widths are adequate to meet the servicing needs of the development.<br/>                     We are satisfied that the development meets the objectives of the Planning Scheme in regards to neighbourhood street network objectives.</p> |

| Planning Scheme Requirement           | Development Response  |
|---------------------------------------|---|
| Clause 56.06-8 – Lot Access Objective | Vehicle access to each garage and visitor spaces has been reviewed and is satisfactory. |

Based on the above, we are satisfied the proposed layout of car spaces is satisfactory and that the access arrangements for the site will provide for safe and efficient movements to and from the surrounding road network.

## 4.4. Traffic Impacts

### 4.4.1. Traffic Generation

The RTA Guide to Traffic Generating Developments (2002) (RTA Guide) sets out traffic generation rates based on survey data collected in New South Wales for a range of land uses. This guide is referred to in the AustRoads Guide which is used by VicRoads and is generally regarded as the standard for metropolitan development characteristics.

The RTA Guide sets out the following relevant traffic generation rates for medium density residential development:

#### Smaller Units (one and two bedrooms)

- Daily vehicle trips = 4 – 5 per dwelling per day
- Weekday peak hour vehicle trips = 0.4 – 0.5 per dwelling per day

#### Larger Units (three or more bedrooms)

- Daily vehicle trips = 5 – 6.5 per dwelling per day
- Weekday peak hour vehicle trips = 0.5 – 0.65 per dwelling per day

For the purpose of providing a conservative analysis, we have applied a rate of 5 vehicle trip-ends per dwelling per day for each of the two-bedroom townhouse and a rate of 6.5 vehicle trip-ends per dwelling per day for each of the three and four bedroom townhouses, with 10% occurring during the road network peak hours.

This equates to a traffic generation rate of 529 vehicle trip-ends per day, with 53 vehicle trip-ends occurring during the road network peak hours. This corresponds to one vehicle entering or exiting the site every minute on average, during the peak hours (and less at other times).

We are satisfied that the level of traffic generated by the proposed development is modest, spread throughout the day and residential in nature and will not have a detrimental impact on the operation or safety of Golf Road, Beryl Avenue and Bakers Road.

### 4.4.2. Traffic Distribution

The following sets out the adopted traffic distribution for the proposed development. This distribution has adopted the following key assumptions:

- 80% of vehicles will exit the site and 20% will enter the site during the AM peak hour, and
- 30% of vehicles will exit the site and 70% will enter the site during the PM peak hour.



Table 4 details the predicted entering and exiting traffic volumes associated with 53 vehicle trip ends for each peak hour, based on the key assumptions listed above.

*Table 6: Expected Development Peak Hour Traffic Volumes*

| Peak Hour | Entry Movements                             | Exit Movements                              |
|-----------|---|---|
| AM        | 11 veh movements<br>(1 car per 5-6 minutes) | 42 veh movements<br>(1 car per 1-2 minutes) |
| PM        | 37 veh movements<br>(1 car per 1-2 minutes) | 16 veh movements<br>(1 car per 3-4 minutes) |

Traffic generated by the development would gain access to the wider road network via Golf Road with the majority of motorists accessing North Road. These traffic volumes are minor in the context of the existing volumes using Warrigal Road in this location.

We are satisfied that the access to Golf Road has been appropriately designed and the increase in traffic will not have a detrimental impact on the traffic conditions in the surrounding road network.

Further, we note that the subject site formerly operated as a primary school, which would have generated more than 53 vehicle trip-ends during the peak hour and accordingly the proposed use is less intense and will generate less impact on the surrounding road network and intersections compared to the former use of the site.

**4.4.3. Traffic Impacts to Local Roads**

Traffic generated by the development would gain access to the wider road network via Golf Road with the majority of motorists accessing North Road. These traffic volumes are minor in the context of the existing volumes using North Road in this location.

We are satisfied that the access to Golf Road has been appropriately designed and the increase in traffic will not have a detrimental impact on the traffic conditions in the surrounding road network.

Further, we note that the subject site formerly operated as a primary school, which would have generated more than 53 vehicle trip-ends during the peak hour and accordingly the proposed use is less intense and will generate less impact on the surrounding road network and intersections compared to the former use of the site.

The site is well placed with respect to routes to the arterial road network. The following figure details my predicted traffic distribution through the local road network.

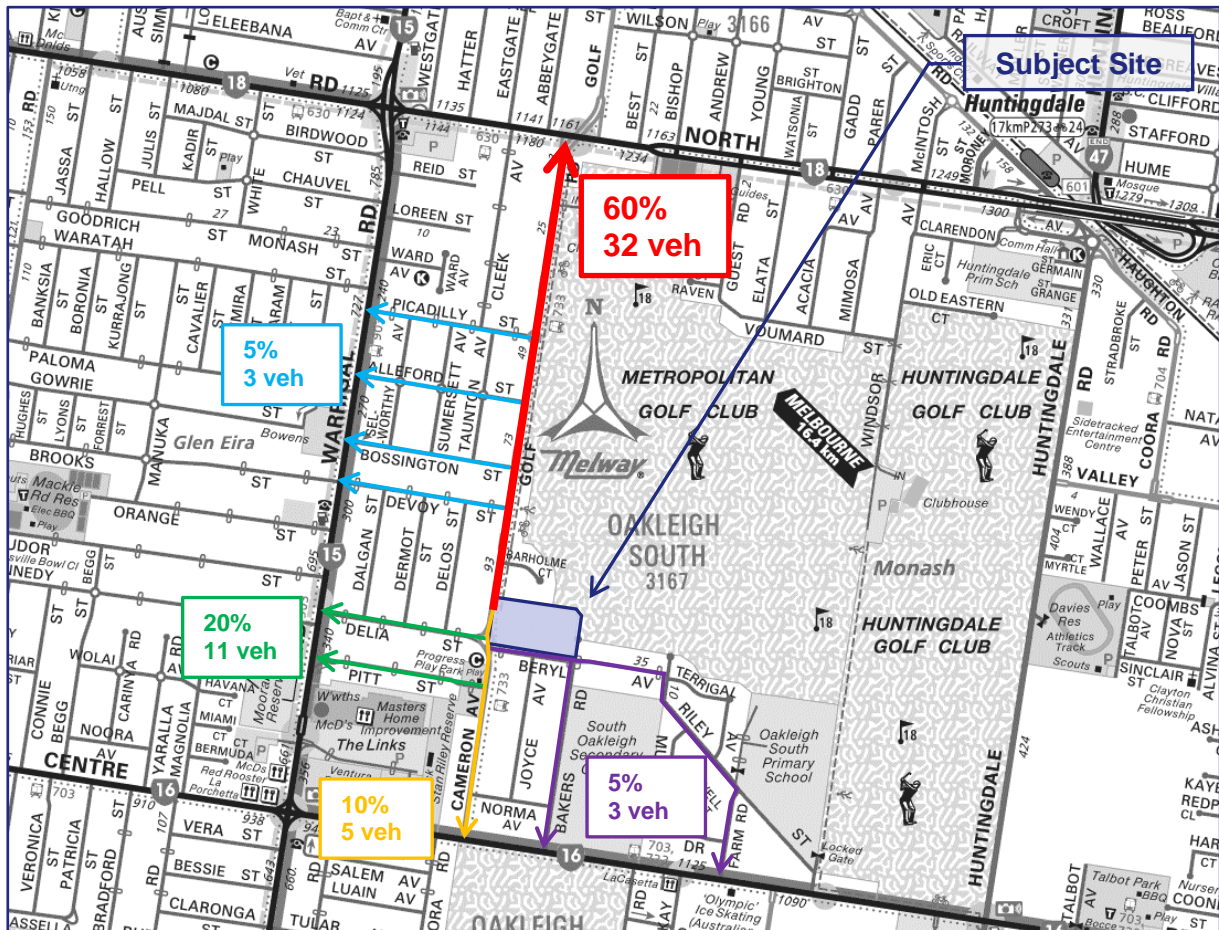


Figure 16: Local Access

### Golf Road

The majority of the traffic generated from the proposed development will access the wider road network via Golf Road, to North Road. Based on the distribution of traffic above, the proposed development is expected to generate a total of 35 vehicle trips per peak hour (343 movements per day) to Golf Road, north of the site access, and 18 vehicle trips per peak hour (186 movements per day), south of the site access.

Under Clause 56.06 of the Planning Scheme, Golf Road to the north of Beryl Avenue would be classified as a Connector Street – Level 2 road, with an indicative maximum traffic volume of up to 7,000 vehicles per day (which is known as the ‘environmental capacity’ of the road).

This section of Golf Road maintains un-interrupted two-way traffic flow, due to no-stopping restrictions and indented car parking removing any parked cars from the main carriageway, consistent with the above classification.

An additional traffic volume of 343 vehicles per day to the north of the site represents 4.9% of the capacity of Golf Road, and 5.9% of the existing weekday volume recorded during the traffic survey undertaken. Further, post development, the environmental capacity of Golf Road will not be exceeded by traffic generated from this site.

We are satisfied that this level of increase to Golf Road is low in the context of the existing volumes on Golf Road and the environmental capacity of Golf Road.

The traffic travelling to the south of the site access will be distributed amongst the local streets to the south of the site access, including Delia Street, Pitt Street, Cameron Avenue, Bakers Road and Beryl Avenue.

### **Beryl Avenue**

Ten dwellings located along the site's southern boundary will have direct vehicle access to Beryl Avenue. The ten dwellings are expected to generate a total of 7 vehicle movements per peak hour, with 65 vehicles trips per day to Beryl Avenue.

Under Clause 56.06 of the Planning Scheme, Beryl Avenue would be classified as an Access Street – Level 2 road, with an indicative maximum traffic volume of up to 2,000-3,000 vehicles per day (which is known as the 'environmental capacity' of the road). Accordingly, an additional traffic volume of 65 vehicles per day along Beryl Avenue represents 3.3% of the lower limit of the capacity of Beryl Avenue, and 2.7% of the existing weekday volume recorded during our survey. The environmental capacity of Beryl Avenue will not be exceeded post-development.

### **Bakers Road**

Two dwellings located along the site's eastern boundary will have direct vehicle access to Bakers Road. Accordingly, the two dwellings are expected to generate a total of 1 vehicle movement per peak hour, with 13 vehicles trips per day to Bakers Road.

This is a negligible impact to this section of Bakers Road.

### **Other Local Access Streets**

Vehicle access to Warrigal Road and Centre Road may also occur via local roads which connect Golf Road to Warrigal Road, and via local roads which connect Beryl Avenue to Centre Road.

These local streets include Cameron Avenue, Delia Street, Pitt Street, Devoy Street, Bossington Street, Alleford Street, Picadilly Street and Riley Street.

We are satisfied that the distribution of traffic to these roads will be such that no one street will be heavily impacted by traffic generated from the development, with 1-6 vehicle movements expected to be generated to the above streets.

Based on the above, we are satisfied that the surrounding road network has adequate capacities to accommodate traffic generated by the site, that the proposed access arrangements are satisfactory and that there will be no detrimental impacts on traffic conditions in the surrounding area as a result of the development.

## **4.5. Waste Collection & Emergency Vehicle Access**

### **Waste Collection**

A Waste Management Plan was prepared by Sustainability House (dated 31<sup>st</sup> January, 2020) which outlines the waste collection arrangements for the proposed development.

Waste bins will be stored by residents within the private garages of each dwelling. Prior to collection, residents shall place their bins outside their townhouse for collection. In the case

of the dwellings with access to the central laneways, bins will be placed in 'niche for bin placement' areas, such that they are not stored on the vehicle accessway.

It is proposed that private collection will occur on the site, via an 8.8m long MRV, for all dwellings with garages that do not front Beryl Avenue.

For all dwellings with garages fronting Beryl Avenue, waste will be collected via Council's existing waste collection service. Residents will be responsible for transferring their bins for collection and removing bins after collection.

Swept path diagrams demonstrating the 8.8m MRV entering the site, circulating to each dwelling and exiting the site in a forwards direction are provided at Appendix C.

We are satisfied the waste collection arrangements are acceptable from a traffic engineering perspective.

### **Emergency Vehicle Access**

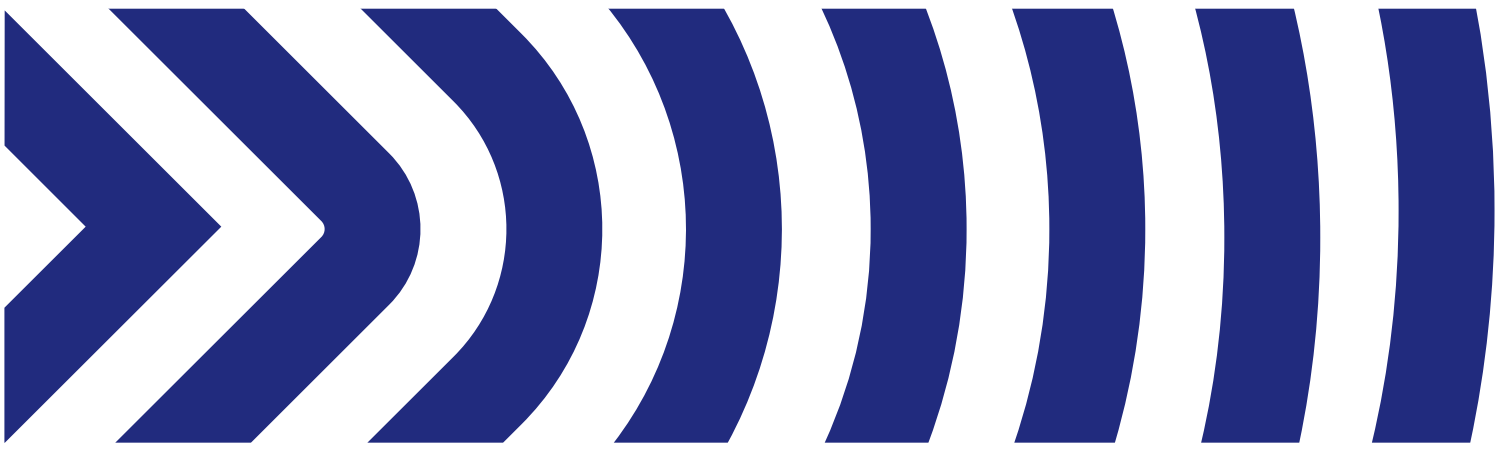
The largest emergency services vehicle which can be reasonably expected to require access to the site is the standard MFB vehicle (Standard Pumper Tanker), which is 8.75m long and has a kerb-kerb turning circle of 19.8m. These dimensions are both lower than the 8.8m service vehicle which has been tested for the internal road network as described above.

Accordingly, we are satisfied that emergency vehicle access to the site is acceptable.

## **5. Conclusion**

Having undertaken a detailed traffic engineering assessment for the proposed residential development at 52 Golf Road, Oakleigh South, we are of the opinion that:

- a) the proposed development has a statutory car parking requirement of 152 car spaces for residents only, under Clause 52.06-5. No visitor car spaces are required for the development,
- b) the provision of 164 car spaces, including 152 resident car spaces and 12 visitor car spaces, exceeds the car parking requirements under Clause 52.06-5 of the Planning Scheme and a car parking reduction is not sought by this application,
- c) bicycle parking is not required under Clause 52.34 of the Planning Scheme. Nonetheless, the provision of 24 bicycle spaces on-site exceeds the bicycle parking requirements generated by this development. Additionally, bicycle parking could be provided within individual garages,
- d) the proposed parking layout and vehicle access arrangements accord with the requirements of the Planning Scheme, AS2890.1:2004 (where relevant) and current practice,
- e) the proposed vehicle access to Golf Road and individual access points to Beryl Avenue and Bakers Road will facilitate safe and convenient access to the site,
- f) waste collection will occur on-site via private contractor, for all dwellings except for those with garages fronting Beryl Avenue, which will be collected via Council's existing waste collection services,
- g) the level of traffic generated as a result of the proposal will be modest, residential in nature, spread throughout the road network and spread throughout the day, and
- h) there are no traffic engineering reasons why a planning permit should not be granted for the proposed residential development at 52 Golf Road, Oakleigh South, subject to appropriate conditions.



# Appendix A

## Development Plans



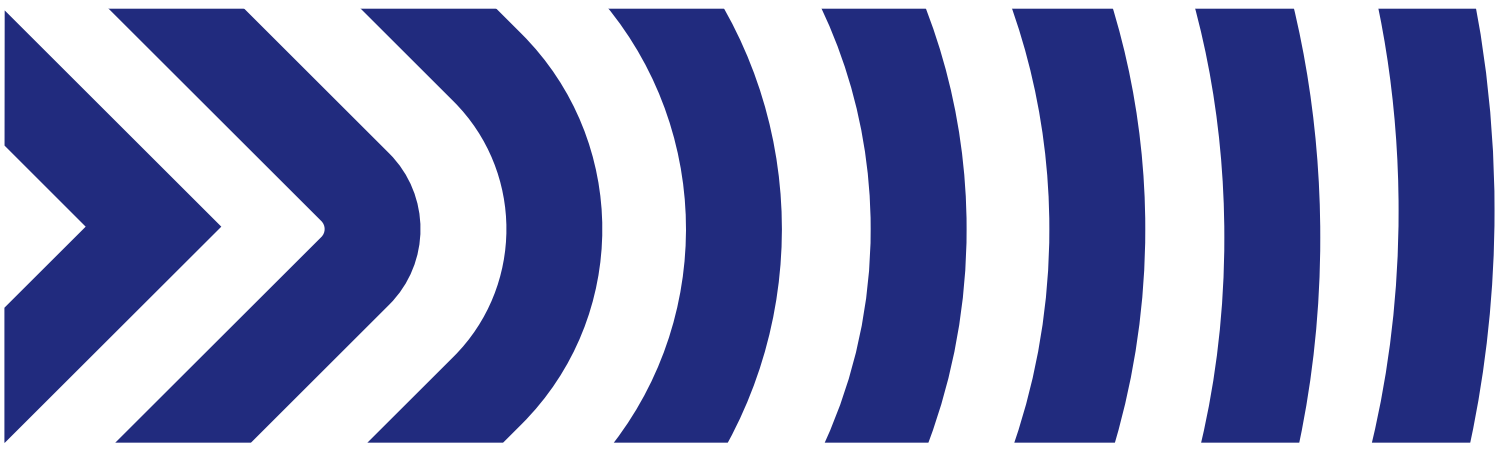
**NOTE:**  
REFER TO LANDSCAPE DRAWINGS FOR NEW TREE LOCATIONS AND LANDSCAPING DETAILS

### LEGEND

- MODERATE TREES TO BE RETAINED
- OTHER EXISTING TREES TO BE RETAINED
- RECOMMENDED BUILDING SETBACK FROM TREE AS PER ARBORIST'S ADVICE
- TH 01
- TH 02
- TH 03
- TH 04
- TH 05
- TH 06
- TH 07

FOR DISCUSSION





# Appendix B

## Traffic Survey Results



# TRANS TRAFFIC SURVEY

trafficsurvey.com.au

T. 1300 82 88 82 - F. 1300 83 88 83 - E. [traffic@trafficsurvey.com.au](mailto:traffic@trafficsurvey.com.au) - W. [www.trafficsurvey.com.au](http://www.trafficsurvey.com.au)

## AUTOMATIC COUNT SUMMARY

|                         |                |                      |  |
|-------------------------|----------------|----------------------|--|
| <b>Street Name :</b>    | Golf Rd        | <b>Location :</b>    | Outside Property 111   |
| <b>Suburb :</b>         | Oakleigh South | <b>Start Date :</b>  | 00:00 Mon 03/February/2020   |
| <b>Metrocount ID</b>    | ME87ZDVF       | <b>Finish Date :</b> | 00:00 Mon 10/February/2020   |
| <b>Site ID Number :</b> | 8836           | <b>Speed Zone :</b>  | 50 km/h  |
| <b>Prepared By :</b>    | Vo Son Binh    | <b>Email:</b>        | <a href="mailto:binh@trafficsurvey.com.au">binh@trafficsurvey.com.au</a> |

| GPS information                        | Lat 37° 55' 11.56 South<br>Long 145° 5' 15.57 East | Direction of Travel |            |            |
|--|--|---------------------|------------|------------|
|  |  | Both directions     | Northbound | Southbound |
| <b>Traffic Volume : (Vehicles/Day)</b> | Weekdays Average                                   | 5,807               | 3,361      | 2,446      |
|  | 7 Day Average                                      | 5,235               | 3,029      | 2,206      |
| <b>Weekday</b>                         | <b>AM</b> 08:00                                    | 822                 | 452        | 370        |
| <b>Peak hour starts</b>                | <b>PM</b> 15:00                                    | 619                 | 353        | 267        |
| <b>Speeds : (Km/Hr)</b>                | 85th Percentile                                    | 47.6                | 49.3       | 45.9       |
|  | Average  | 42.1                | 43.6       | 40.5       |
| <b>Classification % :</b>              | Light Vehicles up to 5.5m                          | 95.7%               | 95.6%      | 95.7%      |

## Location

**GPS Information** [Load Google Map \(internet required\)](#)  
(Latitude, Longitude) -37.919879, 145.087657



[Speed Data](#)   [Speed Graph](#)   [Speed Bin](#)  
[Volume Data](#)   [Volume Graph](#)   [Classification](#)



**QUALITY ASSURED COMPANY BY ISO 9001:2015**

**OH&S SYSTEM CERTIFIED TO ISO 4801:2001**

**ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015**



Site Golf Rd

Direction  ▼

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| Day<br>Date    | Monday       | Tuesday      | Wednesday    | Thursday     | Friday       | Saturday     | Sunday       | 7 days       |             | Weekday      |             | Weekend      |             |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|-------------|--------------|-------------|
|                | 3/02/2020    | 4/02/2020    | 5/02/2020    | 6/02/2020    | 7/02/2020    | 8/02/2020    | 9/02/2020    | Total        | Average     | Total        | Average     | Total        | Average     |
| AM Peak        | 08:00        | 08:00        | 08:00        | 08:00        | 08:00        | 09:00        | 11:00        | N/A          | 08:00       | N/A          | 08:00       | N/A          | 09:00       |
| PM Peak        | 15:00        | 15:00        | 15:00        | 15:00        | 15:00        | 12:00        | 12:00        | N/A          | 15:00       | N/A          | 15:00       | N/A          | 12:00       |
| 00:00          | 6            | 0            | 4            | 7            | 3            | 12           | 16           | 48           | 7           | 20           | 4           | 28           | 14          |
| 01:00          | 3            | 2            | 3            | 1            | 4            | 7            | 6            | 26           | 4           | 13           | 3           | 13           | 7           |
| 02:00          | 2            | 5            | 2            | 4            | 1            | 3            | 3            | 20           | 3           | 14           | 3           | 6            | 3           |
| 03:00          | 3            | 1            | 0            | 0            | 4            | 3            | 3            | 14           | 2           | 8            | 2           | 6            | 3           |
| 04:00          | 3            | 6            | 8            | 6            | 7            | 3            | 3            | 36           | 5           | 30           | 6           | 6            | 3           |
| 05:00          | 20           | 30           | 26           | 28           | 24           | 12           | 10           | 150          | 21          | 128          | 26          | 22           | 11          |
| 06:00          | 70           | 80           | 86           | 81           | 78           | 33           | 15           | 443          | 63          | 395          | 79          | 48           | 24          |
| 07:00          | 314          | 319          | 311          | 315          | 274          | 58           | 42           | 1633         | 233         | 1533         | 307         | 100          | 50          |
| 08:00          | 469          | 445          | 441          | 465          | 440          | 117          | 71           | 2448         | 350         | 2260         | 452         | 188          | 94          |
| 09:00          | 245          | 255          | 261          | 249          | 257          | 277          | 135          | 1679         | 240         | 1267         | 253         | 412          | 206         |
| 10:00          | 139          | 144          | 143          | 143          | 136          | 204          | 142          | 1051         | 150         | 705          | 141         | 346          | 173         |
| 11:00          | 129          | 146          | 150          | 155          | 140          | 215          | 162          | 1097         | 157         | 720          | 144         | 377          | 189         |
| 12:00          | 139          | 146          | 181          | 161          | 188          | 322          | 164          | 1301         | 186         | 815          | 163         | 486          | 243         |
| 13:00          | 144          | 154          | 162          | 172          | 178          | 170          | 163          | 1143         | 163         | 810          | 162         | 333          | 167         |
| 14:00          | 167          | 170          | 171          | 157          | 198          | 222          | 139          | 1224         | 175         | 863          | 173         | 361          | 181         |
| 15:00          | 377          | 331          | 363          | 347          | 345          | 204          | 129          | 2096         | 299         | 1763         | 353         | 333          | 167         |
| 16:00          | 251          | 296          | 309          | 255          | 289          | 164          | 145          | 1709         | 244         | 1400         | 280         | 309          | 155         |
| 17:00          | 305          | 289          | 308          | 304          | 276          | 169          | 142          | 1793         | 256         | 1482         | 296         | 311          | 156         |
| 18:00          | 191          | 229          | 207          | 219          | 190          | 130          | 122          | 1288         | 184         | 1036         | 207         | 252          | 126         |
| 19:00          | 115          | 116          | 130          | 147          | 131          | 110          | 71           | 820          | 117         | 639          | 128         | 181          | 91          |
| 20:00          | 89           | 92           | 84           | 80           | 103          | 77           | 65           | 590          | 84          | 448          | 90          | 142          | 71          |
| 21:00          | 46           | 45           | 37           | 60           | 59           | 40           | 31           | 318          | 45          | 247          | 49          | 71           | 36          |
| 22:00          | 24           | 17           | 30           | 20           | 35           | 44           | 22           | 192          | 27          | 126          | 25          | 66           | 33          |
| 23:00          | 15           | 8            | 13           | 16           | 21           | 16           | 10           | 99           | 14          | 73           | 15          | 26           | 13          |
| <b>Total</b>   | <b>3266</b>  | <b>3326</b>  | <b>3430</b>  | <b>3392</b>  | <b>3381</b>  | <b>2612</b>  | <b>1811</b>  | <b>21218</b> | <b>3029</b> | <b>16795</b> | <b>3361</b> | <b>4423</b>  | <b>2216</b> |
| <b>% Heavy</b> | <b>4.75%</b> | <b>4.51%</b> | <b>4.31%</b> | <b>4.22%</b> | <b>4.70%</b> | <b>4.17%</b> | <b>3.20%</b> | <b>4.35%</b> |             | <b>4.50%</b> |             | <b>3.78%</b> |             |



Site Golf Rd

Direction  ▼

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| Day<br>Date        | Monday         | Tuesday        | Wednesday      | Thursday       | Friday         | Saturday       | Sunday         | 7 days       |                | Weekday      |                | Weekend     |                |
|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|--------------|----------------|-------------|----------------|
|                    | 3/02/2020      | 4/02/2020      | 5/02/2020      | 6/02/2020      | 7/02/2020      | 8/02/2020      | 9/02/2020      | Total        | Average        | Total        | Average        | Total       | Average        |
| AM Peak<br>PM Peak | 08:00<br>15:00 | 08:00<br>15:00 | 08:00<br>17:00 | 08:00<br>15:00 | 08:00<br>15:00 | 08:00<br>12:00 | 11:00<br>13:00 | N/A<br>N/A   | 08:00<br>15:00 | N/A<br>N/A   | 08:00<br>15:00 | N/A<br>N/A  | 11:00<br>12:00 |
| 00:00              | 9              | 6              | 2              | 7              | 7              | 16             | 31             | 78           | 11             | 31           | 6              | 47          | 24             |
| 01:00              | 8              | 2              | 3              | 5              | 2              | 10             | 7              | 37           | 5              | 20           | 4              | 17          | 9              |
| 02:00              | 2              | 2              | 2              | 3              | 2              | 4              | 3              | 18           | 3              | 11           | 2              | 7           | 4              |
| 03:00              | 2              | 1              | 2              | 2              | 3              | 5              | 4              | 19           | 3              | 10           | 2              | 9           | 5              |
| 04:00              | 2              | 2              | 2              | 1              | 1              | 2              | 1              | 11           | 2              | 8            | 2              | 3           | 2              |
| 05:00              | 16             | 13             | 16             | 17             | 13             | 3              | 4              | 82           | 12             | 75           | 15             | 7           | 4              |
| 06:00              | 44             | 49             | 53             | 34             | 44             | 14             | 9              | 247          | 35             | 224          | 45             | 23          | 12             |
| 07:00              | 128            | 133            | 139            | 127            | 124            | 36             | 22             | 709          | 101            | 651          | 130            | 58          | 29             |
| 08:00              | 354            | 381            | 361            | 385            | 371            | 185            | 41             | 2078         | 297            | 1852         | 370            | 226         | 113            |
| 09:00              | 125            | 120            | 119            | 123            | 122            | 101            | 74             | 784          | 112            | 609          | 122            | 175         | 88             |
| 10:00              | 91             | 97             | 85             | 97             | 95             | 125            | 96             | 686          | 98             | 465          | 93             | 221         | 111            |
| 11:00              | 84             | 103            | 100            | 109            | 118            | 160            | 112            | 786          | 112            | 514          | 103            | 272         | 136            |
| 12:00              | 115            | 106            | 123            | 94             | 118            | 242            | 117            | 915          | 131            | 556          | 111            | 359         | 180            |
| 13:00              | 92             | 104            | 124            | 111            | 134            | 144            | 127            | 836          | 119            | 565          | 113            | 271         | 136            |
| 14:00              | 140            | 156            | 168            | 136            | 173            | 174            | 118            | 1065         | 152            | 773          | 155            | 292         | 146            |
| 15:00              | 279            | 275            | 255            | 263            | 262            | 109            | 100            | 1543         | 220            | 1334         | 267            | 209         | 105            |
| 16:00              | 186            | 176            | 204            | 208            | 235            | 134            | 93             | 1236         | 177            | 1009         | 202            | 227         | 114            |
| 17:00              | 212            | 248            | 286            | 245            | 244            | 111            | 83             | 1429         | 204            | 1235         | 247            | 194         | 97             |
| 18:00              | 174            | 207            | 185            | 201            | 155            | 101            | 65             | 1088         | 155            | 922          | 184            | 166         | 83             |
| 19:00              | 92             | 99             | 85             | 110            | 131            | 75             | 67             | 659          | 94             | 517          | 103            | 142         | 71             |
| 20:00              | 56             | 65             | 58             | 72             | 77             | 62             | 44             | 434          | 62             | 328          | 66             | 106         | 53             |
| 21:00              | 35             | 52             | 45             | 56             | 61             | 43             | 34             | 326          | 47             | 249          | 50             | 77          | 39             |
| 22:00              | 30             | 38             | 30             | 29             | 45             | 34             | 24             | 230          | 33             | 172          | 34             | 58          | 29             |
| 23:00              | 14             | 17             | 13             | 22             | 33             | 36             | 13             | 148          | 21             | 99           | 20             | 49          | 25             |
| <b>Total</b>       | <b>2290</b>    | <b>2452</b>    | <b>2460</b>    | <b>2457</b>    | <b>2570</b>    | <b>1926</b>    | <b>1289</b>    | <b>15444</b> | <b>2206</b>    | <b>12229</b> | <b>2446</b>    | <b>3215</b> | <b>1615</b>    |
| % Heavy            | 4.45%          | 4.89%          | 4.72%          | 5.21%          | 4.28%          | 3.32%          | 2.33%          | 4.34%        |                | 4.71%        |                | 2.92%       |                |



Site Golf Rd

Direction  ▼

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| Day<br>Date    | Monday       | Tuesday      | Wednesday    | Thursday     | Friday       | Saturday     | Sunday       | 7 days       |             | Weekday      |             | Weekend      |             |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|-------------|--------------|-------------|
|                | 3/02/2020    | 4/02/2020    | 5/02/2020    | 6/02/2020    | 7/02/2020    | 8/02/2020    | 9/02/2020    | Total        | Average     | Total        | Average     | Total        | Average     |
| AM Peak        | 08:00        | 08:00        | 08:00        | 08:00        | 08:00        | 09:00        | 11:00        | N/A          | 08:00       | N/A          | 08:00       | N/A          | 11:00       |
| PM Peak        | 15:00        | 15:00        | 15:00        | 15:00        | 15:00        | 12:00        | 13:00        | N/A          | 15:00       | N/A          | 15:00       | N/A          | 12:00       |
| 00:00          | 15           | 6            | 6            | 14           | 10           | 28           | 47           | 126          | 18          | 51           | 10          | 75           | 38          |
| 01:00          | 11           | 4            | 6            | 6            | 6            | 17           | 13           | 63           | 9           | 33           | 7           | 30           | 15          |
| 02:00          | 4            | 7            | 4            | 7            | 3            | 7            | 6            | 38           | 5           | 25           | 5           | 13           | 7           |
| 03:00          | 5            | 2            | 2            | 2            | 7            | 8            | 7            | 33           | 5           | 18           | 4           | 15           | 8           |
| 04:00          | 5            | 8            | 10           | 7            | 8            | 5            | 4            | 47           | 7           | 38           | 8           | 9            | 5           |
| 05:00          | 36           | 43           | 42           | 45           | 37           | 15           | 14           | 232          | 33          | 203          | 41          | 29           | 15          |
| 06:00          | 114          | 129          | 139          | 115          | 122          | 47           | 24           | 690          | 99          | 619          | 124         | 71           | 36          |
| 07:00          | 442          | 452          | 450          | 442          | 398          | 94           | 64           | 2342         | 335         | 2184         | 437         | 158          | 79          |
| 08:00          | 823          | 826          | 802          | 850          | 811          | 302          | 112          | 4526         | 647         | 4112         | 822         | 414          | 207         |
| 09:00          | 370          | 375          | 380          | 372          | 379          | 378          | 209          | 2463         | 352         | 1876         | 375         | 587          | 294         |
| 10:00          | 230          | 241          | 228          | 240          | 231          | 329          | 238          | 1737         | 248         | 1170         | 234         | 567          | 284         |
| 11:00          | 213          | 249          | 250          | 264          | 258          | 375          | 274          | 1883         | 269         | 1234         | 247         | 649          | 325         |
| 12:00          | 254          | 252          | 304          | 255          | 306          | 564          | 281          | 2216         | 317         | 1371         | 274         | 845          | 423         |
| 13:00          | 236          | 258          | 286          | 283          | 312          | 314          | 290          | 1979         | 283         | 1375         | 275         | 604          | 302         |
| 14:00          | 307          | 326          | 339          | 293          | 371          | 396          | 257          | 2289         | 327         | 1636         | 327         | 653          | 327         |
| 15:00          | 656          | 606          | 618          | 610          | 607          | 313          | 229          | 3639         | 520         | 3097         | 619         | 542          | 271         |
| 16:00          | 437          | 472          | 513          | 463          | 524          | 298          | 238          | 2945         | 421         | 2409         | 482         | 536          | 268         |
| 17:00          | 517          | 537          | 594          | 549          | 520          | 280          | 225          | 3222         | 460         | 2717         | 543         | 505          | 253         |
| 18:00          | 365          | 436          | 392          | 420          | 345          | 231          | 187          | 2376         | 339         | 1958         | 392         | 418          | 209         |
| 19:00          | 207          | 215          | 215          | 257          | 262          | 185          | 138          | 1479         | 211         | 1156         | 231         | 323          | 162         |
| 20:00          | 145          | 157          | 142          | 152          | 180          | 139          | 109          | 1024         | 146         | 776          | 155         | 248          | 124         |
| 21:00          | 81           | 97           | 82           | 116          | 120          | 83           | 65           | 644          | 92          | 496          | 99          | 148          | 74          |
| 22:00          | 54           | 55           | 60           | 49           | 80           | 78           | 46           | 422          | 60          | 298          | 60          | 124          | 62          |
| 23:00          | 29           | 25           | 26           | 38           | 54           | 52           | 23           | 247          | 35          | 172          | 34          | 75           | 38          |
| <b>Total</b>   | <b>5556</b>  | <b>5778</b>  | <b>5890</b>  | <b>5849</b>  | <b>5951</b>  | <b>4538</b>  | <b>3100</b>  | <b>36662</b> | <b>5238</b> | <b>29024</b> | <b>5805</b> | <b>7638</b>  | <b>3826</b> |
| <b>% Heavy</b> | <b>4.63%</b> | <b>4.67%</b> | <b>4.48%</b> | <b>4.63%</b> | <b>4.52%</b> | <b>3.81%</b> | <b>2.84%</b> | <b>4.34%</b> |             | <b>4.59%</b> |             | <b>3.42%</b> |             |

# TRANS TRAFFIC SURVEY

trafficsurvey.com.au

T. 1300 82 88 82 - F. 1300 83 88 83 - E. [traffic@trafficsurvey.com.au](mailto:traffic@trafficsurvey.com.au) - W. [www.trafficsurvey.com.au](http://www.trafficsurvey.com.au)

## AUTOMATIC COUNT SUMMARY

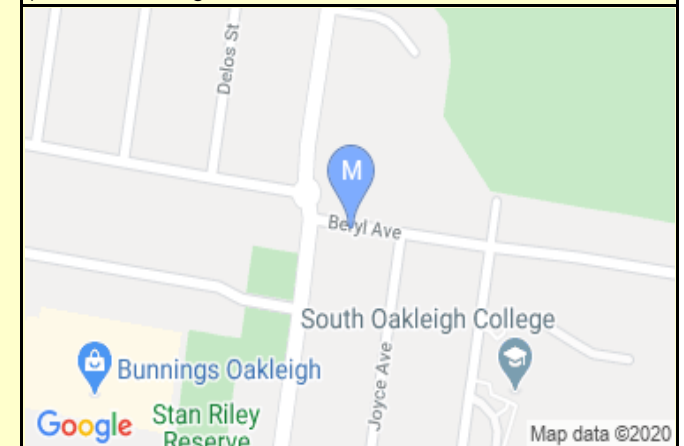
|                         |                |                      |  |
|-------------------------|----------------|----------------------|--|
| <b>Street Name :</b>    | Beryl Ave      | <b>Location :</b>    | Outside Property 4   |
| <b>Suburb :</b>         | Oakleigh South | <b>Start Date :</b>  | 00:00 Mon 03/February/2020   |
| <b>Metrocount ID</b>    | MD722R32       | <b>Finish Date :</b> | 00:00 Mon 10/February/2020   |
| <b>Site ID Number :</b> | 8837           | <b>Speed Zone :</b>  | 50 km/h  |
| <b>Prepared By :</b>    | Vo Son Binh    | <b>Email:</b>        | <a href="mailto:binh@trafficsurvey.com.au">binh@trafficsurvey.com.au</a> |

| GPS information           | Lat 37° 55' 14.78 South<br>Long 145° 5' 17.53 East | Direction of Travel |           |           |
|---------------------------|--|---------------------|-----------|-----------|
|                           |  | Both directions     | Westbound | Eastbound |
| <b>Traffic Volume :</b>   | Weekdays Average                                   | 2,371               | 1,347     | 1,024     |
| <b>(Vehicles/Day)</b>     | 7 Day Average                                      | 2,110               | 1,200     | 910       |
| <b>Weekday AM</b>         | 08:00  | 504                 | 234       | 270       |
| <b>Peak hour start PM</b> | 15:00  | 393                 | 215       | 178       |
| <b>Speeds :</b>           | 85th Percentile                                    | 28.4                | 27.7      | 29.2      |
| <b>(Km/Hr)</b>            | Average  | 24.8                | 24.0      | 25.5      |
| <b>Classification % :</b> | Light Vehicles up to 5.5m                          | 99.2%               | 99.3%     | 99.2%     |

## Location

**GPS Information** [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -37.920773, 145.088204



[Speed Data](#)      [Speed Graph](#)      [Speed Bin](#)  
[Volume Data](#)      [Volume Graph](#)      [Classification](#)



**QUALITY ASSURED COMPANY BY ISO 9001:2015**  
**OH&S SYSTEM CERTIFIED TO ISO 4801:2001**  
**ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015**



Site Beryl Ave

Direction  ▼

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| Day<br>Date        | Monday         | Tuesday        | Wednesday      | Thursday       | Friday         | Saturday       | Sunday         | 7 days       |                | Weekday      |                | Weekend      |                |
|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|
|                    | 3/02/2020      | 4/02/2020      | 5/02/2020      | 6/02/2020      | 7/02/2020      | 8/02/2020      | 9/02/2020      | Total        | Average        | Total        | Average        | Total        | Average        |
| AM Peak<br>PM Peak | 08:00<br>15:00 | 08:00<br>15:00 | 08:00<br>15:00 | 08:00<br>15:00 | 08:00<br>15:00 | 09:00<br>12:00 | 10:00<br>12:00 | N/A<br>N/A   | 08:00<br>15:00 | N/A<br>N/A   | 08:00<br>15:00 | N/A<br>N/A   | 09:00<br>12:00 |
| 00:00              | 3              | 0              | 1              | 4              | 1              | 5              | 13             | 27           | 4              | 9            | 2              | 18           | 9              |
| 01:00              | 0              | 0              | 1              | 1              | 1              | 3              | 2              | 8            | 1              | 3            | 1              | 5            | 3              |
| 02:00              | 0              | 2              | 1              | 1              | 0              | 0              | 0              | 4            | 1              | 4            | 1              | 0            | 0              |
| 03:00              | 1              | 0              | 0              | 0              | 1              | 3              | 2              | 7            | 1              | 2            | 0              | 5            | 3              |
| 04:00              | 1              | 2              | 1              | 0              | 3              | 1              | 0              | 8            | 1              | 7            | 1              | 1            | 1              |
| 05:00              | 8              | 9              | 9              | 8              | 9              | 5              | 4              | 52           | 7              | 43           | 9              | 9            | 5              |
| 06:00              | 19             | 29             | 28             | 28             | 21             | 9              | 4              | 138          | 20             | 125          | 25             | 13           | 7              |
| 07:00              | 67             | 69             | 58             | 77             | 65             | 15             | 16             | 367          | 52             | 336          | 67             | 31           | 16             |
| 08:00              | 226            | 223            | 240            | 230            | 250            | 45             | 26             | 1240         | 177            | 1169         | 234            | 71           | 36             |
| 09:00              | 119            | 110            | 105            | 117            | 138            | 163            | 44             | 796          | 114            | 589          | 118            | 207          | 104            |
| 10:00              | 48             | 61             | 49             | 47             | 59             | 82             | 50             | 396          | 57             | 264          | 53             | 132          | 66             |
| 11:00              | 36             | 52             | 56             | 44             | 46             | 61             | 48             | 343          | 49             | 234          | 47             | 109          | 55             |
| 12:00              | 40             | 45             | 51             | 49             | 47             | 161            | 54             | 447          | 64             | 232          | 46             | 215          | 108            |
| 13:00              | 39             | 44             | 59             | 47             | 41             | 68             | 38             | 336          | 48             | 230          | 46             | 106          | 53             |
| 14:00              | 53             | 42             | 61             | 48             | 55             | 106            | 49             | 414          | 59             | 259          | 52             | 155          | 78             |
| 15:00              | 224            | 188            | 223            | 197            | 244            | 71             | 42             | 1189         | 170            | 1076         | 215            | 113          | 57             |
| 16:00              | 103            | 125            | 120            | 108            | 129            | 63             | 41             | 689          | 98             | 585          | 117            | 104          | 52             |
| 17:00              | 122            | 113            | 99             | 104            | 118            | 67             | 38             | 661          | 94             | 556          | 111            | 105          | 53             |
| 18:00              | 64             | 73             | 71             | 80             | 86             | 45             | 46             | 465          | 66             | 374          | 75             | 91           | 46             |
| 19:00              | 56             | 42             | 62             | 70             | 56             | 43             | 24             | 353          | 50             | 286          | 57             | 67           | 34             |
| 20:00              | 30             | 38             | 37             | 29             | 46             | 35             | 24             | 239          | 34             | 180          | 36             | 59           | 30             |
| 21:00              | 19             | 17             | 12             | 20             | 13             | 17             | 11             | 109          | 16             | 81           | 16             | 28           | 14             |
| 22:00              | 12             | 4              | 15             | 7              | 20             | 15             | 7              | 80           | 11             | 58           | 12             | 22           | 11             |
| 23:00              | 4              | 3              | 3              | 7              | 11             | 10             | 5              | 43           | 6              | 28           | 6              | 15           | 8              |
| <b>Total</b>       | <b>1294</b>    | <b>1291</b>    | <b>1362</b>    | <b>1323</b>    | <b>1460</b>    | <b>1093</b>    | <b>588</b>     | <b>8411</b>  | <b>1200</b>    | <b>6730</b>  | <b>1347</b>    | <b>1681</b>  | <b>849</b>     |
| <b>% Heavy</b>     | <b>0.85%</b>   | <b>0.70%</b>   | <b>0.66%</b>   | <b>0.45%</b>   | <b>1.03%</b>   | <b>0.73%</b>   | <b>0.51%</b>   | <b>0.73%</b> |                | <b>0.74%</b> |                | <b>0.65%</b> |                |



Site Beryl Ave

Direction  ▼

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| Day<br>Date    | Monday       | Tuesday      | Wednesday    | Thursday     | Friday       | Saturday     | Sunday       | 7 days       |            | Weekday      |             | Weekend      |            |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|-------------|--------------|------------|
|                | 3/02/2020    | 4/02/2020    | 5/02/2020    | 6/02/2020    | 7/02/2020    | 8/02/2020    | 9/02/2020    | Total        | Average    | Total        | Average     | Total        | Average    |
| AM Peak        | 08:00        | 08:00        | 08:00        | 08:00        | 08:00        | 08:00        | 11:00        | N/A          | 08:00      | N/A          | 08:00       | N/A          | 08:00      |
| PM Peak        | 15:00        | 15:00        | 15:00        | 15:00        | 15:00        | 12:00        | 12:00        | N/A          | 15:00      | N/A          | 15:00       | N/A          | 12:00      |
| 00:00          | 3            | 0            | 0            | 2            | 2            | 4            | 18           | 29           | 4          | 7            | 1           | 22           | 11         |
| 01:00          | 3            | 3            | 2            | 2            | 0            | 2            | 3            | 15           | 2          | 10           | 2           | 5            | 3          |
| 02:00          | 1            | 1            | 0            | 2            | 2            | 2            | 2            | 10           | 1          | 6            | 1           | 4            | 2          |
| 03:00          | 1            | 0            | 0            | 2            | 1            | 3            | 2            | 9            | 1          | 4            | 1           | 5            | 3          |
| 04:00          | 0            | 0            | 1            | 0            | 0            | 0            | 0            | 1            | 0          | 1            | 0           | 0            | 0          |
| 05:00          | 2            | 3            | 2            | 4            | 4            | 1            | 0            | 16           | 2          | 15           | 3           | 1            | 1          |
| 06:00          | 7            | 6            | 9            | 14           | 10           | 3            | 2            | 51           | 7          | 46           | 9           | 5            | 3          |
| 07:00          | 41           | 45           | 40           | 40           | 40           | 10           | 6            | 222          | 32         | 206          | 41          | 16           | 8          |
| 08:00          | 271          | 279          | 260          | 269          | 271          | 171          | 10           | 1531         | 219        | 1350         | 270         | 181          | 91         |
| 09:00          | 36           | 31           | 27           | 29           | 41           | 60           | 21           | 245          | 35         | 164          | 33          | 81           | 41         |
| 10:00          | 23           | 27           | 21           | 25           | 22           | 35           | 22           | 175          | 25         | 118          | 24          | 57           | 29         |
| 11:00          | 17           | 23           | 21           | 30           | 31           | 65           | 44           | 231          | 33         | 122          | 24          | 109          | 55         |
| 12:00          | 27           | 23           | 46           | 25           | 39           | 115          | 34           | 309          | 44         | 160          | 32          | 149          | 75         |
| 13:00          | 25           | 34           | 39           | 31           | 37           | 56           | 33           | 255          | 36         | 166          | 33          | 89           | 45         |
| 14:00          | 73           | 70           | 70           | 62           | 76           | 101          | 24           | 476          | 68         | 351          | 70          | 125          | 63         |
| 15:00          | 181          | 173          | 154          | 175          | 207          | 40           | 30           | 960          | 137        | 890          | 178         | 70           | 35         |
| 16:00          | 54           | 61           | 67           | 61           | 85           | 44           | 28           | 400          | 57         | 328          | 66          | 72           | 36         |
| 17:00          | 66           | 74           | 110          | 87           | 64           | 53           | 23           | 477          | 68         | 401          | 80          | 76           | 38         |
| 18:00          | 68           | 61           | 59           | 65           | 41           | 26           | 20           | 340          | 49         | 294          | 59          | 46           | 23         |
| 19:00          | 28           | 34           | 40           | 46           | 54           | 21           | 16           | 239          | 34         | 202          | 40          | 37           | 19         |
| 20:00          | 24           | 21           | 19           | 36           | 25           | 23           | 21           | 169          | 24         | 125          | 25          | 44           | 22         |
| 21:00          | 11           | 19           | 11           | 15           | 24           | 18           | 12           | 110          | 16         | 80           | 16          | 30           | 15         |
| 22:00          | 9            | 11           | 5            | 9            | 15           | 12           | 11           | 72           | 10         | 49           | 10          | 23           | 12         |
| 23:00          | 1            | 4            | 5            | 5            | 13           | 11           | 2            | 41           | 6          | 28           | 6           | 13           | 7          |
| <b>Total</b>   | <b>972</b>   | <b>1003</b>  | <b>1008</b>  | <b>1036</b>  | <b>1104</b>  | <b>876</b>   | <b>384</b>   | <b>6383</b>  | <b>910</b> | <b>5123</b>  | <b>1024</b> | <b>1260</b>  | <b>637</b> |
| <b>% Heavy</b> | <b>0.72%</b> | <b>1.20%</b> | <b>0.89%</b> | <b>0.77%</b> | <b>0.82%</b> | <b>0.46%</b> | <b>0.78%</b> | <b>0.81%</b> |            | <b>0.88%</b> |             | <b>0.56%</b> |            |



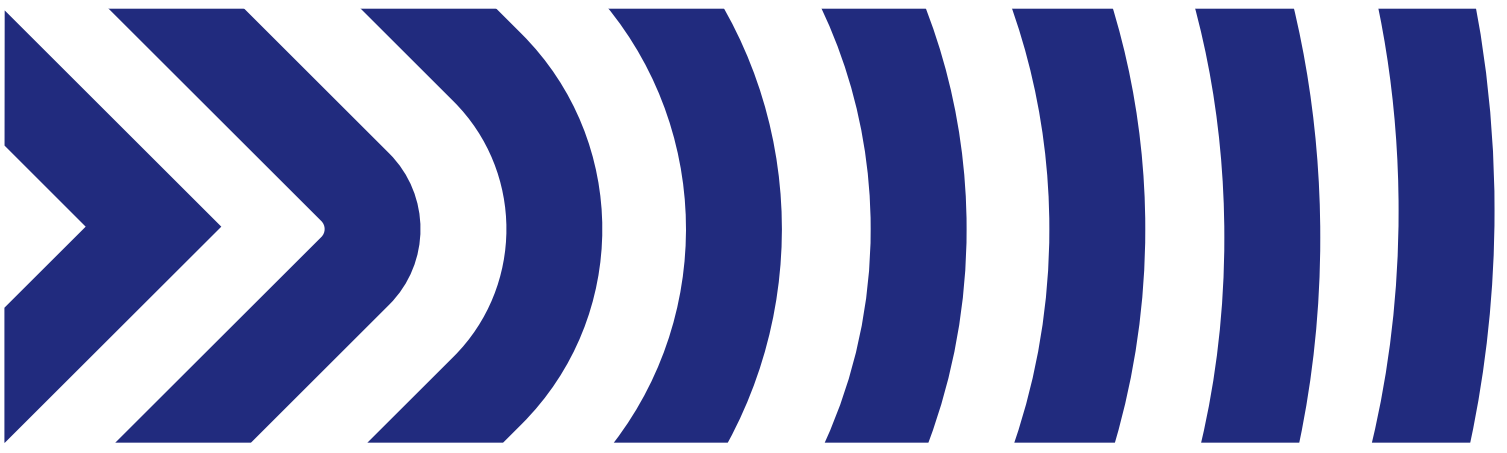
Site Beryl Ave

Direction  ▼

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| Day<br>Date        | Monday         | Tuesday        | Wednesday      | Thursday       | Friday         | Saturday       | Sunday         | 7 days       |                | Weekday      |                | Weekend      |                |
|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|
|                    | 3/02/2020      | 4/02/2020      | 5/02/2020      | 6/02/2020      | 7/02/2020      | 8/02/2020      | 9/02/2020      | Total        | Average        | Total        | Average        | Total        | Average        |
| AM Peak<br>PM Peak | 08:00<br>15:00 | 08:00<br>15:00 | 08:00<br>15:00 | 08:00<br>15:00 | 08:00<br>15:00 | 09:00<br>12:00 | 11:00<br>12:00 | N/A<br>N/A   | 08:00<br>15:00 | N/A<br>N/A   | 08:00<br>15:00 | N/A<br>N/A   | 09:00<br>12:00 |
| 00:00              | 6              | 0              | 1              | 6              | 3              | 9              | 31             | 56           | 8              | 16           | 3              | 40           | 20             |
| 01:00              | 3              | 3              | 3              | 3              | 1              | 5              | 5              | 23           | 3              | 13           | 3              | 10           | 5              |
| 02:00              | 1              | 3              | 1              | 3              | 2              | 2              | 2              | 14           | 2              | 10           | 2              | 4            | 2              |
| 03:00              | 2              | 0              | 0              | 2              | 2              | 6              | 4              | 16           | 2              | 6            | 1              | 10           | 5              |
| 04:00              | 1              | 2              | 2              | 0              | 3              | 1              | 0              | 9            | 1              | 8            | 2              | 1            | 1              |
| 05:00              | 10             | 12             | 11             | 12             | 13             | 6              | 4              | 68           | 10             | 58           | 12             | 10           | 5              |
| 06:00              | 26             | 35             | 37             | 42             | 31             | 12             | 6              | 189          | 27             | 171          | 34             | 18           | 9              |
| 07:00              | 108            | 114            | 98             | 117            | 105            | 25             | 22             | 589          | 84             | 542          | 108            | 47           | 24             |
| 08:00              | 497            | 502            | 500            | 499            | 521            | 216            | 36             | 2771         | 396            | 2519         | 504            | 252          | 126            |
| 09:00              | 155            | 141            | 132            | 146            | 179            | 223            | 65             | 1041         | 149            | 753          | 151            | 288          | 144            |
| 10:00              | 71             | 88             | 70             | 72             | 81             | 117            | 72             | 571          | 82             | 382          | 76             | 189          | 95             |
| 11:00              | 53             | 75             | 77             | 74             | 77             | 126            | 92             | 574          | 82             | 356          | 71             | 218          | 109            |
| 12:00              | 67             | 68             | 97             | 74             | 86             | 276            | 88             | 756          | 108            | 392          | 78             | 364          | 182            |
| 13:00              | 64             | 78             | 98             | 78             | 78             | 124            | 71             | 591          | 84             | 396          | 79             | 195          | 98             |
| 14:00              | 126            | 112            | 131            | 110            | 131            | 207            | 73             | 890          | 127            | 610          | 122            | 280          | 140            |
| 15:00              | 405            | 361            | 377            | 372            | 451            | 111            | 72             | 2149         | 307            | 1966         | 393            | 183          | 92             |
| 16:00              | 157            | 186            | 187            | 169            | 214            | 107            | 69             | 1089         | 156            | 913          | 183            | 176          | 88             |
| 17:00              | 188            | 187            | 209            | 191            | 182            | 120            | 61             | 1138         | 163            | 957          | 191            | 181          | 91             |
| 18:00              | 132            | 134            | 130            | 145            | 127            | 71             | 66             | 805          | 115            | 668          | 134            | 137          | 69             |
| 19:00              | 84             | 76             | 102            | 116            | 110            | 64             | 40             | 592          | 85             | 488          | 98             | 104          | 52             |
| 20:00              | 54             | 59             | 56             | 65             | 71             | 58             | 45             | 408          | 58             | 305          | 61             | 103          | 52             |
| 21:00              | 30             | 36             | 23             | 35             | 37             | 35             | 23             | 219          | 31             | 161          | 32             | 58           | 29             |
| 22:00              | 21             | 15             | 20             | 16             | 35             | 27             | 18             | 152          | 22             | 107          | 21             | 45           | 23             |
| 23:00              | 5              | 7              | 8              | 12             | 24             | 21             | 7              | 84           | 12             | 56           | 11             | 28           | 14             |
| <b>Total</b>       | <b>2266</b>    | <b>2294</b>    | <b>2370</b>    | <b>2359</b>    | <b>2564</b>    | <b>1969</b>    | <b>972</b>     | <b>14794</b> | <b>2114</b>    | <b>11853</b> | <b>2370</b>    | <b>2941</b>  | <b>1475</b>    |
| <b>% Heavy</b>     | <b>0.79%</b>   | <b>0.92%</b>   | <b>0.76%</b>   | <b>0.59%</b>   | <b>0.94%</b>   | <b>0.61%</b>   | <b>0.62%</b>   | <b>0.76%</b> |                | <b>0.80%</b> |                | <b>0.61%</b> |                |





# Appendix C

## Car Parking Survey Results

Supervised By: Yvonne Leow  
 Surveyed By: San Murali

Survey Dates & Times: See below

| Location                                   | Restriction                          | Reduced Parking Area | Capacity Min - Max | Thursday 6th February, 2020 |            |            |            | Saturday 8th February, 2020 |            |            |            | Thurs 13th Feb, 2020 |
|--|--------------------------------------|----------------------|--------------------|-----------------------------|------------|------------|------------|-----------------------------|------------|------------|------------|----------------------|
|  |                                      |                      |                    | 12pm                        | 1pm        | 7pm        | 8pm        | 12pm                        | 1pm        | 7pm        | 8pm        | 3pm                  |
| <b>ON-STREET CARPARKING</b>                |                                      |                      |                    |                             |            |            |            |                             |            |            |            |                      |
| <b>GOLF ROAD</b>                           |                                      |                      |                    |                             |            |            |            |                             |            |            |            |                      |
| <b>East Side</b>                           |                                      |                      |                    |                             |            |            |            |                             |            |            |            |                      |
| No. 28 (NB) to Barholme Court              | Unrestricted (indented)              |                      | 7                  | 0                           | 0          | 1          | 2          | 1                           | 2          | 2          | 2          | 0                    |
|  | No Stopping                          |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
| Barholme Court to No. 52 (WB)              | No Stopping                          |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | Bus Zone                             |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | No Stopping                          |                      | -                  | 0                           | 0          | 0          | 0          | 1                           | 1          | 0          | 0          | 0                    |
| No. 52 (WB) to Beryl Avenue (Subject Site) | No Stopping 7am-5pm Mon-Fri          |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | No Stopping                          |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
| <b>West Side</b>                           |                                      |                      |                    |                             |            |            |            |                             |            |            |            |                      |
| Delia Street to No. 97 (NB)                | No Stopping                          |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | No Stopping 7-9am, 4-6:30pm Mon-Fri  |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | Unrestricted (Indented Parking)      |                      | 1                  | 0                           | 0          | 1          | 1          | 1                           | 1          | 1          | 1          | 1                    |
|  | Bus Zone                             |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | Unrestricted (Indented Parking)      |                      | 2                  | 1                           | 1          | 2          | 2          | 2                           | 2          | 2          | 2          | 2                    |
|  | No Stopping                          |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
| No. 97 (NB) to Deroey Street               | No Stopping                          |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | Bus Zone                             |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | No Stopping                          |                      | -                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
| <b>GOLF ROAD</b>                           | <b>Capacity</b>                      |                      | <b>10 - 10</b>     | <b>10</b>                   | <b>10</b>  | <b>10</b>  | <b>10</b>  | <b>10</b>                   | <b>10</b>  | <b>10</b>  | <b>10</b>  | <b>10</b>            |
|  | <b>Total Number of Cars Parked</b>   |                      |                    | <b>1</b>                    | <b>1</b>   | <b>4</b>   | <b>5</b>   | <b>5</b>                    | <b>6</b>   | <b>5</b>   | <b>5</b>   | <b>3</b>             |
|  | <b>Total Number of Vacant Spaces</b> |                      |                    | <b>9</b>                    | <b>9</b>   | <b>6</b>   | <b>5</b>   | <b>5</b>                    | <b>4</b>   | <b>5</b>   | <b>5</b>   | <b>7</b>             |
|  | <b>Percentage Occupancy</b>          |                      |                    | <b>10%</b>                  | <b>10%</b> | <b>40%</b> | <b>50%</b> | <b>50%</b>                  | <b>60%</b> | <b>50%</b> | <b>50%</b> | <b>30%</b>           |

Supervised By: Yvonne Leow  
 Surveyed By: San Murali

Survey Dates & Times: See below

| Location                    | Restriction                          | Reduced Parking Area | Capacity Min - Max | Thursday 6th February, 2020 |           |           |            | Saturday 8th February, 2020 |           |           |           | Thurs 13th Feb, 2020 |
|-----------------------------|--------------------------------------|----------------------|--------------------|-----------------------------|-----------|-----------|------------|-----------------------------|-----------|-----------|-----------|----------------------|
|                             |                                      |                      |                    | 12pm                        | 1pm       | 7pm       | 8pm        | 12pm                        | 1pm       | 7pm       | 8pm       | 3pm                  |
| <b>CAMERON AVENUE</b>       |                                      |                      |                    |                             |           |           |            |                             |           |           |           |                      |
| <b>East Side</b>            |                                      |                      |                    |                             |           |           |            |                             |           |           |           |                      |
| Beryl Avenue to No. 16 (SB) | No Stopping                          | -                    | 0                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0         | 0                    |
|                             | Bus Zone                             | -                    | 0                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0         | 0                    |
|                             | No Stopping 7-9am & 4-6pm Mon-Fri    | 10                   | 0                  | 0                           | 0         | 1         | 1          | 0                           | 0         | 0         | 0         | 0                    |
| <b>West Side</b>            |                                      |                      |                    |                             |           |           |            |                             |           |           |           |                      |
| No. 17 (NB) to Pitt Street  | Unrestricted                         | 9                    | 1                  | 2                           | 1         | 0         | 1          | 1                           | 0         | 0         | 0         | 1                    |
|                             | No Stopping                          | -                    | 0                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0         | 0                    |
| Pitt Street to Roundabout   | No Stopping                          | -                    | 0                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0         | 0                    |
|                             | Unrestricted                         | 2                    | 0                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0         | 0                    |
|                             | Bus Zone                             | -                    | 0                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0         | 0                    |
|                             | No Stopping                          | -                    | 0                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0         | 0                    |
| <b>CAMERON AVENUE</b>       | <b>Capacity</b>                      | <b>21 - 21</b>       | <b>21</b>          | <b>21</b>                   | <b>21</b> | <b>21</b> | <b>21</b>  | <b>21</b>                   | <b>21</b> | <b>21</b> | <b>21</b> | <b>21</b>            |
|                             | <b>Total Number of Cars Parked</b>   |                      | <b>1</b>           | <b>2</b>                    | <b>1</b>  | <b>1</b>  | <b>2</b>   | <b>1</b>                    | <b>0</b>  | <b>0</b>  | <b>1</b>  |                      |
|                             | <b>Total Number of Vacant Spaces</b> |                      | <b>20</b>          | <b>19</b>                   | <b>20</b> | <b>20</b> | <b>19</b>  | <b>20</b>                   | <b>21</b> | <b>21</b> | <b>20</b> |                      |
|                             | <b>Percentage Occupancy</b>          |                      | <b>5%</b>          | <b>10%</b>                  | <b>5%</b> | <b>5%</b> | <b>10%</b> | <b>5%</b>                   | <b>0%</b> | <b>0%</b> | <b>5%</b> |                      |

Supervised By: Yvonne Leow  
 Surveyed By: San Murali

Survey Dates & Times: See below

| Location   | Restriction                          | Reduced Parking Area | Capacity Min - Max | Thursday 6th February, 2020 |            |            |            | Saturday 8th February, 2020 |            |            |            | Thurs 13th Feb, 2020 |
|--|--------------------------------------|----------------------|--------------------|-----------------------------|------------|------------|------------|-----------------------------|------------|------------|------------|----------------------|
|  |                                      |                      |                    | 12pm                        | 1pm        | 7pm        | 8pm        | 12pm                        | 1pm        | 7pm        | 8pm        | 3pm                  |
| <b>DELIA STREET</b>  |                                      |                      |                    |                             |            |            |            |                             |            |            |            |                      |
| <b>North Side</b>  |                                      |                      |                    |                             |            |            |            |                             |            |            |            |                      |
| Dermot Street to Delos Street  | No Stopping                          | -                    | 0                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | Unrestricted                         | 6                    | 0                  | 0                           | 1          | 1          | 1          | 0                           | 2          | 2          | 0          |                      |
|  | No Stopping                          | -                    | 0                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          |                      |
| Delos Street to Golf Road  | No Stopping                          | -                    | 0                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          |                      |
|  | Unrestricted                         | 6                    | 0                  | 0                           | 1          | 1          | 0          | 0                           | 0          | 0          | 0          |                      |
|  | No Stopping                          | -                    | 0                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          |                      |
| <b>South Side</b>  |                                      |                      |                    |                             |            |            |            |                             |            |            |            |                      |
| Golf Road to No. 32 (WB)   | No Stopping                          | -                    | 0                  | 0                           | 0          | 0          | 0          | 0                           | 0          | 0          | 0          |                      |
|  | Unrestricted                         | 8                    | 0                  | 0                           | 4          | 3          | 0          | 0                           | 1          | 1          | 0          |                      |
| No. 32 (WB) to No. 20 (WB)   | Unrestricted                         | 11                   | 5                  | 6                           | 7          | 7          | 6          | 5                           | 11         | 10         | 5          |                      |
| <b>DELIA STREET</b>  | <b>Capacity</b>                      | <b>19 - 19</b>       | <b>19</b>          | <b>19</b>                   | <b>19</b>  | <b>19</b>  | <b>19</b>  | <b>19</b>                   | <b>19</b>  | <b>19</b>  | <b>19</b>  |                      |
|  | <b>Total Number of Cars Parked</b>   |                      | <b>5</b>           | <b>6</b>                    | <b>13</b>  | <b>12</b>  | <b>7</b>   | <b>5</b>                    | <b>14</b>  | <b>13</b>  | <b>5</b>   |                      |
|  | <b>Total Number of Vacant Spaces</b> |                      | <b>14</b>          | <b>13</b>                   | <b>6</b>   | <b>7</b>   | <b>12</b>  | <b>14</b>                   | <b>5</b>   | <b>6</b>   | <b>14</b>  |                      |
|  | <b>Percentage Occupancy</b>          |                      | <b>26%</b>         | <b>32%</b>                  | <b>68%</b> | <b>63%</b> | <b>37%</b> | <b>26%</b>                  | <b>74%</b> | <b>68%</b> | <b>26%</b> |                      |
| <b>Note:</b> Due to width of carriageway, parking can only be legally accommodated on one side of the road. Accordingly, we have only considered the capacity on one side. |                                      |                      |                    |                             |            |            |            |                             |            |            |            |                      |

Supervised By: Yvonne Leow  
 Surveyed By: San Murali

Survey Dates & Times: See below

| Location   | Restriction             | Reduced Parking Area | Capacity Min - Max | Thursday 6th February, 2020 |           |           |            | Saturday 8th February, 2020 |           |           |            | Thurs 13th Feb, 2020 |
|--|-------------------------|----------------------|--------------------|-----------------------------|-----------|-----------|------------|-----------------------------|-----------|-----------|------------|----------------------|
|  |                         |                      |                    | 12pm                        | 1pm       | 7pm       | 8pm        | 12pm                        | 1pm       | 7pm       | 8pm        | 3pm                  |
| <b>BERYL AVENUE</b>  |                         |                      |                    |                             |           |           |            |                             |           |           |            |                      |
| <b>North Side</b>  |                         |                      |                    |                             |           |           |            |                             |           |           |            |                      |
| Cameron Avenue to Bakers Road (Subject Site)   | Unrestricted            |                      | 23                 | 0                           | 0         | 0         | 0          | 2                           | 0         | 0         | 0          | 0                    |
|  | Unrestricted (indented) |                      | 2                  | 0                           | 0         | 0         | 0          | 2                           | 0         | 0         | 0          | 1                    |
|  | No Stopping             |                      | -                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0          | 0                    |
| Bakers Road to Riley Street  | No Stopping             |                      | -                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0          | 0                    |
|  | Unrestricted            |                      | 21                 | 1                           | 0         | 1         | 1          | 8                           | 2         | 1         | 1          | 3                    |
|  | No Stopping             |                      | -                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0          | 0                    |
| <b>West Side</b>   |                         |                      |                    |                             |           |           |            |                             |           |           |            |                      |
| Riley Street to Bakers Road  | No Stopping             |                      | -                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0          | 0                    |
|  | Unrestricted            |                      | 19                 | 0                           | 0         | 0         | 0          | 6                           | 1         | 1         | 1          | 3                    |
|  | No Stopping             |                      | -                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0          | 0                    |
| Bakers Road to Joyce Avenue  | No Stopping             |                      | -                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0          | 0                    |
|  | Unrestricted            |                      | 4                  | 0                           | 0         | 0         | 0          | 7                           | 2         | 0         | 0          | 0                    |
|  | No Stopping             |                      | -                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0          | 0                    |
| Joyce Avenue to Cameron Avenue   | No Stopping             |                      | -                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0          | 0                    |
|  | Unrestricted            |                      | 5                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0          | 0                    |
|  | No Stopping             |                      | -                  | 0                           | 0         | 0         | 0          | 0                           | 0         | 0         | 0          | 0                    |
| <b>Capacity</b>  |                         |                      | <b>46 - 46</b>     | <b>46</b>                   | <b>46</b> | <b>46</b> | <b>46</b>  | <b>46</b>                   | <b>46</b> | <b>46</b> | <b>46</b>  | <b>46</b>            |
| <b>Total Number of Cars Parked</b>   |                         |                      | <b>1</b>           | <b>0</b>                    | <b>1</b>  | <b>1</b>  | <b>25</b>  | <b>5</b>                    | <b>2</b>  | <b>2</b>  | <b>7</b>   |                      |
| <b>Total Number of Vacant Spaces</b>   |                         |                      | <b>45</b>          | <b>46</b>                   | <b>45</b> | <b>45</b> | <b>21</b>  | <b>41</b>                   | <b>44</b> | <b>44</b> | <b>39</b>  |                      |
| <b>Percentage Occupancy</b>  |                         |                      | <b>2%</b>          | <b>0%</b>                   | <b>2%</b> | <b>2%</b> | <b>54%</b> | <b>11%</b>                  | <b>4%</b> | <b>4%</b> | <b>15%</b> |                      |
| <b>Note:</b> Due to width of carriageway, parking can only be legally accommodated on one side of the road. Accordingly, we have only considered the capacity on one side. |                         |                      |                    |                             |           |           |            |                             |           |           |            |                      |

Supervised By: Yvonne Leow  
 Surveyed By: San Murali

Survey Dates & Times: See below

| Location   | Restriction                           | Reduced Parking Area | Capacity Min - Max | Thursday 6th February, 2020 |           |            |            | Saturday 8th February, 2020 |            |            |            | Thurs 13th Feb, 2020 |
|--|---------------------------------------|----------------------|--------------------|-----------------------------|-----------|------------|------------|-----------------------------|------------|------------|------------|----------------------|
|  |                                       |                      |                    | 12pm                        | 1pm       | 7pm        | 8pm        | 12pm                        | 1pm        | 7pm        | 8pm        | 3pm                  |
| <b>BAKERS ROAD</b>   |                                       |                      |                    |                             |           |            |            |                             |            |            |            |                      |
| <b>East Side</b>   |                                       |                      |                    |                             |           |            |            |                             |            |            |            |                      |
| END to Beryl Avenue  | Unrestricted                          |                      | 2                  | 0                           | 0         | 1          | 1          | 2                           | 1          | 1          | 1          | 3                    |
|  | No Stopping                           |                      | -                  | 0                           | 0         | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
| Beryl Avenue to opposite No. 17 (NB)   | No Stopping                           |                      | -                  | 0                           | 0         | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | Permit Zone                           |                      | 4                  | 0                           | 0         | 0          | 0          | 2                           | 0          | 0          | 0          | 0                    |
|  | P 2minute 8am-9am & 3-4pm School Days |                      | 6                  | 0                           | 0         | 0          | 0          | 5                           | 4          | 0          | 0          | 5                    |
|  | Bus Zone                              |                      | -                  | 0                           | 0         | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
|  | No stopping                           |                      | -                  | 0                           | 0         | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
| <b>West Side</b>   |                                       |                      |                    |                             |           |            |            |                             |            |            |            |                      |
| No. 17 (NB) to Beryl Avenue  | Permit zone                           |                      | 15                 | 3                           | 3         | 1          | 1          | 12                          | 8          | 5          | 4          | 11                   |
|  | No Stopping                           |                      | -                  | 0                           | 0         | 0          | 0          | 0                           | 0          | 0          | 0          | 0                    |
| Beryl Avenue to END (Subject Site)   | Unrestricted                          |                      | 3                  | 1                           | 0         | 0          | 0          | 4                           | 0          | 0          | 0          | 1                    |
| <b>BAKERS ROAD</b>   | <b>Capacity</b>                       |                      | <b>9 - 9</b>       | <b>9</b>                    | <b>9</b>  | <b>9</b>   | <b>9</b>   | <b>9</b>                    | <b>9</b>   | <b>9</b>   | <b>9</b>   | <b>9</b>             |
|  | <b>Total Number of Cars Parked</b>    |                      |                    | <b>1</b>                    | <b>0</b>  | <b>1</b>   | <b>1</b>   | <b>11</b>                   | <b>5</b>   | <b>1</b>   | <b>1</b>   | <b>9</b>             |
|  | <b>Total Number of Vacant Spaces</b>  |                      |                    | <b>8</b>                    | <b>9</b>  | <b>8</b>   | <b>8</b>   | <b>-2</b>                   | <b>4</b>   | <b>8</b>   | <b>8</b>   | <b>0</b>             |
|  | <b>Percentage Occupancy</b>           |                      |                    | <b>11%</b>                  | <b>0%</b> | <b>11%</b> | <b>11%</b> | <b>122%</b>                 | <b>56%</b> | <b>11%</b> | <b>11%</b> | <b>100%</b>          |
| <b>Note:</b> Due to width of carriageway, parking can only be legally accommodated on one side of the road. Accordingly, we have only considered the capacity on one side. |                                       |                      |                    |                             |           |            |            |                             |            |            |            |                      |

Supervised By: Yvonne Leow  
 Surveyed By: San Murali

Survey Dates & Times: See below

| Location                    | Restriction                   | Reduced Parking Area | Capacity Min - Max | Thursday 6th February, 2020 |     |     |     | Saturday 8th February, 2020 |     |     |     | Thurs 13th Feb, 2020 |
|-----------------------------|-------------------------------|----------------------|--------------------|-----------------------------|-----|-----|-----|-----------------------------|-----|-----|-----|----------------------|
|                             |                               |                      |                    | 12pm                        | 1pm | 7pm | 8pm | 12pm                        | 1pm | 7pm | 8pm | 3pm                  |
| <b>JOYCE AVENUE</b>         |                               |                      |                    |                             |     |     |     |                             |     |     |     |                      |
| <b>West Side</b>            |                               |                      |                    |                             |     |     |     |                             |     |     |     |                      |
| No. 15 (SB) to Beryl Avenue | Unrestricted                  |                      | 17                 | 3                           | 3   | 4   | 3   | 5                           | 3   | 2   | 1   | 4                    |
|                             | No Stopping                   |                      | -                  | 0                           | 0   | 0   | 0   | 0                           | 0   | 0   | 0   | 0                    |
| <b>East Side</b>            |                               |                      |                    |                             |     |     |     |                             |     |     |     |                      |
| Beryl Avenue to No. 16 (SB) | No Stopping                   |                      | -                  | 0                           | 0   | 0   | 0   | 0                           | 0   | 0   | 0   | 0                    |
|                             | Unrestricted                  |                      | 16                 | 2                           | 2   | 3   | 3   | 8                           | 3   | 2   | 2   | 6                    |
| JOYCE AVENUE                | Capacity                      |                      | 17 - 17            | 17                          | 17  | 17  | 17  | 17                          | 17  | 17  | 17  | 17                   |
|                             | Total Number of Cars Parked   |                      |                    | 5                           | 5   | 7   | 6   | 13                          | 6   | 4   | 3   | 10                   |
|                             | Total Number of Vacant Spaces |                      |                    | 12                          | 12  | 10  | 11  | 4                           | 11  | 13  | 14  | 7                    |
|                             | Percentage Occupancy          |                      |                    | 29%                         | 29% | 41% | 35% | 76%                         | 35% | 24% | 18% | 59%                  |

Note: Due to width of carriageway, parking can only be legally accommodated on one side of the road. Accordingly, we have only considered the capacity on one side.

**SUMMARY => ON-STREET CARPARKING**

|                               |           |     |     |     |     |     |     |     |     |     |     |
|-------------------------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Car Parking Supply            | 122 - 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 | 122 |
| Total Number of Cars Parked   |           | 14  | 14  | 27  | 26  | 63  | 28  | 26  | 24  | 35  |     |
| Total Number of Vacant Spaces |           | 108 | 108 | 95  | 96  | 59  | 94  | 96  | 98  | 87  |     |
| Percentage Occupancy          |           | 11% | 11% | 22% | 21% | 52% | 23% | 21% | 20% | 29% |     |

**SUMMARY => ON-STREET CARPARKING (REDUCED AREA)**

|                               |         |    |    |    |    |     |     |    |    |     |
|-------------------------------|---------|----|----|----|----|-----|-----|----|----|-----|
| Car Parking Supply            | 28 - 28 | 28 | 28 | 28 | 28 | 28  | 28  | 28 | 28 | 28  |
| Total Number of Cars Parked   |         | 1  | 0  | 1  | 1  | 17  | 3   | 1  | 1  | 5   |
| Total Number of Vacant Spaces |         | 27 | 28 | 27 | 27 | 11  | 25  | 27 | 27 | 23  |
| Percentage Occupancy          |         | 4% | 0% | 4% | 4% | 61% | 11% | 4% | 4% | 18% |

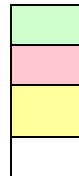
Note: Public parking includes spaces that are available to the general public and excludes 'No Stopping', 'Loading Zones' and 'No Parking' areas, etc., during the relevant enforcement periods

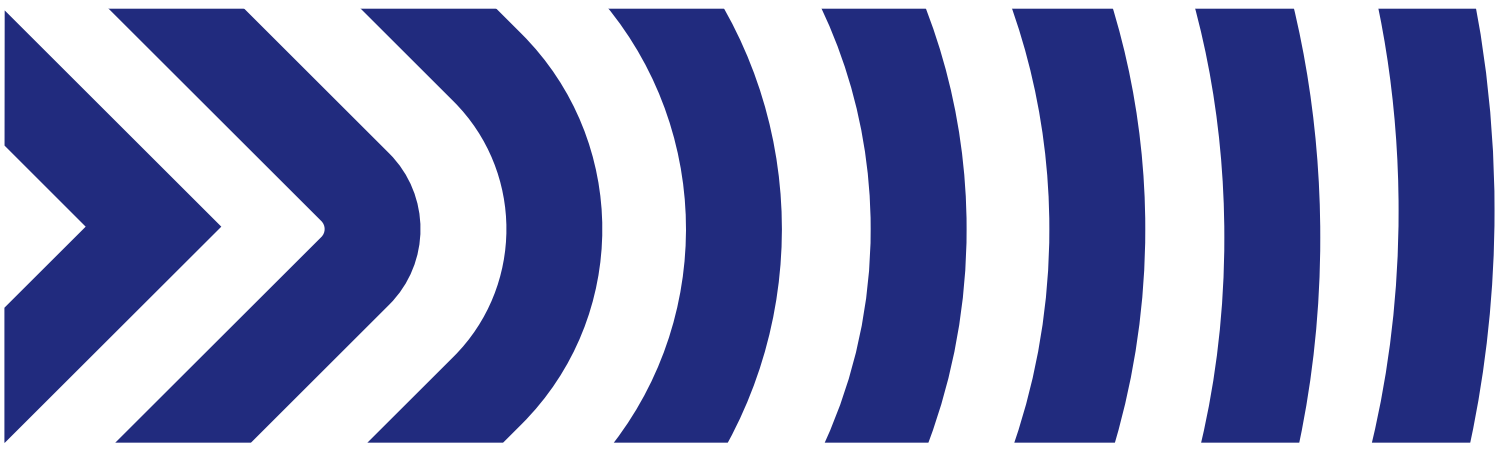
**LEGEND: Public Parking**

Not available to the general public

Illegally parked cars on nature strip included in analysis

No Stopping/  
Other No Parking



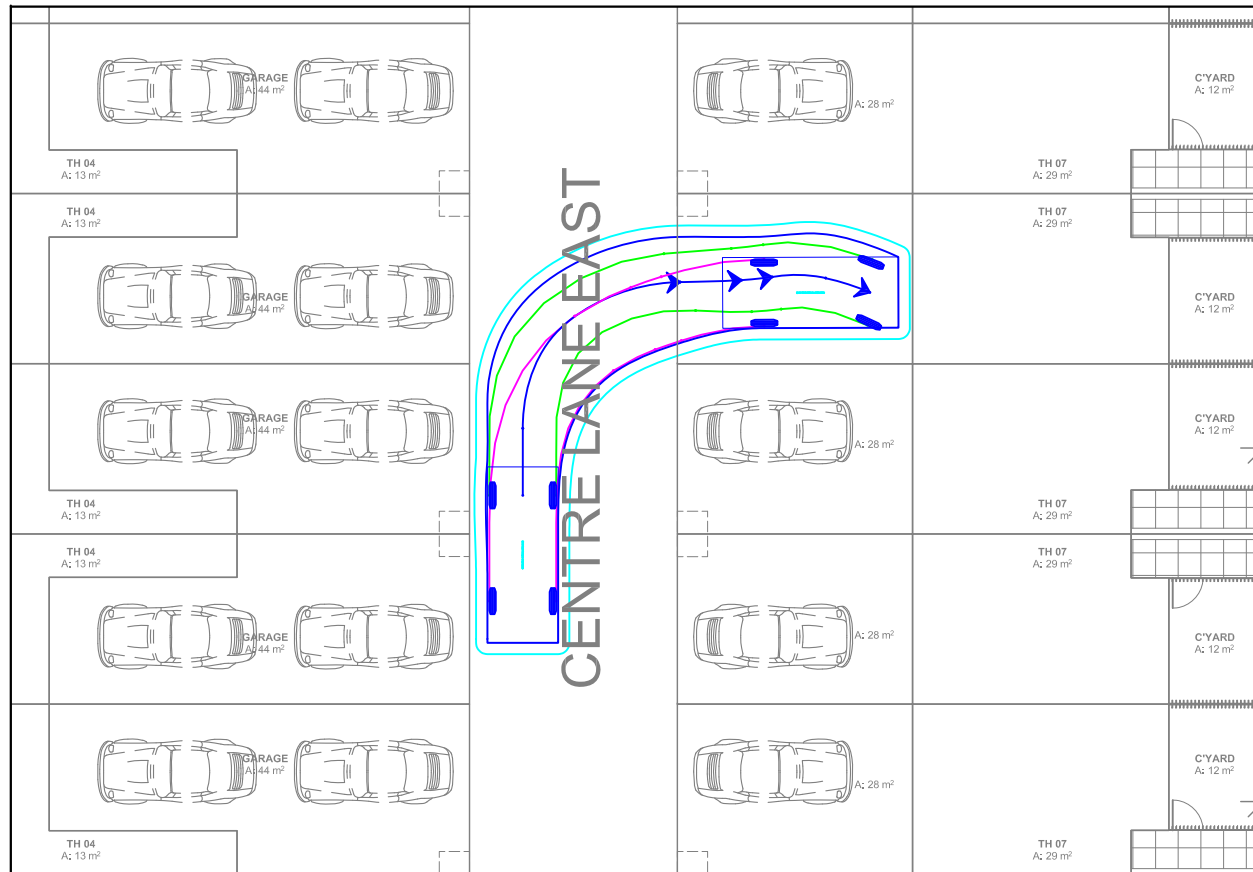


# Appendix D

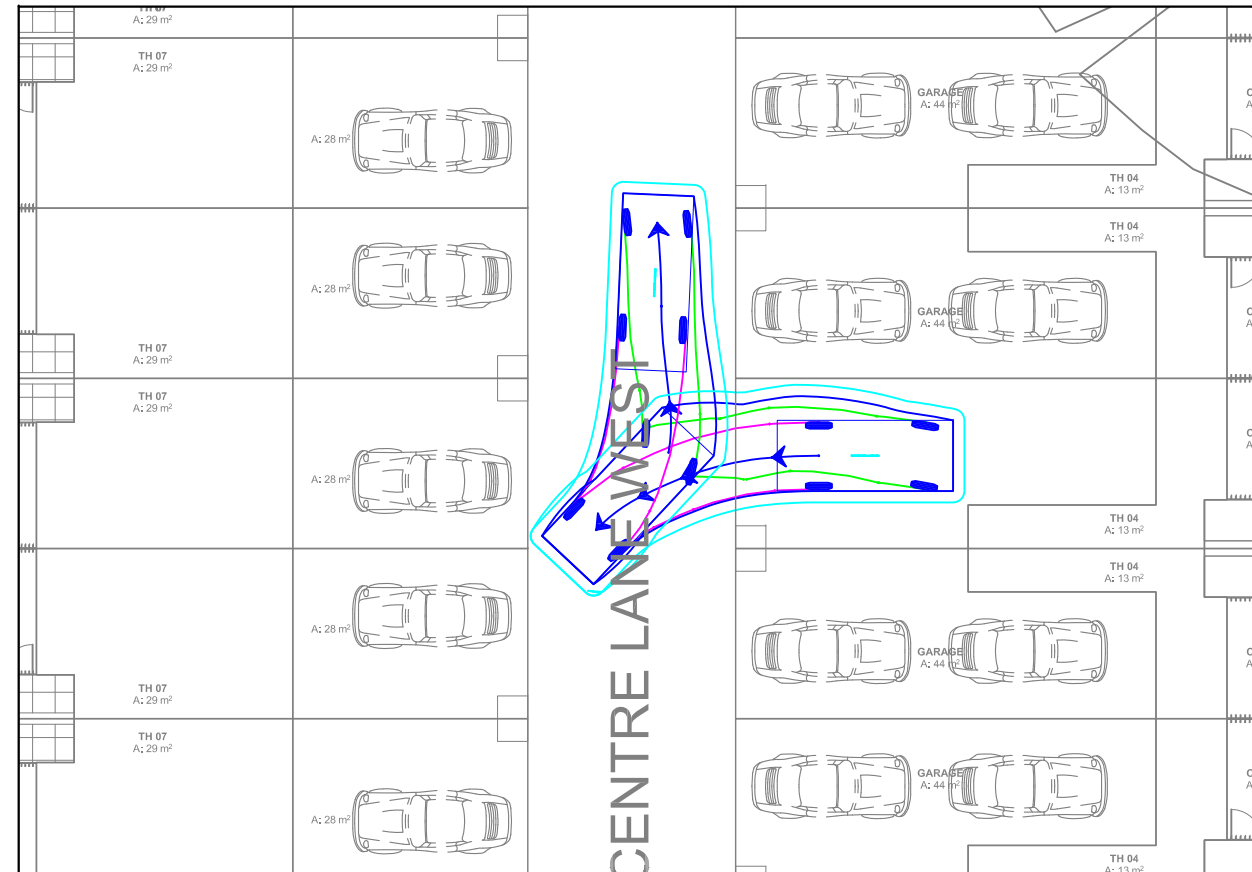
## Swept Path Diagrams



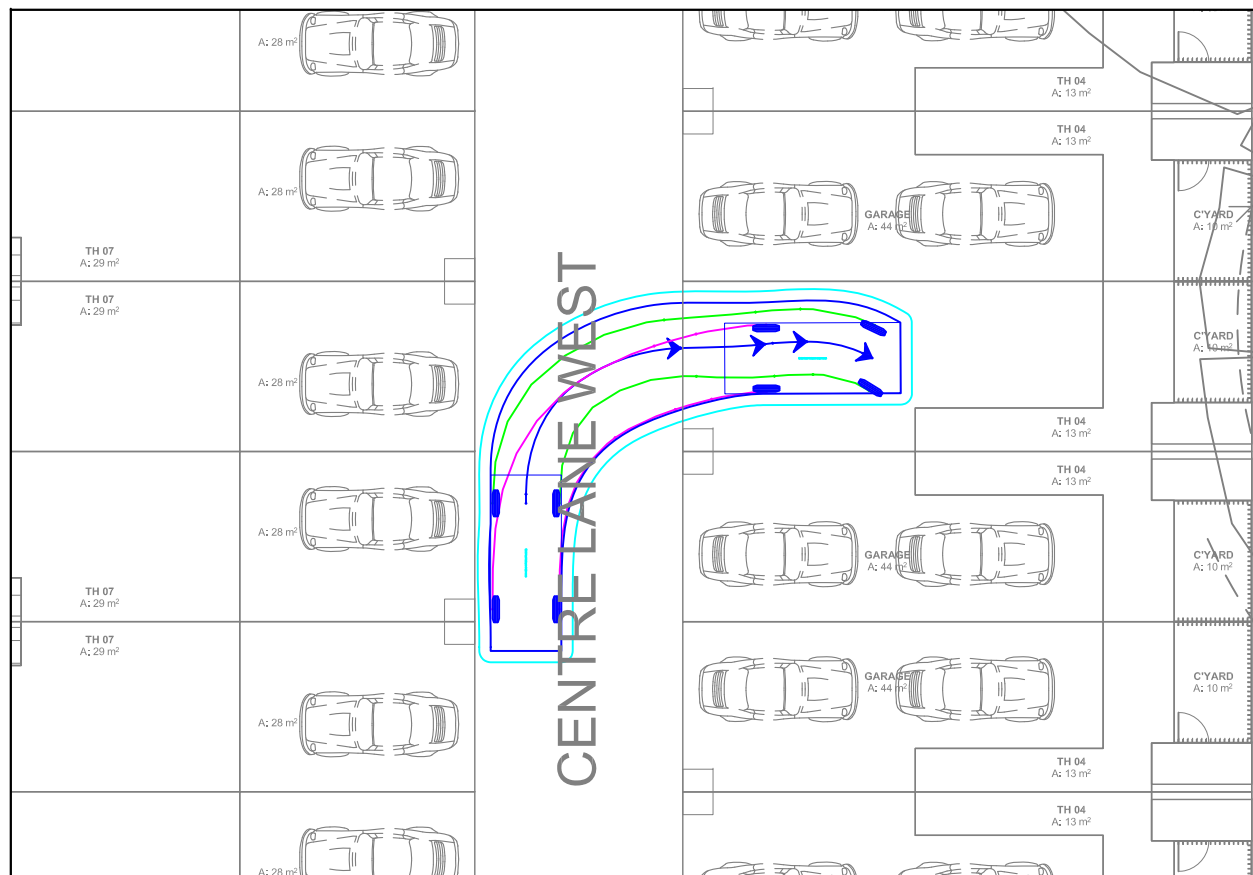
GARAGE SPACE 1 - INGRESS



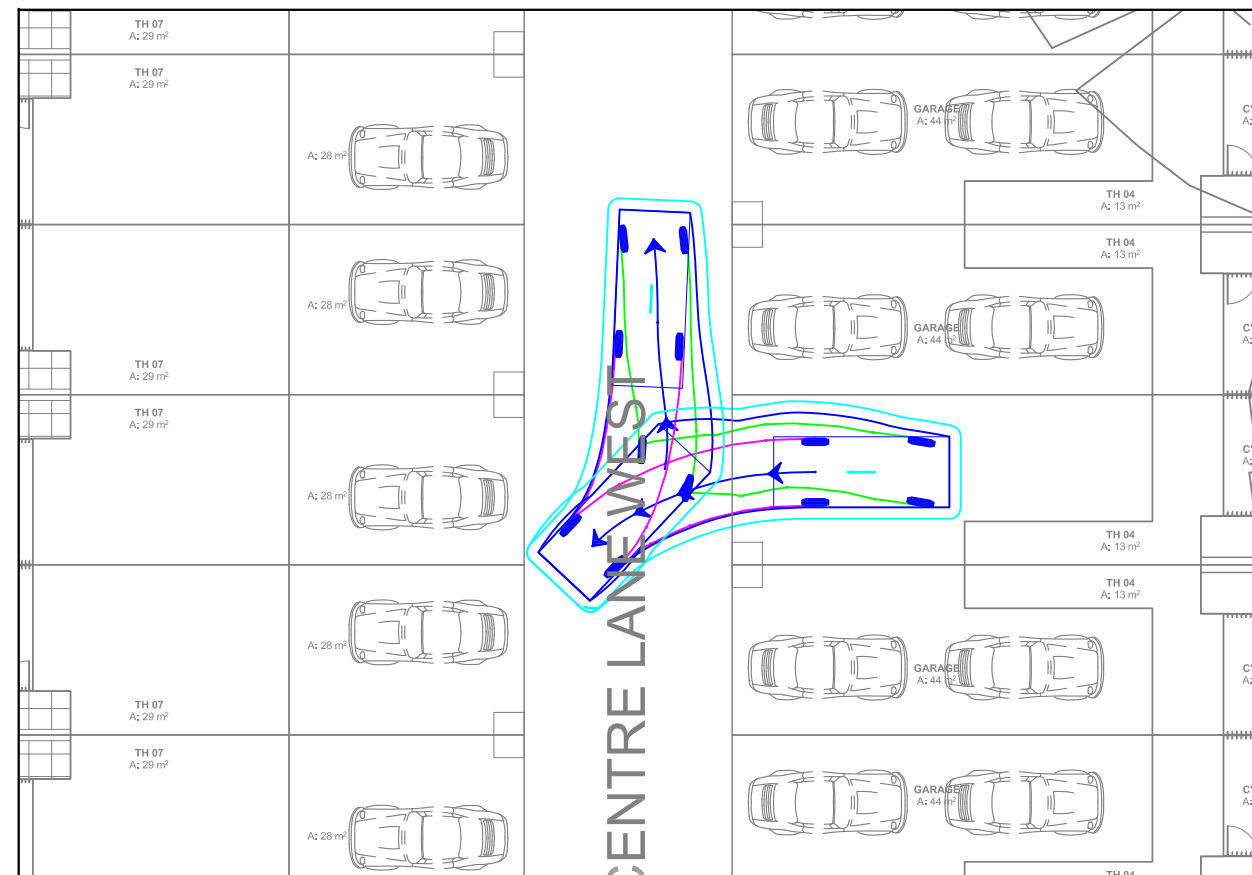
GARAGE SPACE 1 - EGRESS



GARAGE SPACE 2 - INGRESS

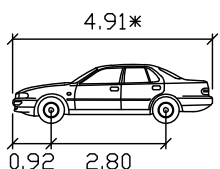


GARAGE SPACE 2 - EGRESS



VEHICLE USED IN SIMULATION

(VEHICLE SPEED - 5KM/H)



85th percentile  
(AS/NZS 2890.1:2004)

Width : 1.87m  
Track : 1.77m  
Kerb to Kerb Radius: 1.5m

\* actual template based on 'relevant longitudinal dimensions that affect swept path' as set out in Section B2.1 of AS/NZS 2890.1:2004

LEGEND

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



**PRELIMINARY ONLY**  
**NOT FOR CONSTRUCTION**

| REV. | REVISION NOTES | REVISION DATE |
|------|----------------|---------------|
|      |                |               |
|      |                |               |
|      |                |               |
|      |                |               |

GENERAL NOTES:  
INFORMATION BASED ON "4.01 MASTER PLAN - GROUND FLOOR.dwg"  
PREPARED BY PLUS ARCHITECTURE , RECEIVED ON 1 JUN 2020

|                             |             |
|-----------------------------|-------------|
| DESIGNED BY:<br>Y. LEOW     | 2 JUN 2020  |
| CHECKED BY:<br>M. WOOLLARD  | 2 JUN 2020  |
| FILE NAME:<br>G25977-05.dwg | ISSUE:<br>A |

**Traffix Group**

Level 28, 459 Collins Street  
MELBOURNE VICTORIA 3000  
TEL : (03) 9822-2888

**52 GOLF ROAD, OAKLEIGH SOUTH**  
**B85 DESIGN CAR SWEEP PATHS**  
**PROPOSED RESIDENTIAL DEVELOPMENT**

SCALE: 1:200 (A3)

SHEET NO.: 01/05

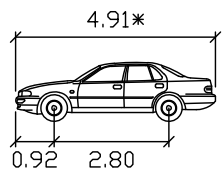
JOB NO.: G25977

GARAGE SPACE 3 - INGRESS

GARAGE SPACE 3 - EGRESS

VEHICLE USED IN SIMULATION

(VEHICLE SPEED - 5KM/H)



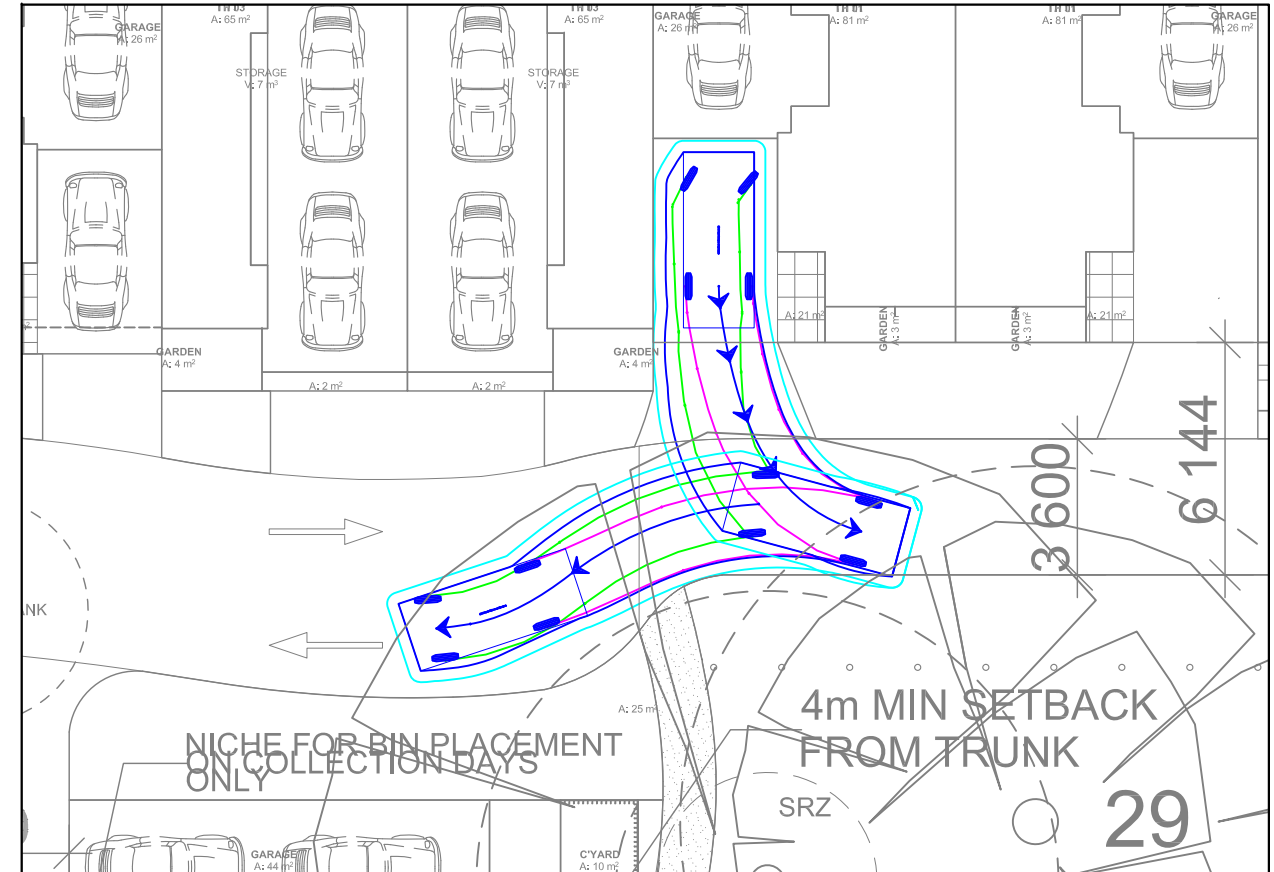
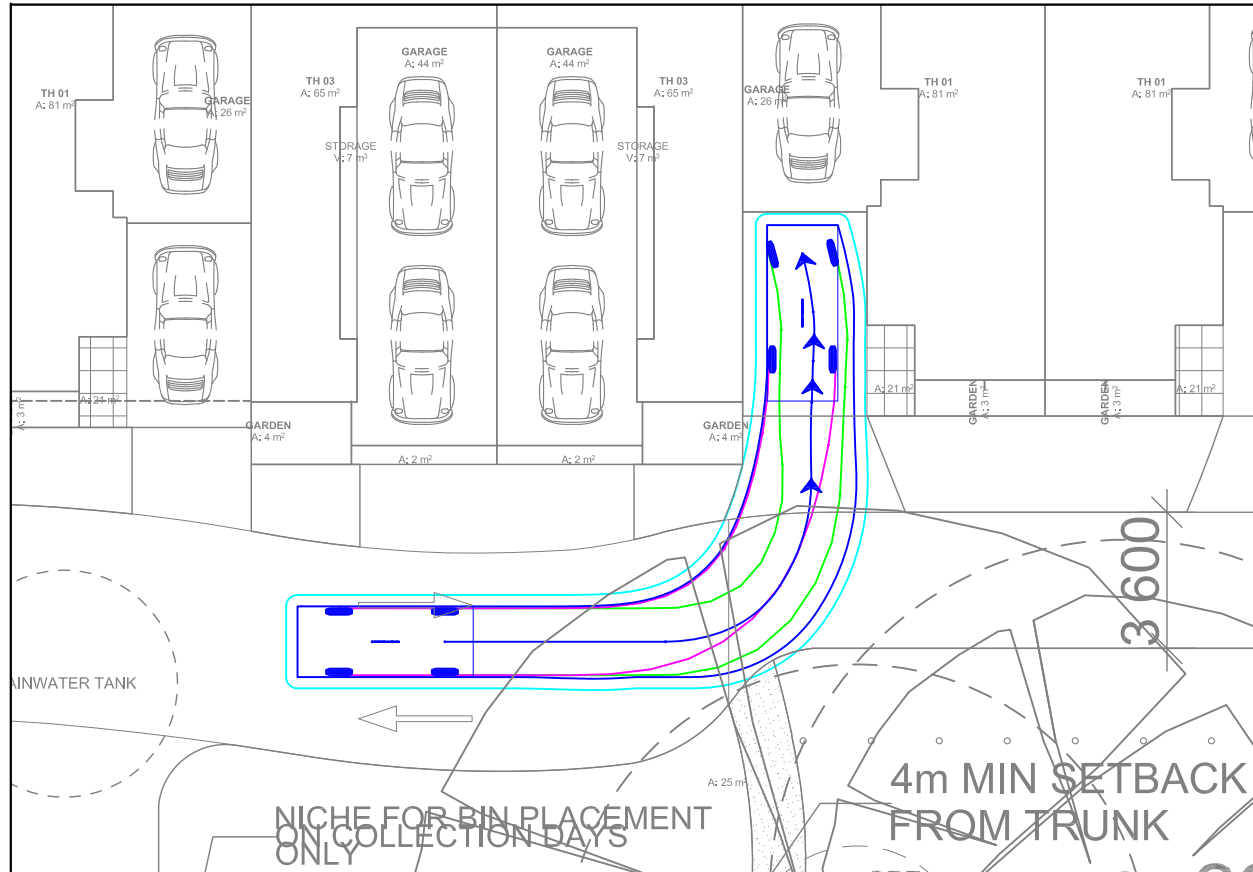
85th percentile  
(AS/NZS 2890.1:2004)

Width : 1.87m  
Track : 1.77m  
Kerb to Kerb Radius 1.5m

\* actual template based on 'relevant longitudinal dimensions that affect swept path' as set out in Section B21 of AS/NZS 2890.1:2004

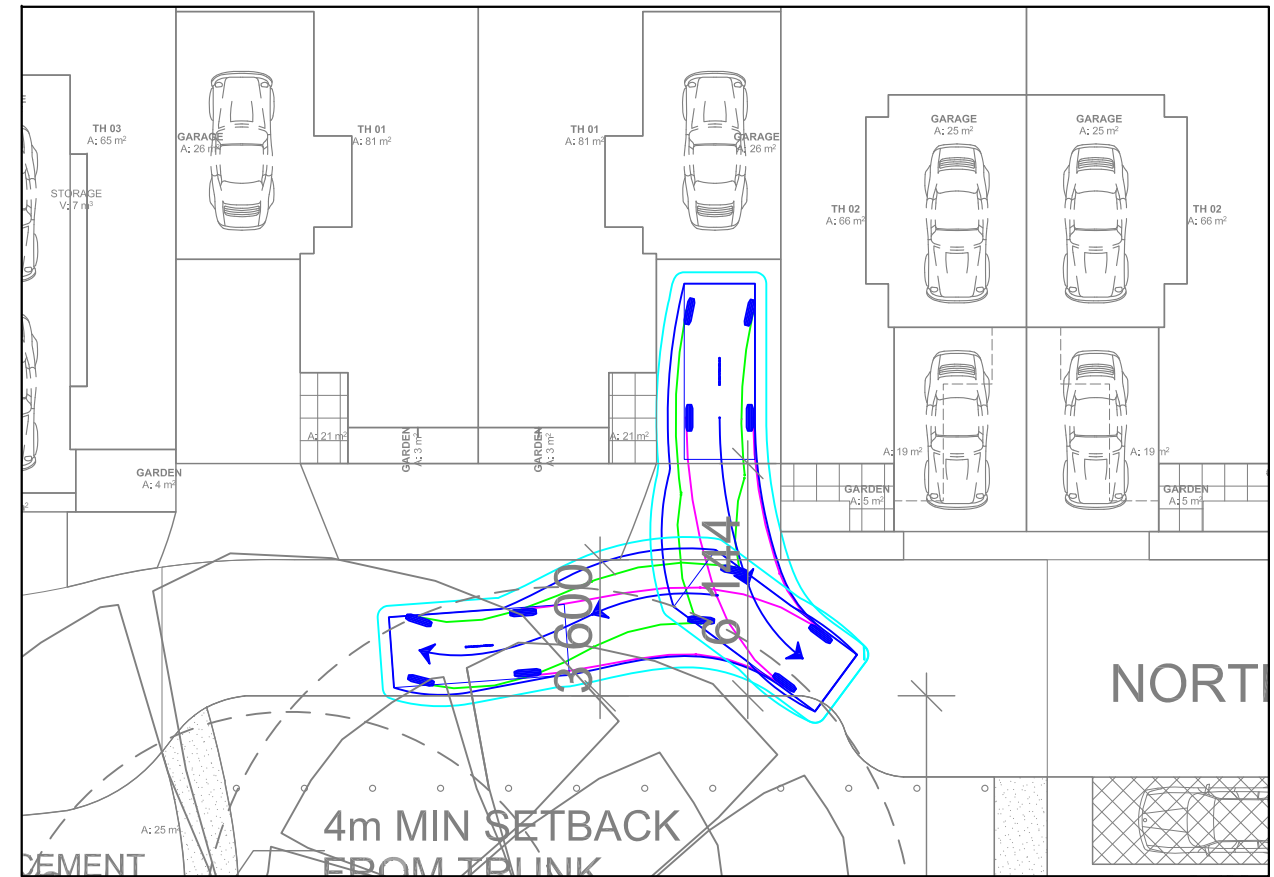
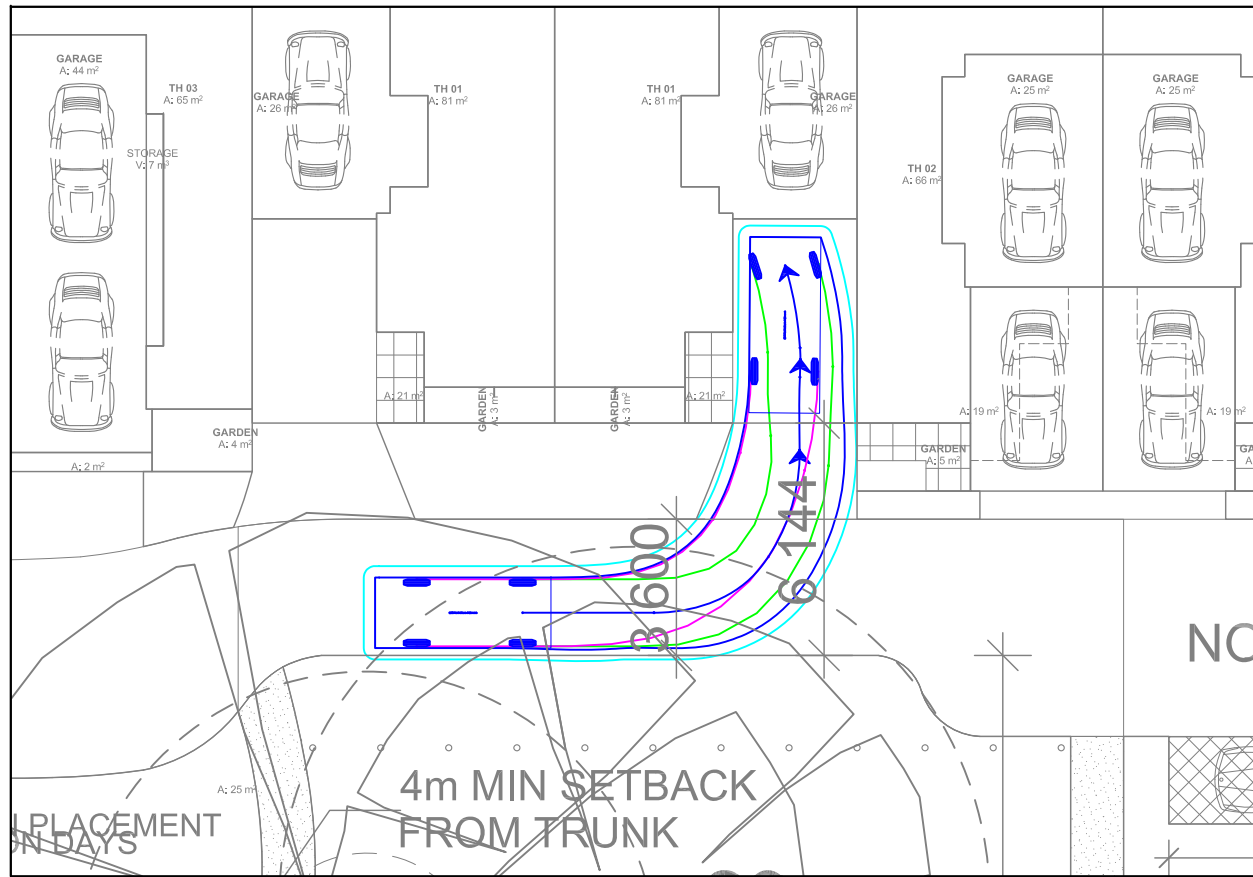
LEGEND

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



GARAGE SPACE 2 - INGRESS

GARAGE SPACE 2 - EGRESS



PRELIMINARY ONLY  
NOT FOR CONSTRUCTION

| REV. | REVISION NOTES | REVISION DATE |
|------|----------------|---------------|
|      |                |               |
|      |                |               |
|      |                |               |
|      |                |               |

GENERAL NOTES:  
INFORMATION BASED ON "4.01 MASTER PLAN - GROUND FLOOR.dwg"  
PREPARED BY PLUS ARCHITECTURE , RECEIVED ON 1 JUN 2020

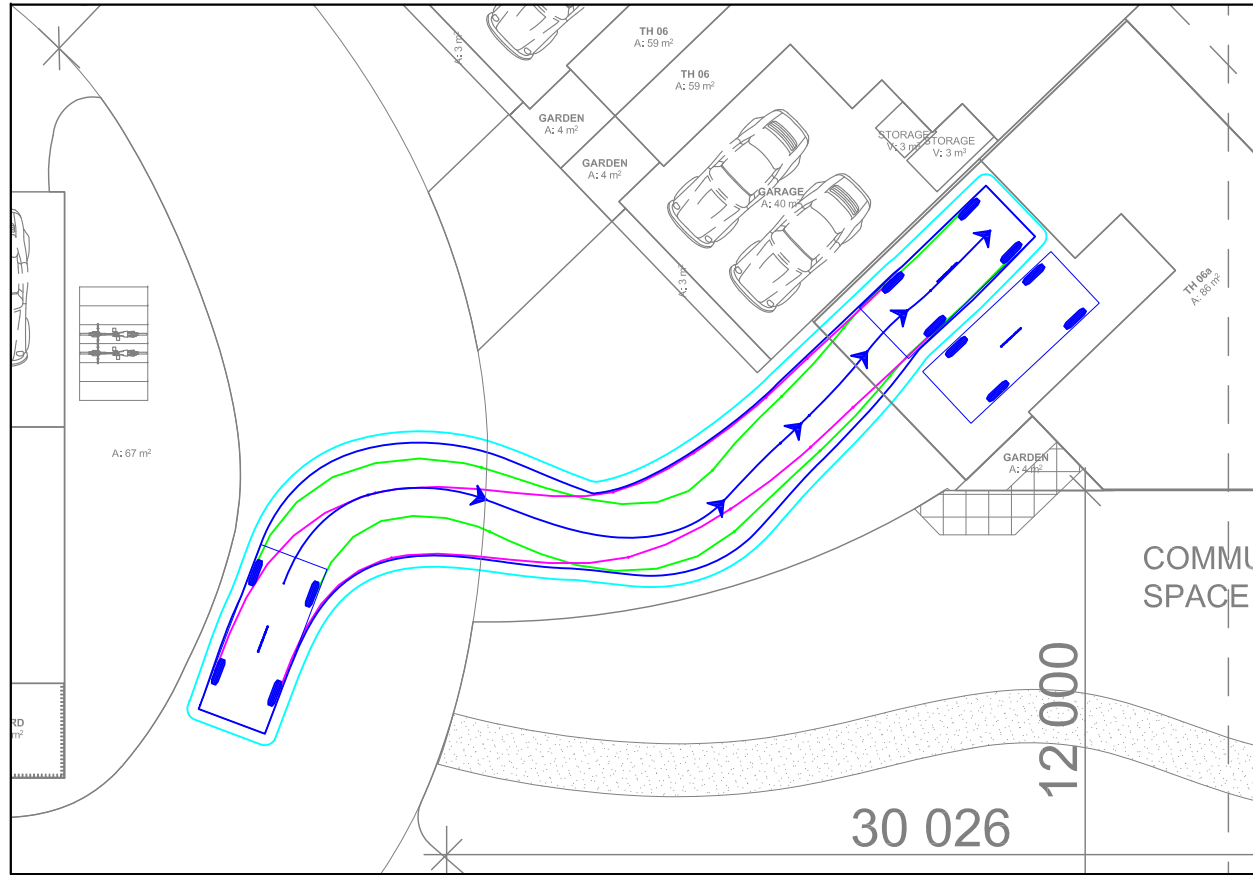
DESIGNED BY:  
Y. LEOW 2 JUN 2020  
CHECKED BY:  
M. WOOLLARD 2 JUN 2020  
FILE NAME:  
G25977-05.dwg  
ISSUE:  
A

**Traffix Group**  
Level 28, 459 Collins Street  
MELBOURNE VICTORIA 3000  
TEL : (03) 9822-2888

**52 GOLF ROAD, OAKLEIGH SOUTH**  
B85 DESIGN CAR SWEEP PATHS  
PROPOSED RESIDENTIAL DEVELOPMENT

SCALE: 1:200 (A3) SHEET NO.: 02/05 JOB NO.: G25977

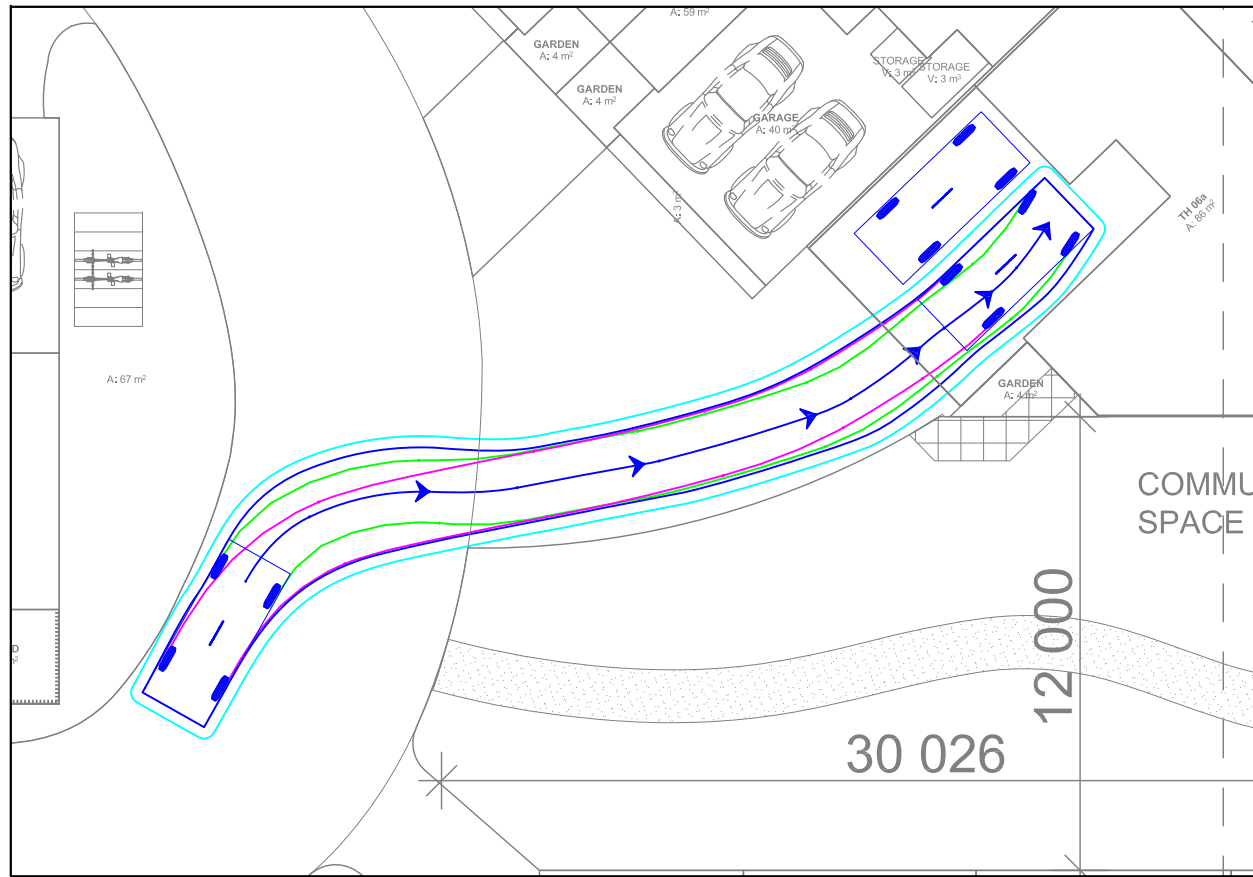
GARAGE SPACE 5 - INGRESS



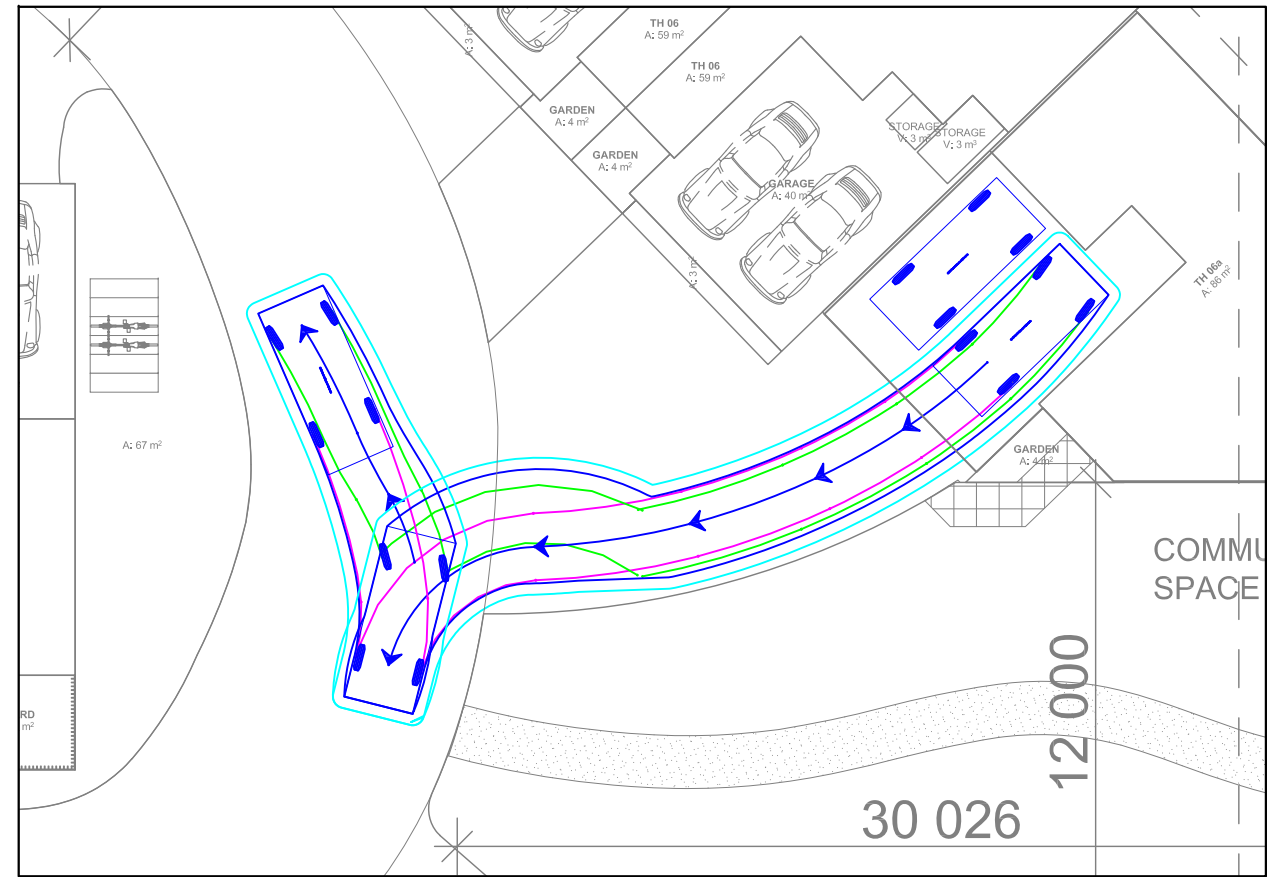
GARAGE SPACE 5 - EGRESS



GARAGE SPACE 6 - INGRESS

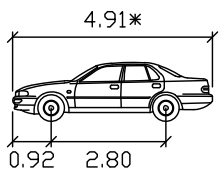


GARAGE SPACE 6 - EGRESS



VEHICLE USED IN SIMULATION

(VEHICLE SPEED - 5KM/H)



85th percentile  
(AS/NZS 2890.1:2004)

Width : 1.87m

Track : 1.77m

Kerb to Kerb Radius 1.5m

\* actual template based on 'relevant longitudinal dimensions that affect swept path' as set out in Section B21 of AS/NZS 2890.1:2004

LEGEND

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



**PRELIMINARY ONLY  
NOT FOR CONSTRUCTION**

| REV. | REVISION NOTES | REVISION DATE |
|------|----------------|---------------|
|      |                |               |
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|      |                |               |
|      |                |               |

GENERAL NOTES:  
INFORMATION BASED ON "4.01 MASTER PLAN - GROUND FLOOR.dwg"  
PREPARED BY PLUS ARCHITECTURE , RECEIVED ON 1 JUN 2020

DESIGNED BY:  
Y. LEOW 2 JUN 2020

CHECKED BY:  
M. WOOLLARD 2 JUN 2020

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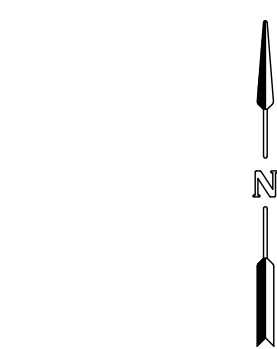
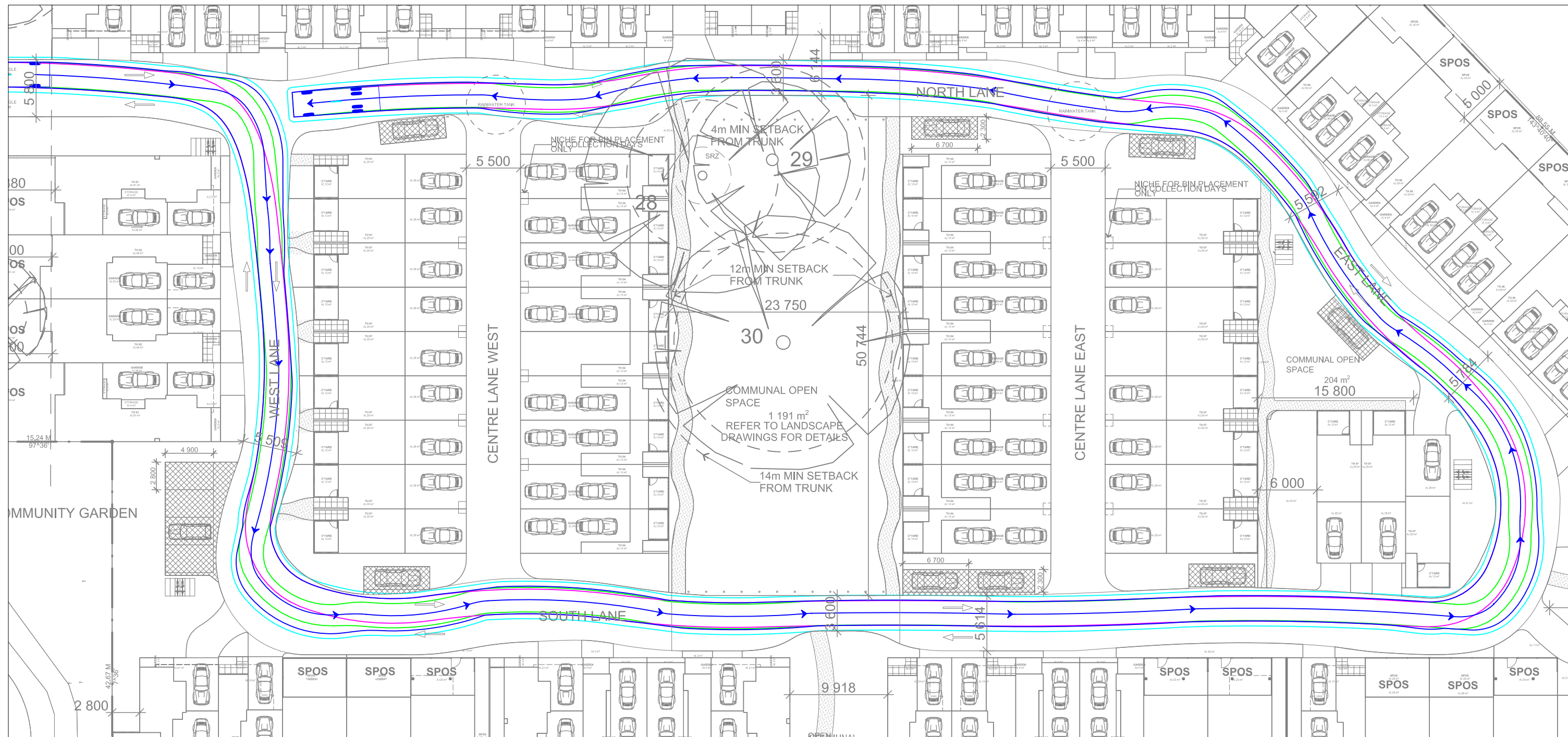
**52 GOLF ROAD, OAKLEIGH SOUTH**  
B85 DESIGN CAR SWEEP PATHS  
PROPOSED RESIDENTIAL DEVELOPMENT

SCALE: 1:200 (A3)

SHEET NO.: 03/05

JOB NO.: G25977

8.8m MRV - CIRCULATING SITE



**PRELIMINARY ONLY  
NOT FOR CONSTRUCTION**

**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

| REV. | REVISION NOTES | REVISION DATE |
|------|----------------|---------------|
|      |                |               |
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|      |                |               |

**GENERAL NOTES:**  
 INFORMATION BASED ON "4.01 MASTER PLAN - GROUND FLOOR.dwg"  
 PREPARED BY PLUS ARCHITECTURE , RECEIVED ON 1 JUN 2020

**DESIGNED BY:**  
 Y. LEOW 2 JUN 2020

**CHECKED BY:**  
 M. WOOLLARD 2 JUN 2020

**FILE NAME:**  
 G25977-05.dwg

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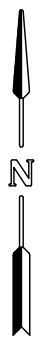
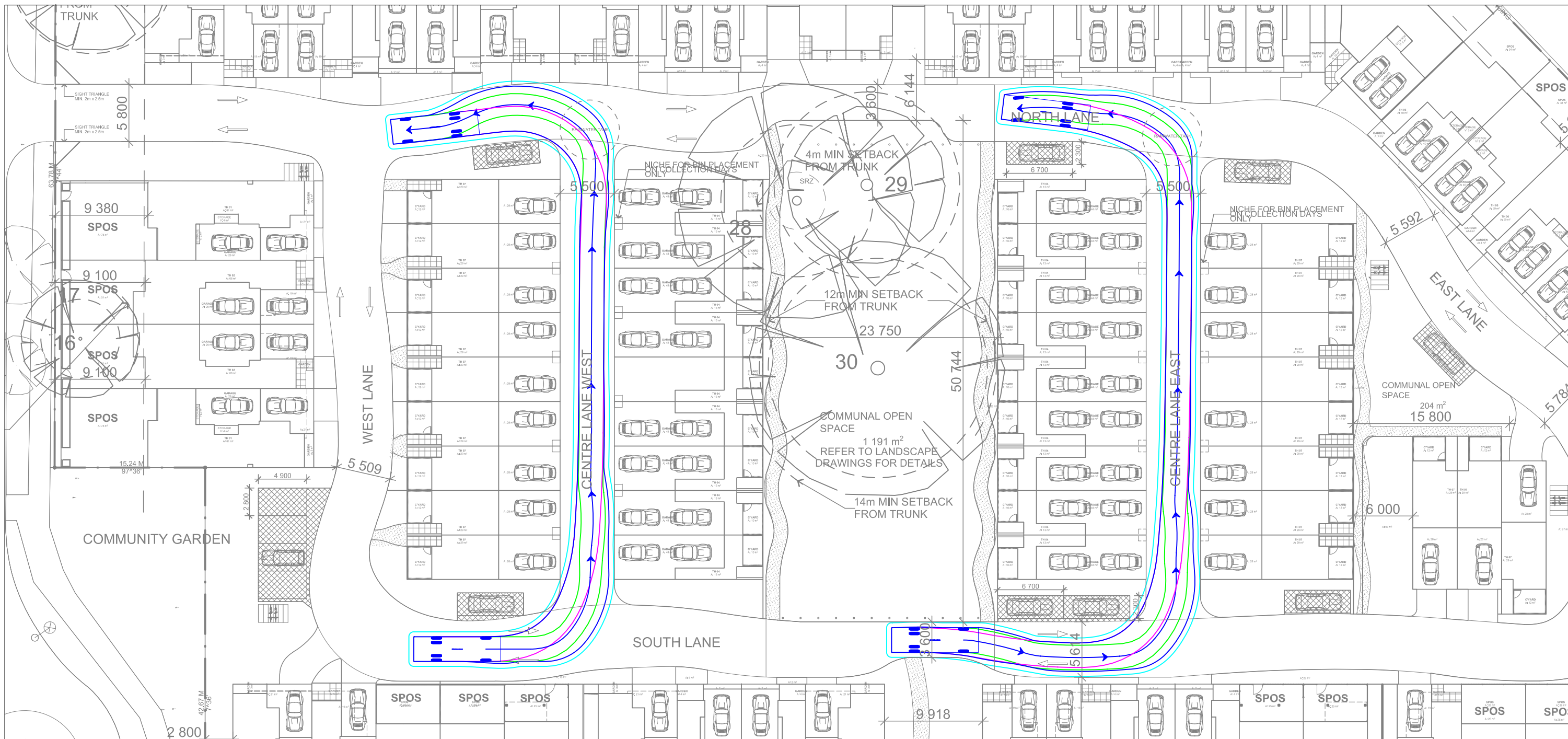
**52 GOLF ROAD, OAKLEIGH SOUTH**  
 8.8M MRV DESIGN CAR SWEEP PATHS  
 PROPOSED RESIDENTIAL DEVELOPMENT

SCALE: 1:400 (A3)

SHEET NO.: 04/05

JOB NO.: G25977

8.8m MRV - CIRCULATING SITE



**PRELIMINARY ONLY  
NOT FOR CONSTRUCTION**

**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

| REV. | REVISION NOTES | REVISION DATE |
|------|----------------|---------------|
|      |                |               |
|      |                |               |
|      |                |               |
|      |                |               |

**GENERAL NOTES:**  
 INFORMATION BASED ON "4.01 MASTER PLAN - GROUND FLOOR.dwg"  
 PREPARED BY PLUS ARCHITECTURE , RECEIVED ON 1 JUN 2020

**DESIGNED BY:**  
 Y. LEOW 2 JUN 2020

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 M. WOOLLARD 2 JUN 2020

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**52 GOLF ROAD, OAKLEIGH SOUTH**  
 8.8M MRV DESIGN CAR SWEEP PATHS  
 PROPOSED RESIDENTIAL DEVELOPMENT

SCALE: 1:400 (A3)

SHEET NO.: 05/05

JOB NO.: G25977