



**TRAFFIC AND PARKING IMPACT ASSESSMENT OF
PLANNING PROPOSAL
AT 147 GARNETT ROAD, KAREELA**



**Address: Shop 7, 720 Old Princes Highway Sutherland NSW 2232
Postal: P.O Box 66 Sutherland NSW 1499**

**Telephone: +61 2 8355 2440
Fax: +61 2 9521 7199
Web: www.mclarentraffic.com.au
Email: admin@mclarentraffic.com.au**

Division of RAMTRANS Australia ABN: 45067491678 RPEQ: 19457

Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

Development Type: Planning Proposal

Site Address: 147 Garnett Road, Kareela

Prepared for: Wynne Planning

Document reference: 190560.03FA

| Status | Issue | Prepared By | Checked By | Date |
|--------|-------|-------------|------------|---------------|
| Draft | A | SI | ME | 23 April 2021 |
| Final | A | ME | TS | 3 May 2021 |

Please be aware that all information and material contained in this report is the property of McLaren Traffic Engineering. The information contained in this document is confidential and intended solely for the use of the client for the purpose for which it has been prepared and no representation is made or if to be implied as being made to any third party. Any third party wishing to distribute this document in whole or in part for personal or commercial use must obtain written confirmation from McLaren Traffic Engineering prior to doing so. Failure to obtain written permission may constitute an infringement of copyright and may be liable for legal action.

TABLE OF CONTENTS

| | | |
|----------|--|-----------|
| 1 | INTRODUCTION..... | 1 |
| 1.1 | Description and Scale of Development..... | 1 |
| 1.2 | State Environmental Planning Policy (Infrastructure) 2007..... | 1 |
| 1.3 | Site Description..... | 2 |
| 1.4 | Site Context | 3 |
| 2 | EXISTING TRAFFIC AND PARKING CONDITIONS | 4 |
| 2.1 | Road Hierarchy..... | 4 |
| 2.1.1 | Mikarie Place..... | 4 |
| 2.1.2 | Garnet Road | 4 |
| 2.2 | Existing Traffic Management | 4 |
| 2.3 | Public Transport..... | 4 |
| 2.4 | Future Road and Infrastructure Upgrades | 5 |
| 2.5 | Existing Site Characteristics | 5 |
| 3 | PARKING ASSESSMENT | 7 |
| 3.1 | DCP Parking Requirement | 7 |
| 3.2 | Parking Impact Assessment | 7 |
| 3.3 | Disabled Parking..... | 8 |
| 3.4 | Bicycle & Motorcycle Parking Requirements | 8 |
| 3.5 | Servicing & Loading..... | 9 |
| 3.6 | Car Park Design & Compliance | 10 |
| 4 | TRAFFIC ASSESSMENT | 11 |
| 4.1 | Traffic Generation & Impact..... | 11 |
| 5 | CONCLUSION | 13 |

1 **INTRODUCTION**

McLaren Traffic Engineering was commissioned by Wynne Planning to provide a Traffic and Parking Impact Assessment of the Planning Proposal for the site identified as 147 Garnett Road, Kareela.

1.1 **Description and Scale of Development**

The proposal involves the rezoning of a portion of the subject site from *SP2 – Infrastructure* to *R3 – Medium Density Residential*. The extents of the rezoning are shown within **Annexure A** and the existing uses of the site have the following characteristics relevant to traffic and parking.

- Sylvanvale Child Care Centre of 80 enrolled children;
- Kirrawee ASPECT School of 439m² GFA;
- Sylvanvale Head Office of 1,160m² GFA;
- Hydrotherapy Pool of 452m² GFA;
- Other ancillary facilities.

Following the re-zoning, it is expected that a Development Application will be submitted with the following indicative scale, which is illustrated on the concept plans provided in **Annexure A** for reference.

- Retaining of Sylvanvale Child Care Centre with no change to existing operations or number of enrolled children;
- Removal of Kirrawee ASPECT School, Sylvanvale Head Office, Hydrotherapy Pool and ancillary facilities;
- Addition of 43 medium-density residential dwellings:
 - 24 x two-bedroom units;
 - 19 x three-bedroom units.

All vehicular access to the site will be provided via an existing two-way driveway with access from Mikarie Place. The proposal includes the widening of the existing driveway from 5.5m to 6.5m. Further, a circulation roadway is proposed within the site to provide direct access to the townhouse dwellings.

1.2 **State Environmental Planning Policy (Infrastructure) 2007**

The proposed development does not qualify as a traffic generating development with relevant size and/or capacity under *Clause 104* of the *SEPP (Infrastructure) 2007*. Accordingly, formal referral to the Roads and Maritime Services (RMS) is unnecessary and the application can be assessed by Sutherland Shire Council officers accordingly.

1.3 Site Description

The subject site is currently zoned *SP2 – Infrastructure* under the *Sutherland Shire Local Environmental Plan 2015* with a proposed change of zoning to *R3 – Medium Density Residential*. The site is currently occupied by Sylvanvale Head Office, Sylvanvale Child Care Centre, ASPECT School and an adjoining Hydrotherapy Pool, with various ancillary facilities. The site has a single road frontage to Mikarie Place to the west. Further, it is noted that an informal right of way is situated along the southern boundary of the site, facilitating access to Bates Drive School. It is noted that no parking associated with the Bates Drive School occurs on the site.

The site is generally surrounded by low to medium density developments to the west, with the eastern boundary of the Kirrawee Industrial Precinct located approximately 250m to the west. The Bates Drive School borders the site directly to the west with the Joseph Banks Native Plants Reserve, zoned *RE1 – Public Recreation*, sharing a boundary with the site to the north. Directly to the south of the site is an area zoned *E2 – Environmental Conservation* followed by the Kareela Sports Fields.

The Princes Highway is located approximately 400m to the east providing access to the north and south, with Bates Drive located to the north providing access north-west.

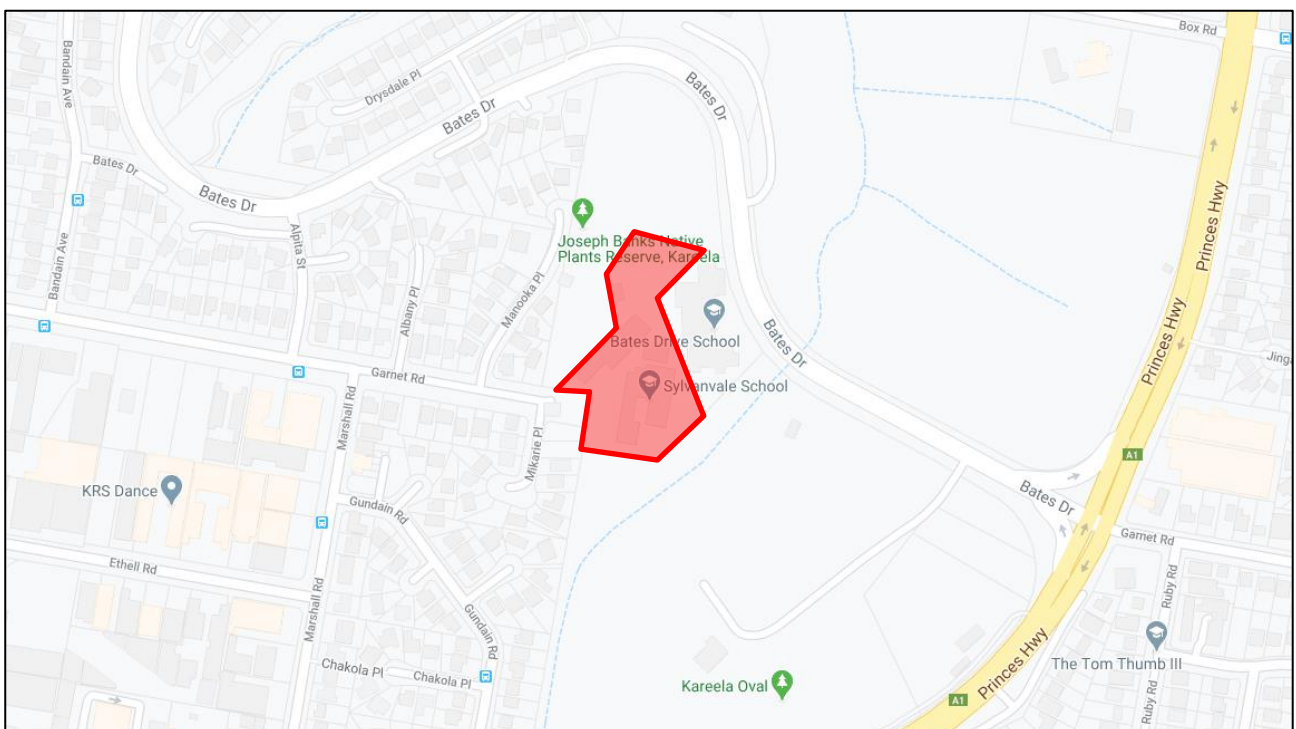
1.4 Site Context

The location of the site is shown on an aerial photo and a street map in **Figure 1** and **Figure 2** respectively.



— Site Location

FIGURE 1: SITE CONTEXT – AERIAL PHOTO



— Site Location

FIGURE 2: SITE CONTEXT – STREET MAP

2 EXISTING TRAFFIC AND PARKING CONDITIONS

2.1 *Road Hierarchy*

The road network servicing the site has characteristics as described in the following sub-sections.

2.1.1 Mikarie Place

- Unclassified LOCAL cul-de-sac road;
- Approximately 9m wide two-way carriageway and kerbside parking on both sides of the road;
- Default 50km/h speed limit;
- 40km/h speed limit applies during school zone hours;
- Unrestricted kerbside parking permitted along both sides of the road.

2.1.2 Garnet Road

- Unclassified LOCAL road;
- Approximately 9m wide two-way carriageway within close vicinity to the site, east of Marshall Road and kerbside parking on both sides of the road
- To the east of Marshall Road the carriageway is approximately 13m wide providing one (1) traffic lane in each direction and kerbside parking on both sides of the road;
- Signposted 50km/h speed limit;
- 40km/h speed limit applies during school zone hours;
- Unrestricted kerbside parking permitted along both sides of the road.

2.2 *Existing Traffic Management*

- Priority-controlled intersection of Garnet Road/Manooka Place;
- Priority-controlled intersection of Garnet Road/Albany Place;
- Give-way line-controlled intersection of Garnet Road/Marshall Road;
- Give-way line-controlled intersection of Garnet Road/Alpita Street.

2.3 *Public Transport*

The subject site is within 300m walking distance of existing bus stop (ID: 2232101) located to the west of the site on Marshall Road. The bus stop services existing bus Routes 967 (Como West to Miranda via Oyster Bay), 968 (Bonnet Bay to Miranda via Kareela) and 969 (Cronulla to Sutherland) provided by Transdev NSW.

The location of the site subject to the surrounding public transport network is shown in **Figure 3**.

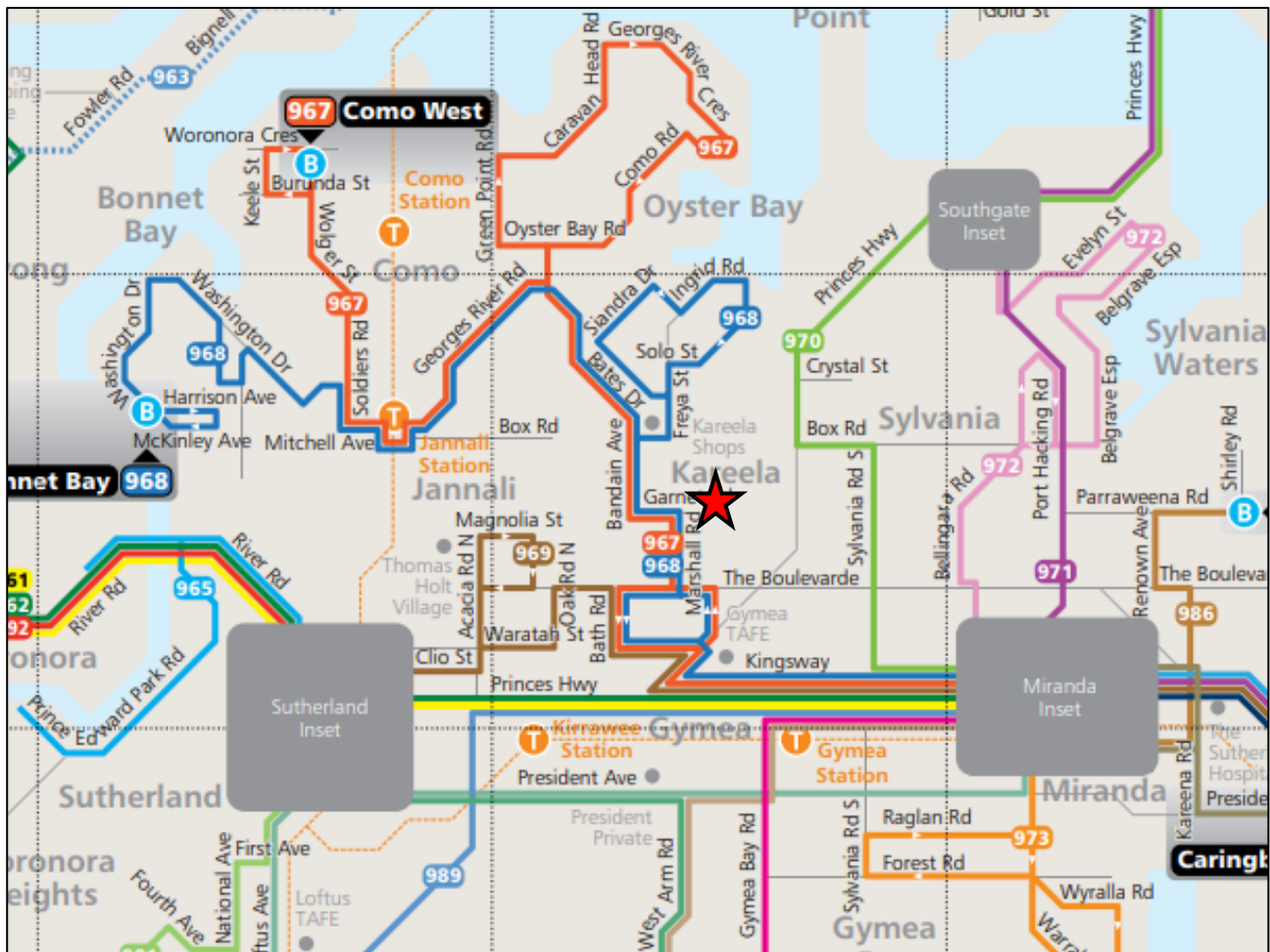


FIGURE 3: PUBLIC TRANSPORT NETWORK MAP

2.4 Future Road and Infrastructure Upgrades

From Sutherland Shire Council's Development Application tracker and RMS projects website, it appears that there are no future planned road or public transport changes that will affect traffic conditions within the immediate vicinity of the subject site.

2.5 Existing Site Characteristics

The existing site includes a diverse range of land-uses, some of which are to be retained and some of which will be removed as part of any future development application on the site. A summary of the nature and scale of uses on the site is provided in **Table 1**.

It is noted that a significant parking shortfall presently exists and it has been indicated in discussions with Sylvanvale staff that car parking overflows onto the streets surrounding the site.

TABLE 1: EXISTING SITE CHARACTERISTICS

| Land Use | Scale | Traffic Generation | | Parking Demand (Peak) | Parking Spaces Provided | Estimated Overflow in Parking | Retained Post-DA |
|------------------------|--|--------------------|---------------|-----------------------|-------------------------|-------------------------------|------------------|
| | | AM | PM | | | | |
| Existing | | | | | | | |
| Sylvanvale Head Office | 60 Full-Time Staff 20-40 Occasional Staff | 50 IN/5 OUT | 5 IN/50 OUT | 80 Vehicles | 45 | 35 vehicles | No |
| ASPECT School | 15 Staff 35 Children | 45 IN/30 OUT | 30 IN/45 OUT | 15 Vehicles | 10 Informal | 5 vehicles | No |
| Child Care Centre | 80 Children | 32 IN/32 OUT | 28 IN/28 OUT | 17 Vehicles | 17 | 0 vehicles | Yes |
| Rehabilitation Pool | 1 Staff Member 1 Visitor at a Time | 2 IN/1 OUT | 1 IN/2 OUT | 2 Vehicles | 0 | 2 vehicles | No |
| Sub-Total | - | 149 IN/83 OUT | 79 IN/145 OUT | 127 Vehicles | 72 | 42 | - |

3 **PARKING ASSESSMENT**

3.1 **DCP Parking Requirement**

Reference is made to *Sutherland Shire Council's Development Control Plan 2015 - Chapter 5: Multi Dwelling Housing* which designates the following parking rates applicable to the Multi-Dwelling Housing in the R3 Medium Density Residential Zone:

7.2 Controls

2. Car parking for multi dwelling housing is to be provided at the following (minimum) rates:

| | |
|---------------------|--|
| <i>1 bedroom</i> | <i>1 car parking space per dwelling</i> |
| <i>2 bedrooms</i> | <i>1.5 car parking spaces per dwelling</i> |
| <i>3 + bedrooms</i> | <i>2 car parking spaces per dwelling</i> |

One (1) visitor car park is to be provided for every 4 dwellings in a multi dwelling development.

Developments with 10 or more dwellings must also provide 1 designated carwash bay with minimum dimensions of 3m x 7.6m.

Table 2 presents the parking requirements from the above rates.

TABLE 2: DCP PARKING REQUIREMENTS

| Use | Type | Scale | Rate | Parking Required | Parking Proposed |
|----------------------------|-------------|--------------|-------------------------|-------------------------|-------------------------|
| Multi-Dwelling Residential | 2-bedrooms | 24 | 1.5 spaces per dwelling | 36 | 85 |
| | 3+ bedrooms | 19 | 2 spaces per dwelling | 38 | |
| | Visitor | 43 | 1 per 4 dwellings | 11 (10.75) | |
| Total | - | - | - | 85 | 85 |

The proposed plans detail the provision of 85 car parking spaces over two (2) basement levels satisfy Council's DCP requirements. It is noted that one (1) car wash bay is required for the development.

3.2 **Parking Impact Assessment**

Considering the substantial changes in terms of land use that will occur as a result of any future development application on the site, it is important to quantify the impacts of any proposed changes on the car parking surrounding the site. The concept plans include a total of 43 medium-density dwellings, which would be provided after the removal of several existing facilities on the site including:

- The Sylvanvale Head Offices;

- The ASPECT School;
- The rehabilitation pool.

Table 3 provides a summary of the net parking impacts of the removal of these facilities and the construction of some 43 dwellings on the site. As shown, post-DA the site's existing parking overflow will be removed.

TABLE 3: SUMMARY OF PARKING IMPACT

| Land Use | Scale | Parking Demand (Peak) | Parking Spaces Provided | Estimated Overflow in Parking |
|-------------------------------|--|-----------------------|-------------------------|-------------------------------|
| Existing | | | | |
| Sylvanvale Head Office | 60 Full-Time Staff 20-40 Occasional Staff | 80 Vehicles | 45 | 35 vehicles |
| ASPECT School | 15 Staff 35 Children | 15 Vehicles | 10 Informal | 5 vehicles |
| Child Care Centre | 80 Children | 17 Vehicles | 17 | 0 vehicles |
| Rehabilitation Pool | 1 Staff Member 1 Visitor at a Time | 2 Vehicles | 0 | 2 vehicles |
| Sub-Total | - | 127 Vehicles | 72 | 42 |
| Post-Development | | | | |
| Residential Townhouses | 43 Dwellings | 85 Vehicles | 85 | 0 vehicles |
| Child Care Centre | 80 Children | 17 Vehicles | 17 | 0 vehicles |
| Sub-Total | - | 102 Vehicles | 102 | 0 |
| Net Change | | -25 Vehicles | +30 | -42 |

3.3 Disabled Parking

Sutherland Shire Council's DCP denotes that parking for people with a disability shall be provided in accordance with the *Building Code of Australia* (BCA). However, it is common practice to provide a disabled car space for each adaptable unit proposed within any multi dwelling housing development. Any proposed adaptable units will include the provision of an adaptable space designed in accordance with *AS4299-1995* or *AS2890.6:2009*.

3.4 Bicycle & Motorcycle Parking Requirements

Sutherland Shire Council's DCP 2015 does not require the provision of bicycle or motorcycle parking for multi dwelling residential developments. As such it is not expected that the detailed design of the development will provide dedicated bicycle or motorcycle parking.

3.5 Servicing & Loading

Reference is made to Sutherland Shire Council's DCP 2015 *Chapter 5 – Multi Dwellings – R3 Medium Density Residential Zone* which outlines the following with respect to waste collection:

Enable the servicing of the waste management system on site, and the efficient collection of waste and recyclables by collection service providers, with minimum disruption and impact on the community.

It is envisaged that waste collection will be completed by Council's waste collection service vehicles within the internal road network of the site. Sutherland Shire Council's *Environmental Specification- 2017 Waste Collection for New Multi-Unit Dwellings and Residential Flat Buildings* details the specification of the 10.24m length Rear Loading Waste Collection Vehicle as reproduced in **Annexure B**.

Swept path tests of the Council Waste Collection Vehicle have been undertaken to depict successful circulation through the proposed internal roadway and turning within the site, as reproduced in **Annexure C**.

It is noted that Council currently services the site for waste collection and is able to enter and exit the site using the existing 5.5m width driveway. It is assumed that the existing waste collection vehicle will continue to service the site into the future (i.e. under proposed conditions) and as such, no change to access will be apparent. Further, the proposed driveway widening to 6.5m will improve waste collection vehicle access and egress from the vehicular access point.

3.6 Car Park Design & Compliance

The proposed concept plan as depicted in **Annexure A** provides a layout which is generally consistent with the requirements of the Australian Standards, such that it is a reasonable basis on which to assume that the parking requirements can be acceptably met. A detailed assessment of the design is not necessary as part of a planning proposal and can be undertaken as part of any future Development Application on the site.

Any future proposed car parking is to comply with the relevant requirements of AS2890.1:2004, AS2890.2:2018 and AS2890.6:2009, with the following requirements relevant to note:

- Minimum 6.5m circulation roadway providing access to the residential dwellings from the existing roadway, as shown on the concept plans;
- Minimum 2.4m width, 5.4m length residential parking spaces;
- Minimum 3m width (wall to wall), 5.4m length enclosed residential single garages;
 - Including a minimum 2.62m width door opening;
- Minimum 5.4m width (wall to wall), 5.4m length enclosed residential double garages;
 - Including a minimum 4.8m width door opening for a combined garage door;
- Minimum 2.4m width, 5.4m length disabled space with adjacent 2.4m width, 5.4m length shared zone;
- Minimum 2.5m width, 5.4m length residential visitor parking spaces;
- Minimum 0.3m clearance to high objects from any area access to a vehicle;

4 TRAFFIC ASSESSMENT

The impact of the expected traffic generation levels associated with the subject proposal is discussed in the following sub-sections.

4.1 *Traffic Generation & Impact*

Traffic generation rates for the relevant land uses are provided in the *Roads and Maritime Services (RMS) Guide to Traffic Generating Developments (2002)* and recent supplements are as follows:

RMS Guide

3.3.2 Medium density residential flat building.

Smaller units and flats (up to two bedrooms)

Weekday peak hour vehicle trips = 0.4-0.5 per dwelling.

Larger units and town houses (three or more bedrooms):

Weekday peak hour vehicle trips = 0.5-0.65 per dwelling.

For the purposes of this report and to provide a conservative measure, the 42 medium density dwellings shown on the concept plans have been assumed to have a traffic generation of 0.65 trips per dwelling.

Discussions with Sylvanvale Head Office staff have clarified the existing traffic generating characteristics of the land uses on the site. These details have been compiled to provide for an analysis of the net change in traffic generation that will occur post-development, with a summary provided in **Table 4**.

As shown, post-development it has been estimated that there will be net reduction of 106 trips in both the AM and PM peak hours when compared to the existing traffic generation of the site, noting that both the existing incoming and outgoing trips are reduced. This net reduction in traffic generation will result in a net improvement in the performance of the road network in the surrounds of the site and no further analysis is necessary.

TABLE 4: SUMMARY OF NET CHANGE IN TRAFFIC GENERATION

| Land Use | Scale | Traffic Generation | | |
|------------------------|---|--------------------|----------------|---------------|
| | | AM | PM | Total |
| Existing | | | | |
| Sylvanvale Head Office | 60 Full-Time Staff 20-40 Part Time Staff | 50 IN/5 OUT | 5 IN/50 OUT | 55 |
| ASPECT School | 15 Staff 35 Children | 45 IN/30 OUT | 30 IN/45 OUT | 75 |
| Child Care Centre | 80 Children | 32 IN/32 OUT | 28 IN/28 OUT | 64 AM/56 PM |
| Bates Drive School | 30 Staff 70 Students | 20 IN/15 OUT | 15 IN/20 OUT | 35 |
| Rehabilitation Pool | 1 Staff Member 1 Visitor at a Time | 2 IN/1 OUT | 1 IN/2 OUT | 3 |
| Sub-Total | - | 149 IN/83 OUT | 79 IN/145 OUT | 232 AM/224 PM |
| Post-Development | | | | |
| Residential Townhouses | 43 Dwellings | 5 IN/ 20 OUT | 20 IN/5 OUT | 25 |
| Child Care Centre | 80 Children | 32 IN/32 OUT | 28 IN/28 OUT | 64 AM/56 PM |
| Bates Drive School | 30 Staff 70 Students | 20 IN/15 OUT | 15 IN/20 OUT | 35 |
| Sub-Total | - | 57 IN/67 OUT | 63 IN/53 OUT | 124 AM/116 PM |
| Net Change | | -92 IN/-16 OUT | -14 IN/-92 OUT | -108 |

5 CONCLUSION

The traffic and parking impacts of the proposed rezoning of 147 Garnett Road Kareela to *R3 Medium Density Residential* have been assessed. The assessment has taken into consideration the removal of the existing land-uses on the site and the construction of 43 medium density residential units as depicted on the reduced plans provided in **Annexure A**.

The concept plans demonstrate that the site can meet the relevant Council DCP requirements, noting that all car parking will be designed in accordance with the relevant Australian Standards. The detailed design of each townhouse development will be subject to a development application.

The proposed changes in land use on the site will result in the elimination of the existing parking shortfall and the resulting overflow onto the streets surrounding the site.

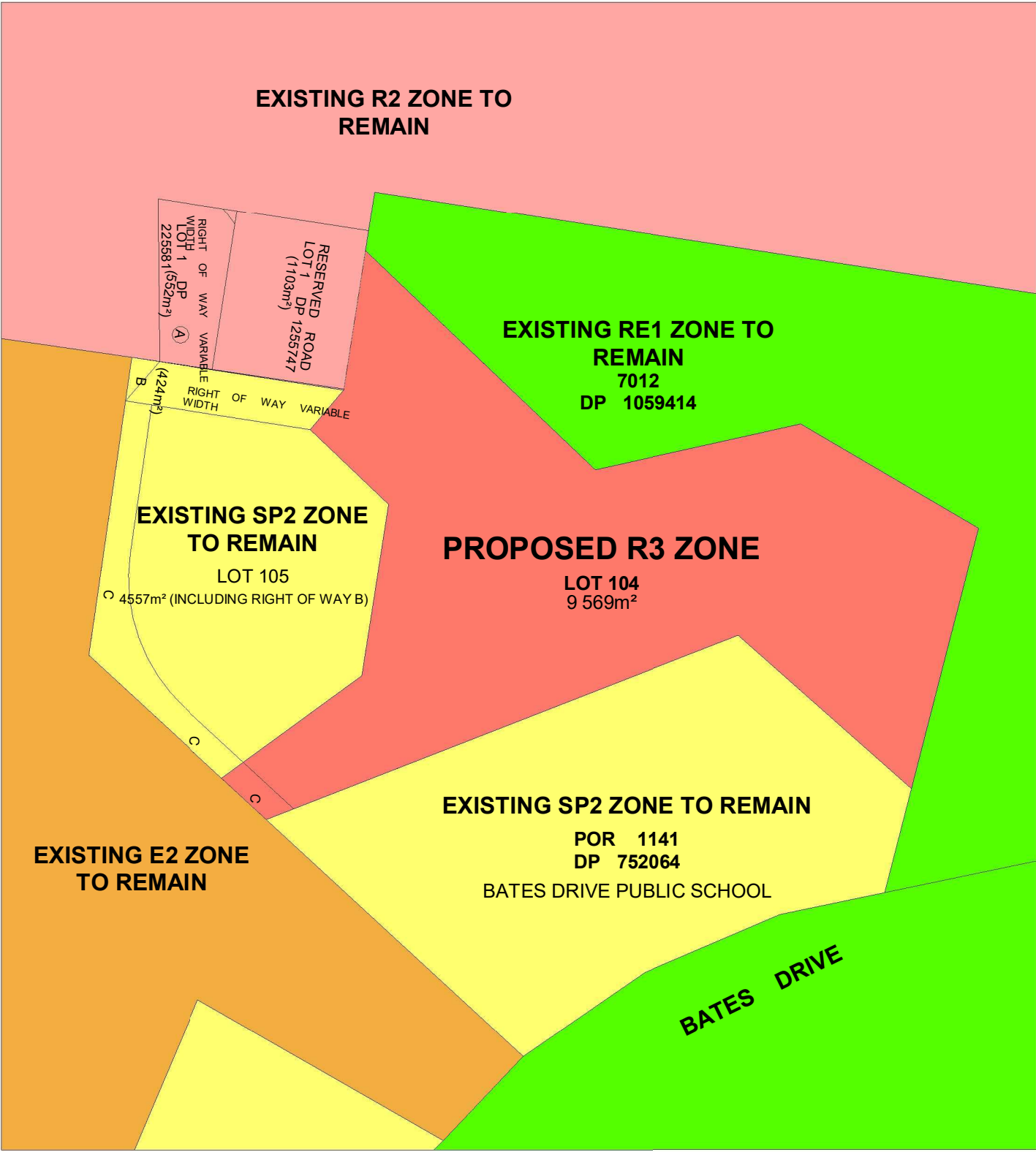
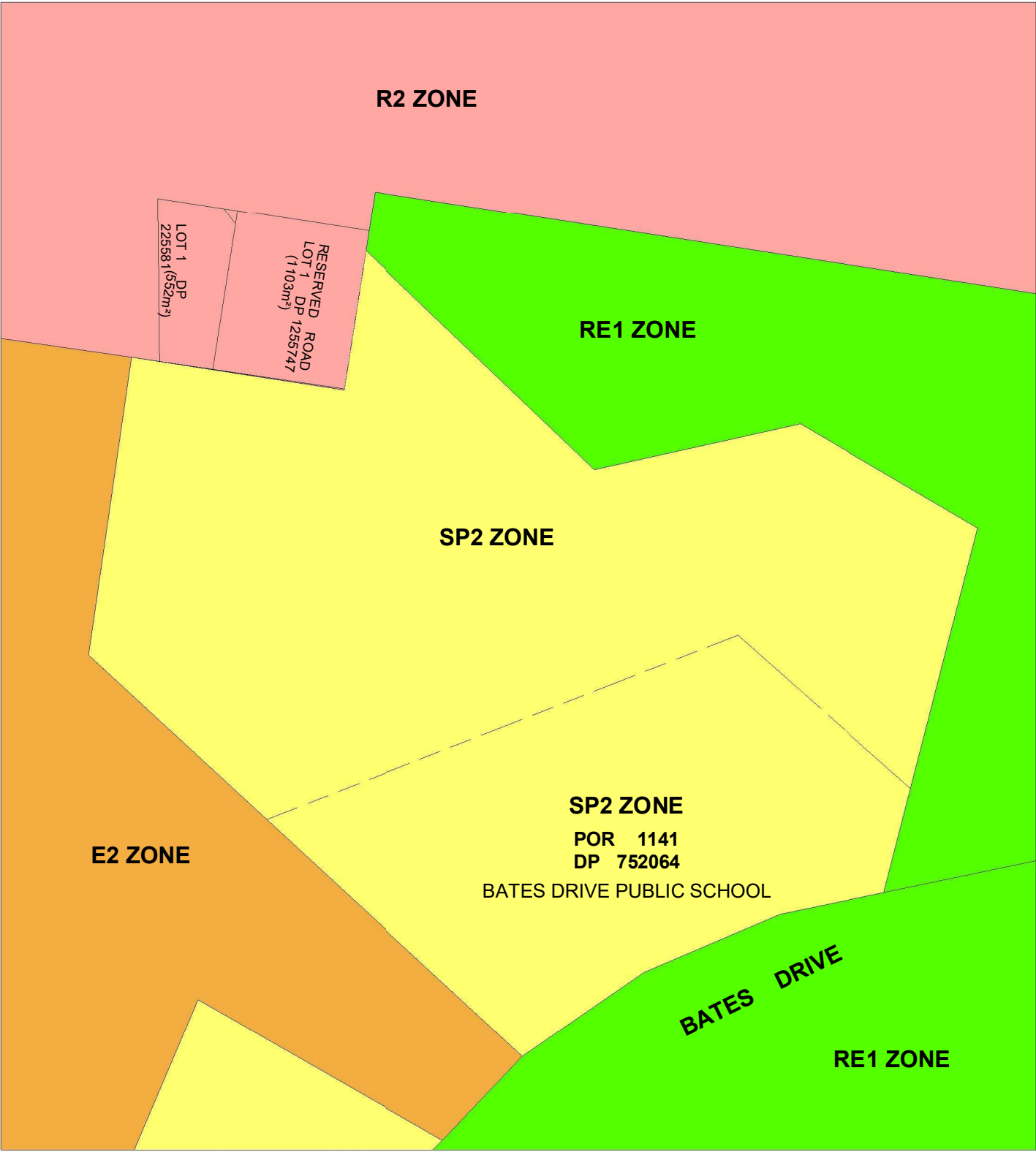
The concept plans depict a circulation roadway which will facilitate waste on site by Council's Waste Collection Vehicle, allowing for forward entry and forward exit from the site to Mikarie Place via the existing driveway.

The net change in traffic generation associated with the proposed development has been estimated to be some **-108** vehicle trips in both the AM and PM peak periods, with a reduction expected in both incoming and outgoing trips in both peak hours.

In view of the foregoing, the proposed change in zoning is fully supported in terms of its traffic and parking impacts.



ANNEXURE A: PROPOSED PLANS
(3 SHEETS)



1. Current Zoning Plan

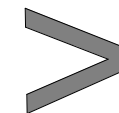
| | | |
|---|--|----------|
| C | Issue for Community Consultation | 04/05/20 |
| D | Updated issue for Community Consultation | 11/05/20 |
| F | Updated Tree Plan | 29/05/20 |

2. Proposed Zoning Plan



C Issue for Community Consultation
D Updated issue for Community Consultation
F Updated Tree Plan
G Issue for Planner Approval
J Issue for Planner Version R3
L Issue to Council Version R3

04/05/20
11/05/20
29/05/20
20/07/20
30/3/21
9/4/21



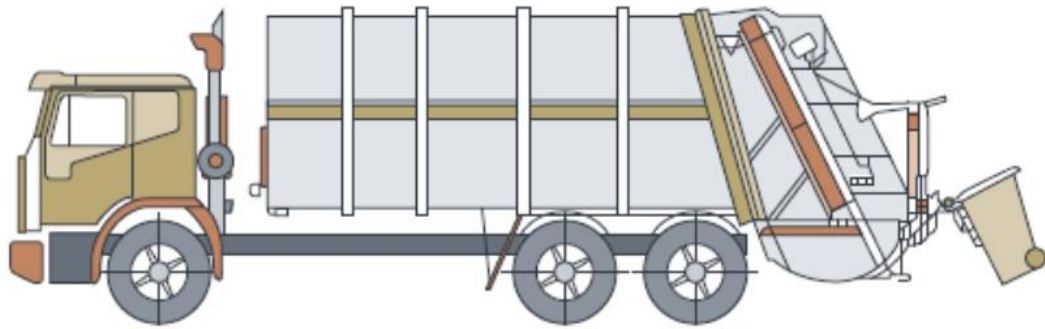
C Issue for Community Consultation
D Updated issue for Community Consultation
F Updated Tree Plan
G Issue for Planner Approval
J Issue for Planner Version R3
L Issue to Council Version R3

04/05/20
11/05/20
29/05/20
23/07/20
30/3/21
9/4/21



**ANNEXURE B: COUNCIL WASTE COLLECTION VEHICLE
SPECIFICATIONS**

(1 SHEET)



| Overall Length | Overall Width | Turning Circle | Travel height | Operational height |
|----------------|---------------|----------------|---------------|--------------------|
| 10.24m | 2.5m | 18m | 3.5m | 3.5m |

Figure 2: Typical Rear Loading Collection Vehicle

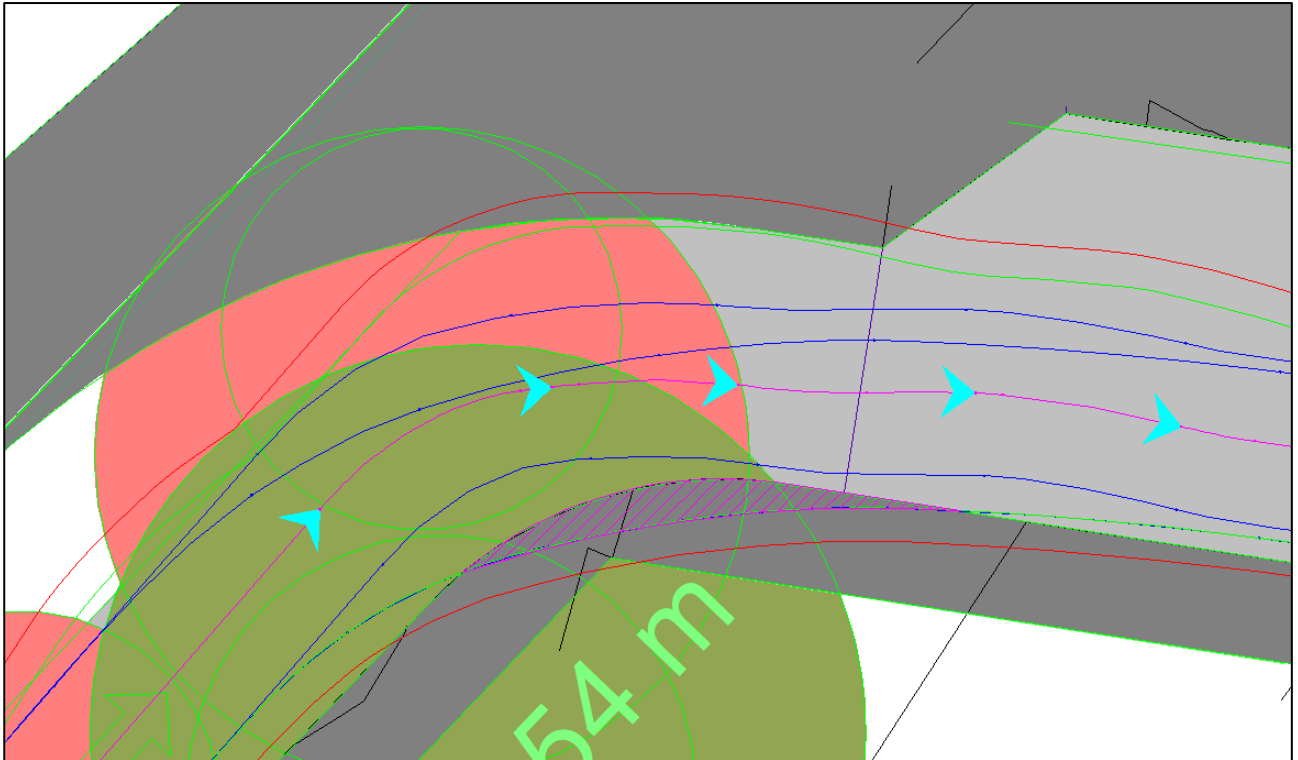


ANNEXURE C: SWEPT PATH TESTING
(2 SHEETS)

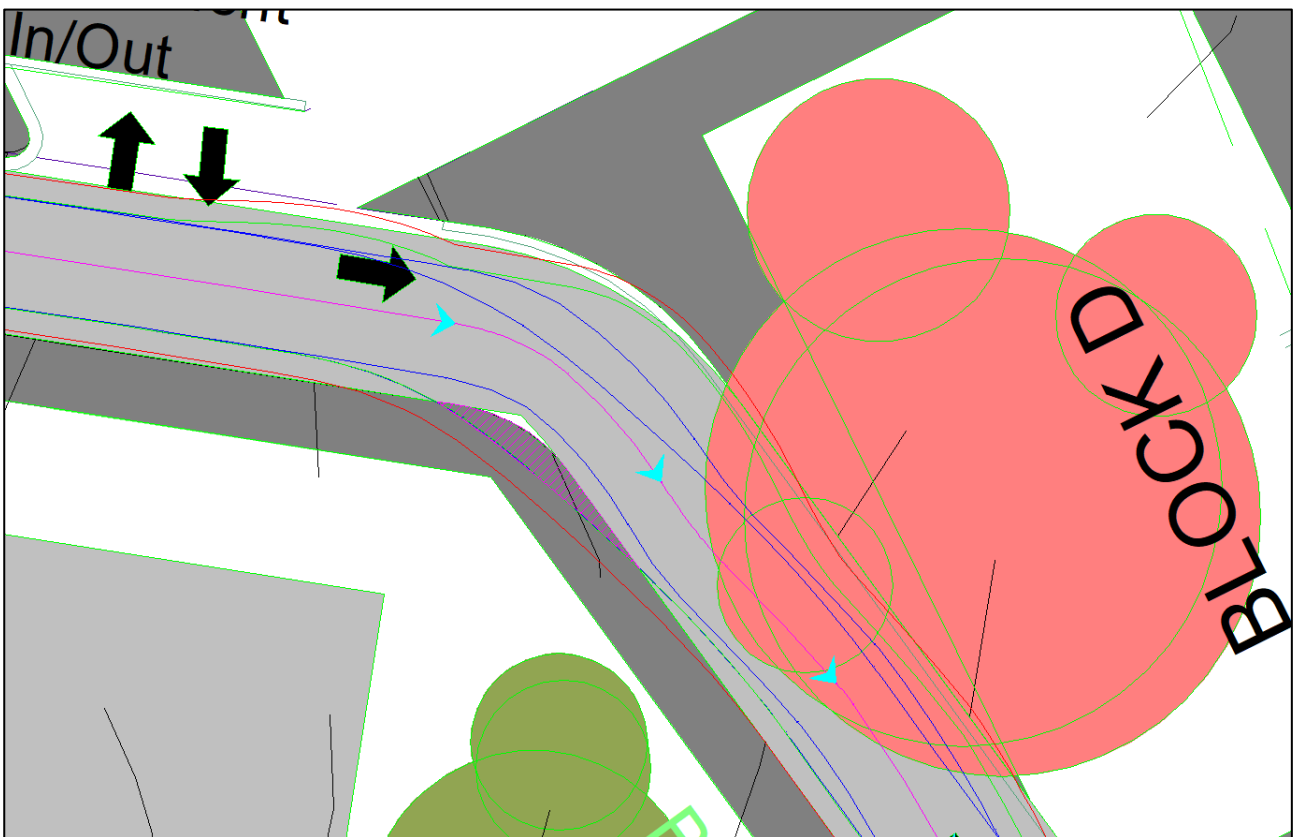


10.24M COUNCIL WASTE VEHICLE ON-SITE CIRCULATION

Successful subject to road widening as outlined below.



ROAD WIDENING REQUIRED NEAR BLOCK A



ROAD WIDENING REQUIRED NEAR BLOCK D