OPAL AGED CARE

TRAFFIC REPORT FOR PROPOSED RESIDENTIAL AGED CARE DEVELOPMENT, 56 QUARRY ROAD, BOSSLEY PARK

JUNE 2018

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1. INTRODUCTION

1.1 Colston Budd Rogers and Kafes Pty Ltd has been commissioned by Opal Aged Care to prepare a report examining the traffic implications of a proposed residential aged care development at 56 Quarry Road, Bossley Park. The site location is shown in Figure 1.

1.2 The site is occupied by an aged care facility which provides 80 beds, with access from Quarry Road. It is proposed to demolish the existing facility and provide a new aged care facility with 151 beds, with access also from Quarry Road. The application is being made under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

1.3 This report assesses the traffic implications of the proposed development through the following chapters:

- Chapter 2 - describing the existing conditions; and
- Chapter 3 - assessing the traffic implications of the proposed development.

2. EXISTING CONDITIONS

Site Location and Road Network

2.1 The site is at 56 Quarry Road, on the southern side of the road, between Bossley Road in the east and Marconi Road in the west. It is occupied by an aged care facility with some 80 beds and vehicular access from Quarry Road via a two-way driveway. The site also has frontage to Turquoise Crescent at the rear. Pedestrian access is provided to the site from Turquoise Crescent. Some 31 parking spaces are provided on the site. The site location is shown in Figure 1.

2.2 Surrounding land use is largely residential. There are churches and a school west of the site. Further east of the site there is a small retail centre.

2.3 Quarry Road connects to Mimosa Road in the east. West of the site it bends south before connecting to Bossley Road which in turn connects to Cowpasture Road. In the vicinity of the site, Quarry Road provides one traffic lane and one parking lane in each direction, clear of intersections. It forms part of a bus route. There are bus stops on both sides of the road, close to the site.

2.4 Turquoise Crescent is a cul-de-sac which provides access to residential properties. It provides for one traffic lane and one parking lane in each direction, clear of intersections. It has an unsignalised t-intersection with Bossley Road, east of the site.

Traffic Flows

2.5 Traffic generated by the proposed development will have its greatest effects during weekday morning and afternoon peak periods when it combines with weekday traffic on the surrounding road network. In order to gauge traffic conditions, counts were undertaken during morning and afternoon peak periods at the site access point on Quarry Road.

2.6 The results of the surveys are shown in Figures 2 and 3 and summarised in Table 2.1.

Table 2.1: Existing two-way (sum of both directions) peak hour traffic flows

Road	Location	AM peak hour	PM peak hour
Quarry Road	East of site access	365	450
	West of site access	365	445
Site access	South of Quarry Road	7	25

2.7 Table 2.1 shows that Quarry Road carried some 365 to 450 vehicles per hour two-way during the surveyed morning and afternoon peak hours. The site generated some seven and 25 vehicles per hour two-way during the morning and afternoon peak periods respectively.

Intersection Operations

2.8 The capacity of the road network is largely determined by the capacity of its intersections to cater for peak period traffic flows. The intersection of Quarry Road with the site access point has been analysed using the SIDRA program.

2.9 SIDRA simulates the operations of intersections to provide a number of performance measures. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. Based on average delay per vehicle, SIDRA estimates the following levels of service (LOS):

- For traffic signals, the average delay per vehicle in seconds is calculated as delay/(all vehicles), for roundabouts the average delay per vehicle in seconds is selected for the movement with the highest average delay per vehicle, equivalent to the following LOS:

0 to 14	=	"A"	Good
15 to 28	=	"B"	Good with minimal delays and spare capacity
29 to 42	=	"C"	Satisfactory with spare capacity
43 to 56	=	"D"	Satisfactory but operating near capacity
57 to 70	=	"E"	At capacity and incidents will cause excessive delays. Roundabouts require other control mode.
>70	=	"F"	Unsatisfactory and requires additional capacity

- For give way and stop signs, the average delay per vehicle in seconds is selected from the movement with the highest average delay per vehicle, equivalent to following LOS:

0 to 14	=	"A"	Good
15 to 28	=	"B"	Acceptable delays and spare capacity
29 to 42	=	"C"	Satisfactory but accident study required
43 to 56	=	"D"	Near capacity and accident study required
57 to 70	=	"E"	At capacity and requires other control mode
>70	=	"F"	Unsatisfactory and requires other control mode

2.10 It should be noted that for roundabouts, give way and stop signs, in some circumstances, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service A, except one which is at level of service E, may not necessarily define the intersection level of service as E if that movement is very small. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue was also involved.

2.11 The SIDRA analysis found that the intersection of Quarry Road and the site access operates with average delays of less than 15 seconds per vehicle in the peak periods. This represents level of service A/B, a good level of intersection operation.

Public Transport

2.12 The site is adjacent to bus services which operate along Quarry Road. There are bus stops on both sides of the road, adjacent to the site.

2.13 Local bus services are provided by Transit Systems. Route 806 connects Parramatta with Liverpool via Merrylands, Greystanes, Wetherill Park, Prairiewood, Abbotsbury, Edensor Park, Bonnyrigg and Mt Pritchard. Services are every 30 minutes in each direction, Monday to Saturday, and every 60 minutes in each direction on Sundays.

2.14 Route 808 connects Fairfield with Liverpool via Smithfield, Prairiewood, Bossley Park, Abbotsbury, Edensor Park, Bonnyrigg and Mt Pritchard. Services are every

30 minutes in each direction on weekdays and every 60 minutes in each direction on weekends.

2.15 The site therefore has good access to regular public transport services.

3. IMPLICATIONS OF PROPOSED DEVELOPMENT

3.1 It is proposed to demolish the existing building and construct a 151 bed residential aged care facility. Parking will be provided at-grade with access from Quarry Road. The application is being lodged under the Housing for Seniors SEPP. This chapter assesses the implications of the proposed development through the following sections:

- public transport;
- parking provision;
- access, servicing and internal layout;
- traffic effects; and
- summary.

Public Transport

3.2 As previously discussed, the site is adjacent to bus services which operate along Quarry Road. The site is therefore accessible by public transport.

3.3 The proposed development will increase residential densities close to existing public transport services. Increasing residential densities on the site is consistent with government objectives and the planning principles of:

a) improving accessibility to housing by walking, cycling and public transport;

b) improving the choice of transport and reducing dependence solely on cars for travel purposes;

c) moderating growth in the demand for travel and distances travelled, especially by car; and

d) supporting the efficient and viable operation of public transport services.

Parking Provision

3.4 The Housing for Seniors SEPP indicates that a development can not be refused on parking grounds if parking is provided at the following rates:

- one space per 10 beds; plus
- one space per two employees on duty at one time; and
- one parking space for an ambulance.

3.5 These requirements are similar to those in Chapter 12 of the Fairfield Citywide Development Control Plan, which includes a requirement of one space per 10 beds (with each space suitable for a driver with a disability), plus one space per two employees on site at the same time, plus a space for an ambulance.

3.6 The development proposes a total of 151 beds. Based on 36 employees, the proposed development would require 33 parking spaces. It is proposed to provide 33 spaces, which satisfies this requirement.

3.7 The Housing for Seniors SEPP includes a requirement that parking for residents in hostels and independent living units be provided as disabled parking. For residential aged care facilities, this requirement does not exist as residents do not typically drive vehicles.

3.8 A proportion of the parking (two spaces) will be for disabled users. This will provide for when visitors to the facility are taking residents out or bringing them back, or other occasional disabled visitors to the facility.

3.9 Provision for an ambulance is included on the site, in accordance with the SEPP and DCP.

Access, Servicing and Internal Layout

3.10 Vehicular access is proposed to be provided from Quarry Road, in the location of the existing site driveway.

3.11 Within the at-grade car park, parking spaces will be a minimum of 2.5 metres wide and 5.4 metres long. Spaces adjacent to obstructions will be 300mm wider to appropriately provide for doors to open. Disabled spaces will be a minimum of 2.4 metres wide, with an adjacent 2.4 metre wide area for wheelchairs. The minimum aisle width will be 5.8 metres and a further 300mm wider where a wall is located immediately adjacent the parking aisle. Dead end aisles will have a one metre extension for appropriate accessibility to end spaces. These dimensions are considered appropriate, being in accordance with the Australian Standard for Parking Facilities (Part 1: Off-Street Car Parking and Part 6: Off-Street Parking for People with Disabilities), AS 2890.1:2004 and AS 2890.6:2009.

3.12 A loading bay will be provided for garbage collection and deliveries. The bay will accommodate vehicles ranging in size up to 9.9 metre rigid trucks. Service vehicles will be able to enter and exit the site in a forward direction. Swept paths are shown in Figure 4.

Traffic Effects

3.13 Traffic generated by the proposed development will have its greatest effects during morning and afternoon peak periods when it combines with other traffic on the surrounding road network. Surveys undertaken by RMS found that housing for aged and disabled persons generates 0.1 to 0.2 vehicles per hour per dwelling. Based on surveys of the existing site, the development would generate 0.07 to 0.26 vehicles per hour per bed, a similar number.

3.14 With 71 additional beds proposed in the new development the increase in traffic generation would be some five to 15 vehicles per hour two-way at peak times. This is a low generation.

3.15 Such a low generation would not have noticeable effects on the operation of the surrounding road network. The site access point on Quarry Road would continue to operate at a good level of service (LOS A/B) during peak periods, with similar average delays per vehicle.

Summary

3.16 In summary, the main points relating to the traffic implications of the proposed development are:

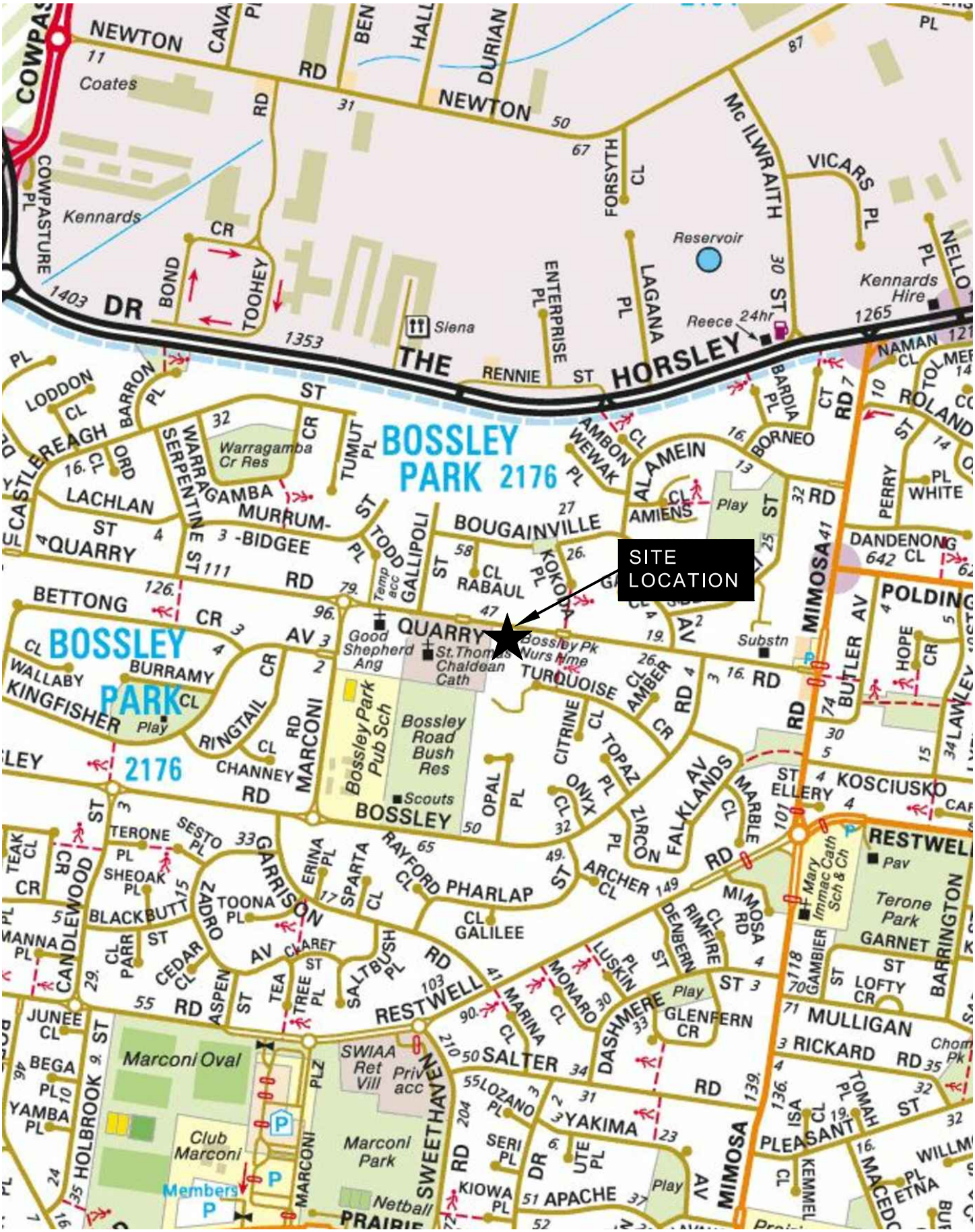
i) the proposed development would increase residential densities close to public transport services;

ii) the proposed parking provision is appropriate;

iii) access and internal layout will be provided in accordance with AS 2890.1:2004, AS 2890.2 – 2002 and AS2890.6:2009;

iv) the proposed development would have a low additional traffic generation, and

v) such a low generation would not have noticeable effects on the operation of the surrounding road network.



Location Plan

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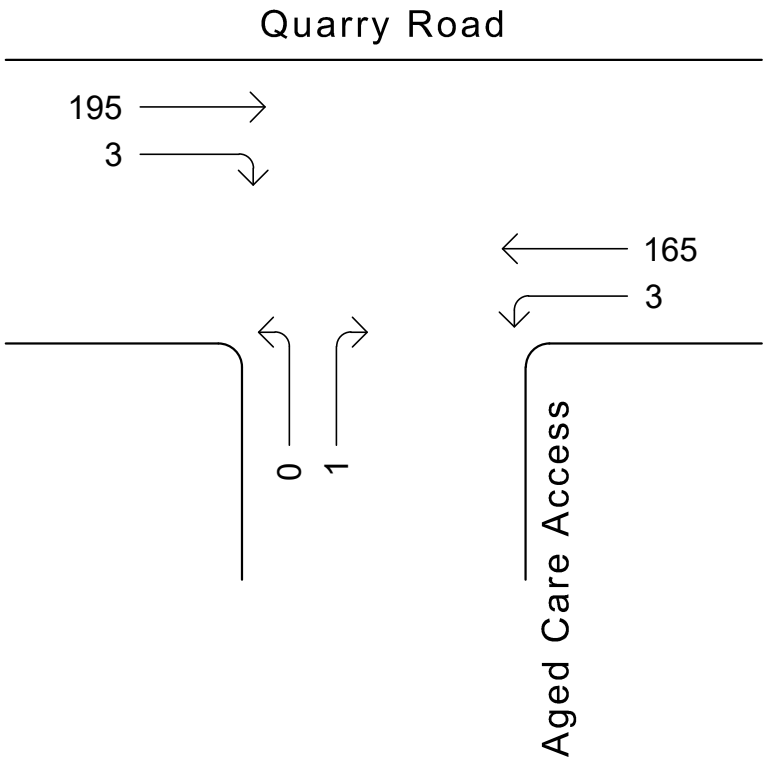
Figure 1



LEGEND

100 - Existing Peak Hour Traffic Flows
(+10) - Additional Development Traffic

Existing weekday morning peak hour traffic flows

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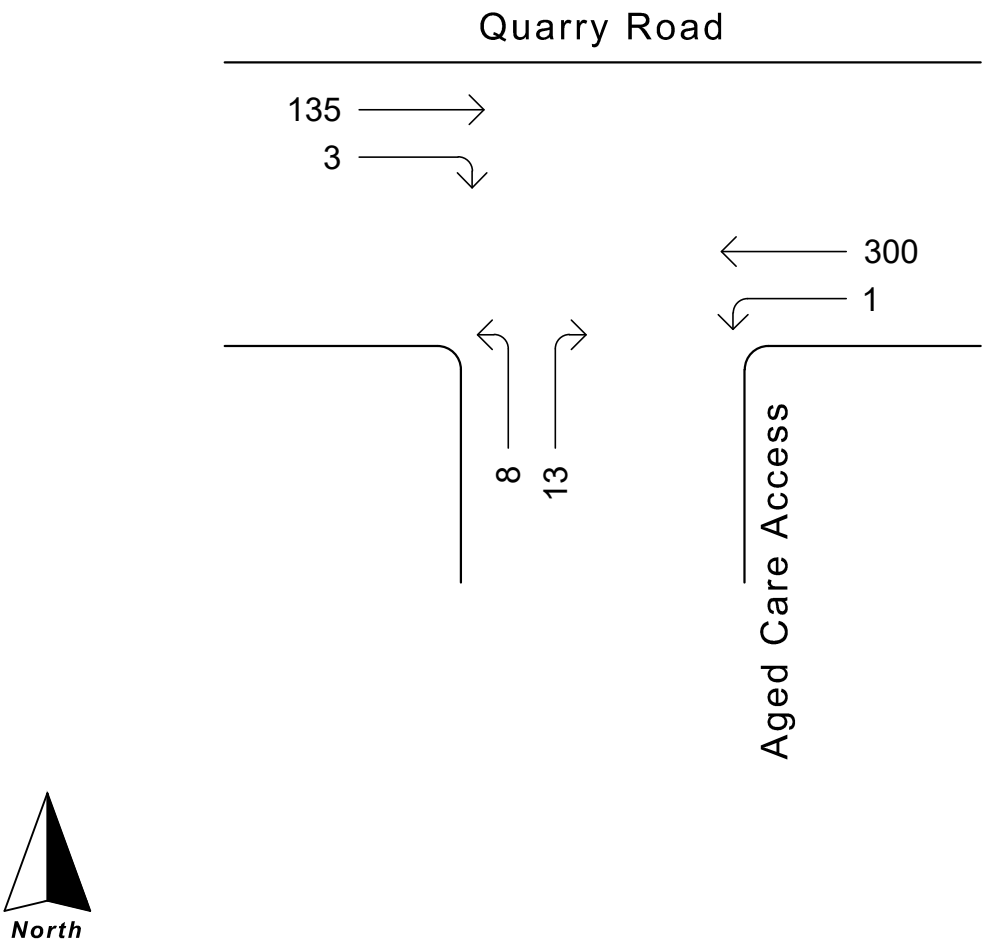
Figure 2



LEGEND

100 - Existing Peak Hour Traffic Flows
(+10) - Additional Development Traffic

Existing weekday afternoon peak hour traffic flows

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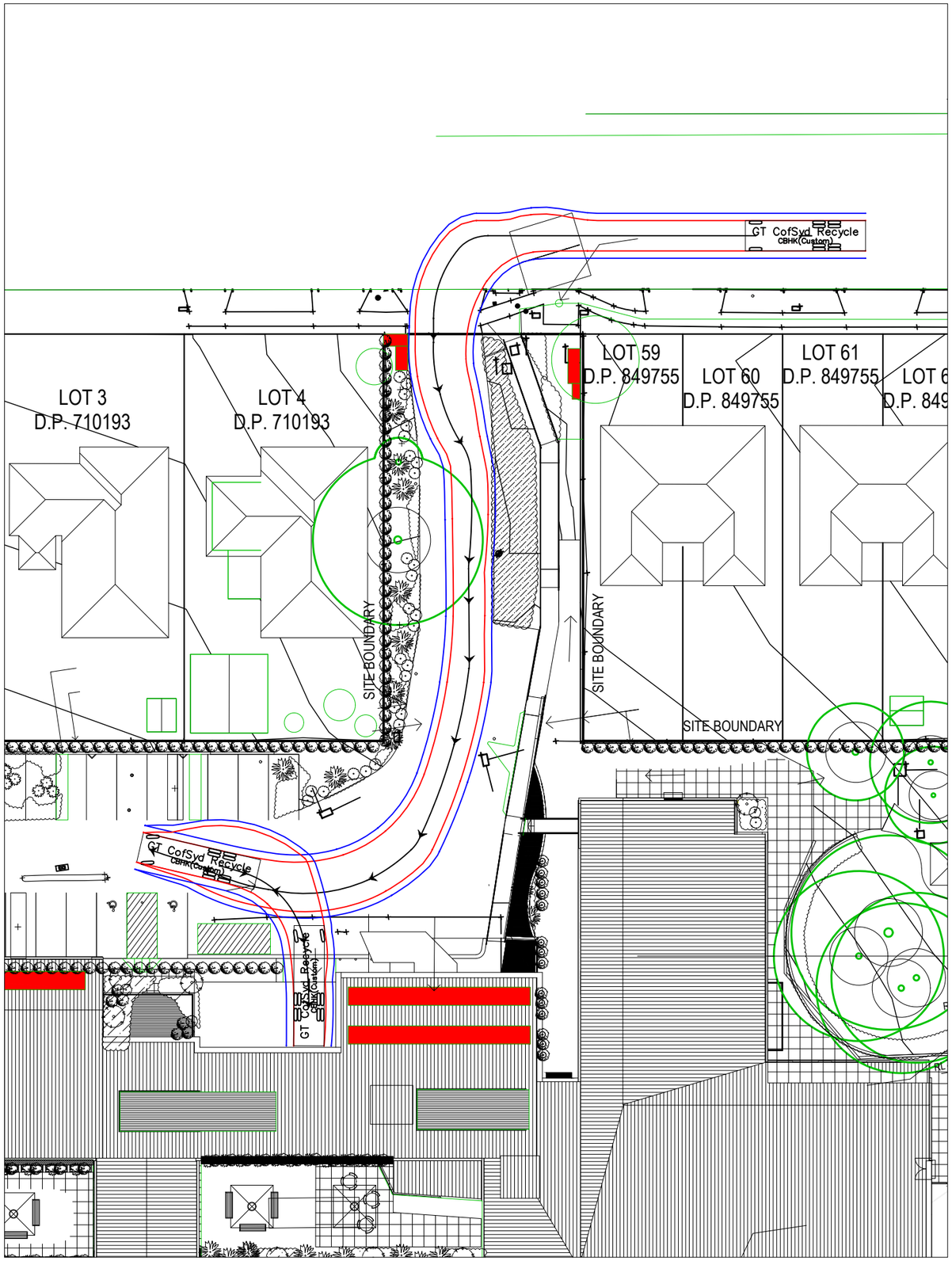
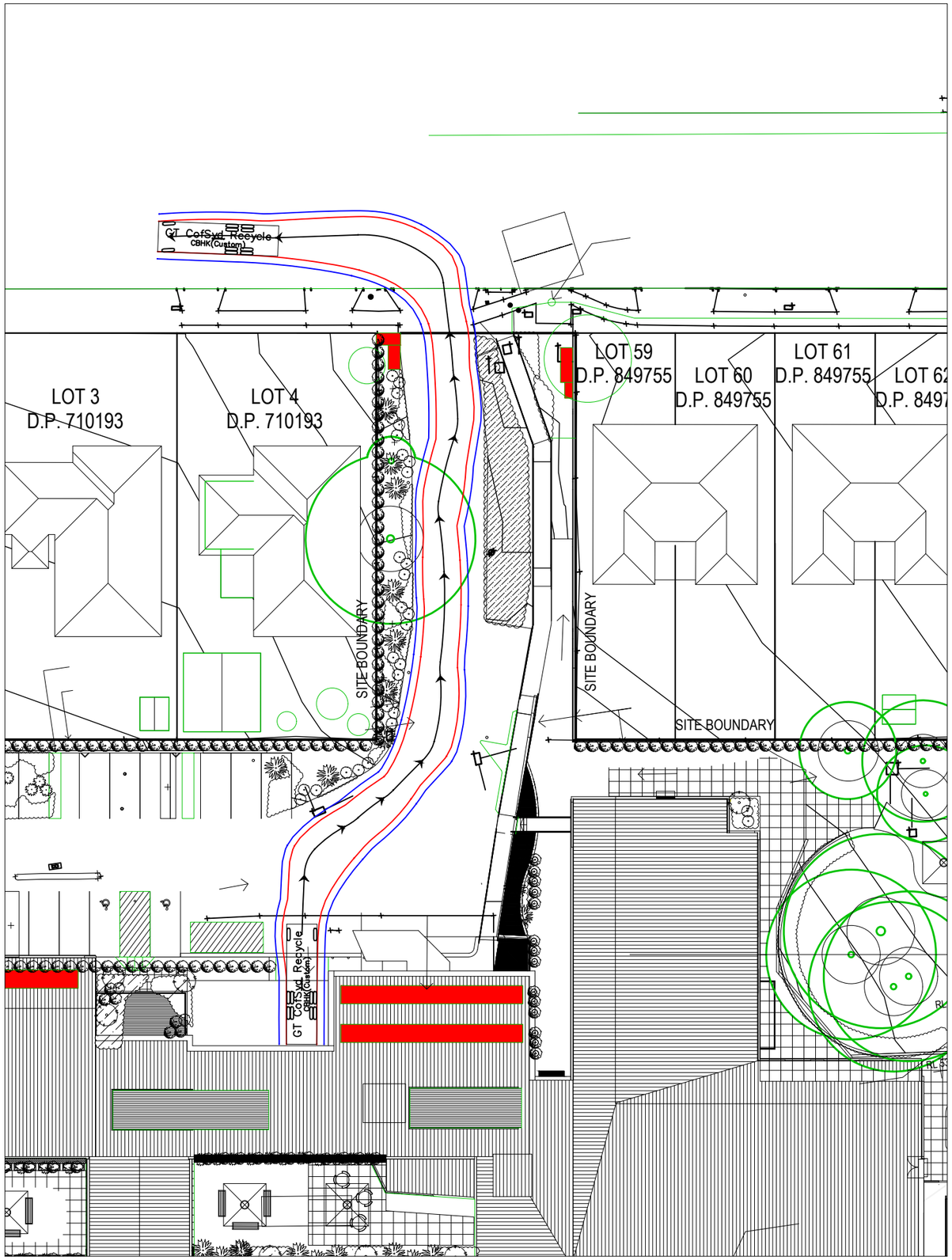
Figure 3





NOTE:
SKETCH PLAN ONLY. PROPERTY BOUNDARIES, UTILITIES, KERBLINES & DIMENSIONS ARE SUBJECT TO SURVEY AND FINAL DESIGN. TRAFFIC MEASURES PROPOSED IN THIS PLAN ARE CONCEPT ONLY AND ARE SUBJECT TO FINAL DESIGN BY CIVIL ENGINEERS.

Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

9.9m GARBAGE TRUCK SWEPT PATHS

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