

Opal St Clair

Proposed Residential Aged Care Facility

11 Explorers Way St Clair

Traffic and Parking Assessment

Ref: 20271

Date: August 2021

Issue: D

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1.0 Introduction

This report has been prepared for Opal Health Care to accompany a Development Application to Penrith City Council for a proposed Residential Aged Care Facility on Explorers Way at St Clair (Figure 1).

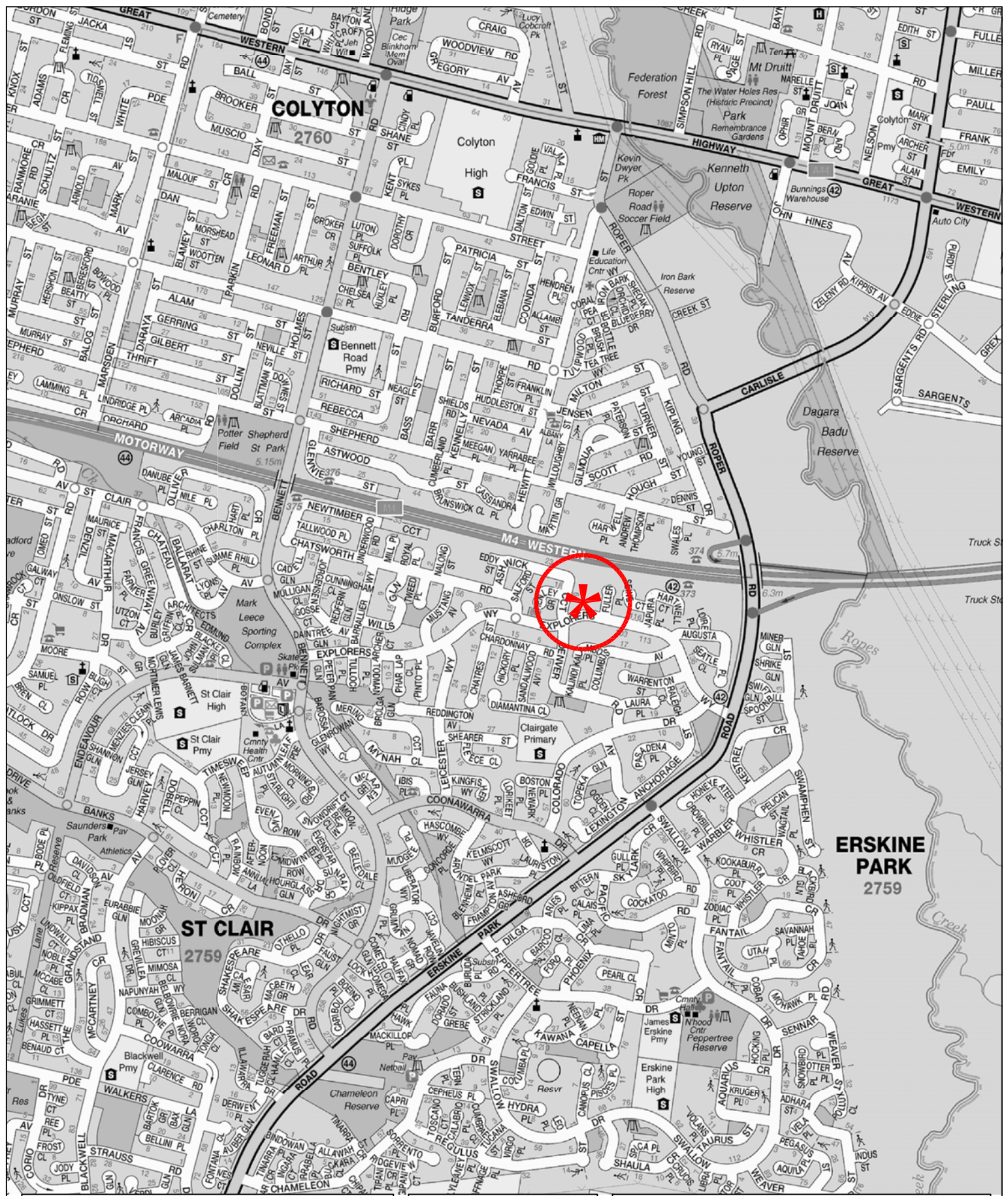
The increased ‘aging population’ in the Western Metropolitan Area is creating a need to provide additional retirement and aged care facilities. The large Opal site at St Clair is located within an established residential area, in a peaceful environment with nearby services and facilities presenting a suitable location for aged care accommodation.

The proposed development scheme involves:

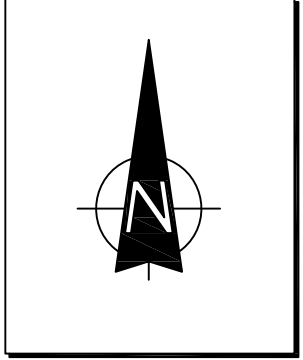
- a new 2 level building with 124 rooms (154 beds)
- an “allied health” element
- at-grade carparking

The purpose of this report is to:

- ❖ describe the site, its context and existing circumstances
- ❖ describe the proposed development scheme
- ❖ describe the road network and traffic conditions relevant to the site
- ❖ assess the proposed vehicle access arrangements
- ❖ assess the potential traffic implications
- ❖ assess the proposed parking, internal circulation and servicing arrangements
- ❖ respond to issues raised



LEGEND



LOCATION

FIG 1

2.0 Proposed Development Scheme

2.1 Site, Context and Existing Circumstances

The site (Figure 2) is Lot 36 in DP 239502 which occupies a generally rectangular shaped area of some 10,570m² with frontage to the northern side of Explorers Way and is bound to the north by the M4 Western Motorway.

The site is adjoined to the east and west by single residential dwellings (and some vacant land) while the St Clair retail centre is located just to the west. The Colyton, Erskine Park and St Clair residential areas which extend to the north, south and west, contain a number of schools, parks and sporting facilities.

There is an existing residential dwelling on the site with access on driveway on the Explorers Way frontage and the elevated northern part of the site has numerous mature trees.

2.2 Proposed Development

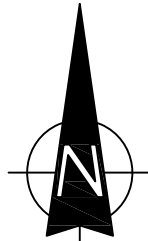
It is proposed to undertake minor earthworks on the southern and central part of the site to provide level platforms for the new building and hardstand areas. The new 2 level residential aged care building will be constructed through the centre of the site and will comprise:

- ❖ 138 high care beds and 16 dementia beds
- ❖ Allied Health Care 1 consulting room, 4 treatment rooms and a therapy room (with part time occupation)
- ❖ Associated facilities for the care of residents including kitchen and laundry facilities, dining rooms, lounge rooms, activity areas, an allied health facility, nurse stations, utility rooms, meeting rooms, staff facilities, café for residents and visitors



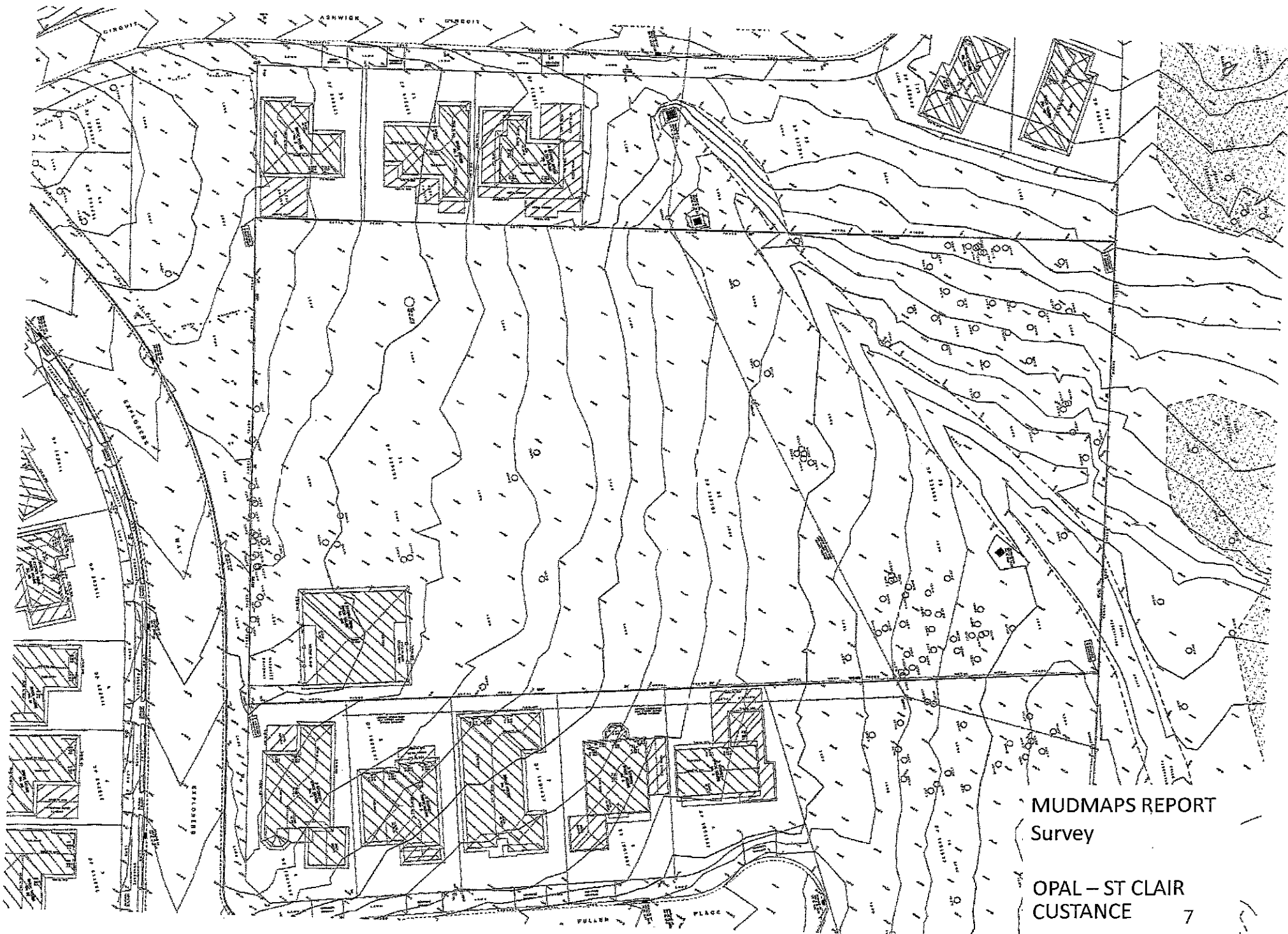
SITE

LEGEND



SITE

FIG 2



MUDMAPS REPORT
Survey

OPAL – ST CLAIR
CUSTANCE

Transport and Traffic Planning Associates

- ❖ 37 parking spaces and loading area with a separate porte cochere area for drop off/ pick up, ambulance and mini bus parking
- ❖ Vehicle accesses on Explorers Way located towards the eastern and western site boundaries
- ❖ Landscaping and purpose designed courtyards suitable for seniors with high care needs (including dementia)
- ❖ Up to 38 staff (max day time)

Details of the proposed development are provided on plans prepared by Custance Architects which accompany the Development Application and are reproduced in part in Appendix A.

3.0 Road Network and Traffic Conditions

3.1 Road Network

The road network serving the site (Figure 3) comprises:

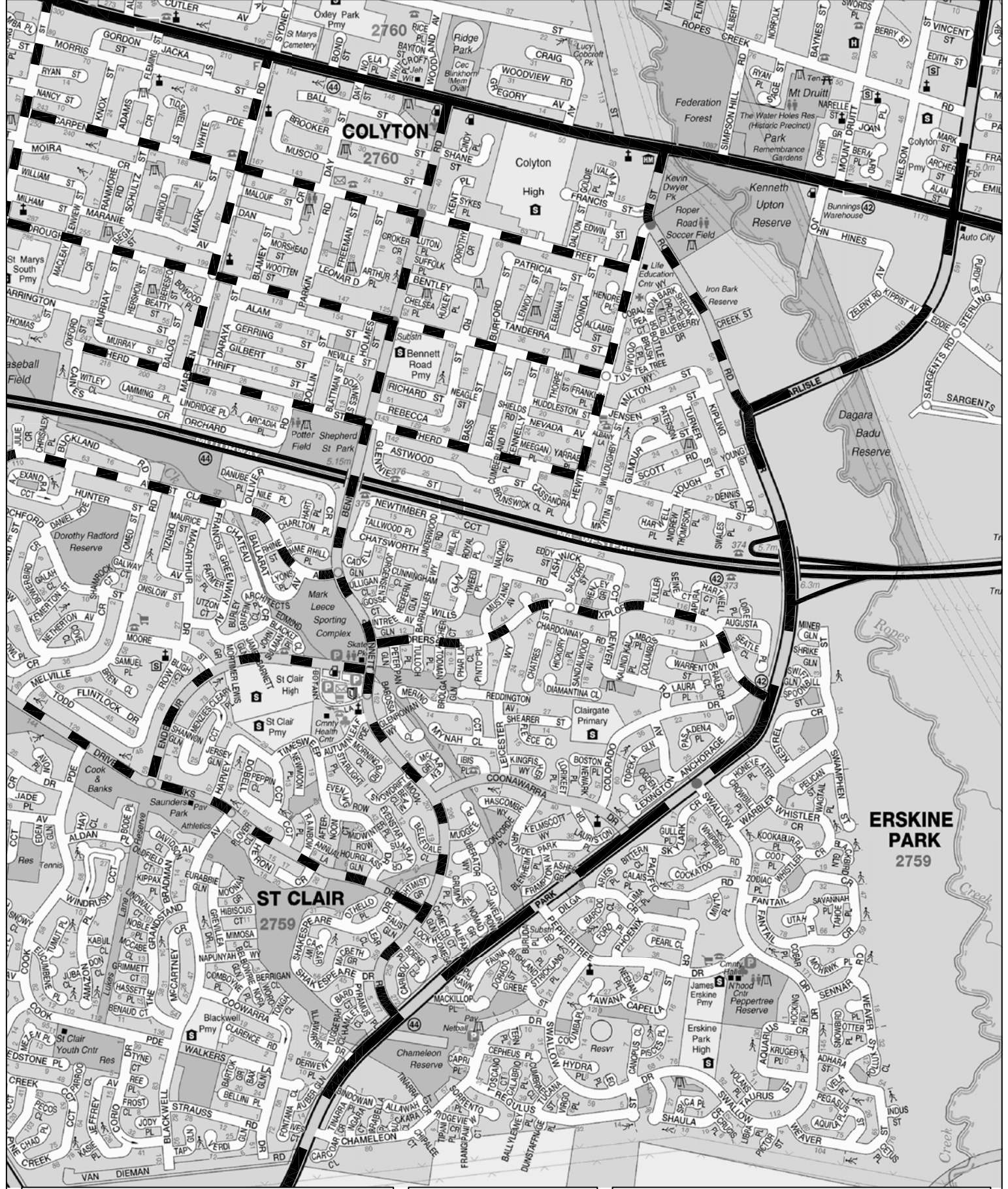
- ❖ *M4 Western Motorway* – a State Road and arterial route connecting between Westconnex and the Blue Mountains crossing
- ❖ *Great Western Highway* – a State Road and arterial route connecting between the City and the Blue Mountains crossing
- ❖ *Carlisle Street/Roper Road/Erskine Park Road* – a State Road and sub-arterial route connecting between the Great Western Highway and Mamre Road
- ❖ *Bennett Road* – a collector road connecting between the Great Western Highway and Erskine Park Road
- ❖ *Explorers Way* – a minor collector road connecting between Bennett Street and Roper Road

Explorers Way has a level slightly curved alignment with a 12.8m wide carriageway in the vicinity of the site.




3.2 Traffic Controls

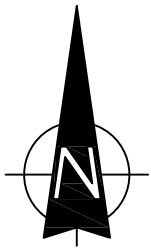
The existing traffic controls in the vicinity of the site (Fig 4) comprise:

- ❖ the roundabout at the Explorers Way and Salford Street intersection
- ❖ the roundabouts along Bennett Road including the Explorers Way intersection
- ❖ the 50 kmph speed restriction on the collector and local road system
- ❖ the traffic signals at intersections along the Roper Road/Erskine Park Road route
- ❖ the “Barrier” centre line along Explorers Way at the site frontage



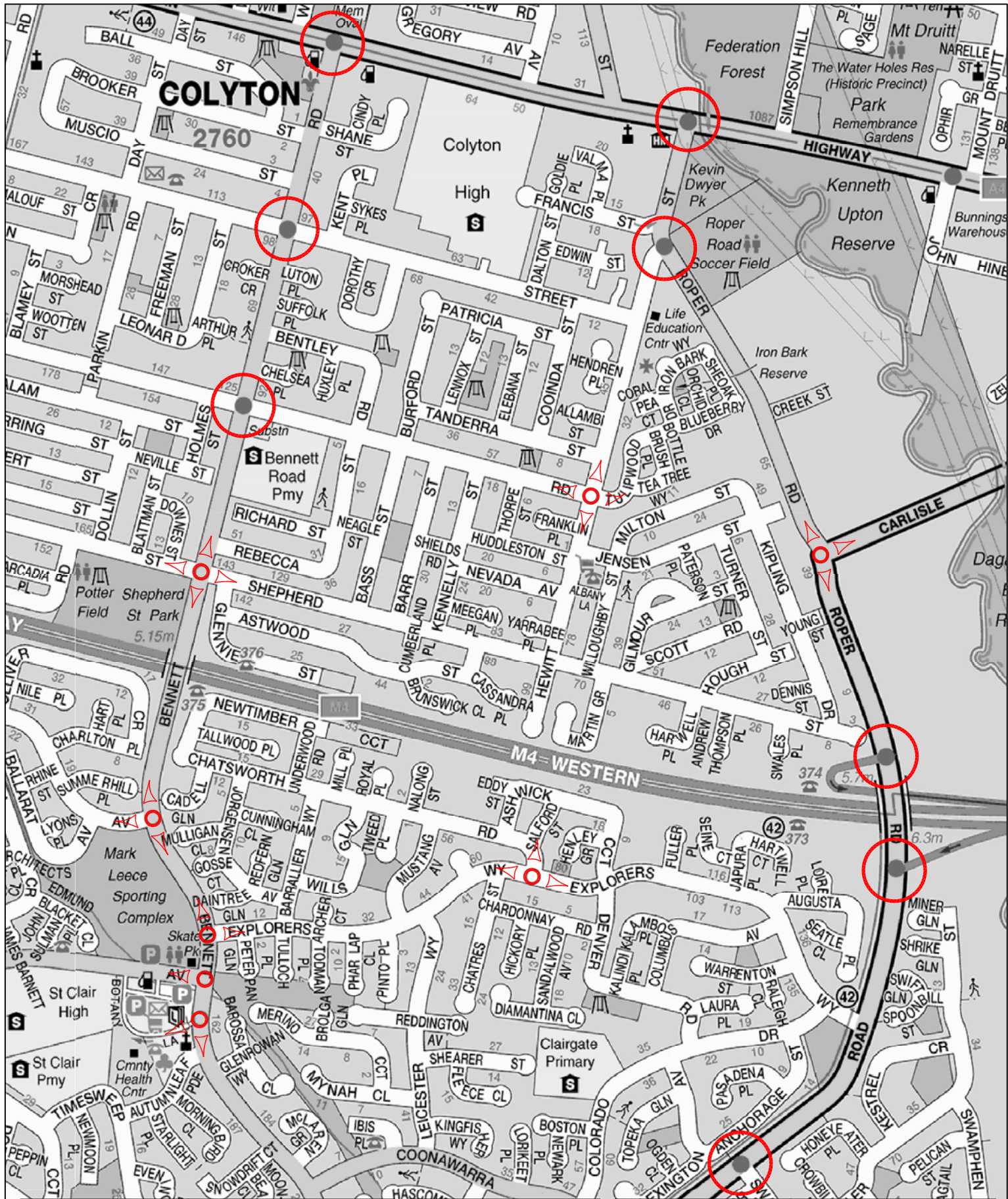
LEGEND

-  ARTERIAL
-  SUB-ARTERIAL
-  COLLECTOR






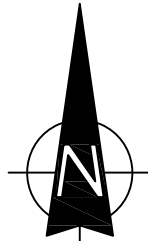
ROAD NETWORK

FIG 3



LEGEND

-  TRAFFIC SIGNAL CONTROL
-  ROUNDABOUT
-  RESTRICTED TURNING MOVEMENT



TRAFFIC CONTROLS

FIG 4

3.3 Traffic Conditions

The results of traffic surveys at the Erskine Road/Explorers Way during the morning and afternoon peak periods are provided in Appendix B and the traffic flows along Explorers Way are as follows:

	AM	PM
Eastbound	373	202
Westbound	76	149
Total:	449	351

The operational performance of intersections on the road system serving the site is quite satisfactory particularly as a result of the traffic signal and roundabout controls at the major intersections.

3.4 Transport Services

The existing public transport services in the vicinity of the site comprise the bus services shown on the diagram overleaf which comprise:

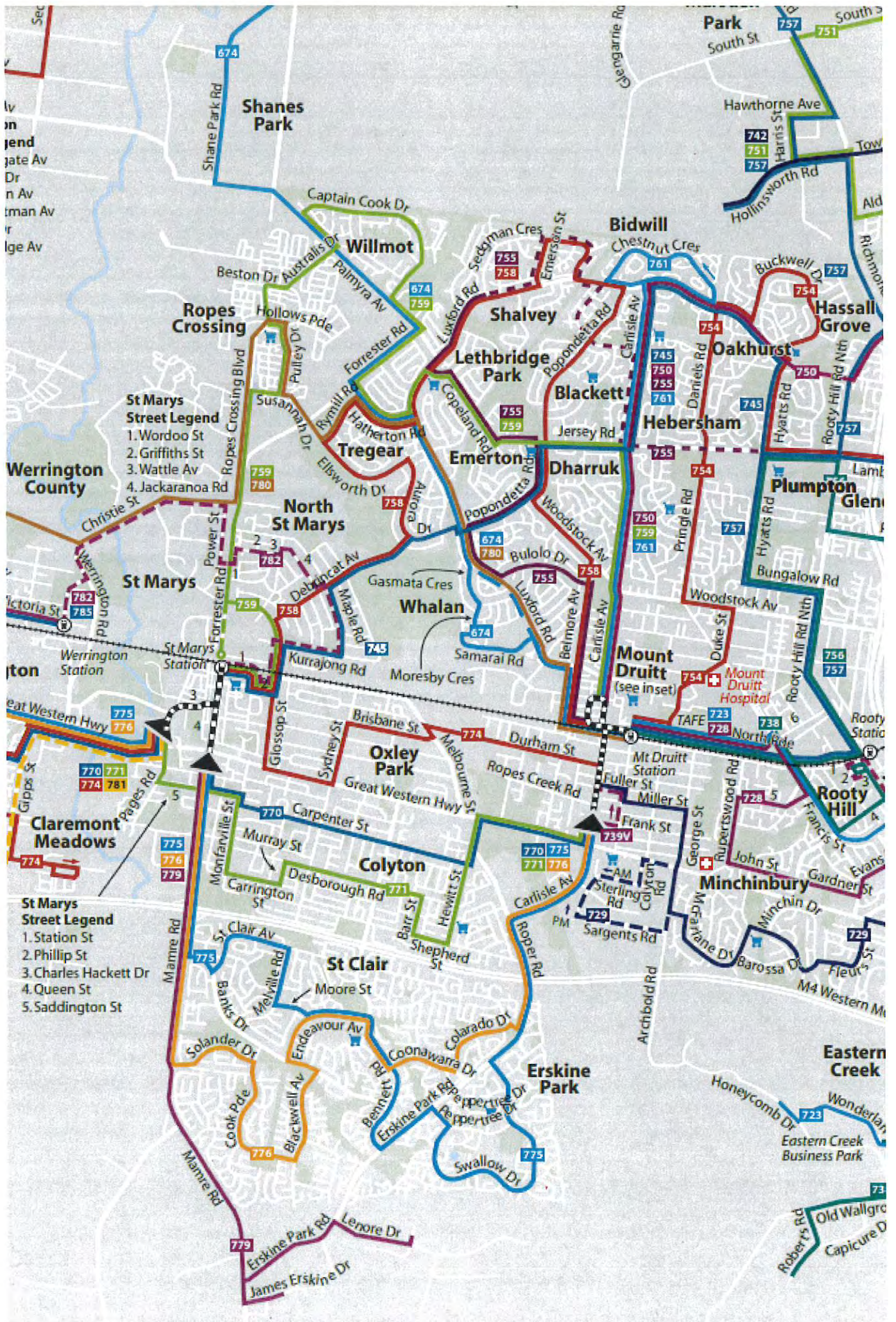
- ❖ Route 775 – which runs along Carlise Avenue, Roper Road and Swallow Drive
- ❖ Route 776 – which runs along Carlise Avenue, Roper Road and Colorado Drive/Coonawarra Drive

These routes, which pass some 500m to the east of the site, connect between Penrith and Mount Druitt.

3.5 Bicycles and Pedestrians

There is no sealed footpath along the site frontage on the northern side of Explorers Way although there is a narrow footpath along the southern side.

There is no provision for cyclists along Explorers Way and the nearest provision for bicycles is the shared path along the southern side of Endeavour Drive some distance to the west of the site (see details overleaf).





4.0 Parking

An indication of the appropriate parking provision for the proposed development is provided by the SEPP Guidelines and Council's DCP as follows:

SEPP (Residential Aged Care Facilities)

- 1 space per 10 beds
- 1 space per 15 dementia beds
- 1 space per 2 staff
- 1 space for ambulance

DCP (Health Consulting Rooms)

- 3 spaces per professional (at one time) plus
- 1 space per receptionist/support staff

Application of this criteria to the proposed development would indicate the following provision:

138 beds	13.8 visitor spaces (14)
16 beds (dementia)	1.06 space (1)
38 staff	19 staff spaces
Allied Health (1 consulting room, 4 treatment rooms and a therapy room)	3 spaces*
Total:	37 spaces plus ambulance

- * *A 50% downward adjustment has been applied to the standard DCP requirement due to the nature of this allied health facility which is 'in-house' being largely intended to save the RAC residents with only limited exposure to the wider community and part time occupation of the rooms.*

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It is proposed to provide a total of 37 parking spaces including 1 accessible spaces in at-grade areas plus provision for an ambulance in compliance with the SEPP and DCP requirements. A mini bus waiting bay is provided although the set down/pick up activity for this and the ambulance provision will be adjacent to the front door.

5.0 Traffic

The TfNSW Development Guidelines do not specify a traffic generation rate for RAC use and the sites surveyed for Technical Direction TDT 2013-4 do not provide details for RAC use. However, TTPA have undertaken surveys at a number of existing RAC sites in assisting with development schemes and the results of surveys at the Anglicare Kingswood RAC (see Appendix C) which has 102 beds indicate the following traffic generation during the morning and afternoon peak periods.

AM	PM
0.17 vtp/h	0.22 vtp/h

These traffic generation rates by coincidence are identical to the rates specified in the Institute of Transportation Engineers Trip Generation criteria also reproduced in Appendix C.

Dementia patients have fewer visitors and that would be reflected in the peak generation rates, however application of the TTPA survey rates to the proposed total beds would indicate the following:

	AM	PM
154 beds	26 vtp/h	34 vtp/h

It is anticipated that the Allied Health Care operation will generate a maximum of 2 vehicle trips per hour during the peak periods. It is apparent therefore that the total peak traffic outcome will be some 28 – 36 vtp/h.

Traffic of this minor magnitude being equivalent to some vehicle movement every 2 minutes is not significant particularly as this will be distributed to the east and west along Explorers Way and it is apparent that the proposed development will not have any adverse traffic implications on the surrounding road network.

6.0 Access, Internal Circulation and Servicing

Access

Vehicle access will involve a principal combined ingress/egress driveway on Explorers Way towards the western site boundary and a secondary egress driveway located at the eastern site boundary. The design of these driveways will comply with the requirements of AS2890.1 & 2 and while this section of Explorers Way has a curved alignment and there are good sight distances available.

Internal Circulation

The design of the car park areas will accord with the requirements of AS2890.1 & 6 and will ensure satisfactory access, manoeuvring and turning. Details of the turning path assessment for the parking area and porte cochere are provided in Appendix D.

Servicing

Refuse removal and deliveries (up to a 9.8m long rigid vehicle – see details overleaf) etc. will be undertaken using the proposed loading dock area while small service vehicles (service personnel, cleaners etc.) will also be able to use this area or the visitor spaces.

Details of turning path assessment for vehicles accessing the loading dock and for fire appliances are provided in Appendix D indicating satisfactory provision for turning and manoeuvring.



8. Rearlift Trucks



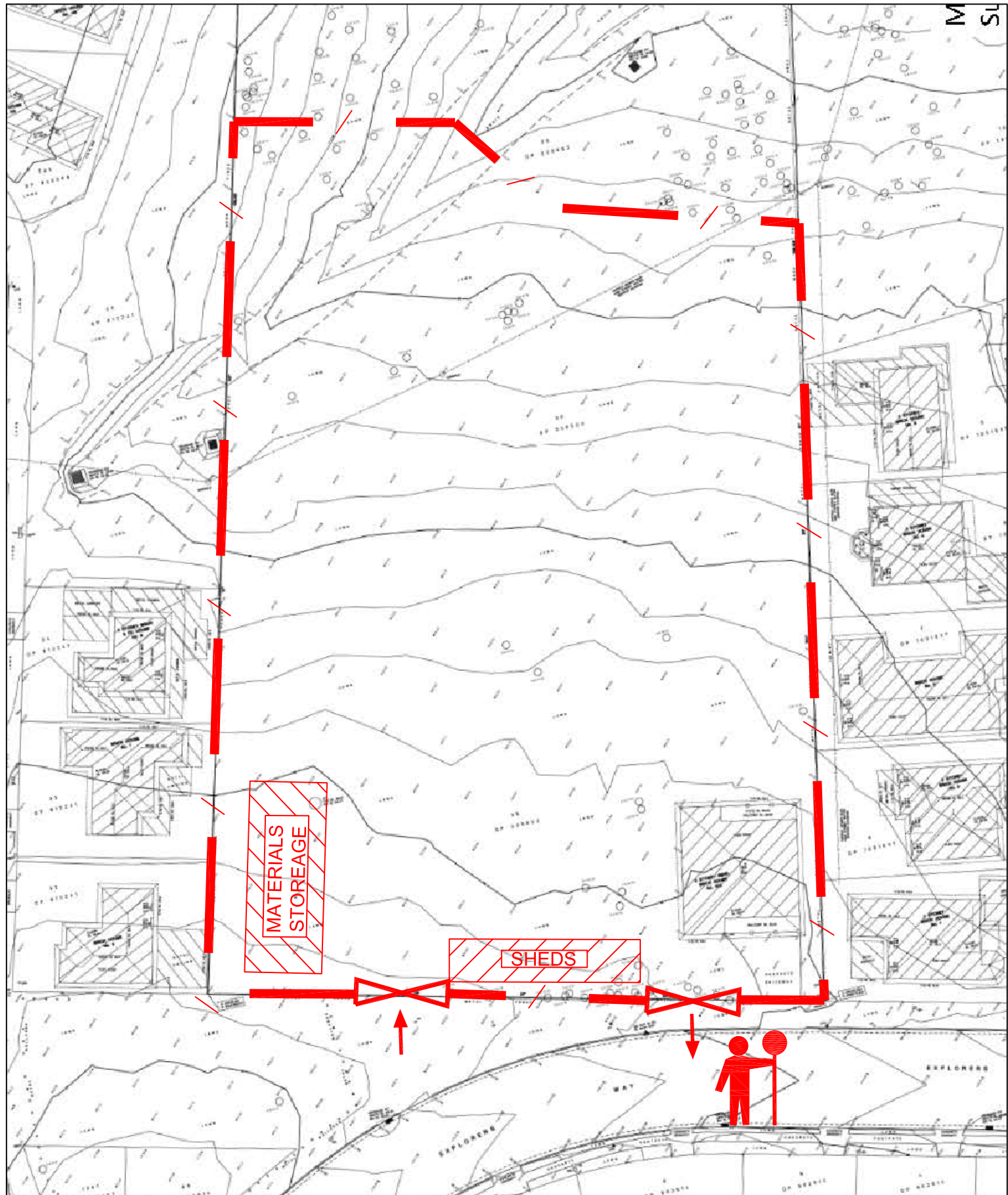
Rear Lift

Vehicle Specification	Measurement
Overall Length	9.8 metres
Travel Height	3.4 metres
Working Height	3.4 metres
Turning Circle Diameter	18.0 metres




7.0 Indicative Construction Traffic Management Plan

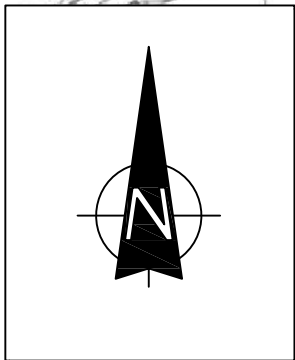
A detailed Traffic Management Plan will be prepared for the Construction Certificate documentation process. However, the principals of this plan will be as follows:

- ❖ vehicle accesses will be located on Explorers Way
- ❖ no on-street WORKS ZONE proposed
- ❖ worker parking to be provided on site (when constructed)
- ❖ all materials will be stored on-site
- ❖ truck routes will be restricted to those illustrated on Figure 5
- ❖ permit to be obtained for any temporary use of mobile crane
- ❖ traffic controller/s to be engaged to assist truck movements (as required)
- ❖ Type A fencing to be installed along boundary
- ❖ working hours as per Consent Condition
- ❖ the indicative TMP is shown on Figure 6



LEGEND

-  A CLASS FENCING
-  SITE ACCESS
-  RMS CERTIFIED TRAFFIC CONTROLLER



TRAFFIC MANAGEMENT PLAN

FIG 6

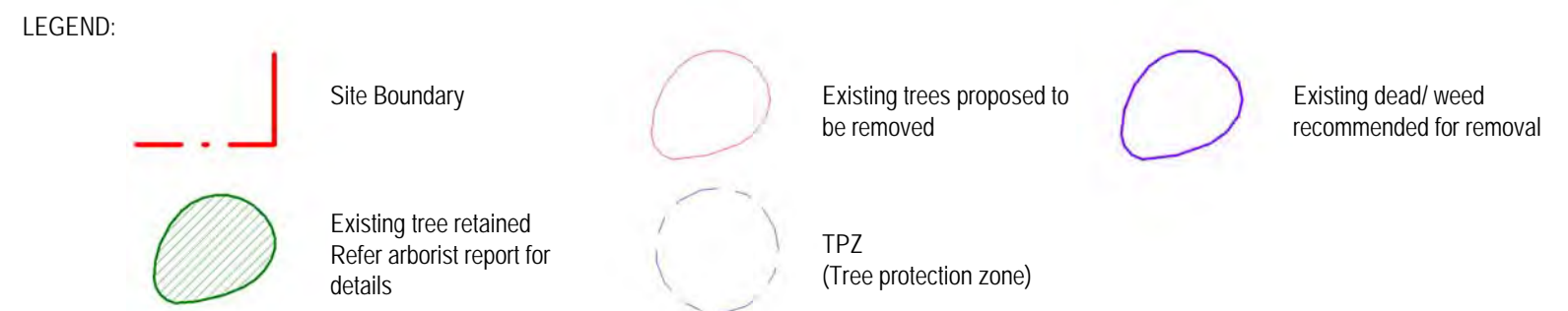


Tree No.	Species	Tree No.	Species	Tree No.	Species	Tree No.	Species	Tree No.	Species	Tree No.	Species	Tree No.	Species	Tree No.	Species		
1	Melaleuca decora (White Feather Honey Myrtle)	16	Melaleuca decora (White Feather Honey Myrtle)	30	Melaleuca decora (White Feather Honey Myrtle)	41	Melaleuca decora (White Feather Honey Myrtle)	51	Melaleuca decora (White Feather Honey Myrtle)	66	Melaleuca decora (White Feather Honey Myrtle)	75	Melaleuca decora (White Feather Honey Myrtle)	84	Melaleuca decora (White Feather Honey Myrtle)		
2	Melaleuca decora (White Feather Honey Myrtle)	17	Cupressus myrtifolia (Leyland Cypress)	31	Melaleuca decora (White Feather Honey Myrtle)	42	Melaleuca decora (White Feather Honey Myrtle)	52	Melaleuca decora (White Feather Honey Myrtle)	67	Melaleuca decora (White Feather Honey Myrtle)	76	Melaleuca decora (White Feather Honey Myrtle)	85	Melaleuca decora (White Feather Honey Myrtle)	94	Melaleuca decora (White Feather Honey Myrtle)
3	Melaleuca decora (White Feather Honey Myrtle)	18	Dead	32	Melaleuca decora (White Feather Honey Myrtle)	43	Melaleuca decora (White Feather Honey Myrtle)	54	Dead	68	Melaleuca decora (White Feather Honey Myrtle)	77	Melaleuca decora (White Feather Honey Myrtle)	86	Melaleuca decora (White Feather Honey Myrtle)	95	Melaleuca decora (White Feather Honey Myrtle)
4	Melaleuca decora (White Feather Honey Myrtle)	19	Eucalyptus longifolia (Woollybutt)	33	Melaleuca decora (White Feather Honey Myrtle)	44	Melaleuca decora (White Feather Honey Myrtle)	55	Melaleuca decora (White Feather Honey Myrtle)	69	Melaleuca decora (White Feather Honey Myrtle)	78	Melaleuca decora (White Feather Honey Myrtle)	87	Melaleuca decora (White Feather Honey Myrtle)	96	Melaleuca decora (White Feather Honey Myrtle)
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7	Melaleuca decora (White Feather Honey Myrtle)	22	Eucalyptus longifolia (Woollybutt)	36	Melaleuca decora (White Feather Honey Myrtle)	47	Melaleuca decora (White Feather Honey Myrtle)	58	Melaleuca decora (White Feather Honey Myrtle)	72	Eucalyptus longifolia (Woollybutt)	81	Melaleuca decora (White Feather Honey Myrtle)	90	Melaleuca decora (White Feather Honey Myrtle)	99	Melaleuca decora (White Feather Honey Myrtle)
8	Melaleuca decora (White Feather Honey Myrtle)	23	Melaleuca decora (White Feather Honey Myrtle)	37	Melaleuca decora (White Feather Honey Myrtle)	48	Melaleuca decora (White Feather Honey Myrtle)	61	Dead	73	Eucalyptus globoides (White Stringybark)	82	Eucalyptus fibrosa (Red Ironbark)	91	Melaleuca decora (White Feather Honey Myrtle)	100	Eucalyptus globoides (White Stringybark)
9	Melaleuca decora (White Feather Honey Myrtle)	24	Melaleuca decora (White Feather Honey Myrtle)	38	Melaleuca decora (White Feather Honey Myrtle)	49	Melaleuca decora (White Feather Honey Myrtle)	62	Melaleuca decora (White Feather Honey Myrtle)	74	Eucalyptus globoides (White Stringybark)	83	Melaleuca decora (White Feather Honey Myrtle)	92	Melaleuca decora (White Feather Honey Myrtle)	101	Melaleuca decora (White Feather Honey Myrtle)
10	Melaleuca decora (White Feather Honey Myrtle)	25	Pinus contorta (Shore Pine)	39	Melaleuca decora (White Feather Honey Myrtle)	50	Melaleuca decora (White Feather Honey Myrtle)	63	Melaleuca decora (White Feather Honey Myrtle)	76	Eucalyptus globoides (White Stringybark)	84	Melaleuca decora (White Feather Honey Myrtle)	93	Melaleuca decora (White Feather Honey Myrtle)	102	Melaleuca decora (White Feather Honey Myrtle)
11	Melaleuca decora (White Feather Honey Myrtle)	26	Melaleuca decora (White Feather Honey Myrtle)	40	Melaleuca decora (White Feather Honey Myrtle)			64	Melaleuca decora (White Feather Honey Myrtle)								
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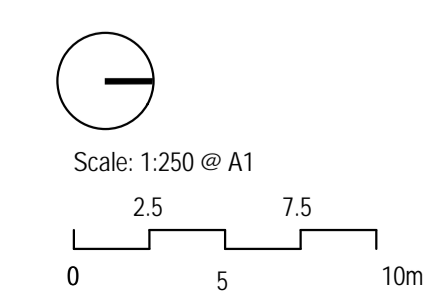
REFER TO Tree Assessment and Arborists Report by TreeIQ dated 06.11.2020 FOR DETAILS OF EXISTING TREES

TREE RETENTION AND REMOVAL PLAN

OPAL ST CLAIR
DEVELOPMENT APPLICATION



Note:
Survey drawing by Geomtra Consulting Survey Date 03.06.2020
Tree Assessment and Arborists Report by TreeIQ dated 06.11.2020



ISSUE:	FOR DA	REV:	A
CLIENT:	OPAL AGED CARE	CHECKED:	AL
SCALE:	1:250	JOB NO.:	20-0275
DATE:	18/05/2021	DESIGNED:	ND
DRAWN:	ND		

DRAWING: LA400
REV: A
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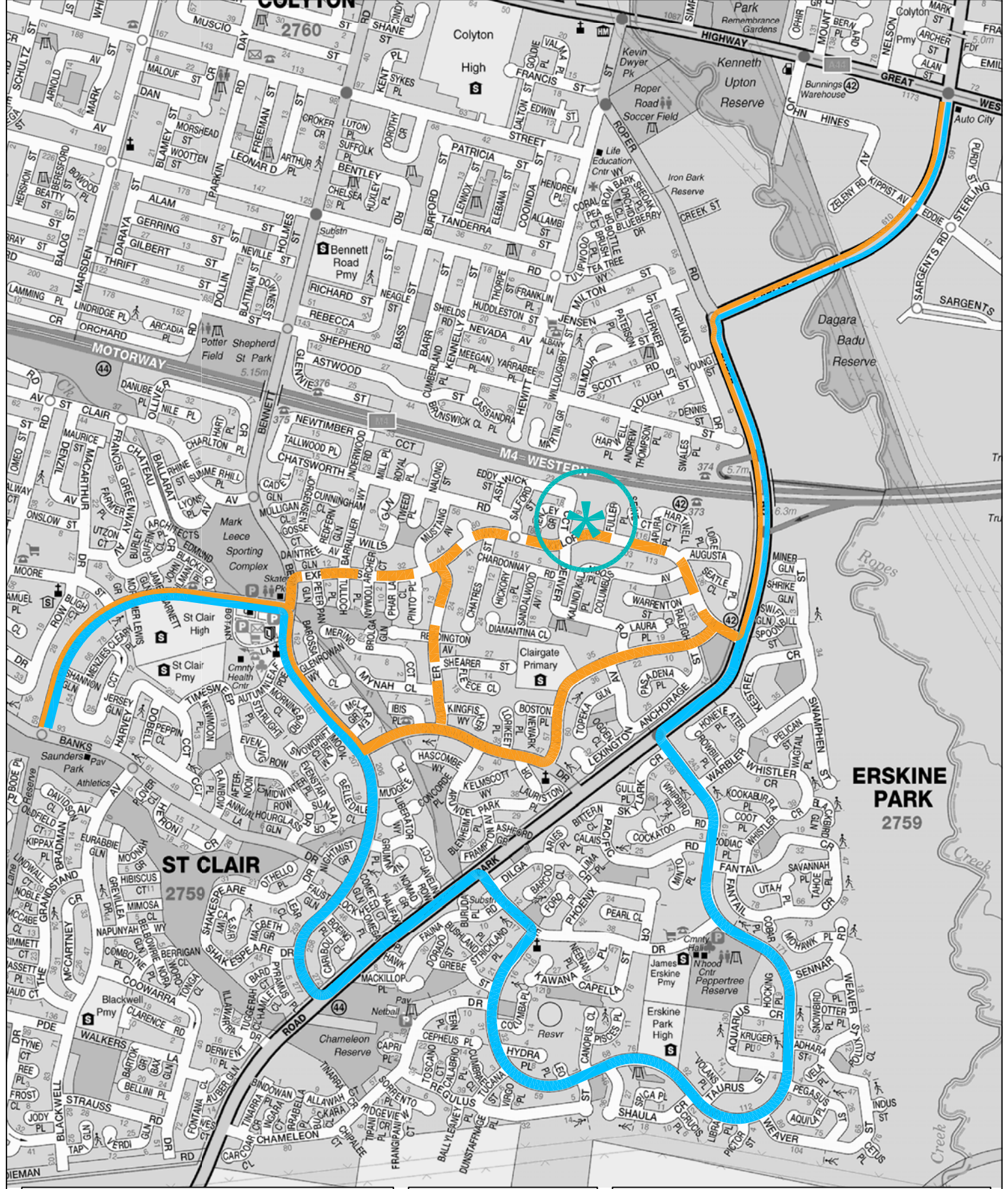
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F: +61 2 9387 8136
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8.0 Issues




Transport

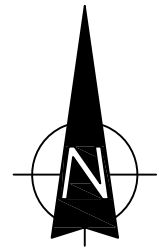
Council have raised the issue of whether an existing bus service could be diverted to serve the site. The existing Route 775 and 776 bus services operate some 500m to the east of the site. The only route which could be rerouted to pass the site would be 776, however due to the nature of the road network, this would no longer serve the Primary School and would be longer if via Leicester Way (see details overleaf).

The service provider was requested to consider this change to the bus route and their response rejecting the proposal is reproduced overleaf.



LEGEND

-  ROUTE 775
-  ROUTE 776
-  POTENTIAL ALTERNATE ROUTE



BUS SERVICES

9.0 Conclusion

The traffic, transport and parking assessment for the proposed Opal Aged Care facility at St Clair confirms that the development will:

- ❖ not present any unsatisfactory traffic implications
- ❖ incorporate a suitable and appropriate parking provision for the nature of the development
- ❖ incorporate suitable vehicle access, internal circulation and servicing arrangements



Appendix A

Development Plans





23/06/2021 2:27:20 PM

<table border="1"> <thead> <tr> <th>Revision</th> <th>Description</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Development Application Issue</td> <td>23/06/2021</td> </tr> </tbody> </table>	Revision	Description	Date	A	Development Application Issue	23/06/2021	<p>NOTES : DEVELOPMENT APPLICATION</p> <p>1. DESIGN RESOLUTION</p> <ul style="list-style-type: none"> The drawings represent general architectural intent for the purpose of this development application only. The internal layout is shown indicatively and is subject to further design development. The dimensions shown are general only and are subject to further design resolution. Location of car park entry point is general only and will be confirmed and dimensioned at later stage. The size and position of privacy screens, louvres is indicative and shown in open and closed positions. Please refer to Landscape drawings for Landscape component (shown indicatively only in this set) Location & sizes of plant, equipment, service areas and service risers on drawings is general and indicative only, and does not include minor elements, such as vent pipes, flues, aerials, etc. <p>2. GRAPHIC PRESENTATION</p> <p>Colours presented on drawings are generic only and indicative of the architectural design intent.</p> <p>3. EXISTING STRUCTURES AND SERVICES</p> <p>Extent and location of existing and proposed neighbouring structures and services is according to the available survey information and will need to be verified on site at later stage.</p>	<p>THIS DRAWING IS TO BE PRINTED IN COLOUR</p> <p>It is intended that the drawings only represent the visual design of the work. Any technical details are for outline purposes only. The Contractor/Manufacturer must separately provide all necessary shop drawings or calculations for compliance with any relevant industry, safety standards or Australian Standards, regulations or by-laws. Dimensions are to be checked on site, any discrepancies are to be referred to Custance Associates Pty Ltd. in writing, prior to proceeding. Use written dimensions only. Do not use scaled dimensions. Check for latest revision issue. ©Copyright of this drawing is vested with Custance Associates Pty Ltd. Nominated Architects: Craig Shelsler 8259</p>	<p>Consultants</p> <p>PROJECT MANAGER PACT PM www.pact.com.au</p> <p>LANDSCAPE ARCHITECT TAYLOR BRAMMER www.taylorbrammer.com.au</p> <p>STRUCTURAL & CIVIL ENGINEER HENRY & HYMAS www.henryandhymas.com.au</p> <p>MECHANICAL / ELECTRICAL / LIFTS / JHA www.jhaservices.com.au</p> <p>HYDRAULIC ENGINEER ACOR www.acor.com.au</p> <p>PLANNER BBC CONSULTING PLANNERS bbcplanners.com.au</p> <p>BCA / PCA / ACCESS CONSULTANTS FORMIGA1 www.formiga1.com.au</p> <p>FIRE ENGINEER INNOVA SERVICES PTY LTD www.innovaservices.com.au</p> <p>TRAFFIC ENGINEER TPA www.tpa.com.au</p> <p>BUSHFIRE CONSULTANTS BUILDING CODE & BUSHFIRE HAZARD SOLUTIONS PTY LTD</p>	<p>Client</p>  <p>Opal HealthCare</p> <p>SYDNEY Level 11/420 George Street, Sydney, NSW 2000 Australia PH. (02) 8241 1600 www.opalhealthcare.com.au</p>	<p>Architect</p>  <p>CUSTANCE</p> <p>Strategy Urban Design Architecture Interior Design</p> <p>SYDNEY Level 3, 87-89 Foveaux St, Sunny Hills, NSW 2010 Australia PH. (02) 9051 0177 www.custance.com.au Nominated Architect: Craig Shelsler (NSW #8259)</p>	<p style="text-align: center; border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">DA ISSUE</p> <p>Drawn: PJ Checked: RW Scale:</p>	<p>Project OPAL ST CLAIR RACF</p> <p>Project Address 94-100 EXPLORERS WAY, ST CLAIR NSW 2759</p> <p>Sheet Title 3D ISOMETRIC VIEW</p> <p>Project No. 3362 Sheet No. DA5.20 Revision A</p>
Revision	Description	Date											
A	Development Application Issue	23/06/2021											



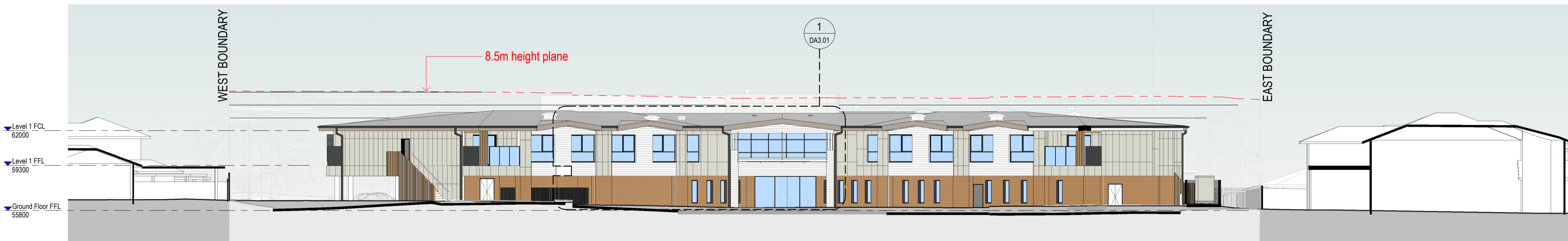
1 DA ELEVATION (EAST)
1: 200



2 DA ELEVATION (WEST)
1: 200



3 DA ELEVATION (NORTH)
1: 200



4 DA ELEVATION (SOUTH)
1: 200

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Revision	Description	Date
A	Development Application Issue	23/06/2021

NOTES : DEVELOPMENT APPLICATION

1. DESIGN RESOLUTION

- The drawings represent general architectural intent for the purpose of this development application only.
- The internal layout is shown indicatively and is subject to further design development.
- The dimensions shown are general only and are subject to further design resolution.
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- Please refer to Landscape drawings for Landscape component (shown indicatively only in this set)
- Location & sizes of plant, equipment, service areas and service risers on drawings is general and indicative only, and does not include minor elements, such as vent pipes, flues, aerials, etc.

2. GRAPHIC PRESENTATION

Colours presented on drawings are generic only and indicative of the architectural design intent.

3. EXISTING STRUCTURES AND SERVICES

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Consultants	Client	Architect
PROJECT MANAGER PACT PM www.pact.com.au LANDSCAPE ARCHITECT TAYLOR BRAMMER www.taylorbrammer.com.au STRUCTURAL & CIVIL ENGINEER HENRY & HYMAS www.henryandhymas.com.au MECHANICAL / ELECTRICAL / LIFTS / JHA www.jhaservices.com.au HYDRAULIC ENGINEER ACOR www.acor.com.au	Opal HealthCare SYDNEY Level 11/420 George Street, Sydney, NSW 2000 Australia PH. (02) 8241 1600 www.opalhealthcare.com.au	CUSTANCE Strategy Urban Design Architecture Interior Design SYDNEY Level 3, 87-89 Foveaux St, Surry Hills, NSW 2010 Australia PH. (02) 9051 0177 www.custance.com.au Nominated Architect: Craig Shelsler (NSW #8259)

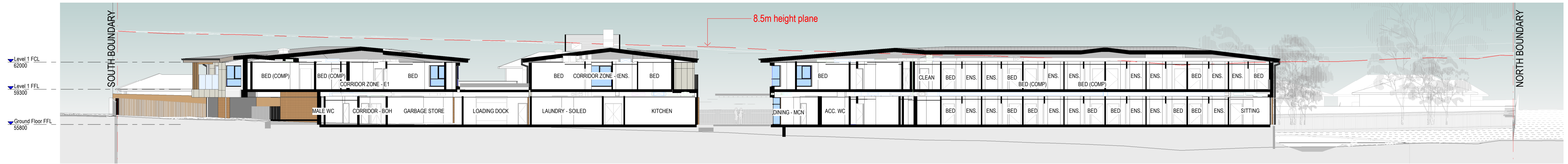
DA ISSUE

SCALE @ A1

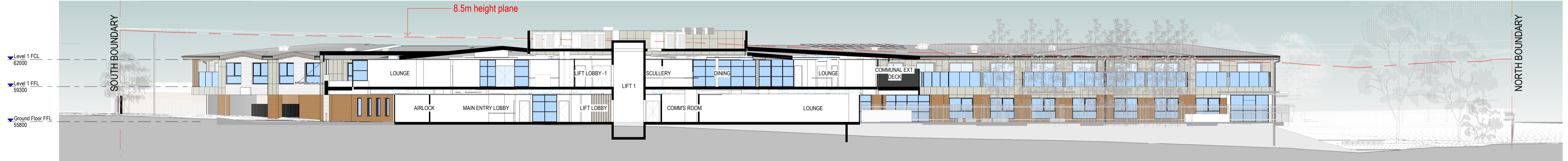
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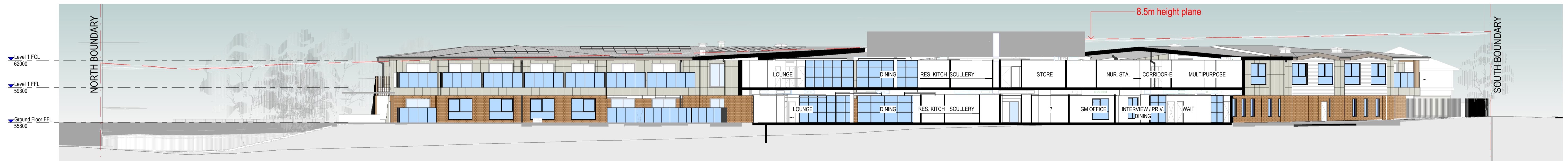
Project OPAL ST CLAIR RACF		
Project Address 94-100 EXPLORERS WAY, ST CLAIR NSW 2759		
Sheet Title EXTERNAL ELEVATIONS 1		
Project No. 3362	Sheet No. DA3.00	Revision A



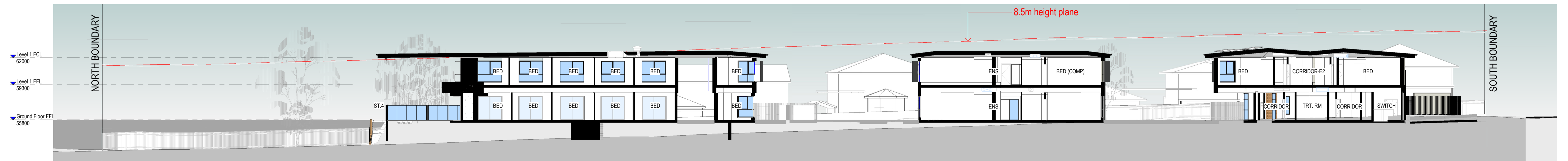
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A2000 1:200



2 LONGITUDINAL SECTION - 2
A2000 1:200



3 LONGITUDINAL SECTION - 3
A2000 1:200



4 LONGITUDINAL SECTION - 4
A2000 1:200

Revision	Description	Date
A	Development Application Issue	23/06/2021



NOTES : DEVELOPMENT APPLICATION

- DESIGN RESOLUTION**
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 - Extent and location of existing and proposed neighbouring structures and services is according to the available survey information and will need to be verified on site at later stage.

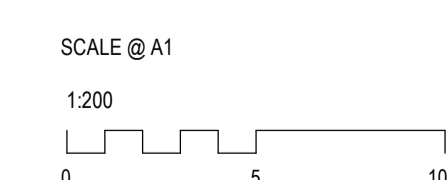
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Consultants	Client
PROJECT MANAGER PACT PM www.pact.com.au LANDSCAPE ARCHITECT TAYLOR BRAMMER www.taylorbrammer.com.au STRUCTURAL & CIVIL ENGINEER HENRY & HYMAS www.henryandhymas.com.au MECHANICAL / ELECTRICAL / LIFTS / JHA www.jhaservices.com.au HYDRAULIC ENGINEER ACOR www.acor.com.au	Opal HealthCare SYDNEY Level 11/420 George Street, Sydney, NSW 2000 Australia PH. (02) 8241 1600 www.opalhealthcare.com.au
PLANNER BBC CONSULTING PLANNERS bbcplanners.com.au BCA / PCA / ACCESS CONSULTANTS FORMIGA1 www.formiga1.com.au FIRE ENGINEER INNOVA SERVICES PTY LTD www.innovaservices.com.au TRAFFIC ENGINEER TTPA www.ttpa.com.au BUSHFIRE CONSULTANTS BUILDING CODE & BUSHFIRE HAZARD SOLUTIONS PTY LTD	Architect CUSTANCE Strategy Urban Design Architecture Interior Design SYDNEY Level 3, 87-89 Foveaux St, Surry Hills, NSW 2010 Australia PH. (02) 9051 0177 www.custance.com.au Nominated Architect: Craig Shelsler (NSW #8259)

DA ISSUE



SCALE @ A1
1:200

Drawn: PJ
Checked: RW
Scale: As indicated @ A1

Project OPAL ST CLAIR RACF		
Project Address 94-100 EXPLORERS WAY, ST CLAIR NSW 2759		
Sheet Title BUILDING SECTIONS		
Project No. 3362	Sheet No. DA3.10	Revision A



- ALLIED HEALTH
- BALCONY
- BOH
- CIRCULATION
- COMMUNAL
- COMPANION BED
- ELECTRICAL
- ENSUITE
- EXTERNAL
- FRONT OF HOUSE
- SERVICES
- SINGLE BED
- SINGLE BED [LARGE] - GROUND LEVEL
- STAFF
- SUPPORT
- WC

EXTENT OF ASSET PROTECTION ZONE (APZ)

124 Bedrooms - 154 Beds
 • 94 single bedrooms
 • 30 companion rooms

37 car spaces

Revision	Description	Date
A	Development Application Issue	23/06/2021

NOTES : DEVELOPMENT APPLICATION

1. DESIGN RESOLUTION
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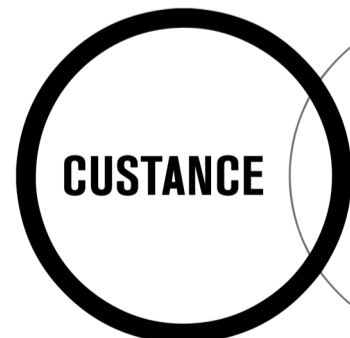
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www.tppa.com.au
 - BUSHFIRE CONSULTANTS**
BUILDING CODE & BUSHFIRE
HAZARD SOLUTIONS PTY LTD

Client



Opal HealthCare
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Architect



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 Surry Hills, NSW 2010
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 www.custance.com.au
 Nominated Architect: Craig Shelsler (NSW #8259)

DA ISSUE

NORTH

SCALE @ A1
 1:200
 0 5 10M

Drawn: JP
 Checked: RW
 Scale: As indicated @ A1

Project
OPAL ST CLAIR RACF

Project Address
**94-100 EXPLORERS WAY, ST CLAIR
 NSW 2759**

Sheet Title
GROUND FLOOR

Project No.
3362

Sheet No.
DA1.20

Revision
A



- ALLIED HEALTH
- BALCONY
- BOH
- CIRCULATION
- COMMUNAL
- COMPANION BED
- ELECTRICAL
- ENSUITE
- EXTERNAL
- FRONT OF HOUSE
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- SINGLE BED [LARGE] - GROUND LEVEL
- STAFF
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- WC

EXTENT OF ASSET PROTECTION ZONE (APZ)

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37 car spaces

Revision	Description	Date
A	Development Application Issue	23/08/2021

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DA ISSUE

NORTH

SCALE @ A1
 1:200
 0 5 10M

Drawn: JP
 Checked: RW
 Scale: As indicated @ A1

Project
OPAL ST CLAIR RACF

Project Address
**94-100 EXPLORERS WAY, ST CLAIR
 NSW 2759**

Sheet Title
LEVEL 1

Project No.
3362

Sheet No.
DA1.21

Revision
A

Appendix B

Traffic Survey Results



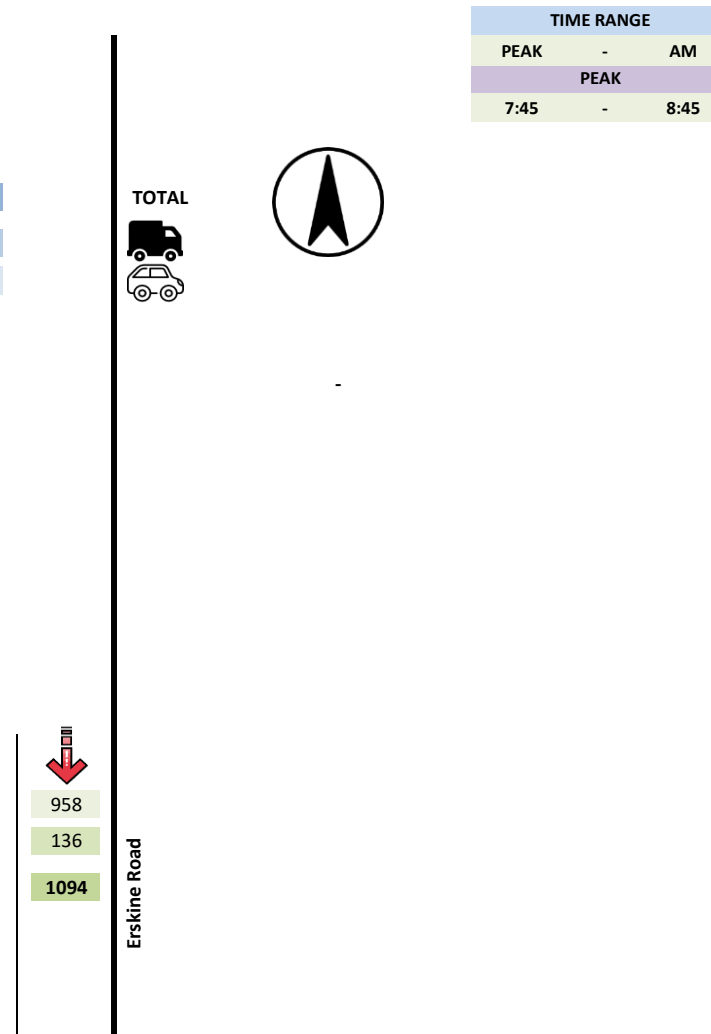
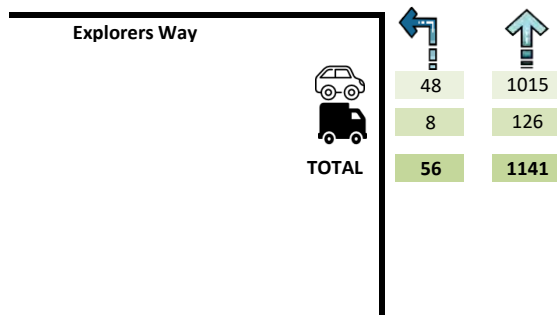
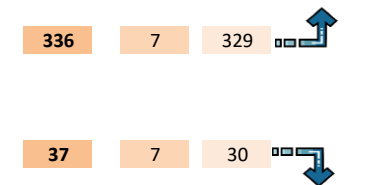
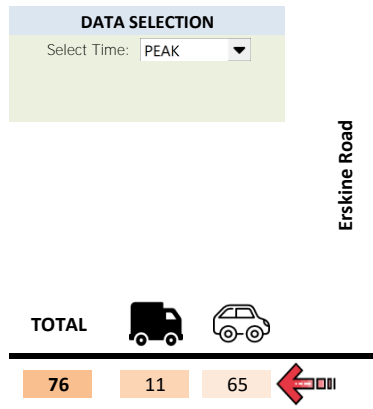
Location Erskine Road Duration 7:00 - 9:00
- 15:00 - 18:00
Erskine Road -
Explorers Way Day/Date Thursday, 26 November 2020
Suburb ST CLAIR Weather -

All Vehicles Time Per Hour	NORTH Erskine Road								EAST -								TOTAL	
	L		I		R		TOTAL	L		I		R		TOTAL	TOTAL			
	LIGHT	HEAVY	LIGHT	HEAVY	LIGHT	HEAVY		LIGHT	HEAVY	LIGHT	HEAVY	LIGHT	HEAVY					
7:00 - 8:00			779	137	916	19	2	21	937							2020	270	2290
7:15 - 8:15			839	150	989	19	3	22	1011							2160	286	2446
7:30 - 8:30			907	134	1041	16	3	19	1060							2307	274	2581
7:45 - 8:45			928	129	1057	17	3	20	1077							2367	280	2647
8:00 - 9:00			864	120	984	18	4	22	1006							2324	261	2585
Period End																		
15:00 - 16:00			1210	133	1343	49	5	54	1397							2472	261	2733
15:15 - 16:15			1296	137	1433	38	5	43	1476							2494	265	2759
15:30 - 16:30			1342	147	1489	53	4	57	1546							2564	269	2833
15:45 - 16:45			1332	143	1475	47	4	51	1526							2580	260	2840
16:00 - 17:00			1366	137	1503	46	5	51	1554							2661	248	2909
16:15 - 17:15			1328	120	1448	54	4	58	1506							2663	228	2891
16:30 - 17:30			1318	99	1417	40	4	44	1461							2652	206	2858
16:45 - 17:45			1342	94	1436	43	4	47	1483							2635	185	2820
17:00 - 18:00			1317	100	1417	44	3	47	1464							2576	176	2752
Period End																		

All Vehicles Time Per Hour	SOUTH Erskine Road								WEST Explorers Way								TOTAL	
	L		I		R		TOTAL	L		I		R		TOTAL	TOTAL			
	LIGHT	HEAVY	LIGHT	HEAVY	LIGHT	HEAVY		LIGHT	HEAVY	LIGHT	HEAVY	LIGHT	HEAVY					
7:00 - 8:00	28	8	36	873	113	986	1022	313	7	320		8	3	11	331	2020	270	2290
7:15 - 8:15	35	9	44	922	115	1037	1081	334	5	339		11	4	15	354	2160	286	2446
7:30 - 8:30	44	10	54	993	113	1106	1160	321	7	328		26	7	33	361	2307	274	2581
7:45 - 8:45	48	8	56	1015	126	1141	1197	329	7	336		30	7	37	373	2367	280	2647
8:00 - 9:00	57	4	61	1023	123	1146	1207	331	5	336		31	5	36	372	2324	261	2585
Period End																		
15:00 - 16:00	95	3	98	902	111	1013	1111	205	9	214		11	0	11	225	2472	261	2733
15:15 - 16:15	89	4	93	885	108	993	1086	177	11	188		9	0	9	197	2494	265	2759
15:30 - 16:30	99	4	103	895	107	1002	1105	166	7	173		9	0	9	182	2564	269	2833
15:45 - 16:45	92	1	93	920	108	1028	1121	182	4	186		7	0	7	193	2580	260	2840
16:00 - 17:00	95	3	98	957	98	1055	1153	190	5	195		7	0	7	202	2661	248	2909
16:15 - 17:15	90	3	93	983	97	1080	1173	200	4	204		8	0	8	212	2663	228	2891
16:30 - 17:30	83	3	86	983	94	1077	1163	215	6	221		13	0	13	234	2652	206	2858
16:45 - 17:45	90	4	94	938	77	1015	1109	207	6	213		15	0	15	228	2635	185	2820
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Period End																		

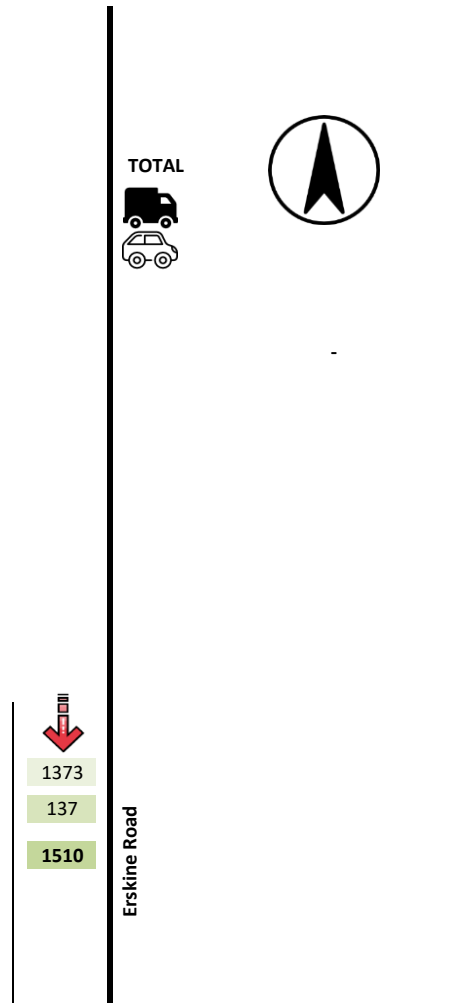
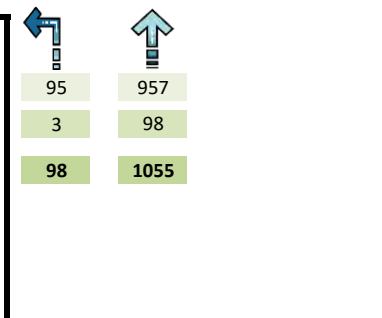
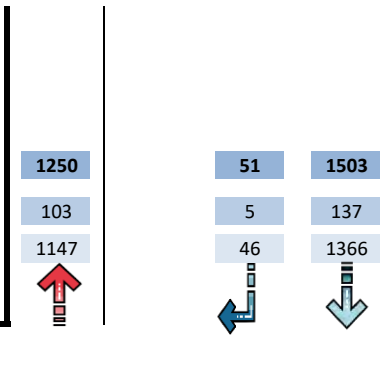
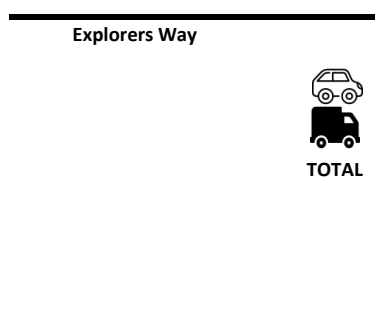
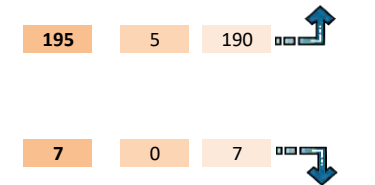
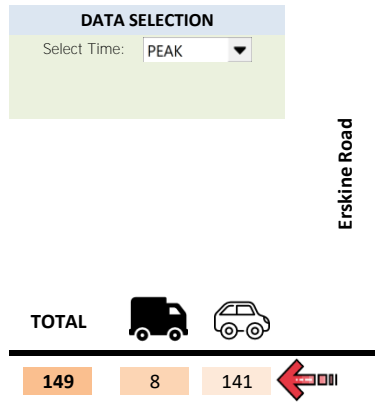
Location Erskine Road
-
Erskine Road
Explorers Way
 Suburb ST CLAIR

Duration 7:00 - 9:00
15:00 - 18:00
-
 Day/Date Thursday, 26 November 2020
 Weather -



Location Erskine Road
-
Erskine Road
Explorers Way
 Suburb ST CLAIR

Duration 7:00 - 9:00
15:00 - 18:00
-
 Day/Date Thursday, 26 November 2020
 Weather -



TIME RANGE		
PEAK	-	PM
PEAK		
16:00	-	17:00

Appendix C

Survey Results (Kingswood RAC)

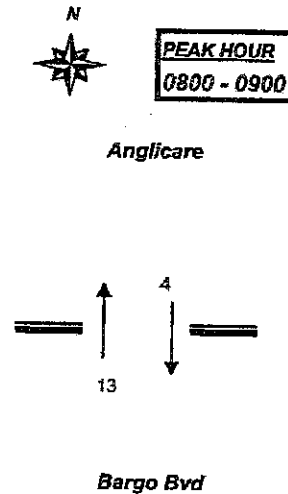




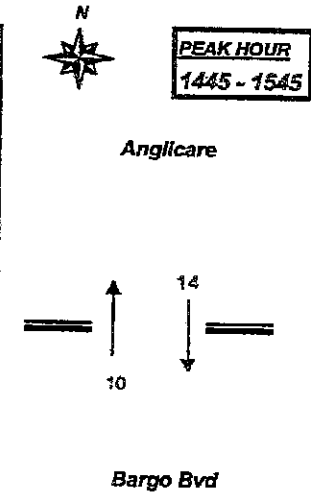
R.O.A.R. DATA
 Reliable, Original & Authentic Results
 Ph.88196847, Fax 88196849, Mob.0418-239019

Client :T.T.P.A
 Job No/Name :2102 Kingswood Anglicare Newmarch House
 Day/Date :Wednesday 12th December 2018

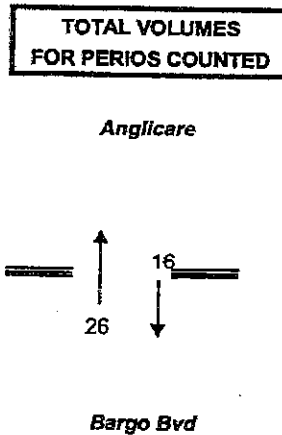
BARGO BVD			
Anglicare			
Time Per	IN	OUT	TOTAL
0630 - 0645	2	1	3
0645 - 0700	4	1	5
0700 - 0715	1	4	5
0715 - 0730	1	2	3
0730 - 0745	1	1	2
0745 - 0800	1	1	2
0800 - 0815	3	0	3
0815 - 0830	3	2	5
0830 - 0845	2	1	3
0845 - 0900	5	1	6
0900 - 0915	1	1	2
0915 - 0930	2	1	3
Period End	26	16	42



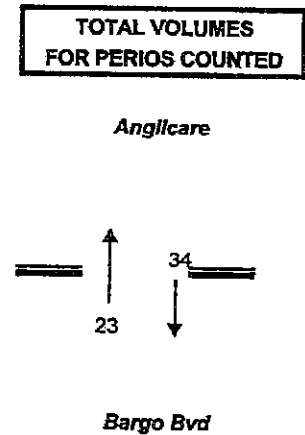
BARGO BVD			
Anglicare			
Time Per	IN	OUT	TOTAL
1430 - 1445	3	1	4
1445 - 1500	3	2	5
1500 - 1515	1	5	6
1515 - 1530	3	4	7
1530 - 1545	3	3	6
1545 - 1600	2	4	6
1600 - 1615	0	3	3
1615 - 1630	2	3	5
1630 - 1645	2	1	3
1645 - 1700	2	3	5
1700 - 1715	1	3	4
1715 - 1730	1	2	3
Period End	23	34	57



BARGO BVD			
Anglicare			
Peak Per	IN	OUT	TOTAL
0630 - 0730	8	8	16
0645 - 0745	7	8	15
0700 - 0800	4	8	12
0715 - 0815	6	4	10
0730 - 0830	8	4	12
0745 - 0845	9	4	13
0800 - 0900	13	4	17
0815 - 0915	11	5	16
0830 - 0930	10	4	14



BARGO BVD			
Anglicare			
Peak Per	IN	OUT	TOTAL
1430 - 1530	10	12	22
1445 - 1545	10	14	24
1500 - 1600	9	16	25
1515 - 1615	8	14	22
1530 - 1630	7	13	20
1545 - 1645	6	11	17
1600 - 1700	6	10	16
1615 - 1715	7	10	17
1630 - 1730	6	9	15



PEAK HR	13	4	17
---------	----	---	----

PEAK HR	10	14	24
---------	----	----	----

(18006)

Nursing Home (620)

Average Vehicle Trip Ends vs: Beds
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

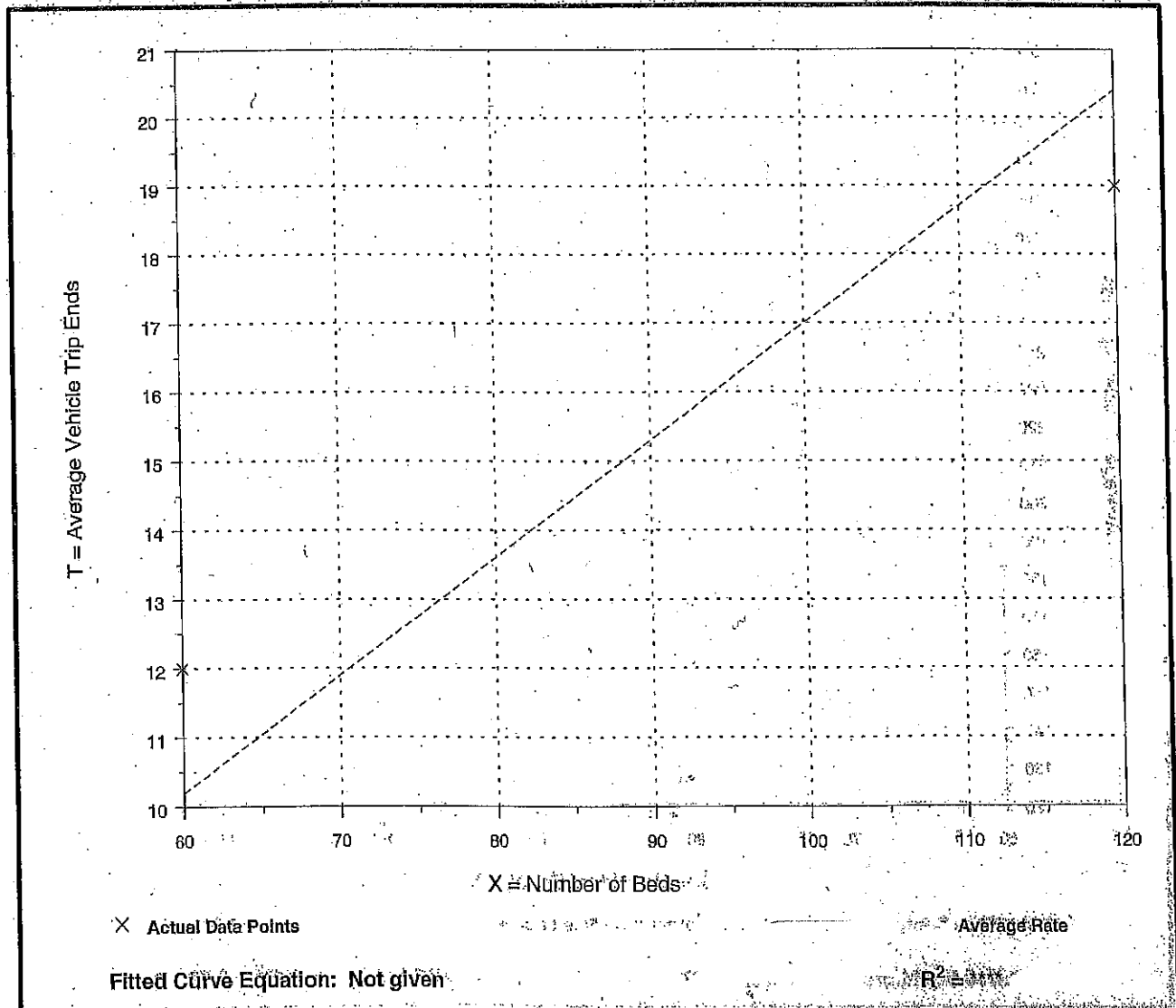
Number of Studies: 2
Average Number of Beds: 90
Directional Distribution: Not available

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.17	0.16 - 0.20	

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Nursing Home (620)

**Average Vehicle Trip Ends vs. Beds
On a Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.**

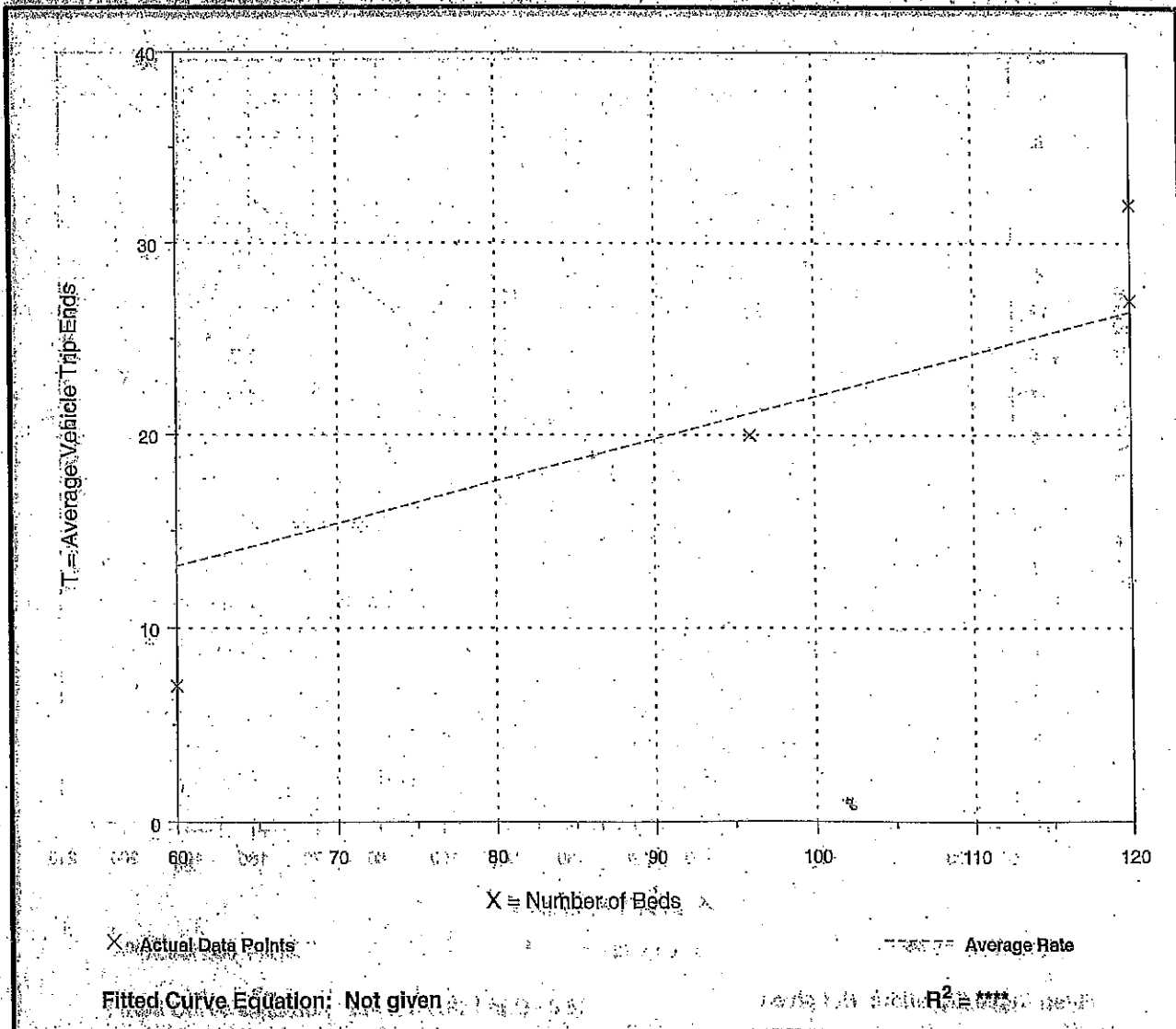
Number of Studies: 4
Average Number of Beds: 199
Directional Distribution: 33% entering, 67% exiting

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.22	0.12 - 0.27	0.47

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Appendix D

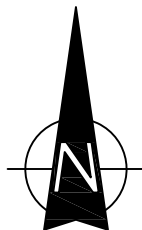
Turning Path Assessment





LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



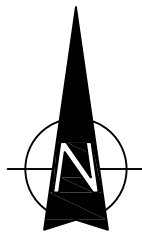
SWEPT PATH ANALYSIS OF A 9.8m REFUSE VEHICLE ENTERING THE SITE

SP 1



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



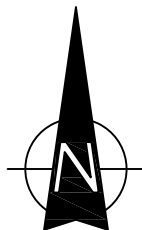
SWEPT PATH ANALYSIS OF A 9.8m REFUSE VEHICLE EXITING THE SITE

SP 2



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



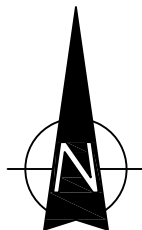
SWEPT PATH ANALYSIS OF A 10.1m FIRE TENDER ENTERING THE SITE

SP 3



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



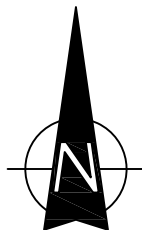
**SWEPT PATH ANALYSIS
OF A 10.1m FIRE TENDER
EXITING THE SITE**

SP 4



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



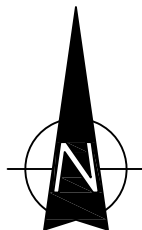
**SWEPT PATH ANALYSIS
OF A 7.73m(25 SEATER)
ENTERING THE SITE**

SP 6



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



**SWEPT PATH ANALYSIS
OF A 7.73m(25 SEATER)
EXITING THE SITE**

SP 7