

**PLANNING PROPOSAL FOR  
MIXED USE DEVELOPMENT  
466 – 480 NEW CANTERBURY ROAD  
DULWICH HILL  
*Assessment of Traffic and  
Parking Implications***

May 2017  
(Rev D)

Reference 16010

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## 1. INTRODUCTION

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This report has been prepared to accompany a Planning Proposal to Marrickville Council for a rezoning to permit an envisaged mixed use development on two separately owned adjoining sites located alongside the Dulwich Grove light rail station on New Canterbury Road at Dulwich Hill (Figure 1).

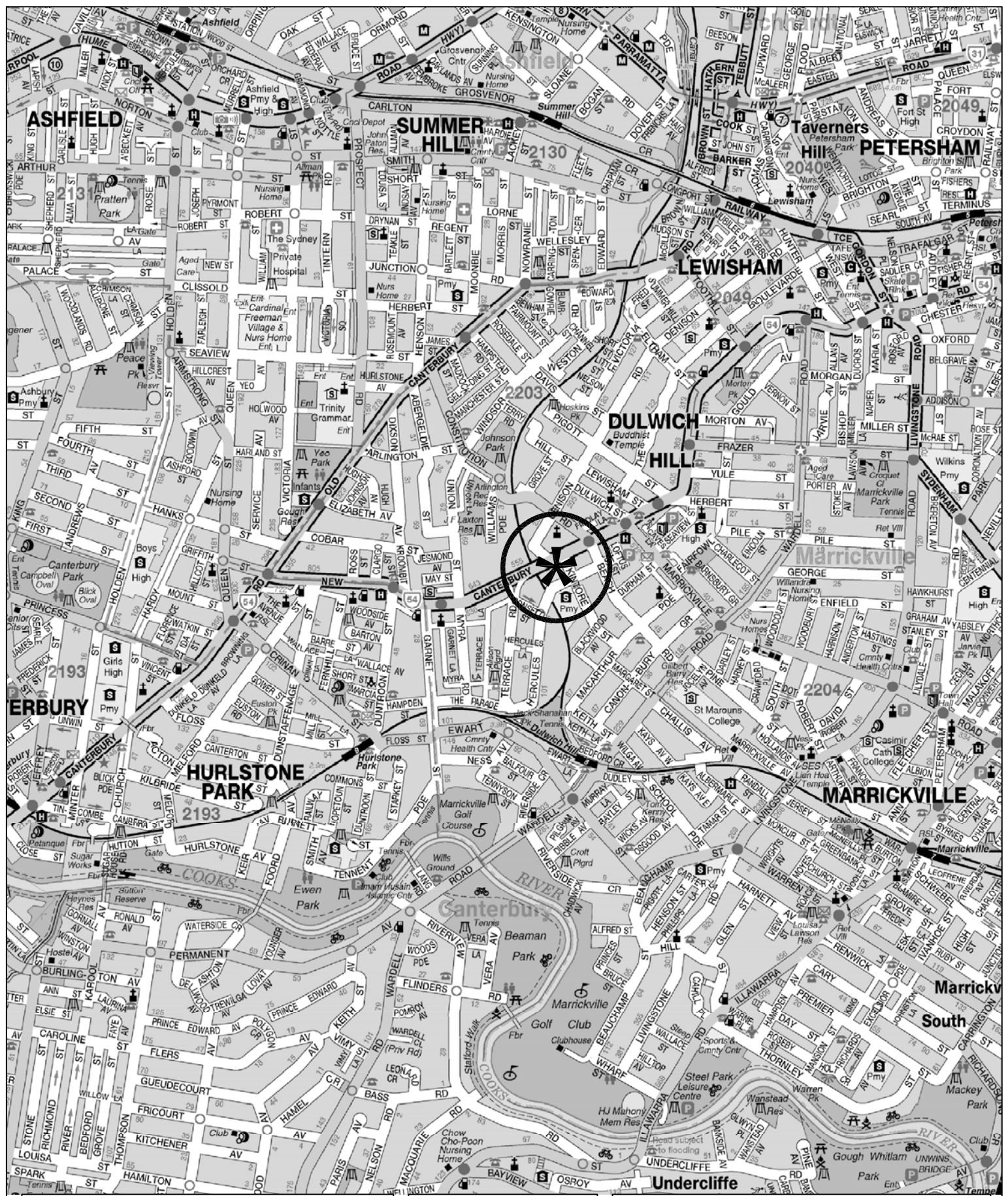
Numerous suburban centres in the Metropolitan Area are undergoing significant revitalisation with older style industrial and commercial buildings being redeveloped for residential apartments some with ground level retail use as part of the urban consolidation process. The subject sites are located within the degenerated Dulwich Hill commercial 'strip' and represents an ideal opportunity for a new mixed use development consistent with the revitalisation which is taking place in the area and taking advantage of the convenient public transport services.

The envisaged development (subject to rezoning) comprises:

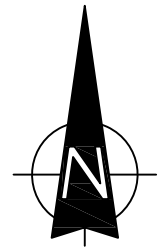
- \* a total of 156 residential apartments (4 buildings)
- \* retail/commercial 699m<sup>2</sup> (4 tenancies)
- \* retained church
- \* separate basement parking and loading dock areas

The purpose of this report is to:

- \* describe the sites, the existing use and the envisaged development outcome
- \* describe the existing road network and traffic conditions in the area
- \* assess the envisaged vehicle access, internal circulation and servicing arrangements
- \* assess the potential traffic implications of the envisaged development
- \* assess the ability to provide an appropriate parking provision



LEGEND



LOCATION

FIG 1

## **2. PLANNING PROPOSAL**

---

### **2.1 SITE, CONTEXT AND EXISTING USE**

The site (Figure 2) comprises 2 separate landholdings including a Church property (which is not to be redeveloped) occupying a rectangular shaped total area of 4,743m<sup>2</sup>. The sites have frontages to New Canterbury Road, Kintore Street and Hercules Street located on the southern part of the Dulwich Hill commercial strip adjacent to the Dulwich Grove light rail station.

The sites are currently occupied by a mixture of uses as indicated on the schedule overleaf which includes details of the number of employees, on-site parking spaces and total parking demand. The uses comprise a total of:

- some 4,200m<sup>2</sup> of mixed commercial/retail use
- 32 employees
- 28 on-site parking spaces and a demand for some 45 parking spaces (i.e. unsupplied, customers, etc.)

The light rail line runs along the western side of the sites while other development fronting this section of New Canterbury Road includes retail, restaurant and commercial uses with some new residential apartment based mixed use buildings. Dulwich Hill Primary School, which is located on the southern side of Hercules Street opposite the site, has its entrance in Kintore Street to the south of Hercules Street.

### **2.2 ENVISAGED DEVELOPMENT**

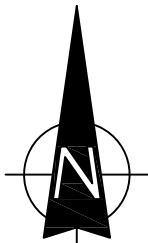
The existing structures apart from the church building would be demolished and the site excavated to construct four new 5 and 8 level buildings over basement carparking.





SITE

LEGEND



SITE

FIG 2

Address	Name	Floor Space SQM Downstairs	Floor Space SQM Upstairs	Car Spaces	Employees	Company Car / Trucks	Required Parking	Additional Comments
480 New Canterbury Road	Kim's Ceramics	526	212	3	4	5	9	no customer parking
478 New Canterbury Road	All Smart Kitchens	364	91	4	8	5	13	also park 2 x fork lift parking
476 New Canterbury Road	Candlelight Confectionary	373	147	2	3		3	no customer parking
474 New Canterbury Road and 34 & 32 Hercules Street	Industrial Sewing Machines Assembly of God Church	1217	289	6	4	5	5	no customer parking approx 50 to 100 parishioners every Sunday no parking for parishioners
26 Hercules Street	3 Bedroom Home			1			2	
	Garage Leased to Builder			1	1	N/A	1	
28 Hercules Street	Greek Orthodox Church of the Holy Unmercenaries			0	3	N/A		approx 100 to 200 parishioners every Sunday
36 Hercules Street	Patrick's Tailoring	327		3	4	0	4	no customer parking
	Bryant's Bookkeeping		90	1	3		3	no customer parking
38-40 Hercules Street	Stills Photography	450	110	3	2		3	

	<b>Building A</b>	<b>Building B, C &amp; D</b>	<b>Total</b>
<b>Non Adaptable</b>	-	5 x Studio apartments	5 apartments
	9 x 1-Bed apartments	34 x 1-Bed apartments	43 apartments
	11 x 2-Bed apartments	60 x 2-Bed apartments	62 apartments
	1 x 3-Bed apartments	5 x 3-Bed apartments	6 apartments
<b>Adaptable</b>	5 apartments	26 apartments	31 apartments
<b>Total:</b>	<b>26 apartments</b>	<b>130 apartments</b>	<b>156 apartments</b>
<b>Retail / Commercial</b>	340 m <sup>2</sup>	359 m <sup>2</sup>	699 m <sup>2</sup>

A total of 161 parking spaces would be provided in the basement levels with vehicular accesses provided on the Kintore Street and Hercules Street frontages.

Details of the envisaged development are provided on the architectural drawings prepared by Baker Kavanagh Architects which accompany the Planning Proposal and are reproduced in part in Appendix A.



### 3. ROAD NETWORK AND TRAFFIC CONDITIONS

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#### 3.1 ROAD NETWORK

The road network in the vicinity of the development site (Figure 3) comprises:

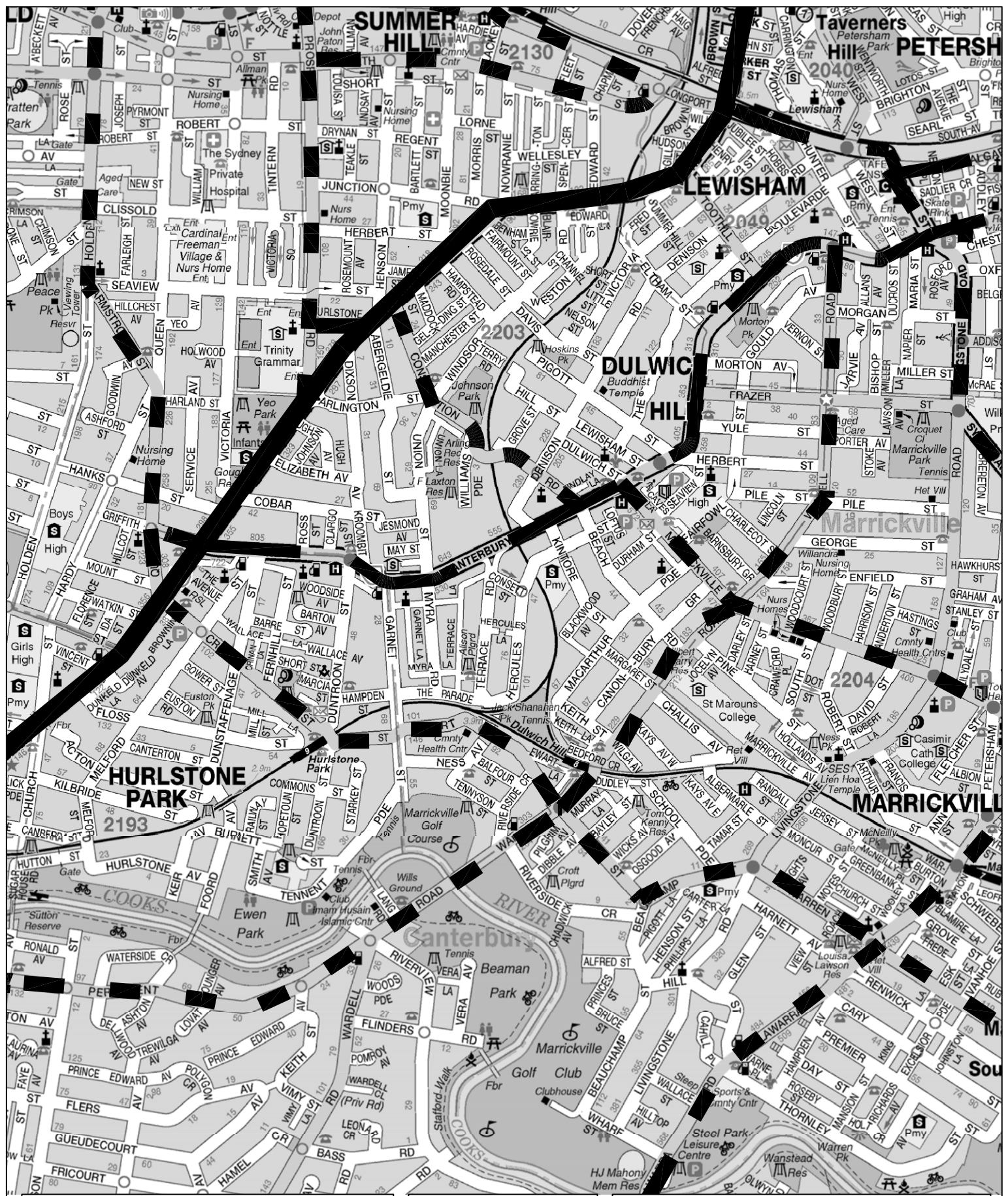
- \* *Parramatta Road* – a State Road and principal arterial route providing major linkage between the City and the Parramatta CBD
- \* *Old Canterbury Road/Canterbury Road* – a State Road and part arterial route linking between Leichhardt and Liverpool
- \* *New Canterbury Road* – a State Road and a sub-arterial route connecting between Princes Highway and Canterbury Road
- \* *Marrickville Road* – a Regional Road and collector route connecting between Dulwich Hill and Sydenham
- \* *Wardell Road* – a Regional Road and minor collector route

New Canterbury Road, Kintore Street and Hercules Street have 12.8m wide roadways and there is a road closure in Kintore Street on the southern side of Hercules Street.

#### 3.2 TRAFFIC CONTROLS

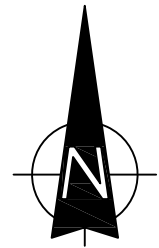
The existing traffic controls in the vicinity of the site (Figure 4) comprise:

- \* the traffic signals along New Canterbury Road including the Marrickville Road and Constitution Road intersections
- \* the pedestrian signals on New Canterbury Road west of Kintore Street at the light rail station
- \* the marked footcrossings across Kintore Street on the northern side of Hercules Street and across Hercules Street on the eastern side of Kintore Street



## LEGEND

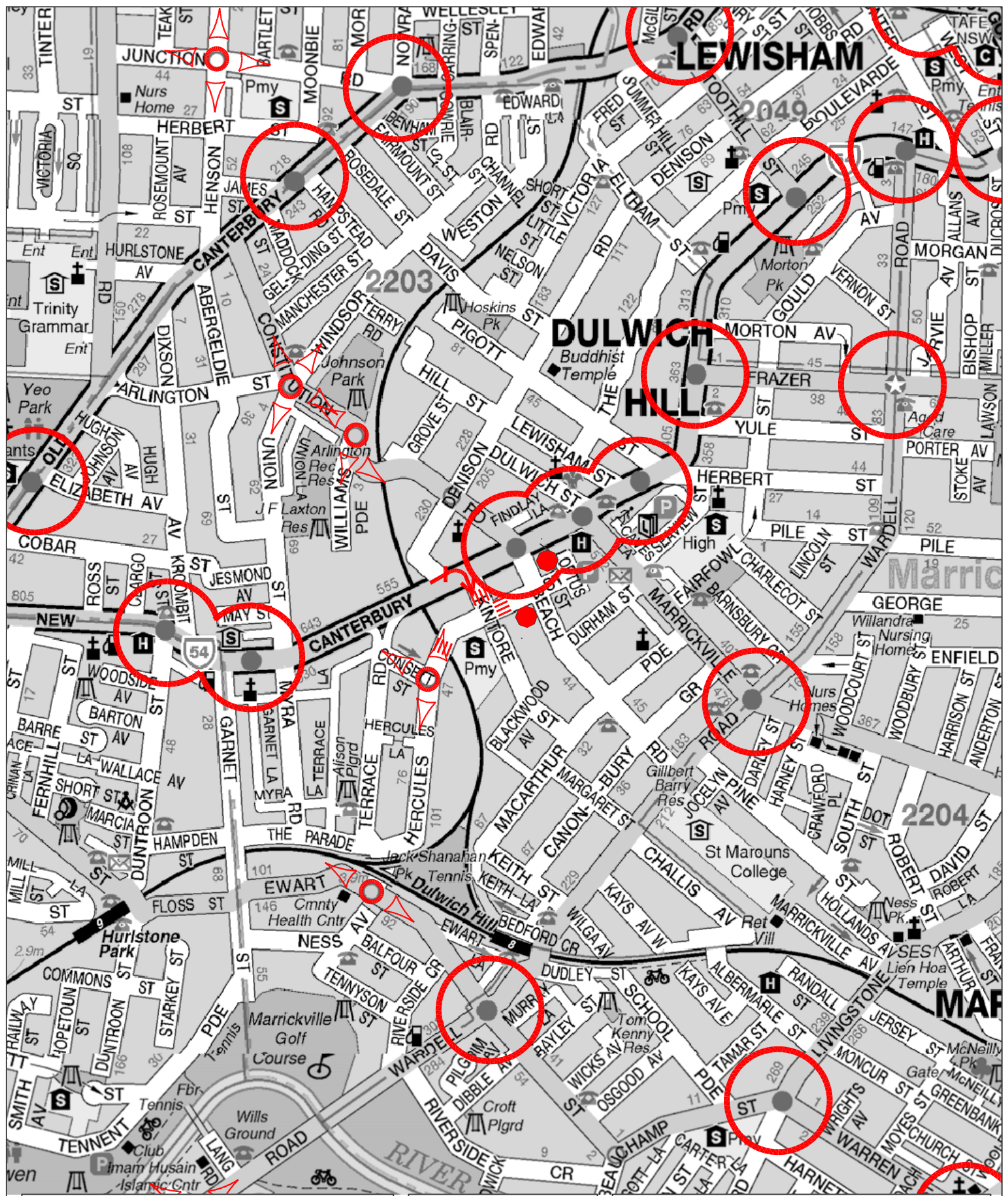
- ARTERIAL**
- SUB-ARTERIAL**
- COLLECTOR**







## ROAD NETWORK

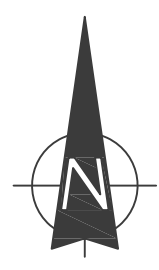
**FIG 3**





**LEGEND**

-  TRAFFIC SIGNAL CONTROL
-  ROUNDABOUT
-  RESTRICTED TURNING MOVEMENT
-  GIVE WAY



**TRAFFIC  
CONTROLS**

**FIG 4**

- \* the NO RIGHT TURN restriction from New Canterbury Road to Kintore Street
- \* the marked footcrossing across Hercules Street adjacent to the light rail corridor
- \* the roundabout at the Hercules Street and Consett Street intersection
- \* the GIVE WAY sign control on Hercules Street at Beach Road
- \* the pedestrian refuge in New Canterbury Road just to the east of Kintore Street
- \* the 60 kmph speed restriction on the New Canterbury Road, the 50 kmph speed restriction on the local and collector road with a 40 kmph school speed restriction on Hercules Street in the vicinity of the School
- \* the peak directional CLEARWAY and BUS ZONE restrictions along New Canterbury Road

### **3.3 TRAFFIC CONDITIONS**

An indication of traffic conditions on the road system serving the site is provided by data published by the RMS and traffic surveys undertaken in conjunction with this study. The RMS data is expressed in terms of Average Annual Daily Traffic (AADT) as follows:

	<b>AADT</b>
New Canterbury Road at Marrickville Road	27,820

Traffic surveys were undertaken at the New Canterbury Road/Kintore Street and Hercules Street/Kintore Street intersections during the weekday morning and afternoon peak periods. The results of these surveys are provided in Appendix B and summarised in the following:

		<b>AM</b>	<b>PM</b>
New Canterbury Road	Eastbound	1,390	620
	Right Turn (prohibited)	6	4
	Westbound	559	1,240
	Left Turn	8	10
Kintore Street	Right Turn	10	6
	Left Turn	106	80
<hr/>			
Hercules Street	Eastbound	98	88
	Left Turn	17	11
	Westbound	81	93
	Right Turn	98	85
Kintore Street	Right Turn	10	6
	Left Turn	4	4

Observations of the intersections in the vicinity of the site during the morning and afternoon peak periods have indicated that there are no undue delays or significant capacity issues. Pedestrian crossing movements in the area are facilitated by the crossing facilities provided at the traffic signals and the marked footcrossings.

The turning movements into and out of Kintore Street at New Canterbury Road are facilitated by the regular gaps in the New Canterbury Road traffic flows induced by the operation of the traffic signals to the east and west.

It is noted that the kerbside space in Kintore Street and the southern side of Hercules Street in the vicinity of the site is generally “parked out” (see Figure 2) and this is indicative of the current shortfall of parking for the various uses on the site (i.e. 17 spaces).

It is also noted that the only formal on-street “set-down/pick-up” provision for the school is located in Kintore Street at the school entrance and the kerbspace on the northern side of Hercules Street is not available for parking due to the continuous driveway access for the on-street parking spaces.



### 3.4 TRANSPORT SERVICES

Public transport services are provided by the light rail line with the Dulwich Grove Station adjacent to the site and STA bus services which run along New Canterbury Road linking to nearby railway stations. The light rail line connects to Central Station with further extensions currently under construction/design.

The bus services include:

- \* Route 411 – operates along New Canterbury Road and provide a weekday service between Ashfield, Dulwich Hill, Earlwood, Bexley North, Kingsgrove, Beverly Hills and Roselands. Services include a link to Dulwich Hill Railway Station. Five to six services are provided in each direction on weekdays.
- \* Route 425 – operates along Marrickville Road and connects Dulwich Hill with Sydenham, Tempe, Arncliffe and Rockdale. It operates on a 20 minute headway in each direction on weekdays, with more frequent services during peak periods. On Saturdays, services are every 30 minutes in each direction.
- \* Route 426 – operates along Marrickville Road and connects Dulwich Hill with Marrickville, Enmore, Newtown, Sydney University, Railway Square, Town Hall, Wynyard and Circular Quay. It operates on a 15 minute headway in each direction on weekdays and a 20 minute headway in each direction on weekends.
- \* Route 428 – operates along New Canterbury Road and provides a link between Canterbury, Dulwich Hill, Petersham, Enmore, Newtown, Sydney University, Railway Square, Town Hall, Wynyard and Circular Quay. Services are every 15 minutes in each direction on weekdays and every 20 minutes in each direction on weekends. The L28 service provides a weekday peak period limited stop service along the same route, with eight city bound services during morning peaks and seven outbound services during afternoon peaks.

- \* Route 445 – operates along New Canterbury Road and provides a link between Canterbury, Hurlstone Park, Dulwich Hill, Petersham, Leichhardt, Lilyfield, Rozelle and Balmain. Services are every 20 minutes in each direction, Monday to Saturday and every 30 minutes in each direction on Sundays.

It is apparent that the development site benefits from excellent access to public transport services.

## **4. ACCESS, INTERNAL CIRCULATION AND SERVICING**

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### **ACCESS**

It is envisaged that there will be two separate access driveways (i.e. one for each landholding) with one located on Hercules Street and one located on Kintore Street. The driveways would be positioned midway along these site frontages and well away from intersections.

These streets are relatively straight and level with good sight distances available and the proposed driveways will be designed in accordance with the AS2890.1 & 2 design criteria. The substantial existing driveways on the New Canterbury Road and Hercules Street frontages (continuous) and on the Kintore Street frontage (3) would be removed (see details in Appendix C).

### **INTERNAL CIRCULATION**

The internal circulation design provisions including ramp grades, aisle widths, bay dimensions accord with the criteria of AS2890.1 & 6 and Council's code.

### **SERVICING**

Retail deliveries and refuse collection will be undertaken at the loading areas in basement level B1 which will accommodate up to a standard 10.2m rigid refuse vehicle.

Other service vehicles (i.e. service personnel, couriers, etc.) associated with the development elements will also be able to utilise the visitor parking spaces.

## 5. PARKING

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Marrickville Council's DCP 2011 locates the site in Parking Area 2 and specifies the following maximum parking provision in relation to the planning proposal.

### **Non-adaptable**

Studio	0.4 space per apt
1 bedroom apartments	0.5 space per apt
2 bedroom apartments	1.0 space per apt
3 bedroom apartments	1.2 space per apt
Visitors	0.1 space per apt

### **Adaptable**

All adaptable apartments	1 space per apt
Visitors	0.25 space per apt
Retail/Commercial	1 per 80m <sup>2</sup>

Application of these rates to the envisaged total development outcome would indicate the following:

<b>Building A</b>		<b>Building B, C &amp; D</b>	
<b><u>Non Adaptable</u></b>			
9 x 1-Bed	4.5 spaces	5 x Studio	2 spaces
11 x 2-Bed	11 spaces	34 x 1-Bed	17 spaces
1 x 3-Bed	1.2 spaces	60 x 2-Bed	60 spaces
<b>Total:</b>	<b>16.7 spaces (17)</b>	5 x 3-Bed	6 spaces
Visitors (21)	2.1 spaces (2)	<b>85 spaces</b>	
5 apts	5 spaces	<b><u>Adaptable</u></b>	
Visitors	1.25 (1)	26 apts	26 spaces
Retail/Commercial	4.2 spaces (4)	Visitors	6.5 spaces (7)
340m <sup>2</sup>		Retail/Commercial	4.4 spaces (4)
<b>Total:</b>	<b>29 spaces</b>	359m <sup>2</sup>	
		<b>132 spaces</b>	
<b>GRAND TOTAL: 161 spaces</b>			

It is proposed to provide a total of 161 spaces for residents, tenants and visitors as well as 2 car share spaces.

Assessment in relation to the appropriate provision for motorcycles and bicycles can also be made with reference to the DCP which indicates the requirements as follows:

**Bicycles**

Residential apartments

1 per 2 apartments for residents

1 per 10 apartments for visitors

**Motorcycles**

5% of parking spaces

	<b>Bicycles</b>	<b>Motorcycles</b>
Residents	78	8
Visitors	16	

It is envisaged that 94 bicycle spaces/storages and 8 motorbike spaces would be provided in the basement carpark areas. The bicycle and motorcycle provisions would therefore entirely compliant with the specifications of the Marrickville DCP and in line with the Council's objectives.

The DCP specifies the following provision for service vehicles:

Residential apartments	1 per 50 (up to 200)
Retail (Shops)	1 per 400m <sup>2</sup> (up to 8,000m <sup>2</sup> )

This would indicate 3 + 2 (5) spaces.

It is apparent that the envisaged development can provide for the parking which is indicated to be appropriate by Council's DCP.



## 6. TRAFFIC

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The existing development of the site comprises a number of commercial/retail uses and details of the “make up” of these uses is provided on the schedule reproduced in Section 2. These various uses comprise a total of some 4,200m<sup>2</sup> of floorspace with 32 employees, 28 on-site parking spaces and an assessed on-street demand for another 17 spaces. It is not possible to identify and survey the diverse traffic generation of these existing uses, however having regard to RMS traffic generation criteria for office, retail and light industry it is reasonable to apply a peak generation factor of 1 to 2 vtpd per 100m<sup>2</sup> (i.e. office 1.2-1.6vtpd/100m<sup>2</sup>, industry 0.5-1.0vtpd/100m<sup>2</sup>, retail (small) 4vtpd/100m<sup>2</sup>).

Application of this assessed factor to the floorspace of some 4,200m<sup>2</sup> would indicate a peak generation of some 42 to 84 vtpd in the morning and afternoon peak periods.

The recent RMS circular TDT-2013/4b specifies peak traffic generation for residential apartments with good access to public transport services of:

AM	PM
0.19 vtpd / apartment	0.15 vtpd / apartment

Application of this to the proposed 156 apartments would indicate 30vtpd in the AM and 24vtpd in the PM.

There will only be 8 parking spaces provided for the retail and commercial tenancies and these would be used by the tenants with the normal “industry” arrival/departure rate of 60% ph (i.e. 5 vtpd). The total projected generation and distribution is as follows:

	AM		PM	
	IN	OUT	IN	OUT
Resident	6	24	19	5
Retail/Commercial	5	-	-	6
<b>Total:</b>	<b>11</b>	<b>24</b>	<b>19</b>	<b>11</b>

It is apparent that the traffic generation of the envisaged development will be very similar to (or somewhat less than) that of the existing development. Accordingly, and particularly as the generation will be split between the 2 envisaged vehicle accesses, there will not be any adverse traffic implications. What is more there will be less truck and commercial vehicle activity (than at present) and the conflicts occasioned by the existing on-site parking/driveway circumstances will be removed.

## 7. CONCLUSION

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The proposed development scheme represents a mixed residential/retail use which is consistent with the planning objectives of the Council. Assessment has concluded that:

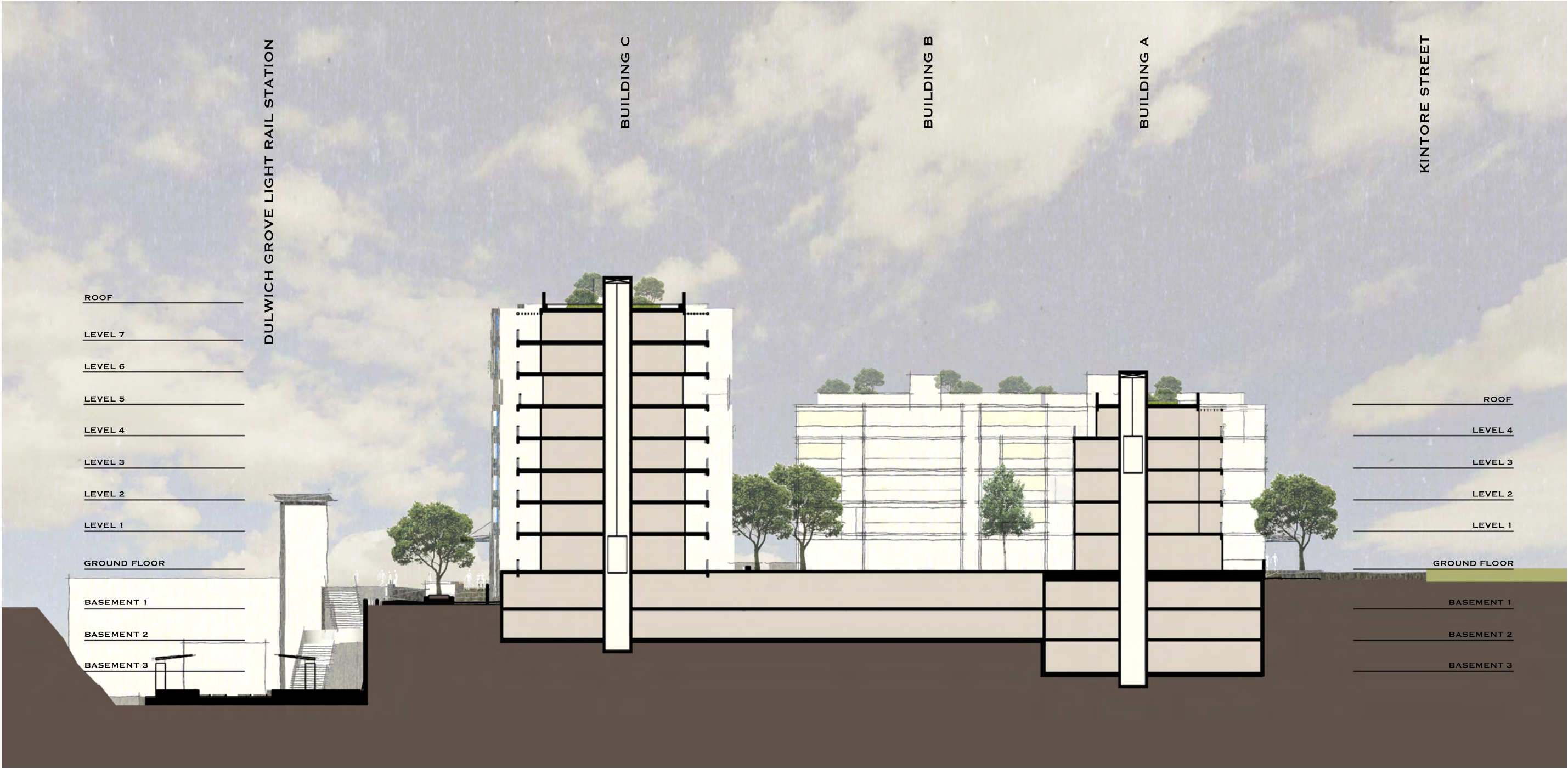
- \* the development will not present any unacceptable traffic implications as the projected traffic generation will be no greater than that of the existing uses on the site
- \* the envisaged parking provision which would be suitable and compliant to the Council's DCP can be accommodated on the site
- \* the envisaged internal circulation, parking and servicing arrangements will be satisfactory
- \* the envisaged vehicle access arrangements will be acceptable
- \* the envisaged loading arrangements will be appropriate and service vehicles will be able to enter and exit in a forward direction

# APPENDIX A

## CONCEPT PLANS

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# WEST EAST SECTION



WEST - EAST SECTION - DULWICH GROVE LIGHT RAIL STATION

0 10m



# SOUTH NORTH SECTION



SOUTH - NORTH SECTION

0 10m

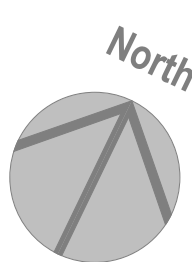




1 Ground Level  
1:200

LEGEND:

- Denotes Gross Floor Area of the New Building
- Denotes Gross Floor Area of existing shops portion of the site
- Denotes Gross Floor Area of Church & Curtilage portion of the site



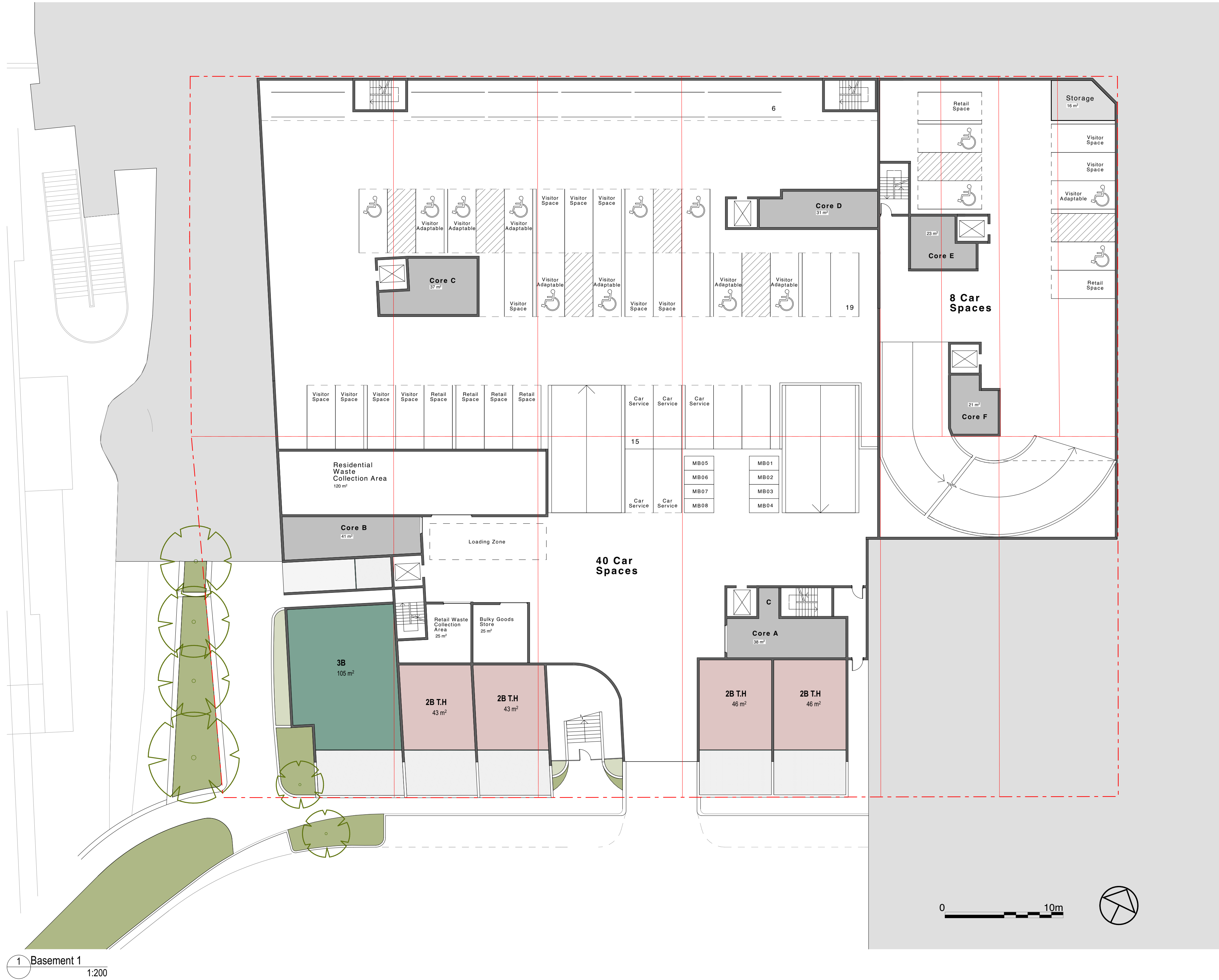
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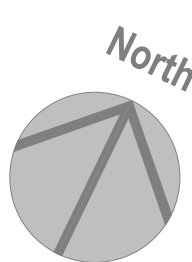
01 - WIP		Work in Progress	Not in Issue
REVISION	DATE	DESCRIPTION	
PROJECT		PLANNING PROPOSAL	
ADDRESS		446-482 New Canterbury Road, Dulwich Hill	PROJECT# 15016
CLIENT		Angus Developments	DATE# 27/04/2017
DWG		CONCEPT - GROUND FLOOR	SCALE as noted
		DRAWN	SK001
		CHKD	REVISION A





LEGEND:

- Denotes Gross Floor Area of the New Building
- Denotes Gross Floor Area of existing shops portion of the site
- Denotes Gross Floor Area of Church & Curtilage portion of the site

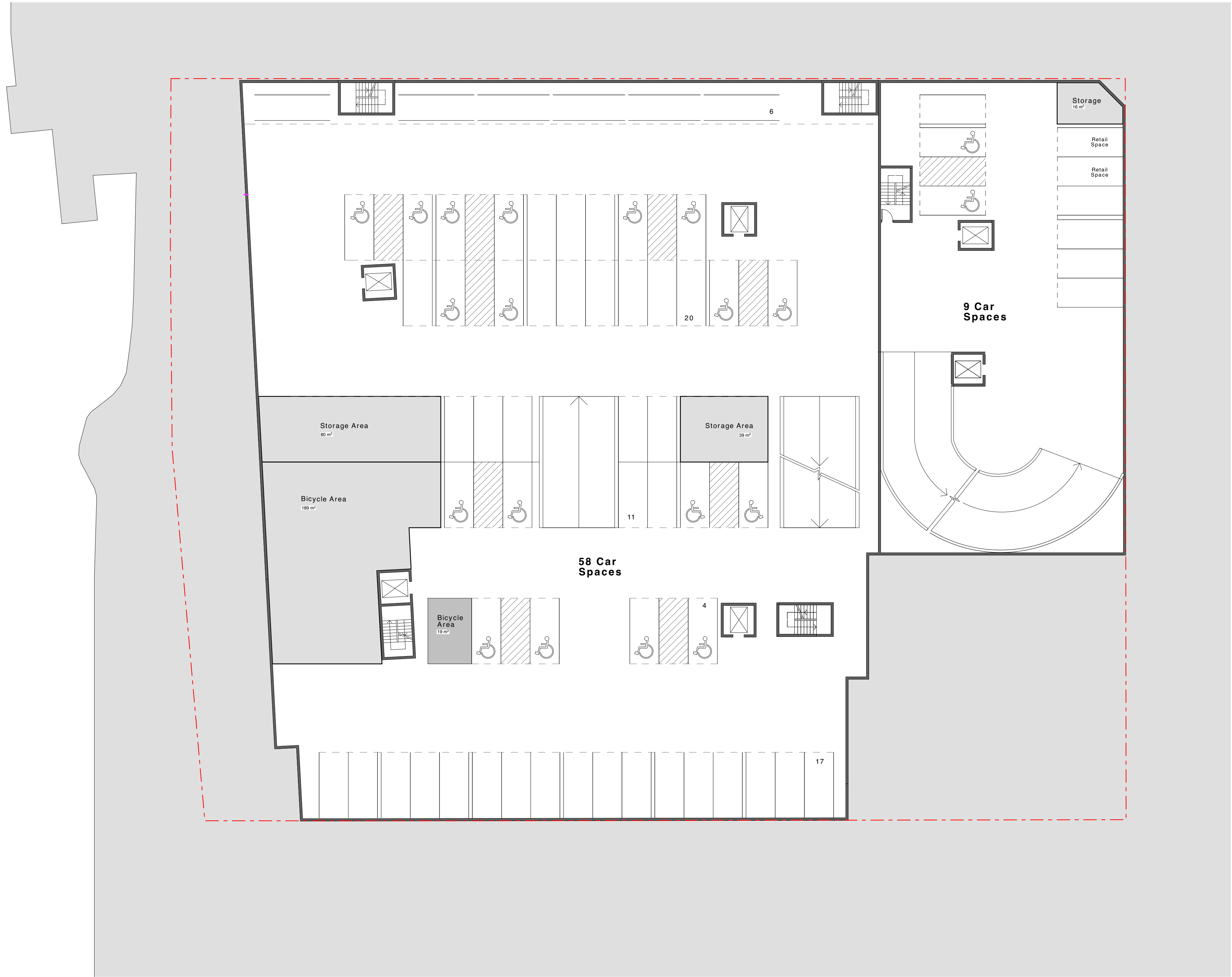


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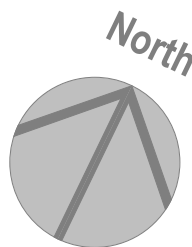
REVISION	DATE	DESCRIPTION
PROJECT	PLANNING PROPOSAL	
ADDRESS	446-482 New Canterbury Road, Dulwich Hill	
CLIENT	Angus Developments	DATE# 27/04/2017 SCALE as noted DRAWN CHKD
DWG	CONCEPT - Basement	PROJECT# 15016 DWG # SK010 REVISION A



1 Basement 1  
1:200

LEGEND:

- Denotes Gross Floor Area of the New Building
- Denotes Gross Floor Area of existing shops portion of the site
- Denotes Gross Floor Area of Church & Curtilage portion of the site

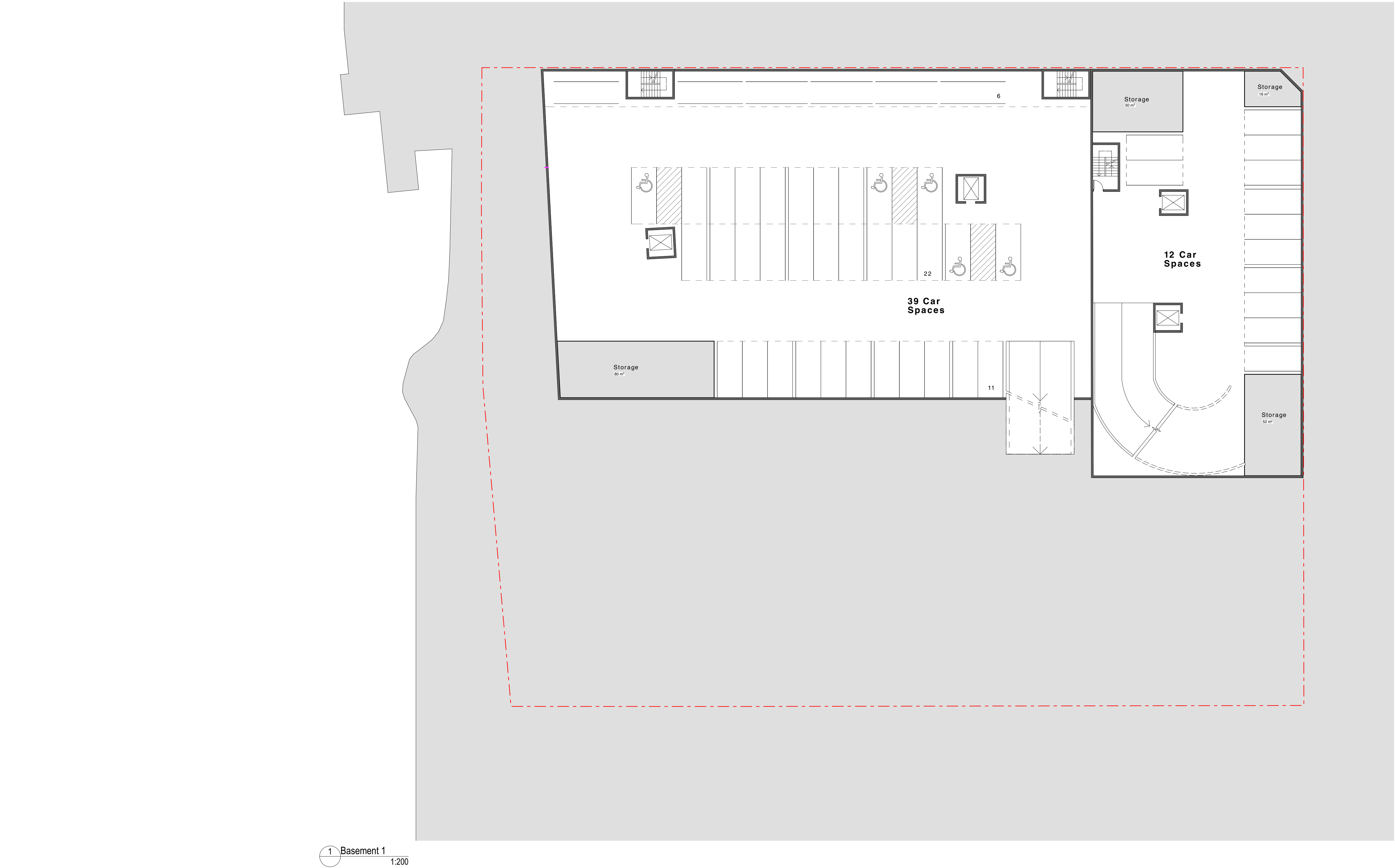


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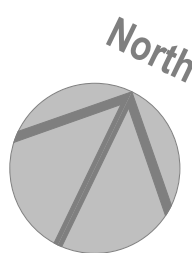
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REVISION	DATE	DESCRIPTION
PROJECT <b>PLANNING PROPOSAL</b>		
ADDRESS <b>446-482 New Canterbury Road, Dulwich Hill</b>		PROJECT# <b>15016</b>
CLIENT <b>Angus Developments</b>	DATE# <b>27/04/2017</b>	DWG # <b>SK011</b>
DWG <b>CONCEPT - Basement 2</b>	SCALE <b>as noted</b>	
	DRAWN	
	CHKD	REVISION <b>A</b>



LEGEND:

- Denotes Gross Floor Area of the New Building
- Denotes Gross Floor Area of existing shops portion of the site
- Denotes Gross Floor Area of Church & Curtilage portion of the site



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REVISION	DATE	DESCRIPTION
PROJECT	PLANNING PROPOSAL	
ADDRESS	446-482 New Canterbury Road, Dulwich Hill	
CLIENT	Angus Developments	DATE# 27/04/2017
DWG	CONCEPT - Basement 3	SCALE as noted
CHKD		DWG # SK012
		REVISION A

PROJECT# 15016

DWG #

SK012

REVISION A



## **APPENDIX B**

### **TRAFFIC SURVEY RESULTS**

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# R.O.A.R. DATA

Reliable, Original & Authentic Results

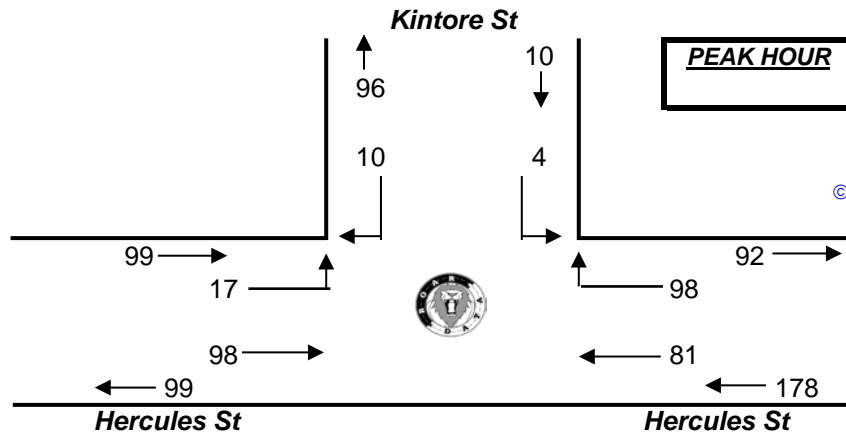
Ph.88196847, Fax 88196849, Mob.0418-239019

## All Vehicles

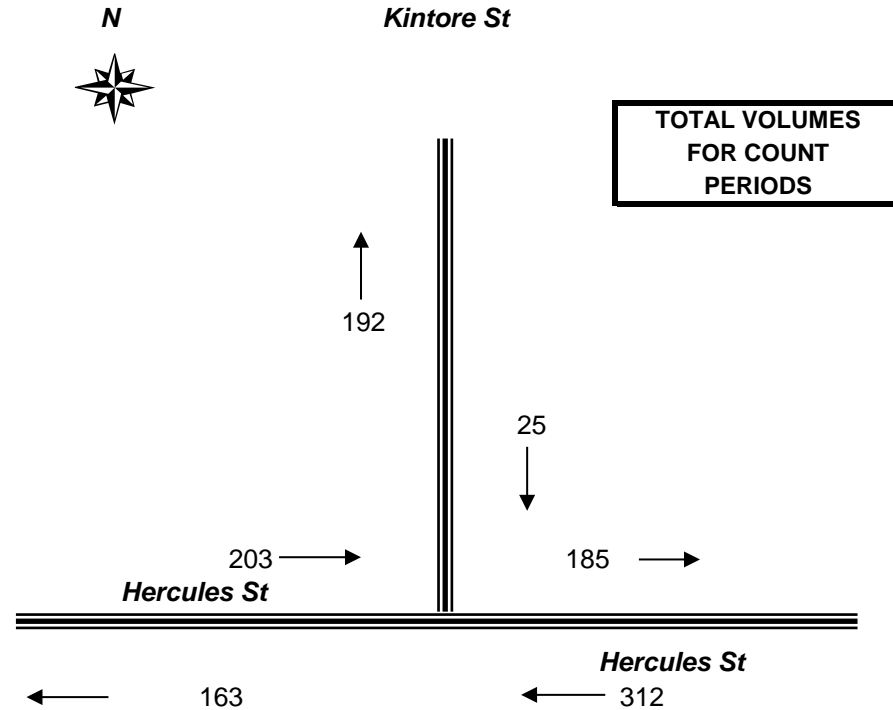
	WEST		NORTH		EAST		
	<i>Hercules St</i>		<i>Kintore St</i>		<i>Hercules St</i>		
Time Per	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	TOTAL
0700 - 0715	2	17	3	1	18	12	53
0715 - 0730	2	23	1	0	13	18	57
0730 - 0745	3	20	1	1	15	18	58
0745 - 0800	2	19	2	2	19	20	64
0800 - 0815	5	25	3	2	20	25	80
0815 - 0830	3	22	2	1	16	23	67
0830 - 0845	4	26	3	1	17	25	76
0845 - 0900	5	25	2	0	28	25	85
Period End	26	177	17	8	146	166	540

	WEST		NORTH		EAST		
	<i>Hercules St</i>		<i>Kintore St</i>		<i>Hercules St</i>		
Peak Per	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	TOTAL
0700 - 0800	9	79	7	4	65	68	232
0715 - 0815	12	87	7	5	67	81	259
0730 - 0830	13	86	8	6	70	86	269
0745 - 0845	14	92	10	6	72	93	287
0800 - 0900	17	98	10	4	81	98	308

PEAK HR	17	98	10	4	81	98	287
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Client : T.T.P.A.  
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 Day/Date : Friday 19th February 2016





# R.O.A.R. DATA

Reliable, Original & Authentic Results

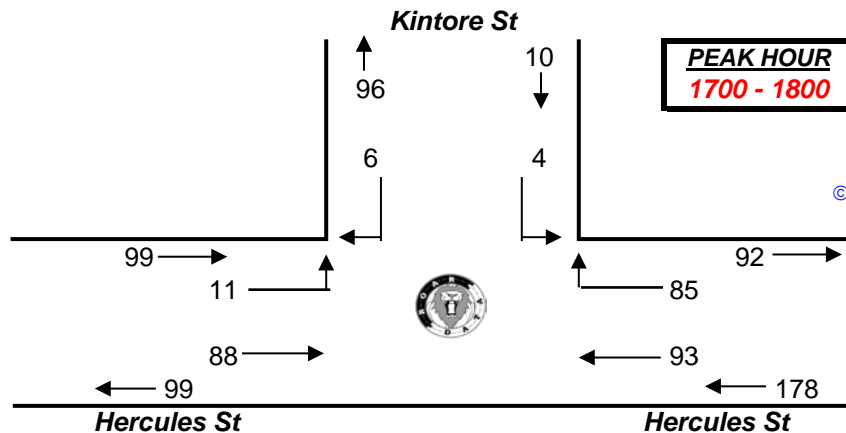
Ph.88196847, Fax 88196849, Mob.0418-239019

## All Vehicles

	WEST		NORTH		EAST		
	<i>Hercules St</i>		<i>Kintore St</i>		<i>Hercules St</i>		
Time Per	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	TOTAL
1600 - 1615	1	17	3	1	21	12	55
1615 - 1630	0	23	0	0	23	18	64
1630 - 1645	3	20	0	0	20	18	61
1645 - 1700	2	19	2	3	19	20	65
1700 - 1715	3	15	1	3	19	22	63
1715 - 1730	3	22	1	0	27	23	76
1730 - 1745	4	26	3	1	24	23	81
1745 - 1800	1	25	1	0	23	17	67
Period End	17	167	11	8	176	153	532

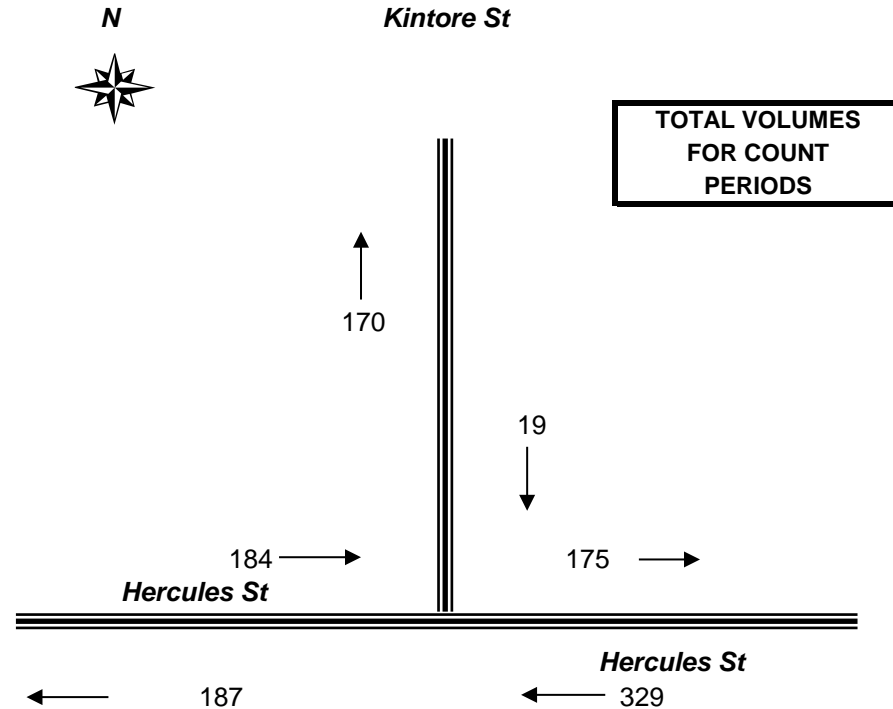
	WEST		NORTH		EAST		
	<i>Hercules St</i>		<i>Kintore St</i>		<i>Hercules St</i>		
Peak Per	<u>L</u>	<u>T</u>	<u>R</u>	<u>L</u>	<u>T</u>	<u>R</u>	TOTAL
1600 - 1700	6	79	5	4	83	68	245
1615 - 1715	8	77	3	6	81	78	253
1630 - 1730	11	76	4	6	85	83	265
1645 - 1745	12	82	7	7	89	88	285
1700 - 1800	11	88	6	4	93	85	287

PEAK HR	11	88	6	4	93	85	287
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# R.O.A.R. DATA

Reliable, Original & Authentic Results

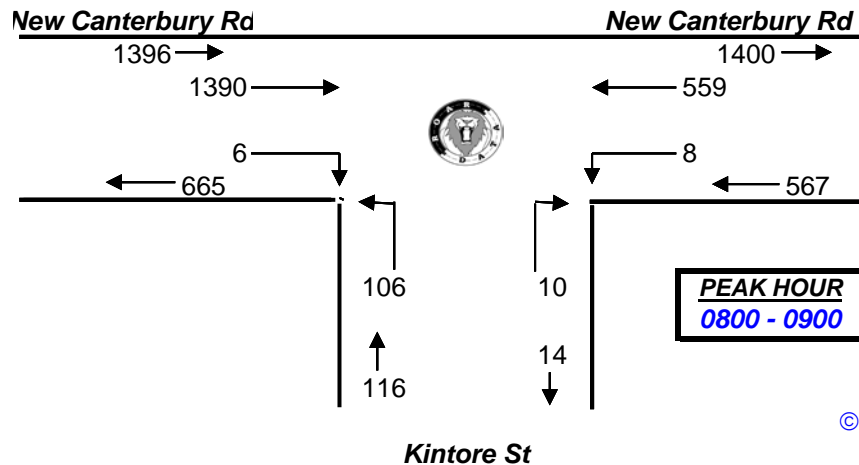
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## All Vehicles

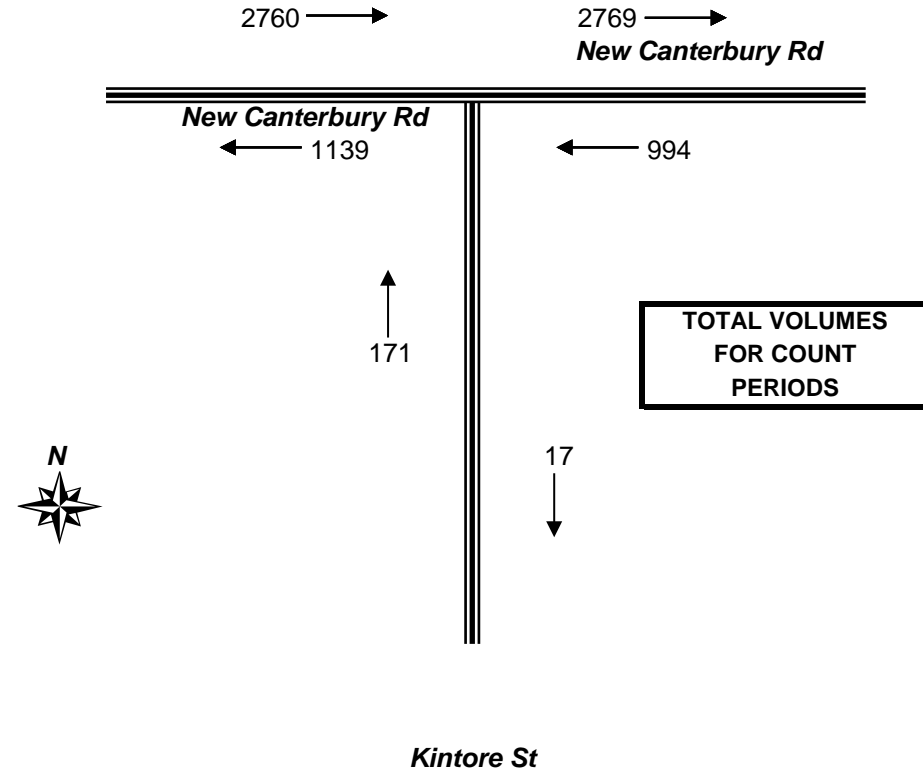
	WEST		SOUTH		EAST		
	New		Kintore St		New		
Time Per	<u>T</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>T</u>	TOTAL
0700 - 0715	286	0	9	0	0	82	377
0715 - 0730	343	0	18	2	0	100	463
0730 - 0745	365	2	5	2	0	118	492
0745 - 0800	367	1	15	4	0	127	514
0800 - 0815	349	1	18	3	3	129	503
0815 - 0830	347	1	26	2	2	125	503
0830 - 0845	344	2	43	4	1	146	540
0845 - 0900	350	2	19	1	2	159	533
Period End	2751	9	153	18	8	986	3925

	WEST		SOUTH		EAST		
	New		Kintore St		New		
Peak Per	<u>T</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>T</u>	TOTAL
0700 - 0800	1361	3	47	8	0	427	1846
0715 - 0815	1424	4	56	11	3	474	1972
0730 - 0830	1428	5	64	11	5	499	2012
0745 - 0845	1407	5	102	13	6	527	2060
0800 - 0900	1390	6	106	10	8	559	2079

PEAK HR	1390	6	106	10	8	559	2079
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Client : T.T.P.A.  
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# R.O.A.R. DATA

Reliable, Original & Authentic Results

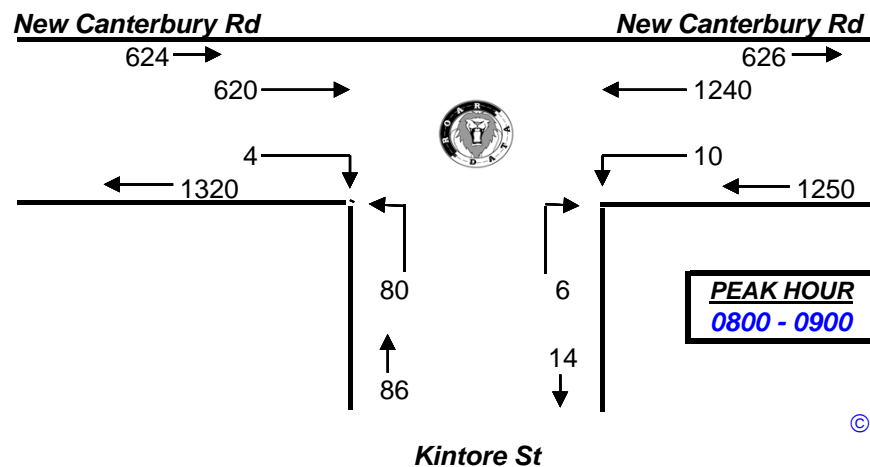
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## All Vehicles

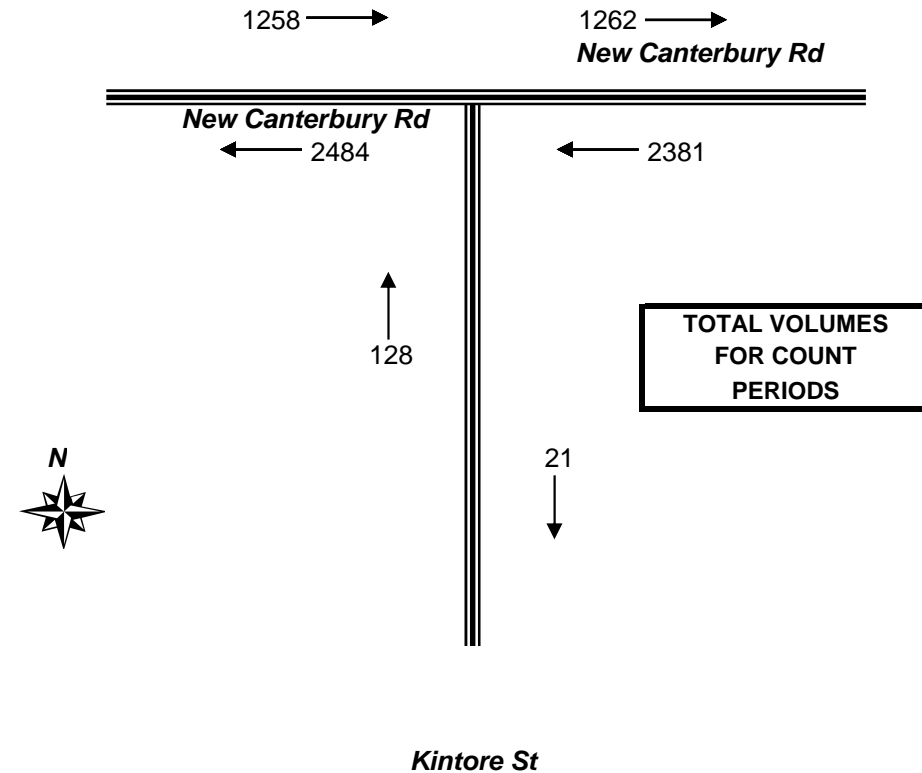
	WEST		SOUTH		EAST		
	New		Kintore St		New		
Time Per	<u>T</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>T</u>	TOTAL
1600 - 1615	186	0	9	0	1	282	478
1615 - 1630	143	0	10	2	2	300	457
1630 - 1645	165	2	5	2	0	318	492
1645 - 1700	137	1	13	1	1	227	380
1700 - 1715	149	1	15	2	3	289	459
1715 - 1730	147	1	16	2	2	325	493
1730 - 1745	154	2	29	1	3	346	535
1745 - 1800	170	0	20	1	2	280	473
Period End	1251	7	117	11	14	2367	3767

	WEST		SOUTH		EAST		
	New		Kintore St		New		
Peak Per	<u>T</u>	<u>R</u>	<u>L</u>	<u>R</u>	<u>L</u>	<u>T</u>	TOTAL
1600 - 1700	631	3	37	5	4	1127	1807
1615 - 1715	594	4	43	7	6	1134	1788
1630 - 1730	598	5	49	7	6	1159	1824
1645 - 1745	587	5	73	6	9	1187	1867
1700 - 1800	620	4	80	6	10	1240	1960

PEAK HR	620	4	80	6	10	1240	1960
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Client : T.T.P.A.  
 Job No/Name : 5946 DULWICH HILL Kintore St  
 Day/Date : Friday 19th February 2016



## **APPENDIX C**

### **EXISTING DRIVEWAYS**

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New Canterbury Rd



New Canterbury Rd





Hercules St

Hercules St





Kintore St

Kintore St

