

42-58 OLD SOUTH HEAD ROAD, VAUCLUSE

PLANNING PROPOSAL TO REZONE FROM LOW-DENSITY
TO MEDIUM-DENSITY RESIDENTIAL

TRAFFIC IMPACT ASSESSMENT

DECEMBER 2016

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**TRAFFIC & PARKING IMPACT ASSESSMENT
42-58 OLD SOUTH HEAD ROAD, VAUCLUSE
REZONING PLANNING PROPOSAL
DATE: 16 DECEMBER 2016**

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1 INTRODUCTION

This report has been prepared by Hemanote Consultants to assess the traffic and parking implications for the rezoning planning proposal for the existing lots at 42-58 Old South Head Road, Vaucluse from low density to medium density residential.

The report is to be read in conjunction with the planning proposal plans prepared by Nicholas Tang Architects (reduced copy of the plans attached in Appendix A) and submitted to Woollahra Council as part of a Development Application.

This report is set as follows:

- *Section 2:* Description of the existing site location and its use;
- *Section 3:* Description of existing traffic conditions, surrounding road network, existing transportation services and existing vehicular access;
- *Section 4:* Description of the proposal and potential vehicular access;
- *Section 5:* Description of existing on-street parking conditions near the subject site; and impacts on parking;
- *Section 6:* Assessment of traffic Impacts on surrounding road network; and
- *Section 7:* Conclusion.

2 EXISTING SITE DESCRIPTION

➤ Site Location

The subject development site comprises of nine (9) existing lots and is located on the western side of Old South Head Road, south of Clarendon Street, at properties No. 42-58 Old South Head Road, within the suburb of Vaucluse. The subject sites have a total frontage of approximately 116 meters to Old South Head Road from the east. Refer to Figure 1 for a site locality map.

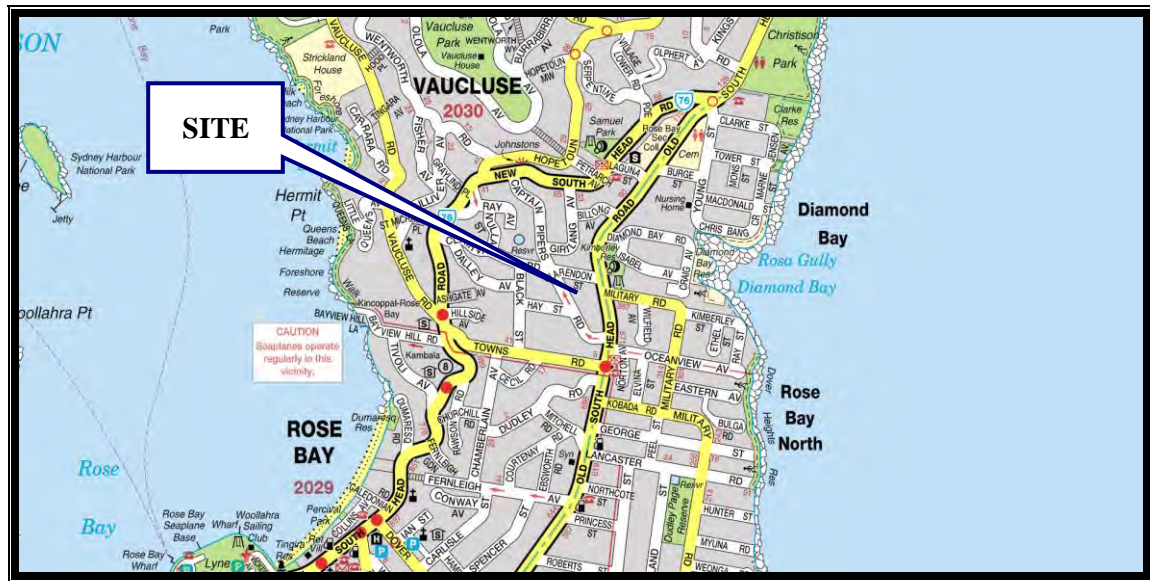


Figure 1: Site Locality Map

➤ Existing Site & Surrounding Land Use

The subject sites are currently occupied by two-storey residential dwellings and older style units in a mainly residential area, with a mixture of single dwellings and small sized residential flat buildings, as well as a small number of commercial/retail shops.



Photo 1: the frontage of the subject site to Old South Head Road



Photo 2: the frontage of the subject site to Old South Head Road

3 EXISTING TRAFFIC CONDITIONS

3.1 Road Network and Classification

Old South Head Road is a State Road under the jurisdiction of the Roads and Maritime Services. It carries a high volume of traffic daily and runs between Bondi Junction and Watsons Bay and is a bus route. It should be noted that the section of Old South Head Road near the subject site carries lower traffic volumes than other busier sections of the road. It intersects with a number of local, collector and state roads, including Military Road and Clarendon Street in the vicinity of the subject site.

3.2 Road Description and Traffic Control

Old South Head Road is a four-lane two-way undivided road that provides one travel lane per direction, with parallel to kerb unrestricted parking being permitted on both sides of the carriageway. The legal speed limit on Old South Head Road is 60 km/h.

The T-intersections of Old South Head Road with Military Road and Clarendon Street are controlled by 'Give Way' signs and line markings. There is an existing on-road cycle route along Old South Head Road and Clarendon Street.



Figure 2: Aerial photo of the subject site



Photo 3: Old South Head Road at the subject site - facing north



Photo 4: Old South Head Road at the subject site - facing south

3.3 Current Traffic Flows

A traffic volume count was undertaken by R.O.A.R Data Pty Ltd at the intersections of Old South Head Road/Military Road and Old South Head Road/Clarendon Street at the subject site on Thursday 10 November 2016, during morning peak periods (7.00am to 9.00am) and afternoon peak periods (3.00pm to 6.00pm) considering traffic peak periods.

The traffic flows on Old South Head Road, Military Road and Clarendon Street in the morning & afternoon peak hours are shown in Table 1 below and in Appendix 'B'.

Traffic movement	Morning Peak Hour (Vehicles Per Hour)	Afternoon Peak Hour (Vehicles Per Hour)
	8.00am – 9.00am	3.30pm – 4.30pm
Old South Head Road		
Northbound	403	553
Southbound	555	597
Military Road		
Eastbound	146	122
Westbound	160	179
Clarendon Street		
Eastbound	47	34
Westbound	14	17

Table 1: Current traffic flows near subject site (on a typical weekday)

The results of the traffic volume counts undertaken determined that the traffic morning peak period on Old South Head Road, Military Road and Clarendon Street was between 8.00am to 9.00am and the afternoon peak period was between 3.30pm to 4.30pm on a typical weekday.

The traffic flows on Old South Head Road are considered to be appropriate for a state road in a mainly residential area, where traffic is free flowing without any major queuing or delays in peak hours.

The traffic flows on Military Road and Clarendon Street are considered to be low and appropriate for local roads in a mainly residential area and in close proximity to a state road, where traffic is free flowing without any major queuing or delays in peak hours.

It is determined that the current level of service on Old South Head Road is class 'C', in accordance with Table 4.4 of the Roads & Maritime Services' *"Guide to Traffic Generating Developments - 2002"* (attached below) with peak hour flow being less than 600 vehicles/hr per direction.

The current existing level of service on Military Road and Clarendon Street is class 'A', with peak hour flow being less than 200 vehicles/hr per direction.

Level of Service	One Lane (veh/hr)	Two Lanes (veh/hr)
A	200	900
B	380	1400
C	600	1800
D	900	2200
E	1400	2800

Table 4.4: Urban road peak hour flows per direction (RMS Guide)

It has also been observed that the current operational performance of the intersections of Old South Head Road/Military Road and Old South Head Road/Clarendon Street is in 'Good operation with acceptable delays and spare capacity' at a Level of Service 'B', in accordance with Table 4.2 of the Roads & Maritime Services' *"Guide to Traffic Generating Developments - 2002"* (attached below) with an average delay of less than 28 seconds per vehicle.

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	< 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode

Table 4.2: Level of Service Criteria for intersections (RMS Guide)

3.4 Existing Transportation Services

The subject site has good access to existing public transport services in the form of regular bus services that operate along both sides of Old South Head Road and Military Road (i.e. bus routes 324, 333, 380, 386 and 387).

The nearest bus stops are located on Old South Head Road and Military Road directly at the front of the subject site and within a very short walking distance.



Figure 3: Bus routes near the subject site



Photo 5: Existing bus stop on Old South Head Road opposite the subject site



Photo 6: Existing bus service on Old South Head Road at the subject site

4 PROPOSED DEVELOPMENT

4.1 Description of the proposal

The planning proposal is for the rezoning of the existing nine lots at 42-58 Old South Head Road, Vaocluse from low density to medium density residential, including the following potential options:

Option 1	Block A	Block B	Block C	Total
Estimated No. of units	44	52	28	124
Option 2	Block A	Block B	Block C	Total
Estimated No. of units	44	38	46	128
Option 3	Block A	Block B	Block C	Total
Estimated No. of units	33	49	46	128

The above number of units is based on an average unit size of 50m². Refer to **Appendix 'A'** for the plans of the rezoning planning options.

4.2 Vehicular Access (Existing & Proposed)

At present, the subject nine sites provide seven (7) separate driveway crossings on the western side of Old South Head Road.

Each of the proposed three residential blocks is expected to provide a two-way driveway crossing that is approximately 5.5 to 6 metres in width, for adequate vehicle manoeuvring into and out of the site without causing any major delays or congestion for traffic along the road.

Therefore, the proposal will have three (3) driveway crossing points compared to the existing seven (7) driveway crossing points, which will provide safer manoeuvring into and out of the subjects sites and reduce impacts on traffic along Old South Head Road, where all vehicles are to enter and exit the site in a forward direction.

All vehicular access to be located and constructed in accordance with the requirements of AS2890.1:2004.

Any front fencing is to be restricted to a height of 1.2 metres, otherwise a 45° splay or equivalent (2m x 2m) is to be provided at exit driveways, in accordance with Council's DCP to provide adequate sight lines to pedestrians.

5 ON-STREET PARKING

5.1 On-street Parking Conditions

The subject site is located in a mainly residential area, with a mixture of single dwellings and small sized residential flat buildings, as well as some commercial/retail shops. At present, unrestricted parking is permitted on both sides of Old South Head Road and adjacent streets, with the exception of the signposted 'No Stopping' zones at intersecting streets and Bus Zones.

It has been observed that on-street parking spaces in the vicinity of the subject site were moderately to highly utilised at times, with some available on-street parking opportunities in the vicinity of the subject site.

5.2 Impacts of Proposed Development on Parking

The parking demand resulting from the rezoning planning proposal will be accommodated within future on-site car parking facilities that are to be in accordance with the requirements of Council's DCP or other SEPP regulations.

Therefore, the proposal will have no major impacts on parking in Old South Head Road or adjacent streets.

6 EXTERNAL TRAFFIC IMPACT

An indication of the potential traffic generation of the proposed development is provided by the RMS *Guide to Traffic Generating Development - 2002*.

The Guide specifies the following traffic generation rates for high-density residential flat dwellings in a metropolitan Sydney area:

- 0.19 (AM) peak hour vehicle trips per unit.
- 0.15 (PM) peak hour vehicle trips per unit.
- 1.52 daily vehicle trips per unit.

Therefore, the proposed residential development options would have the following estimated traffic generation during AM and PM peak hours as shown below:

Option 1	Block A	Block B	Block C	Total
Estimated No. of units	44	52	28	124
Traffic generation (AM Peak)	8.3	9.9	5.3	24
Traffic generation (PM Peak)	6.6	7.8	4.2	19
Option 2	Block A	Block B	Block C	Total
Estimated No. of units	44	38	46	128
Traffic generation (AM Peak)	8.3	7.2	8.7	24
Traffic generation (PM Peak)	6.6	5.7	6.9	19
Option 3	Block A	Block B	Block C	Total
Estimated No. of units	33	49	46	128
Traffic generation (AM Peak)	6.3	9.3	8.7	24
Traffic generation (PM Peak)	5.0	7.4	6.9	19

Therefore, the proposed development options have an estimated traffic generation as follows:

- 24 morning peak hour vehicle trips.
- 19 afternoon/evening peak hour vehicle trips.
- Between 188 and 195 daily vehicle trips.

The estimated traffic generation from the proposed development options is considered to be of low impact on current flows on Old South Head Road and surrounding road network and will not alter the current levels of service, where additional traffic can be readily accommodated.

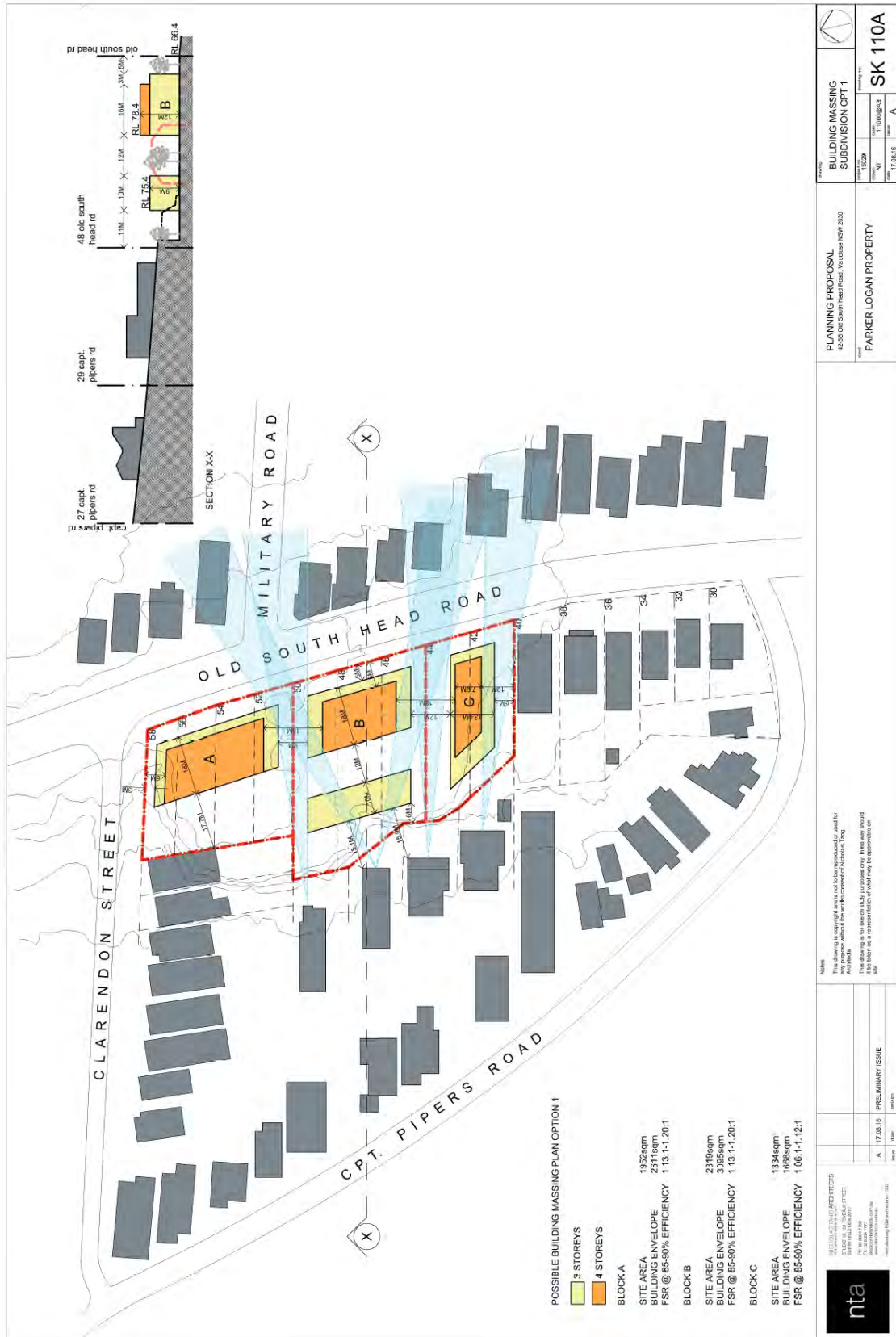
The potential increase in the number of vehicle movements in and about Old South Head Road and adjacent streets will remain well within the Environmental capacity of these streets, with no adverse impacts on the amenity of the area.

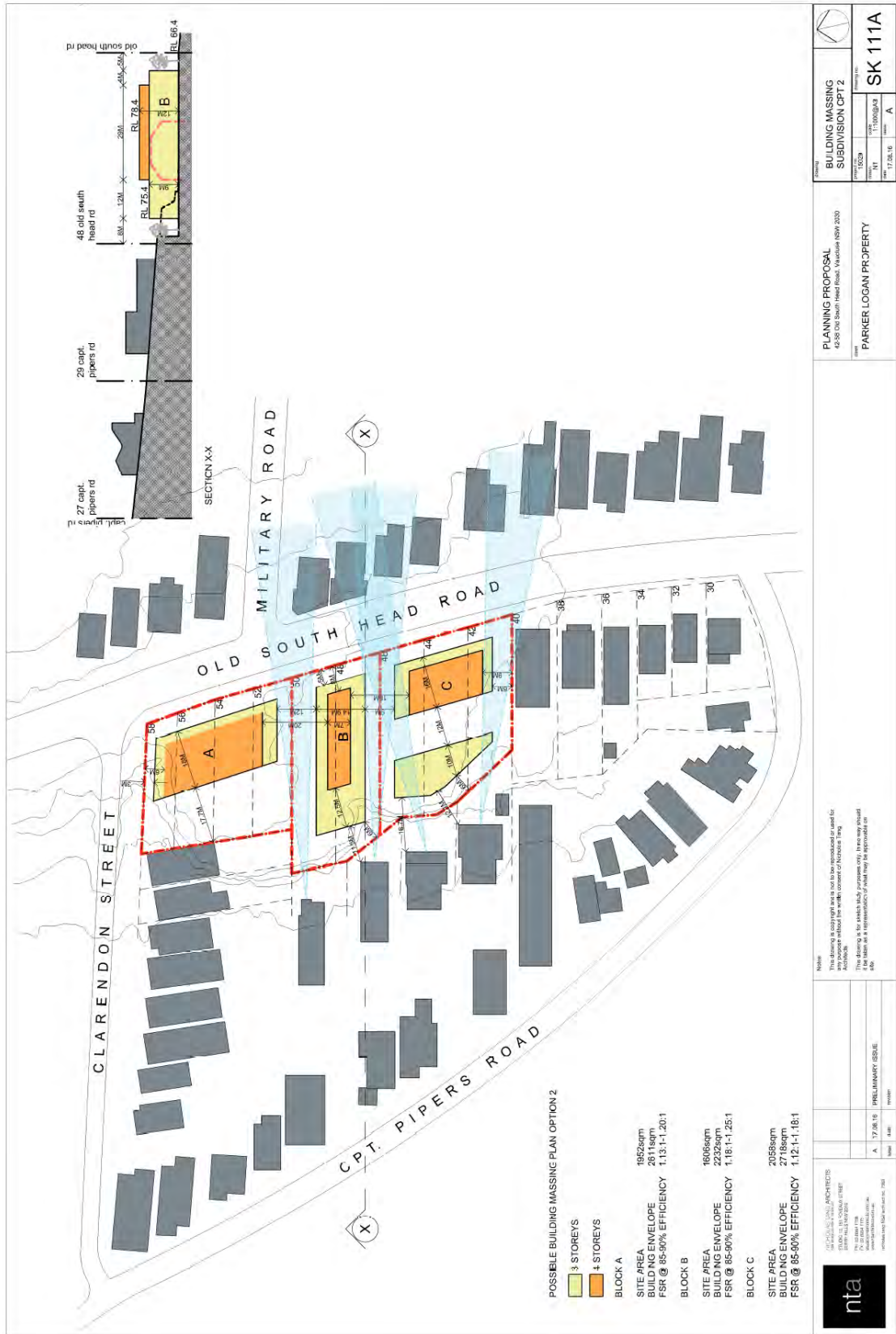
7 CONCLUSION

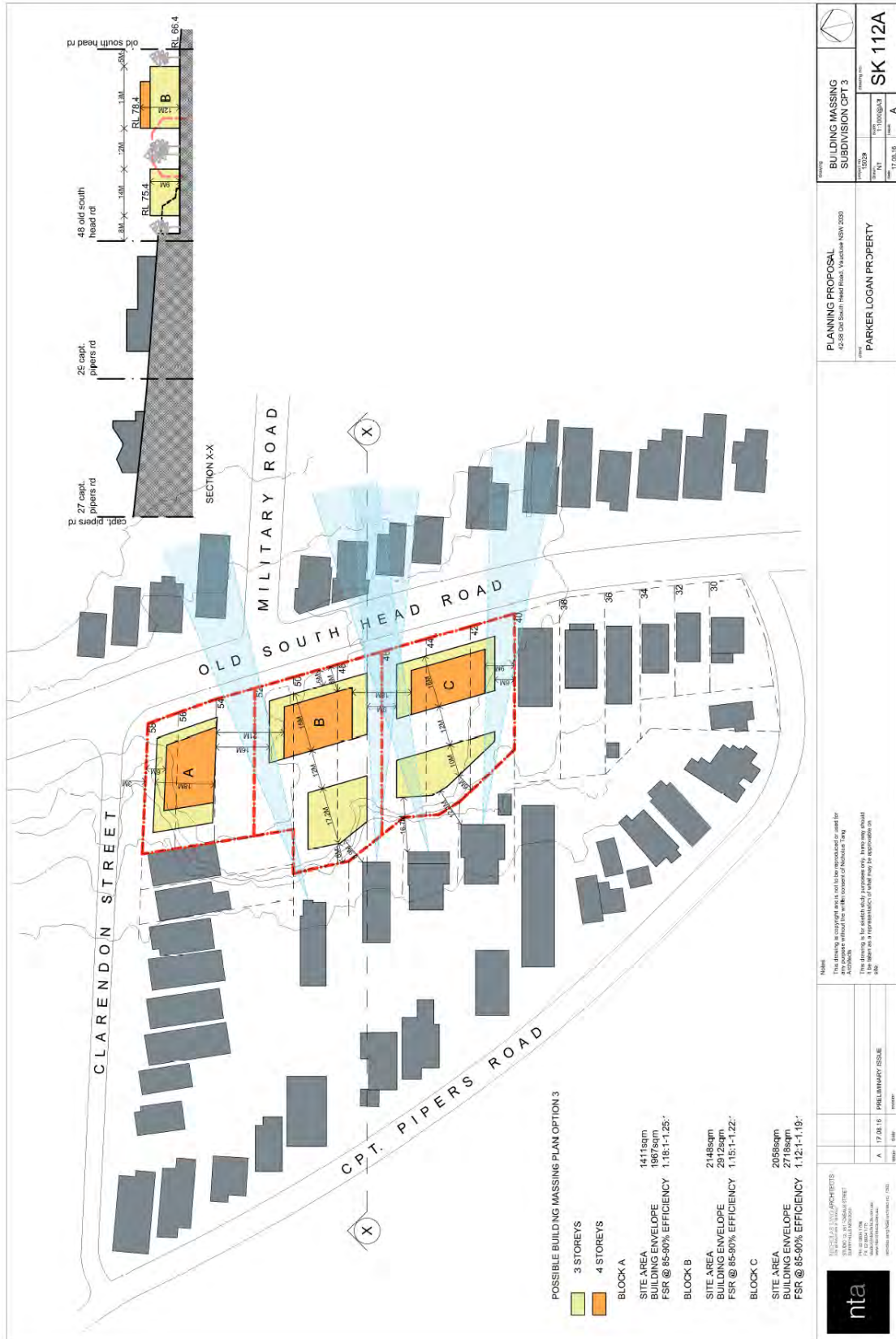
It can be concluded from the traffic and parking impact assessment that the rezoning planning proposal for the existing lots at 42-58 Old South Head Road, Vaocluse from low density to medium density residential will have no adverse impacts on existing traffic or parking conditions:

- The external impact of the traffic generated by the proposed development options is considered to be acceptable and will not result in any adverse impacts on peak traffic periods.
- The potential of any increase in the number of vehicle movements in and about Old South Head Road and adjacent streets will remain well within the Environmental capacity of these streets, with no adverse impacts on the amenity of the area.
- The proposal will have three (3) driveway crossing points compared to the existing seven (7) driveway crossing points, which will provide safer manoeuvring into and out of the subjects sites and reduce impacts on traffic along Old South Head Road, where all vehicles are to enter and exit the site in a forward direction.
- The parking demand resulting from the rezoning planning proposal will be accommodated within future on-site car parking facilities that are to be in accordance with the requirements of Council's DCP or other SEPP regulations. Therefore, the proposal will have no major impacts on parking in Old South Head Road or adjacent streets.
- The subject development site has good access to existing public transportation services in the form of regular bus services, as well as on-road cycle routes.

Appendix A – Proposed Development Options







Appendix B – Traffic Volume Counts

Client : Hemanote Consultants
 Job No/Name : 6280 VAUCLUSE Old South Head Rd
 Day/Date : Thursday 10th November 2018

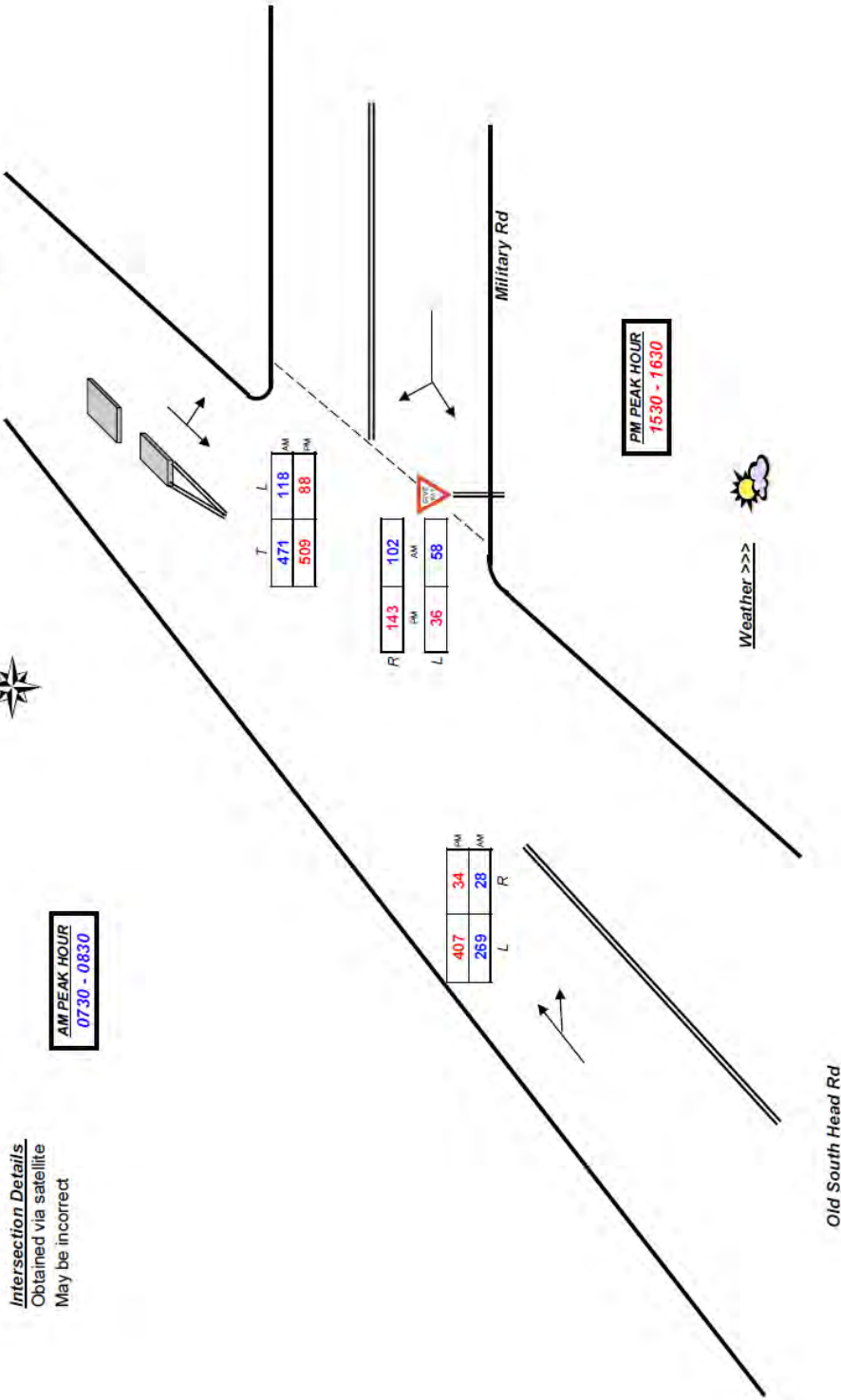
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Old South Head Rd

Intersection Details
 Obtained via satellite
 May be incorrect

AM PEAK HOUR
 0730 - 0830



PM PEAK HOUR
 1530 - 1630



Weather >>>

Old South Head Rd

R.O.A.R. DATA
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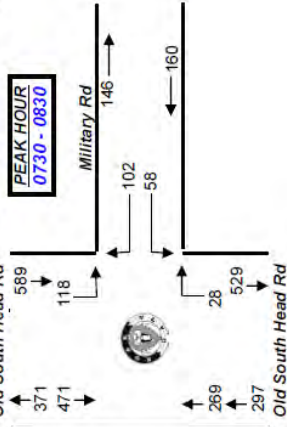
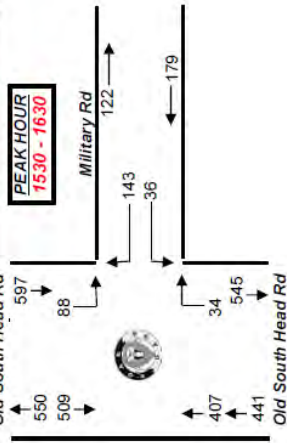
Client : Hemanote Consultants
 Job No/Name : G280 VAUCLUSE Old South Head Rd
 Day/Date : Thursday 10th November 2018

All Vehicles	NORTH			EAST			SOUTH			TOTAL
	Old South	Military Rd	Old South	Old South	Military Rd	Old South	Old South	Military Rd	Old South	
Time Per	I	L	R	I	L	R	I	L	R	I
1500-1515	107	25	43	5	10	92				282
1515-1530	103	22	41	6	12	90				274
1530-1545	149	26	45	4	9	104				337
1545-1600	106	17	34	7	10	85				259
1600-1615	133	23	29	11	6	110				312
1615-1630	121	22	35	14	9	108				309
1630-1645	113	7	40	9	9	91				269
1645-1700	96	25	27	10	10	94				262
1700-1715	115	22	29	10	10	102				288
1715-1730	99	15	40	5	13	116				288
1730-1745	107	20	28	11	11	92				269
1745-1800	100	14	31	7	10	92				254
Period End	1349	238	422	99	119	1176				3403

All Vehicles	NORTH			EAST			SOUTH			TOTAL
	Old South	Military Rd	Old South	Old South	Military Rd	Old South	Old South	Military Rd	Old South	
Time Per	I	L	R	I	L	R	I	L	R	I
0700-0715	95	15	22	6	11	89				248
0715-0730	105	11	25	6	8	81				236
0730-0745	113	25	23	14	7	66				248
0745-0800	133	20	22	13	7	62				257
0800-0815	116	35	32	16	7	70				276
0815-0830	109	38	25	15	7	71				265
0830-0845	97	29	26	8	8	72				240
0845-0900	110	24	31	10	7	78				260
Period End	878	197	206	88	62	599				2030

Peak Per	NORTH			EAST			SOUTH			TOTAL
	Old South	Military Rd	Old South	Old South	Military Rd	Old South	Old South	Military Rd	Old South	
1500-1600	465	90	163	22	41	371				1162
1515-1615	481	88	149	28	37	389				1162
1530-1630	509	88	143	36	34	407				1217
1545-1645	473	69	138	41	34	394				1149
1600-1700	463	77	131	44	34	403				1162
1615-1715	445	76	131	43	38	395				1128
1630-1730	423	69	136	34	42	403				1107
1645-1745	417	82	124	36	44	404				1107
1700-1800	421	71	128	33	44	402				1099
PEAK HR	509	88	143	36	34	407				1217

Peak Per	NORTH			EAST			SOUTH			TOTAL
	Old South	Military Rd	Old South	Old South	Military Rd	Old South	Old South	Military Rd	Old South	
0700-0800	446	71	92	39	33	308				889
0715-0815	467	91	102	49	29	279				1017
0730-0830	471	118	102	58	28	269				1046
0745-0845	455	122	105	52	29	275				1038
0800-0900	432	126	114	49	29	291				1041
PEAK HR	471	118	102	58	28	269				1046



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Client : Hemanote Consultants
 Job No/Name : 6280 VAUCLUSE Old South Head Rd
 Day/Date : Thursday 10th November 2018



Intersection Details
 Obtained via satellite
 May be incorrect

AM PEAK HOUR
 0800 - 0900

Old South Head Rd

Clarendon St

Old South Head Rd



R	T
3	515
0	568
	AM

AM	PM
40	29
	R

AM	T
17	536
11	392
	L

PM PEAK HOUR
 1530 - 1630



Weather >>>

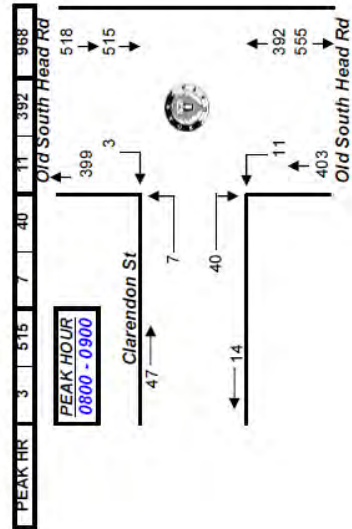
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Client : Hemanote Consultants
 Job No/Name : 6280 VAUCLUSE Old South Head Rd
 Day/Date : Thursday 10th November 2018

Pedestrians	NORTH			WEST			SOUTH			TOTAL
	Old South	Clarendon St	Old South	Clarendon St	Old South	Clarendon St	Old South	Clarendon St	Old South	
Time Per	R	I	L	R	I	L	R	I	L	I
0700 - 0715	3	101	1	9	1	9	1	123	238	
0715 - 0730	1	109	5	7	3	101	226			
0730 - 0745	2	129	1	9	2	87	230			
0745 - 0800	0	145	1	8	1	83	238			
0800 - 0815	1	137	1	14	3	97	263			
0815 - 0830	1	136	4	9	5	90	245			
0830 - 0845	0	111	2	14	2	96	225			
0845 - 0900	1	131	0	3	1	109	245			
Period End	9	999	15	73	18	788	1900			

Peak Per	NORTH			WEST			SOUTH			TOTAL
	Old South	Clarendon St	Old South	Clarendon St	Old South	Clarendon St	Old South	Clarendon St	Old South	
0700 - 0800	6	484	8	33	7	394	932			
0715 - 0815	4	520	8	38	9	368	947			
0730 - 0830	4	547	7	40	11	357	966			
0745 - 0845	2	529	8	45	11	366	961			
0800 - 0900	3	515	7	40	11	392	968			



Pedestrians	NORTH			WEST			SOUTH			TOTAL
	Old South	Clarendon St	Old South	Clarendon St	Old South	Clarendon St	Old South	Clarendon St	Old South	
Time Per	R	I	L	R	I	L	R	I	L	I
1500 - 1515	3	127	1	5	3	132	271			
1515 - 1530	0	121	0	4	4	127	256			
1530 - 1545	0	162	2	13	3	146	326			
1545 - 1600	0	118	2	5	7	114	246			
1600 - 1615	0	147	1	9	5	134	296			
1615 - 1630	0	141	0	2	2	142	287			
1630 - 1645	0	117	2	3	2	129	253			
1645 - 1700	0	114	2	7	1	120	244			
1700 - 1715	2	127	1	10	6	126	272			
1715 - 1730	0	107	1	7	3	153	271			
1730 - 1745	2	120	0	7	0	119	248			
1745 - 1800	1	109	1	5	2	121	239			
Period End	8	1510	13	77	38	1563	3209			

Peak Per	NORTH			WEST			SOUTH			TOTAL
	Old South	Clarendon St	Old South	Clarendon St	Old South	Clarendon St	Old South	Clarendon St	Old South	
1500 - 1600	3	528	5	27	17	519	1099			
1515 - 1615	0	548	5	31	19	521	1124			
1545 - 1645	0	568	5	29	17	536	1165			
1645 - 1845	0	523	5	19	16	519	1082			
1600 - 1700	0	519	5	21	10	525	1080			
1615 - 1715	2	499	5	22	11	517	1066			
1630 - 1730	2	465	6	27	12	528	1040			
1645 - 1745	4	468	4	31	10	518	1035			
1700 - 1800	5	463	3	29	11	519	1030			
PEAK HR	0	568	5	29	17	536	1155			

