

Proposed Carpark Subdivision of Existing Common Spaces for Exclusive Usage by Tenants

41 Kangaroo Street, Manly

Traffic and Parking Assessment

Ref: 19285

Date: December 2019

Issue: A

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1.0 Introduction

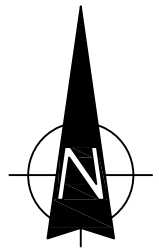
This report has been prepared as a response to Northern Beaches Council's rejection on a Development Application (DA2019/1134) for an existing high-density residential apartment at 41 Kangaroo Street, Manly (Figure 1). The DA seeks consent to amend the use of the existing 5 common car spaces via strata subdivision for the exclusive usage of the tenants/residents.

The purpose of this report is to:

- * describe the site, its context and the proposed modification scheme
- * describe the road network and traffic conditions in the area as well as the public transport services
- * assess the adequacy of the parking provision
- * assess the potential traffic implications
- * assess the vehicle access, internal circulation and servicing arrangements



SPIT BRIDGE OPENING TIMES	
Monday to Friday	
10.15am	11.15am 1.15pm
2.15pm	8.15pm (9.15pm DST only)
Saturday, Sunday and Public Holidays	
8.30am	10am 11.30am 2.30pm
4.30pm	6.30pm 8.30pm 9.30pm
Please contact the Bridge Operator on 9948 1016 for confirmation.	



LOCATION

FIG 1

2.0 Proposed Development

2.1 Site, Context, and Existing Circumstances

The site (Figure 2) is Lot CP of SP 7782 which occupies an irregular shaped area located to the north of the Manly commercial centre. The site has frontages of some 56 and 30 metres to the western side of Kangaroo Street and the eastern side of Sheridan Place respectively. The surrounding uses comprise:

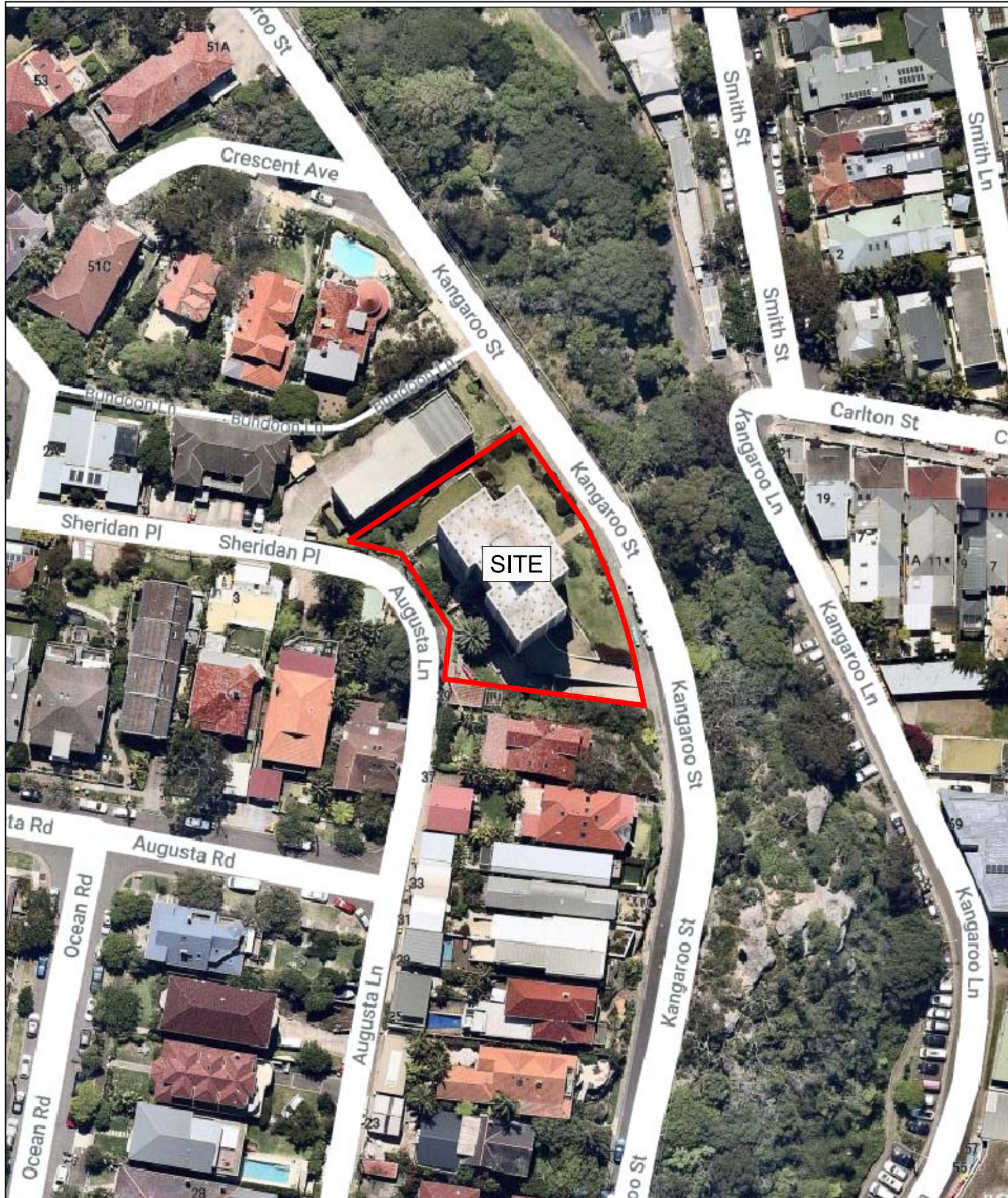
- * the residential dwellings adjoin to the north and south.
- * Kangaroo Street Park Reserve on the eastern side of Kangaroo Street.
- * Ivanhoe Park and Manly Oval which extend along the southern side of Raglan Street

The existing 9-storey residential building on the site comprising 24 three-bedroom apartments. The Strata Plan 7782 was registered on 25 December 1973 with the stratum of the car parking spaces identified as being "8"6" above the concrete slab on which they stand".

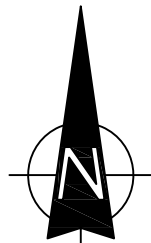
There are 33 on-site car parking spaces available within the site with the following breakdown:

- 29 residential spaces (8 spaces on the upper-level carpark and 21 spaces on the lower level carpark)
- 4 visitor spaces on the upper-level carpark

Vehicle accesses to both carpark levels are located on Kangaroo Street at the eastern site boundary.



SITE



SITE

FIG 2

2.2 Proposed Subdivision

There are five common property car parking spaces located on the upper-level carpark and on common property of the scheme. See figure overleaf.

The DA proposes to subdivide these car spaces. The subdivision will involve the relocation of the existing aluminium safety barriers at the end of each spaces.

Details of the proposed modifications are shown on the plans prepared by Lime Architects which accompanied the DA 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:

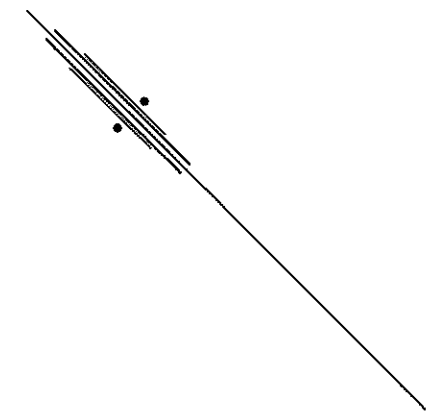
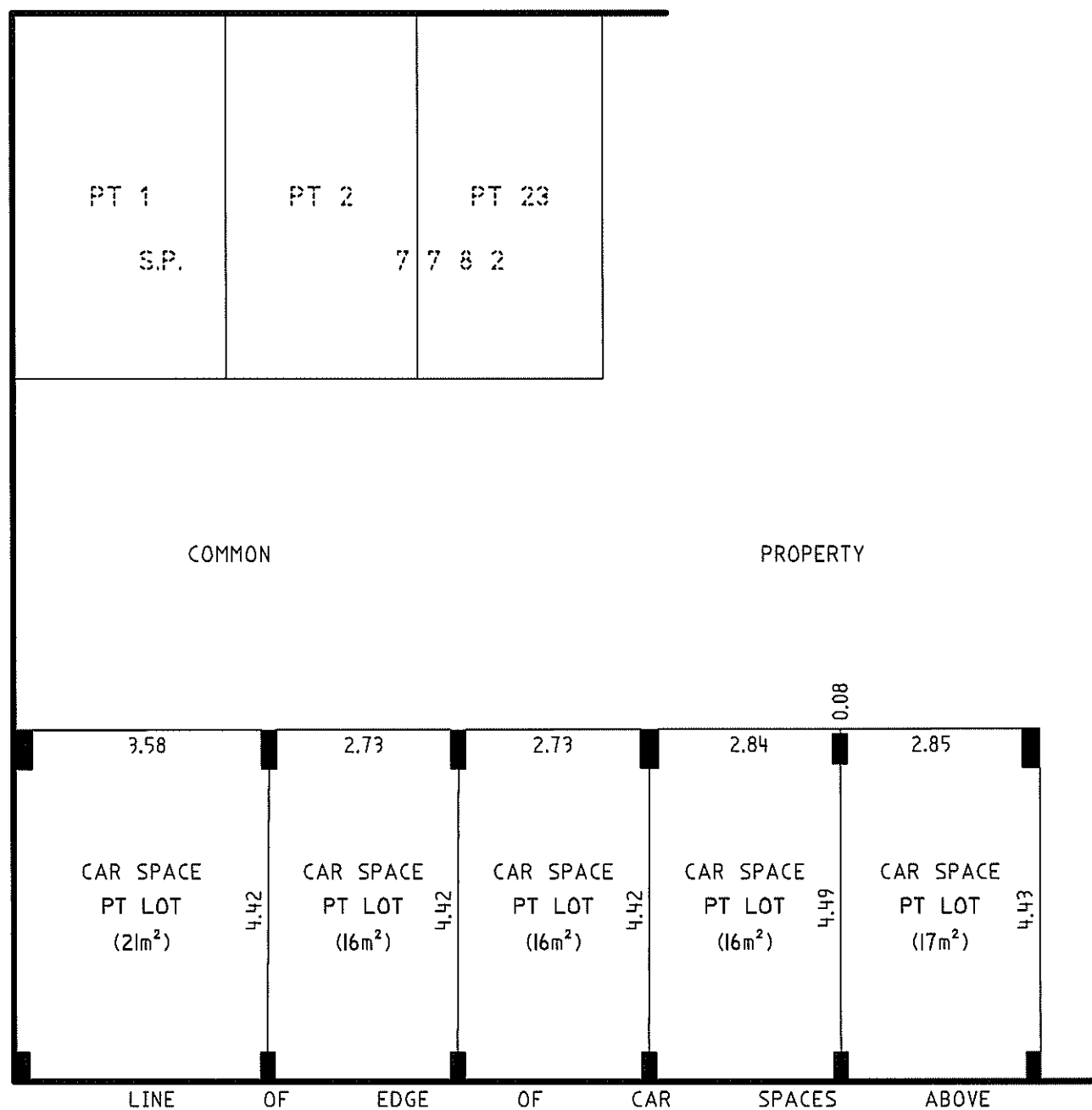
- * *Pittwater Road / State Road and Belgrave Street* – a major arterial route linking between Manly and Mona Vale
- * *Sydney Road* – a State Road and sub-arterial road route linking between Manly and Balgowlah
- * *North Steyne / Raglan Street (East)* – a Regional Road and major collector route connecting between Manly and Queenscliffe
- * *Raglan Street (West) / Griffiths Street* – a collector road route connecting between Pittwater Road and Condamine Street
- * *Kangaroo Street* – a local access road

3.2 Traffic Controls

The existing traffic controls which have been applied to the road system serving the site (Figure 4) comprise:

- * traffic signals at the Pittwater Road / Raglan Street and Sydney Road / Belgrave Street intersections
- * traffic signals at the Sydney Road / Thornton Street intersection
- * the STOP sign on Kangaroo Street at the Raglan Street intersection
- * the NO PARKING and NO STOPPING restrictions on the site frontages
- * the informal cycleway along Raglan Street

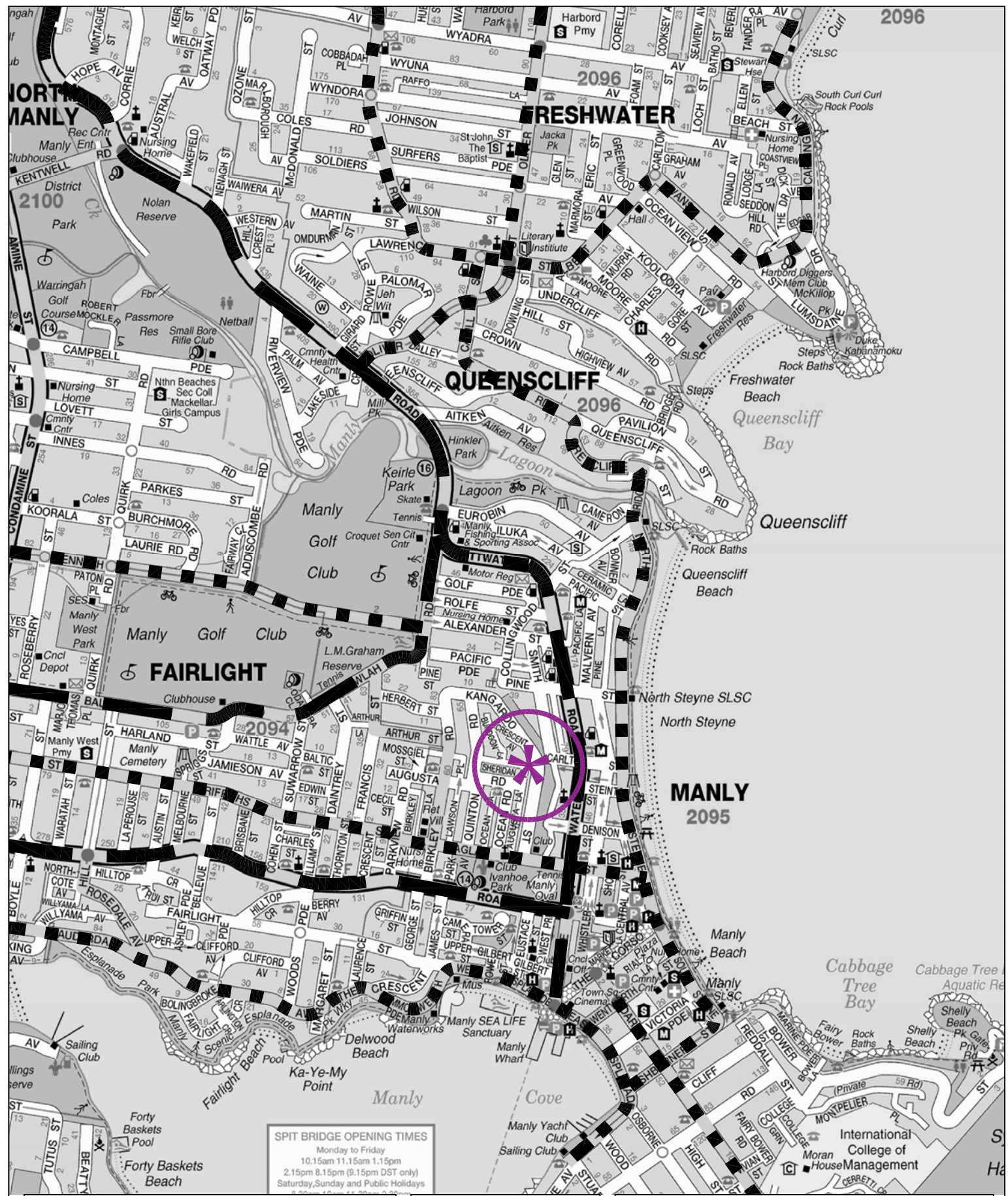
GROUND FLOOR



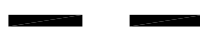

■ DENOTES PROLONGATION OF CENTRE LINE OF COLUMN

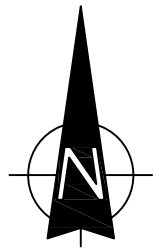
THE AREAS SHOWN ARE FOR THE PURPOSE OF THE STRATA SCHEMES DEVELOPMENT ACT 2015 ONLY AND ARE APPROXIMATE

<p>SURVEYOR Name: WARREN L. BEE Date: Reference: 21435</p>	<p>PLAN OF SUBDIVISION OF COMMON PROPERTY & VARIOUS LOTS TO BE DETERMINED WITHIN S.P. 7782</p>	<p>L.G.A: NORTHERN BEACHES Locality: MANLY Reduction Ratio: 1:100 Lengths are in metres</p>	<p>REGISTERED</p>	<p>DRAFT 23/09/2019</p>
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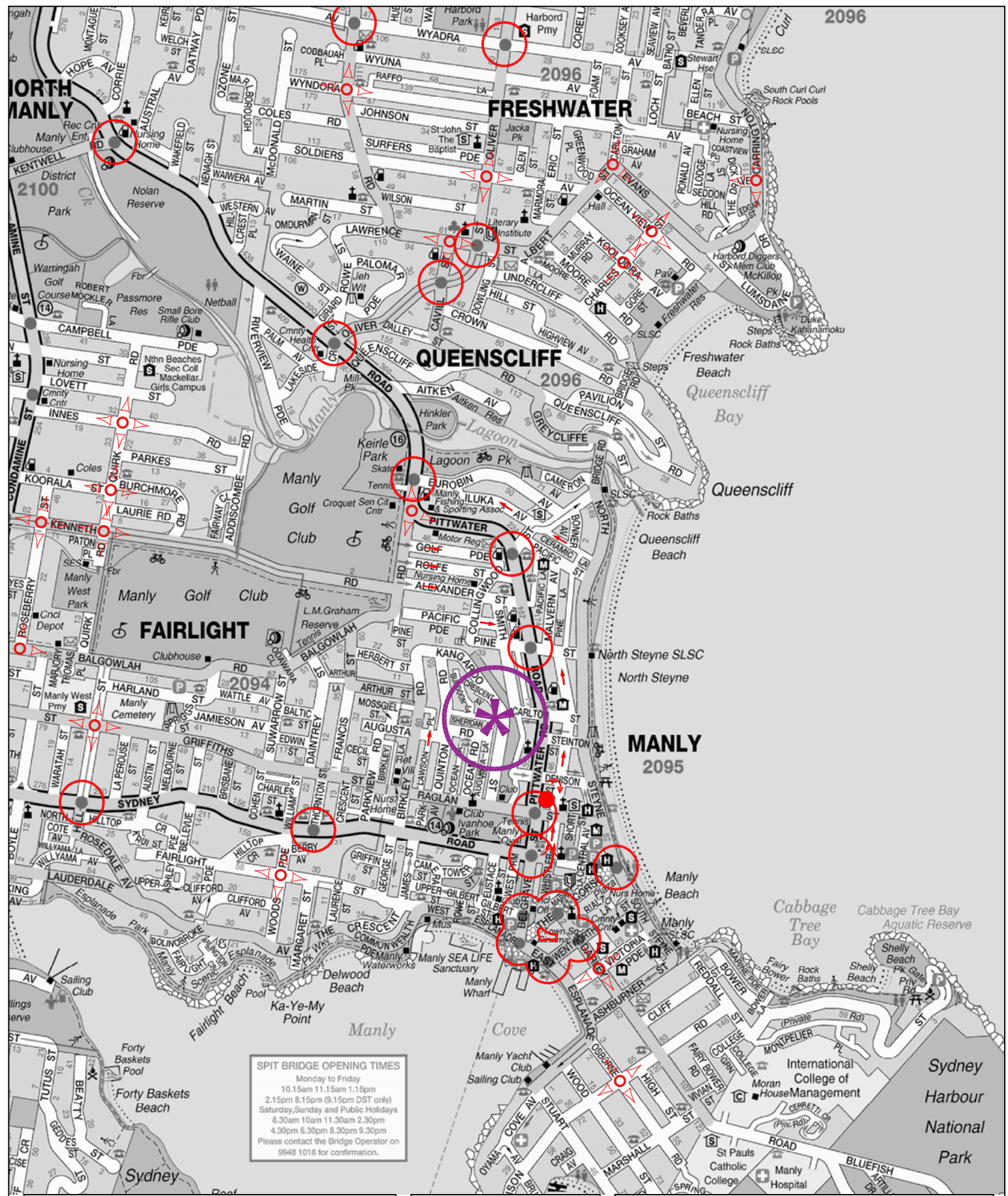
LEGEND

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






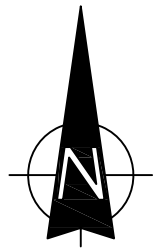
ROAD NETWORK

FIG 3



LEGEND

-  TRAFFIC SIGNAL CONTROL
-  ROUNDABOUT
-  RESTRICTED TURNING MOVEMENT



TRAFFIC CONTROLS

FIG 4

3.3 Traffic Conditions

An indication of the traffic conditions on the road system serving the site is provided by data published by the RMS. The data published by RMS is expressed in terms of Annual Average Daily Traffic (AADT) and the most recent recorded volumes are provided in the following:

Location	AADT
Pittwater Road (West of Raglan Street)	15,371
Sydney Road (West of Pittwater Road)	16,523

Traffic conditions in the vicinity of the site are generally satisfactory with a high level of control provided by the numerous traffic signals which provide for safe vehicle and pedestrian movements.

3.4 Transport Services

Public transport services in the vicinity of the site (Appendix B) include the bus services which interconnect with the ferry services. These frequent high capacity services provide connections to the City, the rail network, other bus services and the surrounding residential areas. It is apparent that the site is conveniently located to take advantage of those frequent high capacity transport services.

The site is advantageously located to benefit from bus and ferry services at the Manly Interchange and Ferry Wharf respectively. These stops are serviced by the following routes:

- * Route 131 North Balgowlah-Manly Loop
- * Route 132 Manly to Warringah Mall
- * Route 135 Warringah Mall to North Head
- * Route 136 Manly to Chatswood
- * Route 139 Manly to Warringah Mall
- * Route 140 Manly- Wharf to Epping station
- * Route 142 Manly to skyline shops

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- * Route 143 Chatswood to Manly
- * Route 144 Chatswood/RNSH to Manly
- * Route 155 Manly to Bayview Village
- * Route 156 Manly to McCarrs Creek
- * Route 171 Manly to City
- * Route E36 PrePay- Manly- Pitt and Playfair
- * Route E41 PrePay- Manly- North Balgowlah
- * Route E50 Milsons Point to Manly Route
- * E70 PrePay- City to Manly
- * Sydney Ferries
- * Manly Fast Ferry

4.0 Travel Planning

4.1 Travel Mode

The Australian Bureau of Statistics (ABS) 2016 Census of Population and Housing – Place of Residence by Method of Travel to Work data provides the most robust indication of existing travel patterns for the Manly (Pittwater Road) localities.

A summary of the current mode shares for the residents in Manly (Pittwater Road) and the Northern Beaches Council area are shown as follows:

Mode	Manly (Pittwater Road)	Northern Beaches Council area
Train/Bus	23.3%	18.5%
Ferry	20.4%	2.5%
Taxi	0.1%	0.2%
Bicycle	2.8%	1.2%
Walked only	8.6%	4.1%
Other	2.3%	1.9%
Subtotal (Active Transport)	57.5%	28.4%
Car - as driver	37.9%	65.2%
Car - as passenger	3.0%	4.1%
Motorbike	1.4%	1.4%
Total	100%	100%

The data indicate that more than half of the residents in Manly (Pittwater Road) area travel to work via active transport, encouraged by the excellent public transport services and well-established footpaths in the vicinity of the site. The convenient access to public transport is also demonstrated by the almost doubled percentage (57.5%) of active transport usage in the Manly (Pittwater Road) area as compared to the Northern Beaches Council area.

Mode	Manly (Pittwater Road)		
	2011	2016	Changes
Train/Bus/Ferry	43.60%	43.70%	0.10%
Walked only	7.40%	8.60%	1.20%
Car - as driver	39.00%	37.90%	-1.10%
Car - as passenger	2.20%	3.00%	0.80%

Based on a review of the travel mode data between the Year 2011 and the Year 2016, there are upward trends in residents using public transport and walking to/from their workplace. The established bus network and its close proximity to the Manly commercial centre and Manly Interchange have presented valuable opportunities to manage/reduce private vehicle usage. In addition, the data indicates a reduction in residents driving with an increase in the percentage of residents being dropped-off and picked-up or carpool.

4.2 Existing Car Parking Demand

As discussed, there are 33 on-site car parking spaces available within the site.

A survey of the surrounding on-street parking spaces as shown in the following figure indicates the following parking availability:

Street Names		Zone	Parking Restrictions	No. of Spaces	
2	Kangaroo Road - North		2p (8.00am-6.00pm) permit holders excepted	25	Bays
3	Kangaroo Road - North		NA	22	Bays
4	Kangaroo Road - South		NA	4	Bays
5	Kangaroo Road - South		2p (8.00am-6.00pm) permit holders excepted	20	Bays
6	Crescent Avenue		2p (8.00am-6.00pm) permit holders excepted	7	Bays
Total Capacity				78	Bays



The existing on-site and on-street parking spaces were surveyed on 2 peak weekday and weekend on the following days and dates:

Tuesday, 3 December 2019

Saturday, 7 December 2019

The surveys were completed to provide an indication of their utilisation when residential and visitor parking demand is expected to be the highest. Details of the surveys are provided in Appendix C while its outcome over the 2 days summarised as follows:

	Capacity	Maximum Occupancy Level	
		Weekday PM	Weekend AM
On-site Carpark (Resident)	29	18	18
On-site Carpark (Visitor)	4	1	0
Subtotal (On-Site)	33	19	18
Kangaroo Road	71	47	56
Crescent Avenue	7	3	4
Subtotal (On-Street)	78	50	60
Total	149	97	116

	Capacity	Minimum Vacancy Level	
		Weekday PM	Weekend AM
On-site Carpark (Resident)	29	11	11
On-site Carpark (Visitor)	4	3	4
Subtotal (On-Site)	33	14	15
Kangaroo Road	71	24	15
Crescent Avenue	7	4	3
Subtotal (On-Street)	78	28	18
Total	149	52	33

The on-site parking survey data above indicate a peak on-site parking demand rate of:

- 0.75 resident spaces per dwelling
- 0.05 visitor spaces per dwelling

Based on the above, there is ample spare on-street parking capacity along Kangaroo Road (a minimum of 15 spaces) and Crescent Avenue (a minimum of 3 spaces) during the peak hours. This equates to a total of 18 available parking spaces the residential use.

4.0 Parking

4.1 Approved Car Parking Rate

The existing 29 resident and 4 visitor car spaces represent parking rates of 1.2 spaces per dwelling and 1 visitor spaces per dwelling. These rates are consistent with the RMS rates for high density residential flat buildings within the Metropolitan Regional (CBD) Centres.

4.2 DCP Parking Rate

Council's DCP specifies the following parking provision in relation to a residential flat building:

- 1.5 resident parking space for 3 (or more) bedroom dwelling
- 0.25 visitor parking space for each dwelling

Application of these criteria to the existing 24 three-bedroom apartment building would indicate the following:

24 apartments	36 resident spaces
	6 visitor spaces
Total:	42 spaces

4.3 Other Council's DCP Parking Requirement

The experience with high-density residential apartments which are afforded excellent public transport and nearby the town/commercial centres are reflected in the Waverley Council parking codes as exemplified in the following:

Residents	Visitors
1 space per 3 rooms	No visitor parking spaces are required for the first 12 residential units. Thereafter, 1 visitor parking space is required for every 4 additional units or part thereof

4.4 Proposed Changes in Parking Provision

There are currently 29 car parking spaces for the use of residents/tenants. It is noted that the existing 24 car spaces have been allocated in the strata plan and such arrangement will remain unchanged with the subdivision of the existing 5 car spaces for the exclusive use rights to some tenants/residents. It is noted that the granting of these spaces to exclusive usage does not change the current parking allocation in terms of increase or decrease in available spaces.

4.5 Adequacy of Parking Provision

While the existing car parking provision of 33 spaces is short of the DCP requirement of 42 spaces, the existing provision remains compliant with the RMS rate, the Waverley Council's rate (of similar nature) and exceeds the surveyed car parking demand. As such, it is considered appropriate and will continue to meet the parking demand for the existing development.

The parking survey indicated a maximum car parking demand of 18 spaces and this demand can be easily accommodated within the 24 car spaces. The provision of 24 car spaces represent a parking provision rate of 1 space per dwelling which is higher the car parking demand rate of 0.75. The higher provision rate as compared to the existing on-site parking demand rate will help in reducing the reliance of residents on on-street parking along Kangaroo Road and Crescent Avenue.

It is apparent that the existing 4 visitor spaces have ample parking capacity to accommodate the visitor parking demand.

In addition, given the nature of the development and its location, the car ownership rates are low due to the following key factors:

- * The site's proximity to high-frequency bus and ferry services present realistic transport alternatives to private cars in the locality with the site within 400m to high-frequency bus services (9 bus routes). These bus services provide the connection to 16 bus routes and ferry services at the Manly Wharf/Interchange

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- * The on-site and surrounding bicycle facilities and infrastructures
- * The very walkable nature of the locality
- * The availability of nearby car share scheme
- * The proximity of Manly Town Centre and nearby services/facilities

The subdivision of the 5 spaces for the exclusive use of residents will present no impact on the residents based on the parking survey. The subdivision merely presents an opportunity for the residents who would like to have an exclusive on-site car space(s) to bid and purchase these spaces via a democratic auction process.

In the very unlikely event if the other residents require additional car spaces, the additional demand can be easily accommodated within the existing on-site and on-street spaces along Kangaroo Road and Crescent Avenue.

5.0 Traffic

The proposed use of the site will represent no change in traffic generation circumstances.

6.0 Access, Internal Circulation, Parking and Servicing

6.1 Access

The 2 existing driveways off Kangaroo Street will be retained. These driveways have traditionally and will continue to function without any safety and operational concerns.

6.2 Internal Circulation and Parking

The design of the circulation aisle on the upper-level carpark of 5460mm is short of the minimum AS2890.1 width requirement of 5800mm. Parking bays are a minimum of 2.4 x 5.4 metres to be in accordance with the design criteria of AS2890.1. The existing car spaces are a minimum of 2965mm wide which allows satisfactory provision will be available for access and manoeuvring as demonstrated by the turning path assessment provided in Appendix D.

6.3 Servicing

Refuse removal will continue to be undertaken with Council's refuse vehicle on the Kangaroo Street frontage as per the existing arrangement.

Occasional needs for other smaller service vehicles such as vans/utes can be satisfied by the use of the available visitors' parking spaces in the upper-level carpark. Any infrequent need for larger service vehicles can continue to be satisfied by the available kerbside parking.

7.0 Conclusion

This assessment has been undertaken in relation to the potential traffic and parking implications of the proposed subdivision of 5 existing car spaces for the exclusive use of residents at 41 Kangaroo Street, Manly. The assessment has concluded that:

- * the site is located in close proximity to high-frequency public transport services which link to the Metropolitan transport system
- * the existing 24 on-site parking provision will be adequate and appropriate to accommodate the maximum car parking demand of 18 spaces.
- * there is ample spare on-street parking capacity along Kangaroo Street and Crescent Avenue to accommodate the unlikely additional resident/visitor parking demand of the existing development
- * there will be no traffic impact on surrounding streets or amenity of surrounding residents
- * the existing servicing arrangement will remain suitable and adequate.

Appendix A

Architectural Plans

**DEVELOPMENT APPLICATION
41 KANGAROO STREET
MANLY NSW
Lot CP
SP 7782**

**Development Application
Architectural Drawings**

DA SERIES

DRAWING LIST

DA01	COVER SHEET
DA02	EXISTING SITE PLAN
DA03	EXISTING CARPARK PLAN (Upper Level only)
DA04	EXISTING CARPARK ELEVATIONS & SECTION (Upper Level only)

notes:
Do not scale from this drawing. Contractors to take and check all dimensions and levels on site prior to commencement of work. Any discrepancies to be reported to architect. Subcontractors to verify all dimensions on site before making shop drawings or commencing manufacture.

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REVISION	DESCRIPTION
A	ISSUE TO CLIENT

DATE
10.09.2019

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41 KANGAROO STREET, MANLY 2095 LOT CP SP 7782

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ARCHITTEAM

client	STRATA COMMITTEE
scale	
drawn	NL
file ref	00595.01
issue date	10.09.2019

COVER SHEET
revision number
DA01

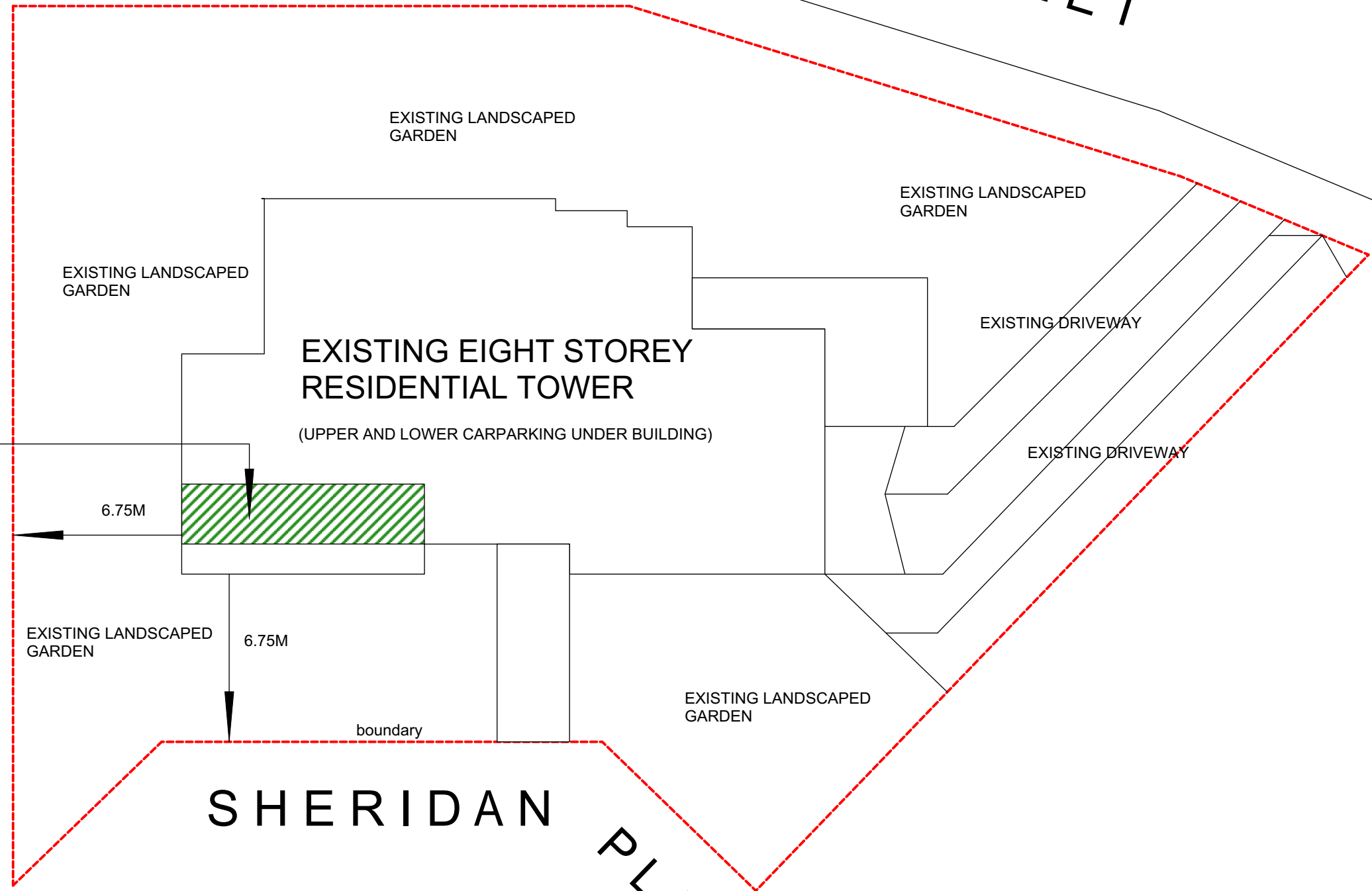
revision
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KANGAROO

STREET



NORTH



HATCHED AREA IS LOCATION OF PROPOSED SUBDIVISION OF 5 CAR SPACES FOR EXCLUSIVE USEAGE

6.75M

6.75M

boundary

SHERIDAN PLACE

EXISTING SITE PLAN

notes:
Do not scale from this drawing. Contractors to take and check all dimensions and levels on site prior to commencement of work. Any discrepancies to be reported to architects. Subcontractors to verify all dimensions on site before making shop drawings or commencing manufacture.

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REVISION	DESCRIPTION
A	ISSUE TO CLIENT

DATE
10.09.2019

ADDRESS
41 KANGAROO STREET, MANLY 2095 LOT CP SP 7782

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NSW Non-architect Registered Architect 6462

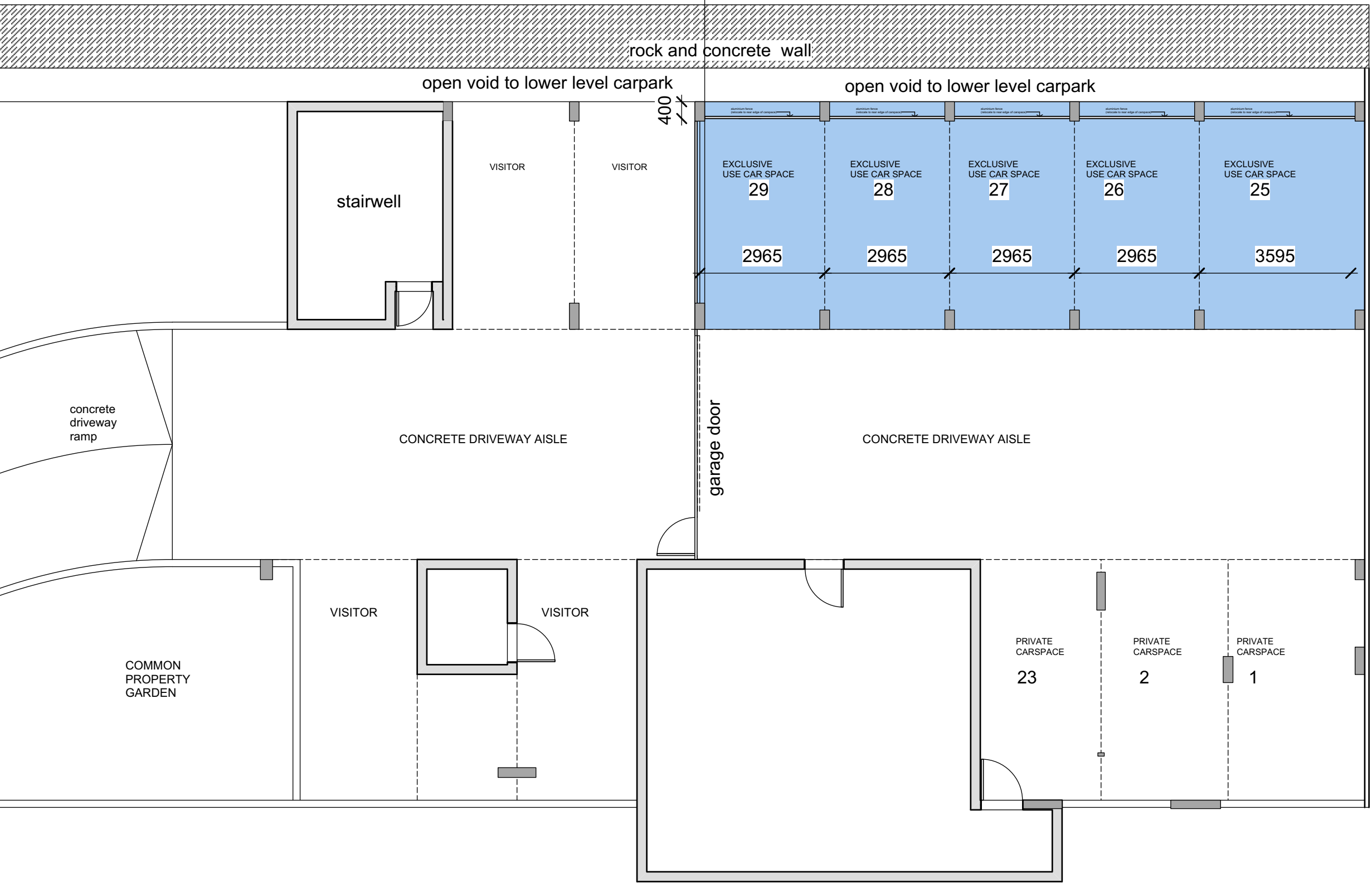
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w| www.limearchitects.com.au
ARCHITTEAM

client	STRATA COMMITTEE
scale	NL
drawn	NL
file ref	00595.01
issue date	10.09.2019

SITE PLAN
revision number
DA02

revision
A

2775 230 2750 230 2735 230 2735 230 2735 230 2735 230 3580 230



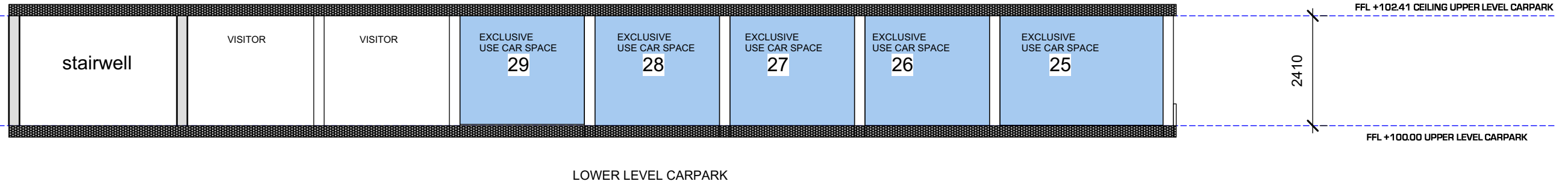
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4480
5400
460
5460
480
1600
650
2980

COMMON PROPERTY GARDEN

NORTH

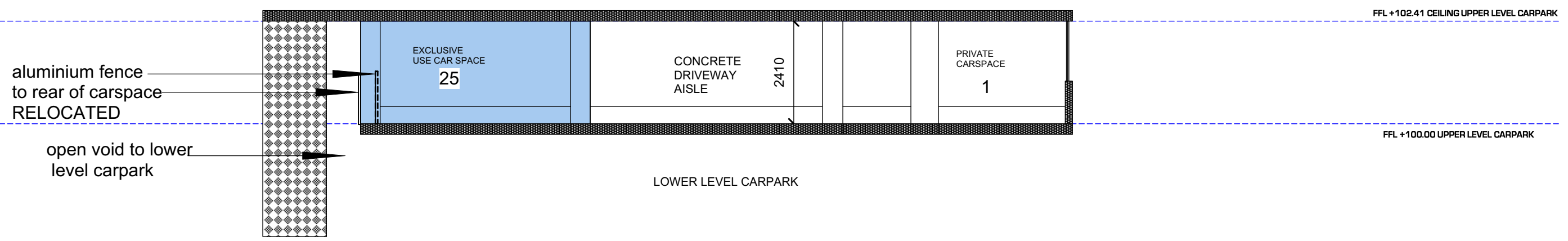
EXISTING UPPER FLOOR CARPARK PLAN

RESIDENTIAL TOWER ABOVE



EXISTING UPPER FLOOR CARPARK LONG SECTION & ELEVATION

RESIDENTIAL TOWER ABOVE



EXISTING UPPER FLOOR CARPARK SHORT SECTION & ELEVATION

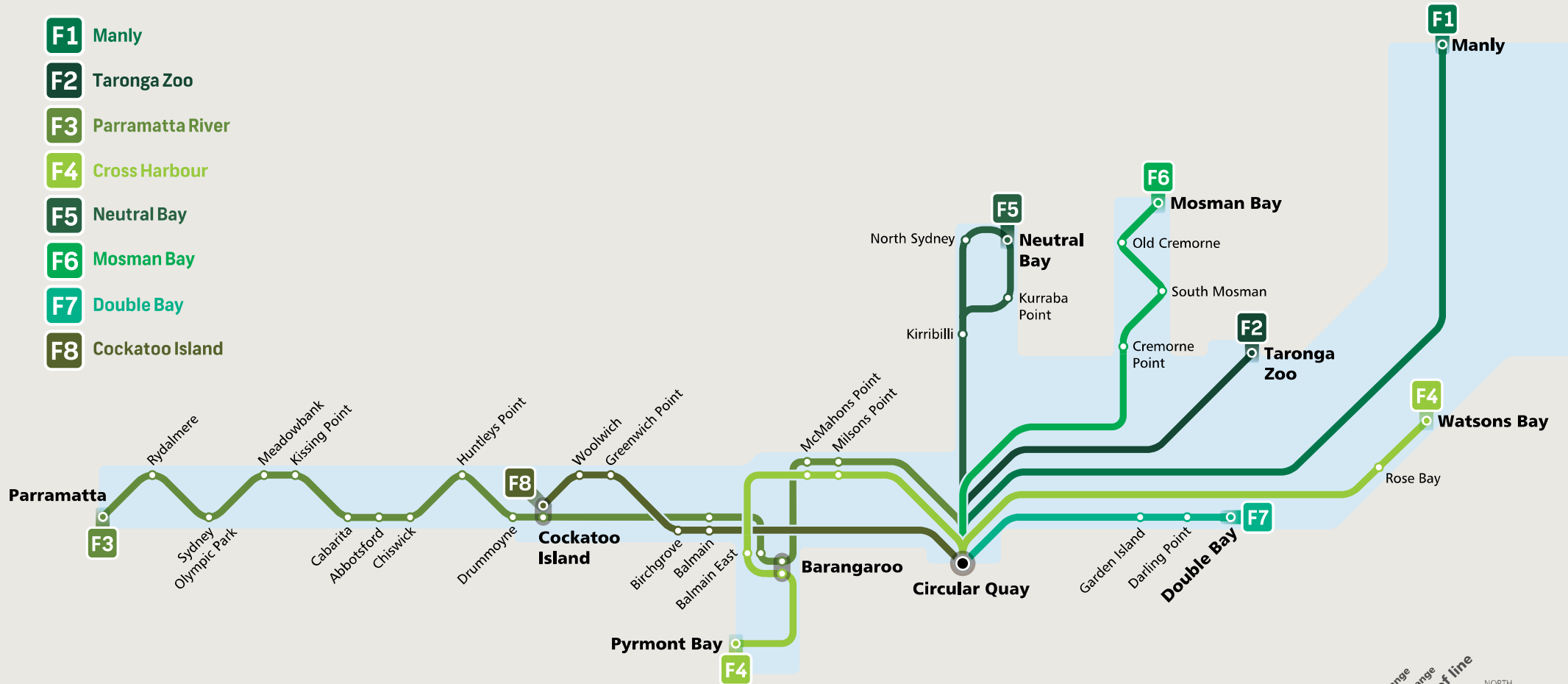
Appendix B

Public Transport Services

Sydney Ferries Network



- F1** Manly
- F2** Taronga Zoo
- F3** Parramatta River
- F4** Cross Harbour
- F5** Neutral Bay
- F6** Mosman Bay
- F7** Double Bay
- F8** Cockatoo Island



Check timetables and trip planners for ferry services and connections

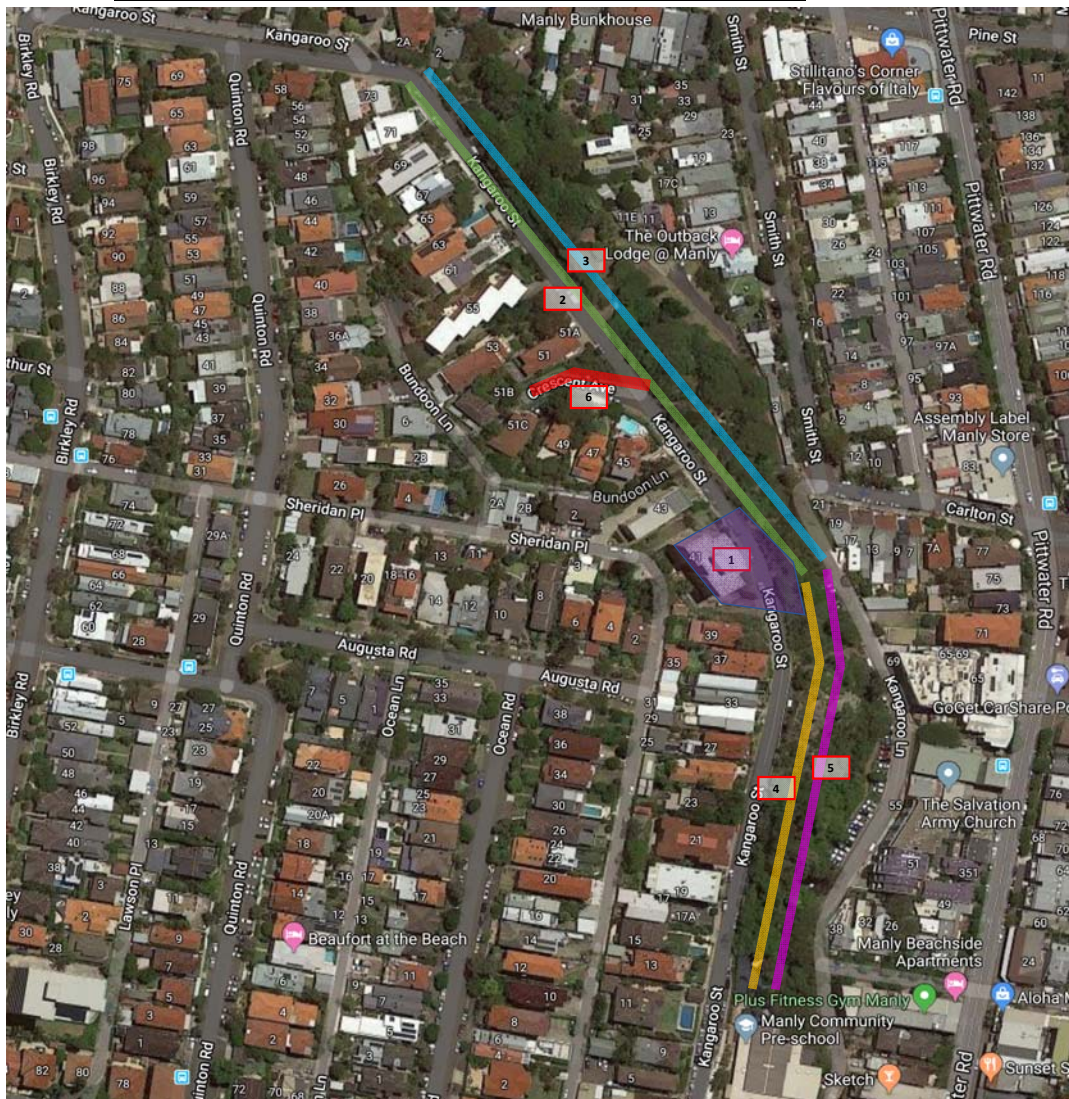
Visit transportnsw.info

Appendix C

Parking Occupancy Survey

41 - Kangaroo Street - MANLY

Street Names		Zone	Parking Restrictions	No. of Spaces	
1A	Resident - Site Carpark		NA	29	Bays
1B	Visitor - Site Carpark			4	Bays
2	Kangaroo Road - North		2p (8.00am-6.00pm) permit holders excepted	25	Bays
3	Kangaroo Road - North		NA	22	Bays
4	Kangaroo Road - South		NA	4	Bays
5	Kangaroo Road - South		2p (8.00am-6.00pm) permit holders excepted	20	Bays
6	Crescent Avenue		2p (8.00am-6.00pm) permit holders excepted	7	Bays
Total Capacity				78	Bays



Location	41 Kangaroo Street
Suburb	MANLY
Client	TTPA
Job No/Name	19144
Survey Duration	3 Hours
Day/Date	Tuesday, 3 December 2019

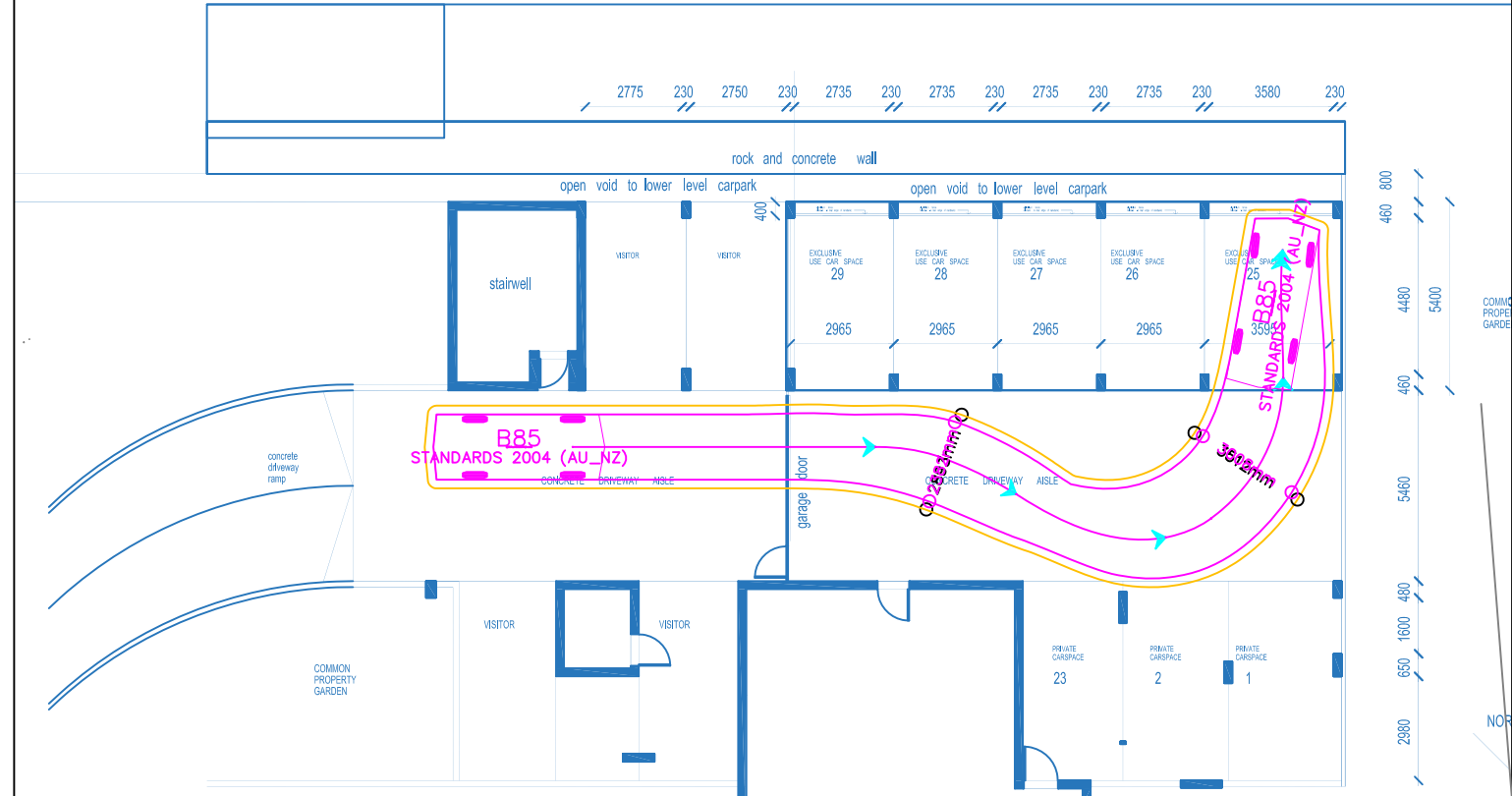
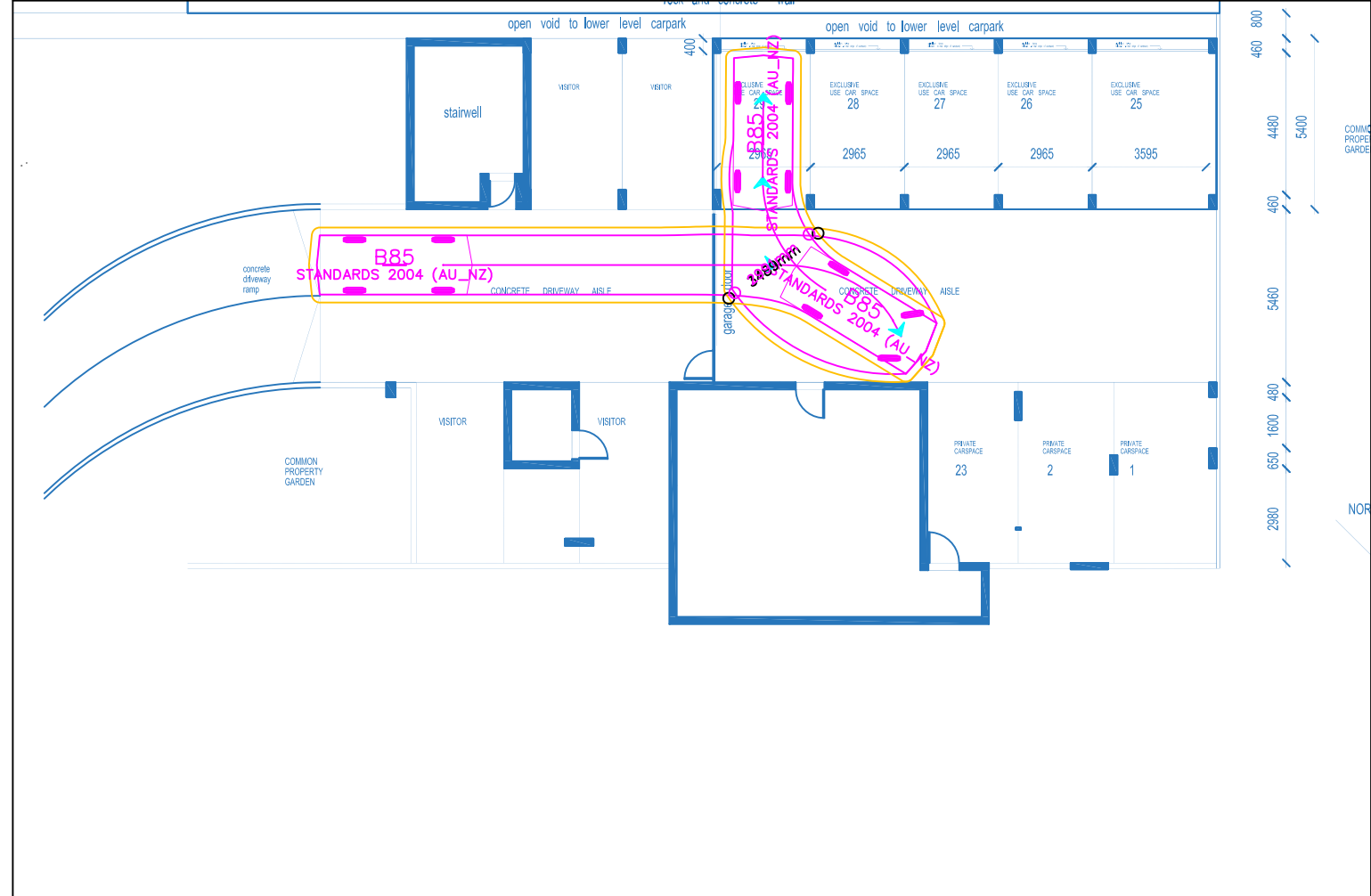
Location		Capacity	Parking Restriction	7:00 PM	7:30 PM	8:00 PM	8:30 PM	9:00 PM	9:30 PM	10:00 PM
On-Site										
1A	Resident - Site Carpark	29	NA	17	17	17	18	18	18	18
1B	Visitor - Site Carpark	4	NA	1	1	1	1	1	0	0
Total Vehicles Parked		33		18	18	18	19	19	18	18
Number of Vacant Spaces				15	15	15	14	14	15	15
% of Capacity Used				54.5%	54.5%	54.5%	57.6%	57.6%	54.5%	54.5%
On-Street										
2	Kangaroo Road - North	25	2p (8.00am-6.00pm) permit holders	16	17	17	16	17	17	17
3	Kangaroo Road - North	22	NA	9	8	8	7	7	8	8
4	Kangaroo Road - South	4	NA	4	3	4	4	4	4	4
5	Kangaroo Road - South	20	2p (8.00am-6.00pm) permit holders	16	17	16	16	17	18	18
6	Crescent Avenue	7	2p (8.00am-6.00pm) permit holders	3	3	3	3	3	3	3
Total Vehicles Parked		78		48	48	48	46	48	50	50
Number of Vacant Spaces				30	30	30	32	30	28	28
% of Capacity Used				61.5%	61.5%	61.5%	59.0%	61.5%	64.1%	64.1%

Location	41 Kangaroo Street
Suburb	MANLY
Client	TTPA
Job No/Name	19144
Survey Duration	3 Hours
Day/Date	Saturday, 7 December 2019

Location	Capacity	Parking Restriction	7:00 AM	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	
On-Site										
1A	Resident - Site Carpark	29	NA	18	18	17	17	16	16	15
1B	Visitor - Site Carpark	4	NA	0	0	0	0	0	0	0
Total Vehicles Parked		33		18	18	17	17	16	16	15
Number of Vacant Spaces				15	15	16	16	17	17	18
% of Capacity Used				54.5%	54.5%	51.5%	51.5%	48.5%	48.5%	45.5%
On-Street										
2	Kangaroo Road - North	25	2p (8.00am-6.00pm) permit holders	20	21	21	20	22	23	23
3	Kangaroo Road - North	22	NA	10	9	9	8	8	9	9
4	Kangaroo Road - South	4	NA	4	4	4	4	4	4	4
5	Kangaroo Road - South	20	2p (8.00am-6.00pm) permit holders	20	20	20	20	20	20	20
6	Crescent Avenue	7	2p (8.00am-6.00pm) permit holders	4	4	4	4	4	4	4
Total Vehicles Parked		78		58	58	58	56	58	60	60
Number of Vacant Spaces				20	20	20	22	20	18	18
% of Capacity Used				74.4%	74.4%	74.4%	71.8%	74.4%	76.9%	76.9%

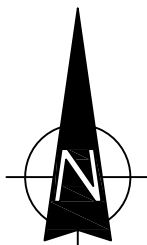
Appendix C

Swept Path Assessment

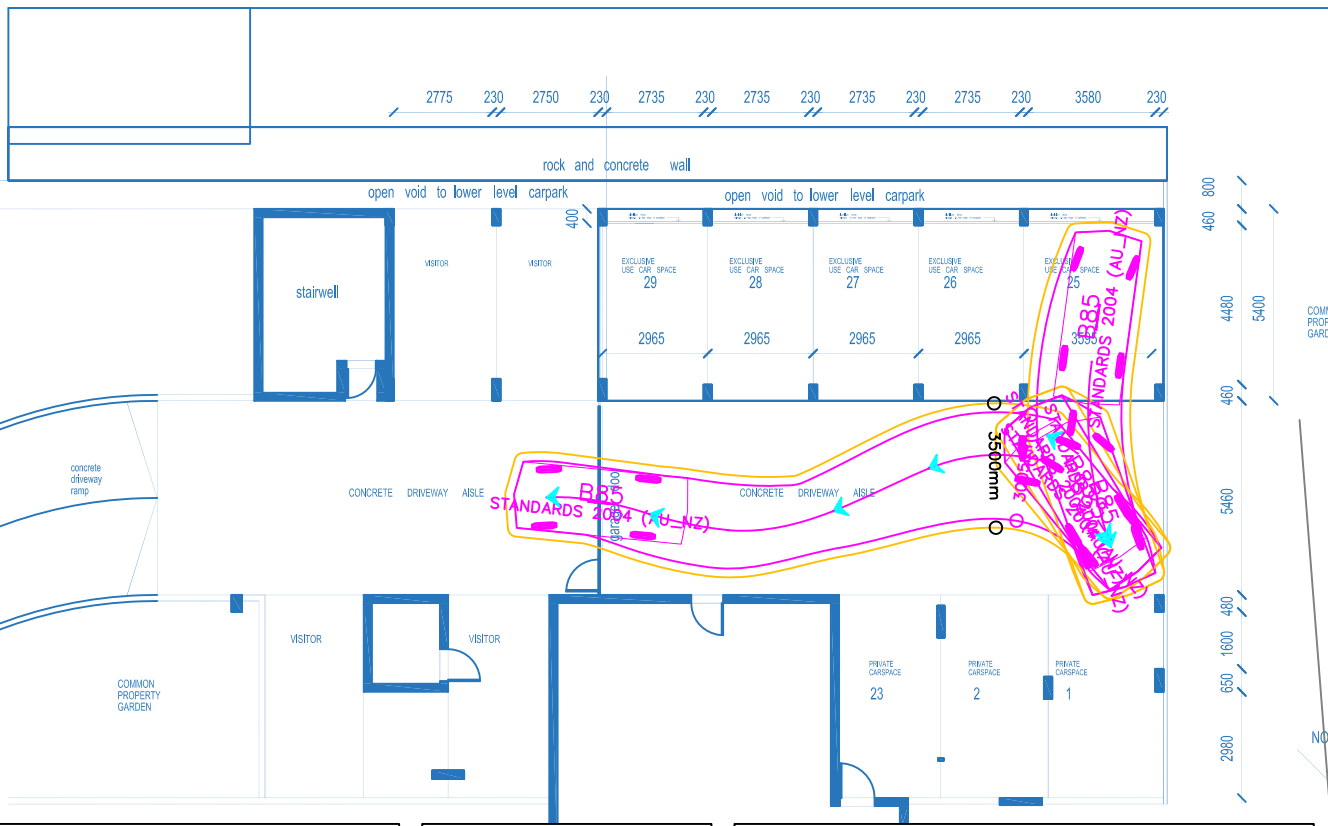
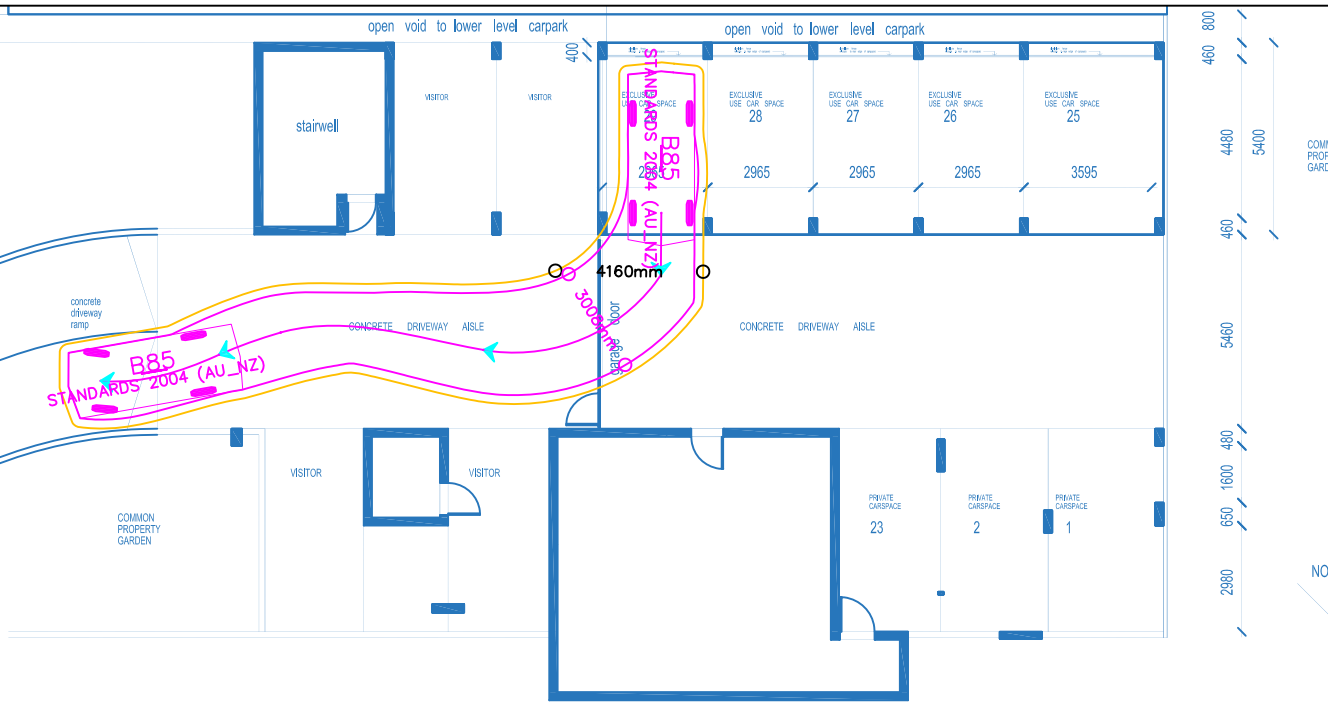


LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTURN PRO10 in conjunction with AutoCAD 2018. 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.

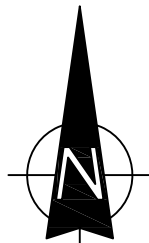


SWEPT PATH ANALYSIS OF B85 VEHICLES ENTERING CAR SPACES NO. 25 & 29



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTURN PRO10 in conjunction with AutoCAD 2018. 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 B85 VEHICLES EXITING CAR SPACES NO. 25 & 29