

**PARKING
ASSESSMENT
REPORT
FOR
PROPOSED
MIXED USE
DEVELOPMENT
ALFRED STREET
AND
WEST STREET
UMINA**

4 MARCH 2021

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1.0 EXISTING CONDITIONS

1.1 Introduction

The purpose of this Parking Assessment Report is to examine the potential traffic and parking impacts of proposed Mixed-Use development near the corner of Alfred Street and West Street, Umina Beach.

The site includes properties numbered 1 and 3 Alfred Street, and part of number 315, West Street.

1.2 Locality Diagram



(Image Courtesy of Google Earth)

**PROPOSED MIXED
USE
DEVELOPMENT**

1.3 Existing Use of Site

The existing site contains residential dwelling, a medical office and parking areas. The site is situated on the western side of Alfred Street at the northern side of commercial buildings along West Street, Umina Beach.

The site has frontage to Alfred Street and joins the northern side of an existing retail development fronting West Street.

1.4 Adjacent Developments

The area surrounding existing commercial building consists of residential, commercial / retail and hospitality developments. Alfred Street contains a variety of commercial and retail businesses, residential dwellings and a large public parking area between Alfred Street and Bullion Street.

1.5 Speed Zoning

Ocean Beach Drive is zoned as 60km/h but most streets in the commercial areas and other adjacent residential streets at Umina Beach near the development are currently zoned at 50km/h.

1.6 Existing Parking

The demountable commercial medical office at No. 1 Alfred Street provides a small off-street car parking area. This situation is common for many businesses in the Umina Beach shopping area.

There are timed parking restrictions on both sides of Alfred Street with a 1-hour limit during business hours, between 8.30am and 6.00pm Monday to Friday and between 8.30am and 12pm Saturday.

There are 1-hour parking restrictions for various sections along both sides of West Street between Ocean Beach Road and Morris Street, excluding Bus Zones and statutory No Stopping zones. There is a part-time Loading Zone approx. 12.6 m long on the southern side of West Street, 6.30am – 8.30am Monday to Friday, just west of South Street.

There are timed parking restrictions on the western side of Bullion Street with a 1-hour limit during business hours, between 8.30am and 6.00pm Monday to Friday and between 8.30am and 12pm Saturday, between West Street and the public car parking area. There is a Taxi zone along the eastern side of Bullion Street

between West Street and the access to the Woolworths supermarket that can accommodate approximately 6 taxis.

There are timed parking restrictions on both sides of Oscar Street with a 1-hour limit during business hours, between 8.30am and 6.00pm Monday to Friday and between 8.30am and 12pm Saturday along the western side fronting the Coles supermarket, with a section of 4-hour parking and 1-hour parking, 8.30am and 6.00pm Monday to Friday and between 8.30am and 12pm Saturday, along the eastern side.

There is a public car parking area located north of the shopping strip along West Street, between Alfred Street and Bullion Street that provides one hundred and fifty-seven (157) car spaces. The public parking area has a signposted 3-hour limit.

There are timed parking restrictions on both sides of South Street and Berith Street with a 1-hour limit during business hours, between 8.30am and 6.00pm Monday to Friday and between 8.30am and 12pm Saturday, extending from West Street to the extent of the existing commercial businesses.

2.0 TRAFFIC ENVIRONMENT ON WEST STREET

West Street is aligned generally east-west and connects Ocean Beach Road and Sydney Avenue to the west and Barrenjoey Road and Broken Bay Road to the east.

West Street has a relatively level gradient and straight horizontal alignment near the site.

There is existing street lighting on West Street.

The existing speed zone on this section of West Street is 50km/h.

There is kerb and gutter along both sides of West Street.

West Street has essentially commercial properties on both sides generally east of Ocean Beach Road through the main shopping strip of Umina Beach to Morris Street.

West Street has a carriageway width of approximately 12.2 metres between kerbs.

West Street has double barrier centreline markings between Ocean Beach Road and the pedestrian crossing just east of Oscar Street and broken centrelines generally east of Oscar Street.

There are several raised pedestrian crossings and kerb blisters along West Street to slow traffic flow and enhance pedestrian safety.

There are several Bus Zones on both sides of West Street.

3.0 TRAFFIC ENVIRONMENT ON OSCAR STREET

Oscar Street is a short local street aligned generally north-south, extending approximately 110 metres north of West Street.

There is kerb and gutter along both sides of Oscar Street.

Oscar Street has a sealed carriageway width of approximately 11.9 metres between kerb faces.

There are paved footpaths along both sides of Oscar Street.

Oscar Street has a straight alignment and relatively flat gradient.

There is street lighting along Oscar Street.

The existing speed zoning on Oscar Street is 50km/h.

Oscar Street provides a link between West Street and the Coles supermarket car parking area.

4.0 TRAFFIC ENVIRONMENT ON WELLINGTON STREET

Wellington Street is a local street aligned generally east-west, linking Ocean Beach Road and Trafalgar Avenue and is approximately 380 metres long.

Wellington Street has a straight alignment and relatively level gradient.

Wellington Street has kerb and gutter along both sides and a paved footpath along the southern side. The northern footway is grassed.

There is street lighting along Wellington Street.

There is a roundabout at the junction of Wellington Street and Ocean Beach Road.

The existing speed zoning on Wellington Street is 50km/h.

Wellington Street has a carriageway width of approximately 11.9 metres between kerbs.

There is a small mountable roundabout at the junction of Wellington Street and Ocean Beach Road that facilitates access in and out of Wellington Street.

There are no parking restrictions on Wellington Street apart from statutory “No Stopping” restrictions adjacent to intersections.

5.0 TRAFFIC ENVIRONMENT ON ALFRED STREET

Alfred Street is a local street aligned generally north-south, linking West Street Road and Wellington Street and is approximately 160 metres long.

Alfred Street has a straight alignment and relatively level gradient.

Alfred Street has kerb and gutter along both sides and a paved footpath along both sides from West Street to the connection to the 90° angle parking area approximately 110 metres north of West Street.

There is street lighting along Alfred Street.

The existing speed zoning on Alfred Street is 50km/h.

Alfred Street has a carriageway width of approximately 13.0 metres between kerb faces.

6.0 PEDESTRIAN ACCESSIBILITY

Paved pedestrian paths are provided along both sides of Alfred Street and West Street past the frontages of businesses along both sides of West Street.

There is pedestrian access along the southern side of the public parking area between Alfred Street and Bullion Street.

It is understood that Central Coast Council is considering acquisition of land between Alfred Street and Oscar Street along the rear of businesses along the northern side of West Street.

Such a pedestrian link would only provide a reduction in walking distance between the same points on Alfred Street and Oscar Street by approximately 80 metres compared with utilising the existing access via West Street and would adversely impact on some existing car parking on the eastern side of Oscar Street. The proposed new pedestrian link would also remove some potential customers from those fronting West Street and reduce security for such pedestrian activity.

At-grade pedestrian crossings exist across Oscar Street and Bullion Street just north of West Street and across West Street just east of Oscar Street.

There is a raised pedestrian crossing / road hump across West Street just west of South Street and across Alfred Street just north of West Street.

7.0 PROPOSED DEVELOPMENT

7.1 General

The proposal, for which this parking report has been prepared, is for removal of an existing residential dwelling and relocatable medical building and associated improvements, and construction of a new multi-level Mixed-Use Development.

The proposed Mixed-Use Development comprises of the following components:

Retail Shops (2)

- 74.23 m² GFA
- 508.39 m² GFA

Total Retail GFA = 582.62 m²

Residential Units

1 - Bedroom units	2
2 - Bedroom units	4
3 - Bedroom units	<u>8</u>
Total Units	14

Car Parking

35 spaces

Bicycle Parking

4 spaces #

(Note # : Bicycle parking not required for Shop-top Housing)

7.2 Public Transport

Busways operates several bus routes to Umina Beach (see Appendix D) that operate along Ocean Beach Road, West Street, Trafalgar Avenue and Wellington Street.

The proposed Mixed-Use Development provides convenient access to public bus routes for those who are unable to drive or who do not want to drive to other areas or to Woy Woy railway station.

7.3 Parking Provision

Parking Requirement

Residential Component

Central Coast Council's DCP 2013 – Part 7: - General Controls - Chapter 7.1 – Car Parking, Table 7.1.3.2 for Shop Top Housing and shops, requires parking as below:

7.1.3.2 Schedule of Requirements

Land-Use	Parking Requirement	Notes
Shop-Top Housing	1 car space per dwelling	

The proposed Mixed-Use Development includes 14 shop-top dwellings above the ground floor shop areas.

14 Units @ 1 spaces per dwelling = **14 spaces**

Commercial Parking

Shops	a) In the B3 Commercial Core or B4 Mixed Use Zone 1 space per 40m ² gross floor area, b) In any other situation 1 space per 30m ² gross floor area,	
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Car parking required under Table 4.1.4.4 Council's DCP 2013 requires parking be provided at a rate of 1 space per 30 m² in the B2 Zone at Umina Beach.

Parking for the retail component under Council's DCP 2013 would therefore be:

582.62 m² @ 1 space per 30 m² → 19.4 spaces
Say **20 spaces**

Total Parking Requirement: **34 spaces**

The existing chemist shop on 315 West Street currently provides a small parking area at the rear capable of accommodating approximately 4 cars. That small parking area will become part of the subject development.

The proposed development will provide thirty-five (35) car spaces – 1 space more than required for the residential shop-top housing / commercial requirement.

However, the parking provision including the existing commercial spaces is three (3) spaces less than the overall parking requirement including the ground floor level shops, as the existing four (4) spaces will also be removed.

The overall parking deficiency is therefore three (3) car spaces.

The basement parking area will provide one (1) motorcycle space and four (4) bicycle racks on the ground floor level.

Most shops along both sides of West Street in the Umina Beach Centre do not provide any off-street parking spaces.

It is relevant to consider Section 5.2.1 of the RTA Guide to Traffic Generating Developments which states the following:

*The importance of parking must be kept in perspective in the overall planning assessment. There may be situations where it may not be physically possible to provide parking, but the potential planning benefits of the proposal are significant. For example, the adaptive re-use of an historic building may not include on-site parking as it could have an adverse impact on the structure of the building or on its curtilage. **Another example is the case of a change of use of a small shop that is part of a traditional strip shopping centre and cannot provide extra parking space.** Alternatives, such as contributions for off-site parking provision must be explored. It is stressed that a shortage of parking (both on-site and off-site) is not necessarily detrimental to the success of a proposed development. It is but one of many issues that need to be considered in determining development proposals.*

7.4 Internal Parking Layout

The basement parking layout will provide spaces 5.2 metres long and 2.6 metres wide for the 2-car-stackers, and 5.4 metres long and 2.5 metres wide for the single car spaces. The main aisle dimension will be 6.182 metres.

The 2-car-stackers turn through 90° and don't require drivers to manoeuvre into those spaces. Drivers travel onto the stacker supports and vacated cars are then slid into the appropriate upper or lower space – refer to details in Appendix E.

The dimensions comply with AS/NZS 2890.1 – 2004.

One (1) space will be designated and suitably delineated as an accessible space.

7.5 Existing Parking Demand

To assess the potential impacts of the minor shortfall in parking associated with the proposed development, parking surveys were undertaken with a walking distance of approximately 200 metres of the development.

Several streets in the Umina Beach area provide kerbside car-parking spaces within reasonable walking proximity to the proposed development located close to the corner of Alfred Street and West Street.

These spaces exist along both sides of Alfred Street, Oscar Street, Alfred Street, Bullion Street #, West Street, South Street and Berith Street.

(Note #: Parking within 200 metres of the site is only available along the western side of Bullion Street).

There is a public car parking area located between Alfred Street between Bullion Street and along the northern side of a one-way laneway between Alfred Street and Bullion Street that provides access for pedestrians and car parking areas for businesses along West Street.

The available lengths of kerbside parking on streets within approximately a 200 metre walk of the proposed Mixed-Use Development on the corner of Alfred Street and West Street that are available for public parking are listed in the following table.

Kerbside Parking Capacity within approximately a 200 metre walk from the Development

Location	Length of Kerbside Available for Public Parking – (Excluding driveways) m	Approximate Numbers of cars that can be Accommodated
Public Car Parking area bordered by Alfred Street and Bullion Street	-	157
Oscar Street – north of West Street - both sides	110	19
West Street – Ocean Beach Road to Trafalgar Street - both sides	269.3	45
Alfred Street – West Street to Wellington Street, both sides	124	21
Alfred Street – 90 ⁰ parking area north of public car parking area	-	32
Bullion Street – West Street north to public parking area, western side; (eastern side Taxi ranks)	25	4
South Street – West Street to House No. 20, both sides	87.2	14
Berith Street – West Street to House No.20, both sides	173	29
Total Kerbside Parking Available Within Proximity to the proposed development		164
Total Parking Available Within Proximity to the proposed development (including Public Off-street Parking Areas)		321

Other sections of streets in Umina Beach also provide kerbside parking in the Umina Beach area but represent a walk slightly greater than 200 metres and were therefore not surveyed.

The lengths of parking shown above were measured with allowance deducted for driveways and nominal clearance each side, and a parking length of 6 metres per car except where clearances between cars can be reduced. The number of cars that could be parked may vary slightly depending on how closely cars are parked together, the size of cars and how close they are parked to driveways.

In some instances, the number of cars parked exceeded the capacity due to illegal parking.

Surveys of existing parking demand were conducted at and near the development site along West Street, Oscar Street, Alfred Street, Bullion Street, South Street, and Berith Street and in the public car parking area on Friday 17 August 2018. Surveys were undertaken at half-hourly intervals between 8.00am and 10.00am; 11.00am and 1.00pm and between 3.00pm and 5.00pm to correspond with peak trading periods for commercial businesses at Umina Beach.

Car parking demand at Umina Beach is unlikely to have altered significantly since the 2018 surveys

The results of this survey, showing the number of parked cars and the number of available parking spaces for streets adjacent to the existing commercial building, and in the existing commercial building car parking area, are tabulated as Appendix A to this report:

Summary of Available Car Parking near the proposed development

Date of Survey	Day of Week	Time of Surveys	Average Number of Vacant Kerbside Spaces within proximity to the existing commercial building (Capacity 164 cars)	Average Total Number of Available Car Parking Spaces within proximity to the existing commercial building (Capacity 321 cars)
17/08/18	Friday	8.00am - 10.00am	53	128
17/08/18	Friday	11.00am - 1.00pm	35	62
17/08/18	Friday	3.00pm – 5.00pm	51	129
Overall Daily Average Number of Vacant Car Spaces			46	106

The surveys were conducted on a Friday - typically the busiest trading day of the week.

The surveys confirm that the adjacent public off-street car parking area and nearby kerbside parking areas will satisfy the potential minor increase in parking demand associated with the proposed Mixed Use Development.

7.6 Traffic Generation

The RTA Guide to Traffic Generating Developments defines traffic generation for medium- density flat buildings (up to 20 dwellings) as follows

The RTA Guide to Traffic Generating Developments indicates traffic generation rates for medium density dwellings as below.

3.3.2 Medium density residential flat building.

Rates.

Smaller units and flats (up to two bedrooms):

Daily vehicle trips = 4-5 per dwelling

Weekday peak hour vehicle trips = 0.4-0.5 per dwelling.

Larger units and town houses (three or more bedrooms):

Daily vehicle trips = 5.0-6.5 per dwelling

Weekday peak hour vehicle trips = 0.5-0.65 per dwelling.

The proposed development comprises the following components:

2 x 1-bedroom units	= 2 bedrooms
4 x 2-bedroom units	= 8 bedrooms
8 x 3-bedroom units	<u>= 24 bedrooms</u>
Total	= 34 bedrooms

The estimated traffic generation would therefore be:

Weekday Peak Periods

6 dwellings @ 0.5 trips per dwelling	= 3 trips
8 dwellings @ 0.65 trips per bedroom	= 5.2 trips
	Say 9 trips
<u>Total residential traffic generation</u>	<u>= 9 trips</u>

Shops

The type of tenancies for the two shops are unknown currently.

The rate deemed applicable is that for specialty shops in shopping centres which may be excessive for the relatively small shops proposed.

That is, evening peak hour:

56 A(SS) where is the GLFA (*vehicle trips per 1,000 m²*)

The architectural drawings indicate the total GFA of the two shops to be 582.62 m².

GLFA is less than GFA and estimated to be approximately 80% of GFA in this location.

That is, the GLFA of the two shops is estimated to be: 466.1 m².

The evening peak hour traffic generation of the two shops is therefore estimated to be:

56 x (466.1 / 1,000)	26.1 trips
	Say 27 trips

Traffic generation during the morning peak-hour is usually less than during the evening peak-hour, assumed to be approximately 75% in this location.

The morning peak-hour traffic generation of the two shops is therefore estimated to be:

27 trips x 0.75	20.25 trips
	Say 21 trips

The combined traffic generation for the overall Mixed-Use Development is estimated to be:

AM Peak	30 trips
PM Peak	36 trips

7.7 Origin / Destination Considerations

The location of the proposed Mixed-Use Development near the southern end of the Central Coast LGA relative to major employment and retail centres, as well as access to the M1 Pacific Motorway and Woy Woy railway station suggests that traffic generated by the proposed development may be approximately 90% to / from the north along Ocean Beach Road, Trafalgar Avenue and Barrenjoey Road

Residential dwellings usually generate approximately 80% of morning trips outwards and 20% inward trips, with the reverse in the evening peak hour.

Shops are more likely to generate approximately 30% of morning trips outwards and 70% inward trips, with the reverse in the evening peak hour

The estimated distribution is therefore:

	Residential Dwellings	Shops
<u>AM Peak</u>	7 outward trips 2 inward trips	8 outward trips 19 inward trips
<u>PM Peak</u>	2 outward trips 7 inward trips	19 outward trips 8 inward trips

7.8 Servicing Arrangements

The proposed Mixed-Use Development will not require significant servicing.

Shops will be serviced by small vans or small rigid vehicles, similar to those servicing many of the shops along West Street.

7.9 Access Provisions

The proposed development will provide one combined entry / exit driveway onto Alfred Street to service the thirty-five (35) basement car spaces.

AS/NZS 2890.1 – 2004 suggests that for a Class 1 parking facility, serving between 25 and 100 car spaces and frontage to a local road, a Category 2 driveway is appropriate. That is, a combined driveway 6.0 metres to 9.0 metres wide, is suitable.

The proposed access driveway to the basement parking area will be approximately 6.1 metres wide at the boundary with 300mm clearances each side on the entry / exit ramp - satisfying the recommended criteria in AS/NZS 2890.1 - 2004.

7.10 Sight Distance

Sight distances at the proposed access driveway are as follows:

Alfred Street Access

Towards the left (generally north)
(to *Wellington Street*) ≈ 100 metres

Towards the right (generally south)
(to *West Street*) ≈ 65 metres

AS/NZS 2890.1 – 2004 recommends sight distances at car parking accesses as follows:

Frontage Road Speed (km/h)	Minimum sight distance (metres)	Desirable sight distance (metres)
50	45	69

Travel speeds would generally be less than 50km/h given the existing traffic environments on Alfred Street and West Street.

The available sight distances at the access driveway considerably exceed the desirable sight distance recommendation in AS/NZS 2890.1 – 2004 towards the north, marginally less towards the south but greater than the minimum recommendation.

Traffic entering Alfred Street from West Street must do so at speeds less than 50km/h and therefore sight distance towards the south is therefore considered satisfactory

7.11 Garbage Facilities

Bins for garbage and recycling will be stored in a bin storage room on the ground floor.

Residents and shop operators will move bins to the western kerbside of Alfred Street for collection by Council's operators.

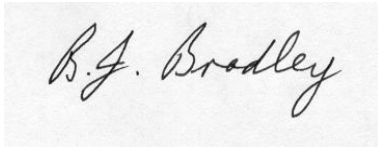
8.0 SUMMARY AND RECOMMENDATION

8.1 Summary

- (a) The proposed Mixed-Use Development will be located on the western side of Alfred Street behind the commercial / retail precinct along West Street near the centre of the Umina Beach shopping precinct.
- (b) The proposed Mixed-Use Development will provide two (2) shop areas on the ground floor area and fourteen (14) residential apartments of various sizes above the shops.
- (c) The car parking for the proposed Mixed-Use Development based on application of Central Coast Council's DCP 2013 Section 7.1 Traffic, Parking and Access will be one (1) spaces more than the DCP 2013 requirement. The loss of the four (4) spaces at the rear of the shop at 315 West Street result in a net parking shortfall of three (3) spaces.
- (d) Car parking surveys undertaken at Umina Beach within proximity to the site on Friday 17/8/18 between 8.00am - 10.00am; 11.00am – 1.00pm and 3.00pm – 5.00pm indicated an average of 46 vacant kerbside spaces on West Street, Oscar Street, Alfred Street, Bullion Street, South Street and Berith Street with a further 60 vacant car spaces available in the public parking area between Alfred Street and Bullion Street. The supply of car parking within approximately a 200 metre walk of the development is in my opinion, enough to cater for the shortfall in off-street parking proposed for this development.
- (e) A considerable number of extra vacant kerbside spaces were noticed along Wellington Street, West Street, South Street and Berith Street during the peak parking demand period of the surveys. The additional spaces along streets other than Wellington Street required a walk slightly greater than the nominal 200 metre walk and were not recorded in the parking surveys.
- (f) Public transport is conveniently available along West Street, Ocean Beach Drive, Trafalgar Avenue and Wellington Street, with bus stops on both sides of those roads.
- (g) The proposed Mixed-Use Development will have no adverse safety impact on roads in the Umina Beach area.
- (h) Servicing activities associated with the proposed Mixed-Use Development will be minimal.

8.2 Recommendation

I recommend the proposed Mixed-Use Development as being a suitable development on the site as the overall car parking shortfall (3 spaces) can easily be accommodated in kerbside parking areas at Umina Beach and the public parking area between Alfred Street and Bullion Street that have a combined excess of approximately 106 spaces, during an average working day and the development will not create adverse traffic or parking impacts in Umina Beach area.

A handwritten signature in black ink that reads "B.J. Bradley". The signature is written in a cursive style with a large, stylized 'B' and 'J'.

B J Bradley BE (Civil) Grad Dip Man MIE Aust

APPENDIX A

PARKING SURVEY DATA FOR FRIDAY 17 AUGUST 2018. (*Car Parking in 2020 unlikely to have altered significantly since*)

PARKING SURVEYS IN VICINITY OF ALFRED STREET / WEST STREET, UMINA BEACH								
Friday 17 August 2018 – (Number of Cars Parked and Number of Vacant Spaces)								
Time of Survey	West St – Ocean Beach Dr to Oscar St (north) - Capacity 2 spaces [#]	Number of Vacant Car Spaces	West St – Ocean Beach Dr to Berith St (south) - Capacity 5 spaces	Number of Vacant Car Spaces	West St – Oscar St to Alfred St (north) - Capacity 7 spaces [*]	Number of Vacant Car Spaces	West St – Berith St to South St (south) - Capacity 12 spaces	Number of Vacant Car Spaces
8.00 am	1	1	2	3	6	1	8	4
8.30 am	1	1	3	2	5	2	9	3
9.00 am	2	0	4	1	6	1	8	4
9.30 am	2	0	4	1	6	1	9	3
10.00 am	2	0	4	1	6	1	12	0
Sub-totals		2		8		6		14
11.00am	1	1	5	0	7	0	6	6
11.30am	2	0	3	2	6	1	9	3
12.00pm	2	0	2	3	7	0	12	0
12.30pm	2	0	3	2	7	0	11	1
1.00 pm	0	2	4	1	6	1	10	2
Sub-totals		3		8		2		12
3.00 pm	0	2	2	3	6	1	10	2
3.30 pm	2	0	2	3	7	0	9	3
4.00 pm	2	0	4	1	3	4	10	2
4.30 pm	1	1	5	0	4	3	9	3
5.00 pm	1	1	5	0	6	1	8	4
Sub-totals		4		7		9		14
Daily Averages	1.4	0.6	3.5	1.5	5.9	1.1	9.3	2.7
Rounded down		0		1		1		2

PARKING SURVEYS IN VICINITY OF ALFRED STREET / WEST STREET, UMINA BEACH								
Friday 17 August 2018 – (Number of Cars Parked and Number of Vacant Spaces)								
Time of Survey	West St – Alfred St to Bullion St (north) - Capacity 7 spaces	Number of Vacant Car Spaces	West St – South St to Trafalgar St -(south) - Capacity 7 spaces	Number of Vacant Car Spaces	West St – Bullion St to Trafalgar St (north) - Capacity 5 spaces	Number of Vacant Car Spaces	Oscar Street- West St to Coles Parking area (west) - Capacity 11 spaces	Number of Vacant Car Spaces
8.00 am	2	5	5	2	4	1	10	1
8.30 am	3	4	6	1	5	0	11	0
9.00 am	5	2	6	1	4	1	11	0
9.30 am	7	0	6	1	6	0	8	3
10.00 am	5	2	5	2	4	1	11	0
Sub-totals		13		7		3		4
11.00 am	6	1	6	1	5	0	11	0
11.30 am	7	0	5	2	6	0	10	1
12.00 pm	7	0	7	0	5	0	9	2
12.30 pm	7	0	6	1	4	1	12	0
1.00 pm	7	0	6	1	3	2	10	1
Sub-totals		1		5		3		4
3.00 pm	7	0	7	0	5	0	10	1
3.30 pm	5	2	6	1	3	2	11	0
4.00 pm	6	1	5	2	5	0	11	0
4.30 pm	6	1	6	1	7	0	9	2
5.00 pm	6	1	5	2	5	0	12	0
Sub-totals		5		6		2		3
Daily Averages	5.5	1.5	5.8	1.2	4.5	0.5	10.3	0.7
Rounded down		1		1		0		0

PARKING SURVEYS IN VICINITY OF ALFRED STREET / WEST STREET, UMINA BEACH								
Friday 17 August 2018 – (Number of Cars Parked and Number of Vacant Spaces)								
Time of Survey	Oscar Street- West St to Coles Parking area (east) - Capacity 8 cars	Number of Vacant Car Spaces	Alfred St – West St to Wellington St (west) - Capacity 27 cars	Number of Vacant Car Spaces	Alfred St – West St to Wellington St (east) - Capacity 26 cars	Number of Vacant Car Spaces	Bullion St – West St to Lane (west) - Capacity 4 cars	Number of Vacant Car Spaces
8.00 am	6	2	6	21	6	20	0	4
8.30 am	6	2	10	17	9	17	0	4
9.00 am	7	1	11	16	11	15	2	2
9.30 am	4	4	17	10	14	12	3	1
10.00 am	5	3	18	9	15	11	2	2
Sub-totals		12		73		75		13
11.00 am	8	0	16	11	14	12	4	0
11.30 am	6	2	18	9	14	12	4	0
12.00 pm	7	1	16	11	15	11	3	1
12.30pm	7	1	19	8	13	13	4	0
1.00pm	6	2	17	10	12	14	4	0
Sub-totals		6		49		62		1
3.00pm	7	1	14	13	11	15	3	1
3.30pm	8	0	15	12	10	16	2	2
4.00pm	8	0	18	9	11	15	4	0
4.30pm	9	0	14	13	7	19	4	0
5.00pm	5	3	8	19	5	21	2	2
Sub-totals		4		66		86		5
Daily Averages	6.5	1.5	14.5	12.5	11.1	14.9	2.7	1.3
Rounded down		1		12		14		1

PARKING SURVEYS IN VICINITY OF ALFRED STREET / WEST STREET, UMINA BEACH								
Friday 17 August 2018 – (Number of Cars Parked and Number of Vacant Spaces)								
Time of Survey	South St – West St to #20 South St (west) - Capacity 9 cars	Number of Vacant Car Spaces	South St – West St to #20 South St (east) - Capacity 5 cars	Number of Vacant Car Spaces	Berith St – West St to #20 Berith St (west) - Capacity 17 cars	Number of Vacant Car Spaces	Berith St – West St to #20 Berith St (east) - Capacity 11 cars	Number of Vacant Car Spaces
8.00 am	4	5	4	1	12	5	10	1
8.30 am	6	3	2	3	12	5	12	0
9.00 am	8	1	4	1	13	4	12	0
9.30 am	7	2	4	1	16	1	11	0
10.00 am	7	2	5	0	16	1	12	0
Sub-totals		13		6		16		1
11.00 am	8	1	5	0	14	3	13	0
11.30 am	9	0	5	0	16	1	13	0
12.00 pm	9	0	5	0	15	2	11	0
12.30pm	9	0	4	1	12	5	13	0
1.00pm	8	1	4	1	13	4	12	0
Sub-totals		2		2		15		0
3.00pm	7	2	5	0	10	7	11	0
3.30pm	6	3	4	1	11	6	10	1
4.00pm	8	1	5	0	13	4	11	0
4.30pm	6	3	4	1	12	5	10	1
5.00pm	7	2	3	2	10	7	9	2
Sub-totals		11		4		29		4
Daily Averages	7.3	1.7	4.2	0.8	13	4	10.7	0.3
Rounded down		1		0		4		0

PARKING SURVEYS IN VICINITY OF ALFRED STREET / WEST STREET, UMINA BEACH		
Friday 17 August 2018 – (Number of Cars Parked and Number of Vacant Spaces)		
Time of Survey	Public Car Park – Alfred St / Bullion St / Lane Capacity 157 cars	Number of Vacant Car Spaces
8.00 am	27	130
8.30 am	51	106
9.00 am	85	72
9.30 am	108	49
10.00 am	135	22
Sub-totals		379
11.00 am	143	14
11.30 am	140	17
12.00 pm	144	13
12.30pm	115	42
1.00pm	108	49
Sub-totals		135
3.00pm	93	64
3.30pm	108	49
4.00pm	90	67
4.30pm	74	83
5.00 pm	34	123
Sub-totals		386
Daily Averages	97	60
Rounded down		60

APPENDIX B

SITE PHOTOS

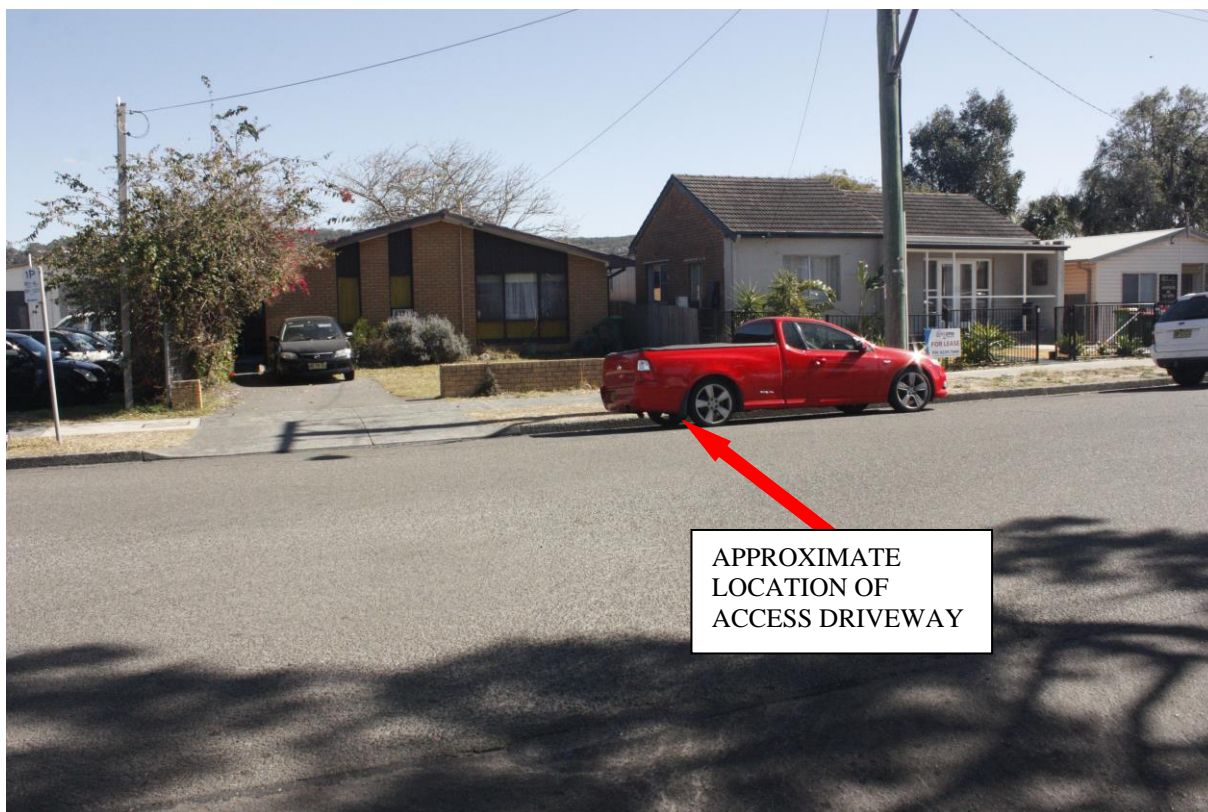


Photo No. 1: Looking generally west across Alfred Street showing the existing dwelling at No. 3 Alfred Street with the proposed vehicular access along the right-hand side of the property.



Photo No. 2: Looking right (generally south) along the western side of Alfred Street from the approximate location of the access driveway to the basement parking area showing the existing traffic environment and available sight distance.



Photo No. 3: Looking left (generally north) along the western side of Alfred Street from the approximate location of the access driveway to the basement parking area showing the existing traffic environment and available sight distance.

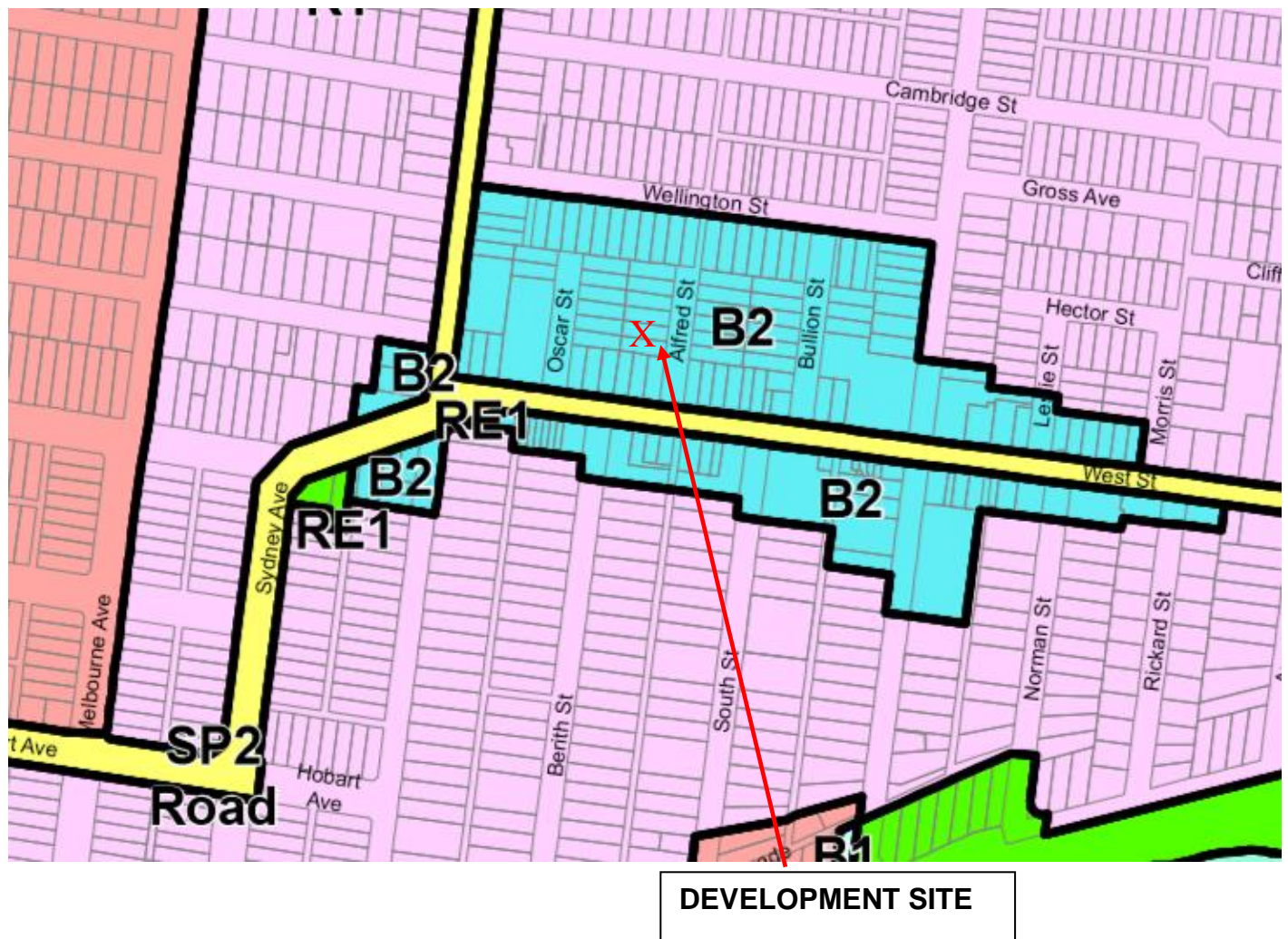


Photo No. 4: Looking generally west from Alfred Street showing the existing medical facility at No. 1 Alfred Street.



Photo No. 5: Looking generally west from Alfred Street showing part of the existing public parking area at Umina Beach Street accessed from Alfred Street and Bullion Street.

APPENDIX C - LAND ZONING MAP



APPENDIX D

BUS ROUTES SERVICING UMINA BEACH



131500.com.au

Transport InfoStop
No:**2257 110****50****Woy Woy**

via Ocean Beach Rd

54**Woy Woy**

via Trafalgar Ave

55**Ettalong Beach**

via Barrenjoey Rd & Uligandi St

57**Ettalong Beach**

via Springwood St

6 busways
Umina, West St - At Woolworths

Stop No: 2257110

Stop Number: 2257110

Buses from this stop:

Stop Location:
Woolworths, West St

50 to Woy Woy via Ocean Beach Rd

54 to Woy Woy via Trafalgar Av

55 to Ettalong Beach via Barrenjoey Rd & Uligandi St

57 to Ettalong via Springwood St

50/3 to Ettalong & Bookar Bay

54/0 to Woy Woy via Ocean Beach Rd

55/3 to Ettalong & Bookar Bay

B**Monday to Friday**

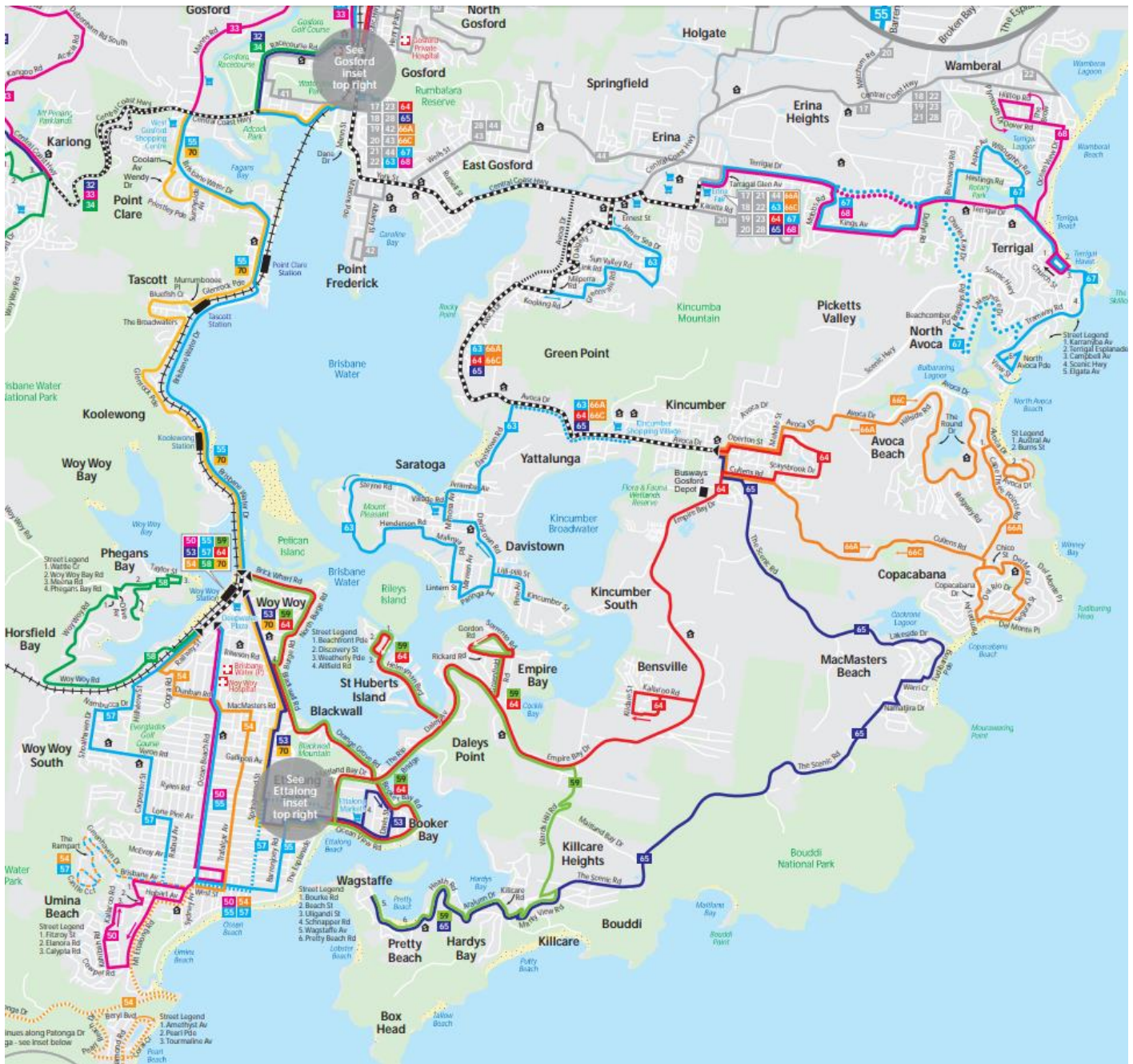
Route	Time	Route	Time	Route	Time	Route	Time
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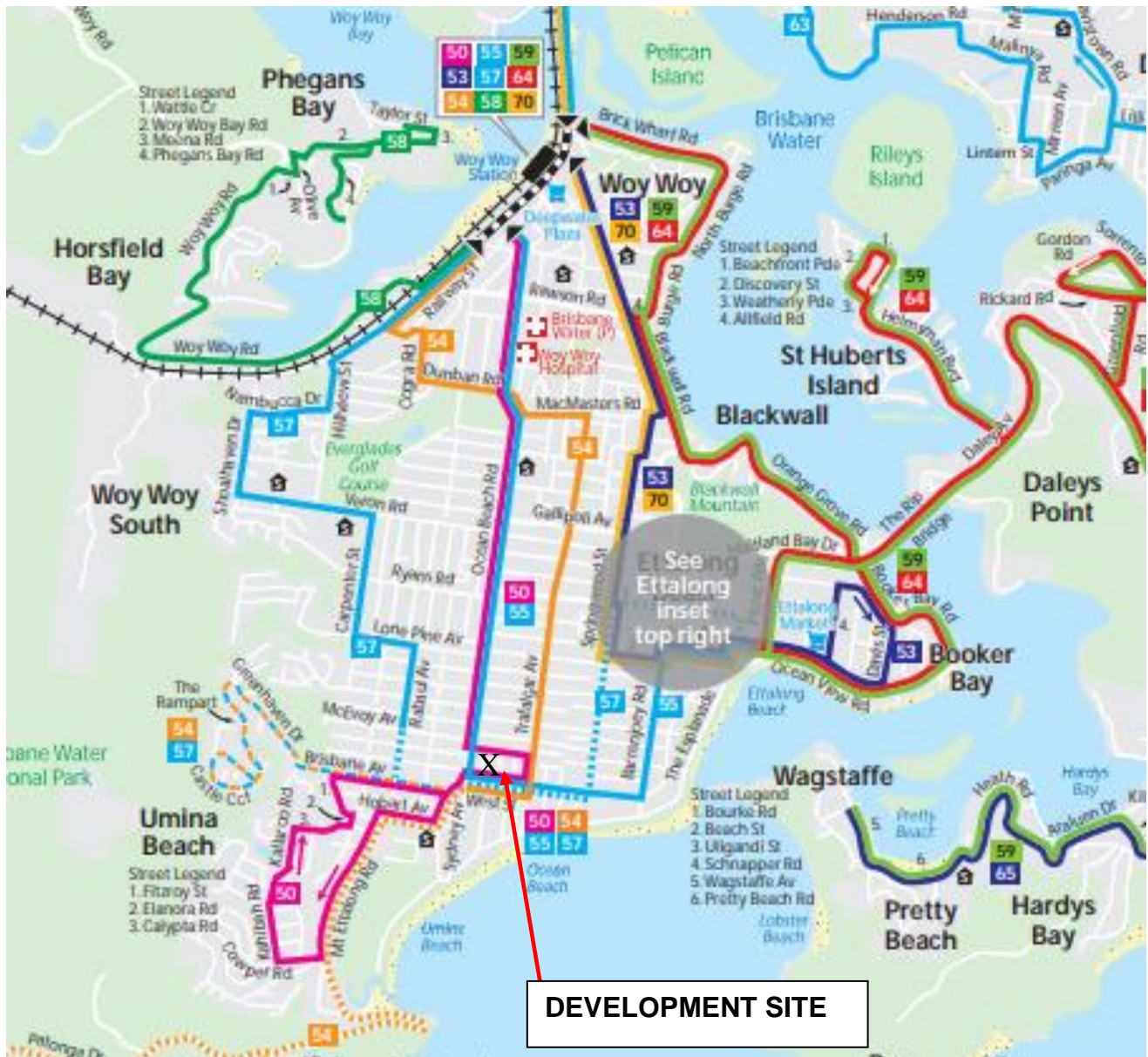
Saturday

Route	Time	Route	Time	Route	Time
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Sunday & Public Holidays

Route	Time	Route	Time
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Bus routes in this network

- 32** Gosford - Somersby - Mangrove Mtn - Spencer
- 33** Gosford - West Gosford - Somersby
- 34** Gosford - Kariong
- 36** Gosford - Narara - Nialgara Park - Ourimbah - Tuggerah
- 37** Gosford - Lisarow - Settlers Park - Ourimbah - Tuggerah
- 38** Gosford - Wyoming
- 50** Woy Woy - Umina Beach via Ocean Beach Rd & Cowper Rd
- 53** Woy Woy - Ettalong Beach - Booker Bay via Springwood St

- 54** Woy Woy - Umina Beach - Pearl Beach - Patonga via Cogra Rd & Trafalgar Av
- 55** Gosford - Woy Woy - Umina Beach - Ettalong Beach via Ocean Beach Rd
- 57** Woy Woy - Umina Beach - Ettalong Beach via Umina West
- 58** Woy Woy - Woy Woy Bay via Phegans Bay
- 59** Woy Woy - Wagstaffe via Ettalong Beach & Booker Bay
- 63** Gosford - Davistown - Saratoga via Green Point
- 64** Gosford - Kincumber - Woy Woy via Empire Bay & Booker Bay

- 65** Gosford - Wagstaffe via Kincumber & MacMasters Beach
- 66A** Gosford - Copacabana & Avoca (anti clockwise loop)
- 66C** Gosford - Avoca & Copacabana (clockwise loop)
- 67** Gosford - Erina Fair - Terrigal - North Avoca
- 68** Gosford - Erina Fair - Wamberal - Terrigal
- 70** Gosford - Woy Woy - Ettalong Beach via Priestley Pde & Blackwall Rd

Legend

- Shopping Centres
- Hospitals
- Schools
- Occasional Route
- Common Route
- Bus routes operated by other operators

APPENDIX E

2-CAR STACKERS



www.evolutionparkingsystems.com | P: +61 3 9462 7400 | A: 274 Wolseley Place, Thomastown, Victoria, Australia 3047 | E: info@polite.com.au

SYSTEM FEATURES:

Evolution Parking System (EPS) is the next-generation parking solution that turns one parking spot into two, with the simple turn of a key.

Already extremely popular with property-developers, architects, hotels, hospitals, building-managers and home-users, EPS is the perfect solution when space is at a premium and security is required. Whether it's in a multi-storey carpark or a small apartment block, EPS' functional design and solid engineering provides fuss-free, two-level parking, effectively doubling vehicle capacity for any given area.

Easy to install

Installation of the EPS vehicle stacker is simple, quick and cost-effective. No civil works are required, and the unit can also be retro-fitted (with suitable existing clearances).

Easy to use

EPS' robust, state-of-the art design has been engineered with the user in mind. The top vehicle is simply driven straight onto the rotating platform, without the need for any awkward manoeuvring. The keyed operating system also provides convenience and security.

Fast

EPS' advanced engineering gives independent access to both the top and bottom vehicles, allowing the top car to be retrieved without having to move vehicles around. Simply insert the key, lower the car, and 60 seconds later you're ready to drive away.

Flexible

The independent functionality provides quicker access to both vehicles, as well as flexibility for the stacker to be used by two different vehicle-owners.

Uncompromising design

Car parks don't always have to look like car parks. EPS' sleek design creates an attractive aesthetic that can enhance the architectural elegance of any building. Further customization is also available through the installation of LED lighting or individual color specifications.





SYSTEM SPECIFICATIONS:

Minimum vehicle height on the upper level – 1.5m with a ground to ceiling clearance of 3.4m - 4.92ft / 59.06in

Maximum vehicle height clearance on the lower level – 1.55m - 5.08ft / 61.02in

System length in up position – 5200mm - 17.06ft / 204.72in

System length in down position – 10.55m - 34.61ft / 415.35in

System width – 2640mm - 8.66ft / 103.94in

Power requirements – 415V, 50 Hz, 8amp
(USA 480V, 60Hz 8amp or 208V, 60Hz, 30amp)



TESTIMONIALS:

We recently bought our daughter her first car, rather than having her park her new car on the street, we have an EPS installed in our garage so we can fit her car in there as well as ours. Very happy with the system, so easy to use and completely safe, even our daughter can use the system by herself.

Anthony Chan

I have recently purchased an Evolution Parking System and had it installed in my garage so I can fit more cars in there. The system is easy to use and works great. and what's more? The service I got from EPS was second to none, their friendly staff were great to deal with and always happy to answer any questions I have.

William McIntyre

