

ANGLICARE
PROPOSED CONCEPT PLAN MODIFICATION
SANDON POINT, BULLI
Traffic Impact Assessment

August 2018
(Rev C)

Reference 18044

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1. INTRODUCTION

This report has been prepared for Anglicare to accompany a S75W Application to NSW Department of Planning & Environment for proposed modifications to the Redevelopment of Sandon Point Concept Plan Approval (MP06-0094).

The peaceful and scenic surrounds of Sandon Point (Figure 1) beneath the Illawarra Escarpment present an ideal location for residential and aged persons accommodation which is compatible with the surrounding landuses.

Consent was granted to the MP06-0094 Concept Plan for envisaged development comprising:

Anglicare Site

- * Residential Aged Care Facility (120 beds)
- * Independent Living Units (250 units)
- * Community Facilities and services
- * Access road system

Stockland Site

- * Residential Subdivision
- * 183 single dwelling & 14 townhouse/terrace dwellings
- * Access road system

Development of the Stockland site is essentially completed and details of the approved concept scheme for the Anglicare site are provided on the Concept Staging Plan reproduced in Appendix A.

The S75W Application proposes to modify the Sandon Point Concept Plan approval to:

- relocate the RACF and reduce the No. of beds
- reduce the No. of ILU's
- replace the apartment buildings in the Hilltop and Ocean View Precincts with residential dwellings (including multi dwelling housing, townhouses, terraces, semi-detached dwellings)
- modify the proposed road network and pathways

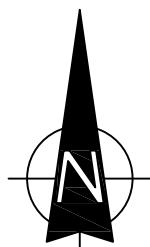
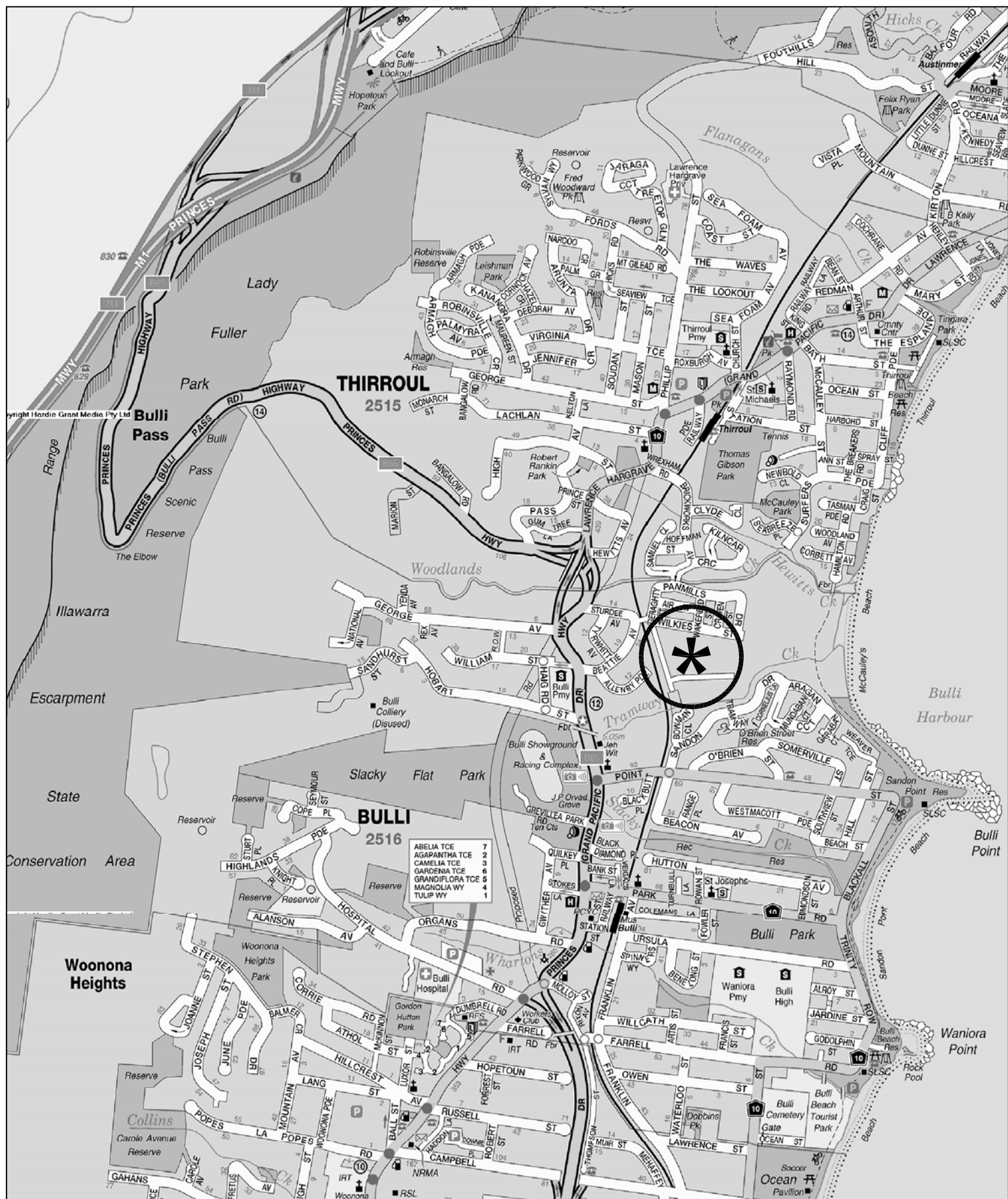
In response to a request from Anglicare the SEARS requirements for the S75W Application (MP06_0094 MOD5) were issued by the Department of Planning and Environment in February 2018. The SEARS requirements in relation to Transport and Accessibility comprise the following:

Include a revised transport and accessibility assessment prepared in accordance with the RMS' Guide to Traffic Generating Developments and the Austroads Guideline to Traffic Management, including the following:

- *modelling of estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips;*
- *address any additional road/intersection upgrades to manage any additional traffic generated by the proposal;*
- *address whether the proposed road layout is capable of complying with the relevant standards taking into consideration the needs of all road users and appropriate facilities;*
- *address the timing for the delivery of vehicular connectivity between Wrexham Road and Point Street, including the provision of a bridge over Tramway Creek, and address connectivity between the site and Beattie Avenue; and*
- *any required changes to pedestrian and cycle networks and access.*

Responses from RMS and Council accompanied the SEARS which also require consultation to be undertaken with Council, RMS and Transport for NSW.

The purpose of this report is to respond to the SEARS requirements in relation to road network, traffic and transport issues.



LOCATION

FIG 1

2. PROPOSED CONCEPT PLAN MODIFICATION

2.1 SITE, CONTEXT AND EXISTING CIRCUMSTANCES

The Anglicare site (Figure 2) is a consolidation of Lots 1 & 2 of DP 224431 being an irregular shaped area of some 8.1 ha as detailed on the engineering survey plan provided overleaf. The site is located immediately to the east of the railway line overlooking McCauleys Beach and is adjoined to the north by the Stockland residential development.

The northern part of the site contains a Turpentine Forest and Shrubland with a fall in levels towards the south where there is a 'filled' level area occupied by vacant factory buildings. The factory complex was occupied by Cookson Plibrico as a refractory manufacturing facility comprising some 33,000m² of industrial floorspace and employing some 80 persons on a 7 day/24 hour basis.

2.2 APPROVED CONCEPT PLAN

The Sandon Point Concept Plan involved lands owned by Stockland and Anglicare. The Stockland landholding has been subdivided with access roads constructed and nearly all dwellings have been constructed and occupied.

The Concept Plan in respect of the Anglicare landholding comprised:

- 3 precincts Village Centre, Hilltop and Ocean View with 5 stages of envisaged completion
- RACF in the western part of the Village Centre Precinct with 120 beds (68 dementia), 38 staff and community facilities and services
- Up to 250 seniors housing ILU's in the Village Centre, Hilltop and Ocean View Precincts
- Access roads with connections to Geraghty Street (extended) and Wilkes Street



LEGEND



SITE

FIG 2

The Concept Plan included the construction of a new north-south link road between Wrexham Road (with its connection to Lawrence Hargrave Drive) in the north and Point Street (with its connection to Princes Highway) in the south. The section between Wrexham Road and Wilkes Street has been constructed while the bridge over the railway line to Sturdee Avenue has been closed to vehicular traffic with access retained for pedestrians and cyclists.

2.3 PROPOSED S75W MODIFICATION

The proposed modifications to the approved Concept Plan include the following:

- change the designation of Village Centre Precinct to Central Precinct
- relocation of the RACF from The Hill Top Precinct to the Central Precinct Area
reduction of beds from 120 to 80 (20 dementia beds) with a reduction of the RACF staff to 40 (max. daytime)
- reduction of the No. of ILU's from some 250 to 140 apartments
- replacement of the 3 level apartment buildings with some 55 residential dwellings including multi-dwelling housing, townhouses, terraces/semi-detached dwellings (33 in Ocean View Precinct and 22 in Hilltop Precinct). These will be either standard residential dwellings or seniors living dwellings depending on "market feasibility"
- modification of the minor access road system and the pedestrian/shared path network
- modification of the parking provision

Details of the proposed modified Concept Plan are provided on the plans prepared by JSA Studio which accompany the Application and are reproduced in part in Appendix B.

2.4 PREVIOUS TRAFFIC ASSESSMENTS

Commission of Inquiry (COI)

In December 2002, the Minister For Planning directed that a COI be held to investigate and make recommendations in relation to the development of the Sandon Point lands including preferred landuses, planning outcomes and management options. In September 2003 the findings of the COI were handed down and Council prepared a DCP for the lands.

It eventuated that the Department of Planning and the Council came to the realisation that the COI recommendations provided no incentive for development of the lands and as a result, in May 2005, the Minister initiated an Independent Review of the COI recommendations (the Charles Hill Report) and this review was tasked to consider:

- the appropriate development footprint
- the appropriate zone boundaries
- the suitability of hostel and nursing home use

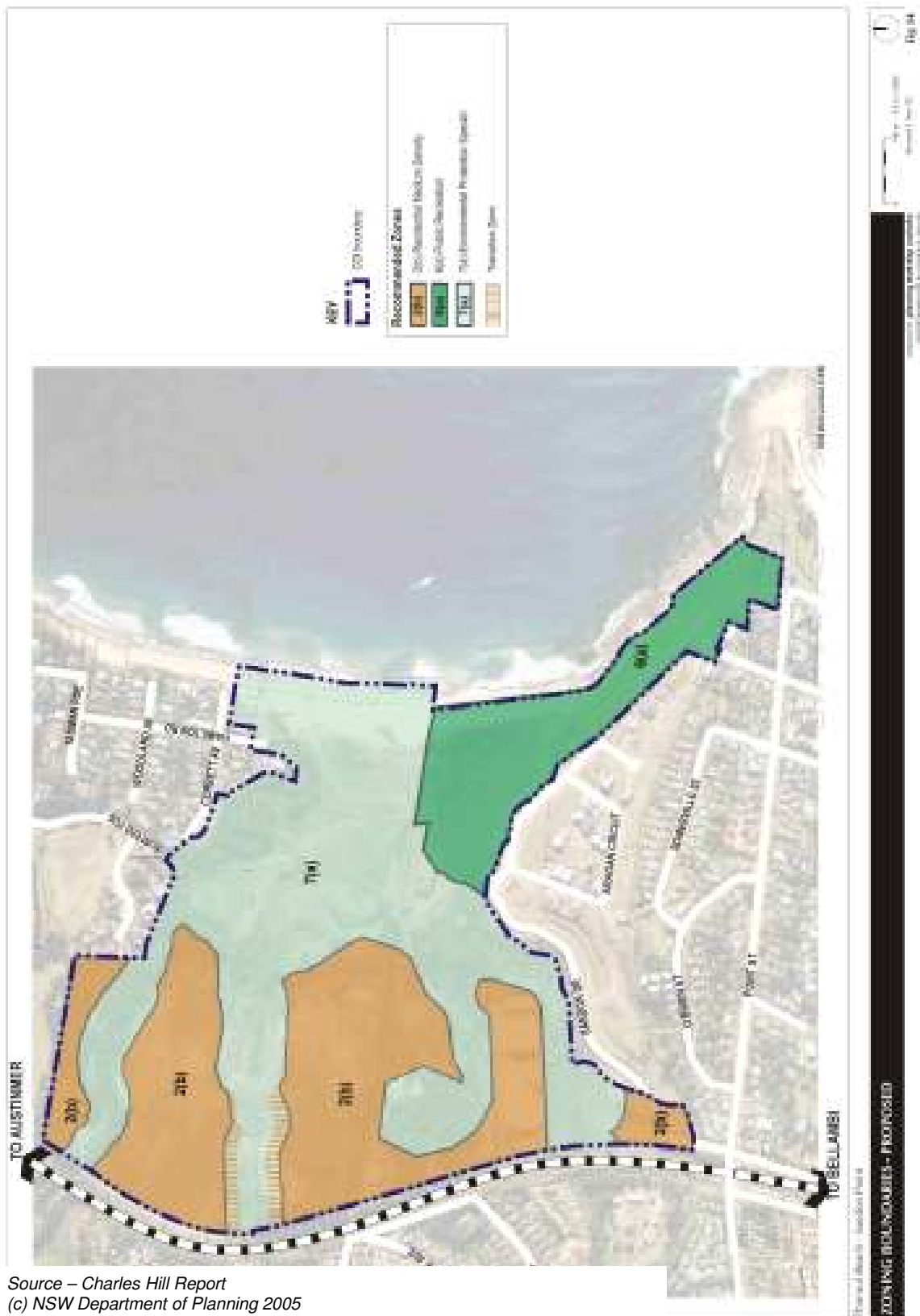
The landuse outcomes recommended in the Charles Hill Report are contained on the diagram overleaf and this included the provision of a north-south link road running along the eastern side of the railway line. In April 2006 the Minister agreed that Part 3A of the Act applied to the development of the Sandon Point lands and authorised the submission of a Concept Plan.

The submitted Concept Plan (MP06-0094) was accompanied by a Traffic Assessment prepared by Hutcheson Transport Solutions Pty Ltd.

The Director General's findings in relation to the traffic issues associated with the Concept Plan are as follows:

- * 'The Department (of Planning) considers that the Traffic Report adequately addresses the local and regional issues'
- * 'The proponents response and Statement of Commitments adequately address the issues' in that:

- Sturdee Avenue will provide a mix of pedestrian and vehicle traffic in the short term with a view to converting this bridge to a dedicated pedestrian and cyclist use
- a Construction and Traffic Management Plan will be prepared as part of future applications
- detailed modelling of the Princes Highway/Lawrence Hargrave Drive intersection indicates an acceptable level of service
- the traffic volumes on Point Street will be within RTA standards for a local street and traffic calming measures will not be required



Source – Charles Hill Report
(c) NSW Department of Planning 2005

Figure 7 - Proposed land use zoning, Charles Hill Report

3. ROAD NETWORK AND TRAFFIC CONDITIONS

3.1 ROAD NETWORK

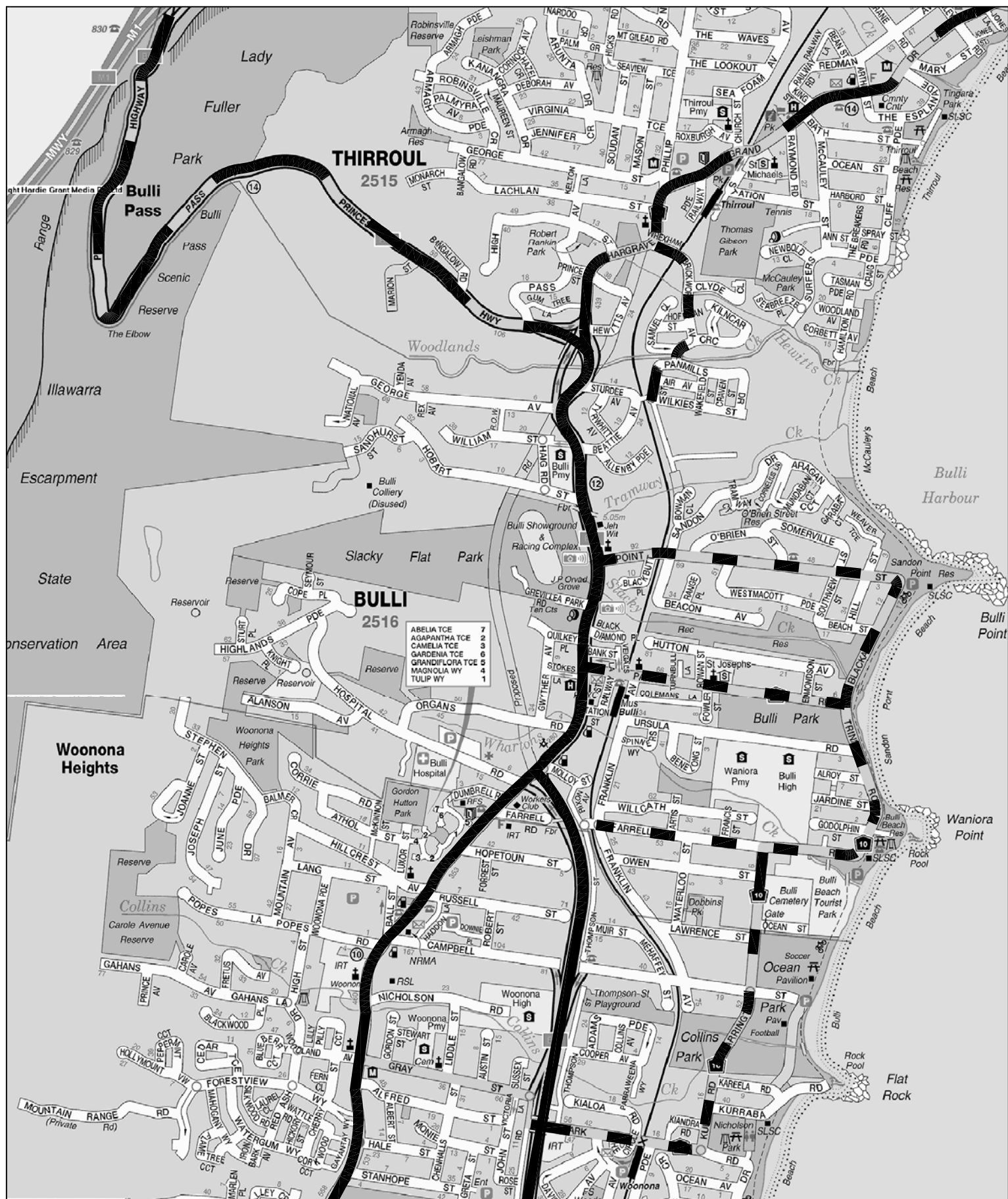
The road network serving the Bulli area (Figure 3) comprises:

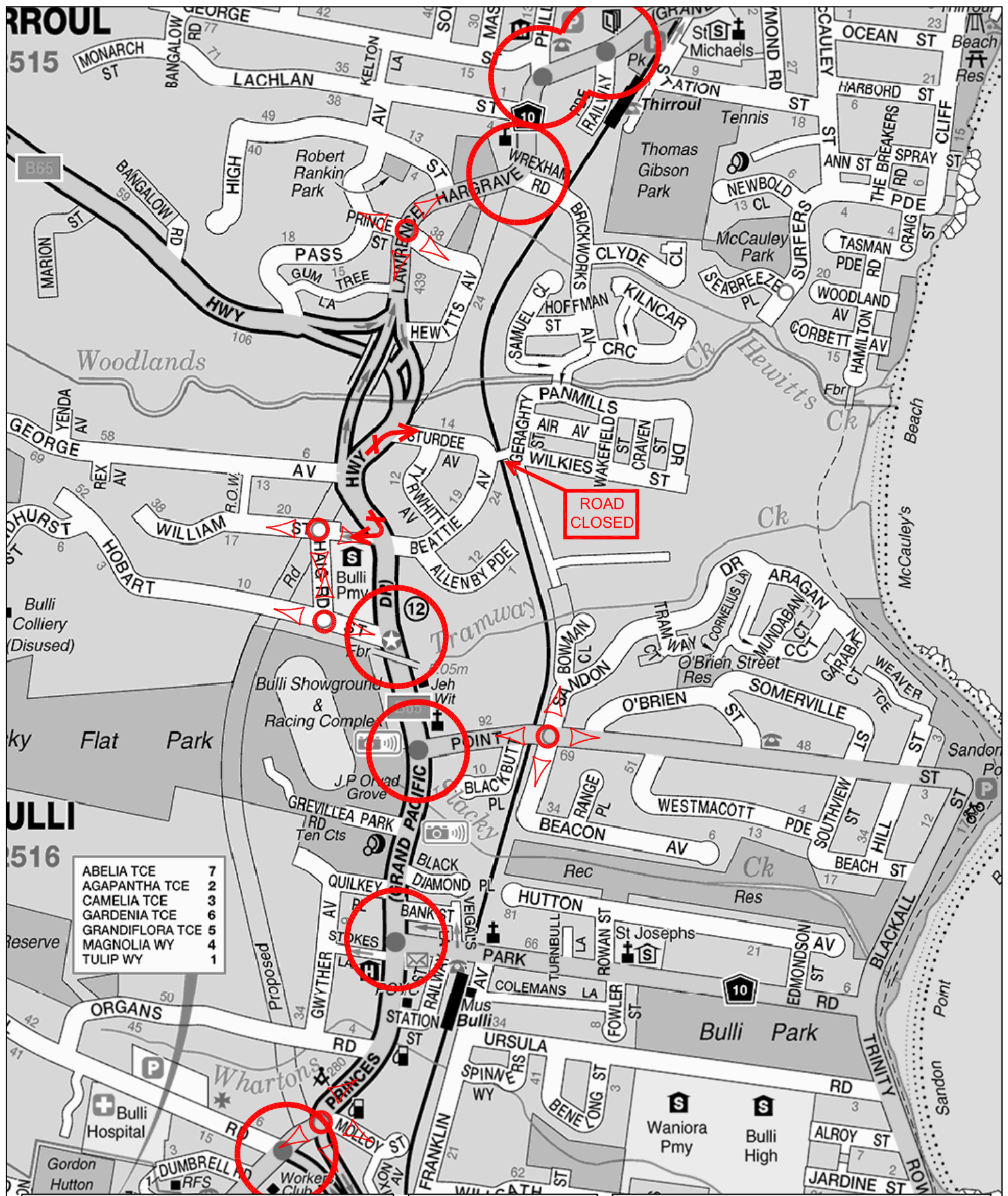
- * *Northern Distributor* – a State Highway and the principal arterial route northwards from Wollongong to Woonoona
- * *Princes Highway (Grand Pacific Drive)* – a State Highway and arterial route which provides the secondary connection between Wollongong and Sydney
- * *Lawrence Hargrave Drive* – a State Road and part of the collector route which provides connection along the coast between Bulli and Loftus
- * *Farrell Road/Blackwell Street/Point Street* – a collector route which provides a circuit connection between Princes Highway along the coast around Bulli
- * *Wrexham Road/Brickworks Avenue/Geraghty Street* – a minor collector route connecting the Stocklands subdivision to Lawrence Hargrave Drive

3.2 TRAFFIC CONTROLS

The existing traffic controls on the road system in the vicinity of the site comprise:

- * the 50 kmph speed restriction on the local and collector road system except in the vicinity of schools where 40 kmph school hours restrictions apply
- * the roundabout at the Point Street/Sandon Drive intersection
- * the traffic signals along the Princes Highway at the Point Street and Park Road intersections
- * the traffic signals at the Lawrence Hargrave Drive/Wrexham Road intersection
- * the closure of Sturdee Avenue railway bridge to vehicles retaining access for pedestrians and cyclists





3.3 TRAFFIC CONDITIONS

An indication of the prevailing traffic conditions on the road network serving the site is provided in data¹ published by the Roads and Maritime Services and data collected as part of this assessment. The most recent data published by the RMS is expressed in terms of Annual Average Daily Traffic (AADT) and relevant to the proposed development are in the following:

Location	AADT
Princes Highway, south of Sturdee Avenue	22,186
Lawrence Hargrave Drive, south of Henley Road	12,965

The traffic movements at the Princes Highway/Point Street and Lawrence Hargrave Drive/Wrexham Road intersections for the weekday AM and PM peak periods are provided in the following:

		AM	PM
Princes Highway	Northbound	1,110	1,306
	Right Turn	45	81
	Southbound	1,320	1,440
	Left Turn	61	107
Point Street	Right Turn	173	105
	Left Turn	87	64
<hr/>			
Lawrence Hargraves Drive	Northbound	799	1076
	Right Turn	42	113
	Southbound	977	821
	Left Turn	18	44
Wrexham Road	Right Turn	41	32
	Left Turn	97	44

¹ Traffic Volume Data for Illawarra Region
Roads and Traffic Authority of NSW

The operational performance of these intersections is relatively satisfactory although there are no separate lanes for the right turn movements into Point Street and Wrexham Road.

Traffic surveys have been undertaken on Brickworks Avenue at the Hewitts Creek crossing during the weekday morning and afternoon peak periods on 28.3.18 in order to establish the traffic generation of the dwellings on the Stocklands subdivision. The results of those surveys are provided in Appendix C and summarised in terms of vehicle movements per hour in the following:

	AM	PM
Northbound	82	24
Southbound	19	81
Total:	101	105

3.4 TRANSPORT SERVICES

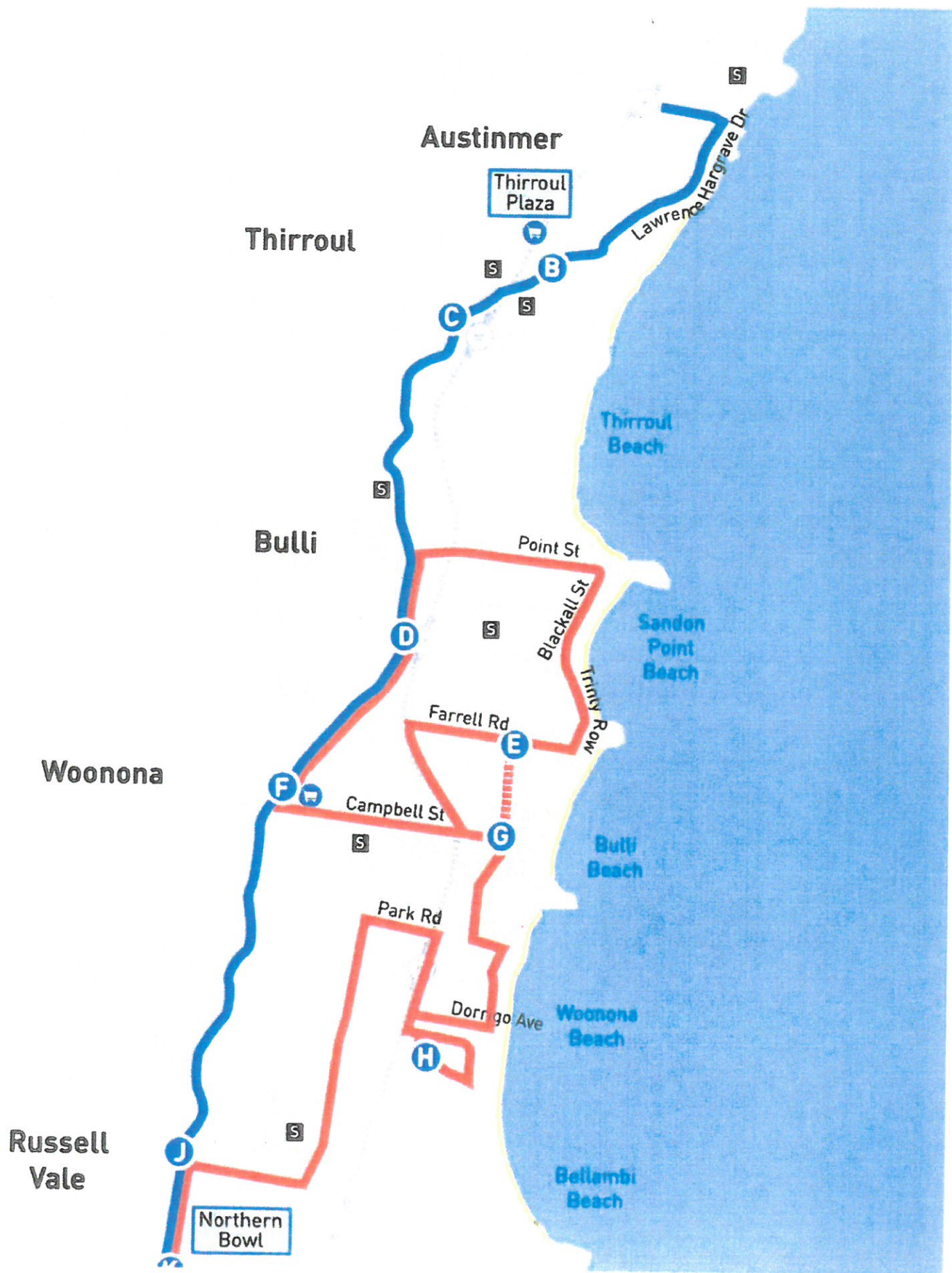
Bus services in the vicinity of the site are provided by Dions Bus Service which operate along Princes Highway/Lawrence Hargrave Drive and along Point Street Blackwall Street etc. as shown on the route map overleaf. These services provide links to Austinmer, Bulli and Thirroul railway stations, Wollongong and the University with 1/2 hour frequency on weekday peak and limited services on weekends.

Rail services are provided at the Bulli and Thirroul Railway Stations, some 1.0 km to the south and north of the site respectively, with regular services on weekdays and limited services on Saturday/Sunday.

3.5 PEDESTRIANS AND CYCLISTS

The existing provisions for pedestrians and cyclists comprise:

- the Coastal Shared Path which runs along the western side of McCauleys Beach
- the Shared Path along the southern side of Wilkes Street connecting between the Coastal path and Geraghty Street



- the Shared Path along the western side of Geraghty Street and across the Sturdee Avenue railway overbridge
- the Shared Path along the northern side of Point Street between the highway and Sandon Drive
- the footways along the Stockland subdivision roads and the subdivision roads south of Tramway Creek including the path linking between Sandon Drive and the Coastal Shared Path

4. ACCESS ROAD SYSTEM, PEDESTRIANS AND CYCLISTS

ACCESS ROAD SYSTEM

The proposed access road system retains the principal elements of:

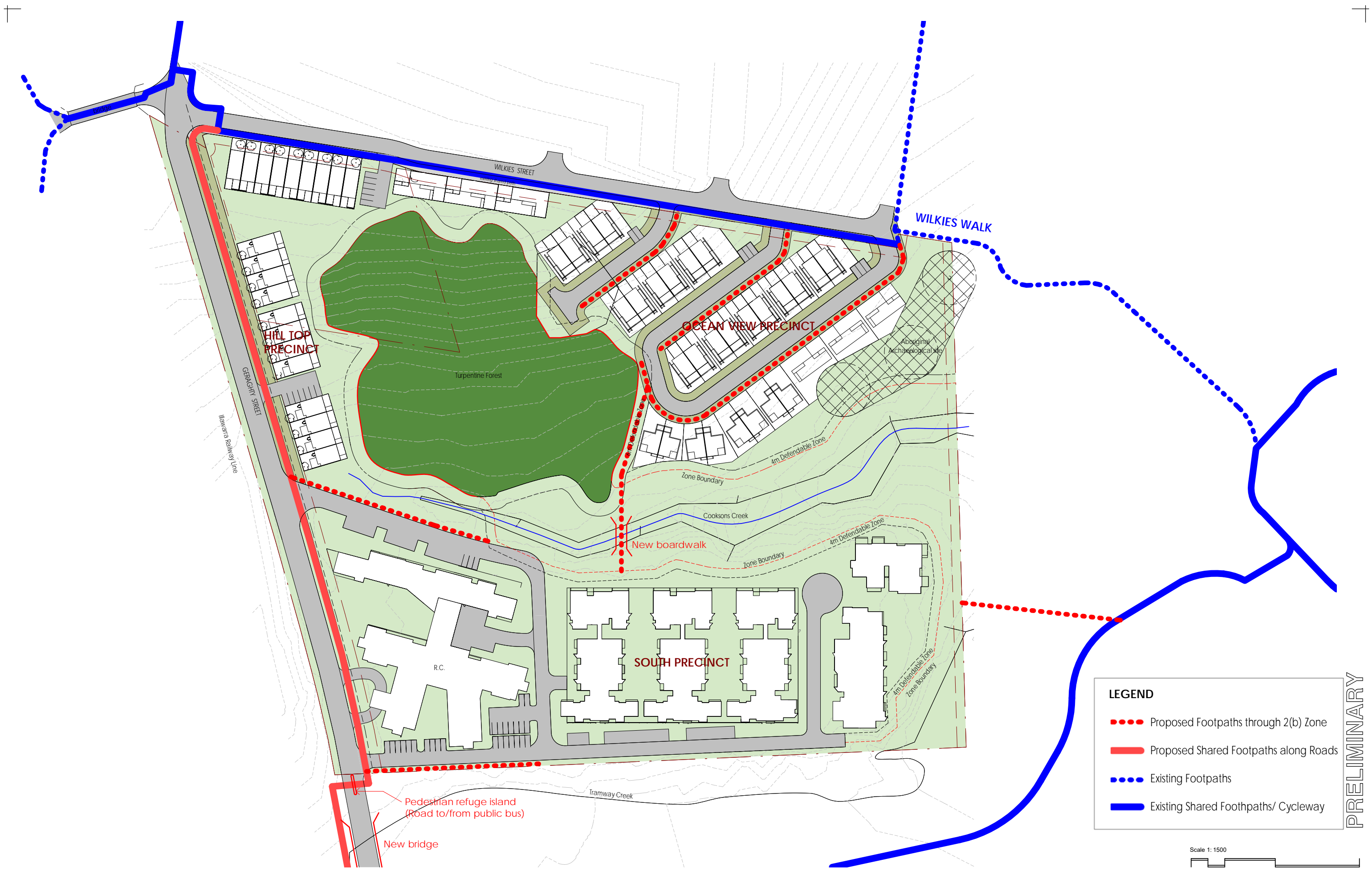
- the Geraghty Street extension to Bowman Close (Point Street) with a bridge over tramway Creek
- the access road running along the southern site boundary

Other elements have changed particularly in relation to resolution of service/delivery/refuse vehicle access. The Ocean View Precinct now has an access “crescent” and a cul-de-sac for vehicle access and there is a roadway connecting from Geraghty Street to the southern road around the RACF. There is a cul-de-sac connecting to the end of the southern road to provide access into the ILU area.

PEDESTRIANS AND CYCLISTS

The proposed provisions for pedestrians and cyclists are shown on the Linkages Plan overleaf with the principal provisions being:

- the shared path along Geraghty Street linking between the existing shared path to the north at Wilkes Street and to the south over the new bridge to Points Street
- the internal footway and boardwalk provisions



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NSW ARCHITECTS REGISTRATION BOARD REGISTERED ARCHITECTS:
KIM JONES Registration No. 6460

Rev.	Revision Description	Chk.	Date
A	Issued for Information		10.07.18
B	Issued for Information		13.07.18

Project
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Title
Concept Plan - Linkages
Linkages

Scales 1 : 1500 @ A3	Drawn JSA
Project No. 171101	Checked JH
Drawing No. SK1.06	Approved KU 6460
Plot Date: 7/13/2018 4:38:33 PM	Revision B

5. TRAFFIC

The RMS Development Guidelines do not provide an indication of traffic generation characteristics of seniors housing Independent Living Units, although criteria is provided for 'aged persons housing' (subsidised) of 0.1 to 0.2 vtpd (evening peak).

ILU dwellings typically involve retired persons and surveys of a number ILU complexes indicate a range of traffic generation rates as follows:

Apartments	0.20 vtpd per dwelling
Separate/attached dwellings	0.25 vtpd per dwelling

Similarly, the RMS Guidelines do not provide an indication of traffic generation characteristics of Residential Aged Care Facilities. However, TTPA has undertaken a number of surveys of RACF's and the TTPA surveyed rates equate to the ITE² Guidelines for "Nursing Homes" as follows (although dementia beds inevitably exhibit lower rates):

AM	PM
0.17 vtpd / bed	0.22 vtpd / bed

The traffic generation of the proposed residential dwellings can best be assessed by the results of the traffic survey of the existing Stockland subdivision (Appendix C).

This "closed precinct" at the time of survey comprised a total of 136 occupied dwellings and the survey results (P6) reveal peak movements of 101 vtpd in the AM and 105 vtpd in the PM. This indicates an intrinsic average peak generation rate of some 0.76 vtpd per dwelling and on this basis the projected traffic generation outcome for the approved and modified Concept Plan outcomes are compared in the following:

² *Institute of Transport Engineers
Trip Generation 7th Edition*

		Approved		Proposed (Standard dwellings)			Proposed (Seniors dwellings)		
		AM vtph	PM vtph		AM vtph	PM vtph		AM vtph	PM vtph
RACF	120 beds	21	27	80 beds	14	18	80 beds	14	18
ILUs	250 apts	50	50	140	28	28	140	28	28
Dwellings				55	42	42	55	13.75	13.75
Total:		71	77		84	88		56	60
		Same		New			Same		

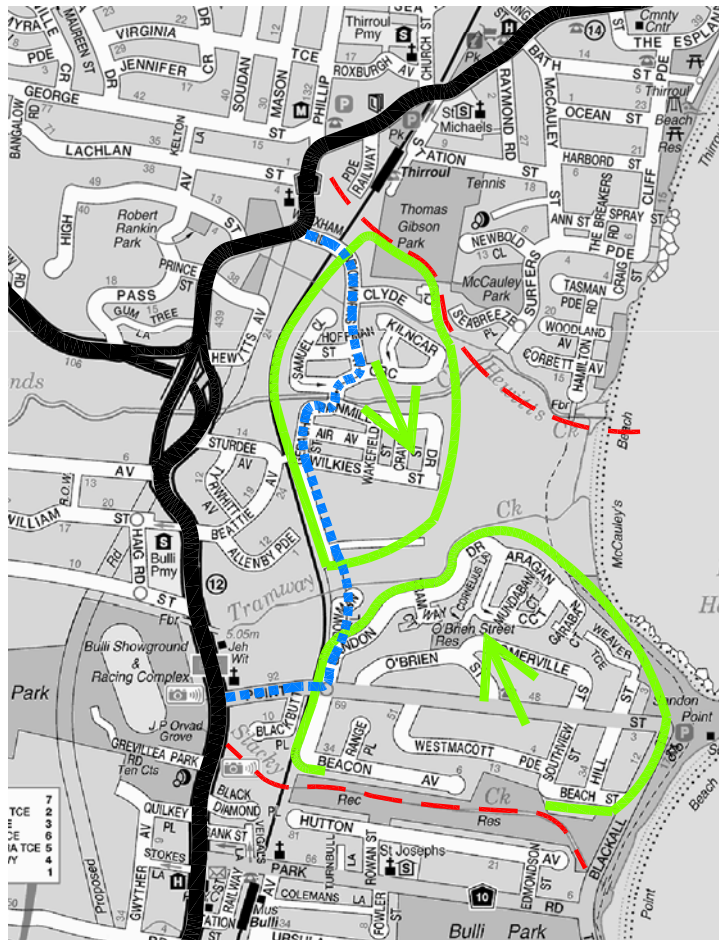
Thus, the projected traffic generation outcomes of the modified Concept Plan development is as follows:

Proposed (Standard Dwellings)		Proposed (Seniors Dwellings)	
AM	PM	AM	PM
+ 13 vtph	+ 11 vtph	- 15 vtph	- 17 vtph
(1 vt per 4.6 min's)	(1 vt per 5.5 min's)	(1 vt per 4 min's)	(1 vt per 3.5 min's)

It is apparent that these very minor increases/decreases in generated traffic would be quite imperceptible when it is distributed in 2 directions along Geraghty Street. The SEARs requirements refer to the “daily traffic volume” outcome however while the RMS Guidelines indicate that the multi-dwelling housing daily traffic will be some 10 times the peak hour volume (i.e. 420 vpd), there is no criteria available to provide an indication of the daily traffic outcome for the RACF and ILU elements. Suffice to say however that the daily traffic outcome for these elements will be significantly less than that of the current Concept Plan elements.

The potential traffic implications of constructing the Geraghty Street link has been raised during the Community Consultation process in relation to the proposed Concept Plan modification. The diagram overleaf indicates why provision of the proposed link will not result in a “rat run” or undue vehicle movements along the link. There will be a tendency for cars with an origin or destination in the Stockland subdivision and the Anglicare development to use the new link to travel to/from the south and there will similarly be a tendency for cars with an origin or destination in the Point Street precinct to use the new link to travel to/from the north. However, all things considered it is evident in relation to the existing section of Geraghty Street/Brickworks Avenue/Wrexham Road that there will be an increase to/from the south and a decrease to/from the north.

ASSESSMENT OF LINK ROAD USE



- BARRIER
- PRECINCT AREAS
- NEW LINK ROAD
- PRINCES HIGHWAY/
LAWRENCE HARGRAVES DR

- VEHICLES TRAVELLING ALONG THE PRINCESS HIGHWAY ROUTE NORTHBOUND OR SOUTHBOUND WILL NOT DIVERT OFF THE HIGHWAY TO TRAVEL ALONG THE LINK ROAD AND REJOIN THE HIGHWAY
- DUE TO THE "BARRIERS" PRESENTED BY HEWITTS CREEK/GIBSON PARK AND STACKY CREEK NORTH-SOUTH INTRUSION WILL BE LIMITED TO VEHICLES THAT MIGHT USE THE BLACKWALL STREET COASTAL ROUTE. BUT TRAVEL ALONG THE HIGHWAY WOULD BE SHORTER AND QUICKER

USE OF THE NEW LINK WILL THEREFORE BE VERY LARGELY LIMITED TO RESIDENTS FROM THE SMALL POINT STREET PRECINCT WANTING TO TRAVEL TO/FROM LAWRENCE HARGRAVE DRIVE AND RESIDENTS FROM THE STOCKLAND /ANGLICARE PRECINCT WANTING TO TRAVEL TO/FROM THE SOUTH

6. PARKING

Criteria for provision of carparking in relation to the development scheme is contained in the Seniors Living SEPP document and Council's DCP as follows:

SEPP

RACF

- 1 space per 10 beds (normal)
- 1 space per 15 beds (dementia)
- 1 space per 2 staff

ILU and Seniors Living

- 0.5 space per bedroom

DCP

Normal Residential

- < 70m² – 1.0 space
- 70 – 110m² – 1.5 spaces
- > 110m² – 2 spaces
- 1 space per 5 for visitors

Application of this criteria to the envisaged development outcome under the modified Concept Plan would indicate the following provision:

	Proposed (Minimum)
RACF	
60 beds normal	6 spaces
20 beds dementia	2 spaces
40 staff	20 spaces
Total	28 spaces
ILU's	
140 ILU's – 280 beds	140 spaces
Visitors	

Normal Residential/Seniors Living

Parking will be provided according to the applicable code (i.e. DCP or SEPP).

It is apparent that envisaged parking provisions will comply with the requirements of the relevant planning criteria.

7. ACCESS, INTERNAL CIRCULATION AND SERVICING

ACCESS

RACF

This element will continue to have:

- porte cochere access on Geraghty Street (extended)
- vehicle accesses on the road connecting between Geraghty Street and the southern access road.

ILU's

This element will continue to have principal access along the southern access road while a new access cul-de-sac at the eastern end will provide for refuse trucks etc. Vehicle access for the basement car park will be provided on the road connecting between Geraghty Street on the southern access road.

Hilltop Precinct

This element will continue to have vehicle accesses along Geraghty Street (extended) and Wilkes Street.

Ocean View Precinct

The former basement carpark accesses connecting to Wilkes Street will be modified to direct individual garage access connections to the proposed crescent and cul-de-sac roadways.

All of the vehicle access will be capable of complying with the design requirements of AS2890.1 and 2.

INTERNAL CIRCULATION

There is no apparent reason why the design of the internal circulation arrangements including parking bays, aisles, grades etc. would not be able to be compliant with the requirements of AS2890.1, 2 and 6.

SERVICING

The proposed modifications to the Concept Plan access road arrangements will improve the access provisions for service vehicles in that:

- refuse collection and deliveries etc. for the Ocean View Precinct will now be accommodated on the proposed new roads rather than along Wilkes Street
- refuse collection and deliveries etc. for the ILU's will now be facilitated by the proposed access cul-de-sac.

It is apparent that appropriate provisions will be made in the envisaged development for service vehicles.

8. TRANSPORT SERVICES

A 22-seat shuttle bus will be provided by Anglicare to transport ILU residents/visitors and RACF residents, staff and visitors for outings, shopping and access to the railway station etc. as is normal for an aged/senior persons development of this nature.

The Geraghty Street link will be suitable for bus movements, however whether the existing service along Point Street bus service is extended will be a matter for Transport NSW and the service provider.

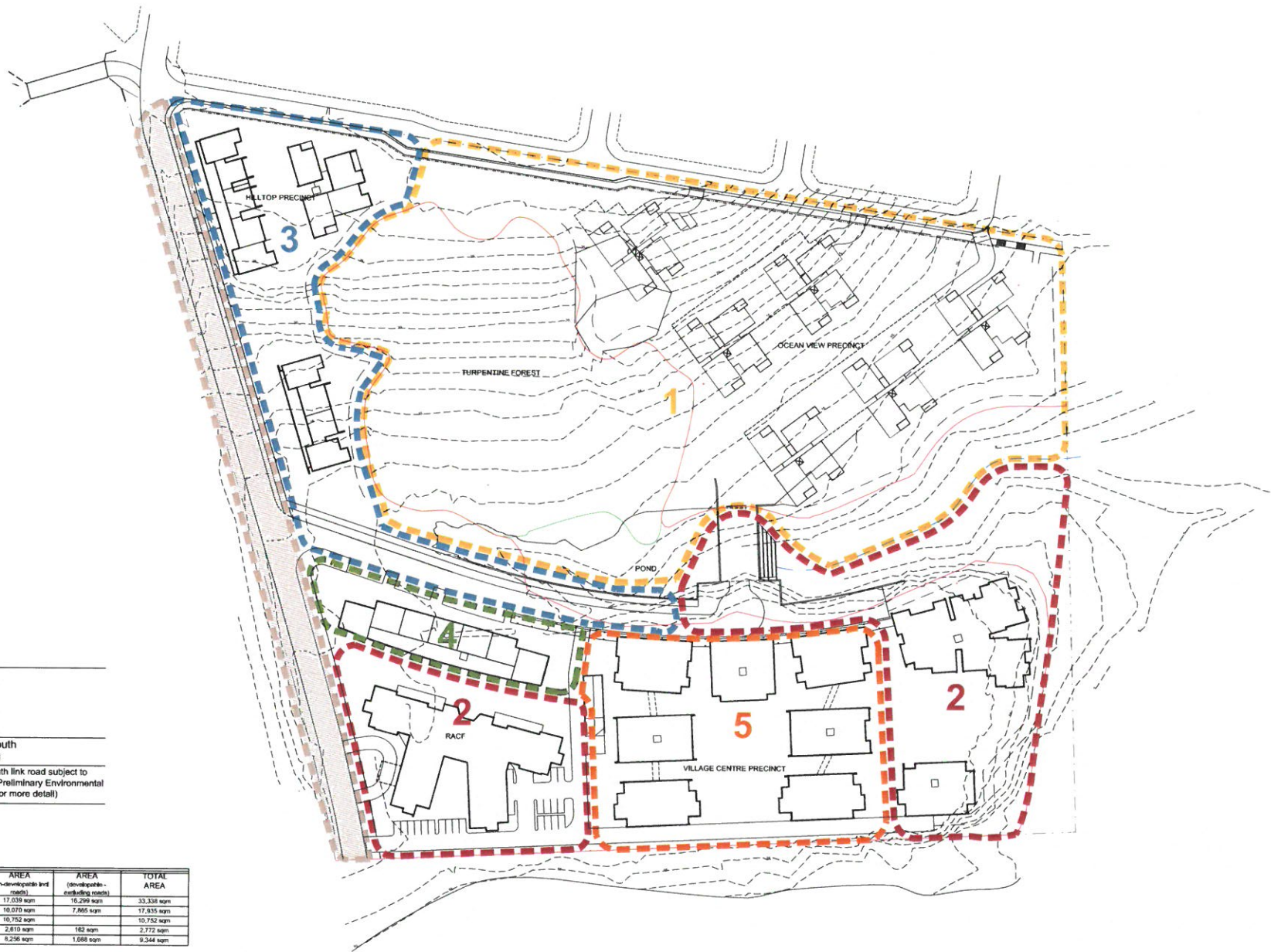
9. CONCLUSION

The Anglicare landholding at Sandon Point represents a valuable asset which can be developed to provide an accommodation resource for the aging population in the Illawarra area. Assessment of the S75W scheme to modify the Concept Plan has concluded that:

- * the proposed road network will be suitable and appropriate, and will incorporate the extension of Geraghty Street to link to Point Street as required by the SEARs and the RMS and Council requirements
- * the traffic generation will remain very similar (i.e. to the approved Concept Plan) and there will be no adverse traffic implications
- * the parking provision will be quite adequate and compliant with the appropriate DCP and SEPP criteria
- * the vehicle access, circulation and servicing arrangements will be quite suitable and appropriate
- * the provisions for pedestrians and cyclists will be satisfactory

APPENDIX A

APPROVED CONCEPT PLAN



LEGEND

- Stage 1
- Stage 2
- Stage 3
- Stage 4
- Stage 5
- North-south link road

(staging of north-south link road subject to traffic studies - see Preliminary Environmental Assessment report for more detail)

STAGE	AREA (non-developable land - roads)	AREA (developable - non-building roads)	TOTAL AREA
Stage 1	17,039 sqm	10,299 sqm	27,338 sqm
Stage 2	10,070 sqm	7,665 sqm	17,735 sqm
Stage 3	10,752 sqm	10,752 sqm	21,504 sqm
Stage 4	2,610 sqm	182 sqm	2,792 sqm
Stage 5	6,256 sqm	1,688 sqm	7,944 sqm

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A	Issued for Information			17-08-07					
B	Comments deleted			20-08-07					
C	Stages adjusted			10-09-07					
D	Village changed to apartment block			12-09-07					
E	Master plan updated/ Areas added			05-11-07					

ARV Bulli Retirement Village
 Sturdee Avenue, BULLI
 Anglican Retirement Villages - Diocese of Sydney

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Concept Masterplan Staging

					
Scales		Date	August 07	Drawn	JH
Project No.		060202		Checked	
Drawing No.		CP14		Approved	
File Name		13-08-07		Issue	E
Cat Ref.		documented drawings			

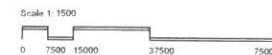
ARV Bulli Retirement Village

APPENDIX B

MODIFIED CONCEPT PLANS



PRELIMINARY



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Rev.	Revision Description
A	Issued for Information
B	Issued for Information
C	Option 1 added
D	Issued for Information
E	Zone Boundary highlighted
F	Issued for Information

Chk.	Date
A	02.02.18
B	23.03.18
C	23.05.18
D	20.06.18
E	20.06.18
F	11.07.18

Project
Village Bulli
Sandon Point
For
ANGLICARE



JSA STUDIO
Suite 2 Level
805 Baiman Rd
Clydeburn NSW
PO Box 483
Rozelle NSW 203
9
phone 02 9555 7464
mail @ jsastudio.com.au



Title
Site Plan

Scales 1: 1500 @ A3	Drawn JSA
Project No. 171101	Checked JH
Drawing No. SK1.00	Approved KJ 6460
Revision F	

LEGEND

UNIT TYPE

- 1 Bed Unit
- 2 Bed Unit
- 3 Bed Unit
- Community Facilities
- Retail - ie cafe
- Respite Centre - Medical / Consulting Rooms

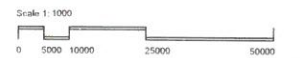
APARTMENTS & RACF - OPTION 1

BLOCKS	1 BED	2 BED	3 BED	TOTAL
V1N (Retail - ground)				159 sqm
V1N (Community Facilities - ground)				730 sqm
V1N (Respite Centre & Medical/Consulting Rooms)				835 sqm
V1N	3	5	-	8
V2N	-	3	6	9
V2C	-	12	-	12
V2S	3	6	-	9
V3N	-	3	6	9
V3C	-	12	-	12
V3S	3	6	-	9
V4N	-	3	6	9
V4C	-	12	-	12
V4S	6	3	-	9
V5N	3	-	12	15
V5C	9	9	3	21
V5S	-	3	3	6
R.C.				80 BED
TOTAL:	27	77	36	140 UNITS
	19%	55%	26%	

1 Ground Floor Plan - Option 1



PRELIMINARY



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Rev.	Revision Description	Chk.	Date
A	Issued for Information		23.03.18
B	Issued for Information		27.03.18
C	Re-issued for Information		11.04.18
D	Re-issued for Information		03.05.18
E	Re-issued for Information		04.05.18
F	RC Center added: Re-issued for Information		08.05.18
G	Issued for Information		13.07.18

Project
Village Bulli
Sandon Point
For
ANGLICARE

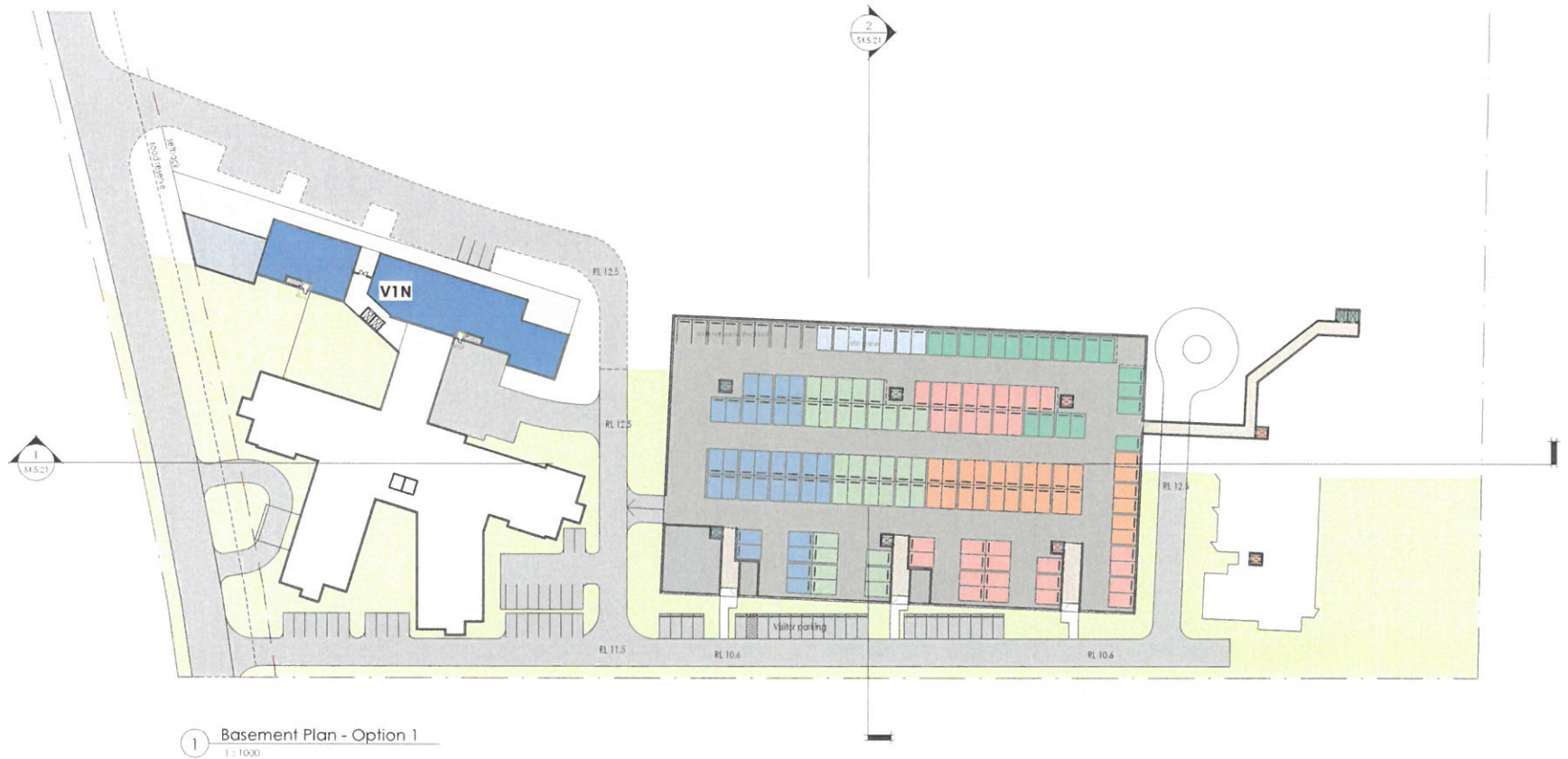


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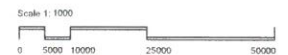
Title
Ground Floor Plan
OPTION 1

Scale	As indicated @ A3	Drawn	JSA
Project No.	171101	Checked	JH
Drawing No.	SK3.21	Approved	KJ 8460
		Revision	G



1 Basement Plan - Option 1
1:1000

PRELIMINARY



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Rev.	Revision Description	Chk.	Date
A	Issued for Information		23.03.18
B	Issued for Information		27.03.18
C	Re-assessed for Information		04.05.18
D	RC Cluster added/ Re-assessed for Information		05.05.18
E	Issued for Information		13.07.18

Project
Village Bulli
Sandon Point
For
ANGLICARE



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Title
Basement Floor Plan
OPTION 1

Scale: 1:1000 @ A3	Drawn: JSA
Project No: 171101	Checked: jh
Drawing No: SK3.20	Approved: KJ 6460
Revision: E	



1 LOT PLAN
Indicative layout only

PROPOSED TOWNHOUSES

TYPE A

8 x 3 BEDROOM TOWNHOUSES
16 x ONSITE PARKING

TYPE B

16 x 3 BEDROOM TOWNHOUSES
32 x ONSITE PARKING

TYPE C

4 x 3 BEDROOM TOWNHOUSES
8 x ONSITE PARKING

TYPE D

3 x 2 BEDROOM TOWNHOUSES
6 x ONSITE PARKING

TYPE E

9 x 3 BEDROOM TOWNHOUSES
18 x ONSITE PARKING

TYPE F

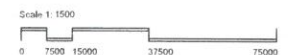
12 x 3 BEDROOM TOWNHOUSES
24 x ONSITE PARKING

TYPE G

3 x 3 BEDROOM TOWNHOUSES
6 x ONSITE PARKING

TOTAL: 55 TOWNHOUSES

PRELIMINARY



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Rev.	Revision Description	Chk.	Date	Project
A	Issued for Information		30.11.17	Village Bulli
B	Issued for Information		12.12.17	Sandon Point
C	SEARS Application		12.12.17	For
D	Issued for Information		02.02.18	ANGLICARE
E	Issued for Information		16.03.18	
F	Issued for Information		23.03.18	
G	Issued for Information		13.07.18	



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Title
Hilltop & Ocean View Precincts
Lot Plan

Scales As indicated @ A3	Drawn JSA
Project No. 171101	Checked JH
Drawing No. SK2.01	Approved KJ 6460
	Revision G

Plot Date: 11/10/2018 4:18:30 PM

APPENDIX C

TRAFFIC SURVEY RESULTS



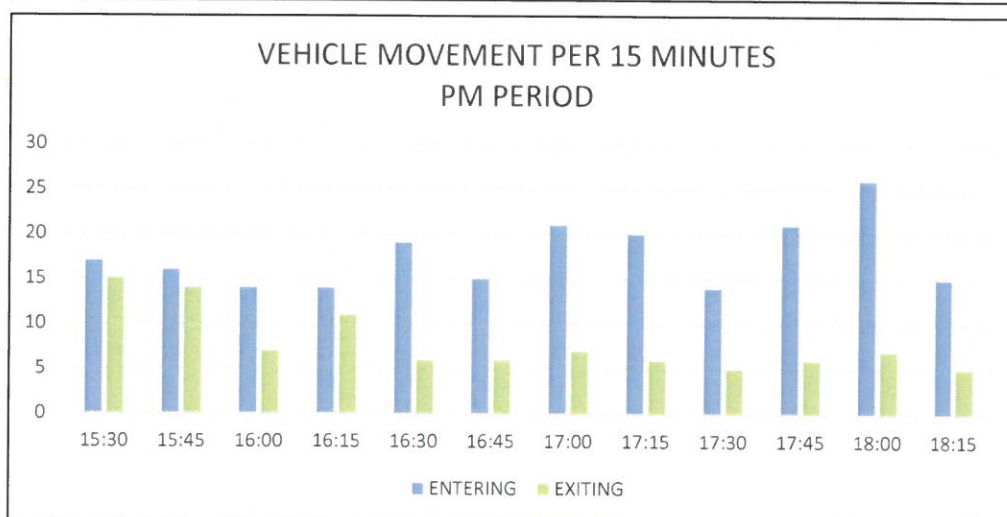
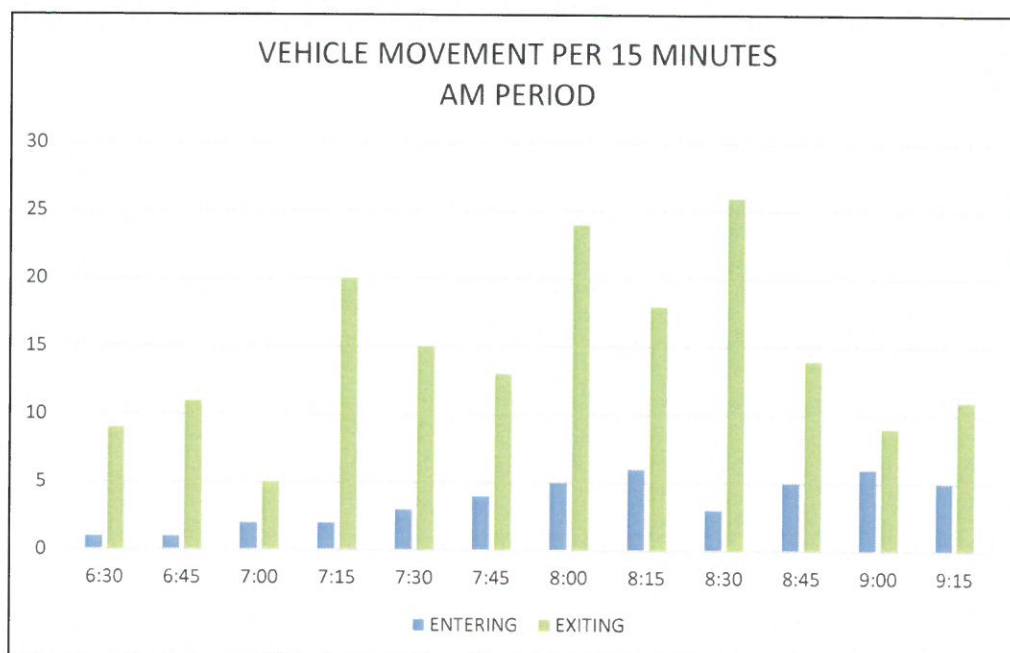
Brickworks Avenue - THIRROUL

LOCATION	NORTH	Brickworks Avenue	TIME PERIOD	0630 - 0930
	EAST	-		1530 - 1830
	SOUTH	-		-
	WEST	-	DATE	Wednesday, 28 March 2018
SUBURB	THIRROUL		WEATHER	-

 Vehicle ENTERING

 Vehicle EXITING

MOVEMENTS			1	2	
Time Per 15 Mins			ENTERING	EXITING	
6:30	-	6:45	1	9	10
6:45	-	7:00	1	11	12
7:00	-	7:15	2	5	7
7:15	-	7:30	2	20	22
7:30	-	7:45	3	15	18
7:45	-	8:00	4	13	17
8:00	-	8:15	5	24	29
8:15	-	8:30	6	18	24
8:30	-	8:45	3	26	29
8:45	-	9:00	5	14	19
9:00	-	9:15	6	9	15
9:15	-	9:30	5	11	16
Period End			43	175	218
15:30	-	15:45	17	15	32
15:45	-	16:00	16	14	30
16:00	-	16:15	14	7	21
16:15	-	16:30	14	11	25
16:30	-	16:45	19	6	25
16:45	-	17:00	15	6	21
17:00	-	17:15	21	7	28
17:15	-	17:30	20	6	26
17:30	-	17:45	14	5	19
17:45	-	18:00	21	6	27
18:00	-	18:15	26	7	33
18:15	-	18:30	15	5	20
Period End			212	95	307

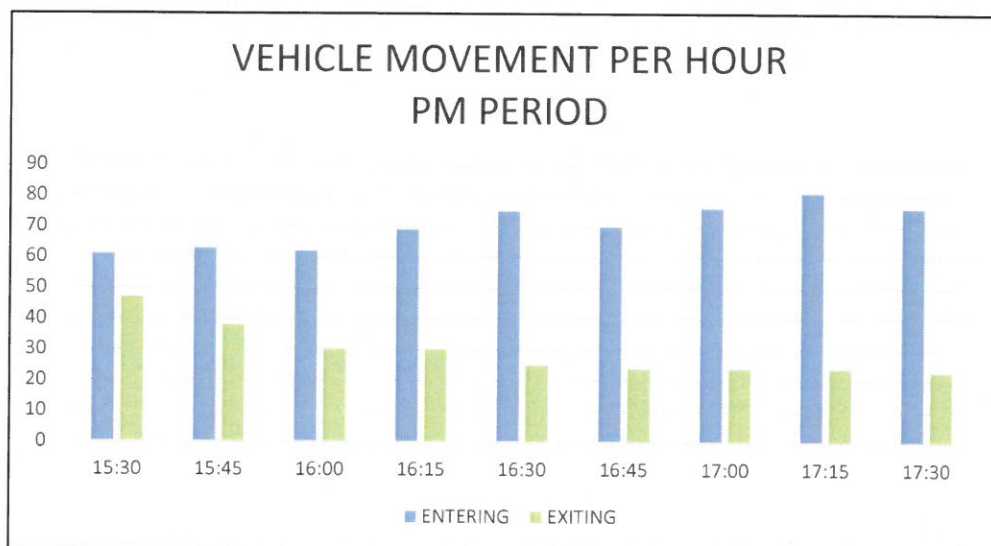
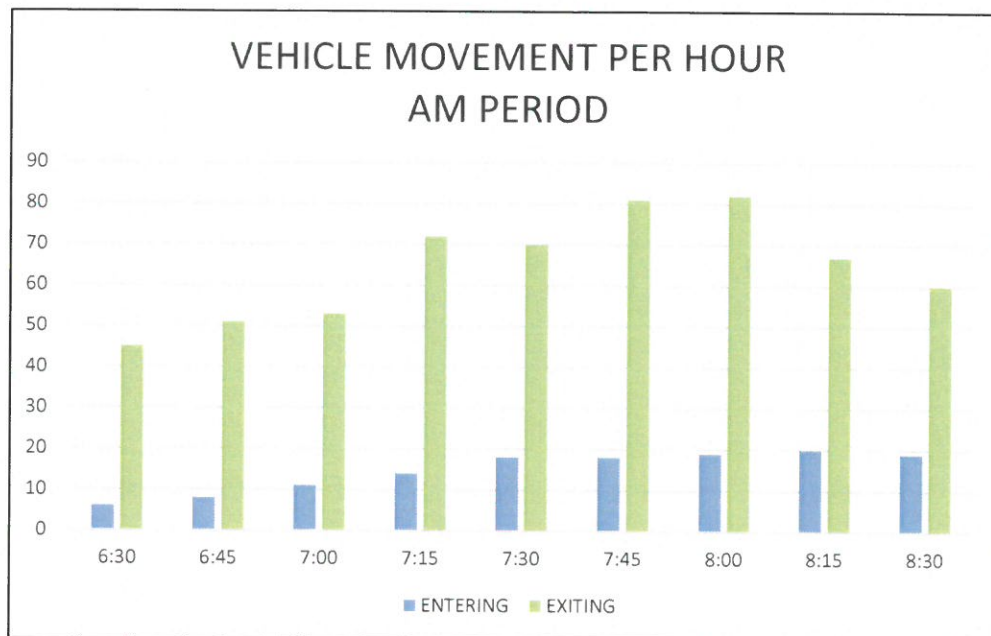


LOCATION	NORTH	Brickworks Avenue	TIME PERIOD	0630 - 0930
	EAST	-		1530 - 1830
	SOUTH	-		-
	WEST	-	DATE	Wednesday, 28 March 2018
SUBURB	THIRROUL		WEATHER	-

 Vehicle ENTERING

 Vehicle EXITING

MOVEMENTS			1	2	
Time Per HOUR			ENTERING	EXITING	
6:30	-	7:30	6	45	51
6:45	-	7:45	8	51	59
7:00	-	8:00	11	53	64
7:15	-	8:15	14	72	86
7:30	-	8:30	18	70	88
7:45	-	8:45	18	81	99
8:00	-	9:00	19	82	101
8:15	-	9:15	20	67	87
8:30	-	9:30	19	60	79
Period End			133	581	714
15:30	-	16:30	61	47	108
15:45	-	16:45	63	38	101
16:00	-	17:00	62	30	92
16:15	-	17:15	69	30	99
16:30	-	17:30	75	25	100
16:45	-	17:45	70	24	94
17:00	-	18:00	76	24	100
17:15	-	18:15	81	24	105
17:30	-	18:30	76	23	99
Period End			633	265	898



APPENDIX D

RMS AND TfNSW CONSULTATION

Ross Nettle

To: development.southern@rms.nsw.gov.au
Cc: Ken Douglas-Hill; Jennie Buchanan
Subject: MP06-0094 S75W - Anglicare Sandon Point (our ref. 18044)
Attachments: ANGLICARE BULLI VILLAGE, SANDON POINT AUG 2018 TRAFFIC IMPACT ASSESSMENT REV C.pdf

Dear Sir/Madam

The SEARS for this S75W Application require consultation with RMS and Transport of NSW to be undertaken. The Traffic and Access issues identified in the SEARS are comprehensively addressed in the attached Traffic Impact Assessment which will be submitted to Planning NSW.

TPPA (traffic consultant) would welcome any opportunity to discuss the Traffic Impact Assessment.

Regards

Ross Nettle | Director

TRANSPORT AND TRAFFIC PLANNING ASSOCIATES

Established 1994

Suite 502, Level 5, 282 Victoria Avenue, Chatswood NSW 2067

P (02) 9411 5660 **F** (02) 9904 6622 **W** tpa.com.au



Ross Nettle

To: Ken Ho (ken.ho@transport.nsw.gov.au)
Cc: Ken Douglas-Hill; Jennie Buchanan
Subject: MP06-0094 S75W - Anglicare Sandon Point (our ref. 18044)
Attachments: ANGLICARE BULLI VILLAGE, SANDON POINT AUG 2018 TRAFFIC IMPACT ASSESSMENT REV C.pdf

Dear Ken

The SEARS for this S75W Application require consultation with RMS and Transport of NSW to be undertaken. The Traffic and Access issues identified in the SEARS are comprehensively addressed in the attached Traffic Impact Assessment which will be submitted to Planning NSW.

TPPA (traffic consultant) would welcome any opportunity to discuss the Traffic Impact Assessment.

Regards

Ross Nettle | Director

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