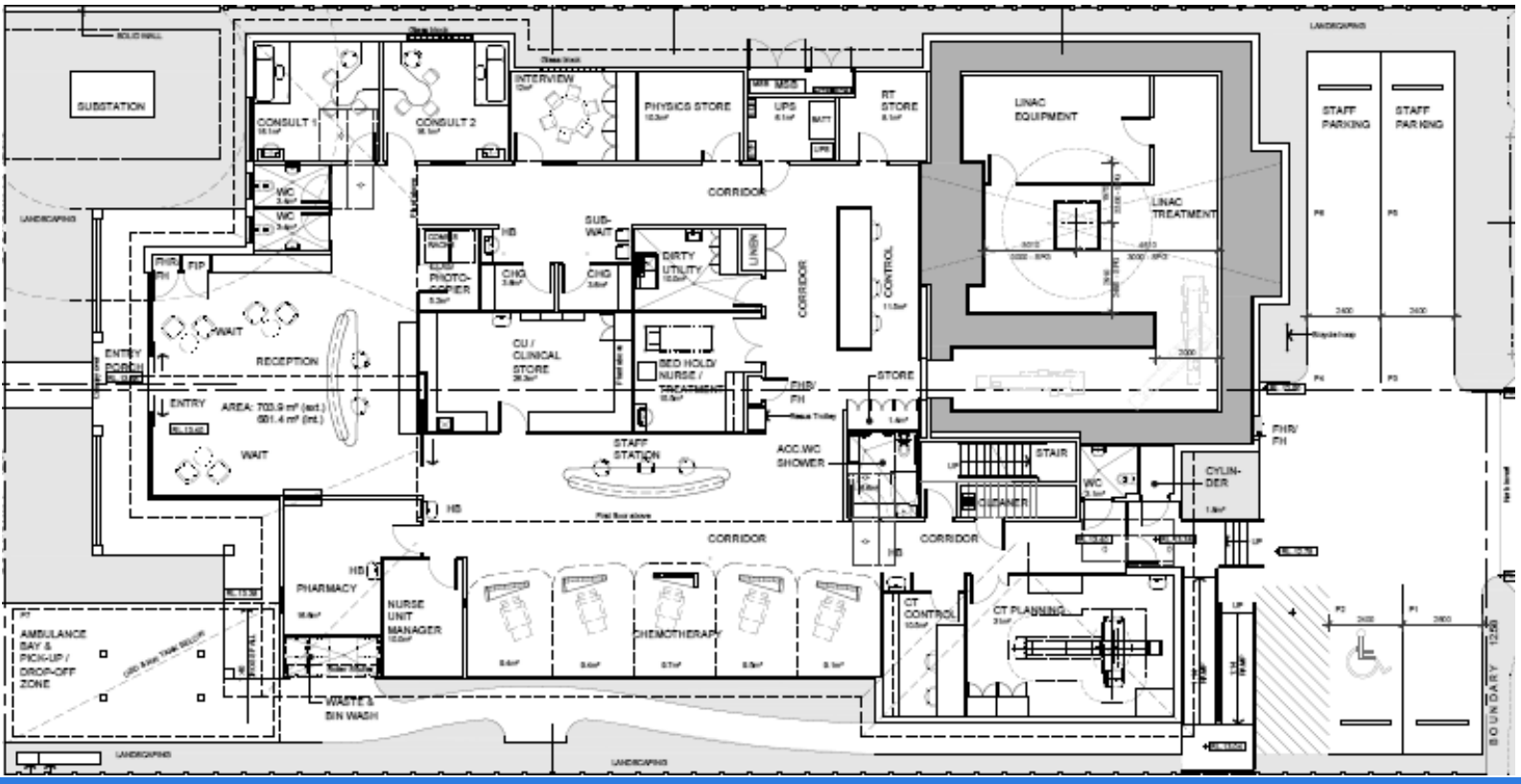

Cancer Care Manning-Great Lakes
88-90 Cornwall Street, Taree

Traffic Impact Assessment

Prepared for:

Cancer Care Associates

8 November 2022

The Transport Planning Partnership

Cancer Care Manning-Great Lakes
88-90 Cornwall Street, Taree

Traffic Impact Assessment

Client: Cancer Care Associates

Version: V03

Date: 8 November 2022

TTPP Reference: 22331

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	15/09/22	Ashwini Uthishtran, Paul Cai	Paul Cai	Ken Hollyoak	Draft
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V03	08/11/22	Ashwini Uthishtran, Paul Cai	Paul Cai	Ken Hollyoak	

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Tables

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APPENDICES

1 Introduction

The Transport Planning Partnership (TTPP) Pty Ltd has prepared this traffic impact assessment report on behalf of Cancer Care Associates in relation to a proposed development at 88-90 Cornwall Street, Taree. The proposal seeks approval to reconstruct the two existing residential dwellings to become a cancer treatment facility (Cancer Centre Manning-Great Lakes).

The proposed development will be provided with six car parking spaces at the rear car park accessed via Cornwall Lane and one ambulance bay / pick-up and drop-off zone at the front of the site off Cornwall Street.

A development application (DA) is to be lodged with Mid Coast Council (Council) seeking approval for the proposed development.

The report assesses the traffic and parking implications associated with the proposed development.

The remainder of the report is set out as follows:

- Chapter 2 discusses the existing conditions including a description of the subject site
- Chapter 3 provides a brief description of the proposed development
- Chapter 4 assesses the proposed on-site parking provision and internal layout
- Chapter 5 examines the traffic generation and its impacts, and
- Chapter 6 presents the conclusions of the assessment.

2 Existing Conditions

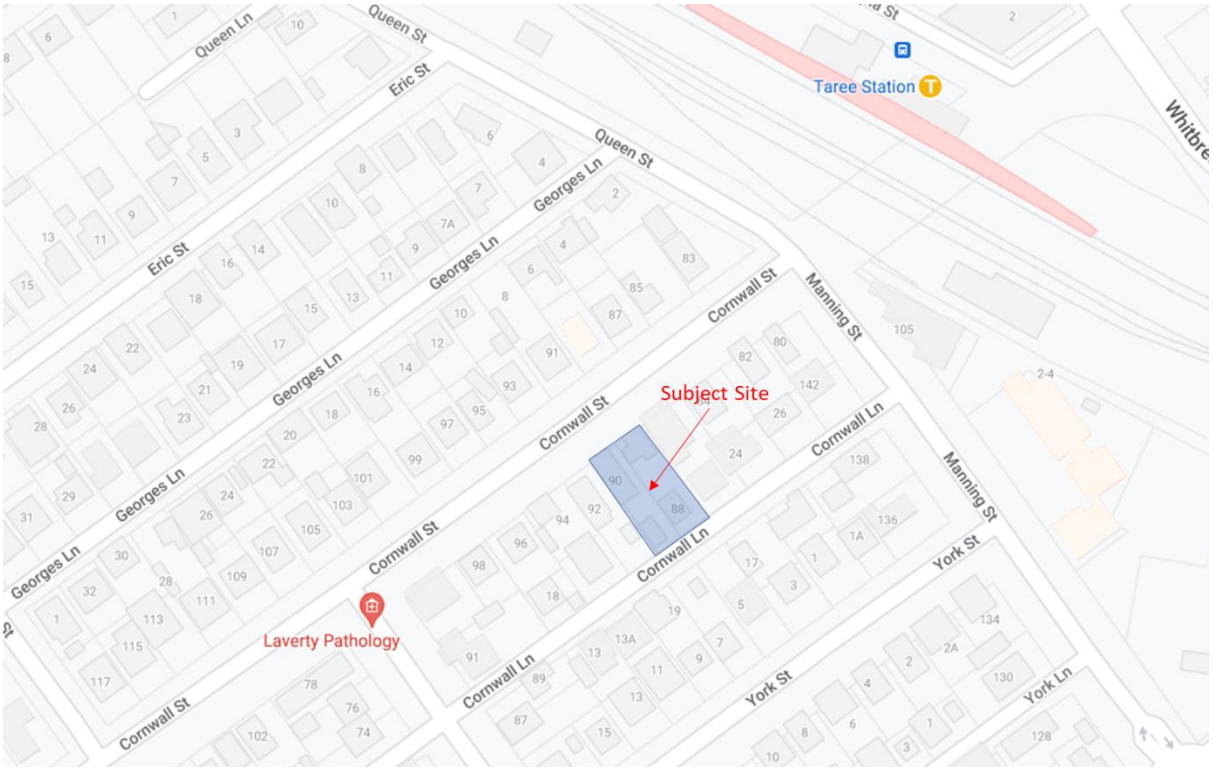
2.1 Site Description

The subject site is located at 88-90 Cornwall Street, Taree and falls within the local government area of Mid Coast Council. The site is bounded by Cornwall Street to the north, Cornwall Lane to the south and residential buildings to the east and west, as shown in Figure 2.1.

The existing site includes two residential dwelling houses.

The existing land use of the site is zoned as R1 – General Residential. The land uses surrounding the site are predominantly low-density residential dwellings.

Figure 2.1: Site Location



Source: Google Maps

2.2 Road Network

The subject site has street frontage to Cornwall Street and Cornwall Lane. A description of the surrounding road network is provided in Table 2.1.

Table 2.1: Surrounding Road Network

Road	Type of Road	Speed Limit	Direction	Lanes	Carriage Road width	Road Authority
Cornwall Street	Local Road	50 km/h	Two-way	2	12m (include kerbside parking)	Council
Cornwall Lane	Local Road	50 km/h	Two-way	2	6.5m (include kerbside parking)	Council
Manning Street	Local Road	50 km/h	Two-way	2	12m (include kerbside parking)	Council
Pulteney Street	Local Road	50 km/h	Two-way	2	17m (include kerbside parking)	Council

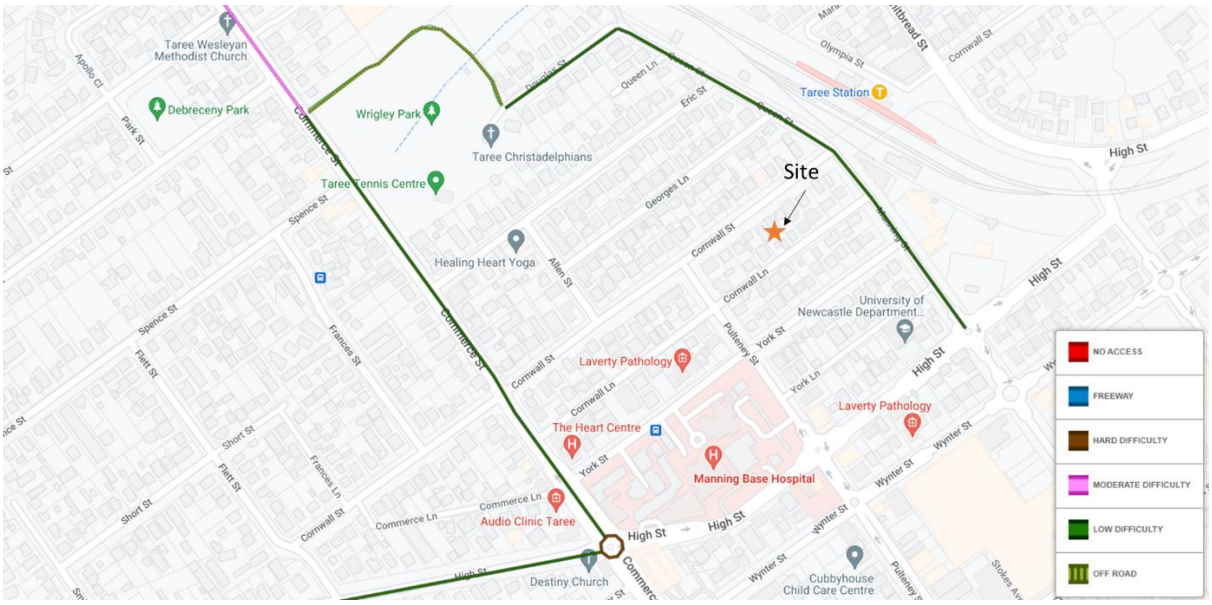
Parallel kerb-side parking is permitted on Cornwall Street and Cornwall lane near the site. Line-marked angled parking spaces are provided on Pulteney Street.

2.3 Pedestrian Infrastructure and Cycleway

There is no pedestrian footpath along the site frontage in Cornwall Street or Cornwall Lane.

On road cycle routes are provided near the site as shown in Figure 2.2.

Figure 2.2: Cycleway Network



Source: Transport for NSW – Cycleway Finder

2.4 Public Transport Facilities

Taree Railway Station is located approximately 900m walking distance from the site. This railway station is on the North West NSW line.

The closest bus stop to the site is located on York Street adjacent to Manning Base Hospital, which is about 400m walking distance to the site. Bus routes provided near the site are presented in Table 2.2.

Table 2.2: Existing Bus Services

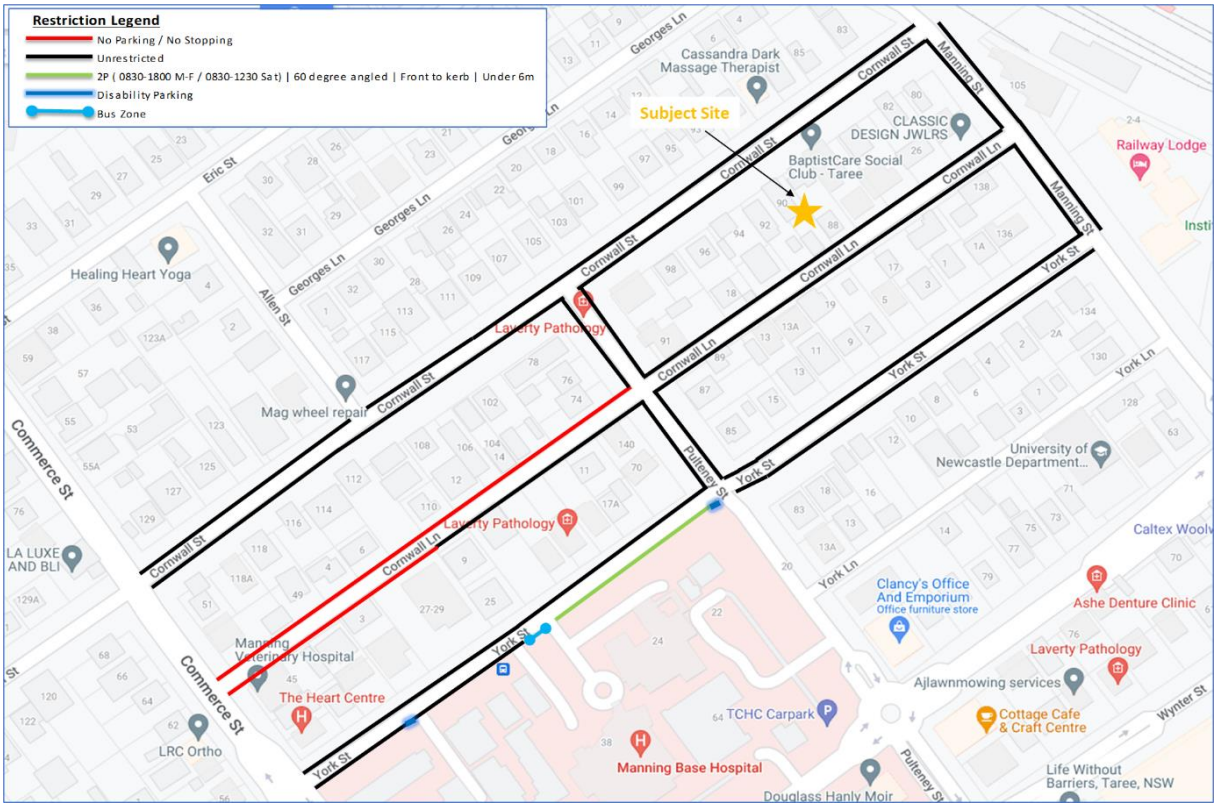
Bus Route	Route Description	Weekday Frequency
309	Taree to Forster via Blackhead and Diamond Beach	Single departure, arrives at Manning Base Hospital at 9:52am.
310	Taree to Forster	Single departure at Manning Base Hospital at 1:10pm. Drop off at hospital available on request to driver.
313	Taree to Taree West	Every 2 hours in the morning and every 1 hour in the afternoon.

2.5 On-street Parking

A review was undertaken of on-street parking around the proposed development. On street parking controls are presented in Figure 2.3.

Unrestricted parallel kerb-side parking is provided on Cornwall Street, Cornwall Lane and Manning Street. Parking on Pulteney Street between Cornwall Street and York Street is unrestricted 60 degree angled parking. Parking on York Street is unrestricted 60 degree angled parking between Pulteney Street and Manning Street.

Figure 2.3: On-street Parking near the Site



2.6 Existing On-street Parking Occupancy

On-street parking surveys have been conducted for the streets near the site from 7 AM to 5 PM on 17th (Monday) and 18th (Tuesday) October 2022. It is shown in the survey results that the on-street parking occupancy rate near the site is slightly higher on Tuesday 18th October 2022. As a conservative measure, TTPP has undertaken an analysis of the survey data on Tuesday 18th October, and the results are summarised in Table 2.3.

It is shown that the on-street parking demand near the site (around the block) is low during the operational time of the proposed facility. The peak parking demand occurred at 10 AM, of which 36% of the on-street parking spaces were occupied, leaving more than 60 spaces were available around the block.

On-street parking demands increase on areas that are closer to the Manning Base Hospital which is bounded by Commerce Street, York Street, Pulteney Street and High Street. The 60 degree angled parking spaces on Pulteney Street and York Street were fully occupied at about 11 AM.

The survey results suggest that the on-street parking demand near the site were not impacted by the over-flow parking demand of the Manning Base Hospital.

Furthermore, the parking survey shows that the parking durations of most vehicles on Cornwall Street, Cornwall Lane and manning Street is about 1-2 hours. Vehicles on Pulteney Street and York Street tend to have a longer duration of stay, which some vehicles stayed more than 8 hours.

Table 2.3: On-street Parking Occupancy near the Site

Street	Side	Section	Restriction	Capacity	Number of Parked Vehicles (Tuesday 18/10/2022)										
					7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
Cornwall Street	North	Allen St – Manning St	Unrestricted	36	6	8	15	17	13	18	15	17	15	15	17
	South	Pulteney St – Manning St	Unrestricted	21	1	1	7	6	8	5	7	7	3	3	4
Cornwall Lane	North	Pulteney St – Manning St	Unrestricted	20	2	4	4	7	4	4	3	3	3	2	3
	South	Pulteney St – Manning St	Unrestricted	16	0	0	1	4	5	4	4	4	2	2	1
Manning Street	West	Cornwall St – Cornwall Ln	Unrestricted	6	0	0	1	2	1	1	1	1	1	1	0
On-street Parking Around the Block			Sub-Total	99	9	13	28	36	31	32	30	32	24	23	25
			Unoccupied		**90**	**86**	**71**	**63**	**68**	**67**	**69**	**67**	**75**	**76**	**74**
			Percentage Occupied		**9%**	**13%**	**28%**	**36%**	**31%**	**32%**	**30%**	**32%**	**24%**	**23%**	**25%**
Manning Street	East	Cornwall St – York St	Unrestricted	6	0	0	0	0	0	0	1	0	1	0	0
	West	Cornwall Ln – York St	Unrestricted	5	0	0	0	0	0	0	1	1	2	1	1
Pulteney Street	East	Cornwall St – York St	Unrestricted	19	6	20	19	19	19	19	19	17	16	12	4
	West	Cornwall St – York St	Unrestricted	20	7	20	20	20	20	20	20	19	18	13	7
York Street	North	Pulteney St – Manning St	Unrestricted	34	3	22	29	33	34	33	33	30	28	27	9
	South	Pulteney St – Manning St	Unrestricted	43	3	21	32	36	42	39	41	42	36	34	16
Extended On-street Parking Areas			Sub-Total	127	19	83	100	108	115	111	115	109	101	87	37
			Unoccupied		**108**	**44**	**27**	**19**	**12**	**16**	**12**	**18**	**26**	**40**	**90**
			Percentage Occupied		**15%**	**65%**	**79%**	**85%**	**91%**	**87%**	**91%**	**86%**	**80%**	**69%**	**29%**

3 Proposed Development

3.1 Development Description

The proposed development seeks to demolish the two existing dwelling houses and construct a two-level cancer treatment facility. The development proposes no changes to the existing zoning of the site. The proposed development will include:

- An at grade car park with six car parking spaces (including one accessible space) at the rear of the site off Cornwall Lane.
- One ambulance bay / pick-up and drop-off zone at the front of the site accessed via a new vehicle crossing off Cornwall Street.
- Two consultation rooms, one bunker for LINAC treatment, one bed hold/treatment room and five chemotherapy chairs, with a total Gross Floor Area (GFA) of 695 m^2.

TTPP has been advised that there will be a maximum of 11 staff and 7 patients on site at any one time.

The proposed operation hours of the facility will be:

- Monday to Friday: 7.30am to 5.00pm
- Saturday: 9.00am to 5.00 pm on occasion
- Sunday and public holidays: closed

Out of hours emergency treatments and extended hours of operation may be required on rare occasions to ensure continuity of patient care or emergency treatments.

The proposed site layout is shown in Appendix A.

3.2 Vehicle Access

The proposed development will close two existing vehicle crossings on Cornwall Lane (one for each dwelling house), and construct a new combined vehicle crossing for access to the rear car park. The new vehicle crossing will be 6 metre wide.

Existing site has a gap of 8.2m between two vehicle crossings on Cornwall Lane, which is able to accommodate one car space on Cornwall Lane along the site frontage. The proposed new vehicle crossing will allow for three car parking spaces (two to the northeast side of the driveway and one to the southwest side of the driveway) on Cornwall Street in front of the site. Therefore the proposed development will gain two additional on-street parking spaces on Cornwall Lane.

The proposed development will close two existing vehicle crossings off Cornwall Street and construct a new vehicle crossing to the proposed ambulance bay / pick-up/drop-off bay and a kerb ramp for pedestrian access to the building. There will be no changes on the numbers of kerb-side parking spaces in front of the site on Cornwall Street.

4 Parking Assessment

4.1 Car Parking Requirements

Car parking rates for cancer treatment facilities are not specified in the Greater Taree DCP 2010. However Council's DCP specifies the car parking rates for the following land uses which is similar to the proposed development as shown in Table 4.1.

Table 4.1: DCP Car Parking Requirements

Land Use	Yield	DCP Parking Rate	DCP Parking Requirement
Health Consulting Room	2 consulting rooms; 695m² GFA	2 spaces per consulting room plus one space for the dwelling (In residential zones)	4 spaces
Medical Centres		3 per surgery; plus 1 per doctor; plus 1 per employee, or 4 spaces per 100m2 (whichever is the greater)	28 spaces

It is noted that the proposed cancer treatment facilities will not operate in the same way as a traditional medical centre and will not have the same number or turnover of patients in the facility at the same time as medical centres or health consulting rooms. The parking rates specified in the DCP do not accurately reflect the parking demands of the proposed development.

It is anticipated that there will be a maximum number of 11 staff and 7 patients on site at any one time. Based on the experience from other similar cancer treatment facilities, the average percentage of staff and patients drive and park on site is about 60%. This is equivalent to a parking demand of 11 cars.

It is also expected that 20% of the patients would be dropped off and picked up. A drop-off/pick-up zone is provided one site.

Six (6) car parking spaces are provided on site. Four of the spaces are arranged in two sets of tandem spaces. The tandem spaces will be allocated to staff parking only. One of the spaces is designed as an accessible space in accordance with AS2890.6. A shortfall of 5 additional car parking spaces would be accommodated on the streets around the site.

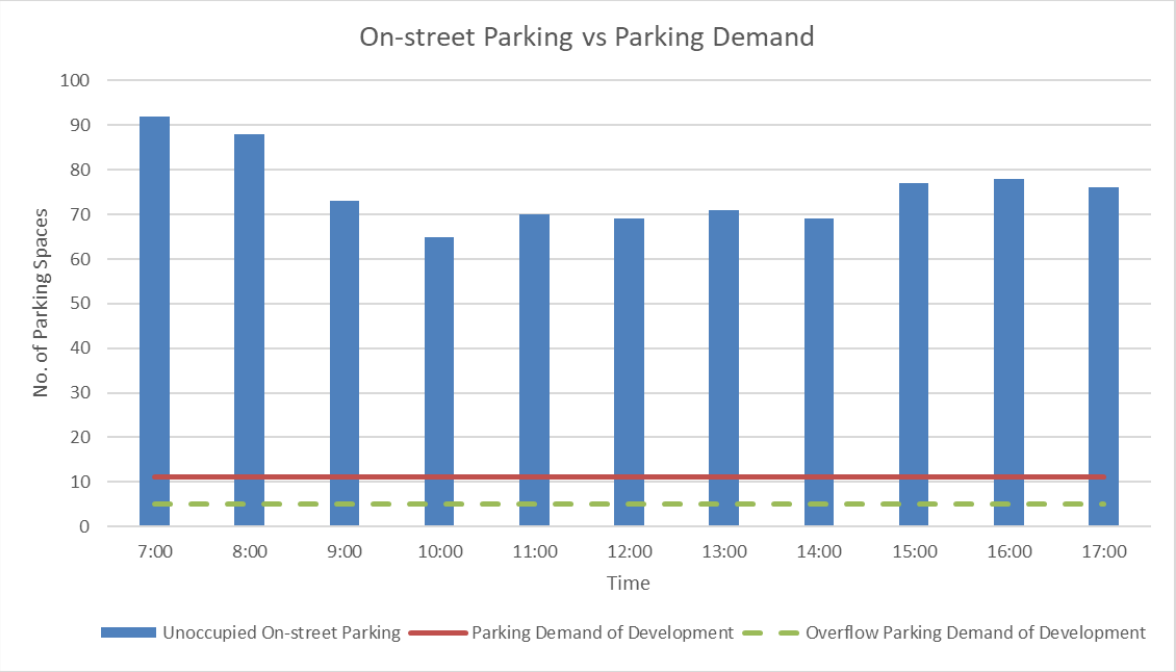
As noticed that Cornwall Lane has a very low on-street parking demand, the two additional parking spaces on Cornwall Lane gained from the development could be use by patients for short-term parking.

4.1.1 On-street Parking Supply

As shown in Section 2.5, the on-street parking around the site was in low demand. Less than 40% of the on-street parking spaces around the block were occupied through out the day. Figure 4.1 shows the number of unoccupied spaces on the streets around the site, parking demand of the proposed development and the overflow parking spaces that need to be accommodated on street.

As shown in the figure, the available on-street parking spaces around the site is sufficient to accommodate the overflow parking demand of the development. The proposed provision of on-site parking will not result in noticeable impacts on the residential parking on the surrounding streets, and it is considered acceptable.

Figure 4.1: Unoccupied On-street Parking vs Development Parking Demand



4.2 Bicycle Parking

Council's DCP does not specify the bicycle parking requirements for this type of development. It is anticipated that the bicycle parking demand would be relatively low for the proposed development.

The proposed development is provided with two bicycle parking spaces at the rear of the site. This will encourage staff to cycle to the site.

4.3 Motorcycle Parking

Council's DCP does not specify the motorcycle parking requirements for this type of development.

No dedicated motorcycle parking spaces are provided on site. Staff who ride their motorcycle to the site could be accommodated within the on-site car parking spaces or on street.

4.4 Emergency Vehicles

It is noted that no patients will be transferred to the site for treatment via ambulance.

Nevertheless, the proposed pick-up/drop-off zone in front of the site off Cornwall is 8.7m long and 4.6m wide. This is sufficient to accommodate an ambulance for emergency use, if required.

4.5 Servicing and Loading Facilities

Waste collection of the site will remain the same as the exiting site, which would be accommodated via kerb-side.

Other deliveries and services could be undertaken via cars and vans, which can be accommodated within the pick-up & drop-off zone or on street.

4.6 Car Park Layout

Car parking spaces allocated to the employees are to be designed in accordance with the Australian StandardAS2890.1:2004 User Class 1A, and car parking spaces allocated to the patients are to be designed in accordance with Australian Standard AS2890.1:2004 User Class 3. User Class 1A spaces are a minimum of 2.4m wide, 5.4m long with a 5.8m aisle width. User Class 3 spaces are a minimum of 2.6m wide, 5.4m long with a 5.8m aisle width.

Four car spaces (tandem arrangement) are designed in accordance with User Class 1A for staff parking. One space is designed in accordance with User Class 3 for patients' parking. One space is designed as an accessible space in accordance with AS2890.6. the proposed parking aisle width is 6.6m, which complies with AS2890.1:2004.

5 Traffic Assessment

5.1 RMS Trip Generation Surveys – Medical Centres (TEF, 2015)

The Medical Centres Traffic Generation Surveys undertaken for RMS (now TfNSW), include survey data for a number of medical centres (14 in the Greater Metropolitan Sydney area and 6 in the Regional NSW areas).

The survey study has investigated the relationship between the peak hour vehicle trips and a number of key independent variables, such as total building GFA, number of consulting rooms, number of doctors and total number of staff. Although the survey data did not produce a strong correlation between the independent and dependant variables, the analysis shows that the peak hour trips in relation to the number of consulting rooms is relatively stronger than other independent variables.

The average vehicle trips per consulting room during the adjacent road's peak hour in the AM and PM for medical centres in the regional areas, and the traffic generations of the proposed development based on those rates are summarised in Table 5.1.

Table 5.1: Traffic Generation (RMS Trip Generation Surveys – Medical Centres by TEF 2015)

Period	Vehicle trips per room during adjacent road's peak hour in regional areas	Number of consulting rooms	Vehicle trips generated during adjacent road's peak hour	Existing traffic generation	Net traffic generation
AM Peak	4.3 trips per hour per room	2	8.6	1.42 (2 dwellings x 0.71 trips per dwelling)	7.2
PM Peak	3.7 trips per hour per room		7.4	1.56 (2 dwellings x 0.78 trips per dwelling)	5.8

The above analysis shows that the proposed development will generate an additional 6-7 vehicle trips during the peak hour based on the survey results of a number of medical centres NSW regional areas.

It is noted that the proposed cancer treatment facility will operate in a less intensive manner than a traditional medical centre and will not have the same turnover of patients in the facility as a traditional medical centre. Traffic generation of the proposed development based on the proposed operation of the site is further discussed in the next section.

5.2 Traffic Generations based on Operation

It is anticipated that the proposed cancer treatment facility will have a maximum 11 staff on site at any one time. TTPP has been advised that the facility will service 2.5 patients per hour on average due to the nature of the treatments provided at the centre.

It is also anticipated that about 60% of the staff will travel to and from work by cars. Therefore the staff will generate up to 6.6 vehicle trips in the AM and PM period.

It is likely that the staff will arrive before the patients so the total traffic will not be an accumulation of the two separate elements.

However, as a worst case scenario, the two elements have been added together and the proposed traffic generation based on this is summarised in Table 5.2.

Table 5.2: Traffic Generation (actual operation)

Period	Traffic generation of proposed development	Existing traffic generation	Net traffic generation
AM Peak	9.1 per hour	1.42 (2 dwellings x 0.71 trips per dwelling)	7.68 per hour
PM Peak	9.1 per hour	1.56 (2 dwellings x 0.78 trips per dwelling)	7.54 per hour

The additional traffic generation of the proposed cancer treatment facility is estimated to be up to 8 vehicle trips per hour in the peak periods. This level of additional traffic generated by the proposed development will therefore have no noticeable traffic impacts on the surrounding road network and would show no discernible difference in any traffic modelling software.

6 Conclusion

This report examines the traffic and parking implications of the proposed development at 88-90 Cornwall Street, Taree. The key findings of the report are presented below.

- The proposal seeks approval to reconstruct the two existing residential dwellings to a cancer treatment facility.
- Based on the proposed operation of the site, it is anticipated that the peak parking demand will be 11 car spaces.
- It is proposed to provide an at grade car park with six car parking spaces (including one accessible space) at the rear of the site via a new vehicle crossing off Cornwall Lane and one pick-up and drop-off space at the front of the site accessed via a new vehicle crossing off Cornwall Street.
- The proposed car park layout and access have been designed in accordance with AS2890.1:2004 and AS2890.6:2009.
- Parking survey of the streets near the site suggests that the overfall parking demand of the proposed development can be accommodated on street without noticeable impacts on the residential parking.
- The proposed development is estimated to generate up to 8 additional vehicular trips per hour during the peak periods. This will have no noticeable traffic impacts on the surrounding road network.

Overall, it is concluded that the proposed development is considered acceptable from a traffic and parking perspective and is not expected to cause any noticeable adverse traffic impacts on the surrounding road network.

Appendix A

Architectural Plans

LEGEND

	PROPOSED WALL
	ROOF OUTLINE
	ABOVE/BELOW OBJECT
	BOUNDARY
ex.RL.0.0	EXISTING LEVELS
RL.00.00	PROPOSED LEVELS
	PROPOSED DOORS
	PROPOSED WINDOW

DEVELOPMENT STATISTICS

SITE AREA (based on SURVEY information)	1,240.0 m²
GROUND FLOOR	551.9 m²
FIRST FLOOR	107.1 m²
TOTAL	659.0 m²
FSR	0.53 : 1
AVAILABLE CARPARKING	6+1= 7 spaces
Landscape Area	255.4 m²

Lot No. 7
DP 3933
86 Cornwall Street

Lot No. 5
DP 664977
92 Cornwall Street

6m CLEARANCE LINE
3m CLEARANCE LINE
BOUNDARY 50.29
BOUNDARY 48.38
BOUNDARY 12.575
BOUNDARY 12.58
SOLID WALL
SUBSTATION
LANDSCAPING
CONSULT 1 16.1m²
CONSULT 2 16.1m²
INTERVIEW 12m²
PHYSICS STORE 10.3m²
MSB
MTR(EDB)
UPS 6.1m²
BATT
UPS
RT STORE 8.1m²
Glass block
Plant above
CORRIDOR
LINAC EQUIPMENT
LINAC TREATMENT
STAFF PARKING
P6
P5
P4
P3
P2
P1
2400
2600
3010
3000 - SPG
4610
1075
3300 - SPG
2610
2400 - SPG
2000
Bicycle hoop
WC 3.4m²
WC 3.4m²
FHR/ FH
FIP
WAIT
ENTRY PORCH
RL 13.28
RECEPTION
ENTRY
RL.13.40
AREA: 703.9 m² (ext.)
681.4 m² (int.)
WAIT
COMMS RACKS
HB
SUB-WAIT
EDB/ PHOTO-COPIER 5.2m²
CHG 3.6m²
CHG 3.6m²
DIRTY UTILITY 10.0m²
LINEN
CONTROL 11.5m²
CU / CLINICAL STORE 26.3m²
BED HOLD/ NURSE / TREATMENT 15.5m²
FHR/ FH
Resus Trolley
STORE 1.4m²
STAFF STATION
ACC.WC SHOWER 9.6m²
STAIR
UP
WC 3.1m²
CLEANER
CYLIN-DER 1.8m²
FHR/ FH
RL. 12.50
RL. 12.30
CARPARK ENTRY
Kerb invert
1:8 Kerb ramp
Carport over
EX. POWER POLE
EX. STORM WATER PIT
First floor above
HB
PHARMACY 16.6m²
NURSE UNIT MANAGER 10.0m²
CHEMOTHERAPY
9.4m²
9.4m²
9.7m²
9.5m²
9.1m²
CT CONTROL 10.5m²
CT PLANNING 31m²
RL.13.38
RL.13.40
RL.12.78
RL.12.55
RL.13.04
1:14 RAMP
P7
AMBULANCE BAY & PICK-UP / DROP-OFF ZONE
OSD & RW TANK BELOW
CROSS FALL 1:40
Roller Shutter
WASTE & BIN WASH
NEW FENCE
BOOSTER ASSEMBLY
WATER METER & RPZ
CORNWALL STREET
CORNWALL LANE

0m 1 2 5 7m
SCALE: 1:100

No.	Amendment	Date
A	DA Issue	31.10.22

Project
CCA MANNING - GREAT LAKES
88 - 90 Cornwall Street, TAREE NSW 2430

Drawing
GROUND FLOOR PLAN

Cancer Care Associates

boffa robertson group
architecture, health and aged care planning, project management
Suite 7, Level 1 Epica, 9 Railway Street
Chatswood NSW 2067
AUSTRALIA
Tel. (02) 9406 7000
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Email : brgroup@brgr.net

Date	JUN 2022	Job No. : Drawing	
Scale	1:100 @ A1	2214 / DA03	
Drawn			
Amendment	A		

DRAWING NORTH

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