



13 August 2021
Ref 20056

Canterbury Bankstown Council
P.O. Box 8
BANKSTOWN NSW 1885

Attn: Patrick Lebon
patrick.lebon@cbc.city.nsw.gov.au

Dear Patrick,

SSD-8499366
PLANNING PROPOSAL FOR A MEDICAL FACILITIES DEVELOPMENT
445-459 CANTERBURY ROAD, CAMPSIE
TRAFFIC, PARKING & TRANSPORT MATTERS

Introduction

I refer to comments received from Canterbury Bankstown Council (Council) and Transport for NSW (TfNSW), as well as the Council-commissioned peer review traffic study prepared by Bitzios Consulting (Bitzios), in relation to the abovementioned planning proposal:

- TfNSW letter dated 12th February 2021
- Council letter dated 15th February 2021
- Bitzios peer review study dated 18th December 2020

The following advice is provided in response to the traffic, parking and transport matters raised in the above letters, noting a significant overlap between the three, with the key issues summarised below.

- clarification and justification for the adopted private hospital traffic and parking rates, preferably via an equivalent case study
- the impact of overflow parking onto the surrounding streets
- defined peak hours of the proposed private hospital
- traffic distribution of the proposed private hospital
- methodology for future traffic demands, including background growth and approved developments
- SIDRA modelling report including calibration, validation and key assumptions, as well as cumulative impacts on the Opening Year and Design Horizon years
- clarification and justification of the B6 zone uplift and its impact to the road network
- identify any road infrastructure upgrades that will be necessary to accommodate development traffic
- additional information regarding anticipated number of service vehicles for the proposed private hospital
- facilitating safe access to the site across Canterbury Road, particularly for traffic approaching from Cooks River (i.e. from the east)
- facilitating safe access to the site at the laneway access
- identify any pedestrian and bicycle infrastructure upgrades

Site

The subject site is located on the north-eastern corner of the Canterbury Road and Stanley Street intersection. The site has street frontage approximately 86m in length to Canterbury Road and approximately 54m in length to Stanley Street. This site occupies an area of approximately 4,414m².

The subject site is currently zoned *B6 – Enterprise Corridor* and is situated approximately 850m walking distance south of Campsie Railway Station. A recent aerial image of the site and its surroundings is reproduced below.



B6 Zone – Enterprise Corridor

The site lies within the *B6* zone which is essentially bound by Canterbury Road to the south, Stanley Street to the west, Perry Street to the north and Duke Street to the east.



Source: Canterbury LEP 2012

Canterbury LEP 2012 outlines the objectives of the *B6* zone which include:

- promoting business along main roads and to encourage a mix of compatible uses
- to provide a range of employment uses (including business, office, retail and light industrial uses)
- to maintain the economic strength of centres by limiting retailing activity
- to facilitate the revitalisation of Canterbury Road and create an attractive streetscape supported by buildings of a high standard of design
- to support urban renewal and a pattern of land use and density that reflects the existing and future capacity of the transport network

Furthermore, the following uses are permitted with consent within the *B6* zone:

- business premises
- community facilities
- food and drink premises
- hardware and building supplies
- hotel or motel accommodation
- landscaping material supplies
- light industries
- plant nurseries
- vehicle sales or hire premises
- warehouse or distribution centres
- other uses such as health services, inc. medical centres, hospitals are permissible by default

Planning Proposal

The planning proposal seeks approval to amend the current planning controls which apply to the site in order to increase the Height of Building restriction from 12m to 48m. The concept design arising from the change in controls intended through the planning proposal envisages the construction of a new multi-storey medical facilities building on the site, as follows:

- demolition of all existing buildings on the site
- construction of a new multi-storey private hospital, comprising;
 - 8 operating theatres
 - 218 beds
 - 650m² of ancillary retail/café
- 1,350m² of allied health, ambulatory care & medical retail
- 3,000m² of medical office space
- 22,628m² GFA
- multi-level basement car parking area, comprising approximately 78 spaces per level
- servicing area accommodating 4 loading bays
- hospital front and back of house areas
- drop-off/pick-up porte cochere

Vehicular access to the on-site car park, service area and porte cochere is to be provided via a new laneway that is to be constructed along the northern edge of the site, extending eastward from Stanley Street. The proposed laneway, which aligns with the *Canterbury Road Review's* recommendations, comprises a 9m reservation width, including a 6.5m wide lane carriageway width, a 700mm wide landscape strip and a 1.8m wide footpath.

The proposed facility is expected to provide a range of high-quality medical care services including inpatient and outpatient services. These may include emergency and intensive care, maternity, day surgery, cardiac care, dialysis and oncology. The facility, which lies in the “Eastern Lifestyle and Medical Precinct – Campsie to Kingsgrove”, is expected to provide a range of private elective procedures that complement the public health system, including the nearby Canterbury Hospital.

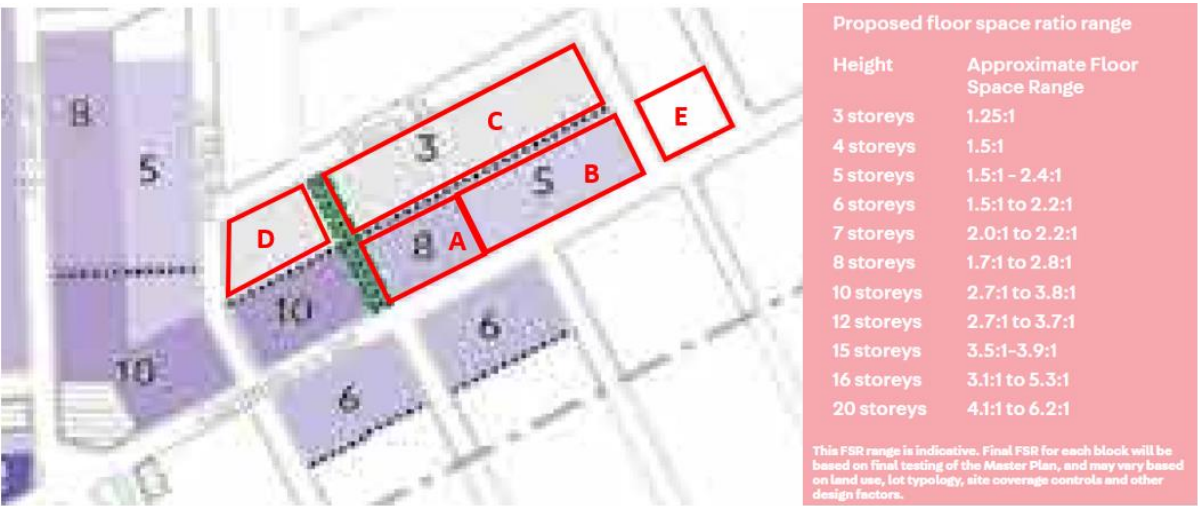
Concept plans of the planning proposal have been prepared by *Team2 Architects* and are provided under separate cover.

B6 Zone Uplift

Preliminary discussions with Council have indicated that the traffic assessment work for the planning proposal relating specifically to 445-459 Canterbury Road, should also give consideration to the entire *B6* block and its development potential, in order to provide a more holistic assessment.

As such, extensive investigation of the B6 uplift has been undertaken as part of the private hospital planning proposal, particularly with respect to Council’s future vision within the Campsie Town Centre Masterplan.

The entire *B6* block has an area of approximately 26,000m². After factoring in the future laneway, which will have an area of approximately 2,400m², as well as the subject site which has an area of approximately 4,400m², the remainder of the *B6* block will have an area of approximately 19,500m².



Taking the mid-point of the indicative FSRs given for the Masterplan for the building heights indicated in the above image, two scenarios have been explored.

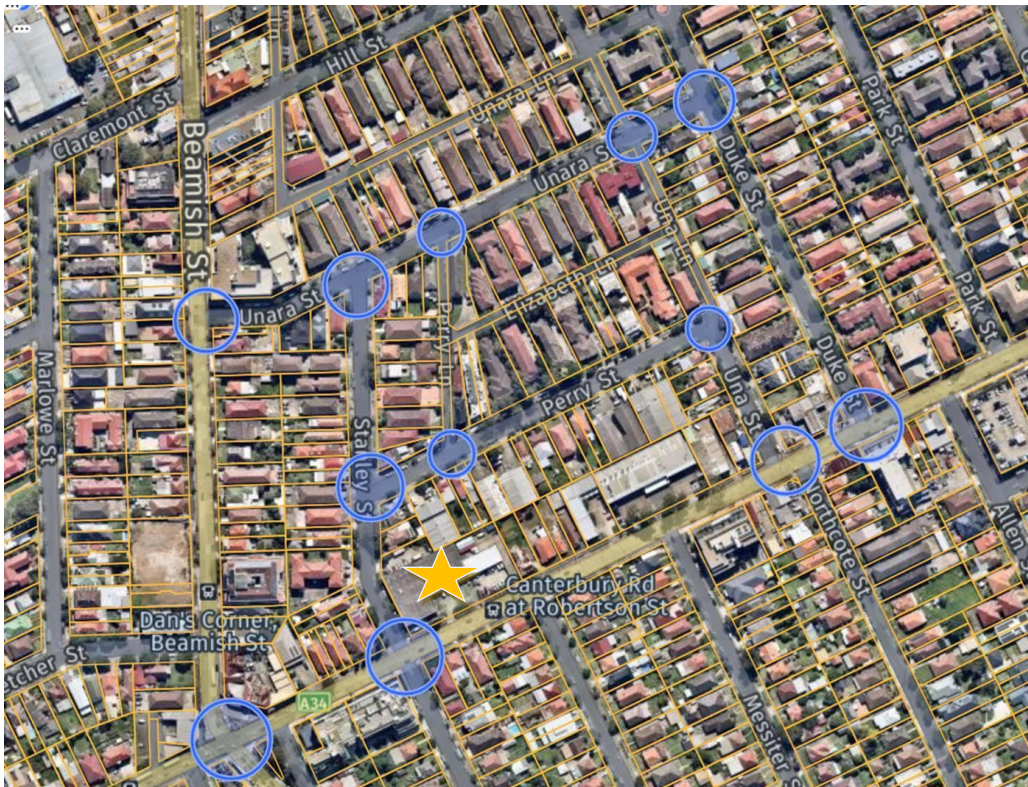
Scenario 1 would be average FSR of just over 1.8:1 across sites A-E above, resulting in a GFA of approximately 36,700m².

Scenario 2 is a sensitivity test and adopts an average FSR of approximately 2.4:1 across sites A-E above, resulting in a GFA of approximately 47,100m². This is potentially at the upper end of possible future development scenarios.

The *B6* potential future FSR, its cumulative floor area and how it relates to traffic is discussed in detail later in this report.

Existing Weekday Peak Period Traffic Conditions

An indication of the existing traffic conditions on the road network in the vicinity of the site is provided by peak period surveys undertaken as part of this planning proposal traffic study. As requested by Council’s Team Leader Traffic & Transport, the traffic surveys were undertaken at the intersections indicated in the aerial image on the following page.



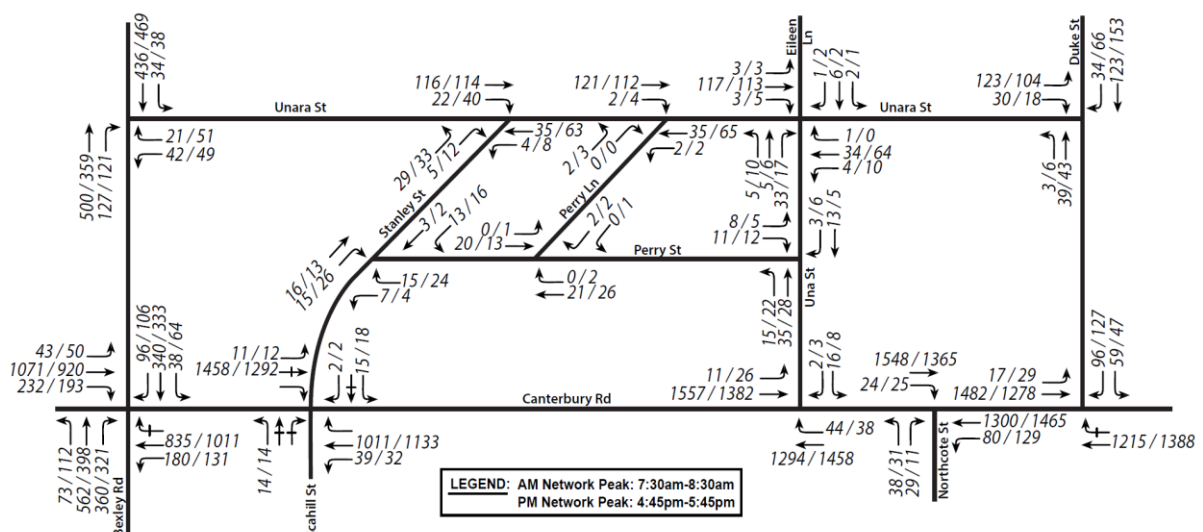
Weekday AM & PM Peak Period Study Area

The traffic surveys were undertaken on Thursday 10th June 2021, between 6:30am-9:30am & 3:30pm-6:30pm, to capture the morning and afternoon peak periods, which were determined to be:

Campsie - Weekday Road Network Peaks

- 7:30am to 8:30am
- 4:45pm to 5:45pm

The results of the weekday peak period traffic surveys are summarised in the figure below.



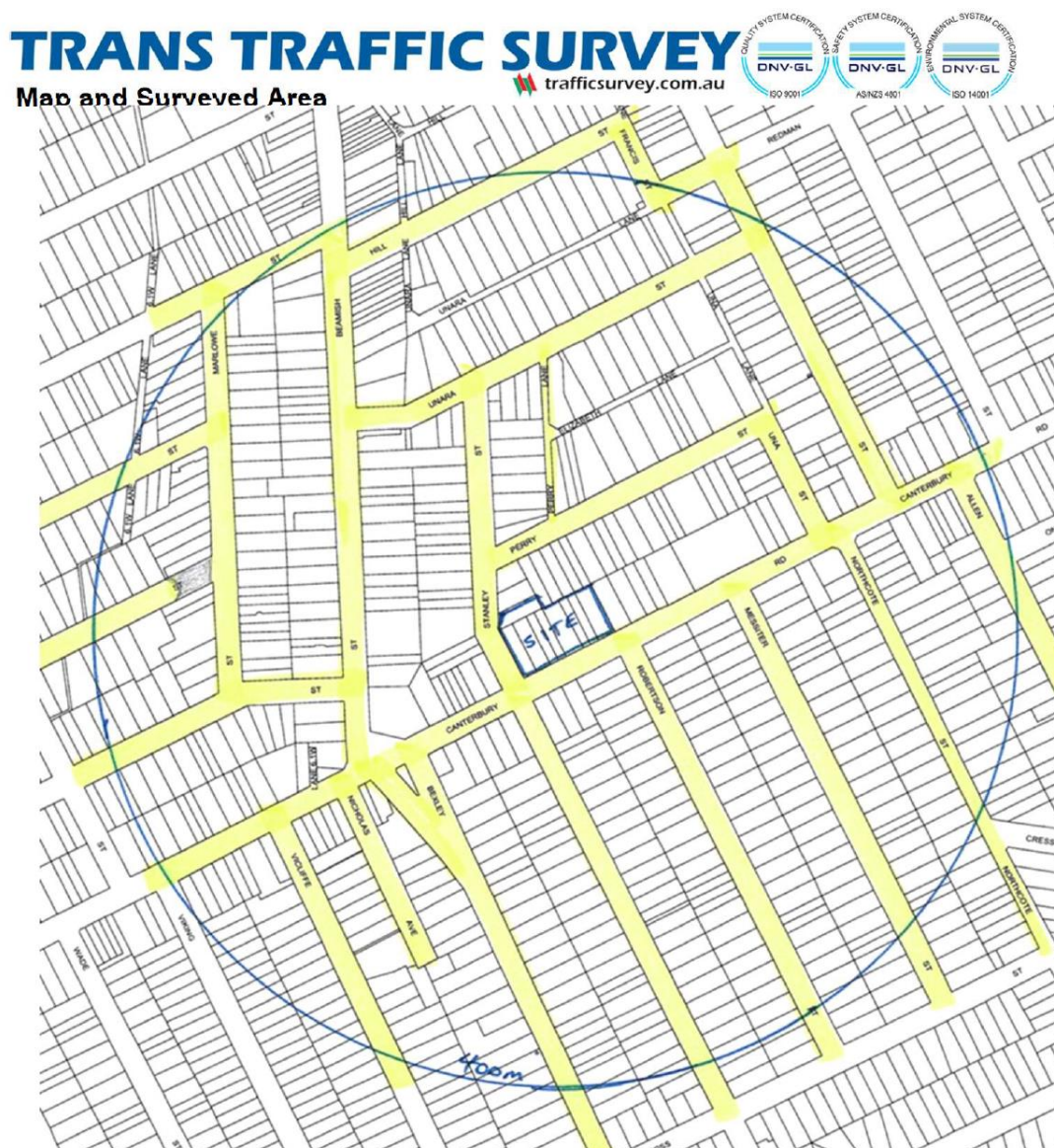
Existing On-Street Parking Conditions

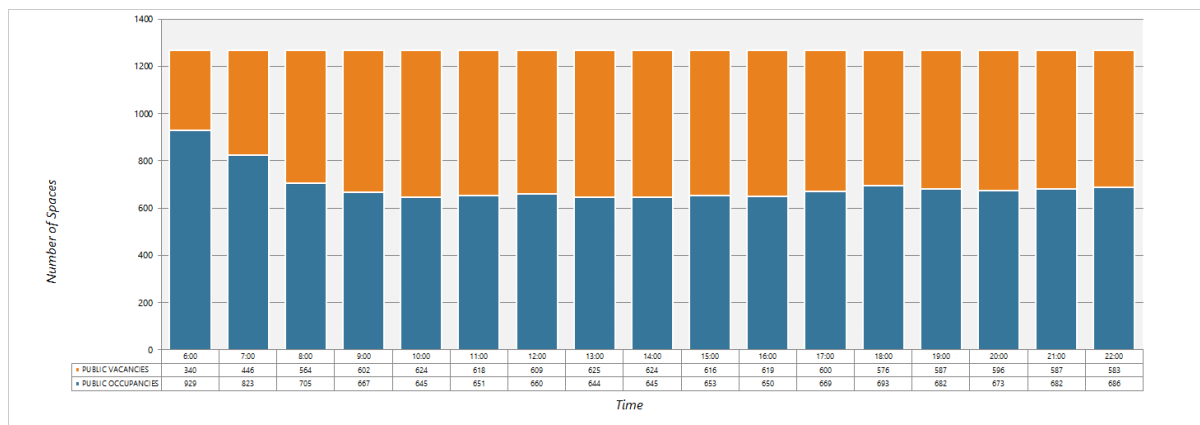
In order to gain an accurate appreciation of the general availability of car parking on the surrounding road network in the vicinity of the subject site, a detailed survey of car parking accumulation was undertaken on Thursday 10th June and Saturday 12th June, 2021, between 6am and 10pm.

As requested by Council's Team Leader Traffic & Transport, the parking surveys were undertaken along every street within a 400m radius of the subject site, as indicated by the highlighted areas in the map on the following page.

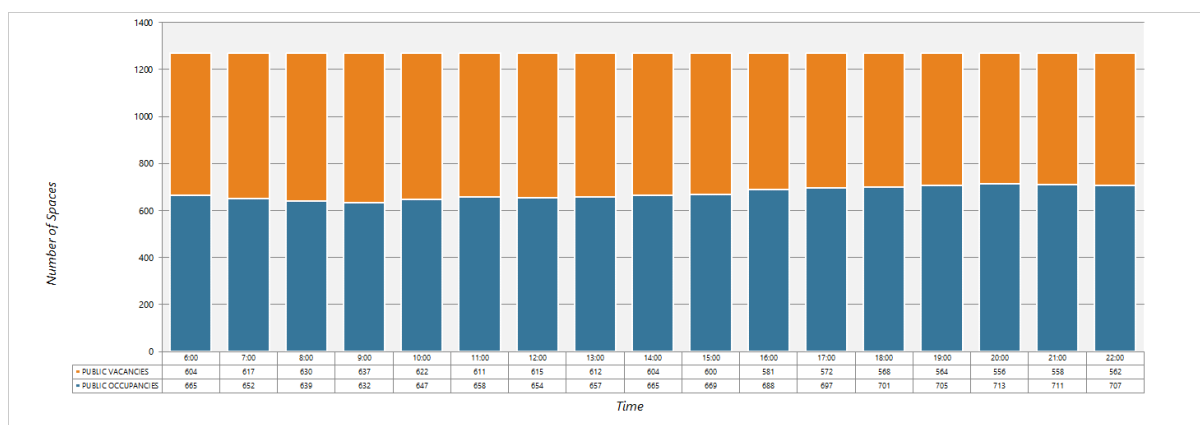
The results of the parking accumulation surveys are represented on the graphs on the following page, and summarised below, revealing that:

- the highest parking demand period during the Thursday survey day occurred at 6am, prior to residents leaving for work in the morning, when 73% of the parking spaces were occupied
- during business hours on the Thursday survey period, parking remained consistently in the order of 51% capacity, before rising slightly to 55% capacity from 6pm onwards
- the highest parking demand period during the Saturday survey day occurred from 7pm onwards, when 56% of the parking spaces were occupied, however during the day, remained steady, between 50% and 55%





Thursday Parking Accumulation Survey Results



Saturday Parking Accumulation Survey Results

Comparison Private Hospitals

In order to get a more accurate estimate of the traffic and parking characteristics of the proposed private hospital on the subject site, a comprehensive set of surveys was undertaken at three comparison private hospitals on Thursday 10th June and Saturday 12th June, 2021, between 6am and 10pm. Based on publicly accessible information, key features of the three comparison private hospitals are as follows:

- Hurstville Private Hospital
 - 37 Gloucester Road, Hurstville
 - 95 beds
 - ~6,700m² GFA
 - 900m walking distance to railway station
 - 98 on-site car parking spaces
- Lakeside Private Hospital
 - 17-19 Solent Circuit, Norwest
 - 78 beds
 - ~12,700m² GFA
 - 1km walking distance to railway station
 - 297 on-site car parking spaces
- Kareena Private Hospital
 - 86 Kareena Road, Caringbah
 - 142 beds
 - ~10,200m² GFA
 - 1.2km walking distance to railway station
 - 121 on-site car parking spaces

It is pertinent to note in this regard that the abovementioned private hospitals were chosen due to their scale and their similar walking distance to a railway station. Furthermore, the comparison sites were confirmed by Council's Team Leader Traffic & Transport as suitable and acceptable.

The methodology behind the surveys involved undertaking a spot-check of the on-site car park at the 6am start and again at the 10pm finish on both days, then counting the in and out movements throughout the entire respective days at the site access driveways. This technique is a commonly used technique which ultimately provides both traffic and parking data of the premises being surveyed.

Traffic

Based on the surveys undertaken at the 12 intersections in the vicinity of the proposed private hospital at Campsie, as specified by Council, the weekday road network peak periods are as follows:

Campsie - Weekday Road Network Peaks

- 7:30am to 8:30am
- 4:45pm to 5:45pm

During the same abovementioned road network peak periods at Campsie, the comparison hospitals generated the following traffic movements which are set out in the table below.

Peak Traffic Generation - Weekday Road Network Peak Hour Vehicle Trips						
Hospital	AM			PM		
	In	Out	Total	In	Out	Total
Hurstville Private Hospital	48	17	65	18	37	55
Lakeside Private Hospital	50	16	66	23	90	113
Kareena Private Hospital	59	32	91	22	45	67

Based on known data of the comparison hospitals, the above data was converted into peak period traffic generation rates on a *per bed* basis and a *per 100m² GFA* basis which are set out in the tables below.

Average Peak Traffic Generation - Weekday Road Network Peak Hour Vehicle Trips						
<i>Trips/Bed</i>						
Hospital	AM			PM		
	In	Out	Total	In	Out	Total
Hurstville Private Hospital	0.50	0.18	0.68	0.19	0.39	0.58
Lakeside Private Hospital	0.64	0.21	0.85	0.30	1.15	1.45
Kareena Private Hospital	0.41	0.23	0.64	0.15	0.32	0.47
AVERAGE	0.51	0.21	0.73	0.21	0.62	0.83

Average Peak Traffic Generation - Weekday Road Network Peak Hour Vehicle Trips						
<i>Trips/100m² GFA</i>						
Hospital	AM			PM		
	In	Out	Total	In	Out	Total
Hurstville Private Hospital	0.72	0.25	0.97	0.27	0.55	0.82
Lakeside Private Hospital	0.39	0.13	0.52	0.18	0.71	0.89
Kareena Private Hospital	0.58	0.31	0.89	0.22	0.44	0.66
AVERAGE	0.56	0.23	0.79	0.22	0.57	0.79

In terms of the site peak periods at the comparison hospitals, they are noted in the table below, along with the traffic volumes during those respective periods.

Weekday Peak Traffic Generation – Site Peak Hour Vehicle Trips				
Hospital	Site Peak	Volumes		
		In	Out	Total
Hurstville Private Hospital	9:45am to 10:45am	80	77	157
Lakeside Private Hospital	12:15pm to 1:15pm	85	81	166
Kareena Private Hospital	11:15am to 12:15pm	70	79	149

Based on the comparison surveys, it is evident that the weekday site peak of private hospitals typically occurs between mid-morning and early afternoon, and *not* during the morning and afternoon road network peak period.

Parking

In terms of peak parking demand at the comparison hospitals, the above data was also converted into a *per bed* parking rate and a *per 100m² GFA* parking rate which are set out in the tables below.

Average Peak Parking Demand Parking Spaces/Bed		
Hospital	Thursday	Saturday
Hurstville Private Hospital	1.1 spaces/bed	0.42 spaces/bed
Lakeside Private Hospital	3.8 spaces/bed	0.51 spaces/bed
Kareena Private Hospital	0.73 spaces/bed	0.17 spaces/bed
AVERAGE	1.88 spaces/bed	0.37 spaces/bed

Average Peak Parking Demand Parking Spaces/100m² GFA		
Hospital	Thursday	Saturday
Hurstville Private Hospital	1.59 spaces/100m ²	0.60 spaces/100m ²
Lakeside Private Hospital	2.35 spaces/100m ²	0.31 spaces/100m ²
Kareena Private Hospital	1.01 spaces/100m ²	0.24 spaces/100m ²
AVERAGE	1.65 spaces/100m²	0.38 spaces/100m²

The above traffic and parking rates associated with the comparison hospital surveys are used as the basis of the revised planning proposal assessment, which is detailed in the following pages.

Traffic Impacts

Private Hospital

In order to provide a more accurate estimate of the traffic generation potential of the proposed private hospital, the average peak traffic generation rates at the comparison hospitals were applied to the proposed hospital's 218 beds and 22,628m² of GFA, with the results summarised in the table below.

For the purposes of this assessment, the *per 100m² GFA* rate has been adopted as it is considered to be a truer reflection of traffic, given the private hospitals all include other traffic generating areas within the buildings, not just beds.

Projected Traffic Generation Potential of the Proposed Campsie Private Hospital Weekday Road Network Peak Hour Vehicle Trips						
Campsie Private Hospital	AM			PM		
	In	Out	Total	In	Out	Total
Per Bed (218 beds)	110 vph	47 vph	157 vph	46 vph	135 vph	181 vph
Per 100m ² GFA (22,628m ² GFA)	127 vph	52 vph	179 vph	50 vph	129 vph	179 vph

By way of comparison, the traffic report submitted with the planning proposal estimated the following traffic generation potential, based on generic traffic generation rates specified in the *RMS Guidelines* and the *Technical Direction*.

Projected Future Traffic Generation Potential of Planning Proposal (FSR 5:1) in Original Study		
Use	AM	PM
Private hospital (218 beds)	112 vph (67 IN/45 OUT)	138 vph (53 IN/83 OUT)
Retail (560m ²)	10 vph (8 IN/2 OUT)	8 vph (2 IN/6 OUT)
Medical (1,350m ²)	70 vph (56 IN/14 OUT)	59 vph (12 IN/47 OUT)
Office (3,000m ²)	48 vph (38 IN/10 OUT)	36 vph (7 IN/29 OUT)
TOTAL TRAFFIC GENERATION POTENTIAL	240 vph (169 IN/71 OUT)	241 vph (74 IN/165 OUT)

It is therefore evident that whilst the in/out split estimated in the original assessment was accurate (i.e. 70/30), the traffic generation potential of the proposed private hospital in the original assessment was overestimated.

Accordingly, the abovementioned traffic volumes of 179 trips during the weekday morning and afternoon commuter peak periods has been used for the basis of the traffic impact assessment and the SIDRA model.

B6 Zone Uplift

As noted in the foregoing, the site lies within the *B6* zone. In order to determine a suitable traffic generation rate to apply to the *B6* uplift, reference is made to the list of permissible uses within the zone as well as traffic generation rates published in the *RMS Guidelines* and the *Technical Direction*.

One method used to estimate traffic generation is on a *per 100m² of Site Area* basis. Based on the subject site's area of 4,414m² and the forecasted 179 peak hour vehicle trips, the proposed private hospital results in a traffic generation potential of *4.0 peak hour vehicle trips per 100m² Site Area*, noting the site's FSR of approximately 5:1.

Extensive investigation of the *B6* uplift has been undertaken as part of the private hospital planning proposal, particularly with respect to Council's future vision within the Campsie Town Centre Masterplan. After factoring in the future laneway as well as the subject site, the remainder of the *B6* block will have an area of approximately 19,500m².

Scenario 2's sensitivity test with an average FSR of approximately 2.4:1 across *B6* sites A-E, is approximately 50% of the FSR of the subject site. Accordingly, a traffic generation rate of *2.0 peak hour vehicle trips per 100m² Site Area* has been applied to the *B6* site area of 19,500m², resulting in a traffic generation potential of 390 peak hour vehicle trips. Again, this is potentially at the upper end of possible future development scenarios, as previously stated.

By way of comparison, reference is also made to the proposed private hospital's adopted traffic generation rate of *0.79 peak hour vehicle trips per 100m² GFA*. Application of this rate to the *B6* cumulative floor area of approximately 47,100m² (based on 2.4:1 FSR), results in a traffic generation potential of 372 peak hour vehicle trips.

Given Council's future vision for the *B6* zone is for similar and complimentary medical and healthcare uses, the traffic generation potential of between 372-390 peak hour vehicle trips (based on the *per 100m² Site Area* and *per 100m² GFA*) is considered to be a reasonable, but upper-end estimate of future traffic from the remainder of the *B6* zone (excluding the private hospital).

Notwithstanding, for the purposes of sensitivity testing, the abovementioned traffic generation rates have been factored up by 33%, with the resulting volumes noted in the table on the following page.

B6 Peak Traffic Generation - Weekday Road Network Peak Hour Vehicle Trips		
Traffic Generation Rate (based on equivalent Hospital rates)	B6 Area	Traffic Generation Potential
2.0 peak hour vehicle trips per 100m ² Site Area	19,500m ² Site Area	390 peak hour vehicle trips
0.79 peak hour vehicle trips per 100m ² GFA	47,100m ² GFA	372 peak hour vehicle trips
Sensitivity Traffic Generation Rate (Hospital +40%)	B6 Area	Traffic Generation Potential
2.7 peak hour vehicle trips per 100m ² Site Area	19,500m ² Site Area	533 peak hour vehicle trips
1.05 peak hour vehicle trips per 100m ² GFA	47,100m ² GFA	495 peak hour vehicle trips

Accordingly, the abovementioned traffic volumes of 533 trips during the weekday morning and afternoon commuter peak periods has been used for the basis of the B6 zone traffic impact assessment and the SIDRA model. Note, this figure represents and includes two components of sensitivity for the remainder of the *B6* zone (excluding the private hospital). The components are an upper-end FSR assumption for the possible future development scenarios for the *B6* zone, plus a 33% increase in traffic generation rates, to reflect the potential range of future uses that are permissible and could be developed in the *B6* zone.

Traffic Implications

The traffic implications of development proposals primarily concern the effects that any *additional* traffic flows may have on the operational performance of the nearby road network, primarily during the weekday morning and afternoon commuter peak periods. Those effects can be assessed using the SIDRA NETWORK 9 program which is widely used by TfNSW and many LGA's for this purpose.

In order to address the traffic impact related comments received by Council, TfNSW & Bitzios, The Transport Planning Partnership (TTPP) were engaged to complete the following tasks:

- inspect the site during the weekday AM and PM peak times to observe signal/phase times, queue lengths, driver behaviour and general surrounds
- review traffic survey data and any other relevant information
- review census method of Travel to Work data and estimate traffic distributions
- obtain future projected traffic growth plots from TfNSW (EMME) plots) to identify future traffic growth predictions in the area
- using the traffic generation rates provided by Varga Traffic Planning (VTP), prepare traffic distribution network diagrams to assess the traffic impact on the Council-specified intersections for existing base and future case scenarios
- obtain SCATS History files on the same day of the traffic surveys to establish existing signal cycle and phasing times for traffic modelling purposes. Review and assess this data against on-site observations
- undertake SIDRA network modelling at the nominated intersections to assess traffic impacts of the proposal on the surrounding road network. Calibrate results based on data provided and site observations and report modelling results accordingly
- model Opening Year and Design Horizon years
- provide recommendations and/or mitigation measures to adequately manage traffic impacts arising from the proposal, with consideration to emergency vehicles
- prepare a calibration and validation traffic modelling report to document all relevant key assumptions and information for the existing base case model

The detailed modelling report prepared by TTPP is provided under separate cover, which ultimately concludes that “*the proposed hospital development traffic has minor impacts to the road network compared to the anticipated background traffic growth and traffic generated by the B6 zone. The proposed mitigation measures would help provide performance relief along the Canterbury Road corridor during peak periods*”.

Parking Requirement & Proposed Provision

As with the peak traffic rates, the average peak parking rates at the comparison hospitals were also applied to the proposed Campsie Private Hospital’s 218 beds and 22,628m² of GFA, with the results summarised in the table below.

Average Peak Parking Demand of the Proposed Campsie Private Hospital		
Campsie Private Hospital	Thursday	Saturday
Per Bed (218 beds)	410 spaces	81 spaces
Per 100m ² GFA (22,628m ² GFA)	373 spaces	86 spaces

By way of comparison, the traffic report submitted with the planning proposal estimated the following parking requirements, based on generic parking rates specified in the RMS *Guidelines* and Council’s *CDCP 2012*.

Off-Street Parking Requirements of Planning Proposal (FSR 5:1) in Original Study		
Use	Rate	Requirement
Private hospital (218 beds)	-26.52 + 1.18B*	231 spaces
Retail (560m ²)	1 space per 40m ²	14 spaces
Medical (1,350m ²)	1 space per 40m ²	34 spaces
Office (3,000m ²)	1 space per 40m ²	75 spaces
TOTAL PARKING REQUIREMENT		354 spaces

* Typographical error in original report – formula referenced was traffic rate, not parking rate

Notwithstanding, Bitzios questioned the use of the “office” parking rate for the ancillary retail/café and Allied Health, ambulatory care and medical retail rather than the specific retail and medical centre parking rates specified in Council’s *CDCP*.

As such, a revised parking assessment is provided in the table below, based on parking rates specified in the RMS *Guidelines* and Council’s *CDCP 2012*, which yields a parking requirement of 382 parking spaces.

Off-Street Parking Requirements of Planning Proposal (FSR 5:1) in Original Study		
Use	Rate	Requirement
Private hospital (218 beds)	-26.52 + 1.18B*	231 spaces
Retail (560m ²)	1 space per 25m ²	22 spaces
Medical (1,350m ²)	1 space per 25m ²	54 spaces
Office (3,000m ²)	1 space per 40m ²	75 spaces
TOTAL PARKING REQUIREMENT		382 spaces

* Typographical error in original report – formula referenced was traffic rate, not parking rate

It is therefore evident that based on the revised parking assessment above and the surveys of the comparison private hospitals, the estimated peak parking requirement of the proposed private hospital at Campsie will be in the order of 370-410 parking spaces.

As noted in the foregoing, the concept basement layout indicates that each basement level can accommodate in the order of 78 parking spaces. Furthermore, the original traffic study submitted with the planning proposal, proposed to *constrain* the provision of on-site parking in an attempt to reduce the traffic generation potential of the hospital. This methodology was questioned by Council, TfNSW and Bitzios.

Again, based on the generic traffic generation rates specified in the *RMS Guidelines* and the *Technical Direction*, the traffic report submitted with the planning proposal estimated the hospital would generate 240 trips during the weekday road network peak periods. This was then reduced by 25% as a result of *constraining* the parking by 25%, reducing the 240 peak trips down to 180 peak trips – i.e. virtually identical to the 179 peak trips now proposed, based on the comparison hospitals' surveys.

In light of this, it is now proposed to *not* constrain the on-site parking at all, and provide 100% of the anticipated peak parking requirement on site.

Accordingly, based on 78 spaces per level in the concept design, 5 full levels of basement would yield approximately 390 parking spaces in total, and likely accommodate the peak parking demand of the proposed private hospital, with minimal “overspill” onto the surrounding local streets.

Furthermore, discussions with Council have indicated that there is currently no resident parking permit scheme in the LGA, and therefore they do not intend to impose such restrictions in the surrounding residential streets. Given it is proposed to provide 100% of the anticipated peak parking requirement on site, it is expected that such measures will not be necessary at this stage.

Service Vehicles

The proposed new private hospital is expected to be serviced by a variety of commercial vehicles up to and including 11m long rigid trucks. The concept plans indicate that the loading dock has the spatial capacity to accommodate 3-4 loading bays, including 2 large rigid truck bays. The loading dock and manoeuvring area will ultimately be designed to accommodate the swept turning path requirements of these trucks, allowing them to enter and exit the site in a forward direction at all times.

The geometric design layout of the proposed loading facilities will also ultimately be designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 2 - Off-Street Commercial Vehicle Facilities AS2890.2* in respect of overhead clearances, loading dock dimensions and service area requirements.

In terms of service vehicle movements, it is estimated there will be 10-20 service vehicle movements per day, including vans, small, medium and large rigid trucks. These will consist of general waste, medical waste and recycling waste collection, deliveries to the retail/café, offices and medical suites, tradesmen and contractors.

It is therefore considered that the provision of 3-4 on-site loading bays will comfortably accommodate the expected service vehicle demand expected to be generated by the proposed private hospital. Furthermore, the estimated 10-20 service vehicle movements per day will not result in any unacceptable implications within the proposed rear lane.

Stanley Street & Proposed Future Laneway Intersection

Bitzios noted in their peer review that the existing driveway located off Stanley Street, which is approximately where the future laneway is proposed, currently has limited sight distance to traffic approaching from the south, caused by parked vehicles and vegetation. The current situation is shown in the image below from the Bitzios peer review.

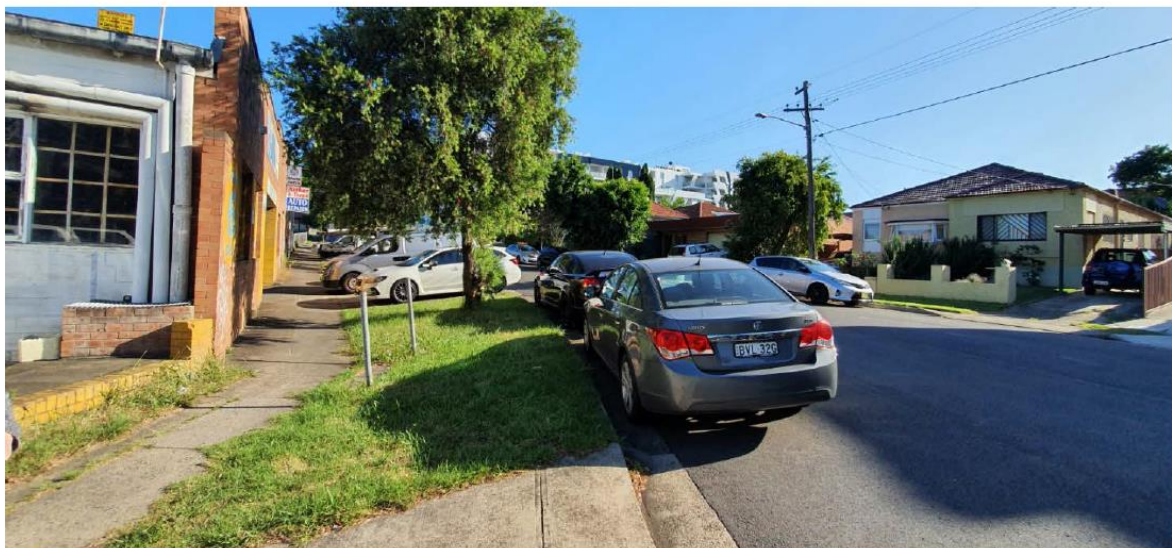


Figure 2.4: Stanley Street looking South – Sight Line Obstructions

As can be seen in the image above, one of the main contributing factors to the limited sight line are the two cars parked at 90° on the existing mechanical workshop's driveway. Legally, cars cannot park on driveways in this manner, nor can they park across driveways. If the two cars in questions were not parked as shown, the sight line to the south would be drastically improved.

In any event, it would seem that implementing No Parking restrictions along the eastern side of Stanley Street, south of the future laneway, will also improve the sight lines. A high-level review estimates there would be a loss of approximately 3 kerbside parking spaces. As indicated in the on-street parking survey results, the removal of 3 kerbside parking spaces would not result in any unacceptable implications whilst also improving safety.

Pedestrian & Bicycle Infrastructure Upgrades

Council and Bitzios note that further discussion is required with regards to pedestrian and bicycle infrastructure in the vicinity of the site. The following comments are made in that regard.

Pedestrians

As Bitzios note in their peer review, to ensure that walking is safe, convenient and attractive to development staff and visitors, consideration needs to be given to the footpath network and pedestrian infrastructure surrounding the subject site, particularly to/from Campsie railway station and town centre. Bitzios include a number of potential pedestrian upgrades, as shown in the diagram below, including:

- improvements to the pedestrian footpath on Perry Street, which shows signs of obstructions and vegetation overgrowth
- new kerb ramp pair on Stanley Street, crossing Perry Street
- upgrade of pedestrian crossing facilities along Canterbury Road at Stanley Street and Una Street. It is noted that Stanley Street currently has a pedestrian refuge
- new pedestrian crossing facilities at Beamish Street/Unara Street and Unara Street/Stanley Street



Figure 2.1: Potential Walking Improvements Map

It is considered that the upgrades measures suggested by Bitzios are reasonable and require further discussion with Council and TfNSW. Notwithstanding, it is noted that the suggested Perry Street upgrade is unlikely to be used to any significant extent by hospital staff, patients or visitors. It is therefore proposed that the Perry Street footpath upgrade works are discussed further with Council.

Cycling

Bitzios also note that nearest existing cycle routes are located some distance from the subject site, therefore the site is not considered to be currently readily accessible by bicycle, as indicated in the diagram below.



Figure 2.2: Site Context within Cycling Map

As Bitzios note, the most feasible connections to the existing cycle network would be links to the Charlotte Street/Thorncraft Parade cycle route or the Cooks River cycleway.

The most direct route to the Charlotte Street/Thorncraft Parade cycle route would be directly along Canterbury Road, however given the heavy traffic volumes and geometric constraints, this option is undesirable.

Accordingly, discussions with Council have indicated that their preference is to add an on-road cycle route to the existing network between the subject site and the Cooks River cycleway via Stanley Street – Unara Street – Duke Street – Redman Street – Wonga Street – Warrigal Street – Phillips Avenue and onto the path through Tasker Park to the Cooks River cycleway.

Generally speaking, the above local roads carry relatively low volumes of traffic whilst also having a carriageway width of approximately 12.5m.

In order to provide comparative context, the existing Charlotte Street and Thorncraft Parade on-road cycleway road markings and signposting are reproduced below.



Existing Charlotte Street On-Road Cycleway



Existing Thorncraft Parade On-Road Cycleway

Council notes that any proposed cycleway must satisfy Australian Standards and Austroads requirements, and that traffic devices to allow the safe crossing of busy roads, such as Wonga Street, Phillips Avenue and Redman Parade, should be investigated. Council also notes that the proposed design shall be submitted to Council for approval and shall be constructed at the Applicant's cost, prior to the issue of an Occupation Certificate. Given the likely very low proportion of trips to/from the hospital on this specific route via bicycle by staff (e.g. due to shift working), patients (due to medical condition) and visitors, the hospital will not materially increase demand or need for this cycleway upgrade. A proportionate contribution to the provision of this cycleway is therefore proposed to assist this delivery.

Conclusion

I trust the above and attached responses address the critical traffic, parking and transport items received on the planning proposal to date, and look forward to the proposal proceeding favourably to the Local Planning Panel.

Please do not hesitate to contact me on telephone 9904 3224 should you have any enquiries.

Yours sincerely

A handwritten signature in black ink, appearing to read 'CPalmer', with a long horizontal flourish extending to the right.

Chris Palmer
Executive Engineer B.Eng (Civil)
Varga Traffic Planning Pty Ltd