Our ref 362693/Traffic/T&P_Memo
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Your ref

City Plan Services
Suite 6.02, 120 Sussex Street
Sydney NSW 2000

18 March 2016

Attn: Mel Krzus

Dear Mel

DA 1326/2015: 11 – 15 Holborn Circuit, Gledswood Hills

This memo has been prepared in response to the email dated 21/01/2016 from Ryan Pritchard, Executive Planner of Camden Council and subsequent design changes to the proposed Health Hub development known as DA 1326/2015: 11 – 15 Holborn Circuit, Gledswood Hills.

1. Parking Requirements and Gross Floor Area (GFA)

GFA assessment of buildings has been applied in the original and current parking requirement assessment of the proposed Health Hub site, where and when it was appropriate. The adoption of non-GFA or a reduced GFA area calculation is based on the proposed uses and its operating characteristics during the Health Hub site peak. In this case, the allied health areas (private consulting rooms) and café areas are treated differently to all other uses, which are based on total GFA. Refer to the below for the approach adopted for the café (identified as a restaurant in the original report) and private consulting rooms (identified as allied health in the original report).

A - Restaurant/ Café 1 - The exclusion of the Mezzanine Area GFA from the peak parking requirement assessment.

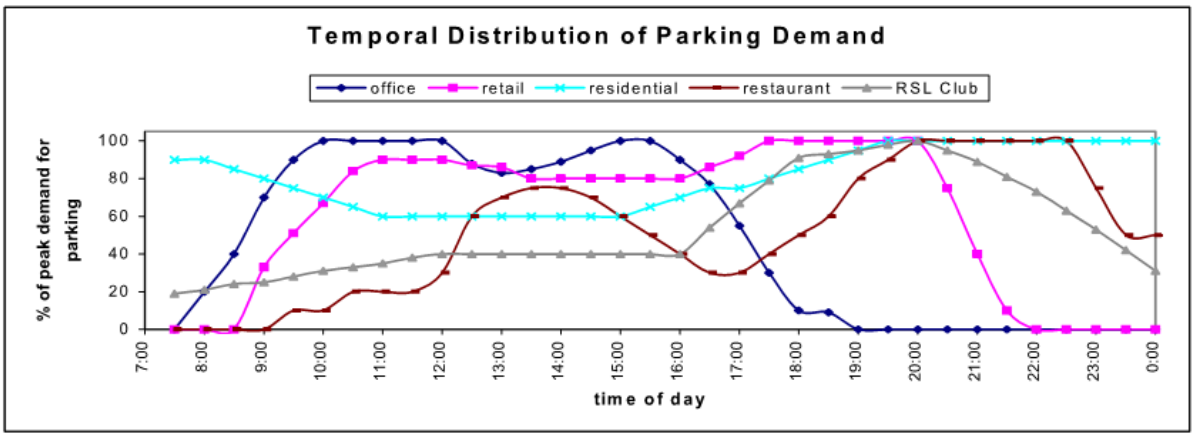
Observed operations of similar large restaurants highlighted that only certain areas of the facility will open during typical weekday business hours and that the function/ mezzanine area will typically only be required

to open on some busy evenings or weekend periods. It is anticipated that peak demand for the restaurant during weekday business hours can be accommodated within a functional space of 398m^2 (does not include the Mezzanine/ function room), which is the area adopted in the original appraisal and as a result this GFA was used to identify the proposed Health Hub site's peak parking operational needs.

Observations and appraisal of data obtained for other site uses highlights that when the restaurant is operating at its peak the remaining key areas of the health hub, such as the private consulting rooms, will either be closed or operating at a reduced capacity (say 50% of its potential capacity). This operation trend for private consulting rooms was observed to occur at established health hub practices situated in Randwick and St Leonards. This difference in peak operational patterns allows the parking provision for the selected land uses within the health hub to be better optimised through an asset sharing arrangement, and in doing so provides a more sustainable outcome in the planning for the Health Hub.

Figure 1 presents varying peak operating periods for land uses that are nominated to be situated within the proposed Health Hub site and comment 2 provides an understanding of the cumulative impact from varying peak parking demands generated from the different uses contained within the proposed Health Hub.

Figure 1 – Temporal Distribution of Parking Demand Based on Land Use



B - Allied Health – the exclusion of GFA used for Allied Health waste areas, WC and foyer/ communal space from the peak parking requirement assessment.

The parking requirements for Allied Health uses that are defined as non-ancillary or the primary/ anchor uses are directly related to the number of consulting rooms. This aligns with the DCP and is directly associated with the number of staff and patients attending the facility and not the total GFA area. Refer to response 7 for an understanding of the nominated rate used for private consulting rooms.

The consulting room component of the Allied Health areas represents over 80% of the total GFA and as a result there is no direct relationship between Allied Health areas defined as ancillary uses (representing less than 20% of Allied Health) and the total GFA. It is also noted that waste areas (linked to all Health Hub

uses), WC (linked to all Allied Health facilities) , and foyer (facilitating access to all Allied Health areas) or circulation areas don't specifically generate a vehicle trip and as a result are unlikely to have a direct relationship to parking. To account for any requirement for parking associated with ancillary Allied Health uses associated with the above non trip generating Allied Health areas an additional parking space (as a proportion it amounts to less than 50m^2) above the total identified requirement was provided in the total Health Hub parking allocation. This allocation aligns with the parking allocation requirement specified in the original report and referenced in response 2 below.

2. Parking requirements and business vs. retail uses

Land use and parking assessment table used in the original application have been refined as part of the design response process and presented in Table 1.

Table 1 – Parking Requirements Based on Land Use

Land Use	Plan Building ID	GFA (m^2) /No of Consulting Rooms)	Adjusted Parking Rates (m^2/Parking space or spaces/room)	Parking Requirement with Cluster Factor (# of parking spaces)
Retail				
Chemist*	Chemist	237	44	5.4
Bulky Goods Premises	Bulky Goods 1 & 2	402	50	8.0
Retail Premises / Shop / Kiosk**	Retail 1 - 2	154	33	4.7
Restaurant**	Café 1, Function Room***	398	45	8.8
Café**	Café 2	154	45	3.4
Commercial	Business Premises 1 & 2	155	40	3.9
Health Care				
Ancillary Uses	Allied Health	455	50	9.1
Pathology*	Allied Health	60	50	1.2
Consulting Rooms****	Allied Health	37	2.61	96.6
Total	**-**	**2015** + 37	-	**142**

* Council standard parking rate was reduced by 50% for Chemist and Pathology due to a large proportion of the customer base being ancillary to other health hub uses and as a result not generating additional vehicle trips.
** Parking rate reduced by 33% for Retail Premises, Restaurant and Café due to a proportion of the customer base being ancillary to other health hub uses and as a result not generating additional vehicle trips.
*** The function room was not included in the parking assessment as it was assumed that the operating times would be restricted to non-peak periods and as a result generate additional trips outside of peak periods.

**** Refer to comment 7 for an understanding of parking rate requirement for consulting room situated in Health Hubs.

The refined parking requirements table now nominates the proposed business uses (commercial premises), which is highlighted in orange in the table above. These nominated GFA areas adopt the Camden Council DCP nominated rates to calculate parking, which amounts to an allocation of 4 parking spaces and forms part of the parking allocation for the Health Hub.

All retail assumptions remaining similar to those presented in the original report and retail have been adjusted to reflect the current design.

3. Reduced Parking Rates for Radiology and Medical Facilities

Precinct health or industrial clustering has a direct relation with trip containment and parking requirements. This is demonstrated through the rates used for medical related uses in locations where both health industry clustering and integrated land use and transport planning has been achieved. Refer to response 7B for an understanding of parking rates applied by Councils that have established health precincts/ hubs.

The ability to coordinate patient visits and ensure that health industry efficiency targets can be achieved will help to reduce patient treatment delays and improve productivity throughout the industry. These targets are constantly being improved and are aided by both health industry clustering and advancement in technology. Observations and trends exhibited in modern day well planned health hubs indicates that instantaneous appointments can be achieved and are feasible and currently practiced in modernised Australian health clusters (http://www.melbourneradiology.com.au/fact-sheets/x-rays.html). This is demonstrated through current marketing material, which highlights that radiologist analysis images and summary of findings can be provided instantaneously to facilitate an immediate appointment. This information is provided electronically and received as encrypted reports to a provider's medical system and is supported by the current shift towards online medical records.

It is therefore concluded that the assumptions made in the original assessment are feasible, align with modern day practices and the efficiency goals of both NSW Government and private health providers in Australia. On this basis, it should be an accepted approach.

These assumptions also align with NSW Government's integrated land use and transport planning principles and sustainability objectives through the provision of well-planned areas that cluster facilities in centres, hubs and along corridors and as a result help to limit additional trip generation, offer travel choice alternatives and to manage private vehicle traffic growth across the transport network.

4. Variations explored to demonstrate compliance with DCP

The following matters were considered as part of achieving compliance.

- The initial design included loading areas within indented bays in roadside locations that facilitated efficient and safe access to areas within the health hub and the surrounding road network and managed internal and external conflict.
- To locate loading bay facilities directly off Holborn Circuit or Digitaria Drive was tested and proved unfeasible based on a number of issues including the visual impacts, the zones building height restrictions, streetscape adjustments and internal access, street driveway and surrounding land use conflicts, spatial requirements, unfavourable grades, and functional needs/economic justification.
- Designing loading facilities within the site and the need to restrict loading times during non-peak business peak periods to help to manage potential internal conflict.
- Providing additional accessible spaces in excess of the DCP to cater for the potential user groups of this type of facility.
- Providing modern day facilities for the future users of this facility through accommodating additional cycling storage facilities and end of trip shower facilities to help to promote healthy life styles with both staff and other users of the health hub.
- Providing a design with the ability to include additional parking spaces in areas reserved for future connections to the neighbouring lots.
- Designing a site that can also manage peak parking demand through an option to share parking allocation with neighbouring sites that front the site, which would help to optimise and balance parking provision and varying peak demand periods across the precinct.
- The design facilitates access by walking, cycling and public transport through its linkages, uses and design provision.

5. Approval of parking rates will have associated conditions that restrict future use unless consistent with the DA

We accept this condition associated with changes in use that may not be consistent with the principles of a health hub cluster. It is also assumed that related uses that align with health hub will follow similar modern day efficiency trends and integrated land use and transport practices that are adopted as part of this appraisal and would not generate a change in use or additional appraisal.

6. Parking space spatial provision and compliance with AS 2890.1

The attached design (refer to Appendix A) has been amended to align with the standard and provides a 600mm overhang from the kerb for each parking space, with a low landscaped area kept free from footpaths and obstacles. This arrangement prevents vehicles from impacting on footpaths and colliding with other potential obstructions.

7. Modification to design and the changes

The following aspects cover design adjustments made since the previous submission and respond to comments not included in the above email:

A - Service vehicle loading zones and access

A total of 3 loading zones have been provided internally to the site as indicated in Appendix A. These are located:

- At the rear of the restaurant in the south-east corner of the car park – designated and will be managed by the restaurant.
- In the plaza area situated in the south west corner of the site and fronts the restaurant, Allied Health and chemist (accessed via a roll-top kerb)
- Situated in the car parking area at the north eastern corner of the site adjacent to the bulky goods land uses (composed of time-restricted parking spaces)

These loading zones provide convenient locations for the restaurant, chemist and bulky goods uses, which are expected to receive infrequent deliveries. Other land uses are expected to receive small deliveries only, capable of being delivered through a small van without the need for a loading zone.

These areas are accessible by an 8.8m medium rigid service vehicle (MRV) as demonstrated by the turning path assessment presented in Appendix B. It is noted that these loading zones will not be used concurrently and the associated demand generated is infrequent. On this basis the proposed solution is deemed to be appropriate for all land uses associated with the proposed health hub development.

B – Private consulting rooms and health clusters parking rate comparison

A review of council parking requirements relating to private consulting rooms in a health hub cluster was undertaken to determine an appropriate rate to be applied to the proposed Health Hub development. The review indicated that the rates used by councils vary and depend on their situation and their relationship to other uses and their connectivity potential. The proposed health hub is based on established health precincts contained in Randwick, St Leonards and other planned and modern day practices, which have been used to determine an appropriate rate for parking. Table 2 presents the findings from the review of similar council rates with and without health hub clustering and is used to determine an appropriate rate to use for the proposed development.

Table 2 – Parking Rates Based on Consulting Rooms from Various Councils

Unit	Council						
	Randwick	**Willoughby**	**Lane Cove**	**Newcastle**	**Hornsby**	**Camden**	**Average**
Land use surrounding health hub	Low to medium density	Medium to high density/ Low density areas	Low to medium density	Low density	Low density	Low Density	
Transport	Bus	Rail and Bus	Rail and Bus	Bus	Rail and Bus	Bus	
Accounts for Health Precinct Clustering	Yes	Yes in some situations	Yes	Unlikely	Unlikely	Unlikely	
Spaces per health care professional		2.0	1.0	3.0			
Spaces per 2 other employees		1.0	1.0	1.0		1.0	
Spaces per individual consulting room	2.0		0.3		3.0	3.0	
Effective Spaces per consulting room	**2.0***	**2.3***	**1.7***	**3.3**	**3.0**	**3.3**	**2.61**

*** Councils which contain a health hub similar to what is planned for the proposed development**

The above information is based on each consulting room accommodating one health care professional, and two other employees (administration or nurse staff) required for every three health care professionals.

The findings from the review indicate that Randwick, Willoughby and Lane Cove councils contain an existing health hub that is similar to that proposed for this site, whilst Newcastle, Hornsby and Camden councils exhibit much higher rates, which probably relates to the status of planning of these types of facilities in isolated locations with limited consideration for clustering. It was found that Camden Council's parking requirement for consulting rooms was particularly high (almost twice that of Lane Cove Council), which is considered appropriate for an isolated location. However, in this circumstance the rate does not account for clustering, modern day work practices or help to manage travel.

On this basis an average council private consulting room parking rate was identified to be 2.61 spaces per consulting room, which was deemed to be appropriate for this situation and account for proposed development characteristics and current and future travel patterns for this well planned area. The parking assessment has applied this rate and limits the number of consulting rooms to 37, which will ensure parking requirements under the current design can be achieved.

Refer to Appendix C for an understanding of the current and proposed transport network that will serve the site. This includes the completion of the Gregory Hills Drive connection through Campbelltown by the end of 2016, an extensive footpath and cycle network, and the introduction of key high frequency bus service routes that operate between Campbelltown, Oran Park and Leppington. The planned release of residential and commercial land parcels within the Gregory Hills precinct is also noted to be close to completion, which will influence travel and change current travel behaviour in this region.

In addition to the above, the site also includes the following that supports site access and assists in providing a well-planned, sustainable and integrated solution:

- The proposal for 20 cycle bike spaces in the precinct, which is above that specified in the DCP and together with end of trip facilities within the Allied Health units. This supports the management of travel and on-site parking demand through encouraging travel choices and is well suited to the relatively flat surrounding areas and aligns with the NSW Government principles, the café scene theme and design intent of a health hub.
- 4 motorbike spaces that supports access by alternatives to the car and should be included in the parking requirements as excess spaces.
- The potential to use 6 temporary car park spaces in the short term, which form future connection to the neighbouring lot to the east and can be included as additional spaces under the parking requirements.
- The opportunity to use neighbouring sites as overflow in the future given the proposed uses as bulky good and entertainment precincts and their associated parking peaks.

C – Weekday, Evening and Weekend Peak Parking Demand Comparison

Land use and parking assessment tables used in the original application have been refined as part of the design response process and presented in Table 3. The assumptions applied to land use and the parking requirements for the proposed health hub is described in detail under responses 2 and 7B and the associated rates are applied below.

Table 3 – Parking Requirements Based on Land Use

Land Use	Plan Building ID	GFA (m^2) /No of Consulting Rooms)	Adjusted Parking Rates (m^2/Parking space or spaces/room)	Parking Requirement with Cluster Factor (# of parking spaces)
Retail				
Chemist*	Chemist	237	44	5.4
Bulky Goods Premises	Bulky Goods 1 & 2	402	50	8.0
Retail Premises / Shop / Kiosk**	Retail 1 - 2	154	33	4.7
Restaurant**	Café 1, Function Room***	398	45	8.8
Café**	Café 2	154	45	3.4
Commercial	Business Premises 1 & 2	155	40	3.9
Health Care				
Ancillary Uses	Allied Health	455	50	9.1
Pathology*	Allied Health	60	50	1.2
Consulting Rooms****	Allied Health	37	2.61	96.6
Total	**-**	**2015** + 37	-	**142**

Refer to response 2 and 7B for parking rate assumptions

The revised plans for the proposed Health Hub indicates that the nominated GFA allocation for private consulting rooms is 2,508m^2 or 37 consulting rooms (approximately 50% of total area), 515m^2 is allocated for Allied Health ancillary uses, 1,500m^2 has a commercial, café and retail type use, and the remaining areas within the proposed 5,207m^2 GFA are allocated for non-trip generating uses

Table 3 highlights that the peak parking requirement for the proposed Health Hub cluster is driven by vehicle trip generation linked to the private consulting rooms, which together with other the proposed health use can be accommodated and appropriately managed under the current design.

The evening and weekend peaks were also assessed to determine the parking requirements during these time periods and to ensure that the proposed parking allocation is not exceeded.

Table 4 presents the parking requirements for a typical evening peak period.

Table 4 – Parking Requirements for the Evening Peak

Land Use	Plan ID	Assumed Operating Capacity	Parking Rate (m^2/space or spaces/room)	GFA/Rooms	Parking Requirement
Retail Premises / Shop / Kiosk	Retail 1 - 2	60%	33	154	2.8
Bulky Goods Premises	Bulky Goods 1 & 2	60%	50	402	4.8
Chemist	Chemist	60%	44	237	3.2
Restaurant	Café 1	100%	30	398	13.3
Function Room	Function Room	100%	45	100	2.2
Café	Café 2	100%	30	154	5.1
Commercial	Business Premises 1 & 2	100%	40	155	3.9
Ancillary Uses	Allied Health	60%	50	449	5.4
Pathology	Allied Health	60%	50	60	0.7
Consulting Rooms	Allied Health	60%	2.61	37	57.9
Total				**2109**	**100**

Indicates a discounted rate

Table 5 presents the requirements for the weekend peak.

Table 5 – Parking Requirements for the Weekend Peak

Land Use	Plan ID	Assumed Operating Capacity	Parking Rate (m^2/space or spaces/room)	GFA/Rooms	Parking Requirement
Retail Premises / Shop / Kiosk	Retail 1 - 2	100%	33	154	4.7
Bulky Goods Premises	Bulky Goods 1 & 2	100%	50	402	8.0
Chemist	Chemist	100%	44	237	5.4
Restaurant	Café 1	100%	30	398	13.3
Function Room	Function Room	100%	45	100	2.2
Café	Café 2	100%	30	154	5.1
Commercial	Business Premises 1 & 2	100%	40	155	3.9
Ancillary Uses	Allied Health	100%	50	449	9.0
Pathology	Allied Health	100%	50	60	1.2
Consulting Rooms	Allied Health	75%	2.61	37	72.4
Total				**2109**	**126**

Indicates a discounted rate

Tables 4 and 5 indicate that the proposed parking provision within the current design of 143 parking spaces is sufficient during these other peak periods and provide an excess of 43 spaces during a typical weekday evening and 17 additional spaces during a typical weekend peak.

Based on the information contained within this memo, it is concluded that the proposed development of 11 – 15 Holborn Circuit at Gledswood Hills as a proposed Health Hub provides an ideal opportunity for clustering health land uses and with other proposed developments in this area has the potential to create a Health precinct for Sydney's south west that can align with similar models in other established parts of Sydney.

Should you require any further information, please do not hesitate to contact the undersigned.

Mott MacDonald
GORDON HUGHES
Practice Leader NSW – Transport Planning

Appendix A – Revised Plans

L10, 383 Kent Street, Sydney NSW 2000, Australia
PO Box Q1678, QVB Sydney NSW 1230, Australia
T +61 (0)2 9098 6800 **F** +61 (0)2 9098 6810 **W** www.mottmac.com/australasia

PARKING SCHEDULE

ACCESSIBLE SPACES	6
REGULAR SPACES	137
Total	143

GFA SCHEDULE

Level	Name	GFA
GROUND FLOOR	ALLIED HEALTH 3	275 m²
GROUND FLOOR	ALLIED HEALTH 4	670 m²
GROUND FLOOR	ALLIED HEALTH 5	455 m²
GROUND FLOOR	ALLIED HEALTH 6	60 m²
GROUND FLOOR	BULKY GOODS 1	200 m²
GROUND FLOOR	BULKY GOODS 2	202 m²
GROUND FLOOR	BUSINESS PREMISE 1	77 m²
GROUND FLOOR	BUSINESS PREMISE 2	78 m²
GROUND FLOOR	CAFÉ 1	398 m²
GROUND FLOOR	CAFÉ 2	154 m²
GROUND FLOOR	CHEMIST/ DISPENSARY	237 m²
GROUND FLOOR	FOYER	200 m²
GROUND FLOOR	RETAIL 1	80 m²
GROUND FLOOR	RETAIL 2	74 m²
GROUND FLOOR	WASTE STORAGE 62 BINS	66 m²
FIRST FLOOR	ALLIED HEALTH 1	678 m²
FIRST FLOOR	ALLIED HEALTH 2	885 m²
FIRST FLOOR	CAFÉ FUNCTION ROOM	100 m²
FIRST FLOOR	CIRCULATION	173 m²
FIRST FLOOR	WC	60 m²
FIRST FLOOR	WC	65 m²
FIRST FLOOR	WC	7 m²
FIRST FLOOR	WC	7 m²
Total		5202 m²

PROPOSED LOT AREA: 10,000m²

INDICATIVE TENANCY LAYOUT ONLY

PROPOSED DAYCARE CENTRE

1 GROUND FLOOR
1 : 500 @A3

NOTE:
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DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.
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ISS	DATE	PURPOSE OF ISSUE
C	09.03.16	REVISED DA SUBMISSION
B	04.03.16	FOR REVIEW
A	27.10.15	DA SUBMISSION

PLOTTED : 9/03/2016 12:36:35 PM

LEGEND:

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+RL 00.000	FINISHED SPOT OR SURFACE LEVEL
FFL 00.000	FINISHED FLOOR LEVEL
⊗ 00.000	SURVEY SPOT LEVEL
⊕ 00.000	EXISTING LEVEL

AD	ALUMINIUM DOOR FRAME	FG	FIXED GLAZING	OAC	OUTDOOR AIR CONDITIONER
ALV	ALUMINIUM LOUVRES	FW	FLOOR WASTE	RC	REINFORCED CONCRETE
AW	ALUMINIUM WINDOWS	G	GLASS	REN	RENDERED MASONRY
BA	BALUSTRADE	GD	GLASS DOOR	RW	RETAINING WALL
BD	BOLLARD	GU	GUTTER	RWH	RAINWATER HEAD
BWK	BRICKWORK	GLV	GLASS LOUVERS	RWT	RAINWATER TANK
BBK	BAGGED BRICKWORK	HWU	HOT WATER UNIT	SS	STAINLESS STEEL
CF	CONCRETE FLOOR	LB	LETTER BOX	SST	SANDSTONE
CON	CONCRETE FINISH	LP	LIGHT POLE	ST	STONE
COS	CONFIRM ON SITE	MC	METAL CLADDING	STP	STEEL PLATE
CRF	CONCRETE ROOF	PEB	PEBBLES	SWP	STORMWATER PIT
DP	DOWNPIPE	PF	PAINT FINISH	TD	TIMBER DECK
EB	ELECTRICAL BOARD	PLB	PLANTER BOX	TF	TIMBER FLOOR
EX	EXISTING	PFC	PAINTED FIBRE CEMENT	TL	TILE FLOOR
FCL	FINISHED CEILING LEVEL	PCP	PRECAST CONC. PANEL	TM	TIMBER
FFL	FINISHED FLOOR LEVEL	PV	PAVING TILE	TMS	TIMBER SHUTTERS

KEY:
Scale 1 : 500 @ A3
0 2.5m 5m 10m 20m

EXISTING LOT 810 BOUNDARY
PROPOSED FUTURE LOT BOUNDARY

ARCHITECTS NICHOLAS + ASSOCIATES
6/ 1 MARY'S PLACE, SURRY HILLS NSW 2010
T + 61 2 8353 9500
ANPLUSA.COM
NOMINATED ARCHITECT
PATRICK NICHOLAS
NSW 6672 QLD 4699 VIC18105

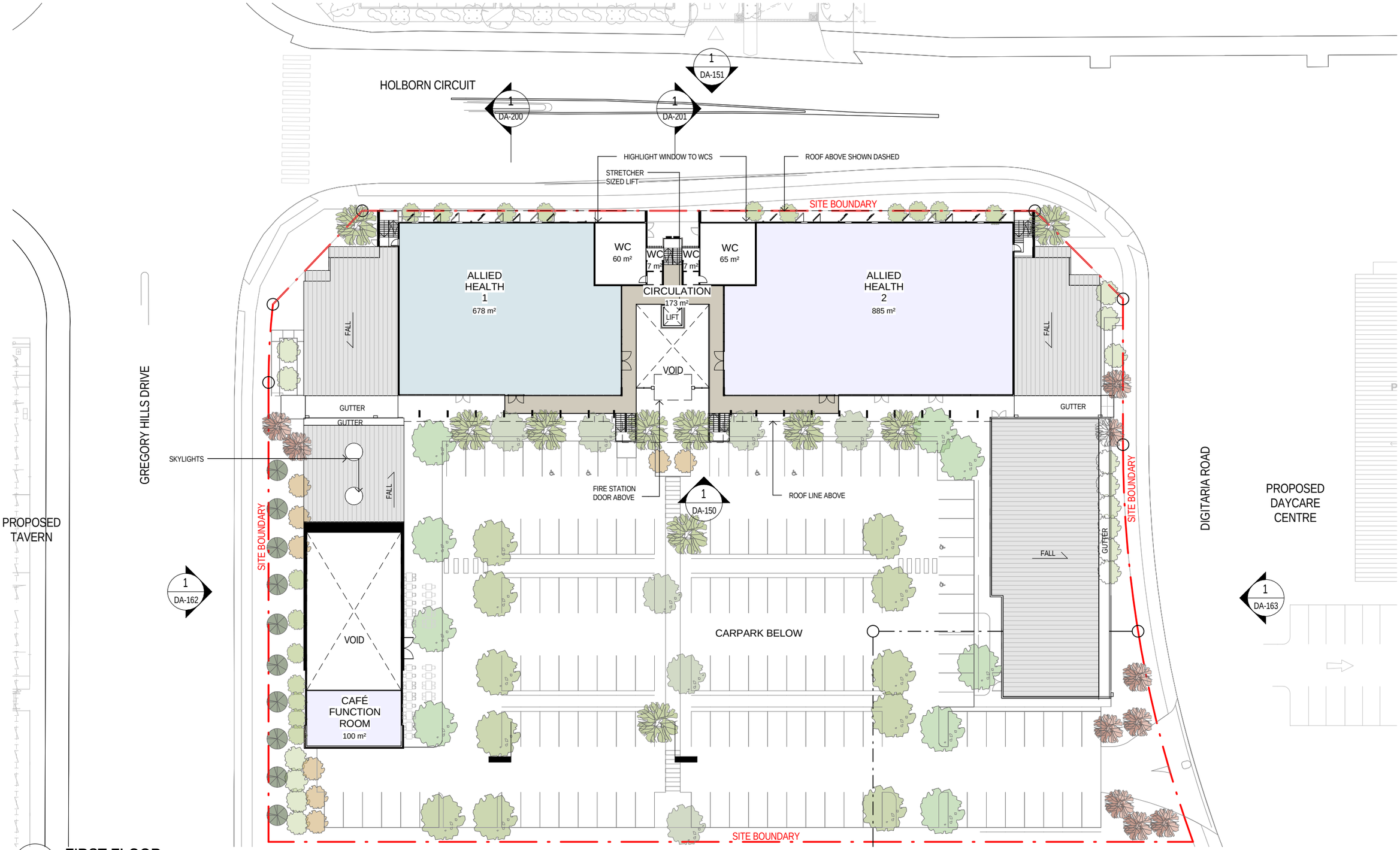
DRAWING NO: DA-010 **ISSUE NO:** C **JOB NO:** ORC1411

DEVELOPMENT APPLICATION

DRAWING TITLE:
GROUND FLOOR PLAN

PROJECT NAME:
GREGORY HILLS HEALTH HUB

CLIENT:
ORCA PARTNERS PTY. LTD.



1 FIRST FLOOR

1 : 500 @A3

NOTE:

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KEY:

Scale 1 : 500 @ A3

0 2.5m 5m 10m 20m

EXISTING LOT 810 BOUNDARY

PROPOSED FUTURE LOT BOUNDARY

ARCHITECTS NICHOLAS + ASSOCIATES

6/ 1 MARY'S PLACE, SURRY HILLS NSW 2010
T + 61 2 8353 9500
ANPLUSA.COM

NOMINATED ARCHITECT
PATRICK NICHOLAS
NSW 6672 QLD 4699 VIC18105

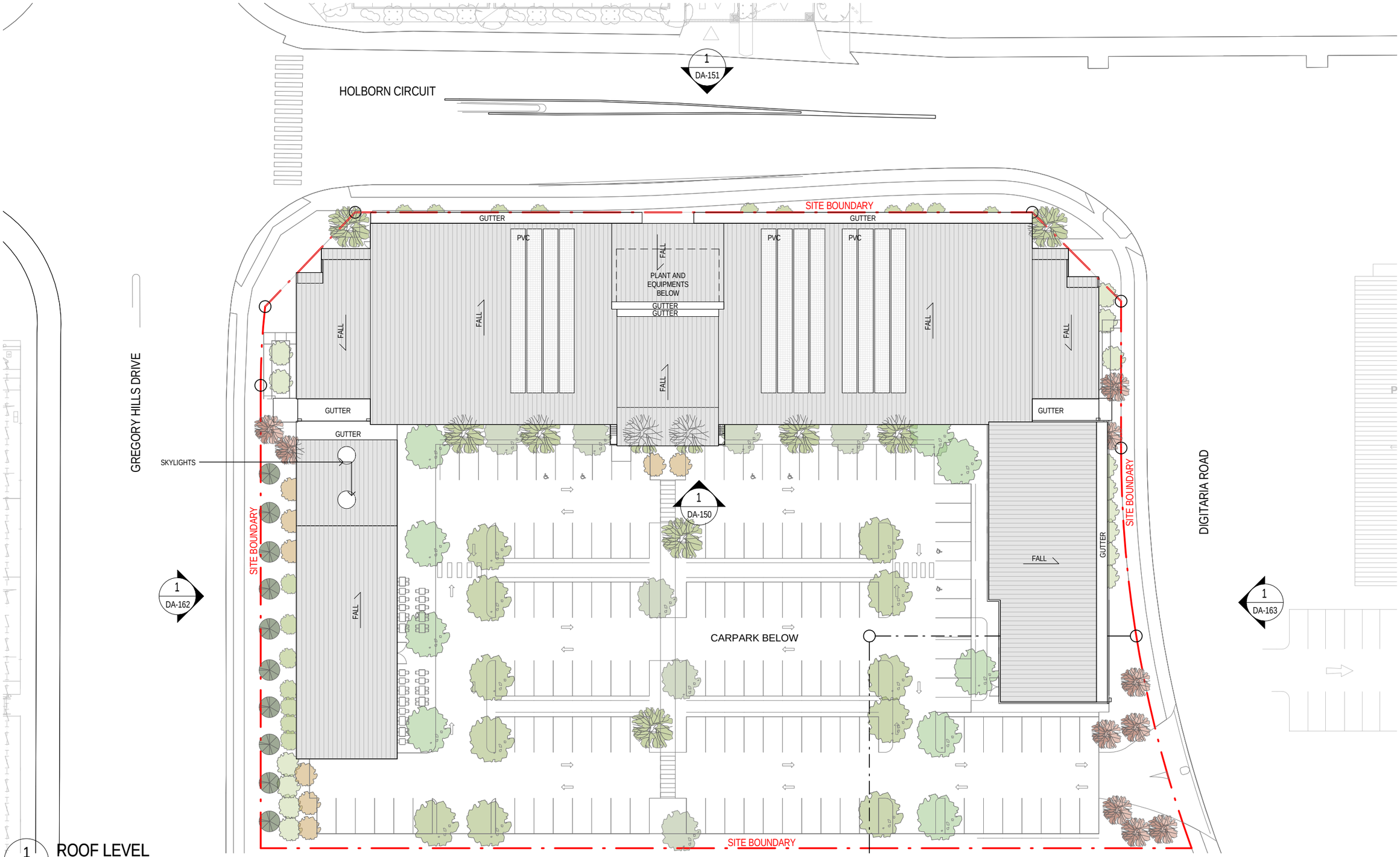
DRAWING NO: DA-011 **ISSUE NO:** C **JOB NO:** ORC1411

DEVELOPMENT APPLICATION

DRAWING TITLE:
FIRST FLOOR PLAN

PROJECT NAME:
GREGORY HILLS HEALTH HUB

CLIENT:
ORCA PARTNERS PTY. LTD.



1 ROOF LEVEL

1 : 500 @A3

NOTE:

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BA	BALUSTRADE	GD	GLASS DOOR	RW	RETAINING WALL
BD	BOLLARD	GU	GUTTER	RWH	RAINWATER HEAD
BWK	BRICKWORK	GLV	GLASS LOUVERS	RWT	RAINWATER TANK
BBK	BAGGED BRICKWORK	HWU	HOT WATER UNIT	SS	STAINLESS STEEL
CF	CONCRETE FLOOR	LB	LETTER BOX	SST	SANDSTONE
CON	CONCRETE FINISH	LP	LIGHT POLE	ST	STONE
COS	CONFIRM ON SITE	MC	METAL CLADDING	STP	STEEL PLATE
CRF	CONCRETE ROOF	PEB	PEBBLES	SWP	STORMWATER PIT
DP	DOWNPIPE	PF	PAINT FINISH	TD	TIMBER DECK
EB	ELECTRICAL BOARD	PLB	PLANTER BOX	TF	TIMBER FLOOR
EX	EXISTING	PFC	PAINTED FIBRE CEMENT	TL	TILE FLOOR
FCL	FINISHED CEILING LEVEL	PCP	PRECAST CONC. PANEL	TM	TIMBER
FFL	FINISHED FLOOR LEVEL	PV	PAVING TILE	TMS	TIMBER SHUTTERS

KEY:

Scale 1 : 500 @ A3

0 2.5m 5m 10m 20m

EXISTING LOT 810 BOUNDARY

PROPOSED FUTURE LOT BOUNDARY

ARCHITECTS
NICHOLAS +
ASSOCIATES

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NOMINATED ARCHITECT
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DRAWING NO:	ISSUE NO:	JOB NO:
DA-012	C	ORC1411

DEVELOPMENT APPLICATION

DRAWING TITLE:
ROOF PLAN

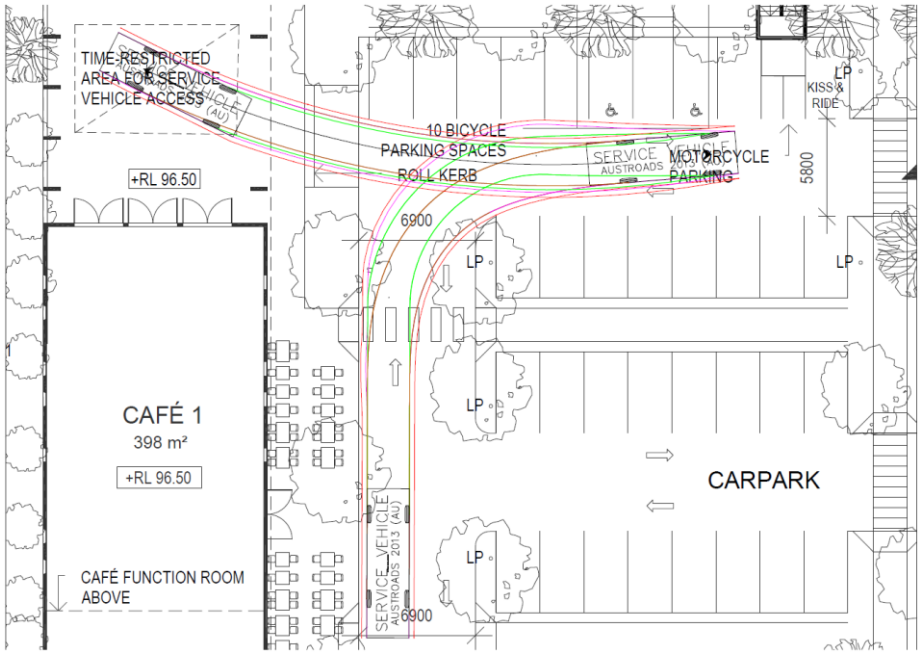
PROJECT NAME:
GREGORY HILLS HEALTH HUB

CLIENT:
ORCA PARTNERS PTY. LTD.

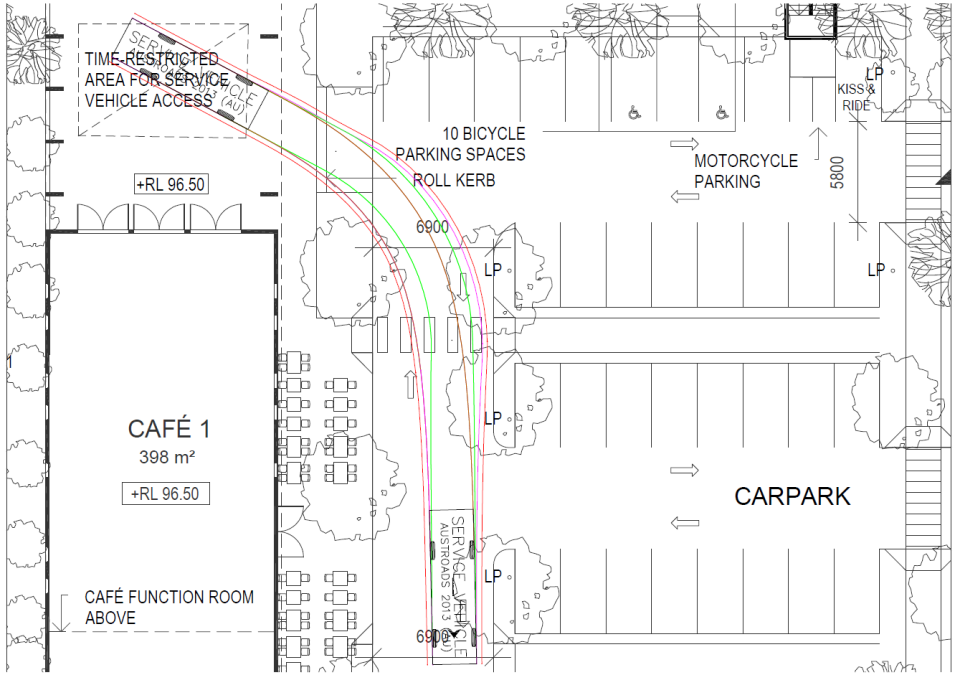
Appendix B – Turning Paths

Figure B1: Service Vehicle Path for Loading Zone at Front of Restaurant and Chemist

Entry Manoeuvre



Exit Manoeuvre



Legend:

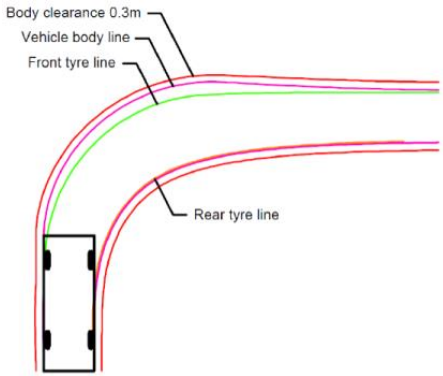
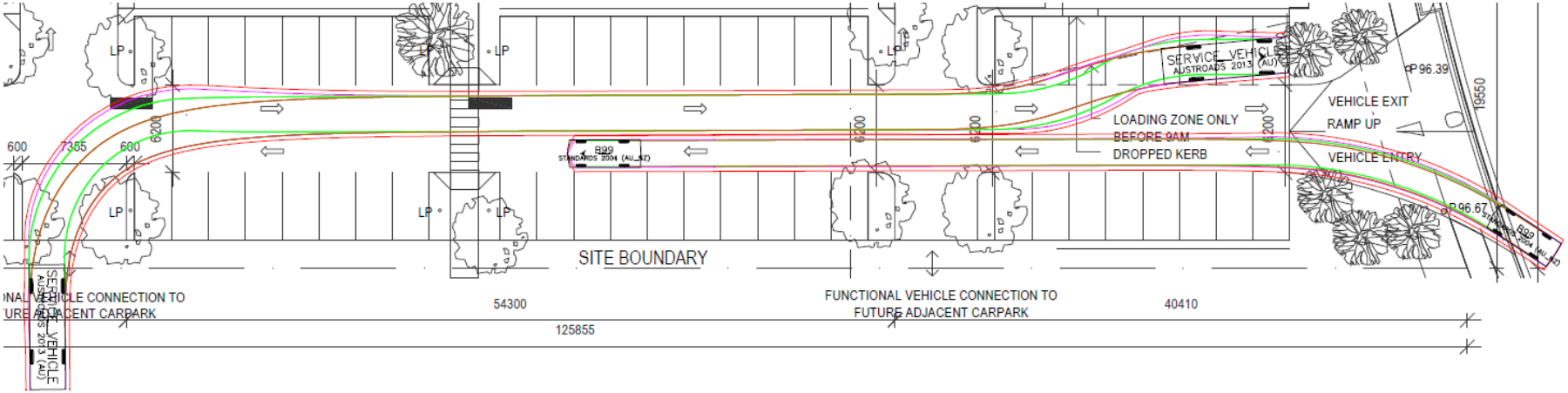


Figure B2: Service Vehicle Path for Loading Zone Adjacent to Bulky Goods Building

Entry Manoeuvre



Exit Manoeuvre

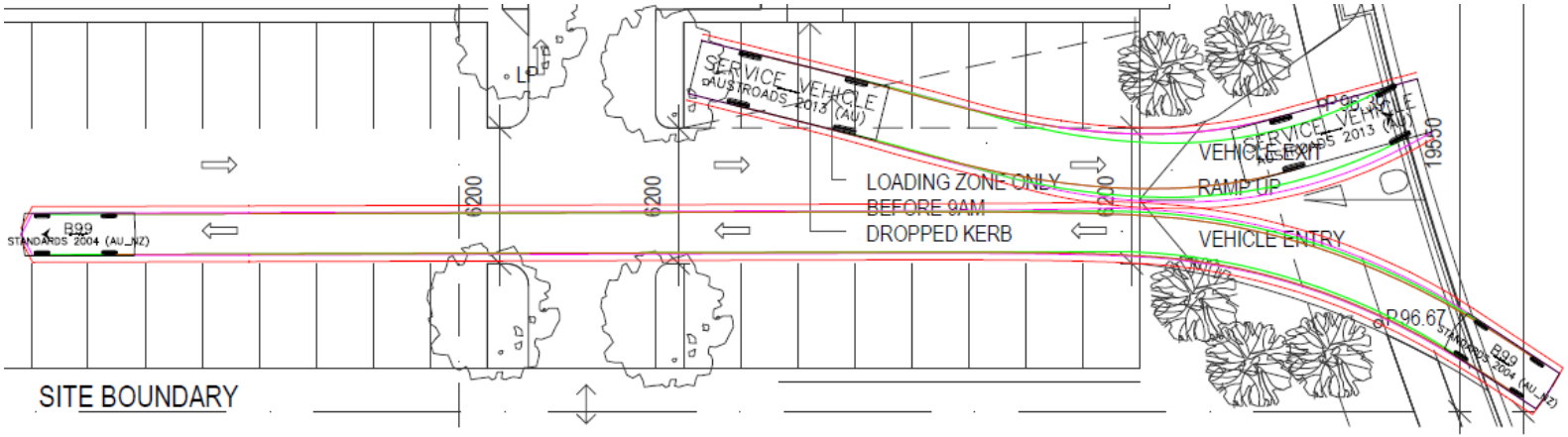


Figure B3: Service Vehicle Path for Loading Zone at BOH and Carpark Aisles

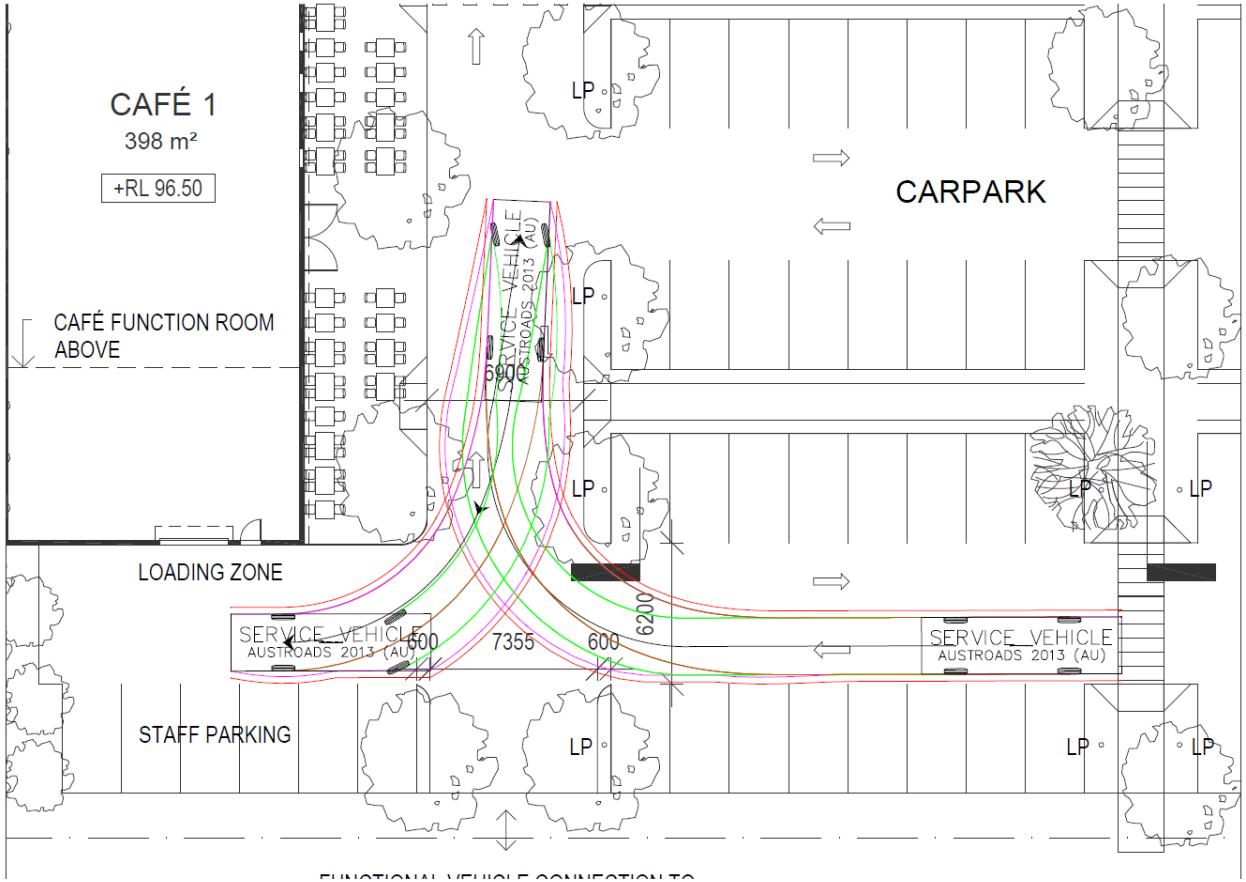
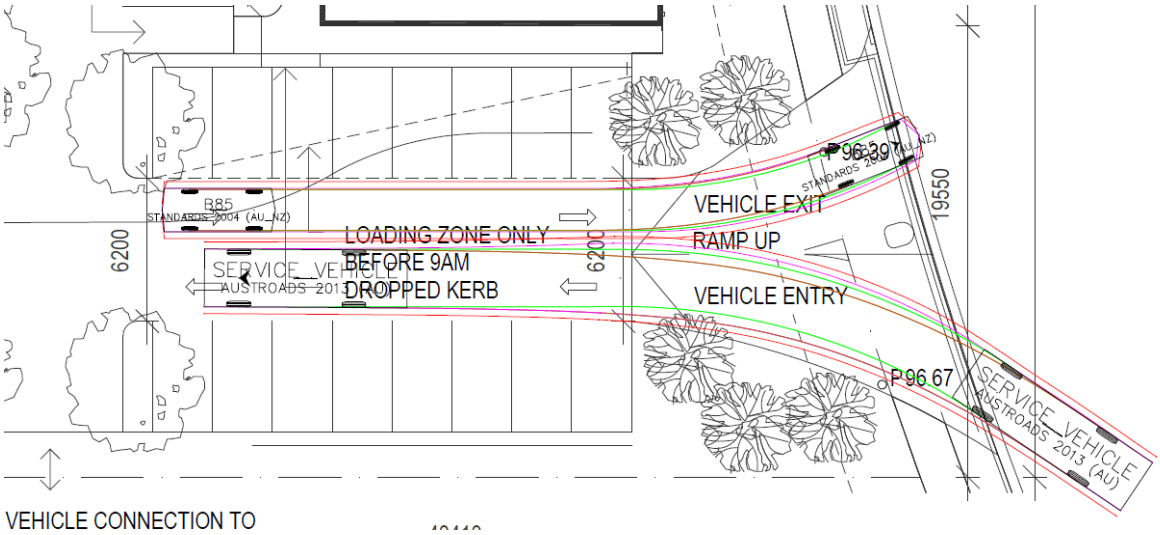
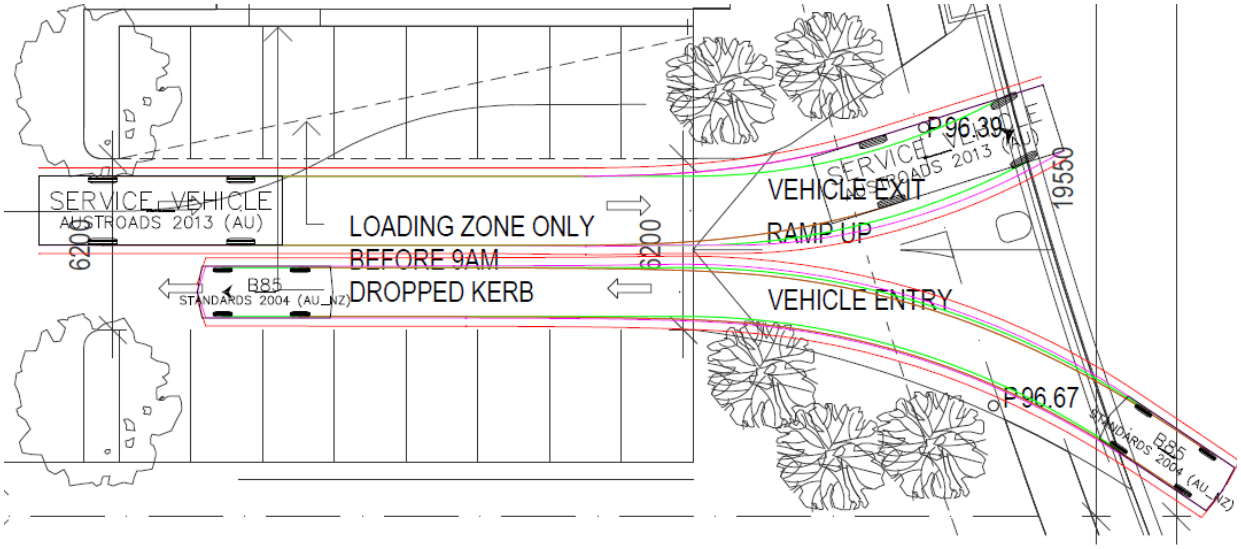


Figure B4: Service Vehicle Path for Entry and Exit of Carpark

Entry Manoeuvre



Exit Manoeuvre



Appendix C – Transport Network Integration

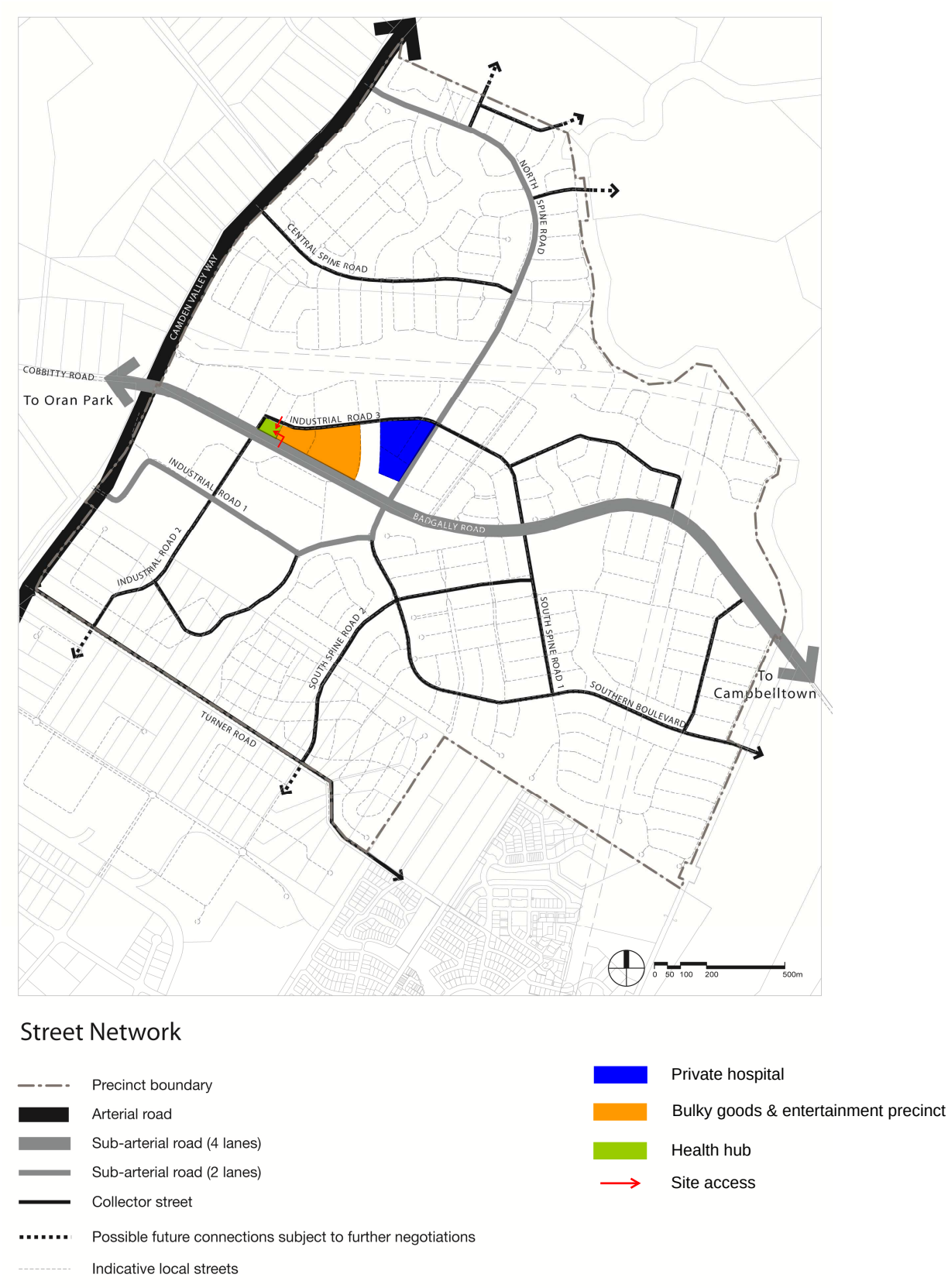


Figure 5: Street Network Plan

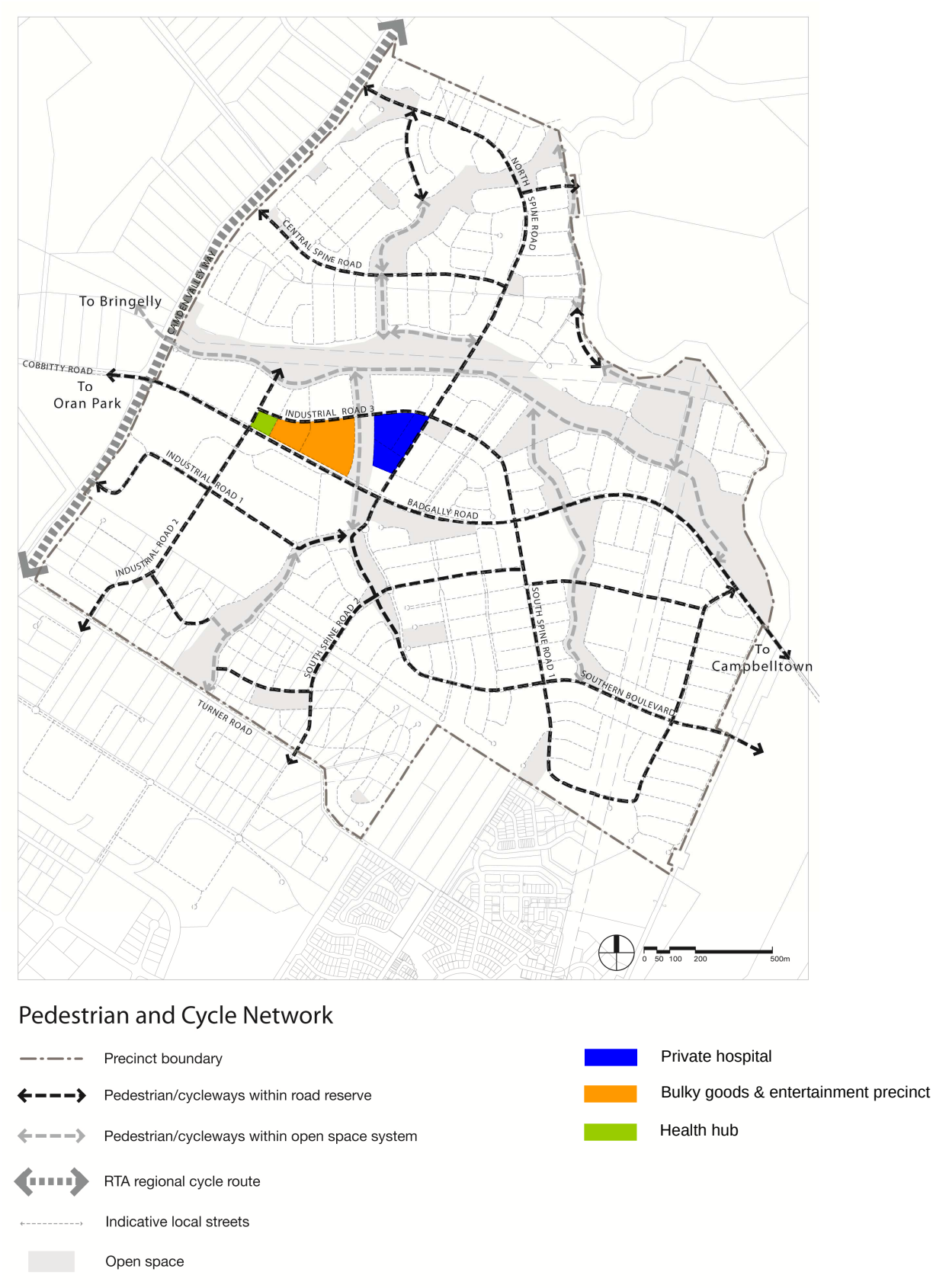
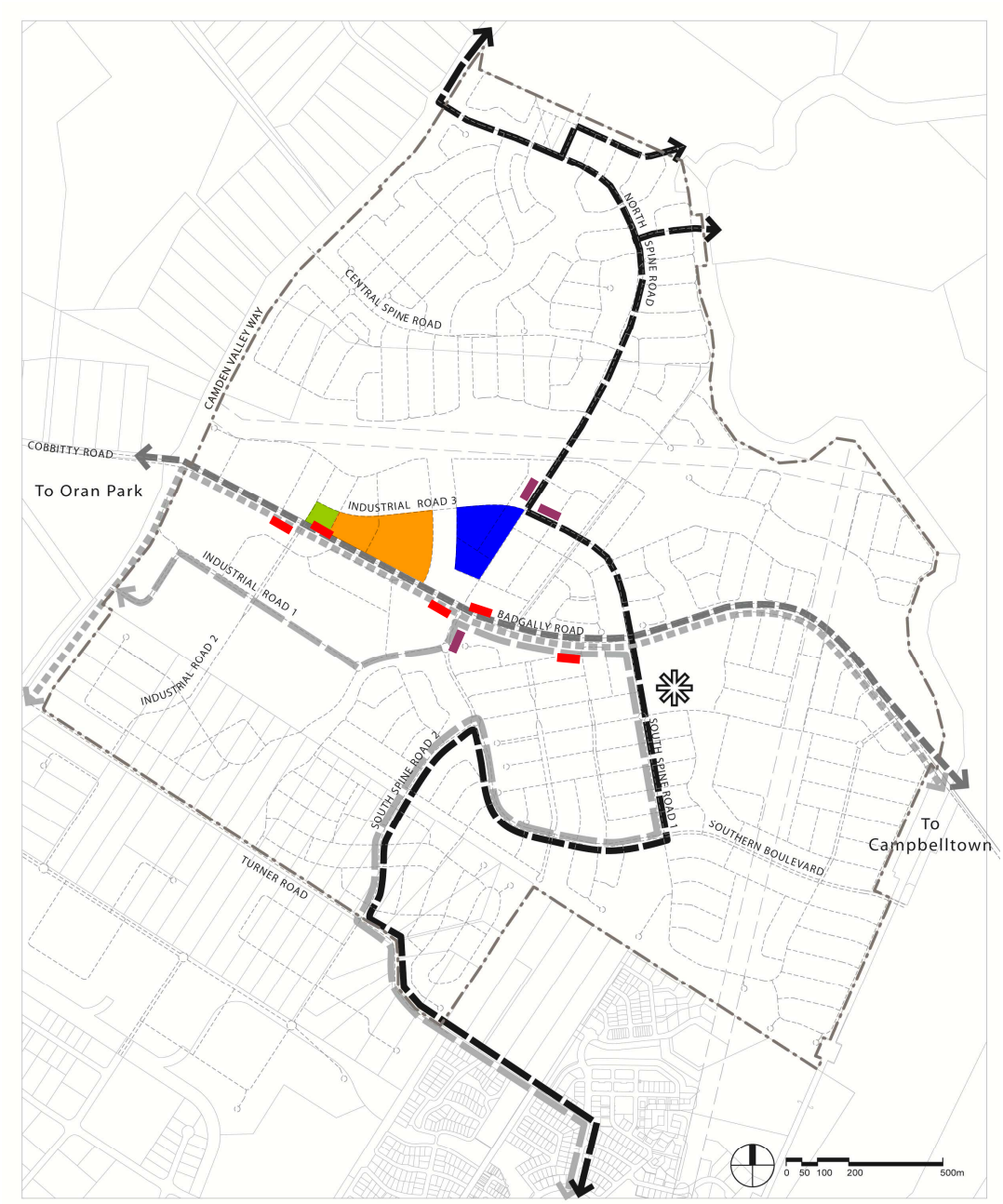


Figure 17: Pedestrian and Cycleway Network



Public Transport

- Precinct boundary
- Turner Road to Campbelltown (From Catherine Fields)
- Turner Road to Campbelltown (From Harrington Park)
- Turner Road to Campbelltown(From Narellan)
- Turner Road to Campbelltown(From Oran Park)
- Indicative local streets
- Neighbourhood Centre
- Private hospital
- Bulky goods & entertainment precinct
- Health hub
- Existing bus stop
- Indicative future bus stop

Figure 18: Public Transport Network