Appendix 3 - Transport Report

Transport Planning


# 122-130 Pyrmont Bridge Rd & 206 Parramatta Rd, Annandale Proposed Health Facility Planning Proposal

## Transport Assessment Report

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## Transport Assessment Report

Report Version: Final

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Client: MHA PBR Annandale Pty Ltd

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# 1 Introduction

This transport assessment report has been prepared as part of a planning proposal for an ear-marked key site located at 122-130 Pyrmont Bridge Road and 206 Parramatta Road in Annandale. This planning proposal for the site is consistent with the strategic objectives set out in the Greater Sydney Commission District Plans, the Camperdown-Ultimo Collaboration Area and Place Study, as well as the Camperdown Precinct within the Parramatta Road Corridor Urban Transformation Strategy.

The site is unique in that is a relatively large land holding that will allow relatively large, flexible floorplates suited to servicing world class health, education and innovation user groups.

The concept design in particular has been informed by a large health user group, who (subject to the approval of the rezoning and subsequent development application) will occupy the building, thus acting as a catalyst to realise genuine activation of the precinct. The Project intends to ultimately offer world class health, education and innovation users a place to collaborate, work, innovate and service the community.

This planning proposal seeks approval to amend the land use zone, building height and floor space ratio (FSR) controls applicable to the site consistent with the Parramatta Road Corridor Urban Transformation Strategy (PRCUTS).

The proposed building envelopes provided with the planning proposal will support a total gross floor area (GFA) of approximately 10,264m$^2$ for use as a health facility, namely a private hospital. The proposed development will be accommodated in a new 8-storey (30.9m) building tower with two basement car parking levels.

MLA Transport Planning (MLA) has been commissioned by MHA PBR Annandale Pty Ltd to prepare this transport assessment report to accompany the planning proposal.

This transport assessment report is a preliminary assessment of the indicative development yield envisaged in the subject planning proposal. This report will be updated accordingly to reflect a more defined scheme at the development application stage. The update report will also incorporate and/or address any feedback provided by the consent authorities during the planning proposal stage.

Furthermore, it is noted that Inner West Council in conjunction with the Department of Planning, Industry and Environment is currently conducting a precinct wide transport study to satisfy a requirement in PRCUTS. Council has requested for this transport assessment for the planning proposal to respond to the findings from the precinct wide transport study when it is completed in July 2021.

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 describes the planning proposal
- Chapter 4 assesses the required on-site parking based on a number of different guidelines and controls
- Chapter 5 examines the traffic generation and its impact of the planning proposal as well as suggesting travel demand measures to discourage the use of private vehicles and encourage the use of active transport modes
- Chapter 6 provides response to the traffic matters raised in the pre-planning proposal lodgement advice from Inner West Council, and
- Chapter 7 presents the conclusions of the assessment.

# 2 Existing Conditions

## 2.1 Site Description

The subject site is located at 122-130 Pyrmont Bridge Road and 206 Parramatta Road, Annandale and falls within the Inner West Council local government area. The site is irregular in shape and has a site area of approximately 2,621m$^2$. It consists of three parcels of land with street frontages to Parramatta Road, Pyrmont Bridge Road, Mathieson Street and Cahill Street.

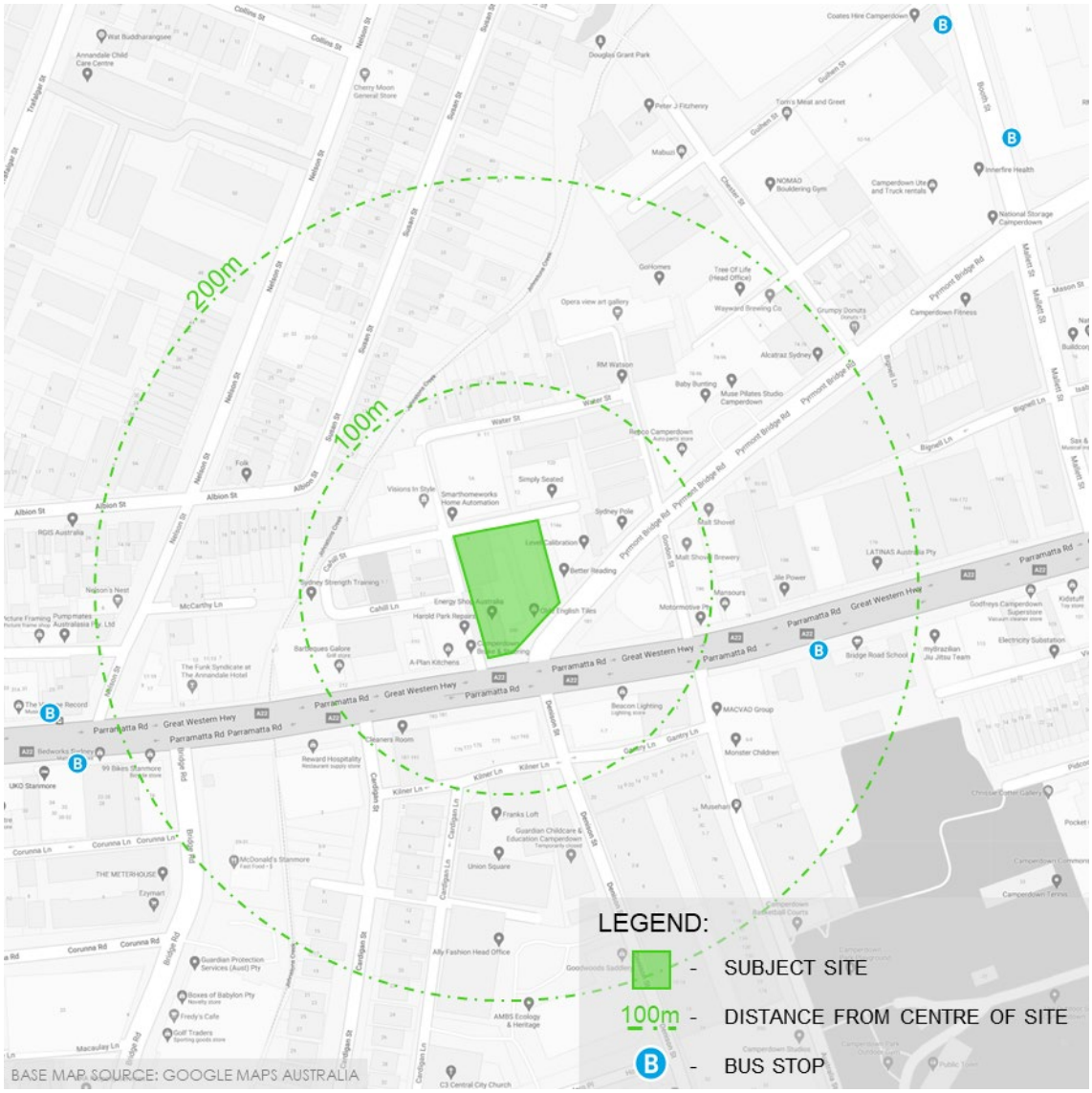
The site is currently occupied by several industrial use buildings accommodating several businesses including a tile retailer, a heater/cooling appliance shop and a bookstore.

One of the sites includes an open-air car park with nine car parking spaces for customers.

Land uses immediately surrounding the site are generally industrial in nature as well as retail shops fronting on directly to Parramatta Road. In addition to the industrial uses, multi-unit and attached dwelling housing are located on Mathieson Street and Water Street with some detached housing located further away from the Parramatta Road and Pyrmont Bridge Road frontages. On the other side of Parramatta Road opposite the subject site are several contemporary residential flat buildings.

The site location is shown in Figure 2.1.

**Figure 2.1: Site Locality Plan**




## 2.2 Road Network

The road network in the vicinity of the subject site includes Parramatta Road (Great Western Highway), Pyrmont Bridge Road, Mathieson Street, Cahill Street, Water Street and Gordon Street. Below is a description of the local road network.

### 2.2.1 Parramatta Road (Great Western Highway)

Parramatta Road is a classified State Road under the administration of Transport for NSW (TfNSW). It is a major east-west arterial road traversing through a vast area across Sydney. It is the most eastern section of the Great Western Highway. It serves a key strategic function in the local road hierarchy by connecting the local areas in western and inner west of Sydney to Sydney CBD via Broadway and George Street.

Parramatta Road in the vicinity of the subject is configured as a six-lane, two-way divided road. The kerbside lanes on both sides of the road operate as a bus lane during weekday morning and evening peak periods. The majority of the intersections along Parramatta Road are controlled by traffic signals with restricted turning movements including the intersection at Pyrmont Road where the right turn movement from Parramatta Road into Pyrmont Bridge Road is prohibited.

Parramatta Road has a sign posted speed limit of 60km/hr.

### 2.2.2 Pyrmont Bridge Road

Pyrmont Bridge Road is a classified road with TfNSW as the road authority. It is configured as a four lane, two-way road. It is aligned generally in an east-west direction. It connects Parramatta Road at its western end to the Western Distributor at its eastern end near the Sydney CBD.

Clearway restriction applies on both sides of the road during the weekday morning and evening peak periods between Parramatta Road and Booth Street. East of Booth Street, the clearway restriction applies in the eastbound direction during the morning peak period and in the westbound direction during the evening peak period. Outside of the peak periods, the kerbside lanes on both sides of the road permits one-hour parking.

In the vicinity of the site, Pyrmont Bridge Road is sign posted with a 40km/hr Local Traffic Area speed limit.

### 2.2.3 Local Streets

In the immediate vicinity of the subject site there are a number of local streets. These include Mathieson Street, Cahill Street, Water Street and Gordon Street. The road authority for these local streets is Inner West Council. These local streets provide access to abutting properties.

The local streets are generally configured as two-way roads with a carriageway width (kerb to kerb) of approximately 6.0m providing for two-way traffic flows.

Kerbside parking within these streets is limited to one side of the street where a mixture of unrestricted kerbside parking and 2- hour parking is permitted, while the opposite side is signed with "NO PARKING" restriction. It is also noted that for most of its length, Cahill Street is signed as "NO PAKING" on both sides of the road. The entire length of Gordon Street is signed with either "NO STOPPING" and/or "NO PARKING" parking restrictions.

Cahill Street in front of the subject site is a cul-de-sac road.

These local streets are located within a 50km/hr speed limit area.

## 2.3 Public Transport

The subject site can be accessed by regular scheduled bus services operated by Transit Systems. The nearest bus stops to the subject site are those located on Parramatta Road within 350m walking distance on either side of Pyrmont Bridge Road. Additional bus stops are located on Booth Street which is approximately 500m walking distance from the site.

Table 2.1 shows the frequency of the bus services in the area.

**Table 2.1: Available Bus Services**

| Route No. | Route Description | Bus Stop Location | Weekday Peak Period Frequency |
|---|---|---|---|
| 413 | Campsie to Central Pitt St | Parramatta Rd | 20-30 Minutes |
| 440 | Bondi Junction to Rozelle | Parramatta Rd | 10 Minutes |
| 470 | Lilyfield to City Martin Place | Booth St | 15-20 Minutes |
| 480 | Strathfield to Central Pitt St via Homebush Rd | Parramatta Rd | 45 Minutes |
| 483 | Strathfield to Central Pitt St via South Strathfield | Parramatta Rd | 20-40 Minutes |

Figure 2.2 shows a map of the existing available bus services in the vicinity of the subject site.

**Figure 2.2: Bus Network**


*Source: TfNSW*

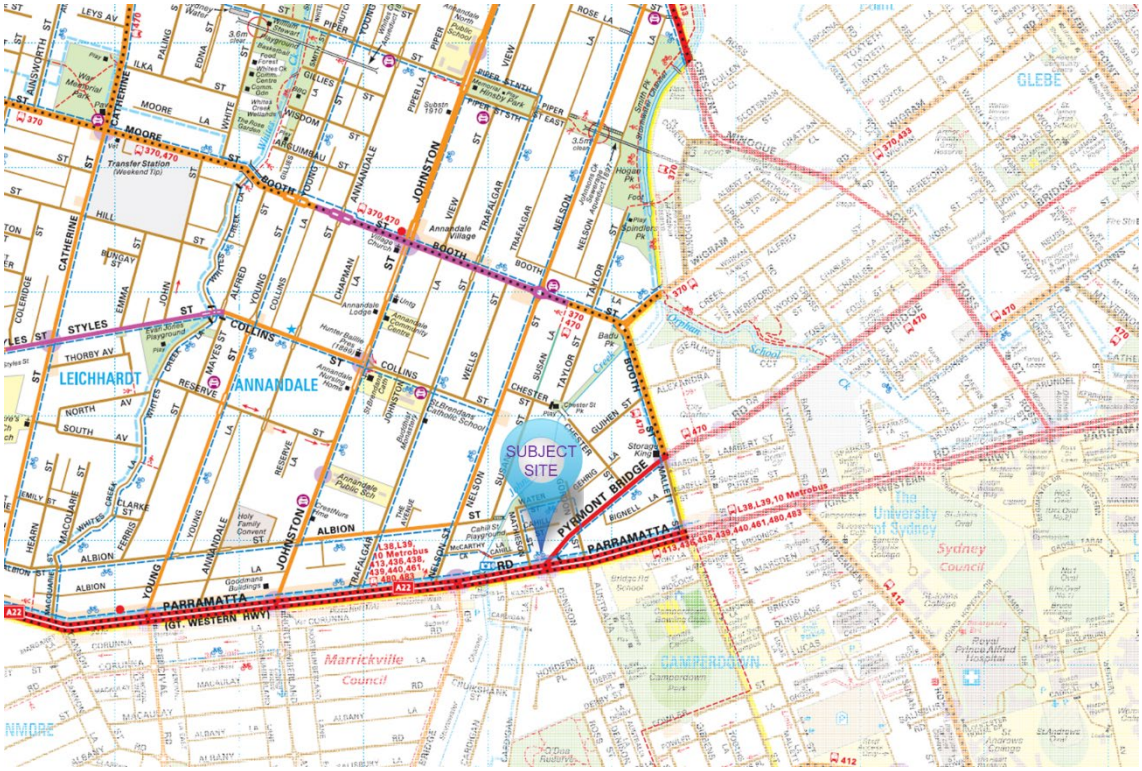
The bus services provide access into the City as well as other suburbs and suburban railway stations across Sydney which interchange with other modes of public transport to provide access to a wider range of destinations around Sydney.

## 2.4 Pedestrian and Cycle Network

In the immediate vicinity of the site, well-established pedestrian infrastructures are provided. Fully formed pedestrian paths are provided on all roads near the vicinity of the site of variable widths – they vary in width from 0.5m to 2m.

The available cycle routes in the vicinity of the site are shown in Figure 2.3.

**Figure 2.3: Cycle Network**




*Source: https://www.innerwest.nsw.gov.au/explore/parks-sport-and-recreation/walking-and-cycling/walking-and-cycling-routes*

## 2.5 Traffic Flows

Weekday peak period intersection turning movement counts have been conducted at the following nearby intersections:

- Parramatta Road with Mathieson Street, and
- • Parramatta Road with Pyrmont Bridge Road.

The intersection counts were conducted on Thursday 3rd June 2021 during the morning peak period from 7:00am to 9:00am and the evening peak period from 4:00pm to 6:00pm.

Table 2.2 presents a summary of the intersection turning movement counts.

**Table 2.2: Intersection Turning Movement Count Summary**

| Location | Morning Peak Hour | | | Evening Peak Hour | | |
|---|---|---|---|---|---|---|
| | NB/EB | SB/WB | Two-way | NB/EB | SB/WB | Two-way |
| Parramatta Rd, West of Mathieson St | 2,706 | 1,496 | 4,202 | 1,580 | 2,363 | 3,943 |
| Parramatta Rd, East of Pyrmont Bridge Rd | 2,244 | 1,221 | 3,465 | 1,235 | 1,871 | 3,106 |
| Mathieson St, North of Parramatta Rd | 15 | 3 | 18 | 4 | 5, | 9 |
| Pyrmont Bridge Rd, North of Parramatta Rd | 482 | 332 | 814 | 376 | 587 | 963 |

The summary of the intersection turning movement counts presented in Table 2.2 indicates that Parramatta Road carried some 4,202 two-way vehicles per hour (vph) during the morning peak hour and 3,943 vph during the evening peak hour. Peak direction along Parramatta Road occurred in the eastbound direction during the morning peak period, and switched to the westbound direction during the evening peak period.

Mathieson Street carried some 18 vph during the busiest peak period.

Pyrmont Bridge Road carried some 814 vph and 963 vph during the morning and evening peak periods, respectively.

The traffic surveys also revealed the peak hours for all intersections commenced at 7:45am and 4:30pm for the morning and evening peak periods, respectively.

## 2.6 Parramatta Road Corridor Urban Transformation Strategy (PRCUTS)

The subject site is located within the Camperdown Precinct – one of eight precincts in PRCUTS. The precinct has been earmarked to prioritise biotechnology and employment uses to support the growth of nearby institutions including the University of Sydney and Royal Prince Alfred Hospital.

The transport study prepared as part of the PRCUTS investigation includes intersection modelling of the Parramatta Road corridor within the Camperdown Precinct.

The modelling results indicates that the key strategic intersections along Parramatta Road will operate with level of service (LoS) C or better in the future. In relation to the Pyrmont Bridge Road intersection, the modelling indicates that this intersection would have an overall LoS B operation in the future.

Although, it indicated that there will be significant delays to the traffic to/from the side streets on both sides of Parramatta Road as priority has been focused on ensuring the efficiency of through traffic along Parramatta Road to maintain east-west coordination, the future overall intersection performance remains acceptable. It identified the Bridge Road and Pyrmont Bride Road approaches at their respective intersection with Parramatta Road as being constrained in the future.

The Pyrmont Bridge Road intersection has been identified as likely to require to be upgraded with a pedestrian crossing on the western approach. Further, the PRCUTS transport study also identified that completion of the WestConnex Project will provide additional opportunities to permit the reprioritisation of the traffic signals at this and other intersections along Parramatta Road. The reprioritisation of the traffic signals will better facilitate traffic movements across Parramatta Road as well as improving access into the Camperdown Precinct as well as accommodating the additional pedestrian crossing on the western approach.

# 3 Planning Proposal

## 3.1 Indicative Proposed Development Mix

The planning proposal seeks approval to amend the existing relevant planning controls in the Leichhardt Local Environmental Plan 2013 (LEP 2013) applicable to the subject site to be consistent with those envisaged in the PRCUTS.

The proposed changes in this planning proposal are presented in Table 3.1.

**Table 3.1: Proposed Amendments to Planning Control**

| Planning Controls | Existing (LEP 2013) | Proposed (PRCUTS) |
|---|---|---|
| Floor Space Ratio, FSR | 1.0:1 | 4.0:1 |
| Land Use Zone | IN2 Light Industrial | B5 Business Development |
| Building Height | Current LEP has no maximum building height | 32m (8 Storeys) |

The planning proposal envisages providing a generally part 7/part 8-storey building with a proposed maximum building of 30.9m containing approximately 10,264m$^2$ GFA to accommodate a proposed health facility, namely a private hospital.

The proposed private hospital would include the following uses:

- ancillary retail uses including café and pharmacy (Ground Floor)
- surgery rooms (Level 1)
- dental/radiology/ultrasound/pathology rooms (Level 2)
- rehab units (Levels 3 to 6), and
- consulting suites (Level 7).

The proposed development as envisaged in the planning proposal includes a 2-level basement car park with access from Cahill Street. A drop off area with three indented car parking spaces is also proposed on Mathieson Street. The drop off area is proposed to be located on land within the subject site.

The proposed development also includes an on-site loading bay and an ambulance bay with access directly off Cahill Street.

The concept design of the proposed building has been informed by a major health provider who will be occupying the proposed development subject to obtaining the

relevant planning and development approvals (including this planning proposal) from the relevant consent authorities.

Following the approval of the planning proposal, a detailed development application for the proposed building will be submitted to Council for approval, which will confirm the details of the proposed development.

For traffic analytical purposes, this transport assessment relates to a proposed private hospital comprising:

- 120 x hospital beds, and
- 170 staff (maximum number staff on site during the main day shift).

The above development yield is for traffic analytical purposes and may be subject to further amendments during the detailed design stage, however it is not expected that it would vary to the point that it would affect the findings of this assessment. The development will be confirmed in a detailed development application at a later date.

## 3.2 Proposed Road Widenings

At present, Mathieson Street has a road width of approximately 6.1m (kerb face to kerb face), while Cahill Street has a road width of approximately 5.7m. As noted previously both of these streets cater for two-way traffic flows with a parking lane on one side of the road.

This planning proposal includes elements associated with the widening of both Mathieson Street and Cahill Road using land from the subject site. Mathieson Street is proposed to have its road width increased from 6.1m to 9.4m. Similarly, the road width on Cahill Street is proposed to be increased from 5.7m to 7.6m. In both cases, the existing kerbside parking lane is also proposed to be retained. The proposed road widening will permit independent two-way traffic flows on both Mathieson Street and Cahill Street in the future.

## 3.3 Proposed Vehicle Access

The proposed development will include a 2-level basement car park to be accessed from Cahill Street. The proposed vehicular access is proposed to be located in a similar location to the current access of the existing use.

The access will permit independent two-way movements into the basement car park via a two-lane, two-way straight ramp.

The vehicle access will be designed in accordance with the design requirements set out in the relevant Australian Standard, namely AS2890.1:2004.

## 3.4 Proposed Loading Provision

All servicing needs of the subject proposed development is proposed to occur within the subject site. To facilitate this, the proposed development will include an on-site loading dock facility. All servicing requirements of the proposed development will be conducted on site within the proposed loading dock facility e.g. waste collection, deliveries of medical provisions.

The loading dock includes provision for one Australian Standard 8.8m long medium rigid vehicle (MRV). In addition, it is proposed to provide a truck turntable to allow services vehicles to enter and exit the site in a forward direction.

The service vehicle access and the loading bay will be designed in accordance with Australian Standard, AS2890.2:2018.

In addition to the above truck loading bay, additional service vehicle bays for van and utility type vehicles would be provided. The number of these type of service vehicle bay will be determined during the detailed design stage. These service vehicle bays are likely to be located within the basement car parking levels.

The service vehicle bays will be designed to comply with the design requirements set out in the Australian Standard.

## 3.5 Proposed Ambulance Bay

The proposed development includes an ambulance bay. The ambulance bay will be designed to meet the requirements of Ambulance NSW. It will have dimensions of 4.2m wide by 7.0m long with a stretcher area of 4.2m wide by 5.5m long.

The access for the ambulance is also located on Cahill Street.

## 3.6 Car Park Design

The detailed design of the car park will be carried out at the development application stage. However, it is proposed that the car park and associated elements such as car parking space dimensions, circulation aisles and ramp would be designed in accordance with the relevant Australian Standard for car parking facilities, namely AS2890.1: 2004 and AS2890.6:2009.

It is proposed to design the proposed car park to comply with a Class 3 car park facility as specified in the Australian Standard. The Australian Standard indicates that Class 3 car parking facility can be provided for hospitals and medical centres. Class 3 car parking spaces are required to have dimensions 2.5m wide by 5.4m long with an aisle width of 5.8m.

Accessible car parking spaces will also be required. These will be designed in accordance with AS2890.6:2009. The designated accessible car spaces and associated shared areas will have dimensions of 2.4m wide by 5.4m long.

## 3.7 Pedestrian and Bicycle Access/Facilities

It is noted that PRCUTS include plans illustrating proposed pedestrian link along the Parramatta Road and Pyrmont Bridge Road frontages as well as a bicycle path along the Mathieson Street frontage of the subject site.

The Project Team has considered these requirements and accordingly incorporate these into the concept plans. As noted previously, both Mathieson Street and Cahill Street are proposed to be widened with the proposed building set back to accommodate these requirements.

# 4 Parking Assessment

## 4.1 Car Parking Requirements

Car parking requirements for the proposed development has been assessed against the relevant Inner West Council's development control plan applicable to the subject, that is Section C1.11 Parking in Part C of the Leichhardt Development Control Plan 2013 (DCP).

In addition, applicable parking rates from the PRCUTS and TfNSW's relevant guidelines have been consulted to provide further guidance on parking requirements for private hospitals.

The parking requirement assessment from the DCP and other guidelines are discussed below.

### 4.1.1 Leichhardt Development Control Plan

The DCP does not include parking rates for a specific hospital use. The closest land use to a private hospital development in the DCP is health consulting room. The DCP stipulates the following parking rates:

- minimum parking requirement – 2 spaces per 3 consulting rooms, and
- maximum parking requirement – 2 parking spaces for every consulting room.

The parking assessment is presented in Table 4.1.

**Table 4.1: DCP Car Parking Requirement**

| No. of Consulting Rooms | Minimum | | Maximum | |
|---|---|---|---|---|
| | Parking Rate | Required No. of Spaces | Parking Rate | Required No. of Spaces |
| 27 | 2.0 Spaces per 3 Consulting Rooms | 18 | 2.0 Spaces per Consulting Room | 54 |

According to the DCP, the proposed health facility with 27 consulting rooms has a minimum parking requirement of 18 car parking spaces with a maximum permissible parking of 54 car parking spaces.

### 4.1.2 PRCUTS

The PRCUTS also does not have stipulate parking rates for a hospital use. For commercial use, it stipulates a maximum parking requirement rate of one space per 150m² GFA. The PRCUTS parking assessment is presented in Table 4.2.

**Table 4.2: PRCUTS Car Parking Requirement**

| Proposed Floor Area | Maximum Parking Rate | Maximum Required Parking |
|---|---|---|
| 10,264m² GFA | 1.0 Space per 150m² | 68 |

Based on PRCUTS requirements, the proposed development has a maximum permissible parking of 68 car parking spaces. It is noted that the PRCUTS parking requirement is for a general commercial use and is therefore not suitable for health use.

### 4.1.3 TfNSW Guidelines

TfNSW's *Guide to Traffic Generating Developments, 2002* includes parking rate for private hospitals. The guideline suggests peak parking accumulation (PPA) can be estimated as follows:

- PPA = -19.56 + 0.85B + 0.27ASDS
  where the number of beds (B) and the average staff per weekday shift (ASDS) are known, or
- PPA = -26.52 + 1.18B
  where only the number of beds is known.

It is noted that the 2002 guideline was first published in the mid-1990s and the data in that guideline is somewhat dated. TfNSW has been undertaking fresh data collection and is in the process of updating the guideline.

In the interim, TfNSW has issued a working draft update of the 2002 guideline for discussion – *Draft Guide to Transport Impact Assessments March 2018 Version 5.1*. The draft guideline states that for private hospitals in urban area with close proximity to transit similar to the subject proposed hospital, the applicable parking demand rates are as follows:

- 0.7 to 1.2 car parking spaces per staff, or
- 3.0 to 5.0 car parking spaces per bed.

The parking requirements from TfNSW's guidelines are summarised in Table 4.3.

**Table 4.3: PRCUTS Car Parking Requirement**

| TfNSW Guidelines | Parking Rates | Parking Requirement |
|---|---|---|
| 2002 Guideline | -19.56 + 0.85B + 0.27ASDS, or<br>-26.52 + 1.18B | 128, or<br>115 |
| Working Draft Guideline | 0.7 to 1.2 car parking spaces per staff, or<br>3.0 to 5.0 car parking spaces per bed | 119 to 204, or<br>360 to 850 |

From the above, the TfNSW guidelines require a proposed private hospital with 170 staff and 120 beds is required to provide a minimum 115 car parking spaces with a maximum of 850 car parking spaces.

It is noted that the parking requirement arising from the working draft guideline based on the number of beds i.e. 360 to 850 car parking spaces are considered to be excessive. These levels of parking would be more commensurate to a large regional hospital than a private hospital envisaged in this planning proposal.

In addition, provision of car parking at these high levels is not consistent with the transport objectives set out in PRCUTS i.e. "*encourage travel behaviour change to discourage car use and support more sustainable travel choices such as public and active transport*" and "*parking across the Corridor should be delivered and designed to transition future communities to low car dependency*".

### 4.1.4 Car Parking Requirement Summary

Table 4.4 summarises the parking requirements from the various guidelines and control for a proposed health facility accommodating 120 beds with 170 staff.

**Table 4.4: Car Parking Requirement Summary**

| Source | Minimum Parking Requirements | Maximum Parking Requirements |
|---|---|---|
| DCP | 18 | 54 |
| PRCUTS | - | 68 |
| TfNSW (2002 Guideline) | 115/128 | - |
| TfNSW (Draft Guideline) | 119/360 | 204/850 |

## 4.2 Adequacy of Car Parking Spaces

At this stage, the concept plans that have been developed thus far indicates that the proposed development with 2-level basement car park can accommodate parking for up to 100 vehicles.

As noted previously, the concept design contained in this planning proposal has been informed by a large health user group. They are generally supportive of the concept design includes the proposed car parking provision of 100 car parking spaces.

It is recommended for the majority of the proposed on-site car parking spaces be allocated to visitors with a small number of car parking spaces allocated to staff. In addition, it is also recommended that a parking fee be charged to use the car park.

## 4.3 Accessible Parking

In relation to accessible parking requirement for hospitals, the DCP requires:

- non-outpatient area – 1 space per 100 car parking spaces
- non-patient area – 1 space per 50 car parking spaces.

On this basis, the DCP requires the proposed development with 100 car parking spaces to provide up to two accessible car parking spaces.

It is proposed to comply with this requirement. In addition, the Project team will consider the objectives of Council's Inclusion Action Plan in the design of the building as a whole as well as into the planning and arrangement of accessible car parking. Further details will be provided during the DA stage.

## 4.4 Bicycle Parking

The DCP requires the following bicycle parking provisions for professional consulting rooms:

- staff – 1 space per 10 staff
- visitors – 1 space per 200 sqm GFA

The proposed hospital as envisaged in the planning proposed will be required to provide 17 Class 2 bicycle parking spaces and 51 Class 3 bicycle parking spaces.

Bicycle parking will be provided to comply with the above DCP requirements and will be designed to comply with design requirements set out in AS2890.3:2015. Further details will be provided during the DA stage.

## 4.5 Motorcycle Parking

For motorcycle parking, the DCP requires:

- one motorcycle parking space for the first 10 car parking spaces provided plus
- five per cent of the required vehicle parking thereafter.

On this basis, a total of six motorcycle parking spaces is required.

It is proposed to comply with the above requirement. Further details will be provided during the DA stage.

## 4.6 Service and Delivery Vehicle Parking

In relation to service and delivery loading facility, the DCP refers to the current TfNSW traffic generation guideline which is the *Guide to Traffic Generating Developments, 2002*. The guideline does not have any specific requirement for a hospital use. However, it indicates developments with "Other Uses" to provide service and delivery vehicle parking based on a rate of one space per 2,000m$^2$.

On this basis, the proposed health facility with a floor area of approximately 10,264m$^2$ is required to provide five loading bays.

The concept plans indicate a service vehicle loading bay for trucks up to an Australian Standard 8.8m long vehicle. In addition, the remaining four service vehicle bays will be provided in the basement car park. These four service vehicle bays in the basement will be designed to accommodate van and utility type vehicles i.e. Australian Standard B99 vehicles. Further details will be provided during the DA stage.

## 4.7 Car Park Layout Design

At this stage concept plans of the basement car park have only been developed to the point required to confirm the number of car parking spaces that can be achieved. In this case, concept design indicates approximately 100 car parking spaces can be accommodated.

At any rate and as noted previously, the basement car park will be designed to comply with the Australian Standard for car parking facilities, namely AS2890.1:2004 and AS2890.6:2009. It is further noted that the proposed car parking spaces will be provided as Australian Standard Class 3 car parking spaces.

## 4.8 Swept Path Analysis

Swept path analysis of the proposed accesses on Cahill Street has been conducted. Swept path analysis at the car park access has been conducted using an Australian Standard B99 vehicle as the design vehicle, while the loading dock access is based on an Australian Standard 8.8m medium rigid vehicle. In addition, access into the ambulance bay has also been assessed based on NSW Ambulance 6.5m vehicle. The swept path analysis indicates that access into the car park, loading dock and ambulance is satisfactory. The swept path diagrams are provided in Appendix A.

# 5 Transport Assessment

## 5.1 Traffic Generation

The traffic generation of the proposed development has been estimated based on rates provided in TfNSW traffic generation guidelines, namely *Guide to Traffic Generating Developments, 2002* and its update *Draft Guide to Transport Impact Assessments March 2018 Version 5.1*.

TfNSW's *Guide to Traffic Generating Developments, 2002* suggests peak hour vehicle trips for private hospitals (where the number of beds and staff) are known can be estimated as follows:

- Peak Vehicle Trips (PVT) = -14.69 + 0.69 B + 0.31 ASDS
- Morning Commuter Peak Hour (MVT) = -10.21 + 0.47 B + 0.06 ASDS
- Evening Commuter Peak Hour (EVT) = -2.84 + 0.25 B + 0.40 ASDS

Where B = number of beds

ASDS = average staff per weekday shift.

In the update, the *Draft Guide to Transport Impact Assessments March 2018 Version 5.1* provides traffic generation rates for private hospitals located in areas of high and low tr5ansort accessibility for the morning and evening peak periods. The suggested traffic generation rates are as follows:

- High Transport Accessibility
  - Morning Peak 0.34 (S) + 0.32 (B)
  - Evening Peak 0.39 (S) + 0.33(B)
- Low Transport Accessibility
  - Morning Peak 0.41 (S) + 0.62 (B)
  - Evening Peak 0.59 (S) + 0.05 (B)

Where S = number of staff during the main day shift at the hospital

B = number of beds.

Table 5.1 presents an estimate of the traffic generation expected for the proposed development as envisaged in the planning proposal.

**Table 5.1: Traffic Generation Estimates – Two-way per Peak Hour**

| TfNSW Guidelines | Peak Vehicle Trips | Morning Period Peak Vehicle Trips | Evening Period Peak Vehicle Trips |
|---|---|---|---|
| 2002 Guideline (Current) | 103 vph | 56 vph | 71 vph |
| Draft Guideline (High Transport Accessibility) | - | 96 vph | 106 vph |
| Draft Guideline (Low Transport Accessibility) | - | 144 vph | 106 vph |

From the above, it can be seen that using the current traffic generation guideline the planning proposal for a private hospital with 120 beds and 170 staff can expect to generate up to 71 two-way vehicles per peak hour while the draft guideline indicates the proposed development would generate up to 144 vph during the busiest time (based on the site having low transport accessibility.

Given that regular scheduled bus services can be used to access the site, it is considered that the subject site is located in an area with high transport accessibility. As such, the traffic generation estimates based on the high transport accessibility would be more appropriate.

It is noted that the current guideline provides the lowest traffic generation estimates for a hospital use, while the draft guideline assuming low transport accessibility provides the highest traffic generation estimates.

However, in the interest of providing a robust and conservative assessment traffic the generation estimates based on the low transport accessibility have been adopted in this assessment.

On this basis, the planning proposal envisaged health facility accommodating a private hospital with 120 beds and 170 staff can be expected to generate development traffic up to 144 vph and 106 vph during the morning and evening peak periods.

In relation to development traffic arising from the proposed retail uses envisaged in this planning proposal i.e. café and pharmacy, it is not expected that these proposed retail uses would generate any additional traffic above those generated by the predominant hospital use. The café and pharmacy uses are ancillary to the hospital use where they generate customs from staff and visitors already on the site. Any development traffic arising from the retail uses would be predominantly related to staff of these retail premises arriving and departing for work which would be likely to occur outside of the peak periods.

In terms of directional distribution, it is expected that the development traffic, being related to a hospital use where the majority of the traffic would be generated by the

visitors, would be distributed 50 per cent inbound and 50 per cent outbound in each peak period.

## 5.2 Background Traffic Growth

To assess the future operation of the road network (up to a 10-year planning horizon), traffic modelling growth plots for the years between 2021 and 2031 have been sourced from TfNSW using their Sydney Strategic Traffic Forecasting Model (STFM).

The 2021 and 2031 STFM growth plots provide growth rates (per cent per annum growth) from the year 2021 to 2031. This enables the per cent per annum traffic growth to be derived so to project traffic out to a 10-year planning horizon. The growth plots take into consideration the approved developments in Sydney.

The growth plots from TfNSW show the 2021 to 2031 growth rates ranging from 0.8 per cent per annum to 2.5 per cent per annum.

In this manner, the 10-year growth of the background traffic has been estimated. The 2031 future base case peak hour turning movement flows are presented in Appendix A.

## 5.3 Intersection Assessment

The operation of the surveyed intersections under existing and future traffic conditions has been assessed using SIDRA Intersection 9.0, a computer-based traffic modelling package which calculates intersection performance parameters such as vehicle delays and level of service.

Level of Service (LoS) is a key performance parameter used by TfNSW to describe the operation of an intersection. It ranges from LoS A (good operation) to LoS F (over-saturated conditions), as presented in Table 5.2. At signalised intersections, the LoS criteria relate to the overall average intersection delay, whilst at sign-controlled intersections and roundabouts, LoS is determined by the worst movement delay.

**Table 5.2: Level of Service Criteria for Intersections**

| Level of Service | Average Delay (Seconds per Vehicle) | Traffic Signals, Roundabout | Give Way and Stop Signs |
|---|---|---|---|
| A | Less than 14 | Good operation | Good operation |
| B | 15 to 28 | Good with acceptable delays and spare capacity | Acceptable delays and spare capacity |
| C | 29 to 42 | Satisfactory | Satisfactory, but accident study required |
| D | 43 to 56 | Operating near capacity | Near capacity and accident study required |
| E | 57 to 70 | At capacity. At signals, incidents will cause excessive delays Roundabouts require other control mode | At capacity, requires other control mode |
| F | Greater 70 | Unsatisfactory with excessive queueing | Unsatisfactory with excessive queueing; requires other control mode |

Source: TfNSW Guide to Traffic Generating Developments, 2002

Intersection capacity analysis has been carried out at the surveyed intersections for the following scenarios:

- Scenario 1: 2021 existing conditions (no development) – this scenario relates to baseline traffic collected from traffic surveys conducted in June 2021 as discussed in Section 2.5 and presented in Figures 1A and 1B in Appendix B
- Scenario 2: 2021 existing plus development – this scenario includes estimated development traffic (as discussed in Section 5.1) added to the existing baseline traffic flows (Scenario 1) and presented in Figures 2A and 2B in Appendix B
- Scenario 3: 2031 future base (no development) – this scenario includes baseline traffic (i.e. Scenario 1 traffic flows) projected to the year 2031 (10-year period) to account for future background traffic growth and does not include development traffic and is presented in Figures 3A and 3B in Appendix B, and
- Scenario 4: 2031 future plus development – this scenario includes background traffic growth (as per Scenario 3) plus additional development traffic and is presented in Figures 4A and 4B in Appendix B.

Below is a discussion of the intersection capacity analysis results.

### 5.3.1 Scenario 1 2021 Existing Traffic Conditions

Scenario 1 represents existing baseline traffic conditions. The analysis results are presented in Table 5.3.

**Table 5.3: Scenario 1 2021 Existing Condition Analysis Results**

| Intersection | Intersection Control | Morning Peak | | | Evening Peak | | |
|---|---|---|---|---|---|---|---|
| | | Delay (sec) | LoS | 95th % Queues (m) | Delay (sec) | LoS | 95th % Queues (m) |
| Parramatta Rd-Mathieson St | Priority | 6 | A | 239 | 6 | A | 100 |
| Parramatta Rd-Pyrmont Bridge Rd | Signal | 11 | A | 100 | 26 | B | 254 |

The existing condition analysis indicates that the assessed intersections currently operate satisfactorily with LoS B or better in both peak periods. Some queues on the Pyrmont Bridge Road approach can be seen on site which has been reflected in the traffic model.

### 5.3.2 Scenario 2 2021 Existing Conditions with Development

The intersections have been re-analysed with the development traffic added to the assessed intersections. The results are presented in Table 5.4.

**Table 5.4: Scenario 2 2021 Existing Condition with Development Analysis Results**

| Intersection | Intersection Control | Morning Peak | | | Evening Peak | | |
|---|---|---|---|---|---|---|---|
| | | Delay (sec) | LoS | 95th % Queues (m) | Delay (sec) | LoS | 95th % Queues (m) |
| Parramatta Rd-Mathieson St | Priority | 6 | A | 253 | 6 | A | 105 |
| Parramatta Rd-Pyrmont Bridge Rd | Signal | 11 | A | 100 | 26 | B | 254 |

The analysis indicates that with the additional development traffic added to the existing road network, the assessed intersections would continue to have the same performance as that found under existing conditions (i.e. Scenario 1). The additional development traffic from the proposed development has no material effects on the nearby intersections.

### 5.3.3 Scenario 3 2031 Future Base Case Condition

This scenario relates to projecting the existing baseline traffic to 2031 using traffic growth factors provided by TfNSW. It does not include any development traffic from the subject site. The analysis results for this scenario are presented in Table 5.5.

**Table 5.5: Scenario 3 2031 Future Base Case Condition Analysis Results**

| Intersection | Intersection Control | Morning Peak | | | Evening Peak | | |
|---|---|---|---|---|---|---|---|
| | | Delay (sec) | LoS | 95th % Queues (m) | Delay (sec) | LoS | 95th % Queues (m) |
| Parramatta Rd-Mathieson St | Priority | 6 | A | 285 | 6 | A | 134 |
| Parramatta Rd-Pyrmont Bridge Rd | Signal | 13 | A | 127 | 41 | C | 399 |

The analysis of the future base case indicates that all intersections would continue to operate satisfactorily in both peak periods. All assessed intersections would continue to operate with LoS C or better.

It is further noted that the Pyrmont Bridge Road intersection during the evening peak period would have its level of service changed from LoS B under existing traffic conditions (with or without development traffic) to LoS C in the 2031 future base case traffic conditions.

Traffic signal timing has been surveyed during the site inspections and entered into the traffic models accordingly. However, in order to achieve LoS C operation for this intersection, some minor re-allocation of the signal timing at this intersection will be required in the future.

Notwithstanding the above, it is further noted that all traffic signals across NSW are part of the Sydney Coordinated Adaptive Traffic System (SCATS). SCATS undertake dynamic changes to the operation of the traffic signals including automatically allocating and re-allocating the signal green time based on the prevailing traffic demand at each intersection at any given time and can change throughout the day following feedback from sensors embedded in the road. As such, any necessary adjustment to the traffic signals will occur through SCATS. See also additional discussion in Section 5.4.

It is also noted that TfNSW considers intersections operating with LoS C conditions to have satisfactory performance.

At any rate, the changing of the performance of the Pyrmont Bridge Road in the evening peak period is solely due to the future growth of the background traffic.

In addition, it is worthwhile to note that as discussed in Section 2.6, traffic modelling of the intersections along the Parramatta Road corridor as part of the PRCUTS investigation indicates that the Pyrmont Bridge Road intersection would operate at LoS B in the future. PRCUTS modelling intersection result is consistent with the analysis result from this assessment as discussed above.

### 5.3.4 Scenario 4 2031 Future Condition with Development

This scenario includes development traffic arising from the proposed development on the subject site as well as 10-year growth of the background traffic. The analysis results for this scenario are presented in Table 5.6.

**Table 5.6: Scenario 4 2031 Future Condition Traffic with Development Analysis Results**

| Intersection | Intersection Control | Morning Peak | | | Evening Peak | | |
|---|---|---|---|---|---|---|---|
| | | Delay (sec) | LoS | 95th % Queues (m) | Delay (sec) | LoS | 95th % Queues (m) |
| Parramatta Rd-Mathieson St | Priority | 7 | A | 301 | 6 | A | 141 |
| Parramatta Rd-Pyrmont Bridge Rd | Signal | 13 | A | 127 | 41 | C | 399 |

The analysis for this scenario indicates that the assessed intersections would continue to operate satisfactorily following the completion of the proposed development. In the future, following the completion of the proposed development the assessed intersections would continue to operate with similar performance found in the future base case (Scenario 3). That is, the additional development traffic is not expected to create any material changes to the operation of the nearby intersections.

From the above analysis results, intersection improvements are not required to support the proposed development.

In summary, it is concluded that the proposed development would have no material traffic effects on the operation of the adjacent road network following its completion. The road network would continue to operate as originally planned.

## 5.4 Traffic Effects of PRCUTS and WestConnex

It is noted that current traffic signal optimisation along the Parramatta Road corridor has been set to favour the traffic movements along Parramatta Road. However, the completion of the WestConnex Project would provide additional opportunities to permit significant reprioritisation of traffic signals along the Parramatta Road corridor including Pyrmont Bridge Road intersection where additional green time could be re-allocated to the traffic movements on the side streets.

In order to provide a conversative assessment results, this assessment has retained the existing signal timing observed on site in all scenarios except for a minor adjustment in the future evening peak period. As noted above, it is expected there would be further opportunities to significantly adjust the signal timing, and this is expected to result to further improvement to the operation of the intersections reported above.

In addition, it is noted that PRCUTS anticipates that an additional pedestrian crossing would be provided on the western approach of the Pyrmont Bridge Road intersection with Parramatta Road. Analysis of the future case evening peak period model indicates the Pyrmont Bridge Road with the additional pedestrian crossing would operate with LoS D, but would require significant adjustment of the signal timing away from the Parramatta Road traffic to favour the traffic on Pyrmont Bridge Road.

## 5.5 Green Travel Plan Framework

### 5.5.1 Preamble

This section provides an outline of a green travel plan. A detailed green travel plan applicable to all occupants of the proposed development will be prepared prior to the occupation of the proposed development.

The subject development site is well placed in terms of its close proximity to existing transport hub, namely regular scheduled bus services along Parramatta Road and Booth Street.

In light of the above, the applicant is committed to providing a sustainable development at this location. The applicant wishes to discourage residents, employees and visitors to/from this development from using private vehicles to access the site and encourage more sustainable transport methods.

To ensure that the proposed development will continue to be developed to encourage more sustainable travel methods, it is appropriate for Council to include a consent condition in the approval of the planning proposal stipulating that a green travel plan be prepared and submitted to Council for approval during the development application stage and/or prior to the issue of the Occupation Certification.

### 5.5.2 The Role of a Green Travel Plan

The purpose of a green travel is to encapsulate a strategy for managing travel demand that embraces the principles of sustainable transport. The green travel plan encourages use of transport modes that have low environmental impacts, for example active transport modes including walking, cycling as well as public transport and the better management of private vehicle use.

The green travel plan should be in place prior to the occupation of the proposed development so that travel behaviours of the occupants and visitors can be influenced from Day One. The green travel plan is to be a living document that can easily be updated and adopted to suit the site's changing conditions. The measures documented in the green travel plan are to be reviewed on an annual basis and, if required, modified to better achieve the desired transport mode shares.

### 5.5.3 Possible Methods of Encouraging Modal Shift

A summary of the travel demand management measures that could be implemented to encourage sustainable travel use is presented in Table 5.7.

**Table 5.7: Potential Travel Demand Measures**

| Type of Measures | Potential Travel Demand Measures |
|---|---|
| Car Parking Provision | • Reducing the on-site car parking provision by adopting a lower parking provision rate than those stipulated in the current planning controls.<br>• Investigate the feasibility of implementing a parking charges for staff and visitors with discount for staff parking outside of the peak periods e.g. after 8:00pm.<br>• Parking for staff to be limited to manager level only. |
| Car Share Facilities | • Provision of additional car parking spaces within the site as car share spaces for dedication to a commercial car share operator. |
| Cycling | • Provision of on-site bicycle parking spaces exceeding Council's current DCP requirements.<br>• Bicycle parking spaces and associated elements such as access paths within the development to bicycle parking spaces to comply with the Australian Standard.<br>• Provision of cycling infrastructure on public roadway with end-of-trip facilities, subject to agreement with relevant Road Authorities.<br>• Provision of bicycle maps displaying all existing cycling routes, available on all noticeboards, newsletters, websites and etc. Tenants to be informed of new cycling routes available in the local areas.<br>• Promotion of annual cycling events such as 'Ride to Work Day'.<br>• Provision of bicycle workshop within the basement car park for occupants to repair and maintain their bicycles. The workshop is to include maintenance toolkits that may include bike pump, puncture repair equipment.<br>• Provide end of trip facilities (e.g. shower and change room) for staff to encourage staff to cycle to and from the site. |
| Walking | • Implementation of a "10,000 steps per day initiative" to encourage tenants to walk to/from the site.<br>• Staff who achieve the "10,000 steps per day" for seven consecutive days are to be rewarded with a $50 gift card. |
| Public Transport | • Provision of public transport information on all noticeboards and website to provide awareness to occupants and visitors of alternative transport options available.<br>• Staff at the initial occupation of the development to be provided with a pre-loaded Opal cards with $100 credit.<br>• The public transport information and the pre-loaded $100 Opal cards are to be provided in the form of a welcome pack for all initial occupants of the building. |
| Car Pooling | • Establishment of a car-pooling forum or board to encourage and organise staff to travel in groups. Information on the car-pooling forum will be posted on the building website, noticeboards and/or newsletters.<br>• Investigate the feasibility of expanding the car-pooling forum to include other occupants working in adjoining |

| Type of Measures | Potential Travel Demand Measures |
|---|---|
| | developments to improve the possibility of connecting people with similar origins and destinations. |
| Working Conditions | • Introduce initiatives to support flexible working hours where possible. |
| Transport Access Guide (TAG) | • A TAG to be developed prior to the occupation of the proposed development and distributed to all staff and visitors advertising all available alternative transport modes for accessing the site in an easy format to read and understand.<br>• The TAG is to be provided on all noticeboards throughout the development as well as on a web page accessible by staff as well as the public. The TAG could also be in the form of a map provided at the back of a business card or envelope.<br>• The TAG provides customised travel information in an easy to understand format for people travelling to and from the site using sustainable forms of transport (i.e. walking, cycling and public transport). |
| Travel Plan Coordinator | • Appoint a travel plan coordinator to prepare, implement, monitor and update the green travel plan as required. |

# 6 Response to Traffic Matters Raised in Pre-Planning Proposal Advice

An earlier set of preliminary concept plans has been submitted to Inner West Council (IWC) in March 2021 seeking their pre-planning proposal advice. IWC subsequently provided their advice in a letter dated 27 May 2021.

The pre-planning proposal advice includes a number of traffic matters. Below is presentation of the traffic matters raised followed by MLA's response.

## Public Transport – Superstop

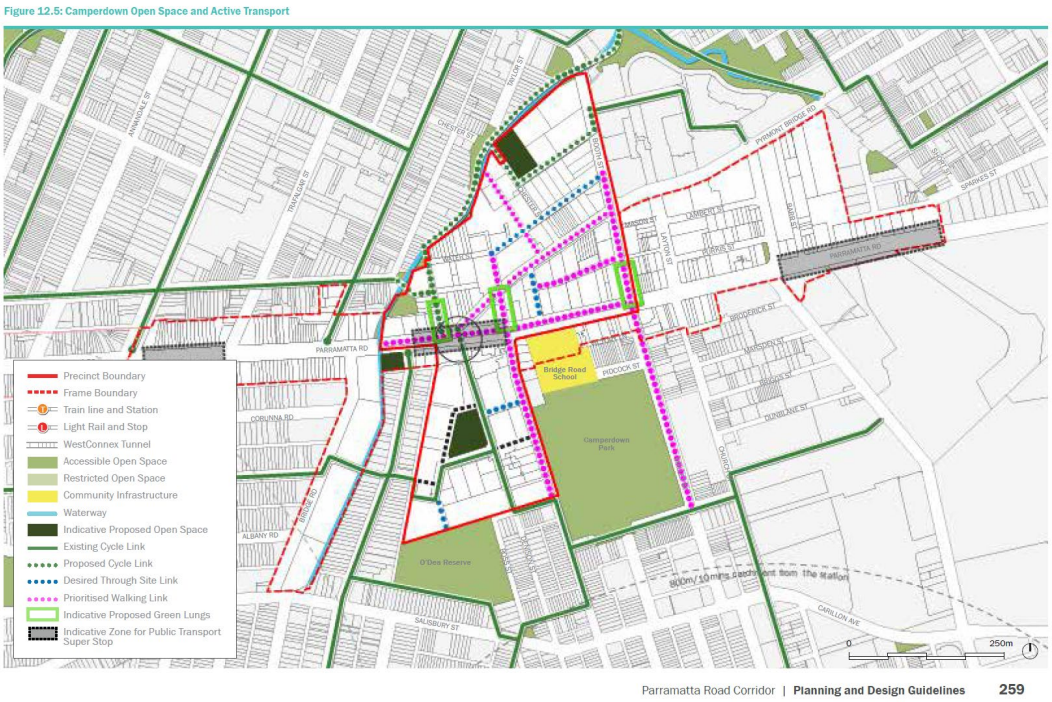
> *The strategic initiatives of Sydney CBD to Parramatta Strategic Transport Plan and proposed rapid bus transport solution from Burwood to Sydney CBD have not yet been implemented by Transport for New South Wales (TfNSW).*
>
> *No consultation with TfNSW has been undertaken to meet this criteria.*
>
> *PRCUTS Planning and Design Guidelines (P&DG) also indicate a Public Transport "superstop" zone on part of your site between Parramatta Road and Pyrmont Bridge Road. This means that front building setbacks to the building line may be required to accommodate this future super-stop. You are advised to consult with TfNSW and Council in relation to provision of any future superstop. This is likely to help meet the infrastructure requirements of PRCUTS. This would have to be complemented with a high-quality placemaking design to enhance the site prior to operation of the superstop.*

Parramatta Road between Burwood and the Sydney CBD has been identified as a strategic corridor and any planning proposals and development applications along the corridor, especially those around future "superstop" locations to be referred to TfNSW.

To this end, the applicant has commenced liaison with TfNSW and is waiting for feedback.

In relation to one of the public transport superstops being located on part of the subject site, the PRCUTS documentation indicates that these have been identified to ensure the delivery of the on-street rapid transit service. The Camperdown Precinct within which the subject site is located has three public transport superstops. The central superstop is located immediately in front of the subject site and stretched approximately 80m along Parramatta Road on either side of Pyrmont Bridge Road as depicted in Figure 6.1 which has been reproduced from the PRCUTS documentation.

## Figure 6.1: PRCUTS Figure 12.5 Depicting Location of Superstop for Camperdown Precinct




Source: PRCUTS

As can be seen from Figure 6.1, the superstop location encompasses the intersection of Parramatta Road with Pyrmont Bridge Road.

It is unlikely that any proposed superstop would be located in the middle of a signalised intersection, especially at a key strategic intersection like that at Pyrmont Bridge Road intersection with Parramatta Road.

As a long-standing policy, TfNSW (and its predecessors) does not permit any obstructions affecting traffic operation and network efficiency to be located within 20m of a signalised intersection (from the stop line) including bus stops. As this would disrupt the traffic efficiency of the intersection and the overall road network.

Locating a superstop in close proximity of a signalised intersection would result in buses stopping near the intersection to pick up and drop off passengers thus reducing the number of traffic lanes at the intersection adversely affecting traffic capacity and disrupting the operation of the intersection. This could lead to detrimental effects on the overall operation of the Parramatta Road corridor with potential flow on effects to other intersections and road corridors such as City Road (Princes Highway) and the Western Distributor.

Furthermore, typically bus stops are located downstream of a signalised intersection so to reduce the potential for buses to be stopped and delayed at traffic signals.

In light of the above, Figure 6.2 shows the revised location of the central superstop within the Camperdown Precinct to comply with TfNSW requirements and to minimise the traffic effects on road network operation due to the public transport superstop.

**Figure 6.2: Revised Superstop Location**


From Figure 6.2, it can be seen that the superstop would be required to be located outside of the site. As such, further adjustment to the front building setback would not be required. This would not compromise the delivery of the infrastructure requirements of PRCUTS, but enhance the operation of the road network as well as public transport services.

The WestConnex construction 'dive-site' located between Gordon St, Pyrmont Bridge Rd and Mallet St on Parramatta Rd is the most obvious location for the public transport superstop servicing this precinct.

## Active Transport

*PRCUTS P&DG identify two key new walking and cycling links immediately adjacent to your site:*

- *Proposed E-W pedestrian and cycling link along Pyrmont Bridge Road*
- *Proposed N-S cycling link along Mathieson Street*

*Delivery of these links may require adequate setbacks from building line of your proposed development as well as appropriate treatments (including materials, levels, landscaping etc.) at interface with future links. You are required to consider the provision of active transport links in your urban design scheme. Additionally, these need to be factored in your response to PRCUTS Infrastructure requirements.*

These have been shown in the concept plans prepared by BVN.

## Road improvements and upgrades

*Prior to any rezoning commencing, PRCUTS requires completion of a precinct-wide transport study and supporting modelling which considers the recommended land-uses and densities, post WestConnex completion conditions, and identifies the necessary road improvements and upgrades required as part of any proposed renewal in the Precinct. This study is currently being prepared by Council in collaboration with Department of Planning, Industry and Environment (DPIE) and is due to be completed by July 2021.*

*Since the proposal requires considerable amendments and further work to be completed including preparation of supporting studies, it can be assumed that development of the planning proposal and precinct wide traffic and transport study can proceed concurrently. The outcomes of the transport study, when completed, will inform the planning proposal helping it address these appropriately.*

*It is requested that you consult with Council at every step of the preparation of this Planning Proposal so that the proposal can be informed by the outcomes of the precinct-wide traffic and transport study including any draft recommendations.*

*This partnership approach will enhance the prospects of Council supporting the final approach.*

The applicant is committed to working with Council to ensure the planning proposal is consistent Council's strategic policies and documents with the outcomes from the precinct wide traffic study informing the planning proposal. The planning proposal will respond to the recommendations made in the precinct wide traffic study.

## Traffic and Transport

Under the heading of Traffic and Transport, Council has outlined the requirement for a detailed traffic and parking assessment report to accompany the planning proposal. It has requested for a number of matters to be addressed. These issues are presented in Table 6.1 together with MLA's response to the issues.

**Table 6.1: Matters Required to be Addressed in the Planning Proposal Traffic Assessment Report**

| Traffic Matters Raised by Council | Response |
|---|---|
| Clarify the proposed link between Water Street and Cahill Street and the proposed one-way street. | The proposed link between Water Street and Cahill Street and the one-way road network are no longer being contemplated in the planning proposal. Instead, it is proposed to widen Mathieson Street and Cahill Street to accommodate independent two-way traffic flows as discussed in Section 3.2 in this report. |
| Assess the impacts of the additional traffic and pedestrian movements generated by the development within the network, also considering any cumulative traffic associated with adjacent existing/future developments. | This report has assessed the effects of the additional traffic movements generated by the proposed development. In addition, future case scenarios where existing background traffic projected to include 10 year traffic growth to allow for additional development not related to the subject site have also been assessed. See Section 5. |
| Outline loading and unloading activity associated with the proposed uses. | See Sections 3 and 4. |
| Provide a breakdown of proposed resident/visitor/staff parking rates and its consistency with the PRCUTS proposed parking rates. | See Section 4. |
| Provide prioritised walking and cycling link along Pyrmont Bridge Road and Mathieson Street as in PRCUTS P&DG. Also consider interventions for traffic calming along these key streets. | See concept plans prepared by BVN. |
| Investigate the total proposed mobility parking spaces if the BCA/current rates are adequate for a health precinct. The proposal should be in-line with Council's Access Inclusion Plan. | See Section 4.3. |
| Investigate if there is a need for an ambulance bay for pick up/drop off. | The planning proposal includes an ambulance bay. See Section 3.5. |
| Ensure safe access for both pedestrian and all road users, including an assessment of intersection safety such as at Mathieson Street and Cahill Street. | Given that both Mathieson Street and Cahill Street are proposed to be widened and the proposed building set back from the site, it is not anticipated that there would be any safety concerns for road users. |
| Provide swept path analysis for proposed car parking arrangement. | The swept path diagrams are provided in Appendix A. |
| Provide a green travel plan for business operations and staff to assist in minimising private car dependency. | See Section 5.5. |
| Minimise loss of on-street parking. | At this stage, the planning proposal does not any elements that would reduce on-street parking. |

| Traffic Matters Raised by Council | Response |
|---|---|
| Improve pedestrian safety and permeability in the precinct. | The planning proposal includes elements to widen both Mathieson Street and Cahill Street and the proposed building set back from the street edge. As such, in the future pedestrian safety and permeability would be significantly improved. |
| Provide traffic and pedestrian network modelling including Parramatta Road, Pyrmont Bridge Road, Gordon street, Water Street, Mathieson Street and Cahill Street. | See Section 5. It is noted that intersection analysis on the Gordon Street, Water Street and Cahill Street has not be undertaken as development traffic generated by the proposed development is not expected to access these intersections. |
| Clarify if on-street parking bays are to be provided along Mathieson Street. | It is proposed to provide a drop off area on Mathieson Street. The drop off area will be provided use land from the subject site – see Section 3.1. |
| Ensure that pedestrian amenity is enhanced through footpath widenings where possible. Concerns are raised for footpaths being narrowed as a result of indented car bays on Mathieson Street and possibly Cahill Street. | The concept plans show the building being set back to embellish the existing pedestrian footpaths surrounding the site. |
| Manage pedestrian and vehicle conflict on Cahill Street between the proposed driveway and existing garages of the adjacent development. | The planning proposal does not include any pedestrian access on Cahill Street as such pedestrian activities on Cahill Street would be limited. At any rate, signage will be placed at the exit of the proposed driveway to compel exiting vehicles to stop and give way to pedestrians if required. In addition, the driveway will be designed in accordance with the Australian Standard to provide sight line to pedestrians. |

# 7 Summary and Conclusion

This transport assessment report relates to a planning proposal for a site located at 122-130 Pyrmont Bridge Road and 206 Parramatta Road, Annandale. The planning proposal seeks approval to amend the land use zone, building height and floor space ratio controls to be consistent with the Parramatta Road Corridor Urban Transformation Strategy.

This transport assessment has been based on a proposed health facility accommodating a private hospital with:

- 120 beds, and
- 170 staff.

The planning proposal envisages that the proposed development would be accommodated in a part 7/part 8 storey building with two car parking basement levels.

The proposed development is generally consistent with that envisaged for the subject site in the Parramatta Road Corridor Urban Transformation Strategy.

The salient findings from the assessment are presented below.

- The proposed vehicle access would be located on Cahill Street similar to existing access arrangement and would be configured to permit independent two-way flows.
- The proposal includes an on-site loading dock facility with one loading bay accommodating service vehicles up to an Australian Standard 8.8m long medium rigid vehicle plus additional smaller service vehicle bays for vans and utility type vehicles in the basement car park.
- The loading facility includes a truck turntable to enable vehicles to enter and exit the site in a forward direction.
- An ambulance bay is also proposed which will be designed in accordance with Ambulance NSW requirements.
- The Leichhardt DCP requires the proposed development to provide up to 54 car parking spaces.
- TfNSW guidelines indicates that the proposed development would require to provide up to 850 car parking spaces. As discussed in this report, this level of parking provision is considered to be excessive and goes counter the transport objectives from the Parramatta Road Corridor Urban Transformation Strategy.
- The required motorcycle and bicycle parking provisions stipulated in the DCP will be complied with.

- In terms of traffic generation, the subject proposed development is expected to generate 144 vehicle trips per hour during the busiest period.
- Intersection analysis of two nearby intersections using SIDRA indicates that the proposed development is not expected to have any material effects on the operation of the intersections under 2021 and 2031 traffic demands.
- The proposed development would implement of a green travel plan to manage travel demand arising from the proposed development and encourage more sustainable travel methods. A detailed green travel plan to be provided during the development application stage can be conditioned as part of the approval of the planning proposal.

Overall, the proposed development as envisaged in the planning proposal would have satisfactory traffic and transport impacts.

# Appendix A

## Swept Path Diagrams

Transport Planning
Level 13 | 465 Victoria Ave
Chatswood | NSW | 2067

CAHILL STREET

MATHESON STREET

PYRMONT BRIDGE ROAD

AMBULANCE PARKING BAY

CONSULT ROOM LOBBY 37.2 m²

STRETCHER AREA

AMENITIES 31.9 m²

DN

UP

LOADING DOCK 65 137.5 m²

KITCHEN 68.2 m²

DRY STORE 7.6 m²

COOL RM 14.6 m²

FREEZER 6.3 m²

WASTE 15.7 m²

F CHANGE RM 29.7 m²

M CHANGE RM 29.7 m²

WAITING LOUNGE 131.6 m²

HYDROTHERAPY POOL 204.1 m²

STAFF RM 10.1 m²

WC 5.5 m²

SHWR/ WC 6.2 m²

SHWR/ WC 6.5 m²

OFFICE 11.0 m²

MAIN ENTRY

CAFE 140.1 m²

EXTENT OF DOUBLE HEIGHT SPACE SHOWN DASHED

RECEPTION 12.9 m²

MEETING 11.8 m²

OFFICE 9.5 m²

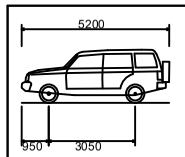
PHYSIO GYM 154.3 m²

PHARMACY 128.6 m²

RETAIL 119.0 m²

KEY:

| | Forward | Reverse |
|---|---|---|
| Wheel Path | | |
| Body Envelope | | |
| Clearance (300mm) | | |




B99 Vehicle (Realistic min radius) (2004)

| | |
|---|---|
| Overall Length | 5200mm |
| Overall Width | 1940mm |
| Overall Body Height | 1878mm |
| Min Body Ground Clearance | 272mm |
| Track Width | 1840mm |
| Lock-to-lock time | 4.00s |
| Curb to Curb Turning Radius | 6250mm |

DATE: 22 JUNE 2021

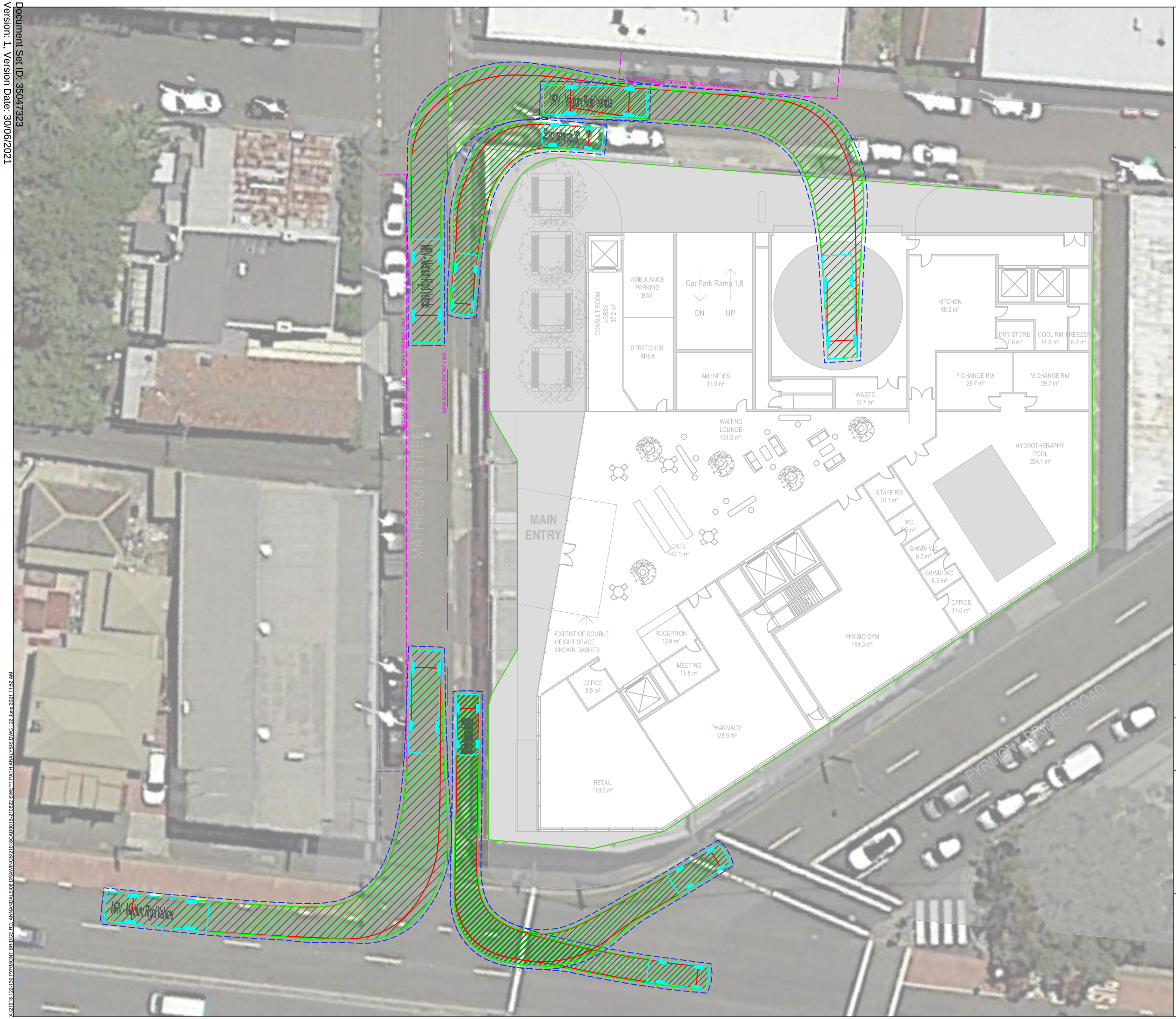
SCALE: 1:300@A3

DRAWING NO.: 21018CAD001B-001

REV: B

DRAWING TITLE: SWEPT PATH ANALYSIS - AS2890.1 5.2M B99 VEHICLE

PROJECT: 122-130 PYRMONT BRIDGE RD, ANNANDALE PRIVATE HOSPITAL PLANNING PROPOSAL

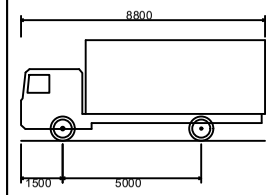



Transport Planning
Level 13 | 465 Victoria Ave
Chatswood | NSW | 2067

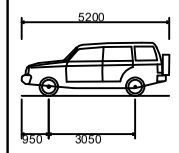


KEY:

| | Forward | Reverse |
|---|---|---|
| Wheel Path | | |
| Body Envelope | | |
| Clearance (300mm) | | |




| MRV - Medium Rigid Vehicle | |
|---|---|
| Overall Length | 8800mm |
| Overall Width | 2500mm |
| Overall Body Height | 3633mm |
| Min Body Ground Clearance | 428mm |
| Track Width | 2500mm |
| Lock-to-lock time | 4.00s |
| Curb to Curb Turning Radius | 10000mm |




| B99 Vehicle (Realistic min radius) (2004) | |
|---|---|
| Overall Length | 5200mm |
| Overall Width | 1940mm |
| Overall Body Height | 1878mm |
| Min Body Ground Clearance | 272mm |
| Track Width | 1840mm |
| Lock-to-lock time | 4.00s |
| Curb to Curb Turning Radius | 6250mm |

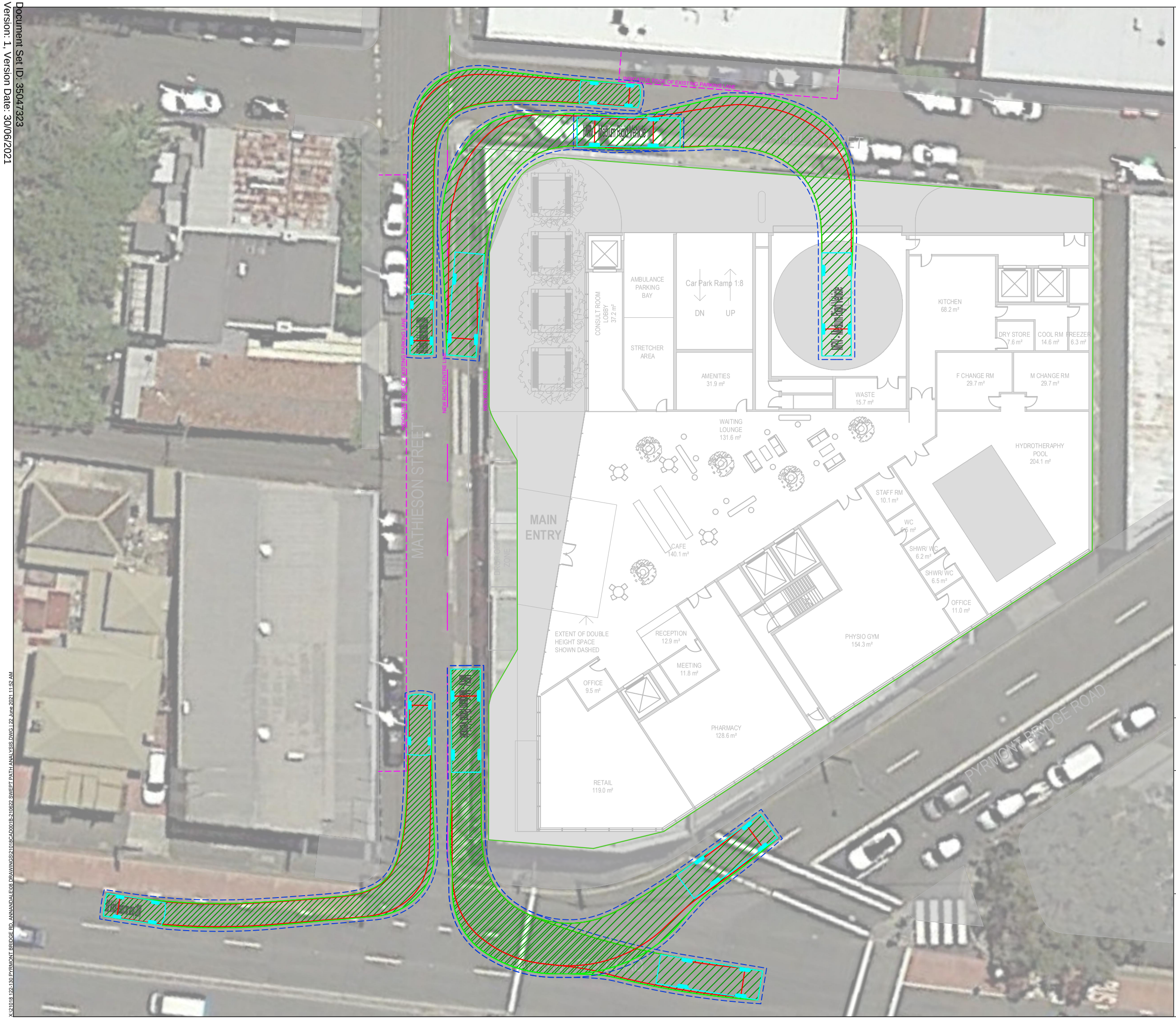
| DATE: | SCALE: |
|---|---|
| 22 JUNE 2021 | 1:300@A3 |
| DRAWING NO.: | REV: |
| 21018CAD001B-002 | B |

DRAWING TITLE:

SWEPT PATH ANALYSIS - AS2890.2 8.8M MRV ENTERING VS AS2890.1 5.2M B99 VEHICLE EXITING

PROJECT:

122-130 PYRMONT BRIDGE RD, ANNANDALE PRIVATE HOSPITAL PLANNING PROPOSAL




MLA Transport Planning

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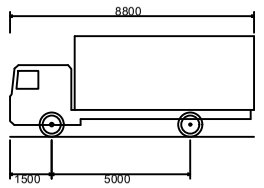
**Appendix 3 - Transport Report**

KEY:

| | Forward | Reverse |
|---|---|---|
| Wheel Path | | |
| Body Envelope | | |
| Clearance (300mm) | | |

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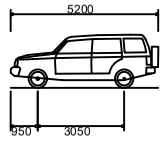
| Overall Body Height | 3633mm |
| Min Body Ground Clearance | 428mm |
| Track Width | 2500mm |
| Lock-to-lock time | 4.00s |
| Curb to Curb Turning Radius | 10000mm |




| B99 Vehicle (Realistic min radius) (2004) | |
|---|---|
| Overall Length | 5200mm |
| Overall Width | 1940mm |
| Overall Body Height | 1878mm |
| Min Body Ground Clearance | 272mm |
| Track Width | 1840mm |
| Lock-to-lock time | 4.00s |
| Curb to Curb Turning Radius | 6250mm |

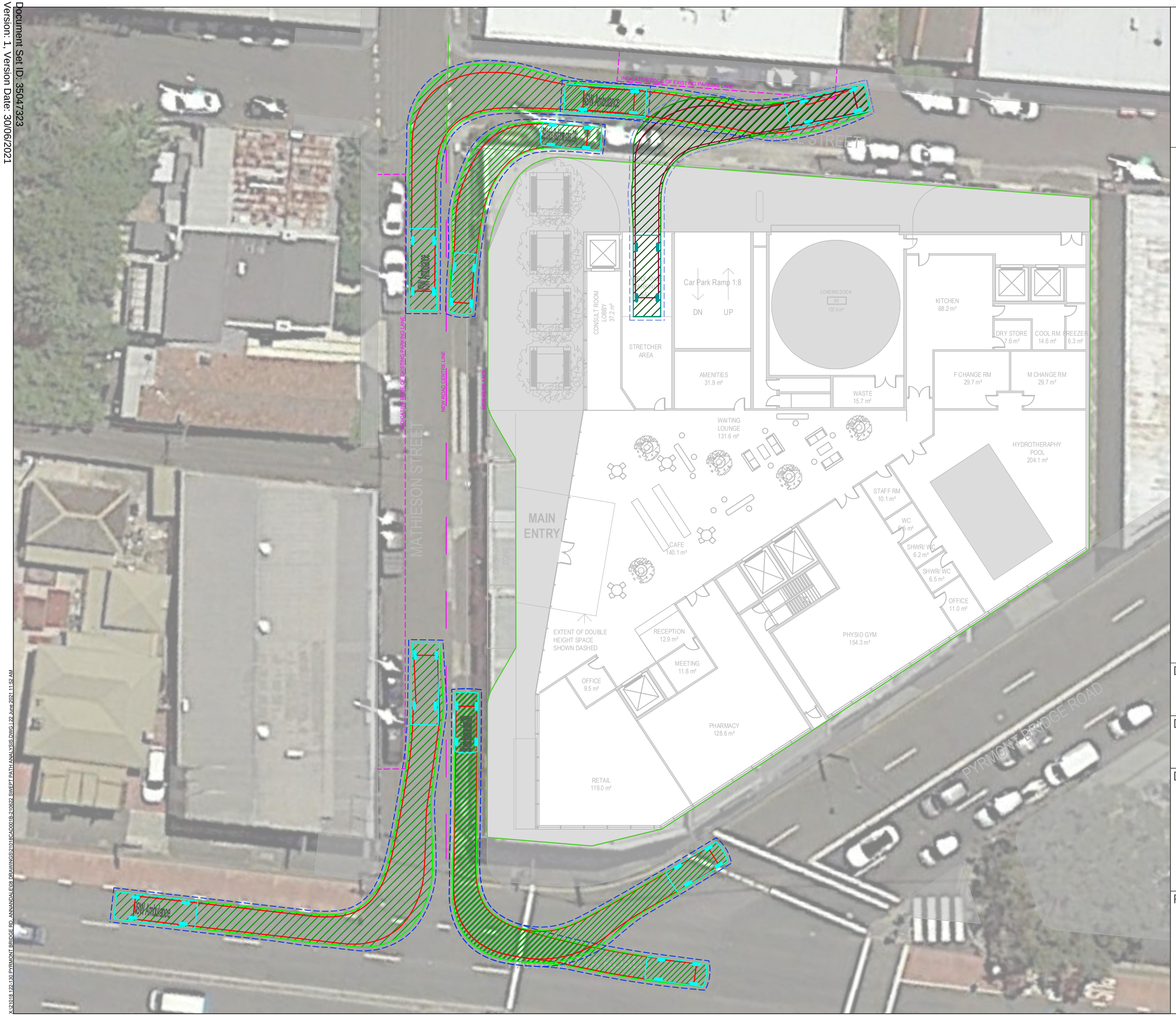
| DATE: | SCALE: |
|---|---|
| 22 JUNE 2021 | 1:300@A3 |
| DRAWING NO.: | REV: |
| 21018CAD001B-003 | B |

DRAWING TITLE:

SWEPT PATH ANALYSIS - AS2890.1 5.2M B99 VEHICLE ENTERING VS AS2890.2 8.8M MRV EXITING

PROJECT:

122-130 PYRMONT BRIDGE RD, ANNANDALE PRIVATE HOSPITAL PLANNING PROPOSAL

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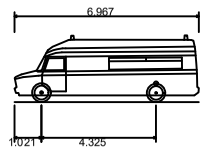
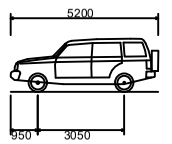
**Appendix 3 - Transport Report**

KEY:

| | Forward | Reverse |
|---|---|---|
| Wheel Path | | |
| Body Envelope | | |
| Clearance (300mm) | | |




| NSW Ambulance | |
|---|---|
| Overall Length | 6.967m |
| Overall Width | 2.345m |
| Overall Body Height | 2.522m |
| Min Body Ground Clearance | 0.249m |
| Max Track Width | 2.020m |
| Lock-to-lock time | 4.00s |
| Curb to Curb Turning Radius | 7.650m |

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| Min Body Ground Clearance | 272mm |
| Track Width | 1840mm |
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| Curb to Curb Turning Radius | 6250mm |

| DATE: | SCALE: |
|---|---|
| 22 JUNE 2021 | 1:300@A3 |
| DRAWING NO.: | REV: |
| 21018CAD001B-004 | B |

DRAWING TITLE:

SWEPT PATH ANALYSIS - NSW AMBULANCE ENTERING VS AS2890.1 5.2M B99 VEHICLE EXITING

PROJECT:

122-130 PYRMONT BRIDGE RD, ANNANDALE PRIVATE HOSPITAL PLANNING PROPOSAL

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CAHILL STREET

MATHIESON STREET

PYRMONT BRIDGE ROAD

CONSULT ROOM LOBBY 37.2 m²

STRETCHER AREA

Car Park Ramp 1:8

DN UP

AMENITIES 31.9 m²

LOADING DOCK 65 137.5 m²

WASTE 15.7 m²

KITCHEN 68.2 m²

DRY STORE 7.6 m²

COOL RM 14.6 m²

FREEZER 6.3 m²

F CHANGE RM 29.7 m²

M CHANGE RM 29.7 m²

WAITING LOUNGE 131.6 m²

HYDROTHERAPHY POOL 204.1 m²

STAFF RM 10.1 m²

WC 2.5 m²

SHWR/ WC 6.2 m²

SHWR/ WC 6.5 m²

OFFICE 11.0 m²

MAIN ENTRY

CAFE 140.1 m²

EXTENT OF DOUBLE HEIGHT SPACE SHOWN DASHED

RECEPTION 12.9 m²

MEETING 11.8 m²

OFFICE 9.5 m²

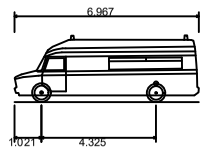
PHYSIO GYM 154.3 m²

PHARMACY 128.6 m²

RETAIL 119.0 m²

KEY:

| | Forward | Reverse |
|---|---|---|
| Wheel Path | | |
| Body Envelope | | |
| Clearance (300mm) | | |




| NSW Ambulance | |
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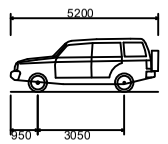
| Overall Width | 2.345m |
| Overall Body Height | 2.522m |
| Min Body Ground Clearance | 0.249m |
| Max Track Width | 2.020m |
| Lock-to-lock time | 4.00s |
| Curb to Curb Turning Radius | 7.650m |

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| Overall Body Height | 1878mm |
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| Track Width | 1840mm |
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| Curb to Curb Turning Radius | 6250mm |

| DATE: | SCALE: |
|---|---|
| 22 JUNE 2021 | 1:300@A3 |
| DRAWING NO.: | REV: |
| 21018CAD001B-005 | B |

DRAWING TITLE:

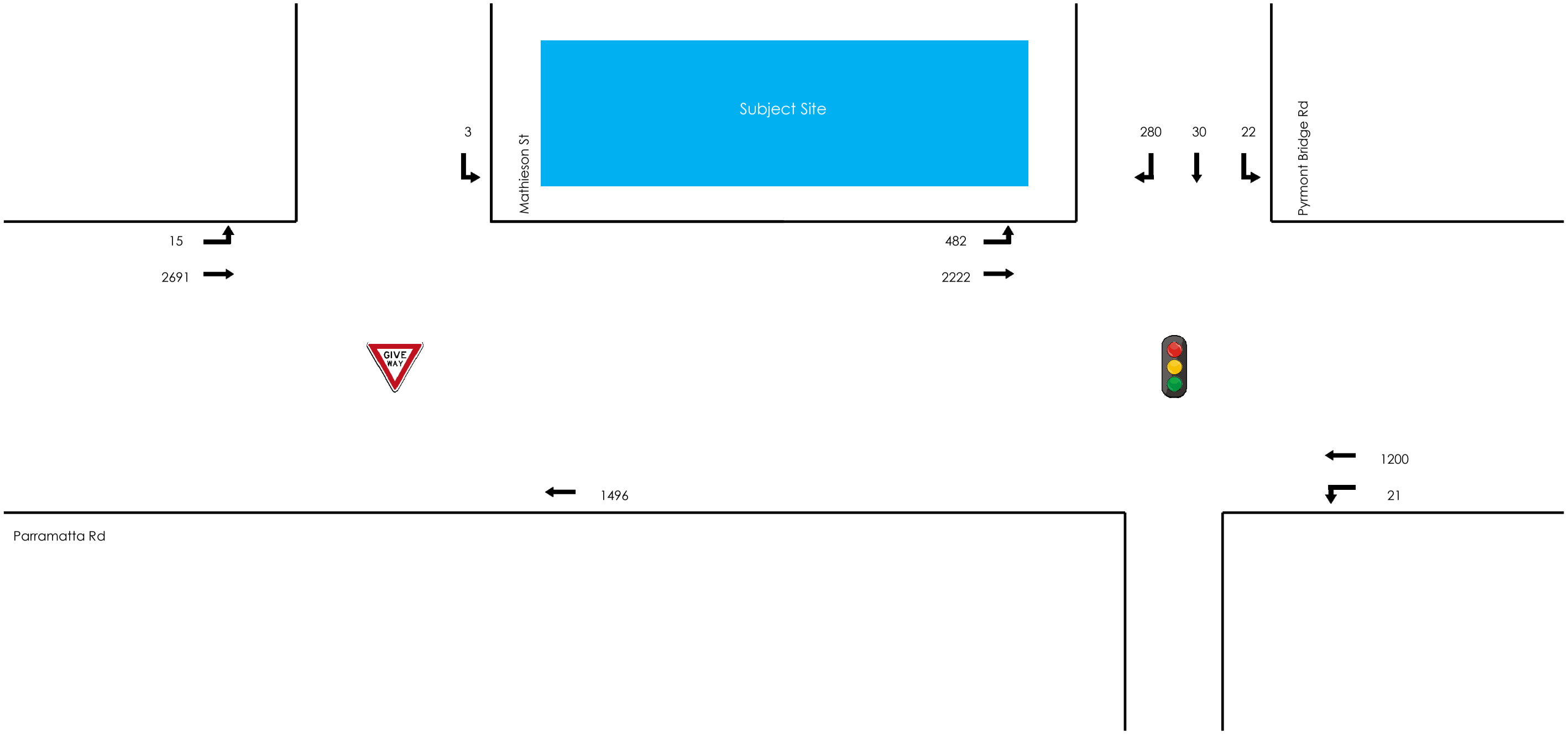
# SWEPT PATH ANALYSIS - AS2890.1 5.2M B99 VEHICLE ENTERING VS NSW AMBULANCE EXITING

PROJECT:

122-130 PYRMONT BRIDGE RD, ANNANDALE PRIVATE HOSPITAL PLANNING PROPOSAL

# Appendix B

## Intersection Peak Hour Flows

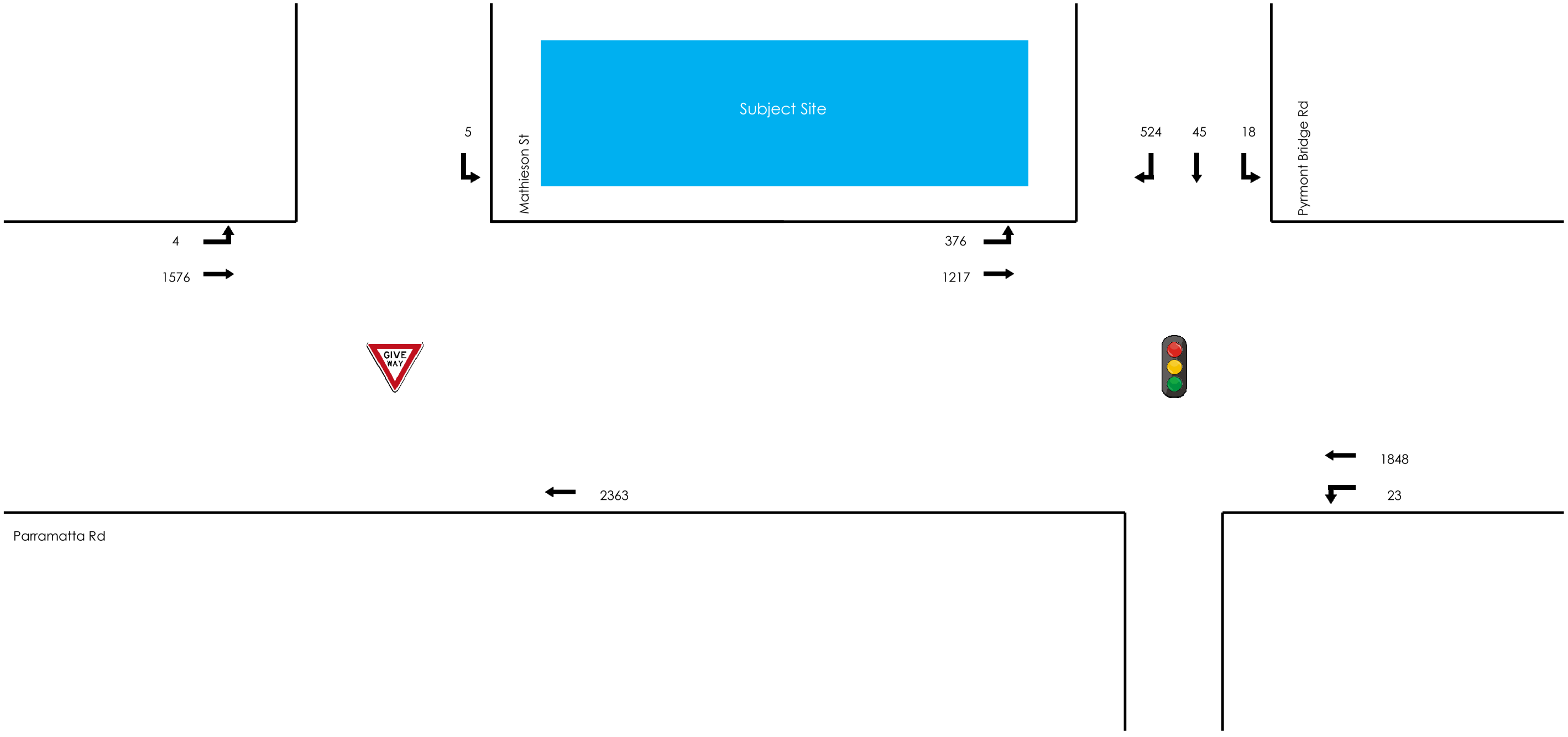



Transport Planning

122-130 Pyrmont Bridge Rd, Annandale Proposed Health Facility Planning Proposal

Figure 1a

2021 Existing Morning Peak Hour Volumes

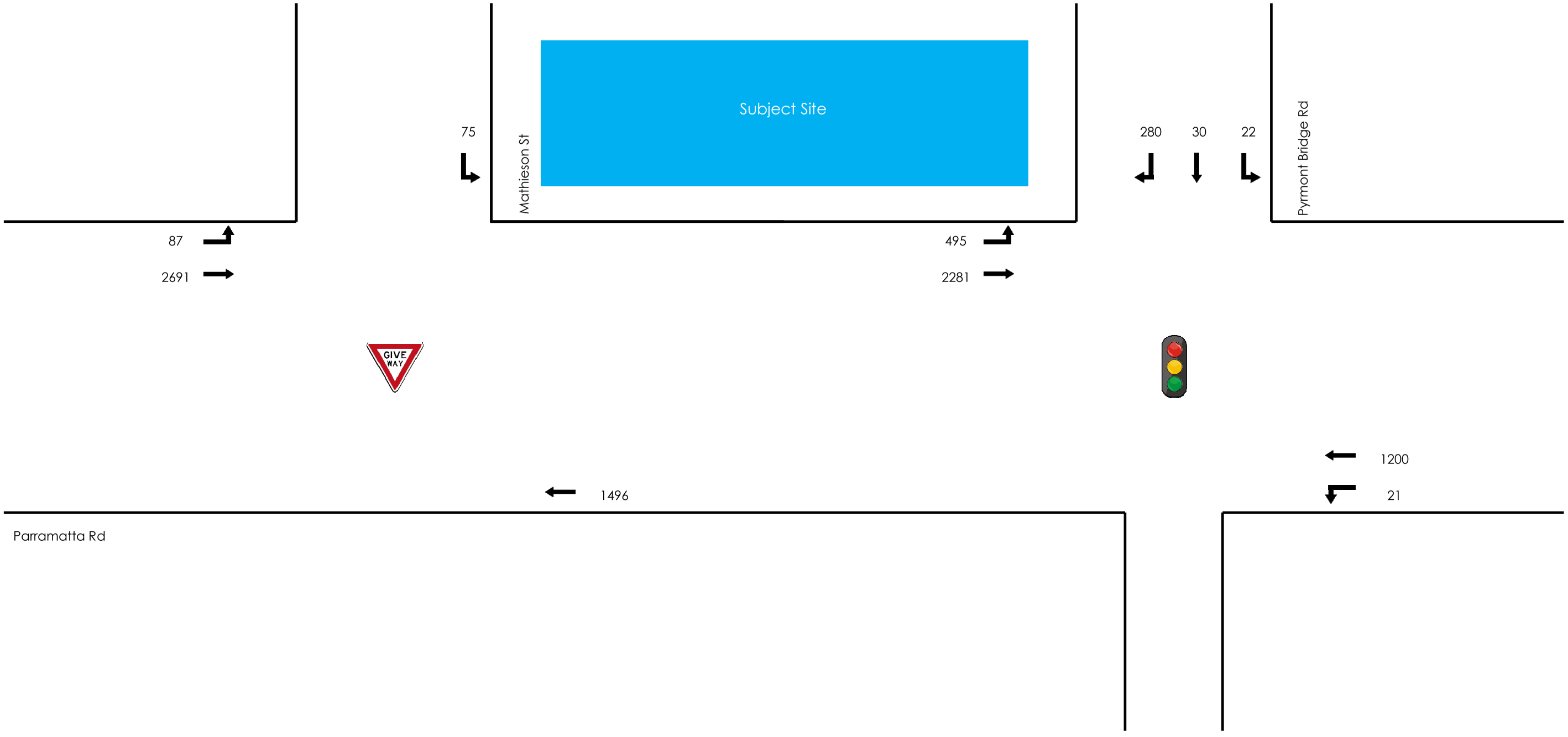



Transport Planning

122-130 Pyrmont Bridge Rd, Annandale Proposed Health Facility Planning Proposal

Figure 1b

2021 Existing Evening Peak Hour Volumes

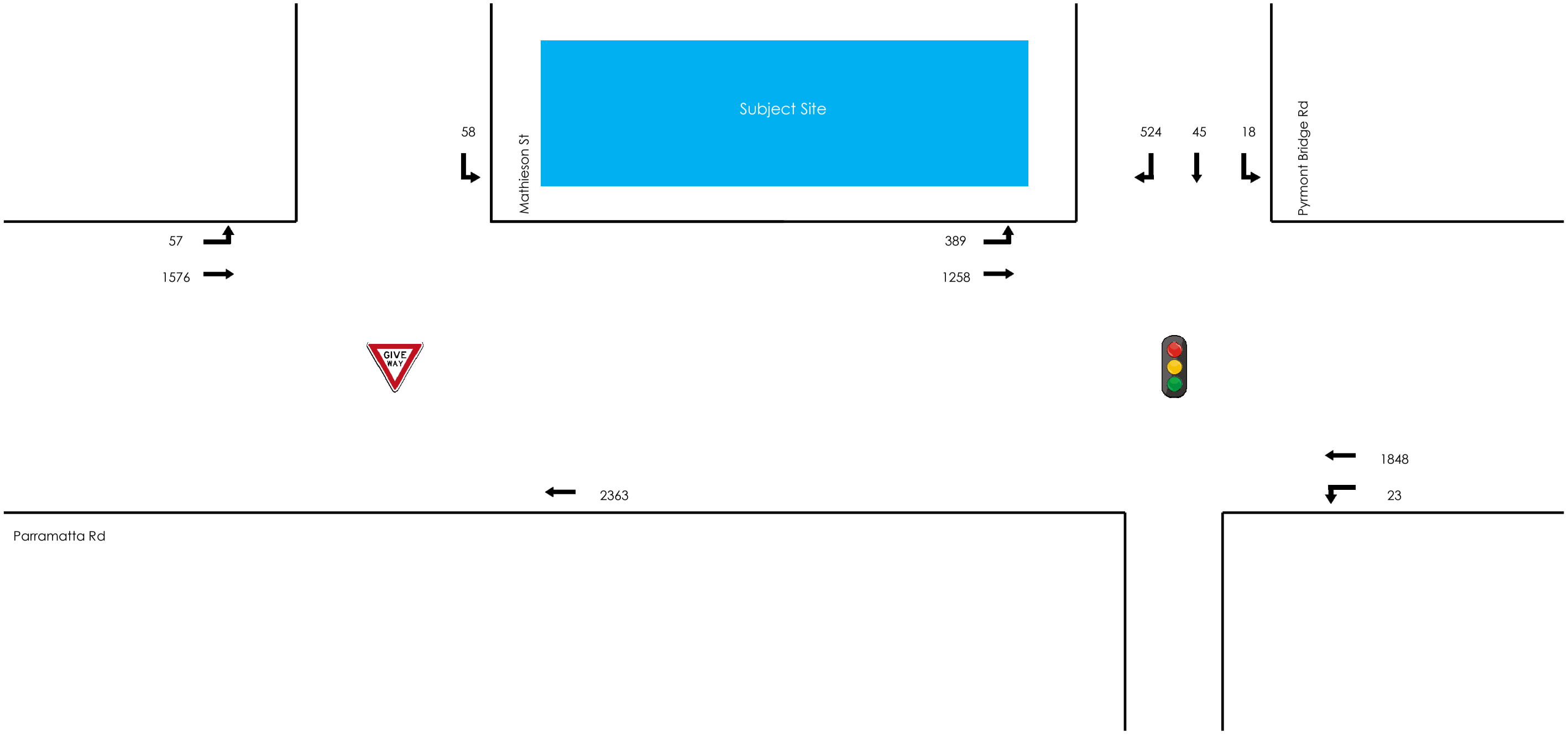



Transport Planning

122-130 Pyrmont Bridge Rd, Annandale Proposed Health Facility Planning Proposal

Figure 2a

2021 Existing Morning Peak Plus Development

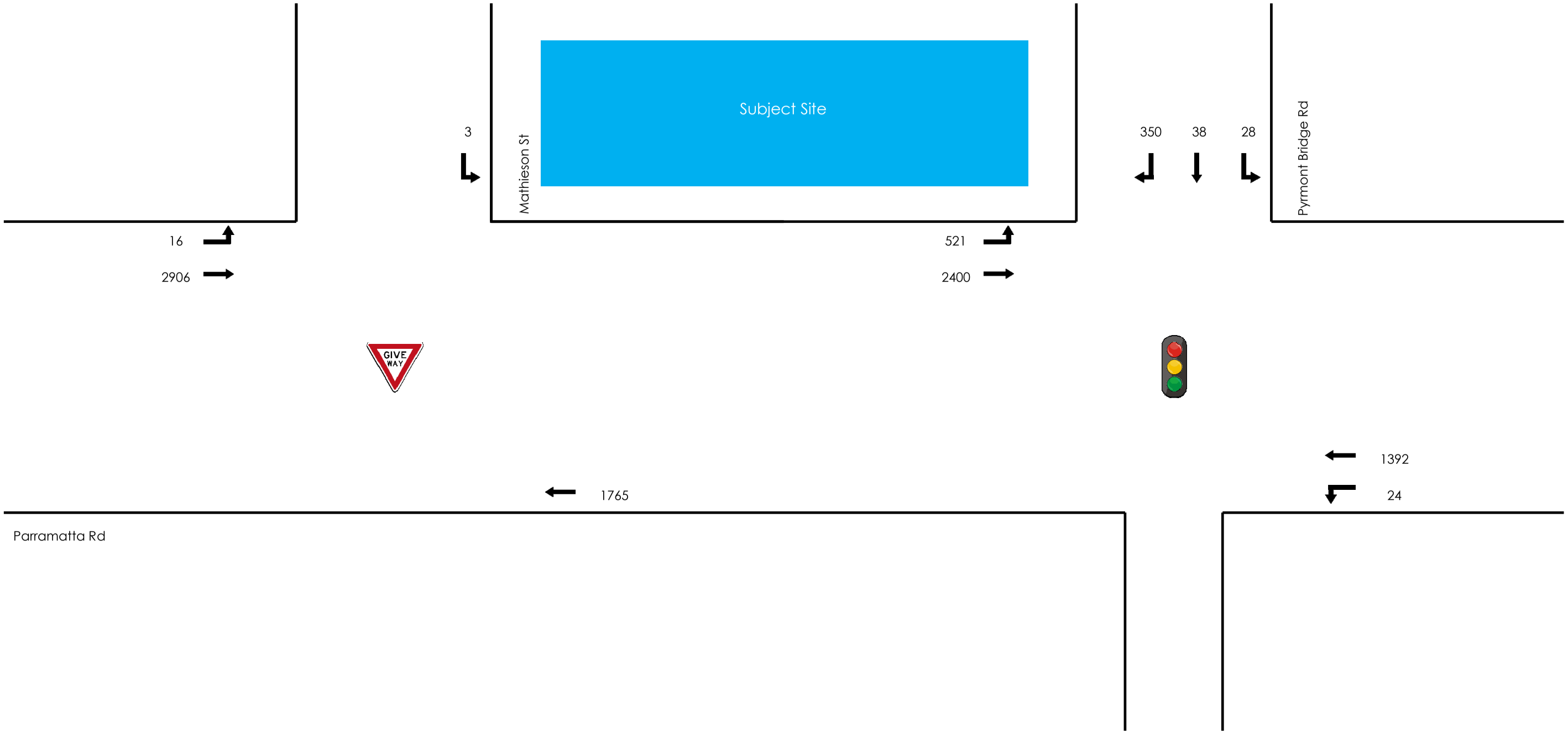



Transport Planning

122-130 Pyrmont Bridge Rd, Annandale Proposed Health Facility Planning Proposal

Figure 2b

2021 Existing Evening Peak Plus Development

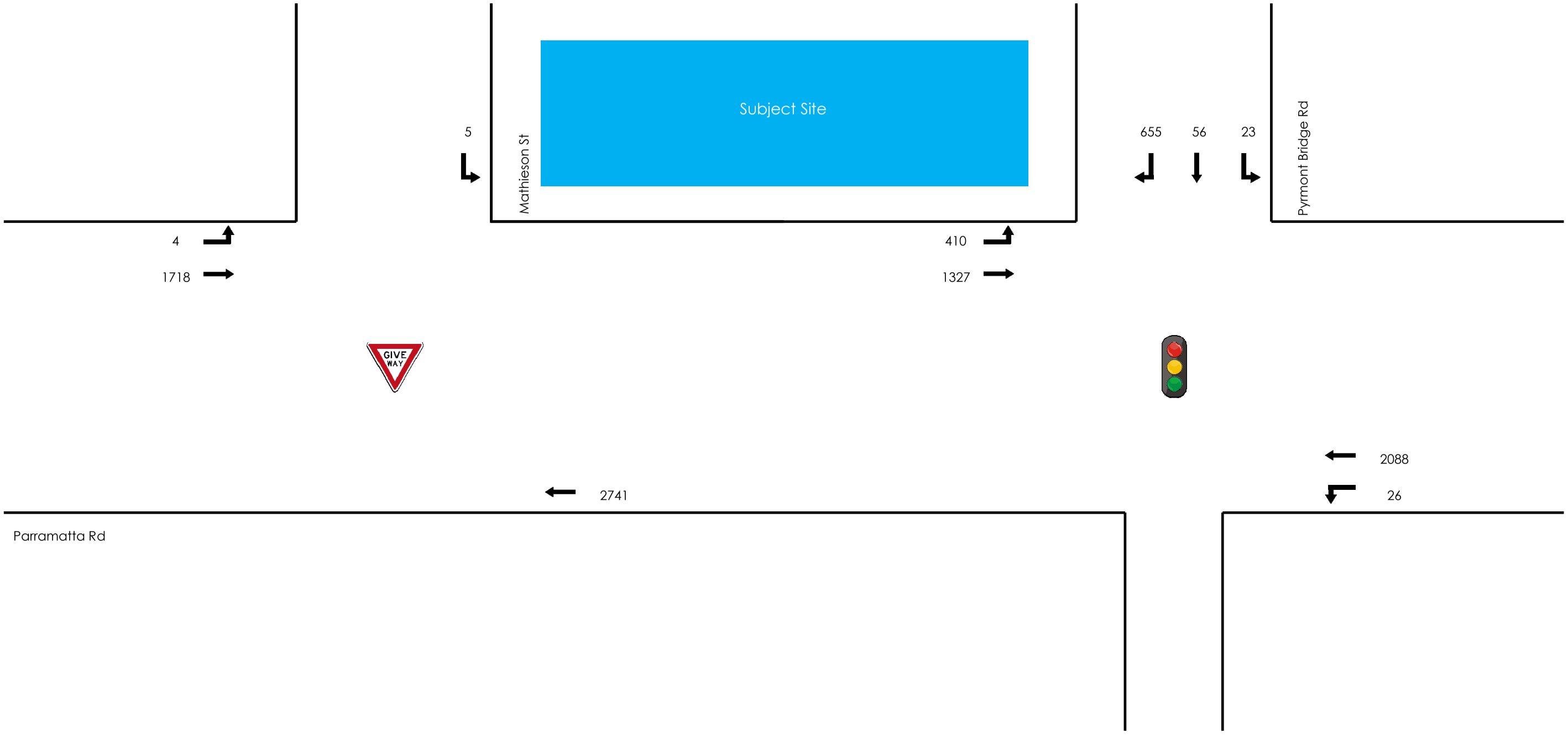



Transport Planning

122-130 Pyrmont Bridge Rd, Annandale Proposed Health Facility Planning Proposal

Figure 3a

2031 Future Base Morning Peak Hour Volumes

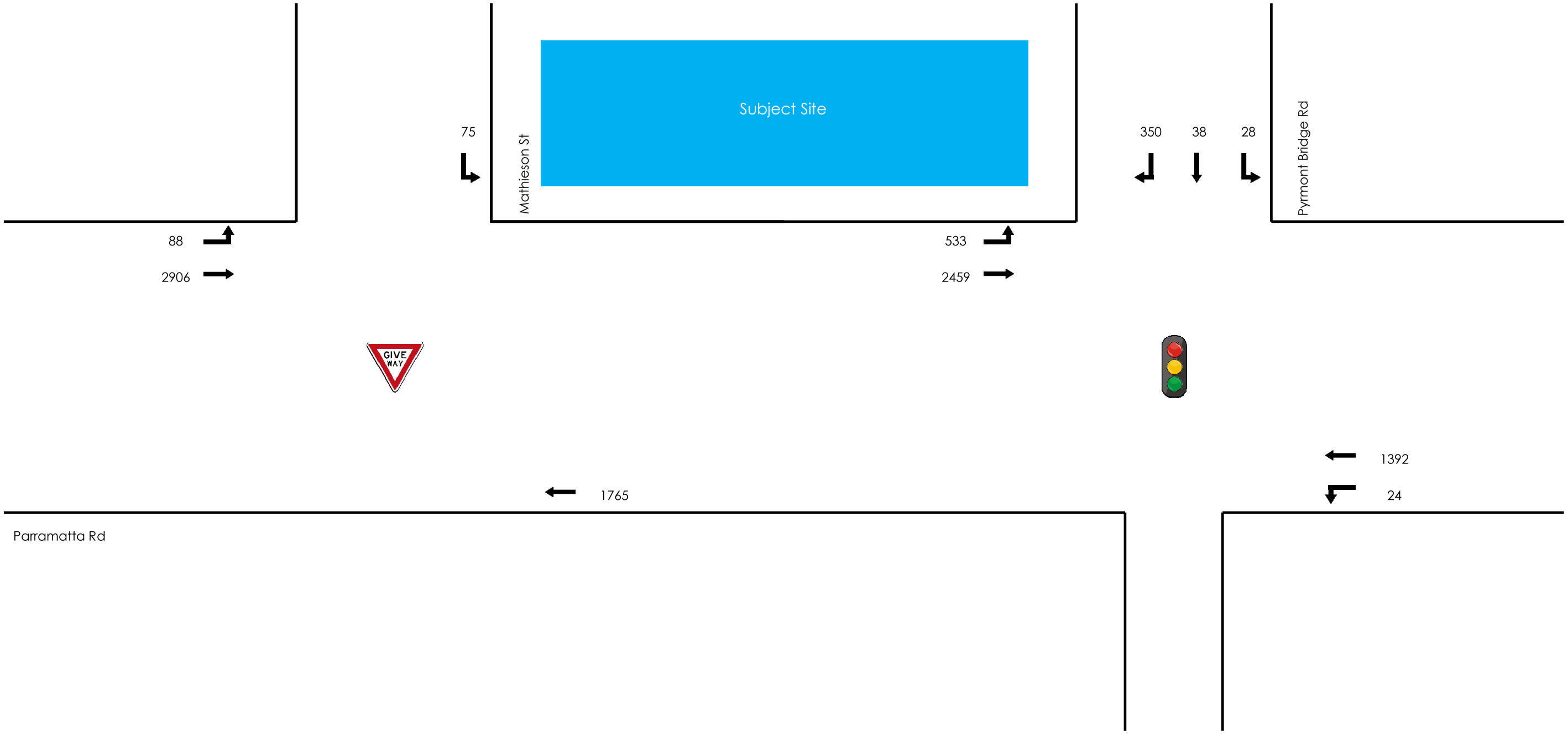



Transport Planning

122-130 Pyrmont Bridge Rd, Annandale Proposed Health Facility Planning Proposal

Figure 3b

2031 Future Base Evening Peak Hour Volumes

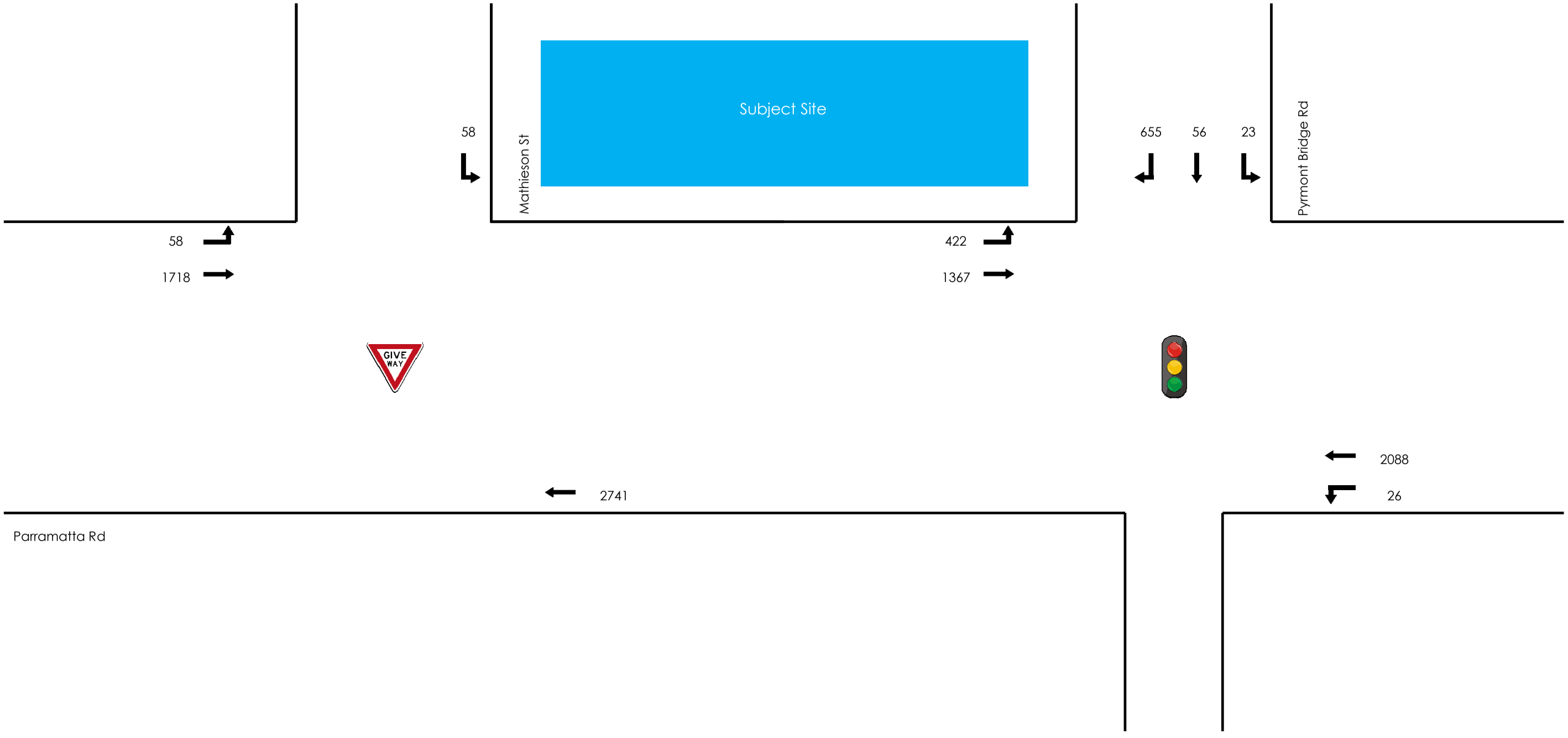



Transport Planning

122-130 Pyrmont Bridge Rd, Annandale Proposed Health Facility Planning Proposal

Figure 4a

2031 Future Morning Peak Plus Development




Transport Planning

122-130 Pyrmont Bridge Rd, Annandale Proposed Health Facility Planning Proposal

Figure 4b

2031 Future Evening Peak Plus Development

**Appendix 3 - Transport Report**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