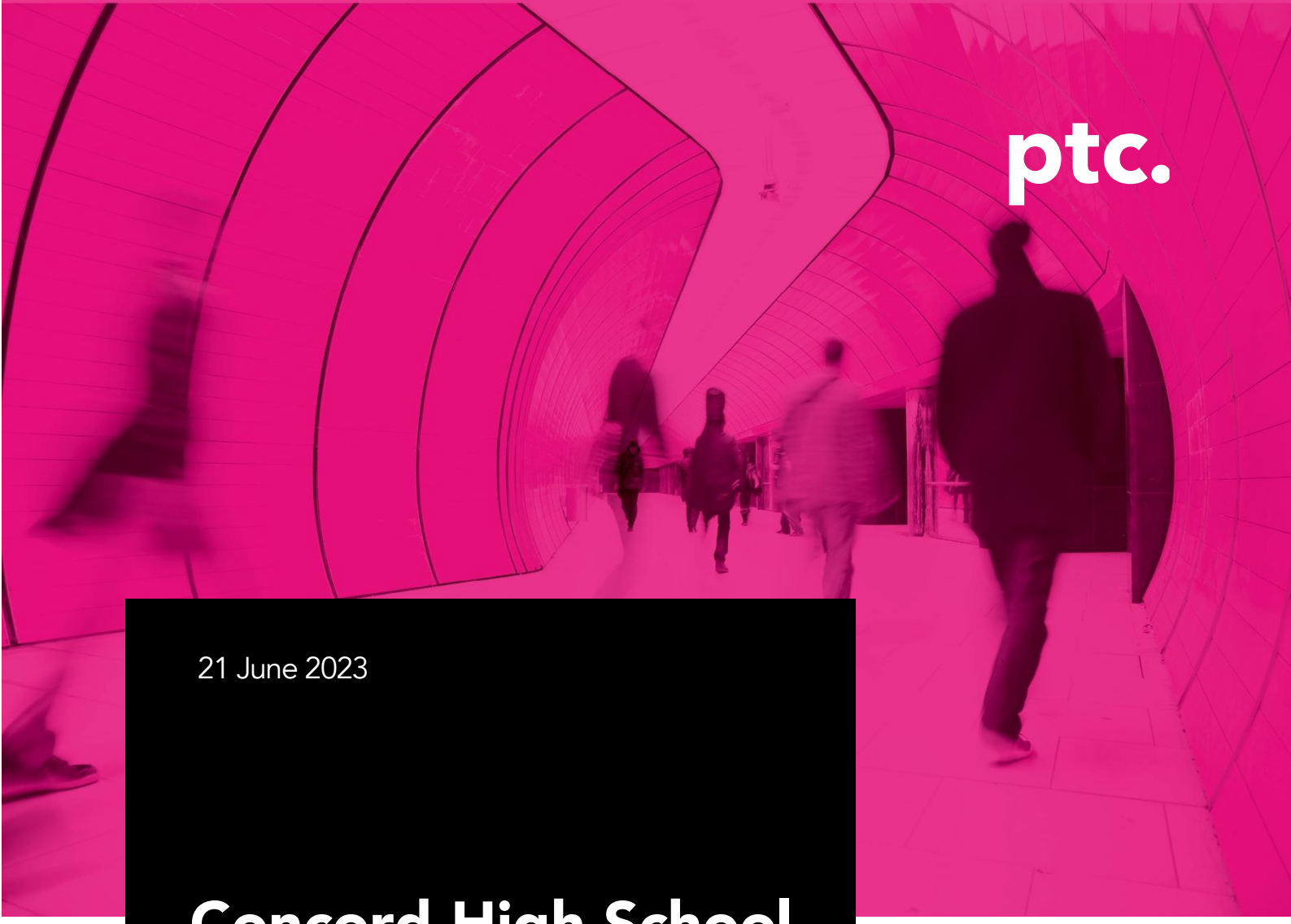


21 June 2023

Concord High School SINSW Transport and Traffic Assessment;

For: **SINSW**

Site Address: 5 Stanley Street, Concord NSW

Project reference number: 23-0620

document control;

Issue:	Date	Issue details	Author	Reviewed
1	24/05/2023	Draft	DK/SM/KP/HL	KB
2	15/06/2023	2nd Draft	DK/SM/KP/HL	KB
3	15/06/2023	3rd Draft	DK/SM/KP/HL	KB
4	21/06/2023	Final	DK/SM/KP/HL	KB

For the attention of:

Sherwin Rasquinha

School Infrastructure NSW

Level 8, 259 George Street

Sydney, NSW 2000

Contact:

Kasia Balsam

+61 2 8920 0800

+61 478 848 945

kasia.balsam@ptcconsultants.co

Sichao Miao

+61 2 8920 0800

sichao.miao@ptcconsultants.co

ptc.
Suite 502, 1 James Place, North Sydney NSW 2060
info@ptcconsultants.co I (+61) 2 8920 0800 I ptcconsultants.co
ABN 85 114 561 223

contents;

contents;

contents;

contents;

contents;

contents;

1. Introduction

1.1. Background

ptc. has been engaged by School Infrastructure New South Wales (SINSW) to prepare a Traffic and Transport Assessment (TTA) report in relation to a Development Application (DA) at the Concord High School ("the School").

Currently, the School accommodates 1,335 year 7-12 students and 89 full time employed staff. The proposal is to upgrade and construct new structures and to uplift the current student capacity to 1,360 students.

The development application will be submitted as a DA to the City of Canada Bay Council.

This report sets out the methodology and findings of the study for the assessment of the transport implications associated with the project proposal.

1.2. School Location

The School is located at 5 Stanley Street, Concord, NSW 2137, within the City of Canada Bay's Local Government Area (LGA). The School has a frontage to Crane Street to the north-east and Stanley Street to the south-west.

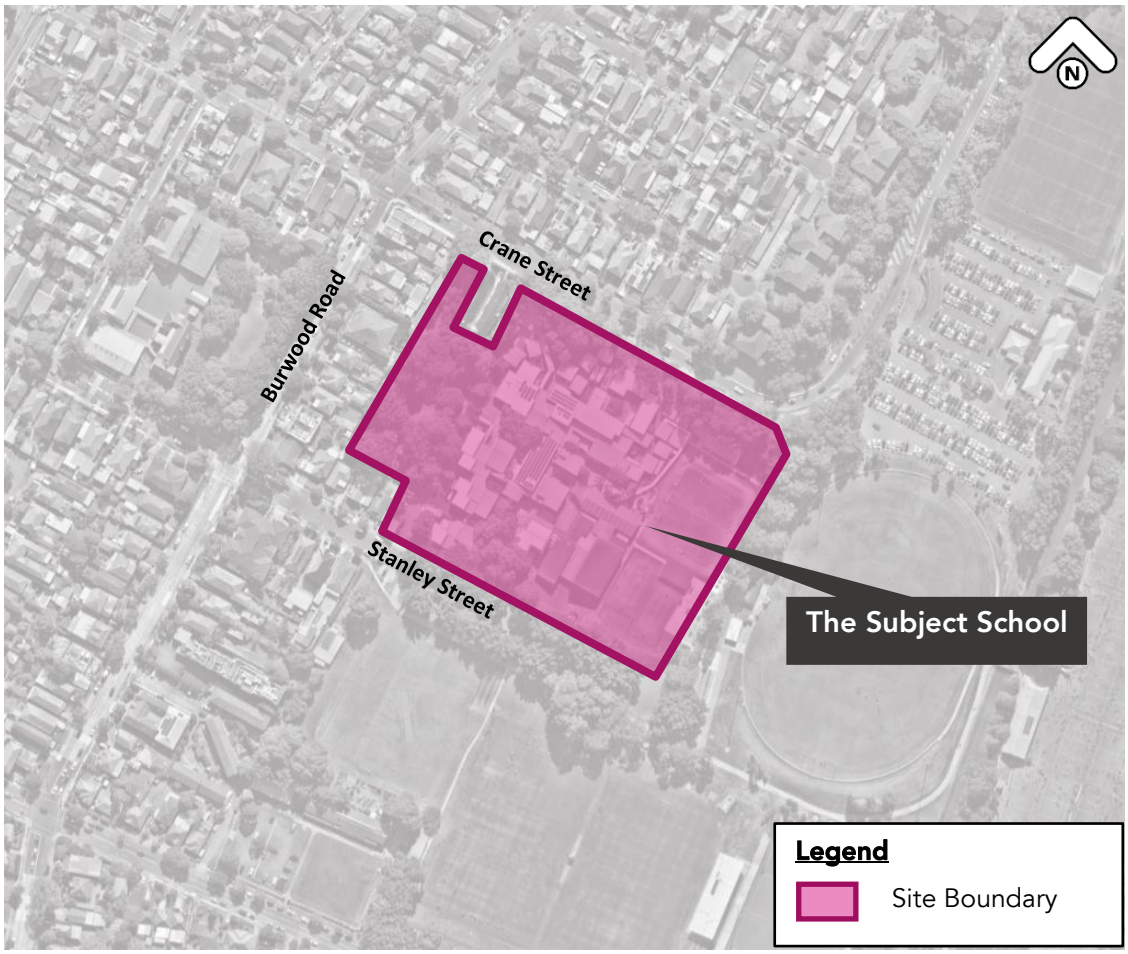


Figure 1-1: School Location

1.3. Enrolment Catchment Area

The School's existing student enrolment catchment has been obtained from NSW Department of Education School Finder. The proposal involves the reduction of the enrolment catchment area. The existing and proposed enrolment catchment are illustrated below.

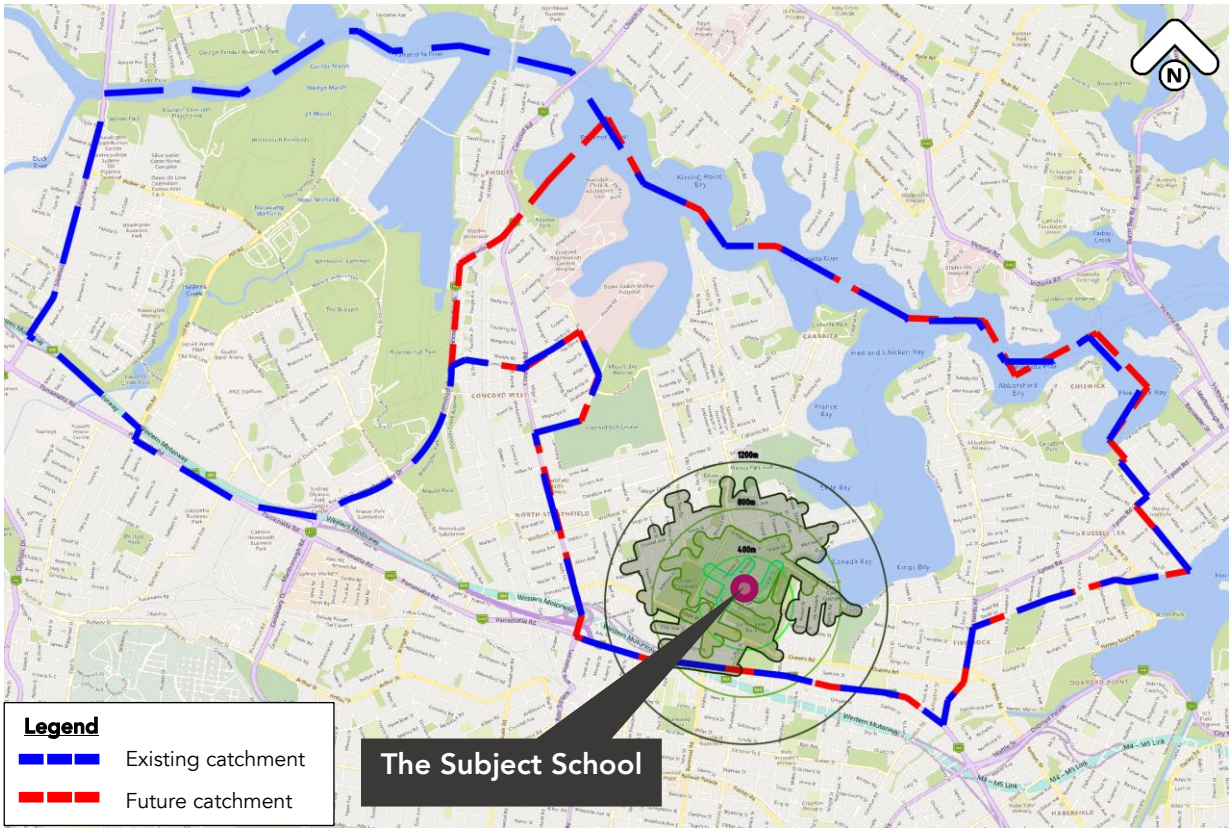


Figure 1-2: Existing and Future School Enrolment Catchment

1.4. Development Proposal

The development proposal for the School involves the redevelopment of the school with the following attributes:

- A reduced enrolment catchment area
- An increased capacity from 1,335 to 1,360 year 7-12 students
- An increase in staff from 89 to 95 FTE
- Demolition of the existing eastern car park off Stanley St with 28 spaces
- An expansion of the existing western car park off Stanley St from 12 to 29 spaces
- Provision of on-site mini-bus parking off Crane Street
- Addition of bicycle parking, showers, change rooms and lockers

The proposed site plan of the School in illustrated in Figure 1-3, and the detailed architectural drawings are presented in Appendix 1.

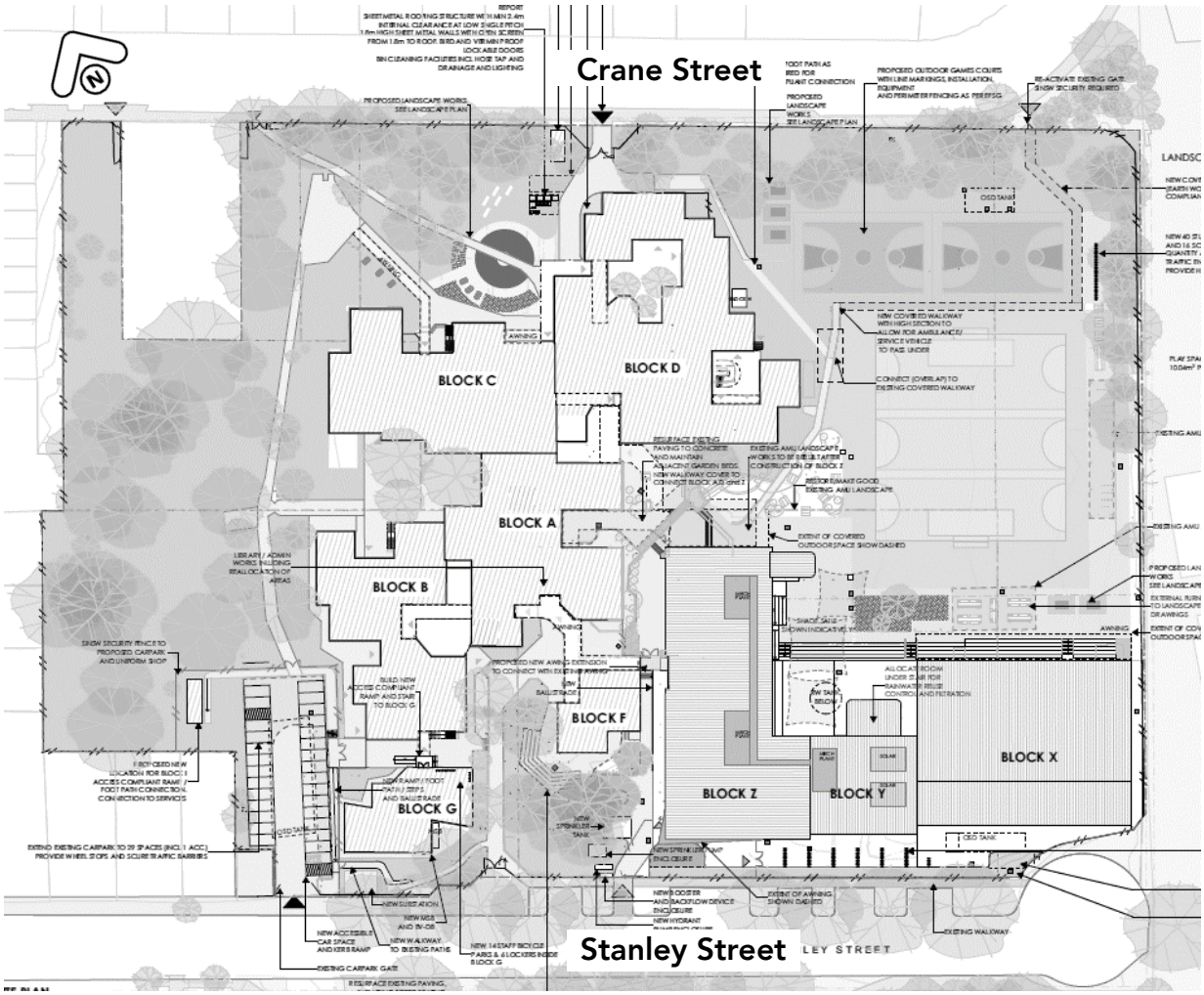


Figure 1-3: Proposed Site Plan (Source: JDH Architects)

2. Area Context

2.1. State Transport or Infrastructure Plans

This section presents the local and state existing plans, programs and strategies for the school catchment area, and potential future implications for the School.

2.1.1. Future Transport 2056

The Greater Sydney City Shaping Network 2056 is aimed to provide high capacity and high frequency services to the metropolitan centres.

This project does not directly affect the existing arrangements, but the potentially improved frequency of trains and the new metro lines may serve staff who live within the wider area of Sydney.

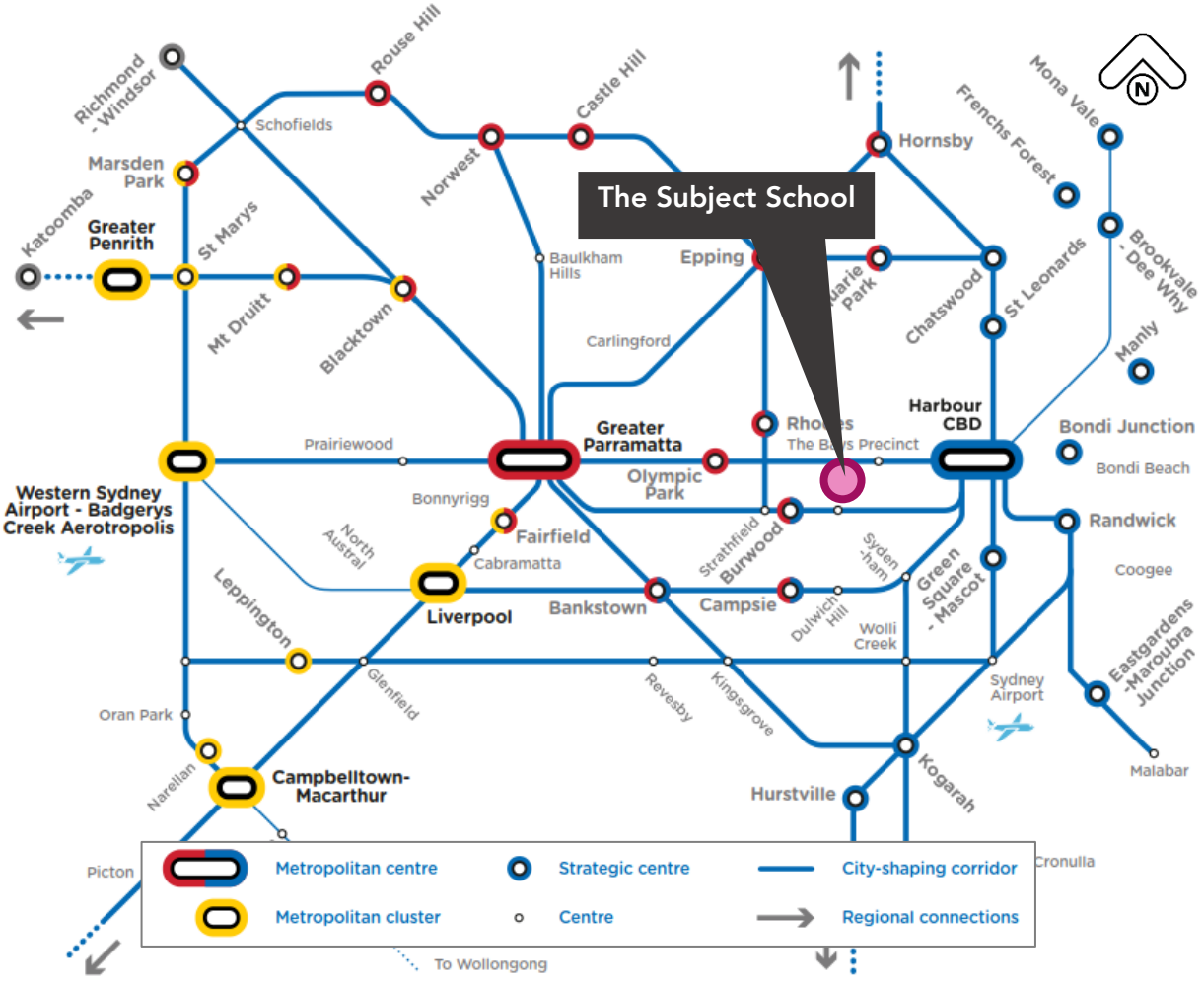


Figure 2-1: Greater Sydney Mass transit / train network (visionary) (Source: Future Transport 2056 Strategy)

The Future Transport 2056 Strategy has the vision to construct a safe cycleway network to motivate people to cycle for trips up to 10km.

This document appears to address a broader vision and is aimed to provide connectivity on a larger scale.

It appears that the proposed cycle paths will be located in close proximity to the School, which may encourage students and staff to cycle to/from the school.

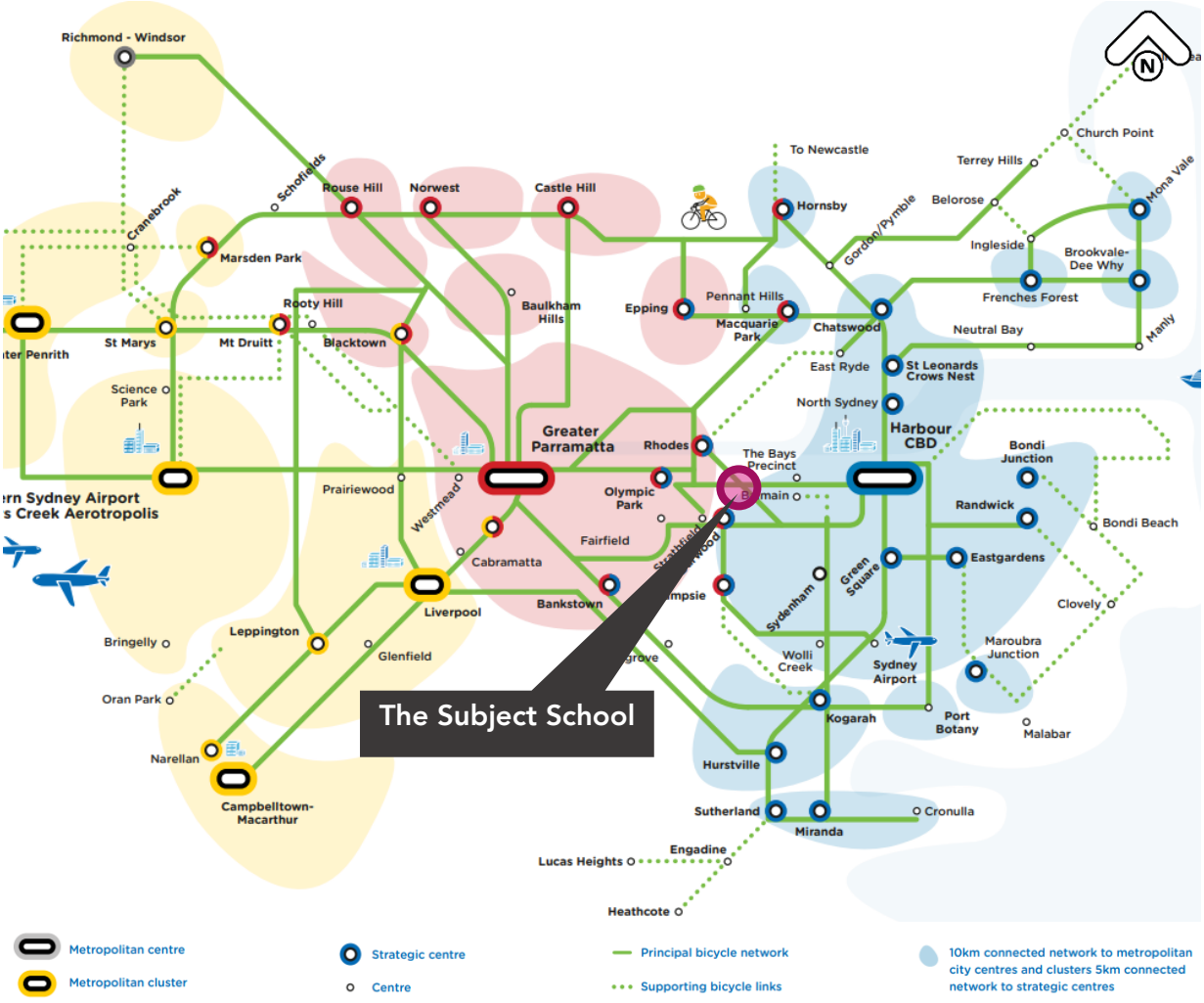


Figure 2-2: Growing Sydney's bicycle network (visionary) (Source: Future Transport 2056 Strategy)

2.1.2. Sydney Metro - West

Sydney Metro West project aims to provide excellent metro services to connect Greater Parramatta and the Sydney CBD by the end of 2030, running parallel to the existing western railway lines.

This metro line lies along the southern edge of the enrolment catchment area and therefore, does not provide additional connectivity for students. However, it could potentially serve staff who live along the proposed metro route catchment.

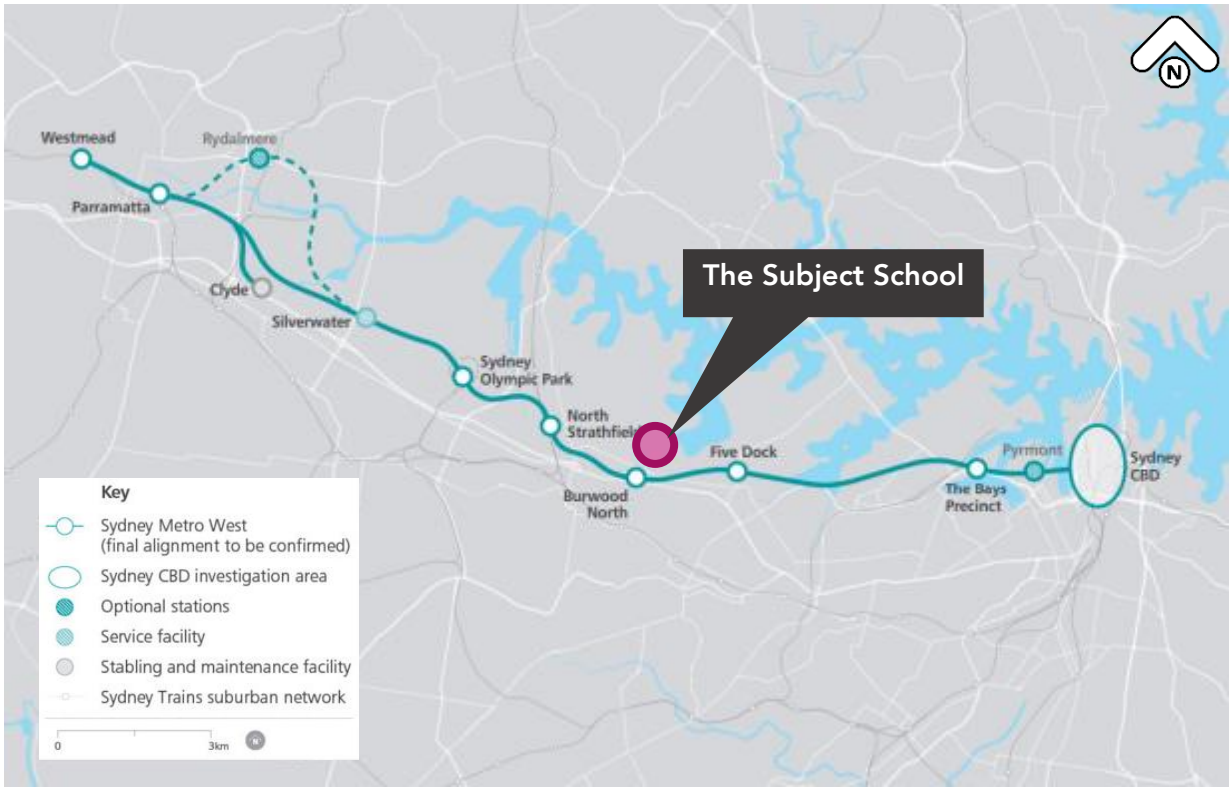


Figure 2-3: Sydney Metro West (Source: https://www.sydneymetro.info/)

2.2. Local Transport Plans

2.2.1. Community Strategic Plan – Your Future 2030

The Council has developed a strategic plan that captures the community's collective vision for the City of Canada Bay until 2036. Some of the goals include:

- Adopting an integrated approach to the provision of Major Regional Infrastructure to meet community needs;
- Providing a connected network of quality active and public transport routes and services that help to minimise traffic and make it easier to get around; and
- Provide traffic, parking, roads and marine infrastructure to promote safe and efficient travel.

2.2.2. City of Canada Bay Environmental Strategy

The City of Canada Bay has adopted a new Environmental Strategy in 2020 to ensure the City is connected by walking, cycling and public transport opportunities. The Council's goals are to achieve improved access to sustainable transport options, cycleway facilities, walkability and accessibly to ease congestion.

The Council's major targets are:

- 5% of trips made by cycling by 2036 (1% in 2016)
- 20% of trips made by walking by 2036 (12% in 2016)

- 30% increase in total kilometres of cycleways from 2019 baseline by 2030 (39km of cycle way in 2019)

2.2.3. City of Canada Bay Local Movement Strategy

The Local Movement Strategy is to set out a 20-year vision for the Council and contribute to Council's Local Strategic Planning Statement.

One major goal of the strategy is to reduce the share of private vehicle trips compared with other modes. To facilitate this mode shift, the Local Movement Strategy highlights opportunities for safe walking and cycling facilities across the Council area, as well as safe routes to schools, completion of missing links in the cycle network and a simplified and more direct bus network.

A strategic bicycle map has been developed for the Council, indicating existing on-road and off-road routes and connections to regional bike routes.

The following figure illustrates future cycle routes which are seen as an opportunity for connections to existing cycling facilities and local centres, train and potential metro stations and other travel generators across the LGA. These are seen as beneficial to students and staff attending the School.

Figure 2-4: Existing & Future Cycle Routes (Source: City of Canada Bay Local Movement Strategy)

2.2.4. Canada Bay Draft Bike Plan

Council is currently developing a new bike plan to identify and plan the delivery of cycling infrastructure to meet the current and future needs of bike riders.

The following map shows the existing off- and on-road bicycle routes, as well as those proposed. These are seen as beneficial to students and staff attending the School.

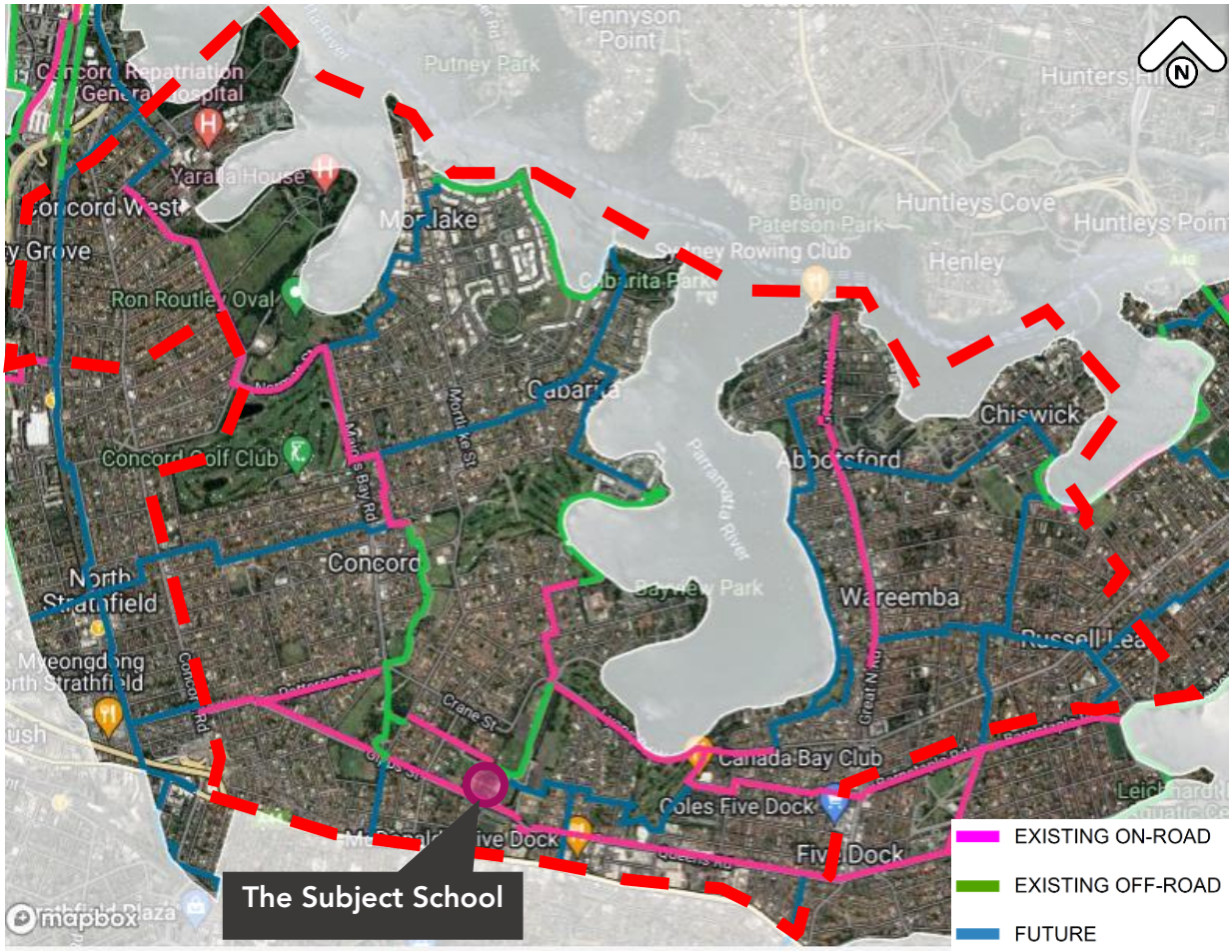


Figure 2-5 - Canada Bay BIke Plan Map (https://collaborate.canadabay.nsw.gov.au/draft-bike-plan)

2.2.5. City of Canada Bay Local Strategic Planning Statement 2020

The Local Strategic Planning Statement (LSPS) serves as the central strategic planning document for the City of Canada Bay. Its purpose is to provide guidance on shaping the character of the LGA's centres and neighbourhoods in the years to come. The LSPS outlines the challenges and opportunities that lie ahead and presents the necessary actions to safeguard and improve the residents' way of life.

The key land use visions include creating attractive and functional urban spaces, promoting diverse and affordable housing options, preserving and improving local character, enhancing connectivity and cohesion within neighbourhoods and centres, aligning growth with infrastructure development, ensuring high-quality density in the Sydney Metro West project, facilitating sustainable development and rejuvenation, and fostering biodiversity and urban tree canopy expansion.

2.2.6. Pedestrian Access and Mobility Plan (PAMP) 2021

The purpose of this Pedestrian Access and Mobility Plan (PAMP) is to evaluate the existing pedestrian requirements within the LGA and enhance the walking environment for all pedestrians. The PAMP aims to prioritise pedestrian infrastructure improvements to promote safer and more attractive transport options for residents and visitors. Its objective is to increase pedestrian activity, enhance the overall amenity within the Council LGA, and achieve the following goals:

- Encourage the utilisation of the pedestrian network for short trips (0-2 km)
- Reduce the number of missing links within the pedestrian network
- Decrease the number of pedestrian crashes
- Improve pedestrian connectivity with other transport modes, including train, bus, bicycle, and car
- Provide pedestrian facilities that accommodate the needs of all pedestrians, including people with disabilities, commuters, children, seniors and recreational walkers
- Complement existing and planned pedestrian and bicycle facilities

A review of the PAMP has been conducted, and it was found that some gaps in the pedestrian infrastructure in the vicinity of the school were identified. It is understood that Council has included upgrades to the infrastructure in their budget.

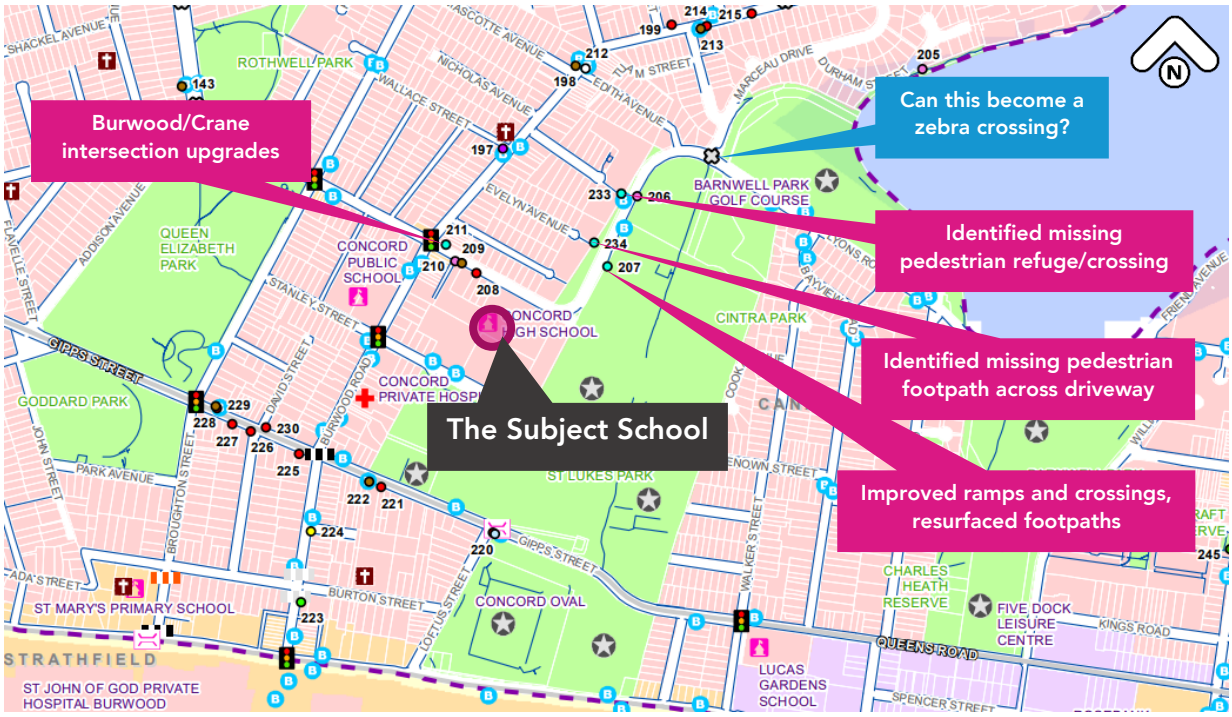


Figure 2-6 – Locations of Existing Issues and Contraints for Pedestrians (https://collaborate.canadabay.nsw.gov.au/pamp)

2.3. Local Land Use Planning

2.3.1. Canada Bay Local Environmental Plan 2013

The objective of this plan is to establish local environmental planning provisions for land within Canada Bay in alignment with the applicable standard environmental planning instrument.

The School is located at 5 Stanley Street, Concord. The site comprises of lot 15 DP 8687, lot 18 DP8687, lot 19 DP8687, lot 20 DP8687, lot 1 DP1114919, lot 1 DP 60167, lot 2 DP 1114919, and lot 3 DP 1114919.

The site lies within the R3 (Medium Density Residential) zone which expands to the school's west. To the north, there is an R2 zone (Low Density Residential).

A large RE1 (Public Recreation) zone is on the eastern side of the School, comprising sporting and recreational facilities (i.e. St Lukes Oval, St Lukes Park, etc) and associated car parks.

The surrounding land use zones are presented in Figure 2-7.

Figure 2-7: Surrounding land use (https://www.planningportal.nsw.gov.au/spatialviewer/)

2.3.2. Canada Bay Development Control Plan 2022

The current Development Control Plan (DCP) includes planning controls for vehicle and bicycle parking rates and bicycle storage facilities.

3. Transport Networks and Operations

3.1. Existing School Access

The School has a total of 7 access gates for various uses: 4 are located on the Stanley Street frontage, 3 on Crane Street.

The school bus stop is located at the School's main entry off Stanley Street; further bus stops are located on Burwood Road and Crane Street.

A map of the direct surroundings of the school showing access points is illustrated in Figure 3-1.

Figure 3-1: School Access Map

To understand the existing transport conditions and behaviours on the surrounding road network servicing the School, pedestrian and traffic surveys were undertaken around the School on Tuesday, 30th March 2023 (outside of school holidays).

As part of the surveys, pedestrian counts were obtained around the School access gates and intersections, as shown in Figure 3-2.

The main pedestrian activity was recorded along Stanley Street. This is likely due to the following factors:

- The main entry to the school is along Stanley Street.
- Stanley Street is more pleasant to walk along than Crane Street, as the latter has higher traffic volumes and speeds. Stanley Street is a no-through local road with a small number of residential properties, thus it is likely perceived as the safer option.
- Students using the St Luke's car park mostly use the main access off Stanley Street.
- Many students use public buses running along Burwood Road.

Figure 3-2: Pedestrian access pattern around the School

3.2. Active Transport

The following sections describe the existing pedestrian and cycling infrastructure within the school enrolment catchment. Based on these findings, a gap analysis has been undertaken and ways to improve walkability and cyclability have been suggested.

3.2.1. Walking

The NSW Guidelines to Walking & Cycling 2004 (the Guide) suggests that 400-800m is a comfortable walking distance when considering the distance to public transport, which equals a 5-10 minutes' walk. SINSW defines 1.2km distance as acceptable, which equals a 15-minute walk. Figure 3-3 shows the "as crow flies" and the actual 400m, 800m and 1200m walking catchments from the School. The actual on-street walking catchment covers a reasonable portion of the enrolment catchment.

The existing pedestrian walking infrastructure in the locality contains footpaths generally either on one side or both sides of most roads. There are signalised pedestrian crossings at the intersections of Burwood Road & Stanley Street and Burwood Road & Crane Street, providing connectivity to the surrounding streets and bus stops.

Within the enrolment catchment, 2% of students reside within the 400m walking catchment, 4% within the 401m - 800m catchment and 10% within the 801m - 1200m catchment.

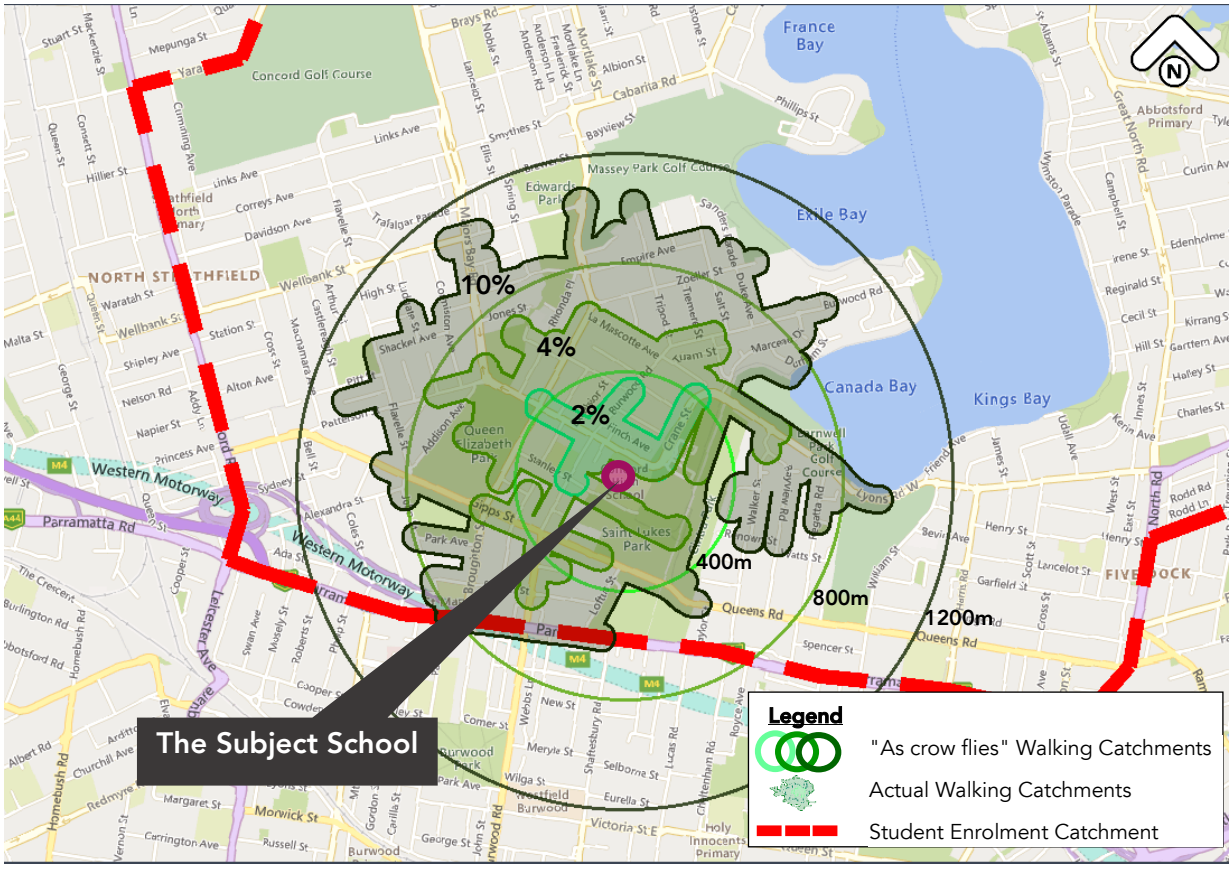


Figure 3-3: Walking Catchment for the School

3.2.2. Cycling

The Guide suggests the comfortable cycling distance is to be between 800m-1.5km, which equals a 5-10 minutes' cycle. SINSW considers distances up to 3.6km as acceptable for cycling. Distances of up to 2.4km and 3.6km are seen as acceptable if cycling is the only mode of transport for primary and secondary school students, respectively.

A map of the School's "as crow flies" and actual 1200m / 2400 / 3600m cycling catchments is presented in Figure 3-4. The majority of the school catchment area lies within the 3600m cycling catchment. The actual on-street cycling catchment also covers almost the entire portion of the enrolment catchment.

Within the enrolment catchment, 16% students reside within the 1200m walking / cycling catchment, 32% students reside within the 1201m - 2400m cycling catchment and 24% students reside within the 2400m – 3600m cycling catchment.

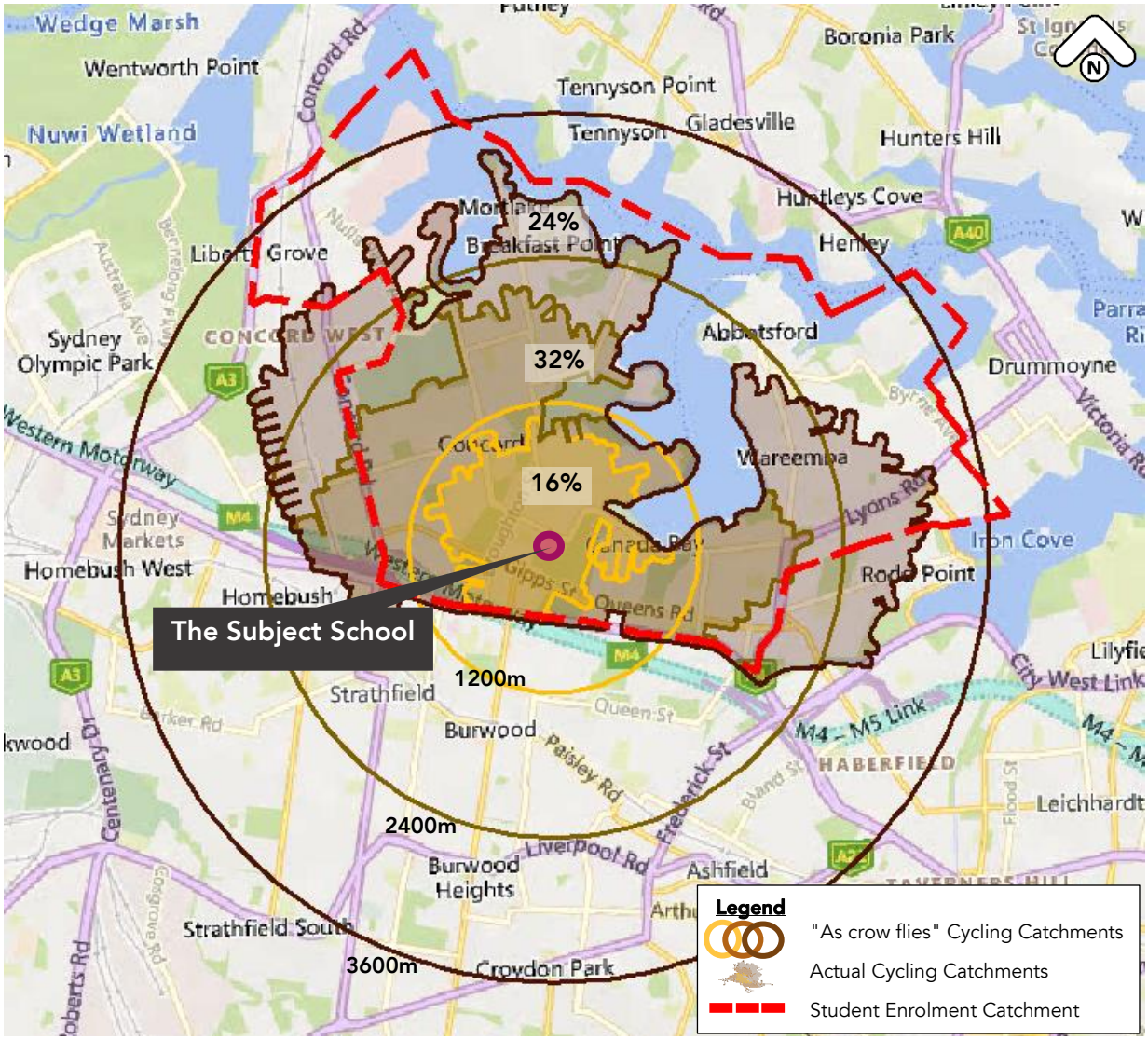


Figure 3-4: Cycling Catchment for the School

An analysis of the Open Data website has been undertaken to assess the existing and proposed cycling infrastructure in the vicinity of the School as an indication of the potential for students to use a bicycle as their primary mode of transport.

As shown in Figure 3-5, the existing cycling infrastructure is fairly well developed in the direct vicinity of the School, thought mostly the path is shared with cars on the road.

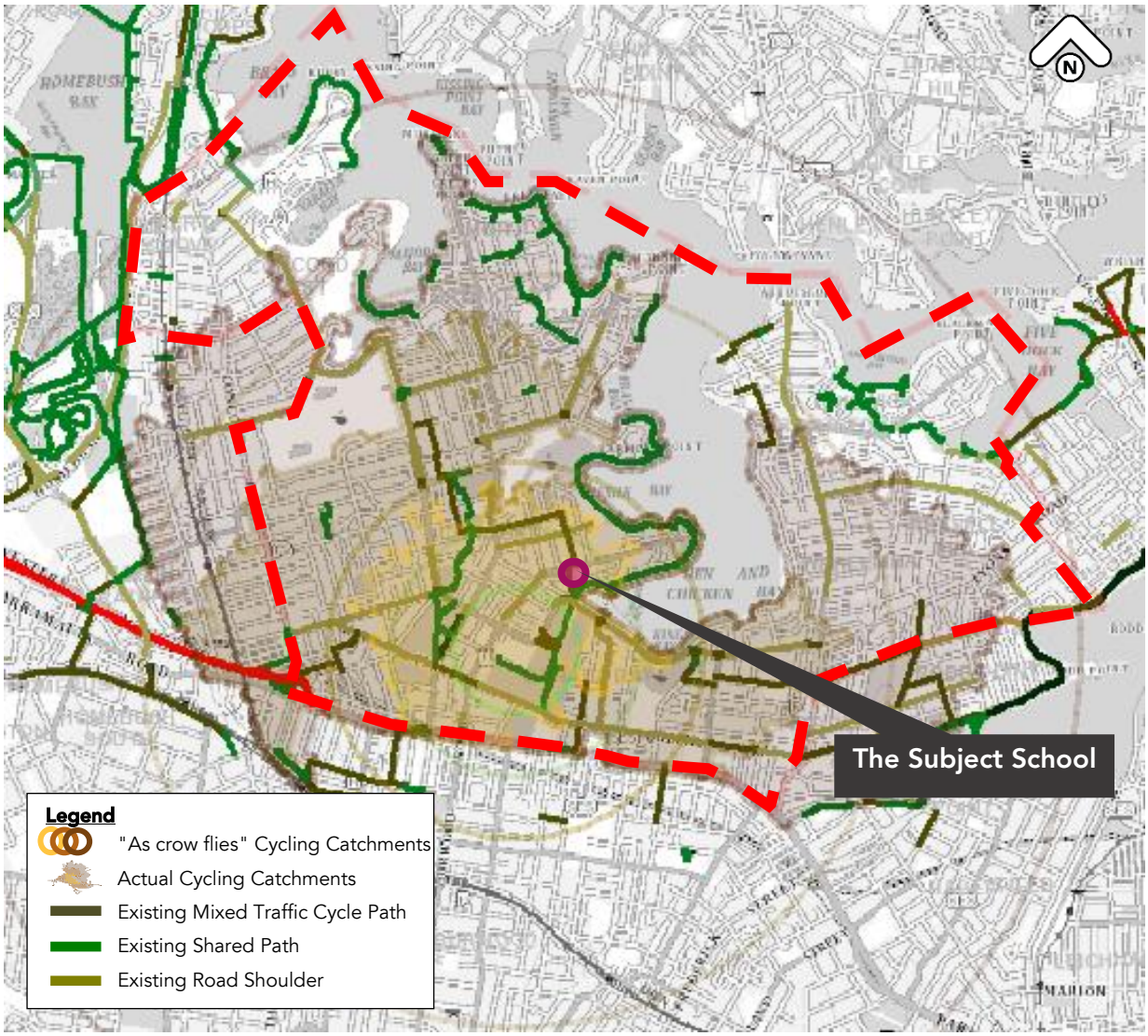


Figure 3-5: Existing cycling infrastructure in the School's cycling catchment

Figure 3-6 presents planned cycleways in the locality. Designated shared paths are proposed towards the south, west and east of school along Gipps Street and Queens Road. Some mixed cycle paths are planned towards the east and west of the school along Parramatta Road, Concord Road and Lyons Road. When they are constructed, they will improve the cycling infrastructure in the local area and benefit the School as well as the broader community.

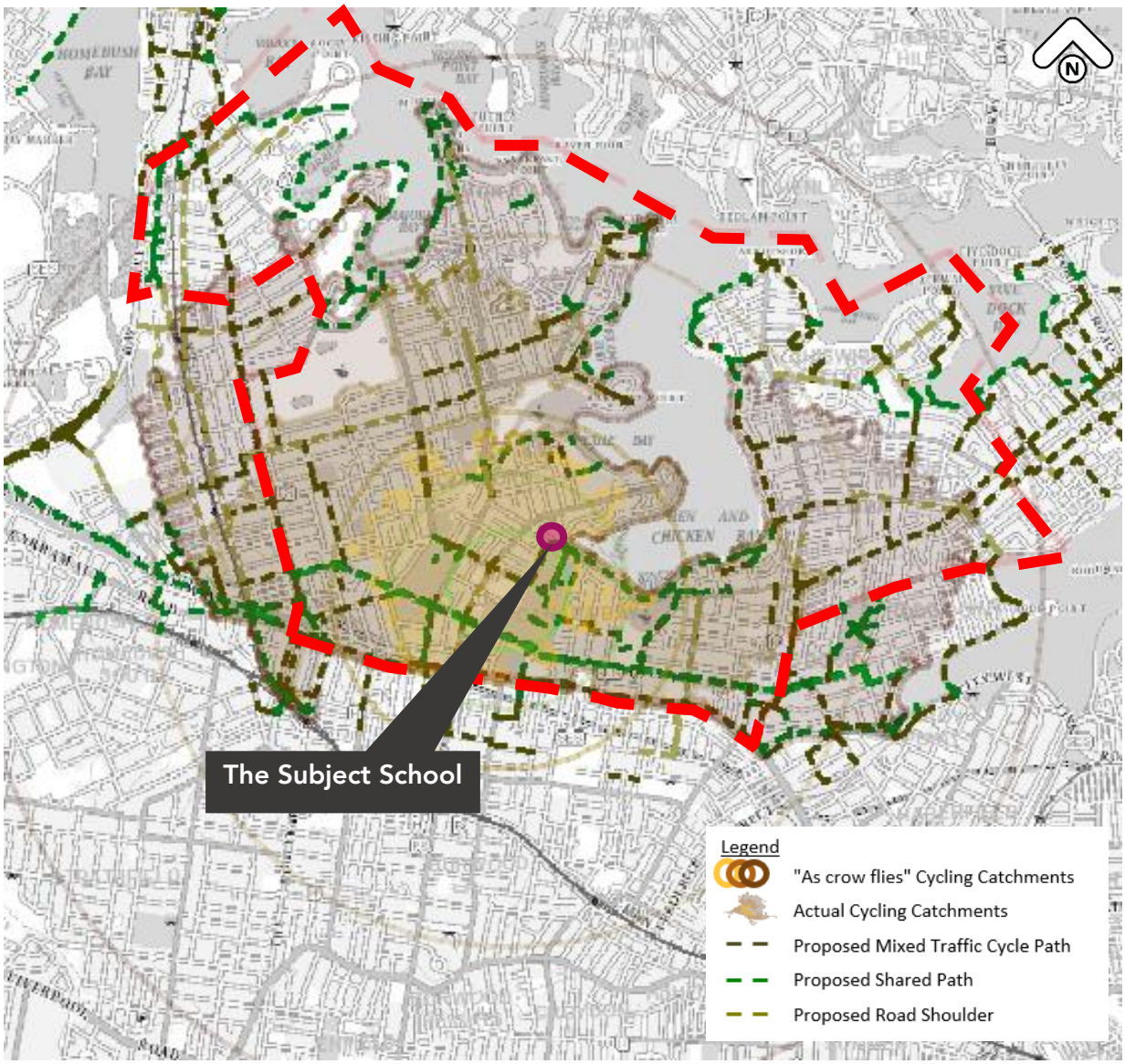


Figure 3-6: Planned cycling infrastructure in the School's cycling catchment

Generally, road shoulder and mixed road traffic cycleways are not considered suitable for school aged students, therefore, ideally, consideration should be made to constructing more shared paths in the vicinity of schools.

It is noted that children up to the age of 16 are legally allowed to cycle on footpaths.

3.2.3. Barriers

To make active transport to school attractive, a comprehensive pedestrian connectivity including footpaths and crossings needs to be provided within the active transport catchment. Nearmap aerial imagery has been used to assess the pedestrian amenities in the locality within the walking/cycling catchment of the school enrolment catchment.

For walking, Figure 3-7 shows the "as crow flies" and the actual 400m, 800m and 1200m walking catchments of the school. Barriers which reduce walking likelihood include the following:

- Footpaths on Crane Street are incomplete and therefore, students need to walk through a section of the St Luke's Oval Carpark.
- An off-road shared path exists to the north of the school, but the connection across Crane Street includes a refuge island only. However, the refuge is in the process of being upgraded by Council.
- Lack of pedestrian path along the northern kerbside of the turning head at Stanley Street for connectivity to the east.
- Lack of marked crossings prioritising pedestrians along some walking routes.

It is noted that Council is in the process of reviewing its active transport strategies and plans, and is currently upgrading walking and cycling infrastructure. Therefore, although the barriers described above may pose reasons for not walking or cycling, the active transport infrastructure is generally well developed and with some education around road safety, the vast majority of students should be capable of walking and cycling to and from School safely.

Figure 3-7: Barriers for Walking to the School

For cycling, Figure 3-8 shows the "as crow flies" and the actual 1.2km, 2.4km and 3.6km cycling catchments of the school. Barriers which may discourage people from cycling to the School are similar to the barriers for walking. The major barrier to cycling is along Queens Road for students travelling from/to the east.

- The Queens Road footpath is not wide enough to provide suitably safe cycling route;
- Cycling infrastructure is unsuitable with cars parked in the cycling lane during school travel times;

The number of students and staff within the cycling catchment who could cycle to the School is affected by the barriers. However, it is noted that addition to paths in this area has been proposed as part of the Draft Bike Plan.

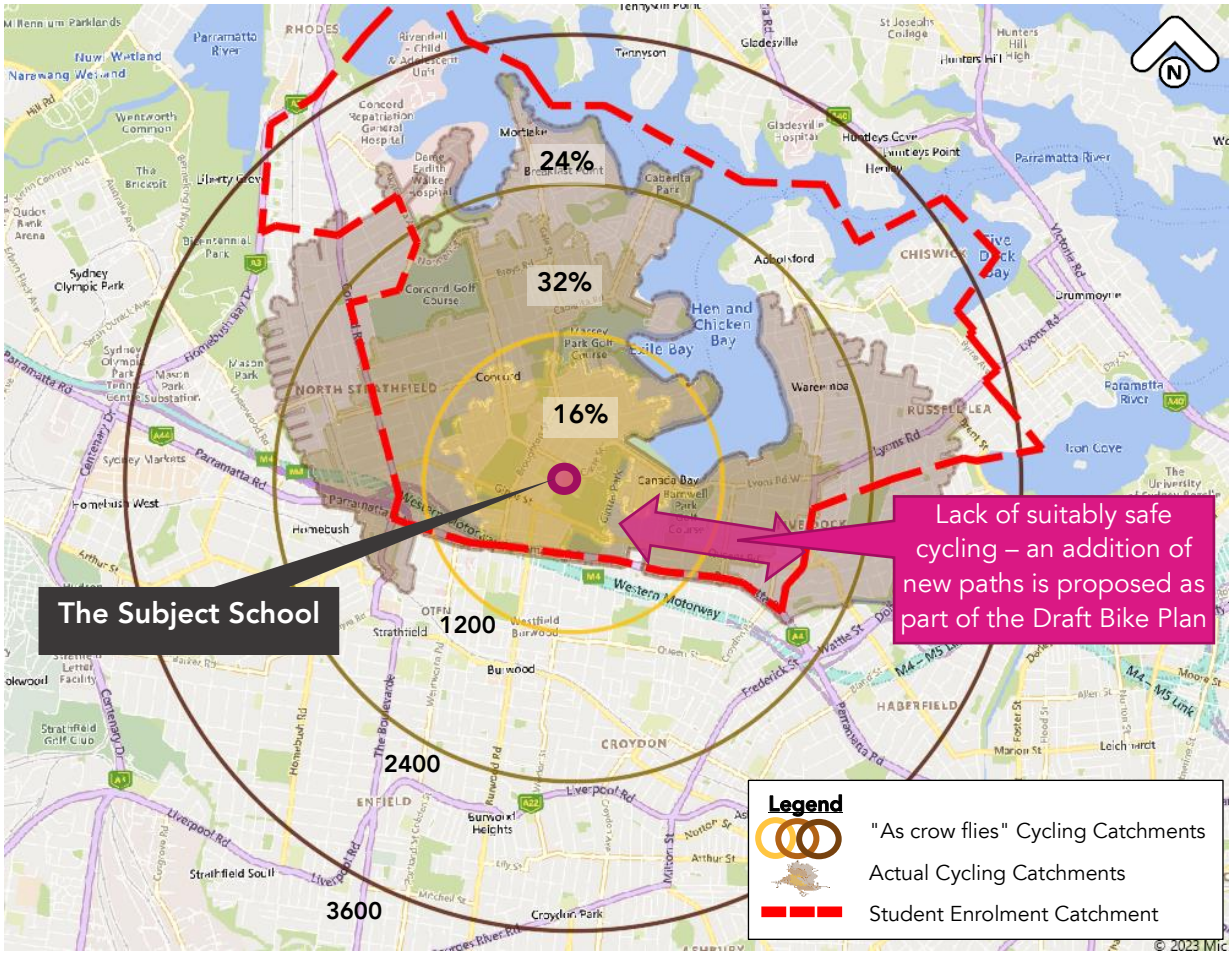


Figure 3-8: Barriers for cycling to the School

3.3. Public Transport

The locality of the site has been assessed in the context of available forms of public transport (PT) that may be utilised by prospective staff and students. When defining accessibility, the Guide suggests that 400m-800m (5-10 minutes' walk) is a comfortable walking distance to access public transport and local amenities.

3.3.1. Network

Figure 3-9 and Figure 3-10 illustrate the public transport network which can be used for travelling to and from the School during the morning and afternoon peak hours.

The School in considered to be very well serviced by public transport.

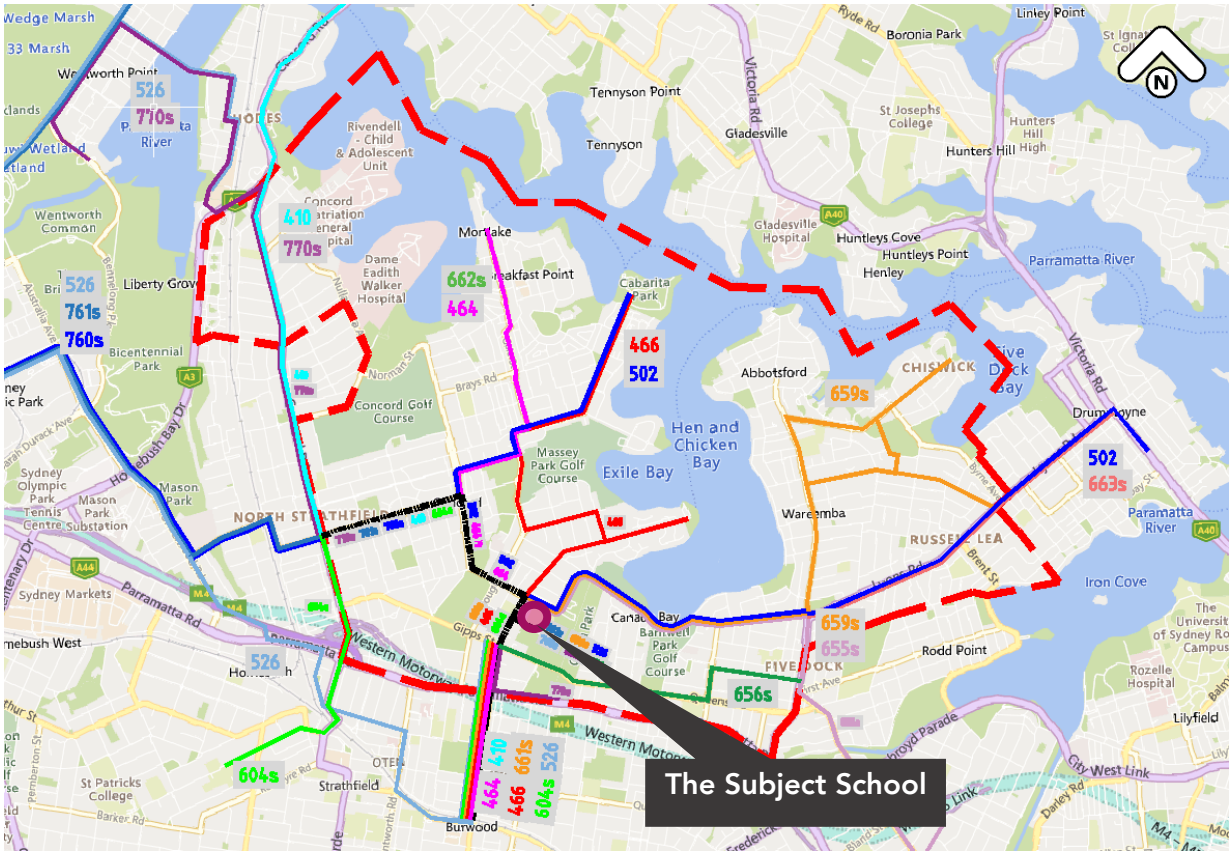


Figure 3-9: Public transport and school bus network - morning school peak

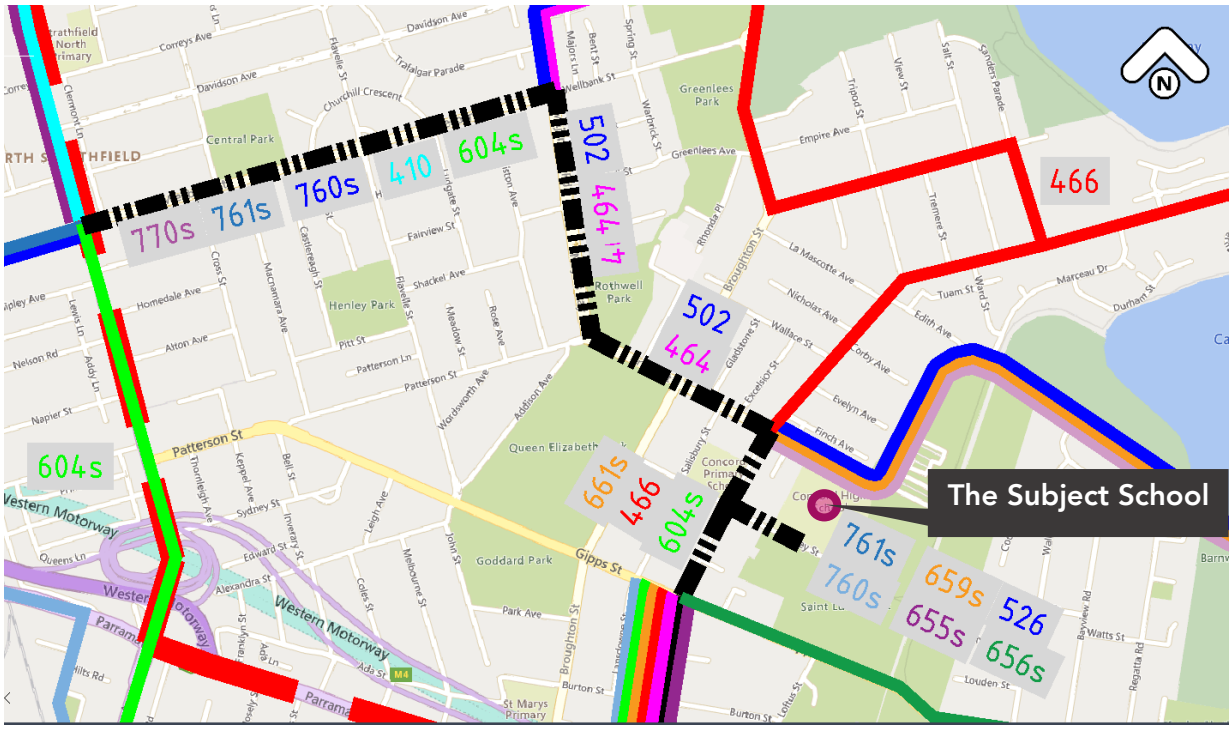


Figure 3-10: Public transport and school bus network - afternoon school peak

3.3.2. Subsidised School Transport Scheme

The School Student Transport Scheme (SSTS) enables eligible school students living outside 2km-2.9km from the school to get free or subsidised travel between home and school on NSW public transport, including trains, buses, ferries and light rail. Ineligible students may be able to purchase a School Term Bus Pass for discounted travel on buses between home and school.

Figure 3-11 presents the SSTS exclusion zone for the School. 62% of students reside within that zone, meaning that 38% students are eligible for the free or subsidised school travel pass.

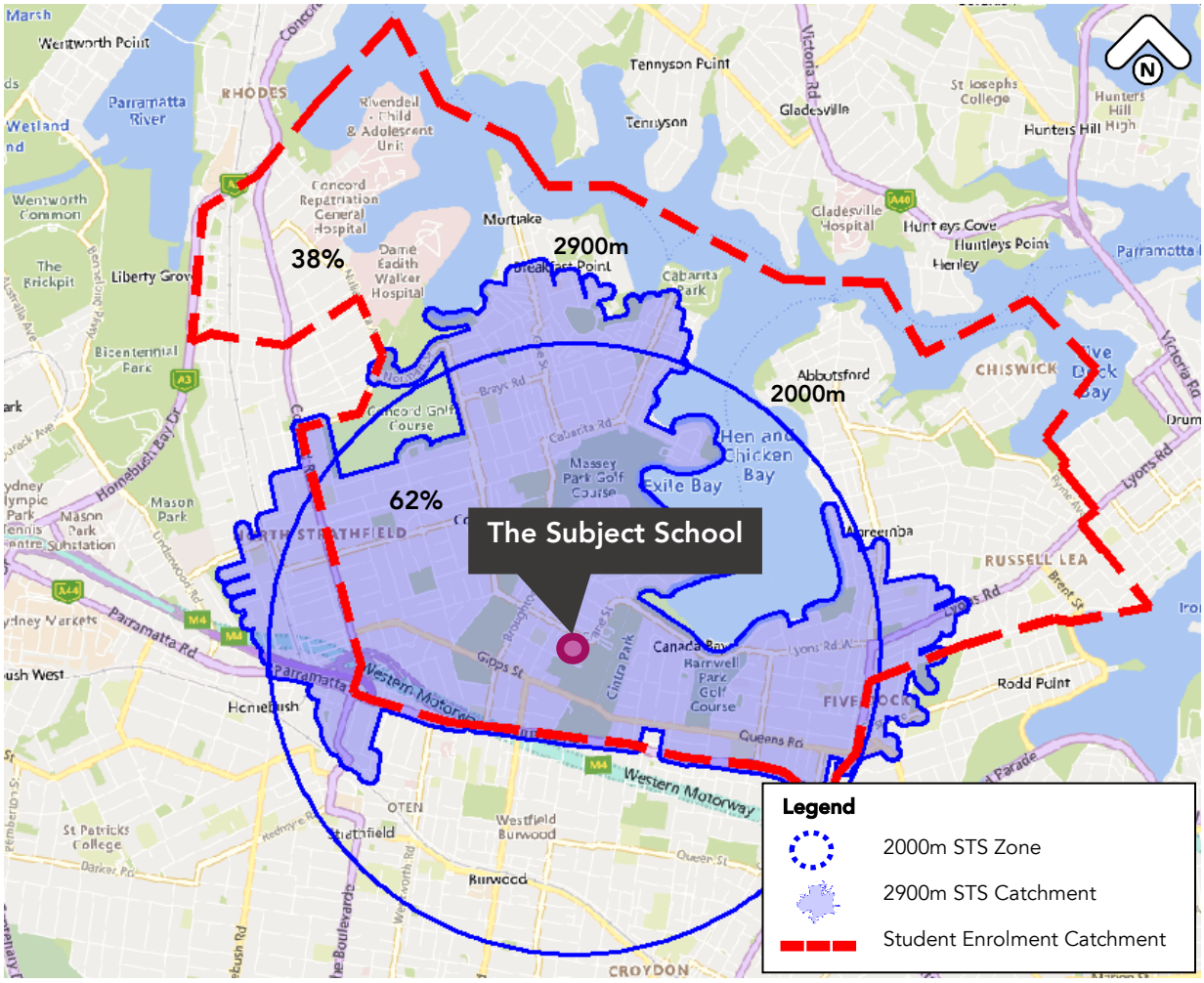


Figure 3-11: SSTS Exclusion Zone for the School

3.3.3. Bus Stops and Services

Within the 800m (10 minutes' walk) catchment of the School, there are multiple bus stops servicing the School, which are listed below and presented in Figure 3-12 and Figure 3-13:

- Bus Stop A – Concord High School, Stanley Street
- Bus Stop B – Burwood Rd at Crane St
- Bus Stop C – Crane St before Burwood Rd
- Bus Stop D – Crane St after Burwood Rd
- Bus Stop E – Burwood Rd at Crane St
- Bus Stop F – Burwood Rd at Stanley St
- Bus Stop G – Burwood Rd at Stanley St

The closest bus stops are located in front of the School's pedestrian accesses on Stanley Street and on Crane Street (A, C & D). Bus stops on Burwood Road near the School (B, E, F & G) provide additional bus services.

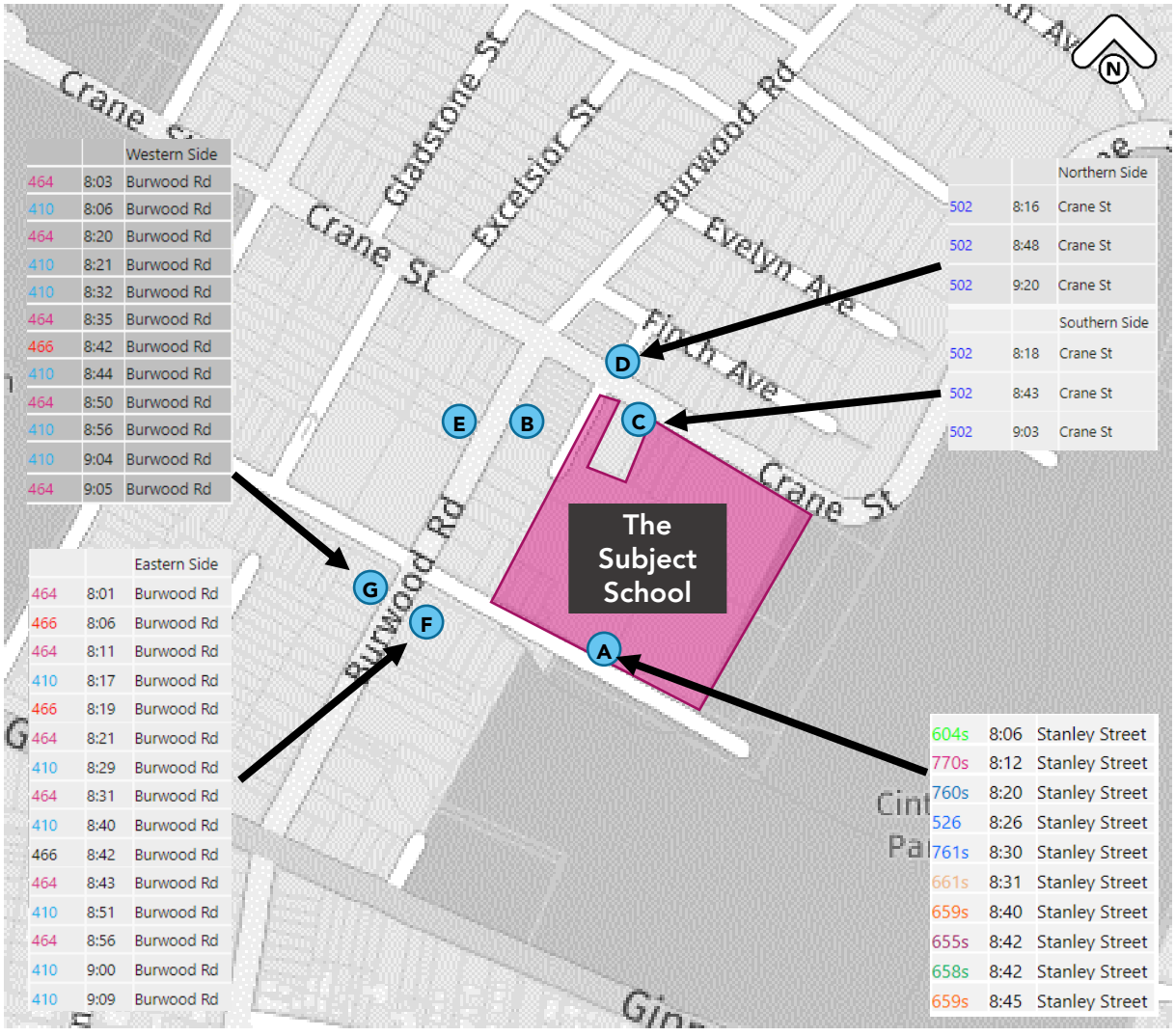


Figure 3-12: Bus Stops near the School and AM Peak Arrival Time at the School

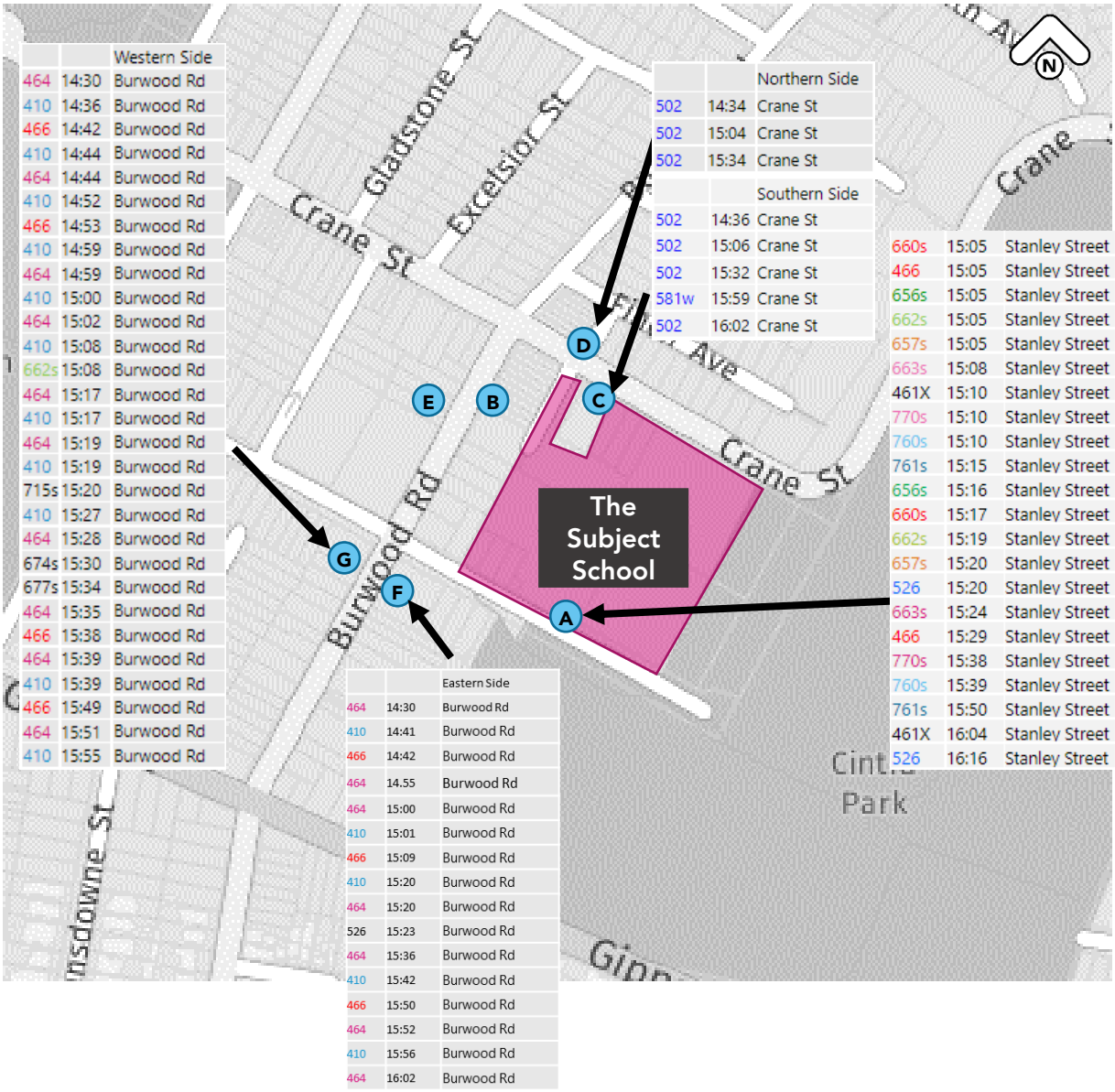


Figure 3-13: Bus Stops near the School and PM Peak Departure Time from the School

The School is well serviced by buses, with multiple services provided during school peak hours. The bus routes generally cover the main roads surrounding the School and most of the residential areas within the enrolment catchment.

The bus services appear to provide a good alternative mode share option for staff and students, subject to availability of convenient bus stops close to their home location.

3.3.4. Train

As shown in Figure 3-14, the Burwood Railway Station is the closest train station and is located 1.6km (or 20min walk) from the School.

Although outside the recommended walking catchment, the station is served by the T1, T2, T3 and T9 lines, with frequent services (every 5-10 min) during morning and afternoon peaks. Some bus services provide direct connection between the School and the Burwood Station.

The train services appear to provide a reasonable alternative mode of transport for staff who live close to train lines and can utilise this mode of transport either directly or indirectly via transport interchanges. Service T9 appears to be a good transport option for students residing on the western edge of the enrolment catchment.

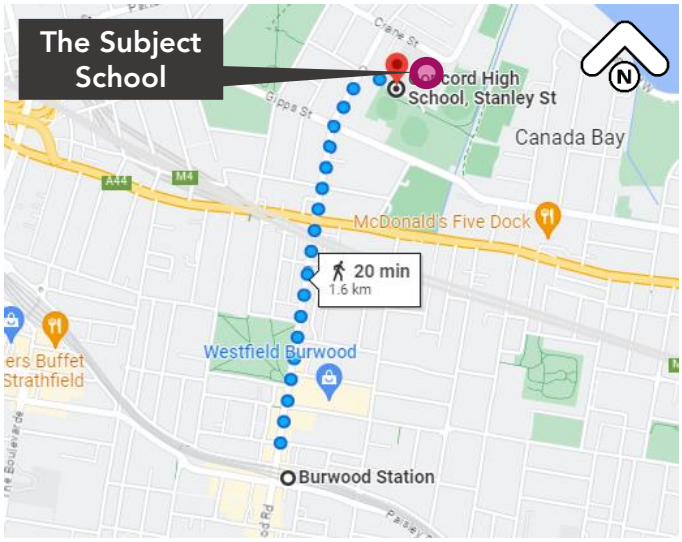


Figure 3-14: Walking Distance between Burwood Station and the School

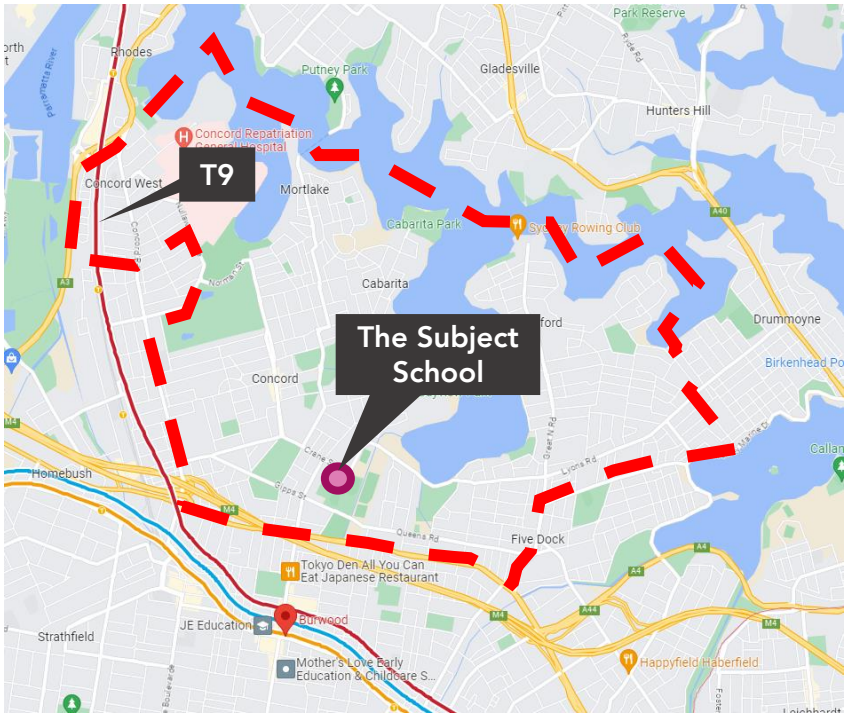


Figure 3-15: Train line within the enrolment catchment

3.3.5. Future Metro

The Sydney Metro Line is currently under construction and will provide metro services connecting Greater Parramatta and the Sydney CBD by the end of 2030.

The future Burwood North Metro Station will be located at the intersection of Parramatta Road and Burwood Road (see the map below), which is approx. 650m (or a 9 min walk) to the School.

Therefore, the future metro will be a good alternative transport mode for staff.

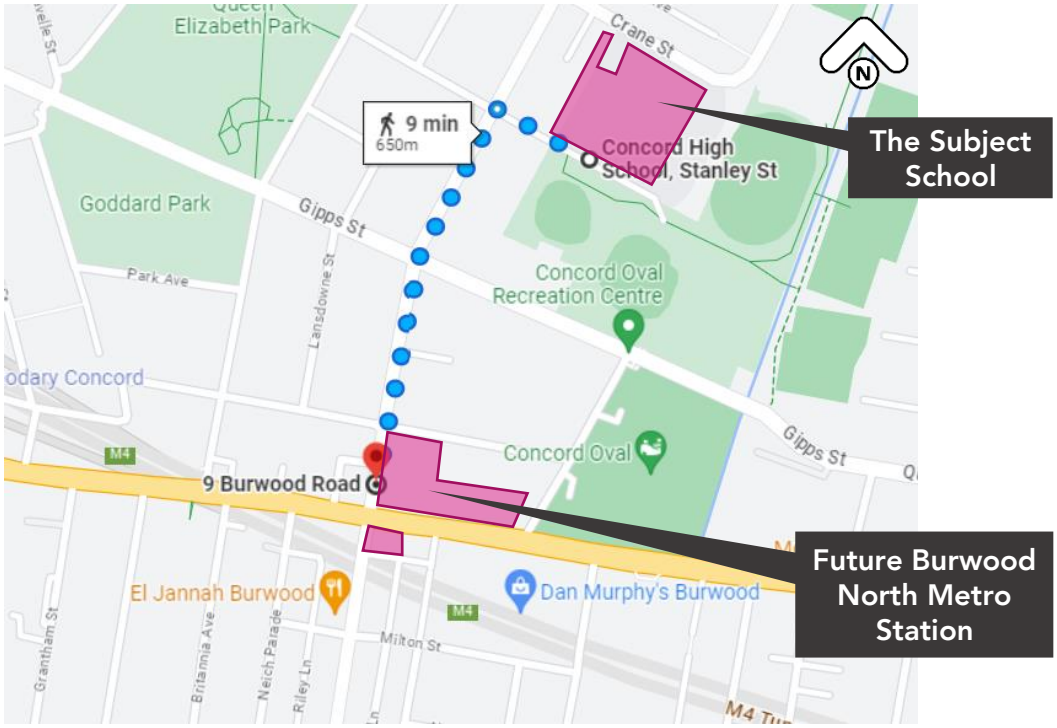


Figure 3-16: Walking Distance between Future Burwood North Metro Station and the School

3.4. Road Network

The NSW administrative road hierarchy comprises the following road classifications, which align with the generic road hierarchy as follows:

- State Roads — Freeways and Primary Arterials (TfNSW managed)
- Regional Roads — Secondary or sub arterials (Council managed, part funded by State)
- Local Roads — Collector and local access roads (Council managed)

As shown in Figure 3-17, the School is located in the suburb of Concord and is primarily serviced by regional roads including Burwood Road and Crane Street, and local roads such as Stanley Street. In a wider context, the locality is also served by some state roads (e.g. Gipps Street, Queens Road).

The surrounding road network provides a readily accessible road network to the School.

A summary of the characteristics of roads directly servicing the School are presented in the tables overleaf.

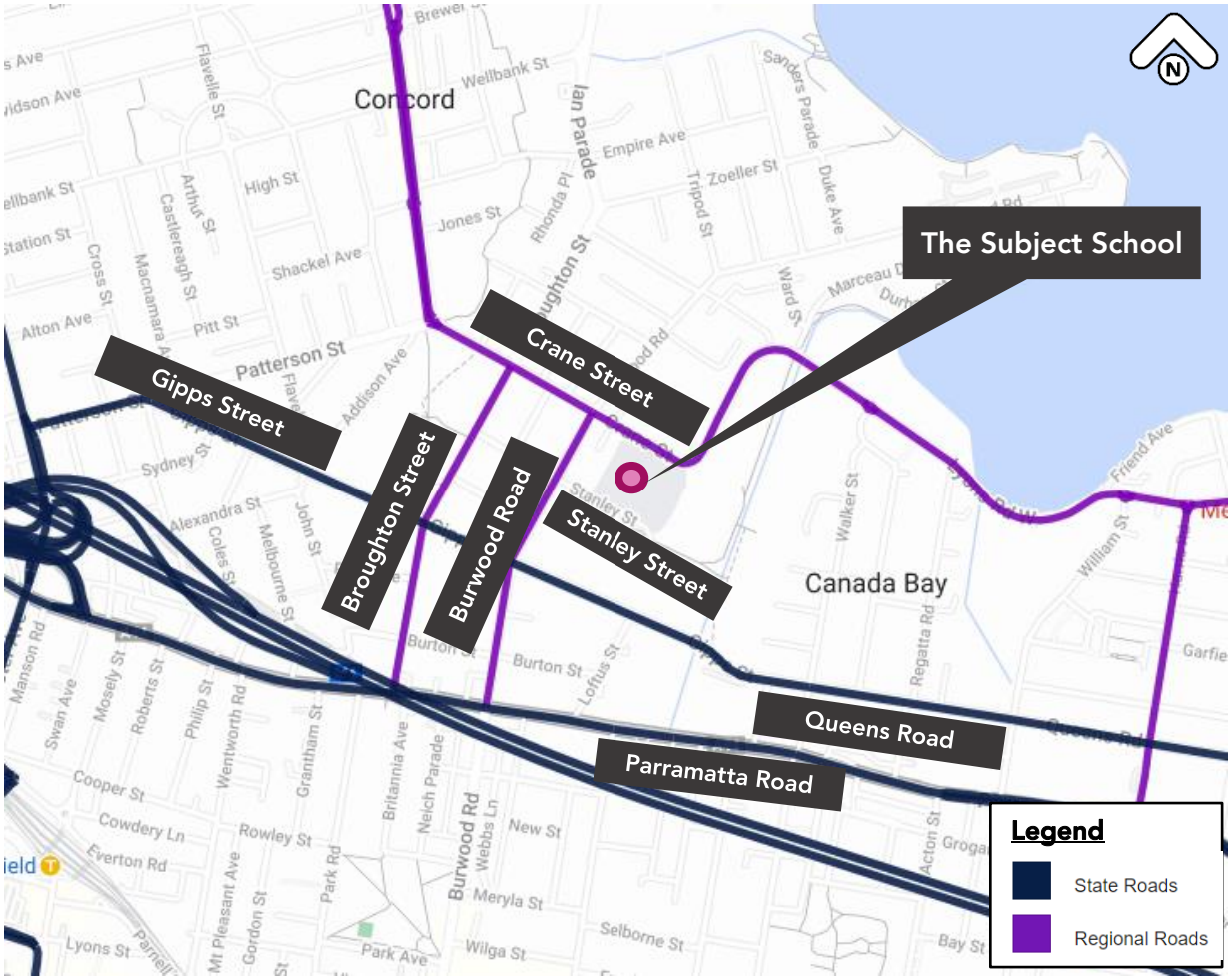


Figure 3-17: Road network classifications around the School (Source: TfNSW Road Network Classifications Map)

Table 3-1: Burwood Road

Burwood Road	
Road Classification	Regional Road
Alignment	Northeast – Southwest
Number of Lanes	2 lanes in each direction
Carriageway Type	Undivided
Carriageway Width	Approximately 12.5m
Speed Limit	50km/h, 40km/h in school zone and on school days
School Zone	Yes
Parking Controls	Unrestricted parking outside of Bus Zones and drop-off/pick-up area in the northeast direction; Bus Zones and No Parking (6:30-9:30am; 3:30pm-6:30pm Mon-Fri) in the southwest direction
Forms Site Frontage	No

Figure 3-18: Burwood Road south-westbound traffic toward Stanley Street

Table 3-2: Crane Street

Crane Street	
Road Classification	Regional Road
Alignment	Northwest – Southeast
Number of Lanes	Varies, typically 1 lane in each direction; widen to 2 lanes in the northwest direction
Carriageway Type	Undivided
Carriageway Width	Approximately 11.8m
Speed Limit	50km/h, 40km/h in school zone and on school days
School Zone	Yes
Parking Controls	Bus Zones and drop-off/pick-up area on the School side
Forms Site Frontage	Yes

Figure 3-19: Crane Street north-westbound traffic toward the School

Table 3-3: Stanley Street

Stanley Street	
Road Classification	Local Road
Alignment	Northwest – Southeast (no through road)
Number of Lanes	1 lane in each direction
Carriageway Type	Undivided
Carriageway Width	Approximately 6.8m
Speed Limit	40km/h in school zone
School Zone	Yes
Parking Controls	Unrestricted parking on the park side; Bus Zones and drop-off/pick-up area on the School side
Forms Site Frontage	Yes

Figure 3-20: Stanley Street south-eastbound toward the School

3.5. Off-Campus Parking

To understand the utilisation of public on-street and off-street parking around the School, a parking occupancy survey was carried out between 10-11am (and 4-5pm in St Luke's car park) on 8th (Tuesday) 9th (Wednesday) and 10th (Thursday) November 2022. The roads and car parks surveyed have generally parking. The locations are shown in Figure 3-21.

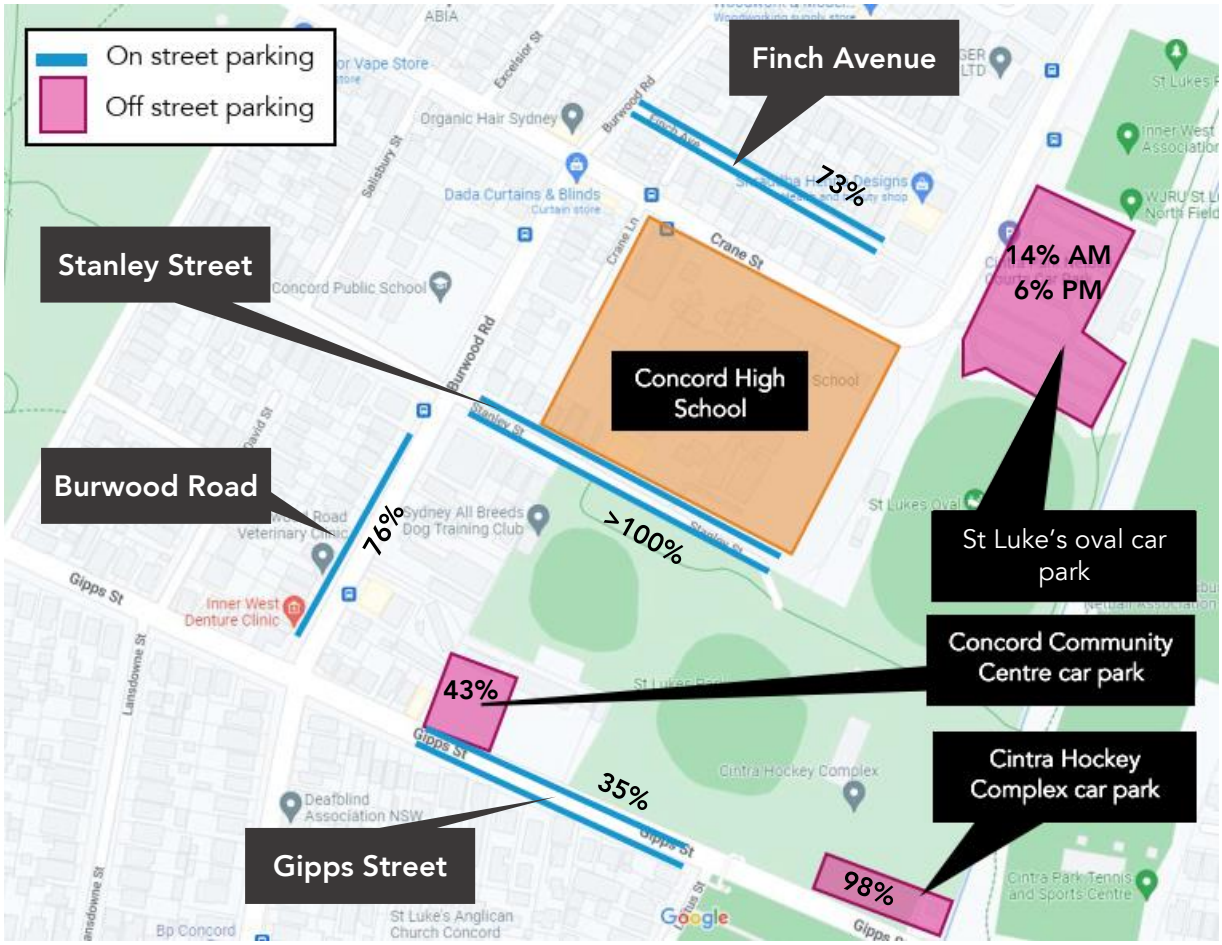


Figure 3-21: On-street and Off-street Parking Survey Locations and average occupancy cates

Key findings are summarised as follows:

- The combined average occupancy rate at the St Luke's Oval Carpark was 10%, leaving 90% of the car park (approximately 325 spaces) available.
- Stanley street was close to being fully occupied during our survey hours.
- The surrounding roads (Burwood Road, Finch Avenue & Gipps Street) have space capacity, which could be utilised by staff.
- Cintra Hockey Complex car park was found to be fully occupied during the morning hours, though it is noted that the vehicles seem to be related to the Concord Oval construction. It is therefore possible that following the construction, this car park would become more vacant.
- Concord Community Centre car park was about 50% occupied; however parking at this car park is restricted for authorised vehicles only.

Description of Parking	Total Bays	TUESDAY AM Number Occupied	TUESDAY AM Percentage Occupied	TUESDAY PM Number Occupied	TUESDAY PM Percentage Occupied
St Luke's Oval Carpark	361	49	14%	11	3%
Finch Avenue (North)	22	12	55%		
Finch Avenue (South)	18	15	83%		
Stanley Street (North)	25	23	92%		
Stanley Street (South)	36	34	94%		
Burwood Road (West)	17	15	88%		
Concord Community Centre Car Park	43	15	35%		
Gipps Street (North)	30	7	23%		
Gipps Street (South)	22	7	32%		
Cintra Hockey Complex Car Park	33	31	94%		
	170	113	66%		

Description of Parking	Total Bays	WEDNESDAY AM Number Occupied	WEDNESDAY AM Percentage Occupied	WEDNESDAY PM Number Occupied	WEDNESDAY PM Percentage Occupied
St Luke's Oval Carpark	361	35	10%	39	11%
Finch Avenue (North)	22	17	77%		
Finch Avenue (South)	18	12	67%		
Stanley Street (North)	25	29	116%		
Stanley Street (South)	36	32	89%		
Burwood Road (West)	17	11	65%		
Concord Community Centre Car Park	43	22	51%		
Gipps Street (North)	30	9	30%		
Gipps Street (South)	22	12	55%		
Cintra Hockey Complex Car Park	33	30	91%		
	170	122	72%		

Description of Parking	Total Bays	THURSDAY AM Number Occupied	THURSDAY AM Percentage Occupied	THURSDAY PM Number Occupied	THURSDAY PM Percentage Occupied
St Luke's Oval Carpark	361	66	18%	12	3%
Finch Avenue (North)	22	17	77%		
Finch Avenue (South)	18	14	78%		
Stanley Street (North)	25	26	104%		
Stanley Street (South)	36	37	103%		
Burwood Road (West)	17	13	76%		
Concord Community Centre Car Park	43	19	44%		
Gipps Street (North)	30	8	27%		
Gipps Street (South)	22	12	55%		
Cintra Hockey Complex Car Park	33	36	109%		
	170	127	75%		

Figure 3-22: Parking occupancy survey results

3.6. Existing Travel Mode Share

To understand and identify the existing travel patterns and demand which will assist in the post development forecast for the purpose of the transport assessment, an online questionnaire survey was conducted for students and staff.

The survey was active for three weeks from April - May 2022. Responses were received from a total of 724 (57%) students and 78 (out of 89 FTE) staff members.

Whilst the survey was undertaken for the existing population, the results presented in this section relate to the students residing within the proposed school enrolment catchment area only.

The existing travel mode share results for students in the morning and afternoon are presented in Figure 3-23 and Figure 3-24, respectively. Similarly, the existing travel mode share results for staff in the morning and afternoon are presented in Figure 3-25 and Figure 3-26.

The full online survey results can be found in Appendix 2.

3.6.1. Student Travel Mode

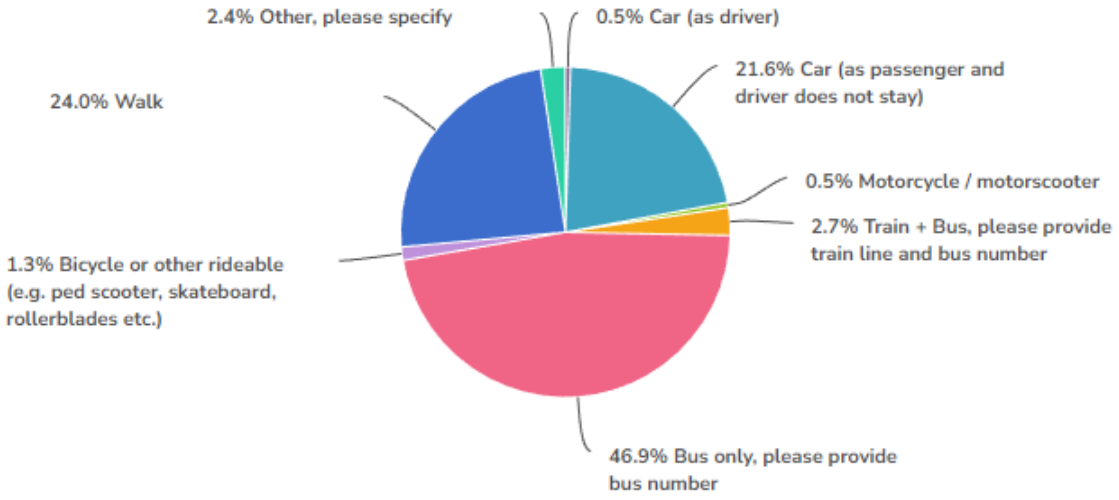


Figure 3-23 - Existing AM Student Travel Mode Share

On a typical morning, students predominantly travel to school by bus only (46.9%), walking (24%) or by private car (22.1%).

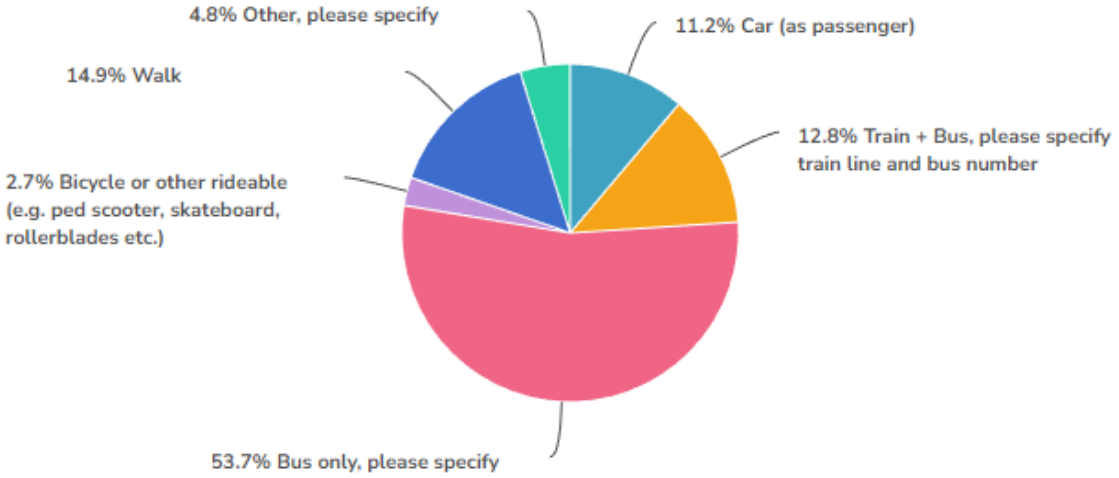


Figure 3-24 - Existing PM Student Travel Mode Share

In the afternoon, students predominantly travel from school by bus only (53.7%), walking (14.9%), train and bus (12.8%) or by private car (22.1%). When compared to a typical morning, there is a noticeable increase of approximately 10% in the number of students who travel by train and bus.

Key findings from the questionnaire are as follows:

- The majority of students use public transport to commute to and from school, followed by walking. Compared to other schools, the travel mode share at Concord High School has a very low car use already. This can be attributed to the well-developed walking and cycling infrastructure within the LGA and a good public transport network.
- Many responses indicated overcrowding of buses, infrequent buses, or a desire for more buses. For example, public buses such as the 410 or 502 with long routes tend to be full even before taking onboard students, thus adding to the overcrowding issue.
- Public bus routes often prove more useful to students as the public school bus routes arrive too early, are infrequent, or are overcrowded.
- Burwood road provides more bus connections with greater frequency than Stanley Street or Crane Street. This provides insight as to why many pedestrians were recorded to walk along Stanley Street.

3.6.2. Staff Travel Mode

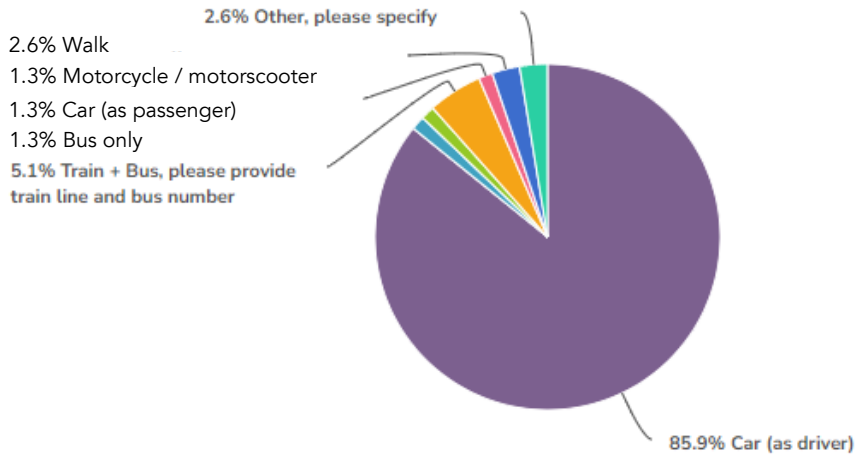


Figure 3-25 - Existing AM Staff Travel Mode Share

On a typical morning, the vast majority of staff (85.6%) travel to school by car as the driver with some travelling by train and bus (5.1%).

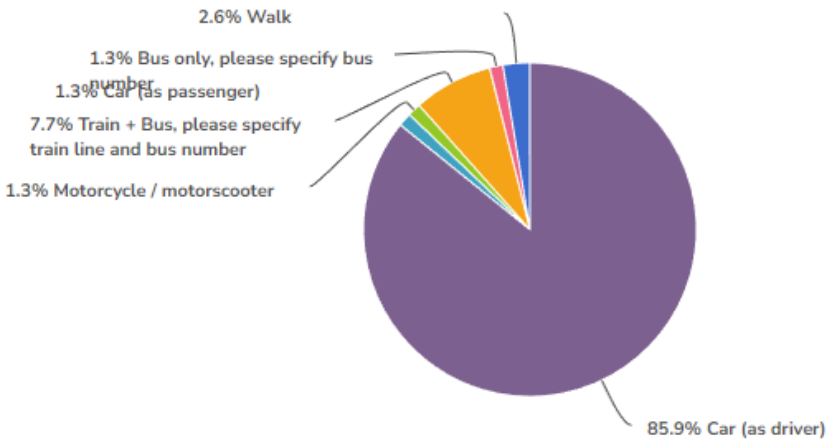


Figure 3-26 - Existing PM Staff Travel Mode Share

In the afternoon, the vast majority of staff (85.9%) travel from school by car as the driver with a slight increase in the number of staff travelling by train and bus to 7.7%.

Whilst private transport is the most dominant travel mode for staff, an 86% car use is lower compared with other schools.

4. Proposed Changes

The development proposes to implement some improvements within and in the vicinity of the school, which are expected to increase access to the school for students and encourage more students to use alternative transport modes instead of a car to travel to and from the school. The proposed improvements are described below.

4.1. Changes to Enrolment Catchment

As outlined in Section 1.3 and 1.4, the enrolment catchment for the school is proposed to be reduced approximately by half due to a new high school being built in Wentworth Point. The reduction in the enrolment catchment is anticipated to influence student travel behaviour through the increase of the proportion of students who are able to walk and cycle as they live closer to the school.

The future and existing student proportions for the walking and cycling catchments as a result in the reduction of the enrolment catchment is outlined in Figure 4-1 and Figure 4-2, respectively.

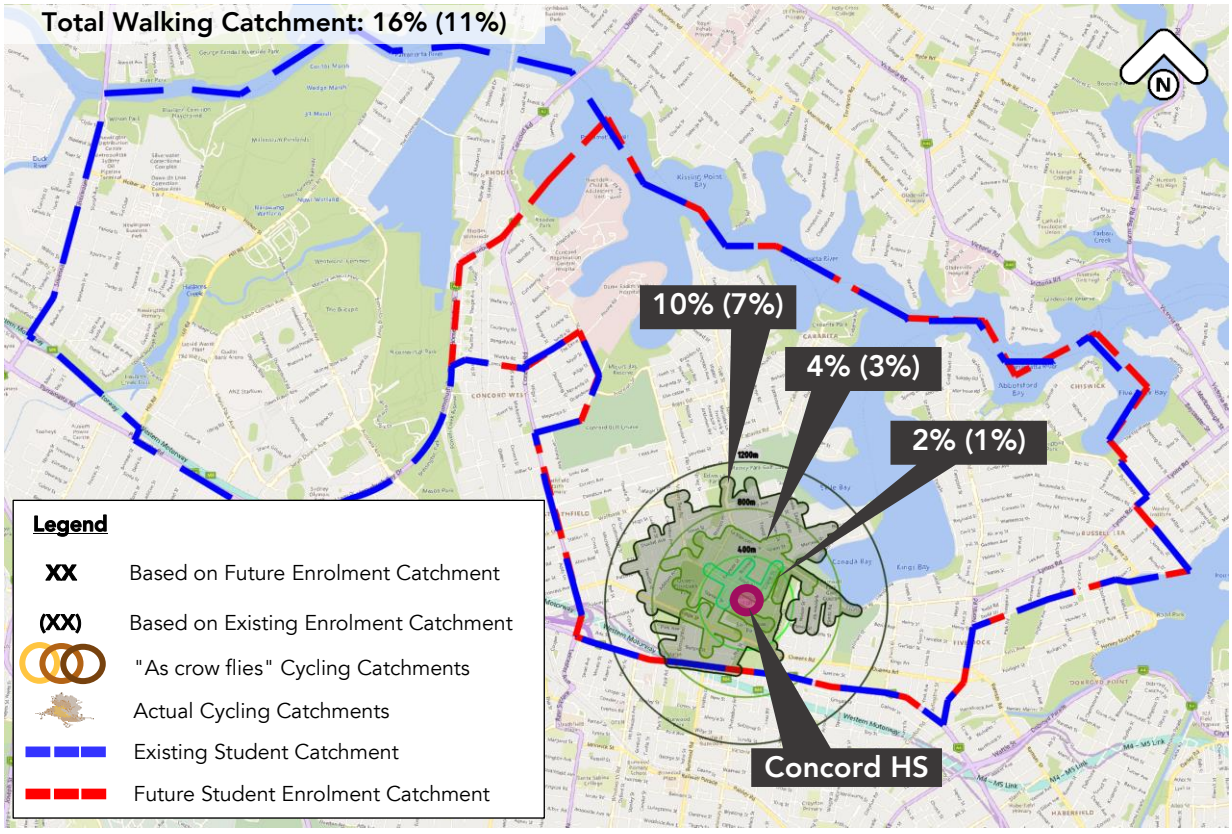


Figure 4-1 - Existing and Proposed Student Proportions for Walking Catchment

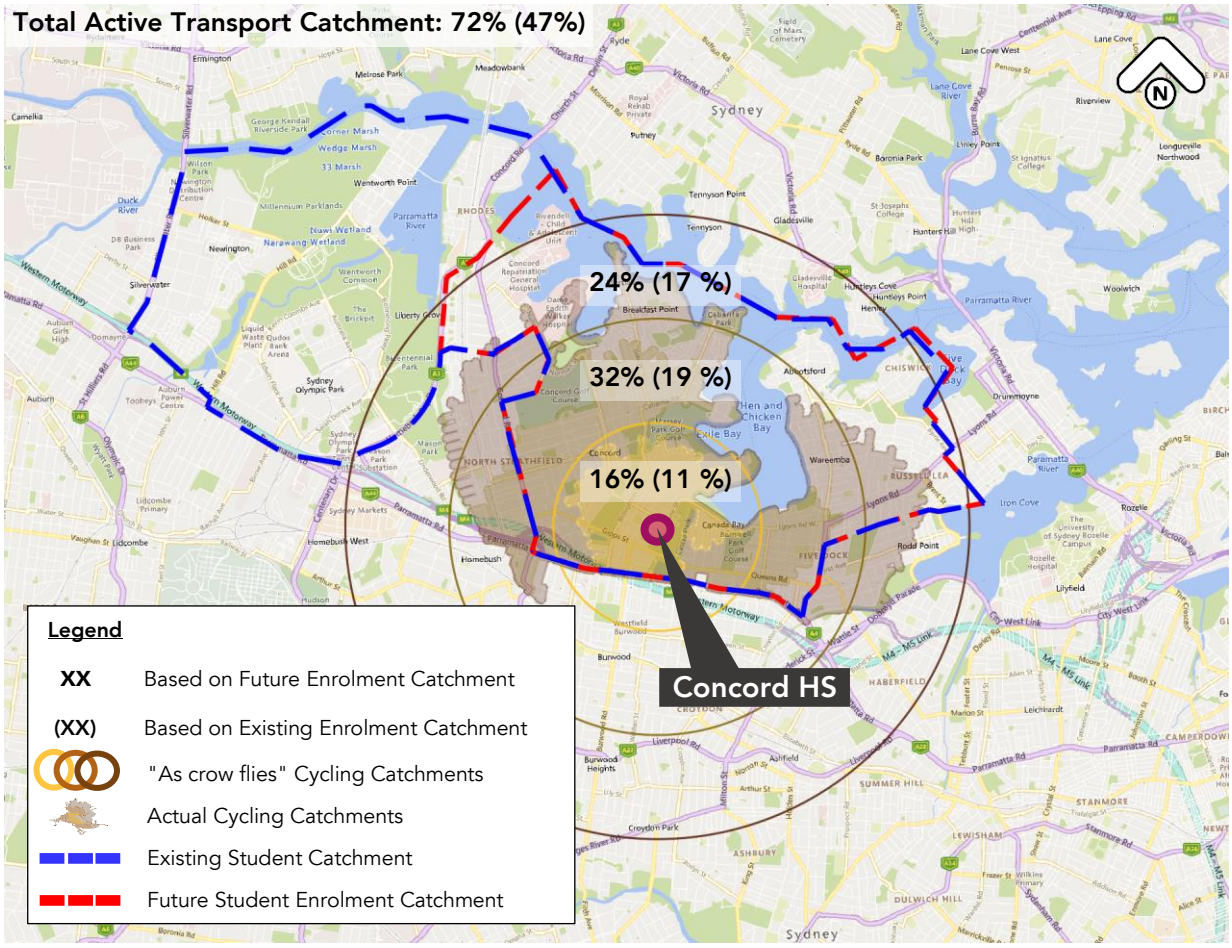


Figure 4-2 - Existing and Proposed Student Proportions for Cycling Catchment

4.2. Reactivation of Crane Street Gate and Proposed Covered Walkways

The development proposal involves the reactivation of a gate on Crane Street (Gate 3 as shown in Figure 4-3) located on the north-eastern side of the school side, which is currently unutilised and does not have a pathway connection to the school buildings.

In conjunction with the gate reactivation, a covered walkway is proposed to connect the gate with the existing walkway within the school site.

The proposed arrangements can bring the following benefits to the school day-to-day operations:

- Improve pedestrian connectivity for students who reside to the north and east of the school;
- Disperse students across the school grounds to avoid crowding at the two existing gates, mostly on Stanley Street; and
- Provide additional and access point for cyclists, with bicycle and scooter parking spaces available adjacent to the gate.

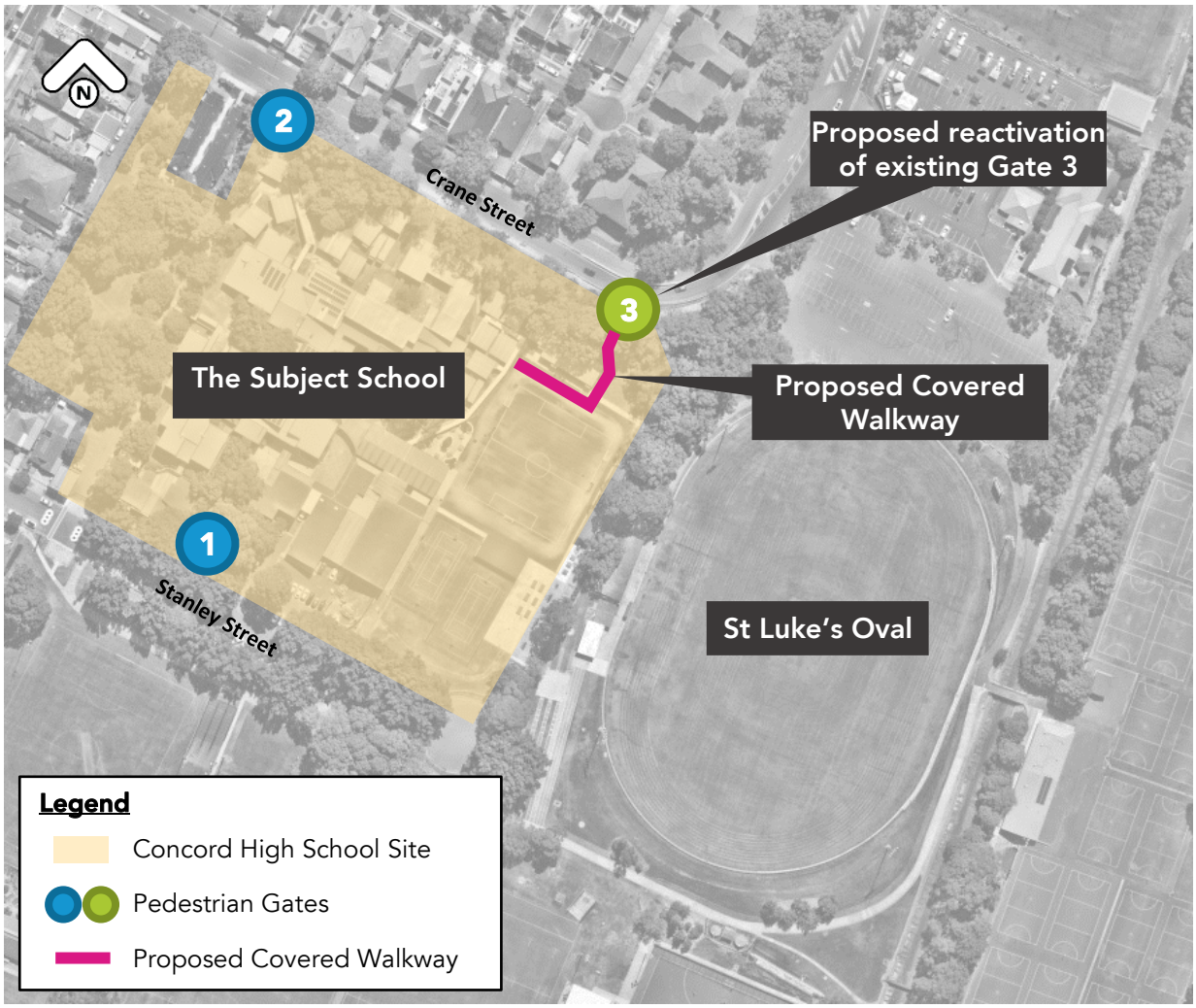


Figure 4-3: Existing and Proposed Pedestrian Gates

4.3. Bicycle/Scooter Parking and End of Trip Facilities

The development proposes to provide a total of 136 bicycle parking spaces and 32 scooter parking spaces.

Furthermore, 14 staff bicycle parking spaces will be provided in the existing Block G and six staff change rooms/showers and 6 lockers are provided in Block Z.

The locations of the proposed bicycle and scooter parking spaces are illustrated in Figure 4-4.

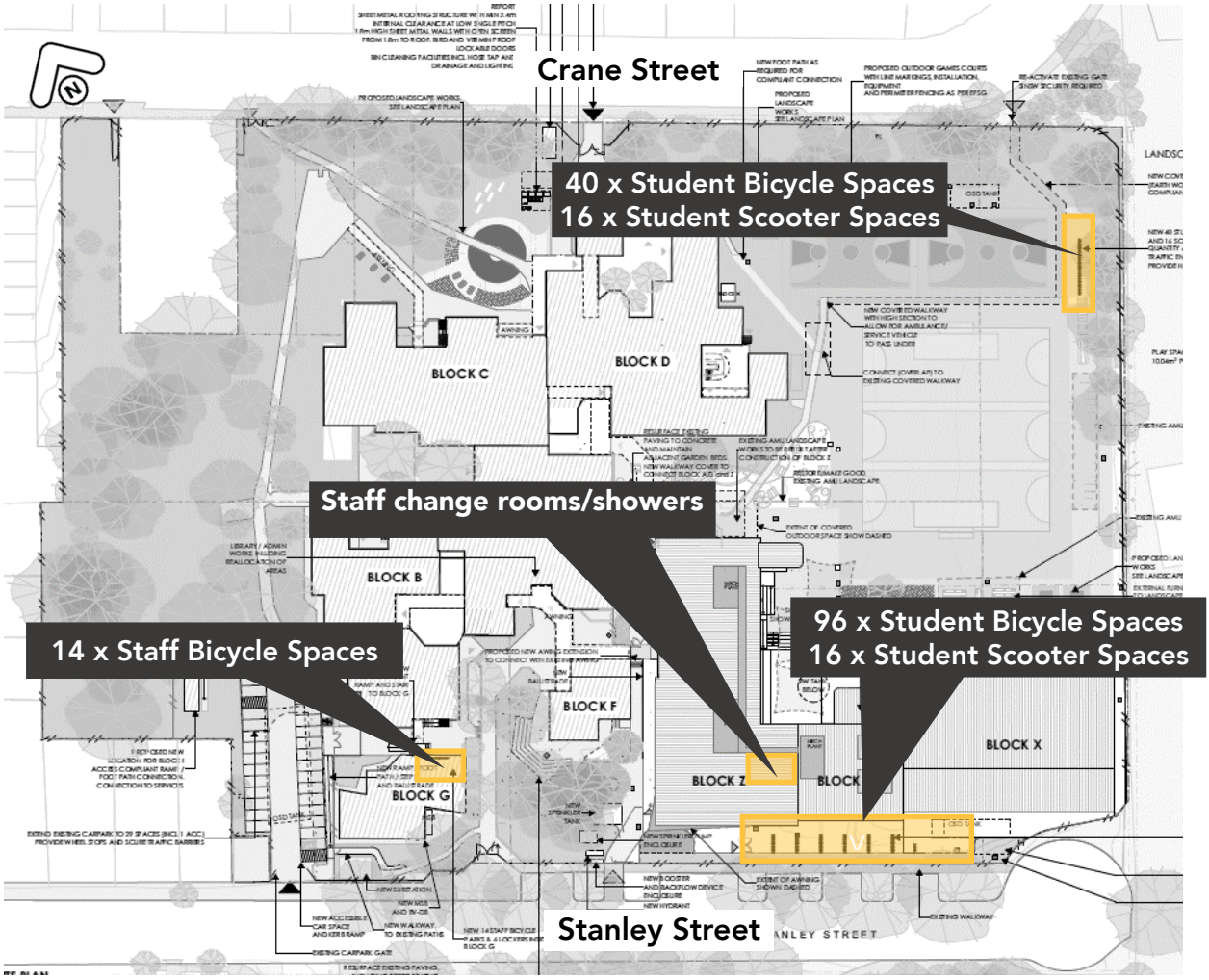


Figure 4-4: Bicycle/Scooter Parking Locations (Source: JDH Architects)

4.4. Removal of Driveways and Car Park off Stanley Street

As part of the redevelopment, the existing eastern staff car park and the two existing driveways connecting to this staff car park (shown in Figure 3-1) will be removed. This will have the benefit of reducing conflicts between vehicles and students arriving from the east.

Figure 4-5: School Access Map – removal of existing eastern car park

4.5. Improvements to Crane Street Drop-off/Pick-up Area

Based the online travel survey results and on-site observation, the utilisation of the existing formal drop-off and pick-up area on Crane Street is low, which may be resulted by various factors such as student residential locations, available transport options and traffic arrangements & conditions of the drop-off and pick-up area.

The development proposes to improve the Crane Street drop-off/pick-up area to encourage more students to use this facility, with the following traffic calming measures:

- Installation of speed cushions, for controlling the speed of north-westbound traffic around the curve along Crane Street;
- Installation of regulatory and advisory signage, for clearer advisory of the area and advanced warning; and
- Implementation of additional road line marking, for guiding traffic away from the drop-off/pick-up area that may have vehicles stopping.

The proposed improvement measures are illustrated in Figure 4-6.

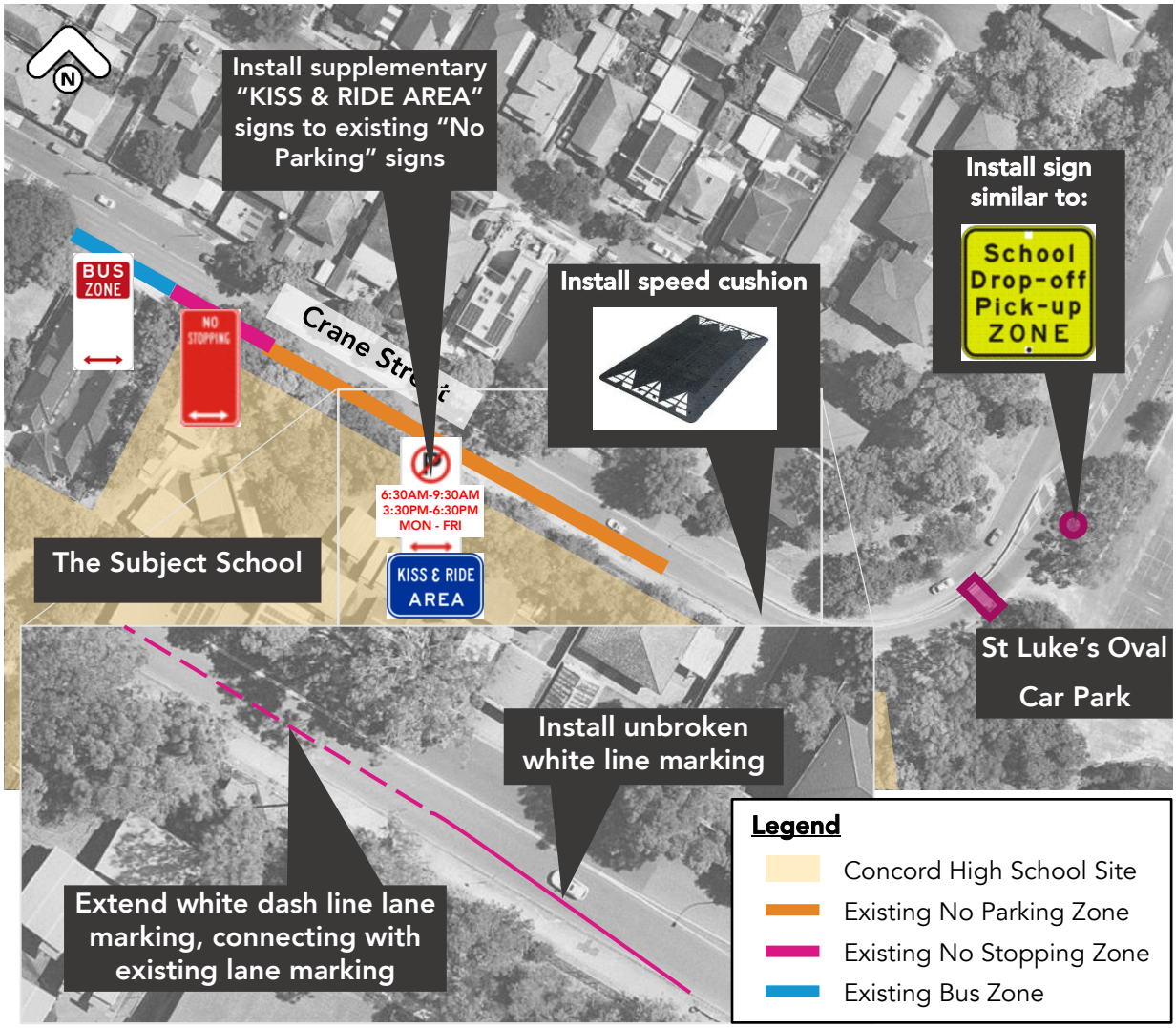


Figure 4-6: Proposed traffic calming measures

4.6. Transport Operations, Encouragement Programs and Staffing

In order to achieve higher active and public transport mode share, appropriate encouragement programs need to be implemented such as “Walk and Wheel Wednesday”, “be Street Smart” etc. These are further described in the School Transport Plan.

5. School Transport Scenarios

5.1. Base Case – Existing Travel Patterns

As outlined in Section 3.6, the existing travel mode share for students and staff are summarised in Table 5-1 and Table 5-2.

Table 5-1: Existing Student Travel Mode Share Summary

Transport Modes	Morning (to school)	Afternoon (from school)
Active Transport	**25.3%**	**17.6%**
Walk	24.0%	14.9%
Cycle	1.3%	2.7%
Public Transport	**49.6%**	**66.5%**
Bus only	46.9%	53.7%
Train only	-	-
Bus + train	2.7%	12.8%
Private Transport	**22.6%**	**11.2%**
Car (as driver)	0.5%	-
Car (as passenger)	21.6%	11.2%
Motorcycle / motorscooter	0.5%	-
Other	2.4%	4.8%

Some cars transport more than one student attending the school, and a calculation based on the survey data suggests a car occupancy of 1.39 and 1.38 students per car for the morning and afternoon peaks, respectively.

Based on student responses, the most prevalent reasons for using a car to travel to and from the School are convenience, worries about weather variation and the car is needed elsewhere before / after school.

Table 5-2: Existing Staff Travel Mode Share Summary

Transport Modes	Percentage[1]
Active Transport	
Walk	2.6%
Cycle	-
Public Transport	
Bus only	1.3%
Train only	-
Bus + train	6.4%
Private Transport	
Car (as driver)	85.9%
Car (as passenger)	-

[1] Averaged across both AM and PM peak periods

Survey responses received from staff indicated that factors contributing to them driving include:

- Convenience due to the need to carry heavy bags and bulky items (e.g., files and papers),
- Staff need the car to drive elsewhere before & after school (e.g. sport, appointment)
- Dropping off / picking up children

5.2. Ideal Case

An "ideal case" transport mode share represents the percentage of all students that theoretically could use alternative transport modes if the active and public transport infrastructure were sufficiently well developed within the entire enrolment catchment. This can be seen as the upper limit, or the maximum possible alternative travel mode share.

The ideal case transport mode share is presented in Table 5-3.

Table 5-3: Student Transport Mode under the Ideal Case

Transport modes	Percentage	Facilities Requirement
Active Transport		
Walking (1200m catchment)	16%	
Cycling (1200m-3600m catchment)	56%	762 bike spaces
Public Transport		
Buses and Train	92%[2]	
Private Transport	-	0 pick-up / drop-off spaces

5.3. Potential Target

As outlined in Section 3.2.3, the road network surrounding the School contains some barriers that make walking and cycling less likely to be chosen by those living within the active transport catchment area, whilst noting that the walking and cycling infrastructure within the Canada Bay LGA is generally well developed. The potential target for active transport represents the percentage of students that has been assumed could theoretically walk and cycle within the active transport catchment not affected by the barriers.

For public transport, the potential target mode share would be the percentage of students living within the enrolment catchment area that have access to public transport and are eligible for the free or subsidised school travel pass. Of the 1,001 existing student population, 377 students reside outside the 2.0km notional (as the crow flies) and 2.9km actual SSTS exclusion zone and are eligible for a free or subsidised school travel pass. This represents approximately 38% of the existing student population.

Based on the above, the analysis suggests a potential target for students to be as follows, with the analysis of the facilities requirement based on the proposed new student cap:

[2] Represents students that could benefit from public transport, including those living within the active transport catchment area. Figure does not take into account SSTS exclusion zone in the Ideal Case.

Table 5-4: Student Transport Mode Share under the Potential Target Case

Transport modes	Percentage	Facilities Requirement
Active Transport	**59%**	
Walking	14%	
Cycling	45%	612 bike spaces
Public Transport	**38%**	
Private Transport	**3%**	
Car (as driver)	1%	1 pick-up spaces
Car (as passenger)	2%	

To determine the potential drop-off and pick-up spaces which would be required under the potential target mode share, an analysis based on Poisson distribution has been conducted. The following parameters have been adopted:

- 30 minutes interval for pick-up and drop-off - Reflects the peak time interval over which pick-up/drop-off activity occurs for a typical school
- 30 seconds dwell time for drop-off (AM Peak)
- 210 seconds dwell time for pick-up (PM Peak) - The service time in the AM peak is shorter due to the fact that drop-off activity is usually shorter in duration than the afternoon pick-up activities where parents need to stop temporarily to wait for their child.
- Car occupancy of 1.39 and 1.38 students/car (AM and PM Peak respectively) - to determine the number of vehicles travelling to/from the site. This number varies significantly based on school's accessibility and has been calculated using the results from the online travel survey.

The pick-up and drop-off space requirement for the potential target scenario is outlined in Table 5-5.

Table 5-5: Drop-off and Pick-up Space Analysis for Potential Target Mode Share

Number of students	Peak hour	Private transport mode share	Number of students use private transport	Car occupancy	Number of vehicles arriving	Spaces required by Poisson distribution analysis
1,360	AM	1%	14	1.39	10	1 (6m)
	PM	1%	14	1.38	10	4 (24m)

5.4. Target

With consideration to, and an analysis of the base case, ideal case and potential target scenarios, as well as the proposed improvements to the infrastructure as part of this development (refer to Section 4), a target mode shares for students and staff have been set for the School, as presented in Table 5-6 and Table 5-7.

For walking, it is noted that even though only 16% of students live within the 1.2km walking catchment defined by SINSW, 24% of students within the enrolment catchment walk based on the travel mode surveys, which means students are walking for distances further than 1.2km.

For public transport, the existing mode share is approximately 50% in the morning, and whilst it is acknowledged the potential target is 38%, this assumes that students residing within the SSTS

exclusion zone will not catch public transport. This means that some students use public transport without the free bus pass.

Table 5-6: Student Target Transport Mode Share

Transport modes	Morning	Afternoon	Facilities requirement
Active Transport	**35%**	**30%**	
Walking/Scooting	25%	20%	
Cycling	10%	10%	136 bike spaces
Public Transport	**55%**	**65%**	
Private Transport	**10%**	**5%**	
Car (as driver)	0%	0%	
Car (as passenger)	10%	5%	

Table 5-7: Staff Target Transport Mode Share

Transport modes	Percentage	Facilities requirement
Active Transport	**15%**	
Walking	5%	
Cycling	10%	10 bike spaces
Public Transport	**15%**	
Private Transport	**70%**	
Car (as driver)	65%	62 car spaces
Car (as passenger)	5%	

To determine the potential drop-off and pick-up spaces that would be required under the target mode share, an analysis based on Poisson distribution has been conducted based on the parameters presented in Section 5.3.

The pick-up and drop-off space requirement for the target scenario is outlined in Table 5-6.

Table 5-8: Drop-off and Pick-up Space Analysis for Target Mode Share

Number of students	Peak hour	Private transport mode share	Number of students use private transport	Car occupancy	Number of vehicles arriving	Spaces required by Poisson distribution analysis
1,360	AM	10%	136	1.39	98	4 (24m)
	PM	5%	68	1.38	50	11 (66m)

6. Demand and Design Assessment

6.1. Planning Policies

The School lies within the City of Canada Bay local Council area. In establishing the parking provision requirements, reference is made to the parking provision rates stipulated in the following documents for assessment:

- City of Canada Bay Development Control Plan (2022)
- NSW Planning Guidelines for Walking & Cycling (2004)
- Austroads Guide to Traffic Management Part 11
- National Construction Code: Building Code of Australia Volume One (2022)

In assessing the design of various parking facilities, reference is made to the requirements of the following standards and guidelines:

- AS2890.1:2004 – Off-street Car Parking
- AS2890.3:2015 - Bicycle Parking

6.2. Pedestrian Access

The development proposal includes the reactivation of an existing gate off Crane Street. This is in line with the general idea to divide movements across various points to reduce pedestrian congestion in one area.

A new covered walkway will be constructed to connect the reactivated gate to the existing walkway within the School. Pedestrian and cycling access would also be accommodated by the proposed arrangements.

6.3. Bicycles

6.3.1. Demand Assessment

The DCP does not provide any bicycling parking rates for schools, hence reference has been made to Table 5.3 of Austroads Guide to Traffic Management Part 11 and NSW Planning Guidelines for Walking & Cycling 2004.

Table 6-1: Bicycle parking spaces requirement and provision

	Population	Bicycle parking provision rates	Bicycle parking space requirement	Bicycle parking spaces provided
NSW Planning Guidelines for Walking & Cycling				14 bike spaces for staff 136 bike spaces for students 32 scooter spaces for students 182 spaces for ridables in total
Staff	95 staff	1 space/3-5% of staff	3-5 spaces	
Visitor		1 space/5-10% of staff	5-10 spaces	
Austroads Guide to Traffic Management				
Students	1,360 students	1 space/20 students	68 spaces	

The target mode share indicates a total of 136 bicycle parking spaces are required for students and 10 spaces for staff. The development proposal is to provide 136 bicycle parking spaces for students and 14 spaces for staff, which is expected to adequately service the bicycle parking demand. In addition, 32 scooter parking spaces are also provided for student use to encourage non-car-based travel modes.

6.3.2. End of Trip Facilities

The DCP does not provide any provision rates for bicycle end of trip facilities specifically for schools, thus reference has been made to NSW Planning Guidelines for Walking & Cycling 2004 for the provision requirement of lockers, showers and change rooms, the requirements are presented in Table 6-2 and Table 6-3.

Table 6-2: Lockers requirement and provision

Number of staff bicycle parking spaces	Locker provision rates	Locker provision requirement	Number of lockers provided
14	1 per 3 racks	5	6

Table 6-3: Showers and change rooms requirement and provision

No. of staff	Facilities	Facility provision rates	Facility provision requirement	Number of facilities provided
6 FTE additional 95 FTE total	Showers	- 1 for 0-12 staff - 2 (1 male and 1 female) for 13-49 staff - 4 (2 male and 2 female) for 50-149 staff	0 for the additional FTE 4 for the total FTE	2 (combined unisex)
	Change rooms	- 0 for 0-12 staff - 2 (1 male and 1 female) for 13-149 staff	0 for the additional FTE 2 for the total FTE	

6 staff change rooms/showers and 6 personal lockers are provided within Block Z to allow staff who cycle to school to change and securely store their belongings.

The proposed bicycle locker provision dedicated for staff is line with the NSW Planning Guidelines for Walking & Cycling 2004 requirements. Based on the proposed staff increase, the proposed shower provision exceeds the requirements stipulated in the Guideline.

6.3.3. Location

The location of the on-site bicycle facilities is shown in Section 4.3.

For students, the location of the bicycle and scooter spaces is seen as adequate considering the direction of travel based on online and traffic surveys. Further, through the provision of two locations for bike parking, the gate utilisation is expected to even out.

6.3.4. Design Assessment

The bicycle parking facilities of the proposed development have been assessed against the requirements of AS2890.3:2015 (Bicycle parking) and industry best practice.

Bicycle spaces shall be provided according to the standards, where a horizontal bicycle parking space envelope shall have the minimum dimensions of 1.8m x 0.5m and a minimum aisle of 1.5m. A vertical space shall have the minimum dimensions of 1.2m x 0.5m and a minimum aisle of 1.5m

The proposed bicycle parking spaces have been assessed to comply with the requirements of AS2890.3:2015. A detailed assessment shall be undertaken during the detailed development stage, prior to the issue of a Construction Certificate.

6.4. School Zone

The development proposal does not involve any changes to the existing school zone establishment in the locality.

6.5. Drop-off and Pick-up

As calculated in Section 5.4, the drop-off and pick-up demand for the target mode share is 11 spaces, which is approximately equivalent to 66m in length. The existing on-street drop-off and pick-up zone is approximately 88 in length accommodating 14 spaces, as illustrated in Figure 6-1.

Considering the above, the existing drop-off and pick-up zone is sufficient to accommodate the target demand, thus the development proposal does not involve any changes to the existing drop-off and pick-up arrangements for the School.

Figure 6-1: School Access Map

6.6. Car Parking

6.6.1. Demand Assessment

The Canada Bay Council DCP does not provide minimum parking rates for educational establishments, including High Schools.

Under the Educational Facilities Standards and Guidelines (EFSG), no car parking requirement is stipulated, while the Department of Education[3] states the following:

- "A school is not obliged to provide parking on site to anyone at any time."
- "If a school has space available they may offer disabled parking spaces and parking for visitors and staff."

It is considered that parking for students should not be provided on-site, which aligns with the current arrangement.

In regard to staff, the following has been considered:

- Concord HS has a proposed staff population of 95 FTE staff, which is an uplift of 6 from the existing 89 FTE as part of this Development Application.
- Based on the online travel surveys (refer to Section 3.6.2 and Section 5.1), 86% of staff drive to and from school.
- With the above, the school currently generates a parking demand of 77. Based on the existing mode share, the proposed staff increase is likely to generate an additional parking demand of 5, totalling 82 for the entire future staff population.
- The site currently accommodates 40 parking spaces on-site, which represents a parking space provision of 46% of the existing FTE staff. Based on this, 37 staff vehicles are likely to parked within the surrounding parking spaces.
- Factors that are expected to contribute to a change in staff travel mode share are as follows:
    - Burwood North Metro Station – the metro will increase accessibility for staff, thus reduce the requirement to rely on private transport.
    - Cycling infrastructure within the site – based on the target mode share (refer to Section 5.4), a target for cycling has been set to be 10%, which results in a requirement to provide 10 bike spaces for the proposed new total number of FTE staff. The development proposes to provide 14 bike spaces (4 more than the anticipated demand) and EOTF, thus increasing the potential for staff to cycle to and from school. It is noted that approximately 20% of staff reside within cycling catchment from the school, plus the cycling infrastructure within the Canada Bay LGA is well developed, thus an increase in cycling by staff can be expected.
- Based on the travel mode target as per Section 5.4, the school is expected to have a 65% car use in the future, which would amount to a parking demand of 62 spaces.

[3] https://education.nsw.gov.au/teaching-and-learning/curriculum/learning-across-the-curriculum/road-safety-education/safe-travel/parking-on-school-grounds

- When applying the current staff to car parking number ratio, 29 spaces would be required to be provided on-site, while 33 staff vehicles would seek to park within the surrounding parking spaces.
- It should be noted that based on the off-site car parking occupancy surveys (refer to Section 3.5), there is some availability of unrestricted parking for staff within the surrounding parking areas.
- As per the School Transport Plan, the school will implement measures to encourage staff to use active and public transport to travel to and from school.

Based on all the above, it is considered that the proposed provision of 29 car parking spaces on-site, in combination with the off-site space availability, will be sufficient to service the staff car parking demand.

6.6.2. Accessible Parking Demand Assessment

Section B3.4 of Part B – General Controls within the DCP stipulates that a Class 9b School building as defined within the BCA is to provide parking spaces for people with disabilities at the rate of at least one car space per 100 car spaces.

The proposed staff car park accommodates 1 accessible car parking space, which is in accordance with the DCP requirement.

6.6.3. Design Assessment

The existing western Stanley Street staff car park is proposed to be expanded from 12 spaces to 29 car parking spaces (inclusive of one accessible bay). The staff car park will be accessed via the existing driveway which may require alteration as part of the redevelopment.

A high-level review of the proposed parking layout has been undertaken with respect to the minimum dimension requirements applicable for Class 1A (employee) and accessible parking spaces outlined within AS2890.1:2004 being:

- (Shared) Bay Width: 2.4m
- (Shared) Bay Length: 5.4m
- Aisle Width: 5.8m (plus 300mm to any obstruction higher than 150mm)
- Headroom: 2.2m (clear of any overhead obstructions, e.g. tree canopies, shade sails or any other obstruction) and 2.5 over the accessible space.

A turning bay is proposed within the staff car park to enable vehicles to turn around and exit the car park in the event all spaces are occupied. The swept path assessment demonstrating access/egress to the staff car park is included in Appendix 3.

The review has found that the proposed car parking layout is capable of complying with the requirements of AS2890.1.

6.7. Service and Emergency Vehicle

The development is proposing to retain the existing waste collection arrangements, i.e. a private waste contractor accesses the site via Crane Street.

Ambulance can access the School via Crane Street to reach the sports oval. Access for a 7.3m bariatric (general) ambulance from Crane Street to the proposed school oval in the eastern portion of the school has been demonstrated using the swept paths included in Appendix 3.

A minibus parking bay with dimensions 7.0m x 3.5m is proposed adjacent to the waste collection/servicing area which is accessed via Crane Street. This minibus bay is capable of accommodating vehicles up to 7m in length. This space is for parking only, the bus will be boarded and alighted from Stanley Street.

Fire truck can access the School and use Stanley Street for parking, as per the existing arrangements.

As the development proposal does not involve any changes to the design of service vehicle parking, no compliance assessment has been undertaken (other than the minibus).

7. Transport Impact Assessment

7.1. Traffic Surveys

To understand the existing transport conditions and behaviours on the surrounding road network servicing the School, pedestrian and traffic surveys were undertaken around the School on Tuesday, 30th March 2023 (outside of school holidays) to obtain vehicle and pedestrian volumes. The key intersections surveyed are as follows:

1. Burwood Road and Crane Street (4-arm signalised intersection)
2. Burwood Road and Stanley Street (4-arm signalised intersection)
3. Crane Street and St Lukes Oval Carpark Entry (3-arm un-signalised intersection)
4. Crane Street and St Lukes Oval Carpark Exit (3-arm un-signalised intersection)

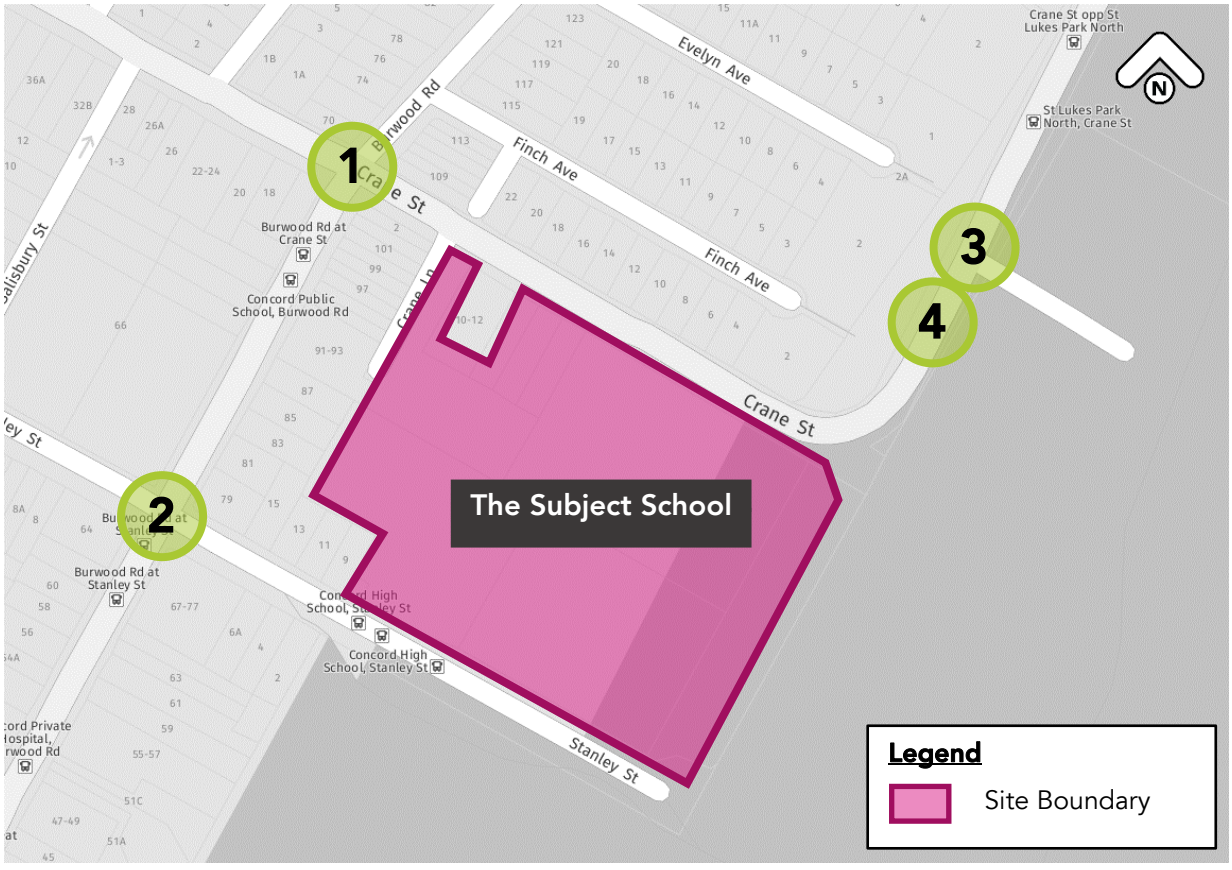


Figure 7-1: Intersection traffic survey locations

For signalised intersections, traffic signal history data has been obtained from Transport for NSW for the date of Tuesday, 30th March 2023. It contains historical information such as phase time, cycle time and other parameters used for the modelling.

7.2. Network Peak Hours

Based on the vehicle traffic volumes collected, the following network school peak hours have been identified for analysis:

- Network AM School Peak: 8:00am – 9:00am; and
- Network PM School Peak: 2:45pm – 3:45pm

The morning network peak hour for all surveyed intersections is aligned with the morning school peak hour, which is commonly observed.

The peak hour of intersection of Burwood Road and Stanley Street is aligned with the school peak hours. The intersections on Crane Street have an additional peak between 5:00pm – 6:00pm. This suggests that Burwood Road around the School is mostly affected by school transport activities, while Crane Street is servicing the locality as a major connection between suburbs and has larger vehicle volumes. This is in line with Crane Street's classification as a regional road.

7.3. Modelling Scenario

The traffic impact assessment has been undertaken for the existing scenario only, with the traffic volume data obtained through traffic surveys. This approach is considered suitable for this study due to the following:

- The proposed student capacity increase is only 25 students;
- The proposed reduction in the enrolment catchment will result in more students residing closer to the School, who would therefore be more likely to walk and cycle in the future; and
- The proposed bicycle parking and end of trip facilities provision is expected to encourage more staff and students to travel by active transport, thus the private car use is expected to reduce.

7.4. SIDRA Modelling

To assess the operation performance of the intersections under the current condition, an analysis has been undertaken using the SIDRA modelling software, which presents a range of performance indicators. Typically, there are four performance indicators used to summarise the performance of an intersection, being:

- Average Delay – The average delay encountered by all vehicles passing through the intersection. It is often important to review the average delay of each approach as a side road could have a long delay time, while the large free flowing major traffic will provide an overall low average delay.
- Degree of Saturation (DoS) – The total usage of the intersection expressed as a factor of 1 with 1 representing 100% use/saturation (e.g. 0.8=80% saturation).
- 95% Queue lengths (Q95) – is defined to be the queue length in metres that has only a 5-percent probability of being exceeded during the analysis time period. It transforms the average delay into measurable distance units.
- Level of Service (LoS) – This is a categorisation of average delay, intended for simple reference. TfNSW adopts the following bands:

Table 7-1: Level of Service

LoS	Average Delay (s)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	<14	Good operation	
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity. At signals, incidents would cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	>70	Extra capacity required	Extreme delay, major treatment required

A summary of the SIDRA modelling results is presented in Table 7-2, while the detailed results are presented in Appendix 4.

The results show that most of the intersections around the School operate at a good to satisfactory level during both the morning and afternoon peak hours. The intersection of Burwood Road and Crane Street is the busiest among all modelled intersections, due to the fact that both roads have an arterial function.

Overall, the results demonstrate that the intersections are currently operating with spare capacity.

It is noted that in the future, more students will live closer to the School as a result of the reduction of the enrolment catchment, thus it is expected that the school generated trips will reduce. However, should any additional private vehicles need to access the School, the proposed minor student capacity increase of 25 is expected to be accommodated within the existing transport conditions.

Table 7-2: Sidra results for existing conditions

Intersection	Peak time	LoS[4]	Average delays (sec)	DoS	Q95 (m)
Burwood Road / Crane Street	AM	C	41.2	0.807	182.6
	PM	C	39.8	0.801	175.8
Burwood Road / Stanley Street	AM	A	13.1	0.342	33.5
	PM	A	11.9	0.250	23.5
Crane Street / Car Park Driveway Entry (N)	AM	A	1.0	0.413	1.7
	PM	A	1.1	0.463	1.9
Crane Street / Car Park Driveway Exit (S)	AM	A	0.7	0.513	1.0
	PM	A	1.0	0.646	3.2

[4] For signalised intersections, the average performance indicators have been reported. It is noted that for priority-controlled intersections, the minor road usually experiences the highest delay whereas the major road experiences zero delay. In light of this, the average performance indicators may not be a suitable method of assessing the performance of an intersection. Therefore, the performance indicators for the worst movement have been reported for priority-controlled intersections.

8. Concept Construction Traffic and Pedestrian Management Plan

8.1. Objective

The traffic management plan associated with the construction activity aims to ensure the safety of all workers and road users within the vicinity of the construction site and following are the primary objectives:

- To minimise the impact of the construction vehicle traffic on the overall operation of the road network;
- To ensure continuous, safe and efficient movement of traffic for both the general public and construction workers;
- Installation of appropriate advance warning signs to inform users of the changed traffic conditions;
- To provide a description of the construction vehicles and the volume of these construction vehicles accessing the construction site;
- To provide information regarding the changed access arrangement and also a description of the proposed external routes for vehicles including the construction vehicles accessing the site; and
- Establishment of a safe pedestrian environment in the vicinity of the site.

8.2. Hours of Work

All works associated with the project will be restricted to the time periods stipulated within the Conditions of Consent upon determination of the DA. At this stage, these hours are not known, though standard construction working hours are generally as follows:

- Monday to Friday 7:00am to 6:00pm
- Saturday 8:00am to 1:00pm
- Sunday, Public Holidays No works to be undertaken

Construction vehicle movements to and from the site shall be restricted during the school peak period times on weekdays between 8.00am-9.30am and 2:30pm-4:00pm.

Works may be undertaken outside of these hours where:

- The delivery of vehicles, plant or materials is required outside the above hours by the Police or other authorities.
- It is required in an emergency to avoid loss of life, damage to property and/or to prevent environmental harm; and
- A variation is approved in advance in writing by the approving authority.

Methodology to restrict vehicular movements to occur within the above-mentioned working hours will need to be established and communicated by the contractor upon engagement at a later stage.

8.3. Construction Staging

As a Principal Contractor has not yet been engaged for the project, construction staging is not known. For the purpose of this document, it is assumed that the construction activity will occur in one stage.

8.4. Construction Vehicle Types

Stanley Street is currently accessed by buses, which undertake a U-turn within the turning head in the east of the cul-de-sack. With this in mind, the construction vehicles are proposed to be limited to up to 12.5m Heavy Rigid Vehicles (HRVs).

Larger vehicles will be dealt with separately, with the submission of required permits to and subsequent approval by Council.

8.5. Site Access

Site access for construction is proposed to be from Stanley Street.

The following options have been considered, which will need to be discussed and agreed upon with the contractor:

8.5.1. Option 1

Vehicles would enter and exit the site via temporary driveways. The following impacts are expected:

- Parking spaces to be temporarily removed as shown in Figure 8-1.
- A traffic controller will be required upon the exiting HRV. A traffic control plan will be prepared to inform drivers of this arrangement.
- Trees near the entry / exit driveways need to be pruned to provide 4.5m height clearance. Confirmation will be required on the potential encroachment of the truck onto the tree protection zones.

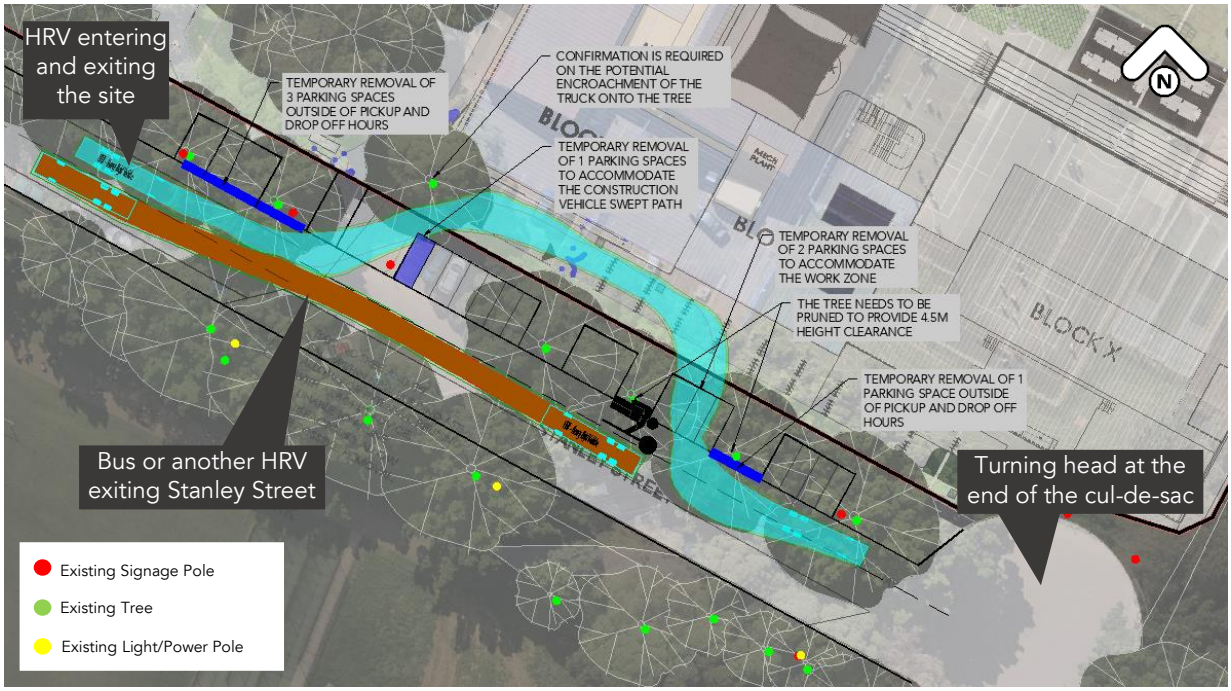


Figure 8-1: Option 1 for construction vehicle entry and exit and implications on surrounding infrastructure

8.5.2. Option 2

A Work Zone would be established on Stanley Street as shown in Figure 8-2. The Works Zone to be designed to accommodate vehicles up to 12.5m HRVs. The following impacts are expected:

- Parking spaces to be temporarily removed as shown in Figure 8-2.
- The work zone would be approximately 28m long to allow 12.5m HRV access and egress.
- Appropriate signage shall be provided to inform road users of the restrictions.
- The work zone to be restricted to times of construction work hours.

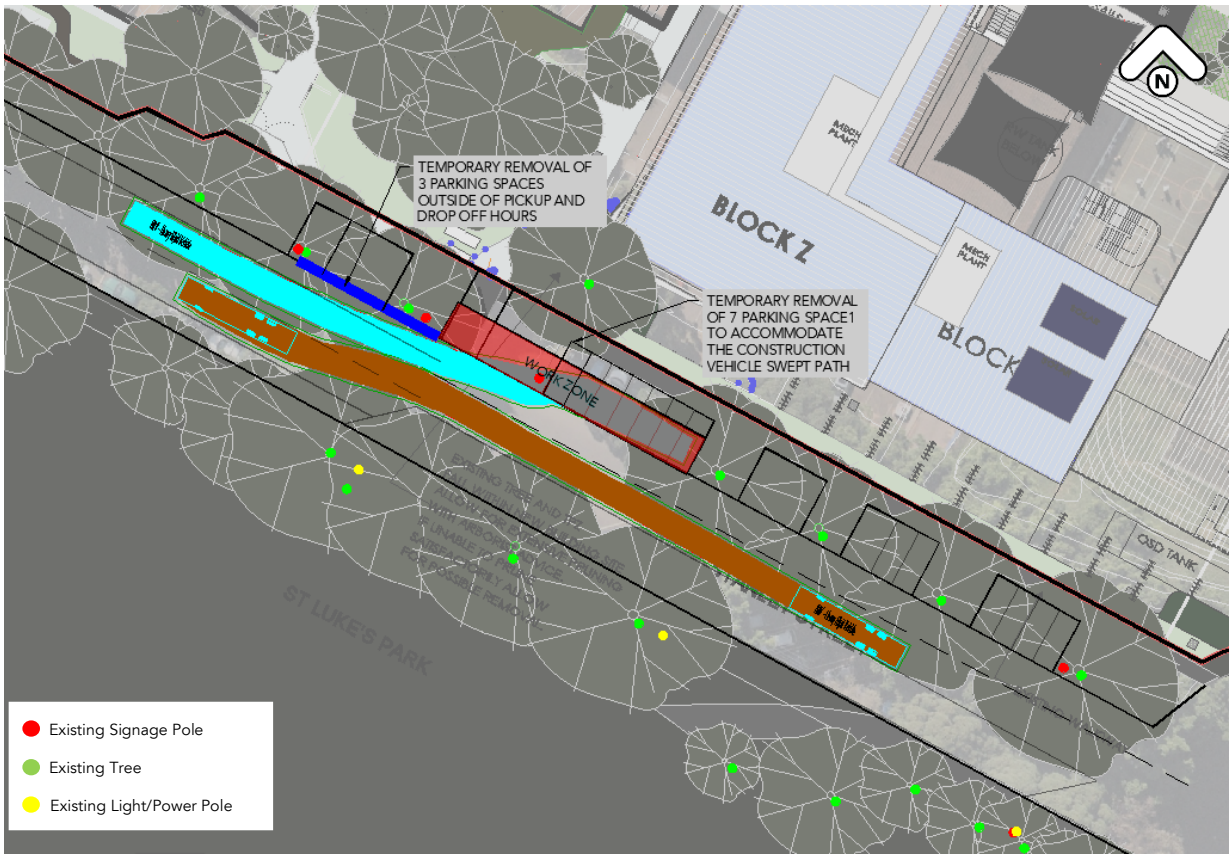


Figure 8-2: Option 2 for construction vehicle entry and exit and implications on surrounding infrastructure

8.6. Construction Vehicles Routes

The site is located in Concord and the proposed construction vehicle routes have regard for the surrounding traffic arrangements in the vicinity of the site. No queuing or marshalling of trucks is permitted on any public road and all loading and unloading of materials will be undertaken within the site or a Works Zone.

All vehicle routes to and from site are constrained to existing public roads that have the physical geometry to accommodate the turning movements.

8.6.1. Access

The key access routes from the state road network to and from Stanley Street has been reviewed.

NORTH – Concord Road (state road), turn left into Patterson Street (state road), turn right into Gipps Street (state road), turn left into Burwood Road (regional road) and a final left turn into Stanley Street (site frontage/work zone)

WEST – Paramatta Road – M4 (state road), turn left into Burwood Road (regional road) and a final left turn into Stanley Street (site frontage/work zone)

SOUTH and EAST– Follow Western Motorway Toll Road M4 (state road), turn left into Concord Rd (state road), turn left into Patterson Street (state road), turn right into Gipps Street (state road), turn left into Burwood Road (regional road) and a final left turn into Stanley Street (site frontage/work zone).

8.6.2. Egress

The egress from the site would be continuing straight on Stanley Street and take the following turns:

NORTH – Turn around at the end of the cul-de-sac and continue straight on Stanley Street, turn left into Burwood Street (regional road), turn right into Gipps Street (state road), then turn right into Concord Road (state road)

WEST – Turn around at the end of the cul-de-sac and continue straight on Stanley Street turn left into Burwood Street (regional road), then take right into Paramatta Road (state road)

SOUTH and EAST– – Turn around at the end of the cul-de-sac and continue straight on Stanley Street turn left into Burwood Street (Regional Road), turn right into Gipps Street (state road), turn right into Taylor Street, and then take left into Paramatta Road (state road).

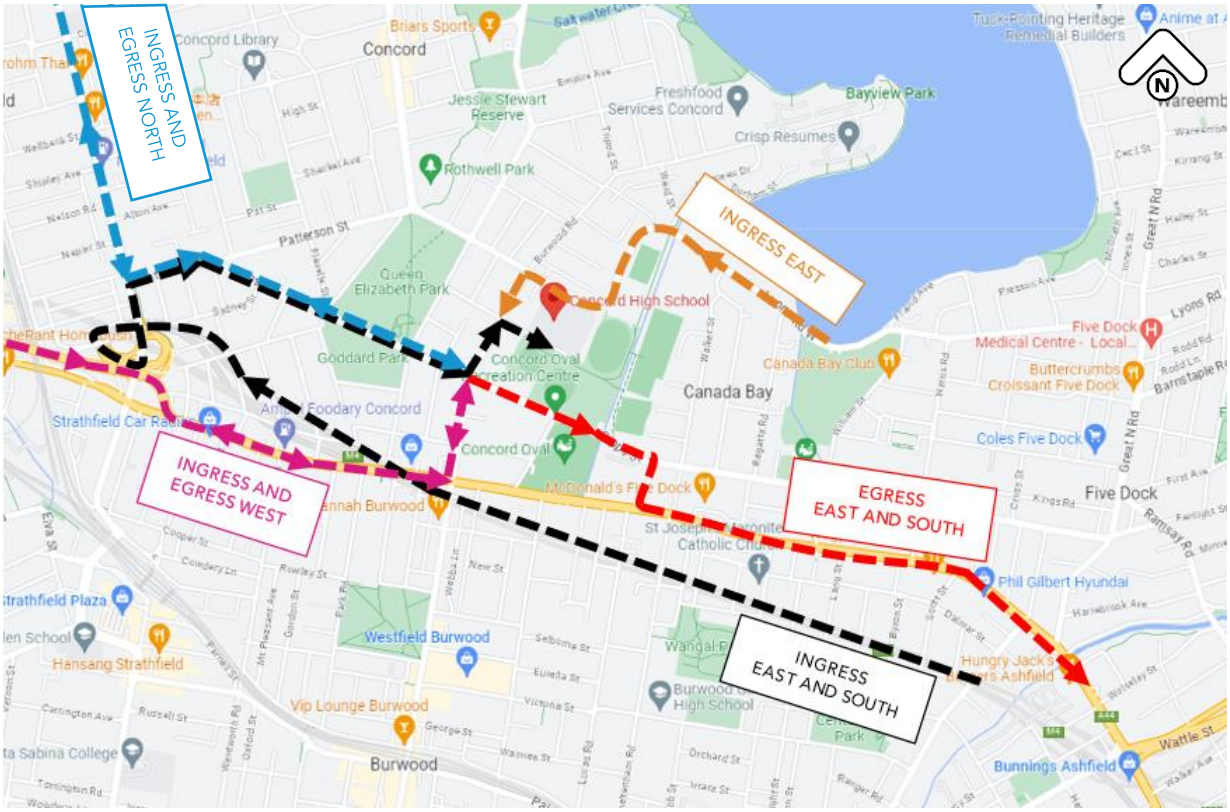


Figure 8-3 Ingress and Egress Routes to Stanley Street

8.7. Traffic Control Plans

Traffic Control Plans (TCP) outline the proposed traffic management to inform road users of the changed traffic conditions in the vicinity of the works site. TCPs are to be developed in accordance with the RMS Traffic Control at Works Site.

8.8. Staff Parking

No parking spaces will be provided for the construction staff due to site constraints.

The contractor will put their usual processes in place to reduce car usage among construction staff. These measures include delivering all tools and equipment required to the site in the morning and removing it in the afternoon so that construction workers are not reliant on a car. The site personnel will be advised to carpool and use the public transport options available in the vicinity of the site.

8.9. Work Site Security

To provide security to the works site and protection to the general public, it is proposed that the entire site (and any remote work areas when applicable) will be physically separated from the School via A-Class or ATF type temporary fencing. The extents of fencing will be modified during the works as required to suit the works occurring at each project stage. For site access – Option 2, B-Class hoarding will be established along the work zone to protect pedestrians during crane operation.

Prior to commencement of works the contractor will facilitate a Safety Workshop where the school and their stakeholders shall be invited to identify site specific safety and security initiatives.

All access points are to be securely locked when construction activities are not in progress. The exact location of this fence is to be agreed on site, prior to commencement of the works. Exact location of the hoarding and fencing will be agreed at construction stage.

8.10. Emergency Vehicle Access

The proposed traffic control arrangements do not propose the closure of any local roads. Any emergency vehicles requiring access to the project site will do so via the site access along Crane Street or Stanley Street. A detailed Emergency Management Plan will be developed by the Principal Contractor prior to site establishment works.

8.11. Access to Adjoining Properties

Access to all adjoining properties will be maintained throughout the works. The adjacent landowners will be notified of works via letter box distribution and road signage to advised of anticipated truck movements in operation with access to adjoining properties being maintained at all times.

8.12. Summary

This concept CTMP has been prepared to outline the construction traffic measures to improve site safety to the public and workers during the construction process.

With the measures described in the concept CTMP in place, the construction activity is anticipated to have minimal disruption to the daily activities within the vicinity of the site.

It is envisaged that this document will be reviewed during the construction stage and amended as required, due to changes in design, TfNSW, Councils or any other authority requirements.

Appendix 1. Architectural Drawings

REV	DESCRIPTION	DATE	INIT.
P18	100% UPDATE - ISSUE TO ALL	14/06/2023	JR
P17	100% UPDATE - ISSUE TO ALL	23/05/2023	JR
P15	100% ISSUE TO ALL	6/04/2023	JR
P14	95% ISSUE TO ALL	23/03/2023	JR
P12	ISSUE TO CLIENT	15/03/2023	JR
P11	ISSUE TO CLIENT ERG	10/03/2023	JR
P08	ISSUE TO CLIENT	3/03/2023	JR
P07	80% ISSUE TO ALL	22/02/2023	JR
P04	50% ISSUE	30/01/2023	JR
P03	40% ISSUE TO CONSULTANTS	16/01/2023	JR

VEHICLE ACCESS ONLY
WASTE STORAGE (EX)
PROPOSED MINIBUS PARKING HARDSTAND AND CARPORT (MIN 3.5m x 7m clear) SECURE SSU FENCING AND LIGHTING
WATER METER AND GAS METER ENCLOSURE (EX)
PROPOSED WASTE STORAGE HARD STAND MIN 25sqm INTERNAL CLEAR, REFER TO WASTE REPORT
SHEET METAL ROOFING STRUCTURE WITH MIN 2.4m INTERNAL CLEARANCE AT LOW SINGLE PITCH
1.8m HIGH SHEET METAL WALLS WITH OPEN SCREEN FROM 1.8m TO ROOF. BIRD AND VERMIN PROOF LOCKABLE DOORS
BIN CLEANING FACILITIES INCL HOSE TAP AND DRAINAGE AND LIGHTING
PROPOSED LANDSCAPE WORKS SEE LANDSCAPE PLAN
CRANE STREET
NEW FOOT PATH AS REQUIRED FOR COMPLIANT CONNECTION
PROPOSED LANDSCAPE WORKS SEE LANDSCAPE PLAN
PROPOSED OUTDOOR GAMES COURTS WITH LINE MARKINGS, INSTALLATION, EQUIPMENT AND PERIMETER FENCING AS PER EFSG
RE-ACTIVATE EXISTING GATE. SINSW SECURITY REQUIRED
COUNCIL CARPARK
LANDSCAPING
NEW COVERD WALKWAY (EARTH WORKS FOR ACCESS COMPLIANCE REQUIRED)
OSD TANK
NEW 40 STUDENT BICYCLE PARKS AND 16 SCOOTER PARKING QUANTITY AND LAYOUT AS PER TRAFFIC ENGINEER. PROVIDE HARD STAND
EXISTING WALKWAY
AWNING
BLOCK H
NEW COVERED WALKWAY WITH HIGH SECTION TO ALLOW FOR AMBULANCE/ SERVICE VEHICLE TO PASS UNDER
BLOCK C
BLOCK D
CONNECT (OVERLAP) TO EXISTING COVERED WALKWAY
PLAY SPACE RATIO 10.04m² PER STUDENT
RESURFACE EXISTING PAVING TO CONCRETE AND MAINTAIN ADJACENT GARDEN BEDS. NEW WALKWAY COVER TO CONNECT BLOCK A,D and Z
EXISTING AMU LANDSCAPE WORKS TO BE REBUILT AFTER CONSTRUCTION OF BLOCK Z
EXISTING AMU AWNING TO BE RETAINED
RESTORE/MAKE GOOD EXISTING AMU LANDSCAPE
BLOCK A
EXTENT OF COVERED OUTDOOR SPACE SHOW DASHED
EXISTING FOOTBALL CLUBHOUSE
LIBRARY / ADMIN WORKS INLUDING REALLOCATION OF AREAS
BLOCK B
PROPOSED LANDSCAPE WORKS SEE LANDSCAPE PLAN
EXTERNAL FURNITURE REFER TO LANDSCAPE ARCHITECTS DRAWINGS
MECH PLANT
SHADE SAILS SHOWN INDICATIVELY
AWNING
EXTENT OF COVERED OUTDOOR SPACE SHOW DASHED
ST LUKE'S OVAL
SINSW SECURITY FENCE TO PROPOSED CARPARK AND UNIFORM SHOP
BUILD NEW ACCESS COMPLIANT RAMP AND STAIR TO BLOCK G
AWNING
PROPOSED NEW AWNG EXTENSION TO CONNECT WITH EXISTING AWNG
NEW BALLUSTRADE
BLOCK F
ALLOCATE ROOM UNDER STAIR FOR RAINWATER REUSE CONTROL AND FILTRATION
RW TANK BELOW
MECH PLANT
SOLAR
BLOCK X
BLOCK Z
BLOCK Y
PROPOSED NEW LOCATION FOR BLOCK I ACCESS COMPLIANT RAMP / FOOT PATH CONNECTION. CONNECTION TO SERVICES
NEW RAMP / FOOT PATH / STEPS AND BALUSTRADE
BLOCK G
MSB
OSD TANK
NEW SPRINKLER TANK
NEW SPRINKLER PUMP ENCLOSURE
OSD TANK
NEW 96 STUDENT BICYCLE PARKS AND 16 SCOOTER PARKS. QUANTITY AND LAYOUT AS PER TRAFFIC ENGINEER. PROVED COVER FOR % AS PER TRAFFIC ENGINEERS REPORT
EXTEND EXISTING CARPARK TO 29 SPACES (INCL 1 ACC) PROVIDE WHEEL STOPS AND SCURE TRAFFIC BARRIERS
NEW BOOSTER AND BACKFLOW DEVICE ENCLOSURE
NEW HYDRANT PUMP ENCLOSURE
EXTENT OF AWNING SHOWN DASHED
PROPOSED LANDSCAPE WORKS SEE LANDSCAPE PLAN
GRASS SPECIES FOR GRASS SWALE INCLUDE: *Juncus usitatus, Isolepsis nodosa, Carex appressa, Dianella spp.*
NEW SUBSTATION
NEW MSB AND EV-DB
NEW ACCESSIBLE CAR SPACE AND KERB RAMP
NEW WALKWAY TO EXISTING PATHS
NEW 14 STAFF BICYCLE PARKS & 6 LOCKERS INSIDE BLOCK G
EXISTING WALKWAY
STANLEY STREET
EXISTING WALKWAY
EXISTING CARPARK GATE
RESURFACE EXISTING PAVING, INCLUDING TIERED SEATING TO CONCRETE AND MAINTAIN EXISTING GARDEN BEDS
ST LUKE'S PARK

PROPOSED SITE PLAN
SCALE 1:500
0 1 2 3 4 5

JDH ARCHITECTS.
Suite 301/249 Pitt Street
Sydney NSW 2000
Telephone: 02 9281 8697
www.jdharchitects.com.au

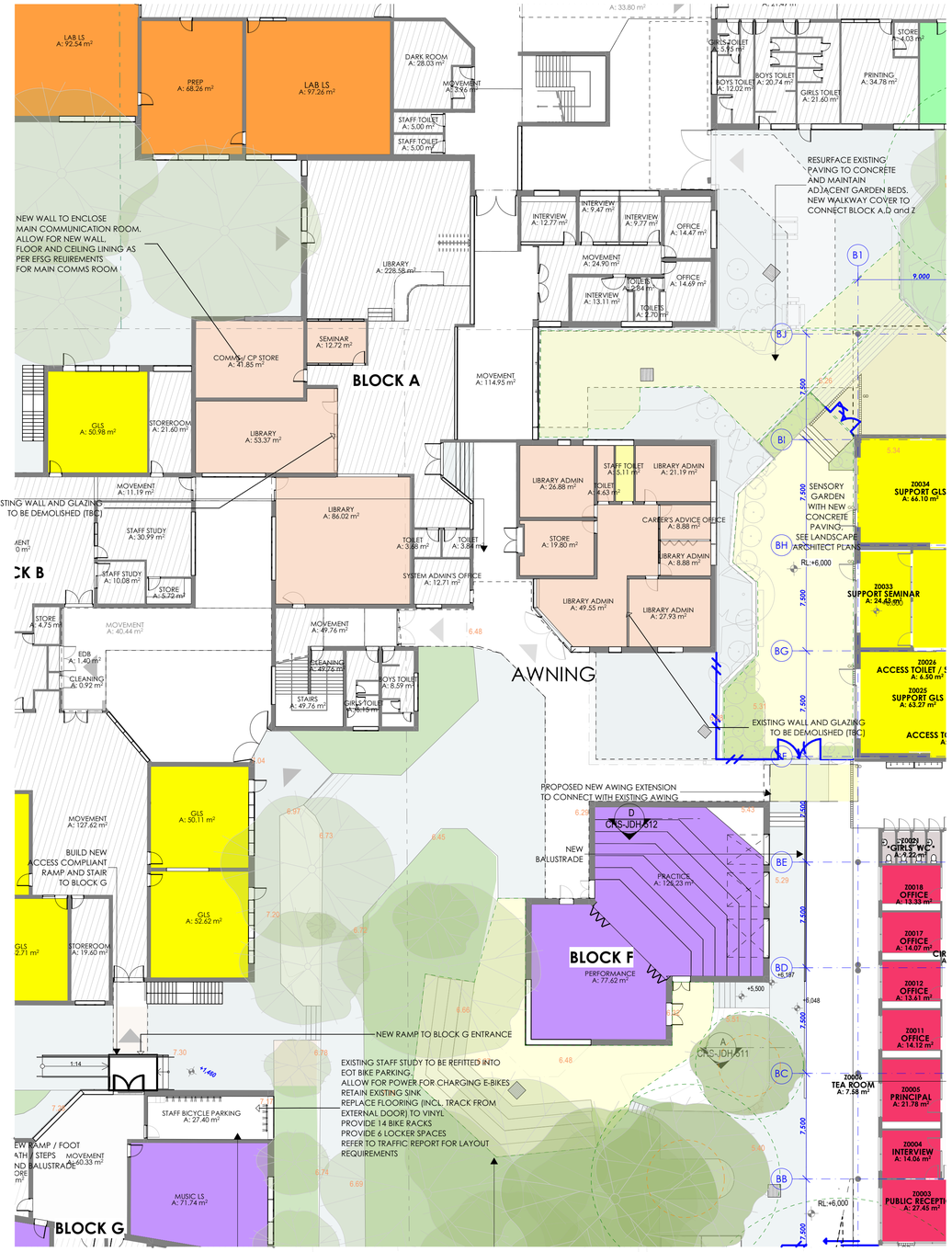
PROJECT:
Concord High School
CLIENT:
DEPARTMENT OF EDUCATION
ADDRESS:
5 Stanley Street, Concord, NSW, 2137 AUS

DRAWING:
PROPOSED SITE PLAN

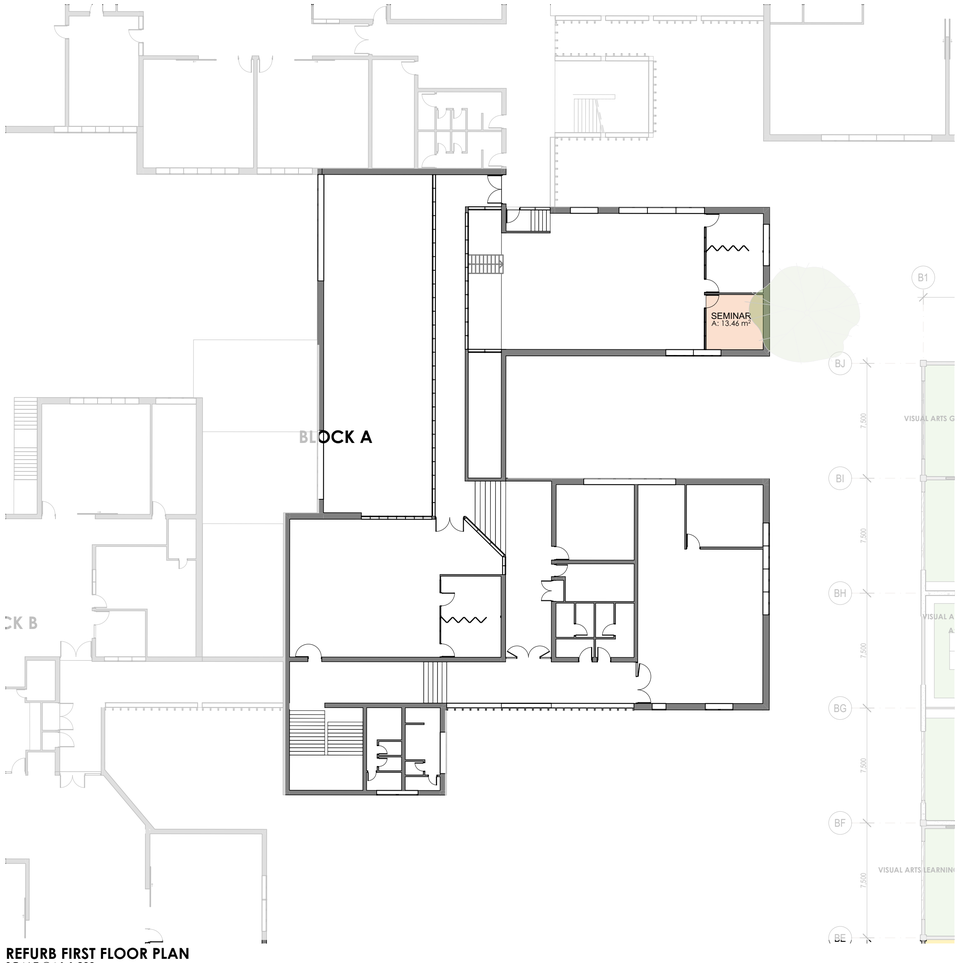
N

ISSUE DATE:	SCALE:	DESIGNED/DRAWN:	CHECKED:	SHEET SIZE:
14/06/2023	@ A1	FM/JR	FM	A1

JOB NO:	SHEET NO:	REVISION:
1292	CHS-JDH-0013-ZZ-XX-DR-A-S3	P18



REFURB FIRST FLOOR PLAN
SCALE @A1 1:200
0 1 2 3 4 5



REFURB FIRST FLOOR PLAN
SCALE @A1 1:200
0 1 2 3 4 5

BLOCK A ROOMS SHOWN IN COLOUR TO BE RELABLED AS PER THIS PLAN
MAKE GOOD ANY DEMOLITION DAMAGE
MAINTAIN EXISTING LIBRARY FURNITURE AND
ALLOW FOR NEW FURNITURE IN REFURBISHED ROOMS.
EFSG AND SINSW TO CONFIRM

REV	DESCRIPTION	DATE	INIT.
P18	100% UPDATE - ISSUE TO ALL	14/06/2023	JR
P17	100% UPDATE - ISSUE TO ALL	23/05/2023	JR
P15	100% ISSUE TO ALL	6/04/2023	JR
P14	95% ISSUE TO ALL	23/03/2023	JR
P12	ISSUE TO CLIENT	15/03/2023	JR
P11	ISSUE TO CLIENT ERG	10/03/2023	JR
P08	ISSUE TO CLIENT	3/03/2023	JR
P07	80% ISSUE TO ALL	22/02/2023	JR
P04	50% ISSUE	30/01/2023	JR
P03	40% ISSUE TO CONSULTANTS	16/01/2023	JR

JDH ARCHITECTS.
Suite 301/249 Pitt Street
Sydney NSW 2000
Telephone: 02 9281 8697
www.jdharchitects.com.au

PROJECT:
Concord High School
CLIENT:
DEPARTMENT OF EDUCATION
ADDRESS:
5 Stanley Street, Concord, NSW, 2137 AUS

DRAWING:
GENERAL ARRANGEMENT - REFURB PLAN

ISSUE DATE:	SCALE:	DESIGNED/DRAWN:	CHECKED:	SHEET SIZE:
14/06/2023	@ A1	FM/JR	FM	A1

JOB NO:	SHEET NO:	REVISION:
1292	CHS-JDH-0106-ZZ-ZZ-DR-A-S3	P18

Appendix 2. Travel Mode Survey Results

This report is filtered
Only show: #1 Question "Are you staff, student or parent / carer of a student? " is one of the following answers ("Student","Parent / carer")

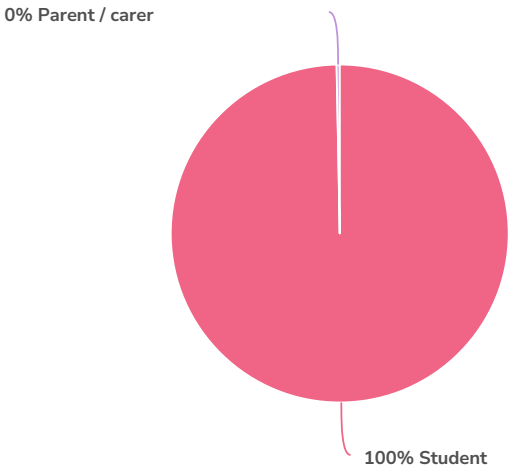
Report for Concord High School Travel Mode Survey

Response Counts

Completion Rate:	**96.7%**		
	Complete		700
	Partial		24

Totals: 724

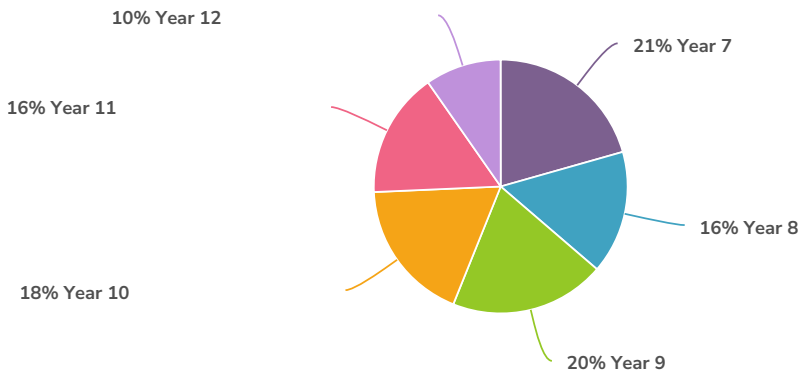
1. Are you staff, student or parent / carer of a student?



Value	Percent	Responses
Student	99.7%	722
Parent / carer	0.3%	2

Totals: 724

2. What year group are you in?



Value	Percent	Responses
Year 7	20.6%	149
Year 8	15.7%	114
Year 9	19.8%	143
Year 10	18.2%	132
Year 11	16.0%	116
Year 12	9.7%	70

Totals: 724

3. Which postcode do you normally travel from?

ResponseID	Response
74	2046
81	2046
82	2134
83	2127
84	2137
86	2137
90	2128
91	2137
92	2141
93	2137
94	2138
95	2193
96	2046
97	2137
98	2127
99	2137
100	2113

ResponseID	Response
101	2141
102	2132
104	2046
105	2127
106	2137
107	2127
108	2127
109	2046
110	2137
111	2134
112	2127
113	2138
114	2144
115	2131
116	2137
118	2137
119	2138
120	2138
121	2132/2127
122	2141
123	2127
124	2141
125	2046
126	2137
127	2127
128	2046
129	2137

ResponseID	Response
130	2128
131	2127
132	2137
133	2127
134	2137
135	2137
136	2138
138	2131
139	2127
140	2141
142	2127
143	2046
144	2127
145	2138
146	2137
147	2137
148	2137
149	2127
150	2128
151	2138
152	2127
153	2138
154	2127
155	2138
156	2137
157	2046

ResponseID	Response
158	2144/2127
159	2046
160	2144
161	2138
162	2127
163	2127
164	2046
166	2046
167	2137
168	2127
169	2046
170	2137
171	2137
172	2127
173	2127
174	2137
175	2137
176	2127
177	2127
178	2046
179	2134
180	2127
181	2137
182	2046
183	2137
184	2127

ResponseID	Response
186	2127
187	2046
188	2136
189	2076
190	2046
191	2137
192	2134
193	2127
194	2127
195	2134
196	2127
197	2128
198	2137
199	2046
200	2141
201	2127
202	2127
203	2137
204	2046
205	2758
206	2127
207	2127
208	2046
209	2137
210	2137
211	Don't know

ResponseID	Response
212	2137
213	2137
214	2132
215	2046
216	2138
217	2137
218	2142
219	2137
220	2128
221	2127
222	2127
223	2046
224	2127
225	2046
226	2099
227	2127
229	2161
230	2141
231	2127
232	2134
233	2137
234	2141
235	2200
236	2137
237	2141
238	2046

ResponseID	Response
239	2144
240	2127
241	2127
242	2046
243	2046
244	2046
245	2137
246	2043
247	2046
248	2137
250	2137
251	2138
252	2137
253	2127
254	2134
255	2141
256	2127
257	2142
258	2046
259	2115
260	2138
263	2140
264	2137
265	2190
266	2141
267	2137

ResponseID	Response
268	2141
269	2137
270	2137
271	2134
272	2137
274	2046
275	.
276	2138
277	2144
278	2127
279	2137
280	2127
282	2138
283	2127
285	43 Davidson Ave
286	2046
287	2046
289	2138
290	2046
291	2133
292	2137
293	2015
294	2137
296	2137
297	2138
298	2046

ResponseID	Response
299	2127
300	2137
301	2127
302	2137
305	2127
306	2190
307	2046
308	2127
310	2046
311	2128
312	2048
313	2137
314	i don't remember
315	2137
316	2046
317	2137
318	2137
319	2127
320	2137
321	2128
322	2137
323	2046
324	2046
325	2137
326	2137
328	2135

ResponseID	Response
329	2137
330	2046
331	2127
332	2141
333	2127
334	Newington1922
337	2141
339	2127
340	2127
341	2127
343	2137
344	2046
345	2138
346	2137
347	2127
348	2137
349	2046
350	2046
352	2138
353	2141
354	2137
355	2138
356	2127
357	2128
358	2138
359	2046

ResponseID	Response
360	2137
361	2046
362	2046
363	2143
364	2127
365	2138
366	2127
367	2141
368	3031
369	2046
370	2048
371	2127
372	2137
373	2137
374	2141
375	2137
376	2137
377	2138
378	2137
379	2140
380	2138
381	2127
382	2137
383	2127
384	2136
385	2137

ResponseID	Response
386	2046
387	2127
389	2046
391	2127
392	2138
395	2138
396	2132
397	2138
399	2137
400	2137
402	2127
403	2127
404	2137
405	2138
406	2134
407	2137
408	2046
409	2127
410	2046
411	2177
412	2127
413	2192
414	2046
415	2136
416	2148
417	2137

ResponseID	Response
418	2137
419	2046
420	2127
421	2141
422	2137
423	2138
424	2143
425	2046
427	2138
428	2127
429	2127
430	2140
431	2138
432	2127
433	2127
434	2137
435	2137
436	2144
438	2137
439	i dont know
441	2138
442	2132
443	2127
444	2137
445	2127
446	2127

ResponseID	Response
447	2137
448	2194
449	edtnsw
450	2046
451	2141
452	2127
453	2046
454	2150
455	2137
456	2046
458	2046
459	2046
460	2166
461	2137
462	2138
463	2046
464	2043
465	2046
466	2137
467	2138
468	2134
469	2137
470	2112
471	2127
472	2137
473	2046

ResponseID	Response
474	2137
475	2137
476	2138
477	2127
478	2046
479	390 concord road
480	2127
481	2137
482	2138
483	2137
484	2137
485	2137
486	2137
488	2137
489	2127
490	2046
491	2045
493	2134
494	2046
495	2138
496	2127
498	2138
499	2127
500	2046
501	2137
502	2137

ResponseID	Response
503	2137
504	2127
505	2046
506	2137
507	2200
508	2137
509	2046
510	2046
511	i forgot
512	2046
513	2162
514	2133
516	2127
517	2128
518	11
519	2127
520	2138
521	2127
522	2137
523	2127
524	2046
526	2137
527	2137
528	2127
529	2137
530	2046

ResponseID	Response
532	2046
533	2127
534	2046
535	2138
536	2127
537	2127
539	2138
541	2046
542	2137
543	2040
544	2127
545	2046
546	2046
547	2137
548	2136
549	2138
550	2046
551	2046
552	2137
553	2127
554	2127
556	Bayview
557	2138
558	2138
560	2046
561	2138

ResponseID	Response
562	2127
563	2127
564	2138
565	2137
566	2046
567	2046
568	2127
569	2138
570	2127
571	2046
572	2127
573	2046
574	2046
575	2046
576	2046
578	2127
579	2141
580	2046/2137
581	2190
582	2138
583	Concord
584	2127
585	2127
586	2144
587	2046
588	2137

ResponseID	Response
589	2135
590	2131
591	2777
592	2049
593	2137
594	2138
595	2138
596	2137
597	2141
598	2137
599	rather not say
600	2137
601	2141
602	2138
603	2138
604	2046
605	2127
606	2137
607	2046
608	2137
609	2138
610	2046
611	2046
612	2137
613	2127
614	2141

ResponseID	Response
615	2127
616	2137
617	2046
618	2137
619	2046
620	2137
621	2138
622	2046
623	2138
625	2137
626	2137
627	2137
628	2046
629	2137
630	2127
631	2137
632	2137
633	2141
634	2127
635	2133
636	2137
637	2137
638	2046
639	2127
640	2137
642	2127

ResponseID	Response
643	2138
644	2138
645	2046
646	2137
647	2138
648	2137
649	2137
650	2138
651	2137
652	2137
653	2127
655	2137
656	2141
657	2624
658	2046
659	2127
660	2141
661	2137
664	2046
666	2046
667	2046/2137
668	2132
669	2127
670	2046
672	410
673	2141

ResponseID	Response
674	2137
676	2127
677	2127
678	2127
679	2127
680	2046
681	bus
682	2046
683	2137
684	2138
685	2046
686	2137
687	2137
688	2128
689	2137
690	2127
691	2132
692	2127
693	2131
694	2127
695	2127
696	2141
697	2132
698	2137
699	2127
701	2134

ResponseID	Response
702	2200
703	2138
704	2127
705	2127
706	2046
707	2137
708	2138
709	2046
710	2128
711	2127
712	2127
713	2138
714	2046
715	2046
716	2046
717	2138
718	2138
719	2138
720	2046
721	2000
722	2133
723	2137
724	2134
725	2137
726	2137
727	2127

ResponseID	Response
728	2127
729	2137
730	2046
731	2137
732	2160
733	Newington1922
734	2137
735	2138
736	bus
738	2069
740	2127
741	2137
743	2137
745	2127
746	2138
747	2137
748	2137
749	2046
750	2136
751	2137
752	2144
753	2137
754	2046
755	2127
756	2137
757	2046

ResponseID	Response
758	2046
759	2127
760	2137
763	2046
764	2127
765	2127
766	2137
768	2137
770	2046
772	2137
773	2137
774	2133
775	2141
776	2138
777	2137
778	2046
779	2046
780	24
781	2137
782	2127
783	2046
784	2137
785	2127
786	2138
787	2138
788	2137

ResponseID	Response
789	2138
790	2137
791	2127
792	2138
793	2046
794	2193
796	2046
797	2046
798	2046
800	2138
802	2137
803	2046
804	2137
806	2138
807	2138
808	2127
809	2137
810	2127
811	2127
812	2137
813	2138
814	2046
815	2137
816	2046
817	2046
818	2137

ResponseID	Response
819	2046
820	2127
821	2137
822	2046
823	2137
824	2137
825	2140
826	2137
827	2127
828	2137
829	2137
830	2118
831	2137
832	2128
833	2127
834	2046
835	2046
836	2046
837	2046
838	2046
839	2127
840	2137
841	2137
842	2131
843	2127
844	2040

ResponseID	Response
845	2127
846	2137
847	2046
848	2137
849	2137
850	2137
852	2046
853	2138
854	2046
856	2127
858	2194
860	2046
861	2155
862	2046
864	2046
866	2046
867	2137
869	2144
872	2138
873	2127
874	2137
875	2138
877	2138
879	2046
880	2040
882	2140

ResponseID	Response
884	2135
885	2138
886	2138
887	2127

4. Which suburb do you normally travel from?

ResponseID	Response
74	Abbotsford
81	Five Dock
82	Burwood
83	Newington
84	Concord
86	Concord
90	Silverwater
91	Concord
92	Sydeny Olympic Park
93	Concord
94	concord west
95	Ashbury
96	Abbotsford
97	Concord
98	Newington
99	Cabarita
100	north ryde

ResponseID	Response
101	Lidcombe
102	Croydon
104	Canada Bay
105	Newington
106	Cabarita
107	Wentworth Point
108	Newington
109	Five Dock
110	Concord
111	Burwood
112	olympic park
113	Liberty Grove
114	Auburn
115	Ashfield
116	concord
118	Concord
119	Liberty Grove
120	Liberty Grove
121	Croydon/Newington
122	Lidcombe
123	Newington
124	lidcombe
125	Abottsford
126	Concord
127	Wentworth Point
128	Russell Lea
129	Concord

ResponseID	Response
130	Silverwater
131	Newington
132	Breakfast point
133	Newington
134	Cabarita
135	Concord
136	Concord West
138	Ashfield
139	Newington
140	Lidcombe
142	newington
143	Russell Lea
144	Wentworth point
145	Concord West
146	Concord
147	Cabarita
148	North Strathfield
149	Newington
150	silverwater
151	Concord west
152	Newington
153	Rhodes
154	Newington
155	Concord
156	concord
157	Wareemba

ResponseID	Response
158	Newington
159	Five Dock
160	Berala
161	Concord west
162	Newington
163	Newington
164	Five dock
166	Five dock
167	Concord
168	Newington
169	Russell Lea
170	Concord
171	burwood rd concord
172	newington
173	Wentworth point
174	Concord
175	concord
176	Newington
177	Newington
178	Five Dock
179	Burwood
180	Wentworth Point
181	concord
182	Abbotsford
183	Cabarita
184	newington

ResponseID	Response
186	Wentworth Point
187	Five Dock
188	Enfield
189	Wahroonga
190	Russell Lea
191	concord
192	Burwood
193	Newington
194	Newington
195	Burwood
196	Wentworth Point
197	silverwater
198	Concord
199	abbotsford
200	Lidcombe
201	Wentworth Point
202	Wentworth Point
203	Concord
204	Five Dock
205	Blue mountains
206	wentworth point
207	newington
208	Five Dock
209	concord
210	Concord
211	Concord

ResponseID	Response
212	Cabarita
213	Concord
214	Croydon
215	Abbotsford
216	rhodes
217	Concord
218	Granville
219	concord
220	Silverwater
221	Wentworth Point
222	Newington
223	five dock
224	newington
225	Abbotsford
226	Collaroy
227	Newington
229	guildford
230	Lidcombe
231	Wentworth point
232	burwood
233	Breakfast Point
234	Lidcombe
235	Bankstown
236	2137
237	lidcombe
238	Abbotsford

ResponseID	Response
239	auburn
240	Wentworth Point
241	Wentworth point
242	Five Dock
243	Abbotsford
244	Abbotsford
245	Concord
246	Erskenville
247	five dock
248	Concord
250	cocord rd north stratfiled
251	liberty grove
252	concord
253	Sydney
254	burwood
255	Lidcombe
256	Olympic Park
257	Granville
258	Five Dock
259	Ermington
260	Concord West
263	North Strathfield
264	Concord
265	Greenacre
266	Lidcombe
267	Concord

ResponseID	Response
268	Lidcombe
269	Cabarita
270	Concord
271	Burwood
272	Concord
274	fivedock
275	.
276	Concord West
277	Auburn
278	Newington
279	Concord
280	Hurstville
282	Rhodes
283	Newington
285	concord
286	five dock
287	Wareemba
289	Rhodes
290	Abbotsford
291	Croydon Park
292	Concord
293	alexandria
294	Breakfast Point
296	Concord
297	Rhodes
298	Canada Bay

ResponseID	Response
299	newington
300	Concord
301	Newington
302	Concord
305	Newington
306	Greenacre
307	five dock
308	Sydney Olympic Park
310	Five Dock
311	Newington
312	wareemba
313	Concord
314	i don't remember
315	concord
316	Five Dock
317	Concord
318	inner west
319	Sydney Olympic Park
320	Sydney
321	Silverwater
322	Concord
323	Russel lea
324	five dock
325	mortlake
326	Concord
328	Strathfield

ResponseID	Response
329	Concord
330	Abbotsford
331	Newington
332	Lidcombe
333	Wentworth point
334	Newington to Concord
337	lidcombe
339	Wentworth Point
340	WentWorth point
341	newington
343	concord
344	Russell Lea
345	rhodes
346	Cabarita
347	Newington
348	Cabarita
349	Abbotsford
350	Abbotsford
352	Rhodes
353	Lidcombe
354	Concord
355	Rhodes
356	Wentworth Point
357	something
358	Rhodesw
359	abbotsford

ResponseID	Response
360	Concord
361	Five Dock
362	Chiswick
363	Regents Park
364	newington
365	Liberty Grove
366	Newington
367	Olympic Park
368	Flemington
369	2046
370	Canada Bay
371	Newington
372	concord west
373	Breakfast Point
374	Berela
375	North Strathfield
376	Concord
377	Rhodes
378	concord
379	Homebush
380	concord west
381	Wentworth point
382	Cabarita
383	Wentworth Point
384	Strathfield South
385	Concord, City of Canada Bay Council

ResponseID	Response
386	five doke
387	Olympic Park
389	Canada Bay
391	wentworth point
392	Rhodes
395	Concord West
396	Croydon
397	Rhodes
399	concord
400	concord road northstath field
402	Newington
403	Newington
404	Concord
405	Rhodes
406	Burwood
407	Concord
408	Warreemba
409	newington
410	abbotsford
411	Bonnyrigg
412	newington
413	Belmore
414	chiswick
415	Burwood Heights
416	blacktown
417	Concord

ResponseID	Response
418	2137
419	Five dock
420	wentworth point
421	Berala
422	Concord
423	Rhodes
424	regent park
425	Fivedock
427	Rhodes
428	Newington
429	Newington
430	Homebush West
431	Liberty Grove
432	Newington
433	Newinton
434	cabarita
435	Concord
436	Auburn
438	concord
439	breakfast point
441	Rhodes
442	croydon
443	newington
444	Concord
445	Newington
446	newington

ResponseID	Response
447	Concord
448	campsie
449	wentworth point
450	abbotsord
451	Lidcombe
452	Wentworth point
453	Five Dock
454	Parramatta
455	Concord
456	five dock
458	2046
459	russel lea
460	Cabramtta
461	2137
462	rhodes
463	abbotsford
464	Erskenville
465	Abbotsford
466	Concord
467	Rhodes, NSW
468	Burwood
469	concord
470	Putney
471	Sydney Olympic Park
472	Concord
473	Five Dock

ResponseID	Response
474	cabarita
475	rhodes
476	Rhodes
477	Newington
478	five dock
479	concord west
480	Wentworth point
481	Concord
482	Rhodes
483	Concord
484	Concord
485	Concord
486	Straithfield
488	concord
489	Wentworth Point
490	Canada Bay
491	haberfield
493	Burwood
494	Five Dock
495	Concord West
496	Newington
498	concord west
499	Newington
500	Five Dock
501	Concord
502	north strathfield

ResponseID	Response
503	Concord
504	Newington
505	Canada Bay
506	concord
507	bankstown lahd
508	cabarita
509	five dock
510	Chiswick
511	Mount avenue Newigton
512	north strathfield or russel lea
513	chester hill
514	croydon park
516	Newington
517	Silverwater
518	concord west
519	Newington
520	Rhodes
521	Wentworth Point
522	Cabarita
523	Newington
524	five dock
526	Concord
527	Rhodes
528	wentworth point
529	Concord
530	Canada Bay

ResponseID	Response
532	Five Dock
533	Newington
534	Abordsford
535	Concord
536	Newington
537	Wentworth Point
539	2138
541	Five Dock
542	Concord
543	lilyfield
544	Footbridge BVD
545	Canada Bay
546	Russel Lea
547	Concord
548	Enfield
549	rhodes
550	russell lea
551	abbotsford
552	concord
553	Olympic park
554	wentworth point
556	Canada Bay
557	Liberty Grove Estate
558	concord
560	abbotsford
561	Concord West

ResponseID	Response
562	Newington
563	Avenue of Oceania
564	concord
565	Concord
566	Wareemba
567	unit 38/2
568	wentworth point
569	concord west
570	wentworth point
571	Five Dock
572	Wentworth point
573	Five Dock
574	five dock
575	chiswick
576	five dock
578	wentworth point
579	Lidcombe
580	Five dock/North strathfield
581	Greenacre
582	Rhodes
583	Concord
584	Sydney Olympic Park
585	Wentworth Point
586	Auburn
587	Five Dock
588	Concord

ResponseID	Response
589	Strathfield
590	Ashfield
591	Springwood
592	five dock
593	Concord
594	Breakfast point
595	concord west
596	Concord
597	olympic park
598	Concord
599	Concord
600	breakfast point
601	Lidcombe
602	Rhodes
603	Liberty Grove
604	FiveDock
605	wentworth point
606	Mortlake
607	five dock
608	mortlake
609	Concord West
610	Abbotsford
611	Russell Lea NSW
612	Cabarita
613	Wentworth Point
614	lidcome

ResponseID	Response
615	Newington
616	Concord
617	Five Dock
618	cononocord
619	Wareemba
620	concord
621	Rhodes
622	Abbotsford
623	Concord West
625	Concord
626	Concord
627	2046
628	Abbotsford
629	concord
630	Wentworth Point
631	concord
632	concord
633	lidcombe/olympic park
634	newington
635	croydon
636	concord
637	Mortlake
638	Abbotsford
639	newington
640	breakfast point
642	Sydney Olympic Park

ResponseID	Response
643	Rhodes
644	rhodes
645	Five Dock
646	Concord
647	Concord West
648	concord
649	concord
650	liberty grove
651	Cabarita
652	concord
653	Wentworth
655	concord
656	Lidcombe/Olympic Park
657	Abbotsford
658	canada bay
659	wentworthpoint
660	Lidcombe
661	Breakfast Point
664	Canada Bay
666	garfield street
667	Five Dock / Concord
668	Croydon
669	wentworth point
670	Five dock
672	Concord west
673	olympic park

ResponseID	Response
674	Concord
676	newington
677	Wentworth Point
678	Newington
679	olympic park
680	Five Dock
681	rhodes street
682	abboutsford
683	Concord
684	liberty grove
685	Abbotsford
686	Nsw
687	Concord
688	Silverwater
689	cabarita
690	WENTWORTH POINT
691	croydon
692	Wentworthpoint
693	ashfield
694	wentworth point
695	Wentworth point
696	Lidcombe
697	Croydon
698	concord
699	Wentworth Point
701	Burwood

ResponseID	Response
702	Bankstown
703	Rhodes
704	newington
705	Wentworth Point
706	Five Dock
707	Concord
708	Concord west
709	Abbotsford
710	Silverwater
711	2127
712	Wentworth Point
713	Concord West
714	Abbotsford
715	Chiswick
716	five dock
717	rhodes
718	concord west
719	Rhodes
720	Chiswick
721	2000
722	Croyden park
723	Breakfast Point
724	burwood
725	Rhodes
726	Concord
727	Sydney Olympic Park

ResponseID	Response
728	Newington
729	Concord
730	Russel lea
731	Breakfast Point
732	merryland
733	Newington to Concord
734	Cabarita/Concord
735	Concord West
736	rhodes
738	rosevile
740	newington
741	concord
743	cabarita
745	wentwroth point
746	rhodes
747	cabarita
748	mortlake
749	fivedock
750	Strathfield South
751	concord
752	Lidcombe
753	Concord
754	Five Dock
755	Newington
756	Burwood
757	Five Dock

ResponseID	Response
758	Five docks
759	newington
760	Concord
763	five dock
764	Newington
765	newington
766	cabarita
768	concord
770	Russell lea
772	Concord
773	cabarita
774	Strathfield
775	olympic
776	concord west
777	concord
778	Wareemba
779	five dock
780	lykart
781	concord
782	wentworth point
783	Abbotsford
784	concord
785	Newington
786	concord west
787	concord west
788	Concord

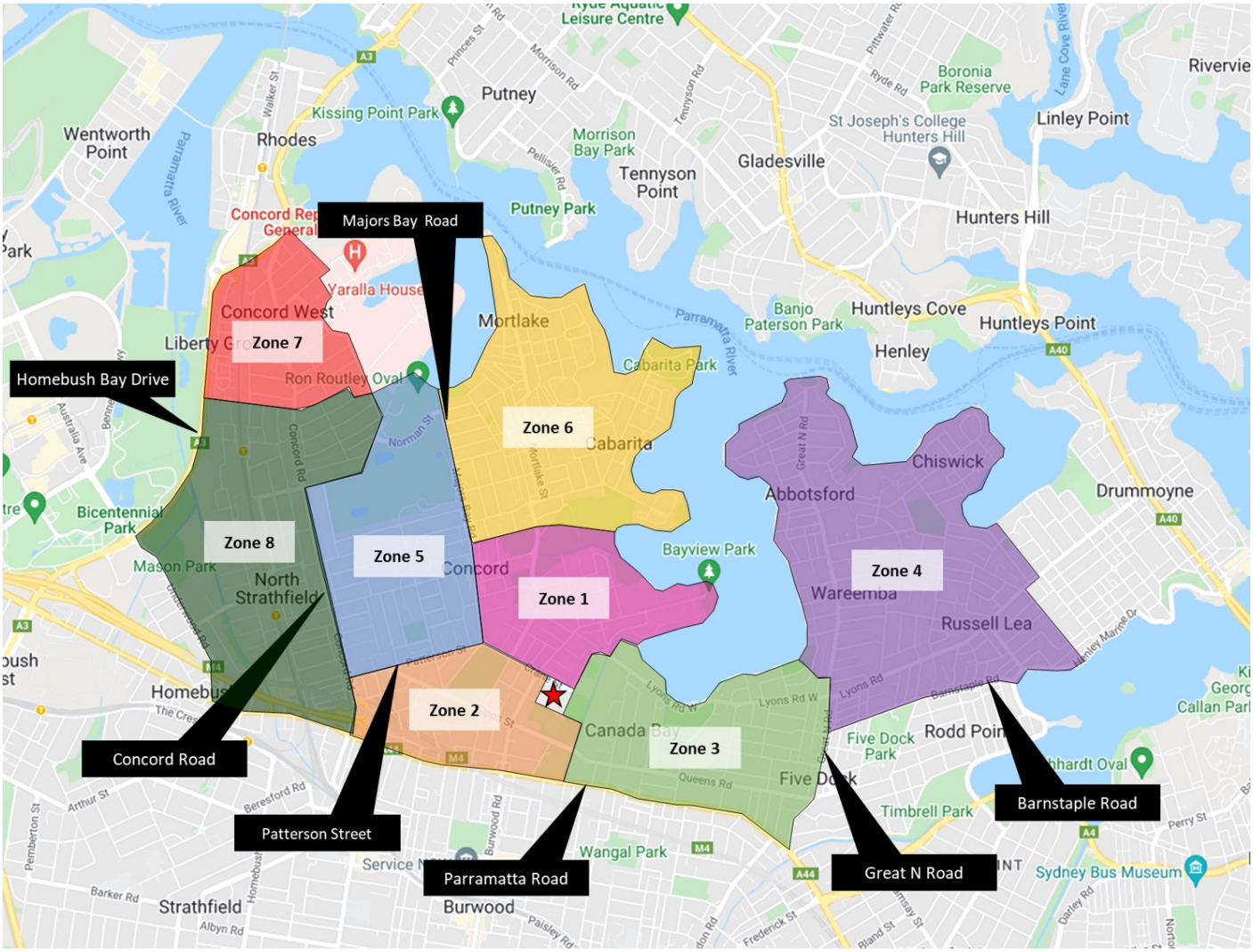
ResponseID	Response
789	Concord
790	concord
791	Wentworth point
792	Concord West
793	Wareemba
794	Canterbury
796	Canada Bay
797	Five Dock
798	Wareemba
800	Rhodes
802	Mortlake
803	Abbotsford
804	concord
806	Liberty Grove
807	Rhodes
808	Wentworth Point
809	Concord
810	Newington
811	Newington
812	Concord
813	Liberty Grove
814	five dock
815	Concord
816	Warremba
817	Russell lea
818	Concord

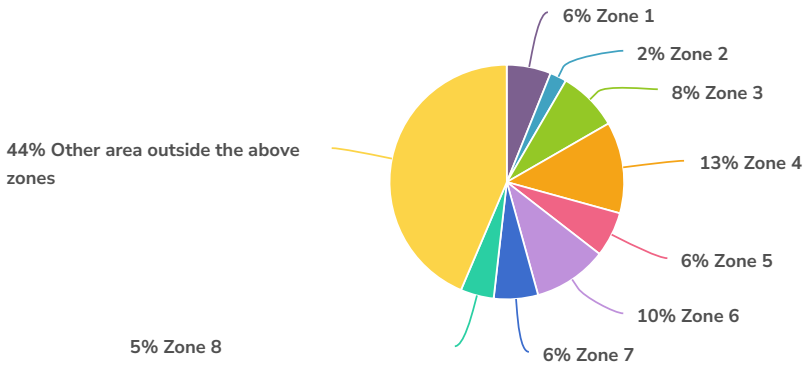
ResponseID	Response
819	Canada Bay
820	Wentworth Point
821	Concord
822	Russell Lea
823	Breakfast Point
824	Concord
825	Homebush west
826	Concord
827	Wentworth Point
828	Concord
829	Concord
830	Carlingford
831	Concord
832	Silverwater
833	Newington
834	Canada Bay
835	Five Dock
836	abbotsford
837	Five Dock
838	Five Dock
839	Newington
840	concord
841	Concord
842	concord
843	sydney olympic park
844	leichhardt

ResponseID	Response
845	Newington
846	Concord
847	Five Dock
848	Concord
849	Concord
850	Cabarita
852	Fivedock
853	Concord West
854	Wareemba
856	Wentworth Point
858	Campsie
860	Canada Bay
861	Kellyville
862	Wareemba
864	Five Dock
866	Abbotsford
867	north statfiled
869	Auburn
872	Rhodes
873	Wentworth Point
874	concord
875	concord west
877	Rhodes
879	five dock
880	leichhardt
882	homebush west

ResponseID	Response
884	strathfeild
885	Rhodes
886	Rhodes
887	Newington

5. Where do you live?

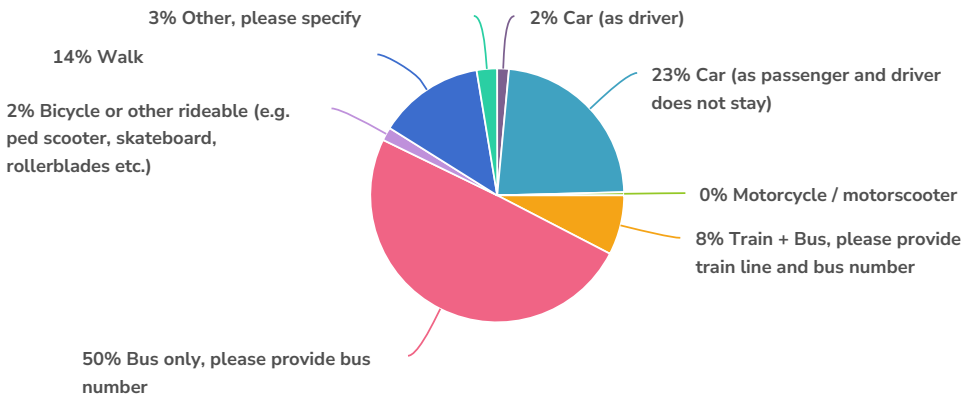




Value	Percent	Responses
Zone 1	6.1%	44
Zone 2	2.3%	17
Zone 3	8.3%	60
Zone 4	12.6%	91
Zone 5	6.2%	45
Zone 6	10.2%	74
Zone 7	6.1%	44
Zone 8	4.6%	33
Other area outside the above zones	43.6%	316

Totals: 724

6. How do you travel to school on a typical morning?



Value	Percent	Responses
Car (as driver)	1.5%	11
Car (as passenger and driver does not stay)	23.1%	167
Motorcycle / motorscooter	0.4%	3
Train + Bus, please provide train line and bus number	7.6%	55
Bus only, please provide bus number	49.6%	359
Bicycle or other rideable (e.g. ped scooter, skateboard, rollerblades etc.)	1.7%	12
Walk	13.5%	98
Other, please specify	2.6%	19

Totals: 724

Train + Bus, please provide train line and bus number	Count
410	3
659	2
T3 City Circle, T9 Hornsby via Strathfield, 410	2
dont know trainline,plt 3 604/410	2
Totals	49

Train + Bus, please provide train line and bus number	Count
526	1
410, 464, 460	1
410/ 770	1
464 410	1
464,410,526	1
466	1
502	1
526	1
526 and Hornsby servise	1
526/525 hornsby train/ city circle	1
530	1
533, T1, 410	1
533,T1,410	1
655	1
728,726, blue mountains line, T2/T9	1
760 761	1
906 and T2 city circle	1
941,T3 city, 410	1
=	1
Auburn to Burwood, Bus 466,526,466	1
Blue mountains line and 410	1
City Circle, 464	1
Croydon train to Burwood then 526	1
T2 City Circle + Buses 466/410/ 464	1
T2 Line LIDCOMBE - BURWOOD. 410 bus BURWOOD - CONCORD	1
T2 Or T1 and buses 464, 466, 410, 526	1
Totals	49

Train + Bus, please provide train line and bus number	Count
T2 and Bus 464/ 410	1
T2 train line and T80 bus	1
T2, 410, 464, 466, 604	1
T2, 464	1
T7, 760, 761	1
T9 Northern, 410	1
T9 and 410,466,464,526	1
T9 or CCN+T2, 410/464	1
T9, 410, 526	1
T9, 630, 660 and 761	1
Train T2, bus 410, 464, 466	1
central via burwood from rhodes or the Hornsby train home	1
if train: platform 3 if bus: 526 or 761/760	1
t1 or t2 410	1
Totals	49

Bus only, please provide bus number	Count
410	59
659	34
464	30
760	24
761	24
502	22
526	22
770	20
655	18
Totals	359

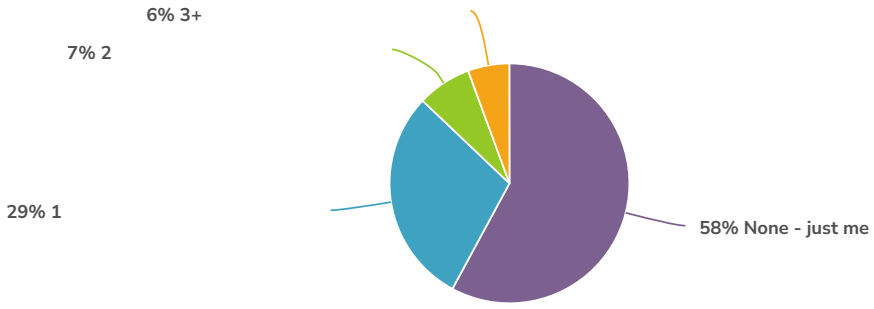
Bus only, please provide bus number	Count
466	7
760 or 761	6
657	5
410	3
659s	3
760,761,526	3
415	2
502	2
526 or 760	2
659, 655	2
760, 761	2
760, 761, 526	2
M90	2
000	1
410 and 464	1
410 or 502	1
410 or school bus 770	1
410, 464	1
410, 464, 466	1
410, 466, 464	1
410,466,464	1
410/402	1
410/464	1
415, 530	1
437 and 502	1
438 437 502	1
Totals	359

Bus only, please provide bus number	Count
438/437 and 502 or 461	1
464 and 410	1
464 and 502	1
464 burwood	1
464, 410	1
464, 410, 466	1
464, 502, 410	1
464/466	1
466,464	1
466,502,464	1
490 or 492 and 410 or 466 or 464	1
502 or 466	1
502, 464, 410	1
502, 663	1
526 or 410	1
526, (public) 760 (school bus)	1
526, 760	1
526, 760, 761	1
526,760,761	1
544 - 760	1
655/659	1
655s	1
656	1
657s	1
659	1
659 or 655	1
Totals	359

Bus only, please provide bus number	Count
760 761 526	1
760 and 761	1
760 or 526, depends if the 760 skips my stop	1
760, 526	1
760,761	1
760/761/526	1
760s	1
761 (School)	1
761 or 533/526 + 410	1
761, 760	1
761,760	1
761,770	1
761s	1
770 and 526	1
770 or 410	1
770 or 761	1
770, 410	1
770/761	1
Either 760, 761, or 526 and 410	1
Either 761 or 410	1
bus 526	1
bus 770	1
school 659	1
school 761	1
school 761 / 526	1
school bus 659	1
Totals	359

Other, please specify	Count
526 (primarily), T9 train service, F3 Ferry service, 410/461/464	1
A Mix Of Driven And Walking	1
Bus (657) and Car (as driver))	1
Bus+Car	1
Bus,car,walk	1
Car (as passenger and driver stays	1
Car and Walk	1
Car if one of my parents is able to take me in the morning and the majority is the 410 bus	1
Currently I travel by car, as a passenger, but soon I will permanently travel by bus on bus 502.	1
Private Bus	1
Rhodes	1
Sometimes walking, and other times catching the T2 from Lidcombe and catching the 604 to school.	1
Train and walk because I prefer walking	1
bus 770 and my dads car	1
bus and car depends	1
i take car halfway to the school and walk the rest	1
my dads car and bus 770	1
sometimes Car, somtimes bus (502)	1
train+bus and car depending on the day	1
Totals	19

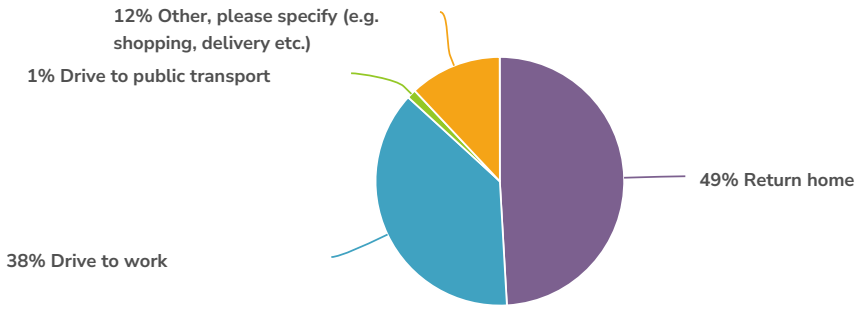
7. If you travel by car, how many other Concord High School students travel with you in the car?



Value	Percent	Responses
None - just me	57.9%	103
1	29.2%	52
2	7.3%	13
3+	5.6%	10

Totals: 178

8. If you are dropped off by a car, where does the car go next?

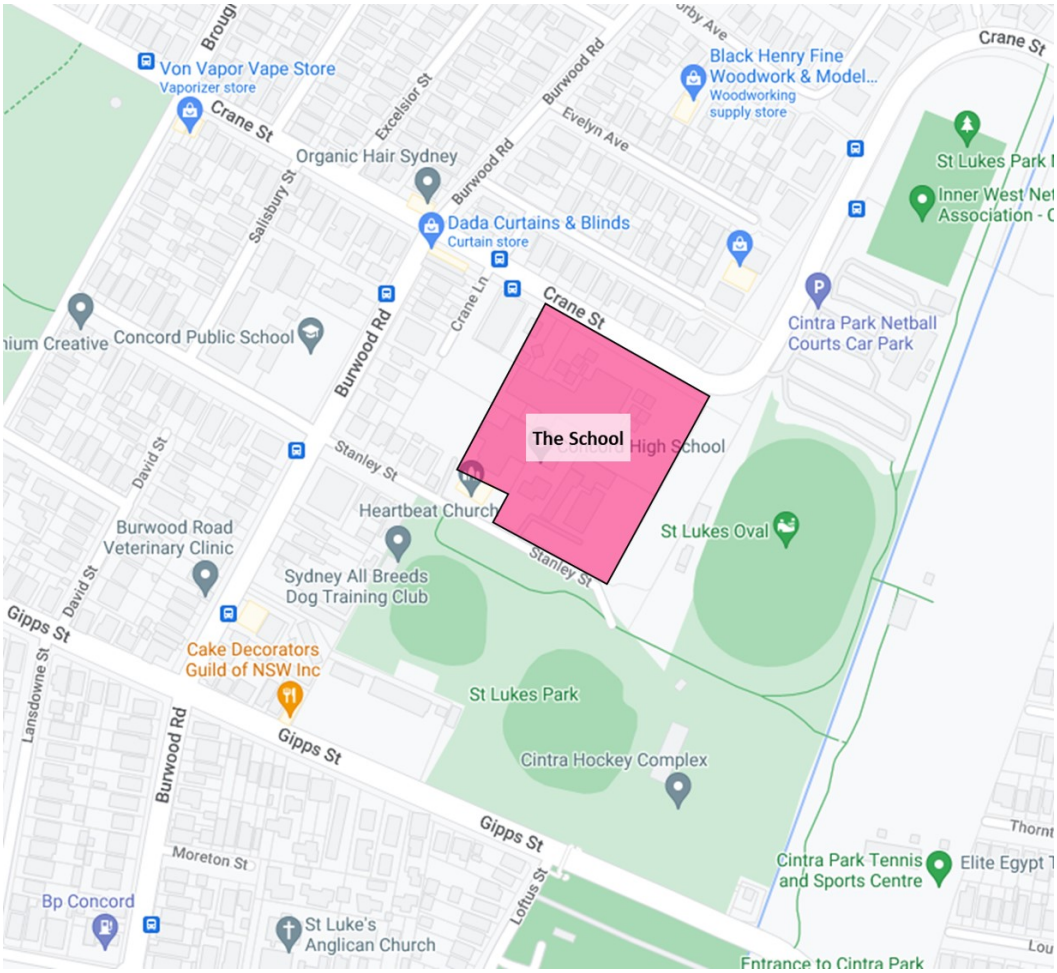


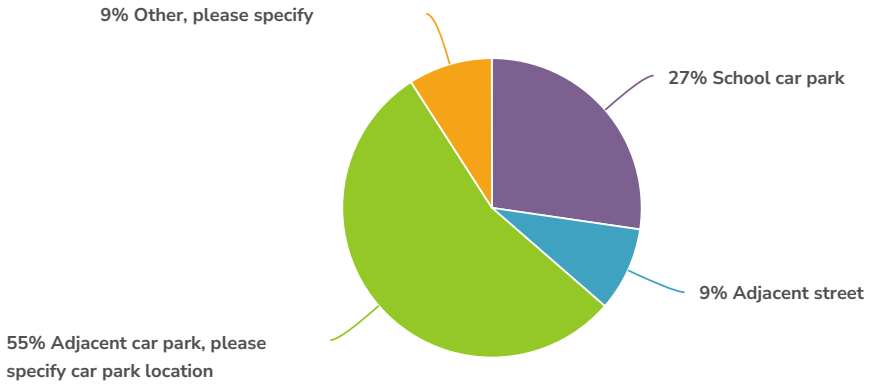
Value	Percent	Responses
Return home	49.1%	82
Drive to work	37.7%	63
Drive to public transport	1.2%	2
Other, please specify (e.g. shopping, delivery etc.)	12.0%	20

Totals: 167

Other, please specify (e.g. shopping, delivery etc.)	Count
Don't know	1
Goes to concord public school for dropoff then drive to work	1
If Dad has work, into the city. Other than that, returns home.	1
My sibling's school then to work	1
Other schools	1
Park	1
Shopping	1
To drop my brothers off at school.	1
different every day	1
drives sister to collage then drives herself to work	1
drop off my little sister's school	1
either go home or go shopping	1
my brothers school	1
my little brothers school	1
she works here	1
the car is parked	1
to drop off my brothers at their primary school	1
to drop off my younger sister	1
younger siblings school	1
Totals	19

9. Where do you normally park?





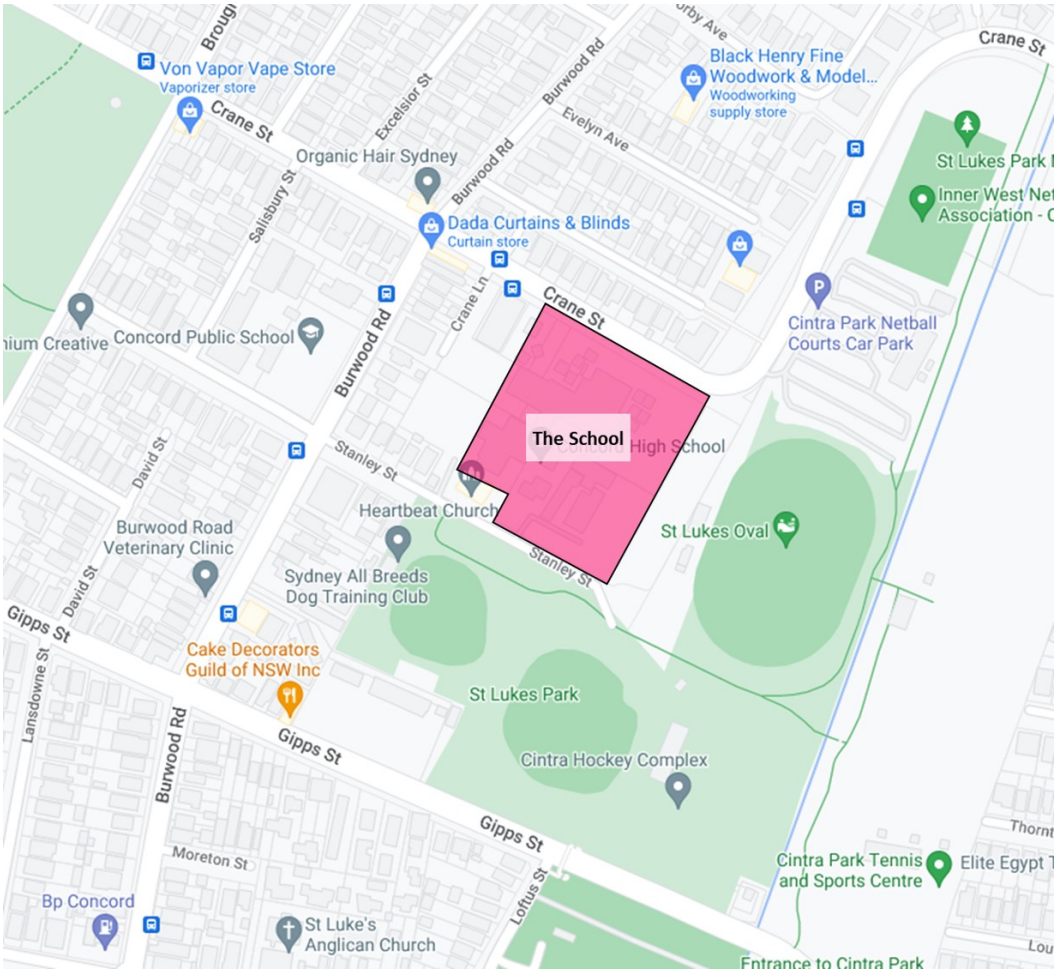
Value	Percent	Responses
School car park	27.3%	3
Adjacent street	9.1%	1
Adjacent car park, please specify car park location	54.5%	6
Other, please specify	9.1%	1

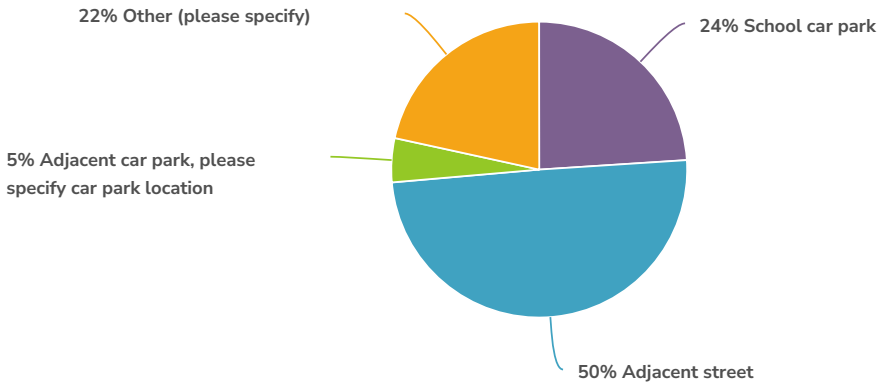
Totals: 11

Adjacent car park, please specify car park location	Count
cintra park netball courts car park	2
Cintra Courts Netball Courts Car Park	1
Cintra Park Netball Courts Car Park	1
St Lukes car park	1
st Lukes park	1
Totals	6

Other, please specify	Count
burwood road	1
Totals	1

10. Where are you dropped off in the morning?





Value	Percent	Responses
School car park	24.0%	40
Adjacent street	49.7%	83
Adjacent car park, please specify car park location	4.8%	8
Other (please specify)	21.6%	36

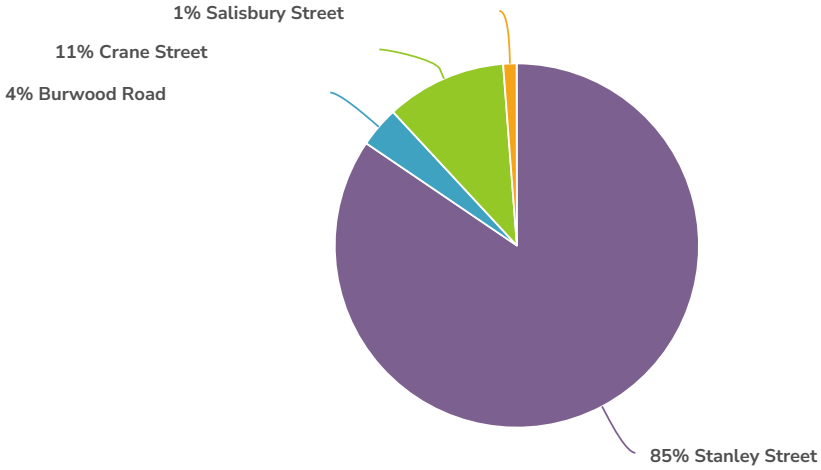
Totals: 167

Adjacent car park, please specify car park location	Count
Cintra Park Netball Courts Car Park	2
Cintra Park Netball Parking lot	1
Cintra Park Netball courts Car Park	1
Cintra Park netball courts car park	1
crane street	1
Totals	6

Other (please specify)	Count
Stanley Street	3
crane street	3
stanley st	3
Gipps St or Stanley St	1
Stanley Street	1
Burwood Rd.	1
Crane St	1
Crane Street	1
Gipps street	1
Infront of the school	1
Near Evelyn Avenue	1
Totals	35

Other (please specify)	Count
Near Lukes Oval	1
Next to concord public school on Stanley st	1
On the street	1
Stanley St	1
Stanley st	1
Stanley street	1
The main door	1
Up Crane St near the back gate	1
crane street gate	1
excelsior street	1
front gate	1
im not sure	1
in front of the school	1
infront of the school	1
near concord public school	1
stanley st	1
stanley street	1
the side gate	1
Totals	35

11. Please specify street name

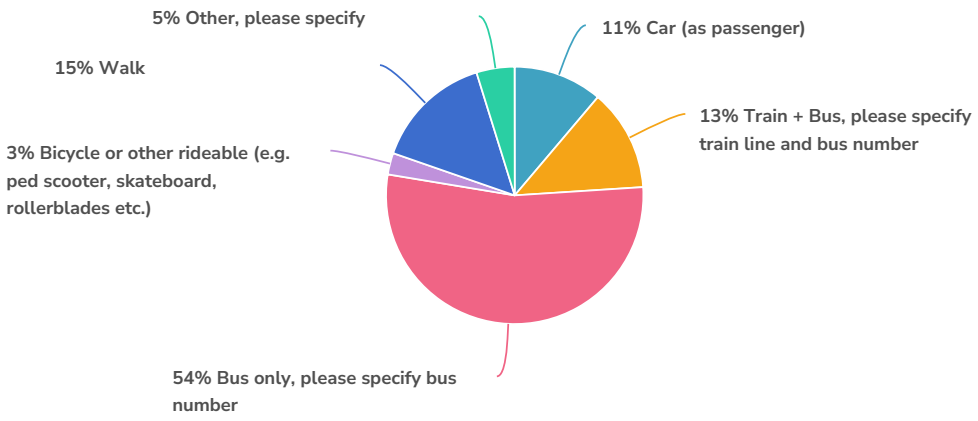


Value	Percent	Responses
Stanley Street	84.5%	71
Burwood Road	3.6%	3
Crane Street	10.7%	9
Salisbury Street	1.2%	1

Totals: 84

Other street (please specify)	Count
Totals	0

12. How do you travel from school on a typical afternoon?



Value	Percent	Responses
Car (as passenger)	11.2%	21
Train + Bus, please specify train line and bus number	12.8%	24
Bus only, please specify bus number	53.7%	101
Bicycle or other rideable (e.g. ped scooter, skateboard, rollerblades etc.)	2.7%	5
Walk	14.9%	28
Other, please specify	4.8%	9

Totals: 188

Train + Bus, please specify train line and bus number	Count
T9, T3	2
410	1
410 bus, T2 train line	1
410 or 770	1
410 to burwood T3 to lidcombe then T1 to berala and walk home	1
410, 464, 466	1
410, paramatta train line	1
410,T2 Parramatta, T3 City,941	1
466	1
502	1
526	1
660 school bus	1
770 OR 410 + 526/533 OR 410 + T9 + 533/526	1
Bus 410/464, T2	1
T2 train and T80 bus	1
T2, 410, 464, 466	1
T2, 464	1
T9 or T2+CCN, 575/591	1
Train T2, bus 410, 464, 466	1
t2	1
Totals	21

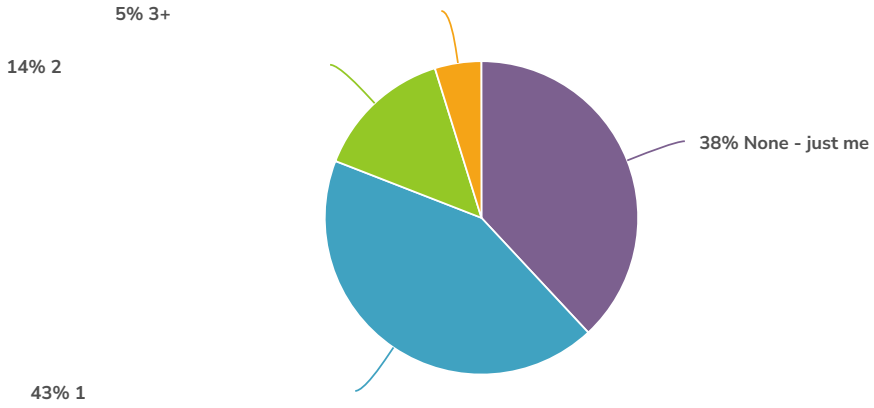
Bus only, please specify bus number	Count
410	24
657	8
760	8
Totals	101

Bus only, please specify bus number	Count
526	7
464	6
770	5
502	4
656	4
663	4
761	4
410 then a 526	1
410, 464, 660	1
410, 466, 464	1
410, baylink free shuttle bus or car then baylink free shuttle bus	1
410/464 and 526	1
415	1
415, 530	1
438 437 502 461	1
464 or 410	1
464, 410, 466	1
464/466	1
502 and 437/438 or 461	1
656 or 657	1
656, 657	1
656s	1
660 (school bus) and 490 or 492	1
660 -> 526	1
660, 526, 466	1
662	1
Totals	101

Bus only, please specify bus number	Count
663 or 410	1
663s	1
760, 662	1
760, 761, or 466, 464, 410 and 526	1
761/760 or 526 from burwood	1
770,761	1
school 657	1
school 761 / 526	1
Totals	101

Other, please specify	Count
Car (as driver)	2
Bus (657) Car (as driver)	1
Car (As Driver)	1
Car (as Driver)	1
Car (driver), 1 extra passenger	1
Helicopter	1
Walk my dog	1
drive	1
Totals	9

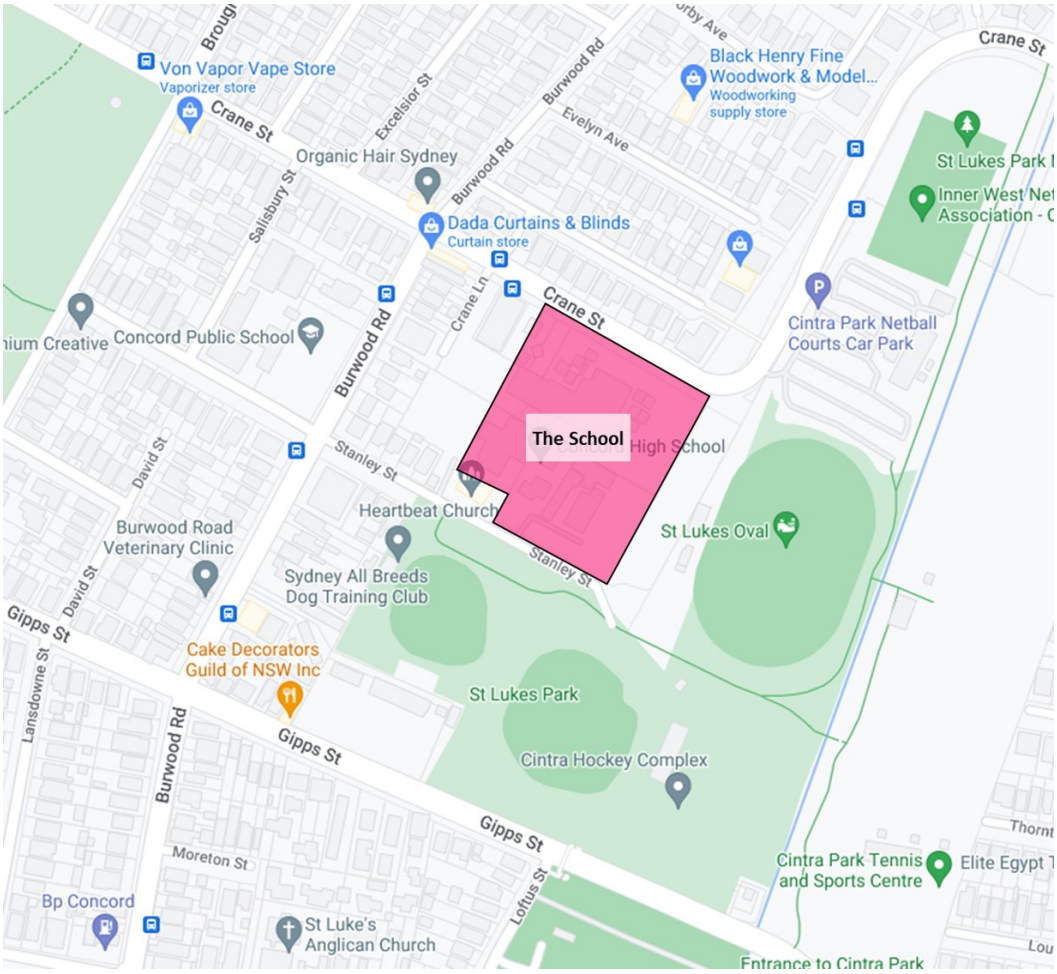
13. If you travel by car, how many other Concord High School students travel with you in the car?

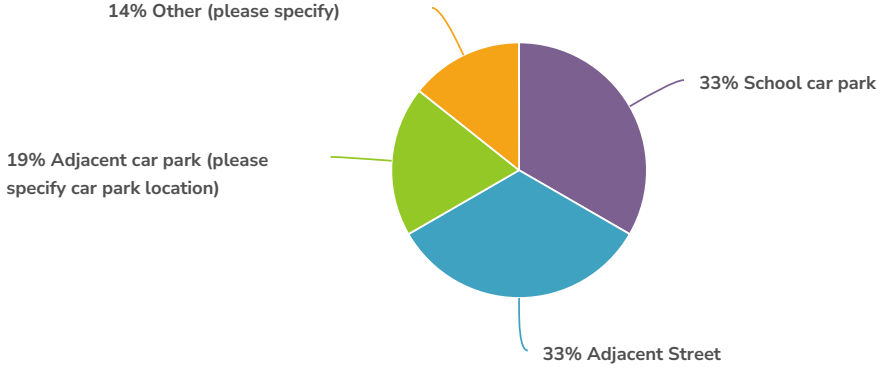


Value	Percent	Responses
None - just me	38.1%	8
1	42.9%	9
2	14.3%	3
3+	4.8%	1

Totals: 21

14. Where are you picked up in the afternoon?





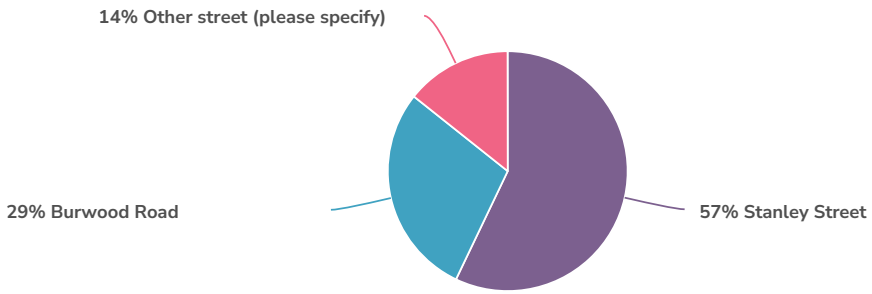
Value	Percent	Responses
School car park	33.3%	7
Adjacent Street	33.3%	7
Adjacent car park (please specify car park location)	19.0%	4
Other (please specify)	14.3%	3

Totals: 21

Adjacent car park (please specify car park location)	Count
Cintra	1
Cintra Park Netball Courts Car Parks	1
Crane st	1
cintra park netball courts car park	1
Totals	4

Other (please specify)	Count
Burwood road	1
burwood road	1
on the corner of Stanley st and Broughten st	1
Totals	3

15. Please specify the street name

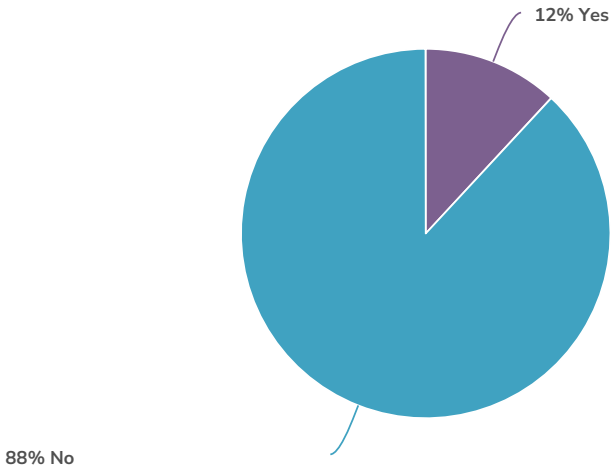


Value	Percent	Responses
Stanley Street	57.1%	4
Burwood Road	28.6%	2
Other street (please specify)	14.3%	1

Totals: 7

Other street (please specify)	Count
Gipps street	1
Totals	1

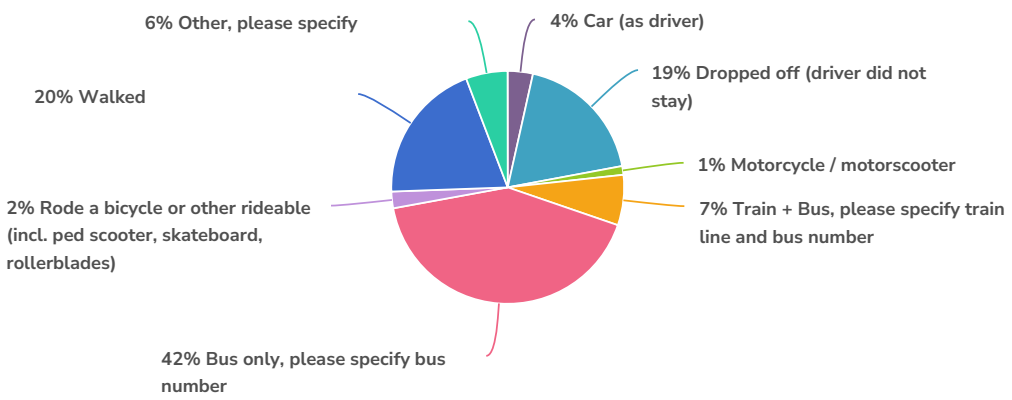
16. Do you use a different transport mode since Covid-19?



Value	Percent	Responses
Yes	11.9%	86
No	88.1%	638

Totals: 724

17. How did you travel to school before Covid-19?



Value	Percent	Responses
Car (as driver)	3.5%	3
Dropped off (driver did not stay)	18.6%	16
Motorcycle / motorscooter	1.2%	1
Train + Bus, please specify train line and bus number	7.0%	6
Bus only, please specify bus number	41.9%	36
Rode a bicycle or other rideable (incl. ped scooter, skateboard, rollerblades)	2.3%	2
Walked	19.8%	17
Other, please specify	5.8%	5

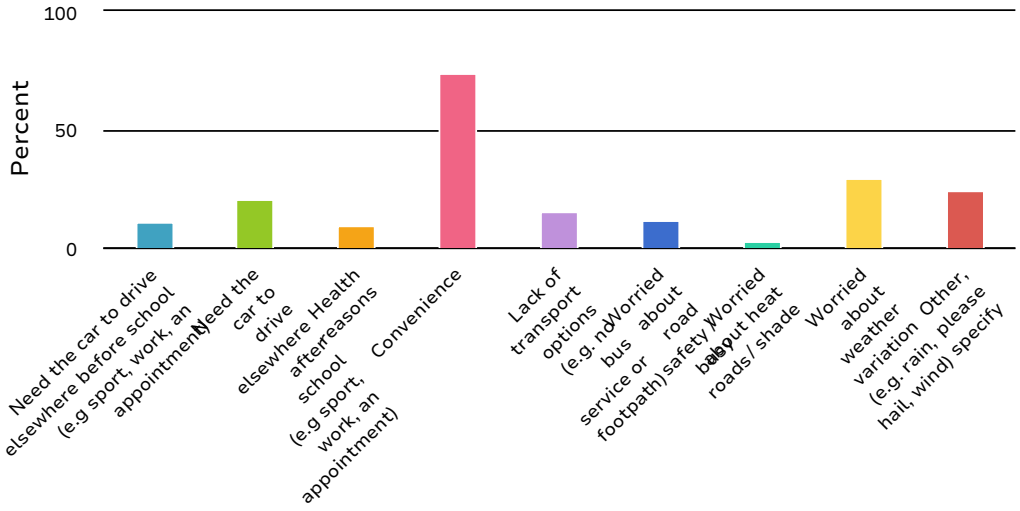
Totals: 86

Train + Bus, please specify train line and bus number	Count
464 bus and T3 train line	1
533	1
T2, 410	1
blaxland Station to central then back to blaxland then to burwood station then catcha bus to five dock then walk to concord high	1
Totals	4

Bus only, please specify bus number	Count
659	7
410	4
464	4
761	3
770	3
761 or 760	2
407	1
410 then 533/526	1
464	1
466	1
526	1
636	1
655	1
656	1
659 or 655	1
760	1
760, 761	1
770 or 410	1
school 659	1
Totals	36

Other, please specify	Count
I sometimes get droped off by car but normally got by bus.	1
car (passenger)	1
car + bus instead of just bus	1
during covid-19 i was taken by car with my mother then she got her new job so i now ride the bus	1
i lived in a different address, i took the 410 from the stop at liberty grove	1
Totals	5

18. What is your primary reason for using a car to travel to/from school? (Please tick up to 3 options that apply)



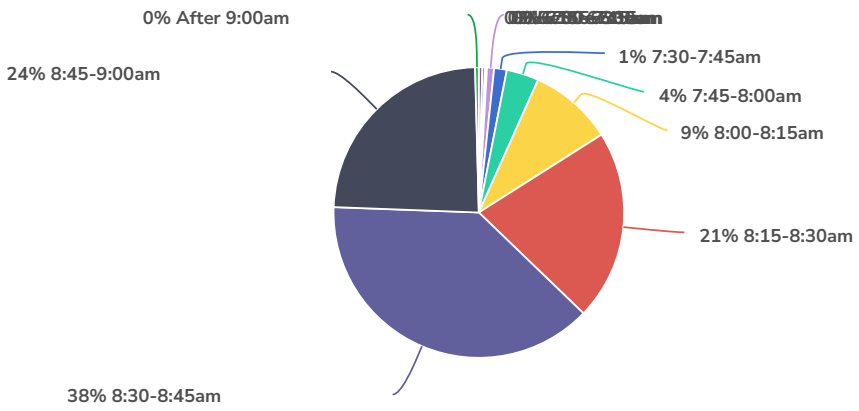
Value	Percent	Responses
Need the car to drive elsewhere before school (e.g sport, work, an appointment)	11.1%	20
Need the car to drive elsewhere after school (e.g sport, work, an appointment)	21.1%	38
Health reasons	10.0%	18
Convenience	73.9%	133
Lack of transport options (e.g. no bus service or footpath)	15.6%	28
Worried about road safety / busy roads	12.2%	22
Worried about heat / shade	3.3%	6
Worried about weather variation (e.g. rain, hail, wind)	29.4%	53
Other, please specify	24.4%	44

Other, please specify	Count
Covid	2
Bad train times	1
Because of Covid-19	1
Totals	42

Other, please specify	Count
Because of younger siblings needs to go to school on time.	1
Being more in contact with COVID-19	1
Distance	1
Early morning classes and band	1
Easier to get to school if it rains	1
Faster, and not crowded	1
I don't like the bus	1
It takes too long with public transport	1
Lazy	1
Limit my chance of getting Covid-19	1
Missed the bus	1
Mother doesnt like me walking or taking the bus because of covid and stanger danger.	1
Mum is already driving past school on her way to work	1
My dad's workplace is nearby so he takes me	1
My parents are too nice and just wanna drop me off at school	1
Parents have to go that way	1
Parents work from home now, so they drop me off, and I get to sleep a bit more.	1
The bus is too crowded and I don't like the people on the bus	1
There are no direct busses to school from where I live, and to get learner driving hours	1
Time efficient	1
Time, saves more time	1
To go to work they come pass my house so they pick me up.	1
around 20-30 min drive	1
cause its faster	1
covid	1
easier	1
Totals	42

Other, please specify	Count
i dont wake up early	1
i need to get to school	1
its faster	1
my mum started working from home and is able to drop me off.	1
need car to go home after school	1
parents say so	1
period 0's	1
prefer it	1
safety	1
take to long to take buses also because of covid	1
the car is faster	1
woke up too late to ride a proper mode of public transport	1
Totals	42

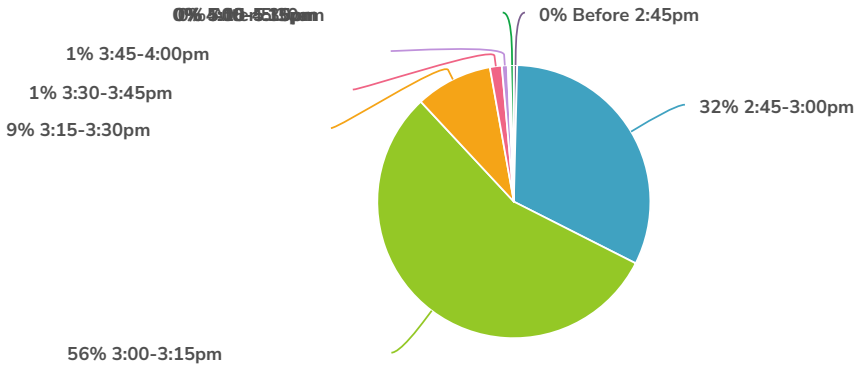
19. What time do you normally arrive at school on a typical morning?



Value	Percent	Responses
Before 6:15am	0.4%	3
6:15-6:30am	0.3%	2
6:30-6:45am	0.1%	1
7:00-7:15am	0.1%	1
7:15-7:30am	0.8%	6
7:30-7:45am	1.4%	10
7:45-8:00am	3.6%	26
8:00-8:15am	9.3%	67
8:15-8:30am	21.2%	153
8:30-8:45am	38.4%	277
8:45-9:00am	24.0%	173
After 9:00am	0.4%	3

Totals: 722

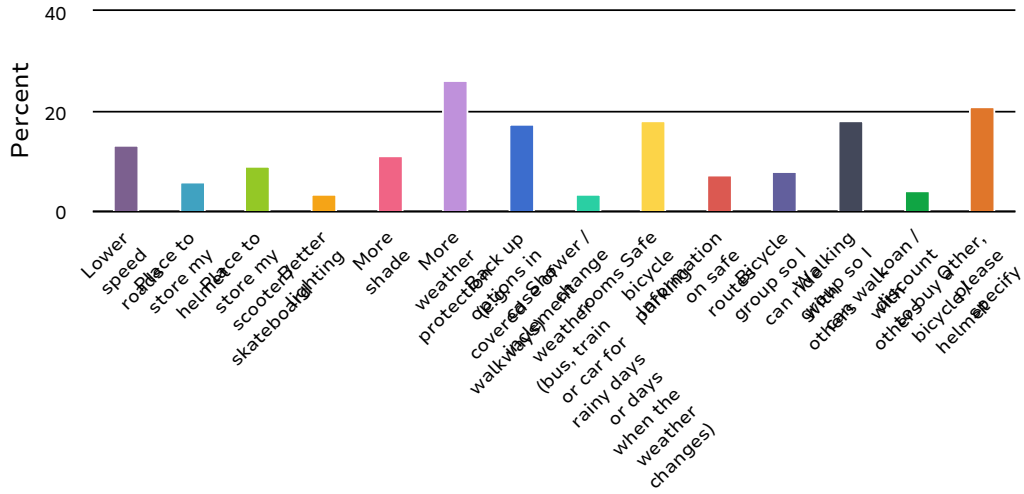
20. What time do you normally leave school on a typical afternoon?



Value	Percent	Responses
Before 2:45pm	0.4%	3
2:45-3:00pm	32.0%	231
3:00-3:15pm	55.5%	401
3:15-3:30pm	9.1%	66
3:30-3:45pm	1.4%	10
3:45-4:00pm	0.7%	5
4:00-4:15pm	0.1%	1
5:00-5:15pm	0.1%	1
5:15-5:30pm	0.1%	1
After 5:30am	0.4%	3

Totals: 722

21. Which measures would encourage you to walk or ride a bicycle? (Please tick up to 2 options that apply)



Value	Percent	Responses
Lower speed roads	13.5%	42
Place to store my helmet	6.1%	19
Place to store my scooter / skateboard	9.0%	28
Better lighting	3.5%	11
More shade	11.3%	35
More weather protection (e.g. covered walkways)	26.4%	82
Back up options in case of inclement weather (bus, train or car for rainy days or days when the weather changes)	17.7%	55
Shower / change rooms	3.5%	11
Safe bicycle parking	18.3%	57
Information on safe routes	7.4%	23
Bicycle group so I can ride with others	8.0%	25
Walking group so I can walk with others	18.3%	57
Loan / discount to buy a bicycle / helmet	4.2%	13
Other, please specify	20.9%	65

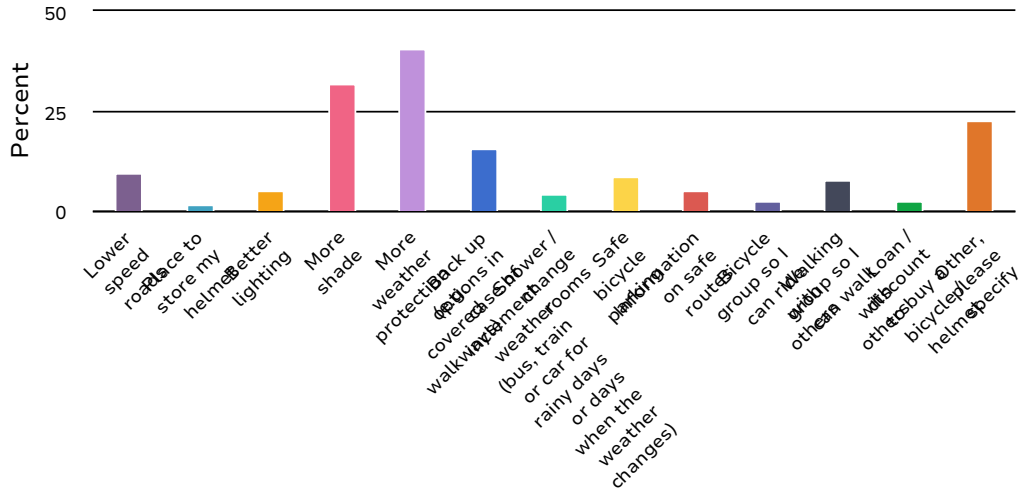
Other, please specify	Count
none	4
A better and safer bike track	1
An easier way to avoid crowds when leaving school, and not being sweating when I go to an from school.	1
Better footpaths	1
Bus	1
Totals	62

Other, please specify	Count
Don't walk or ride bike to school	1
Having my own bike	1
I cant be bothered	1
I don't want to ride my bike	1
I dont walk, live too far away	1
I walk	1
I would not walk because it is to far	1
I wouldn't, I run for sport	1
If I lived closer to school	1
If it meant I got home earlier	1
If the school was closer	1
If the weather is cool so I don't sweat	1
It all depends on my mood	1
It depends on the day	1
Its a 45minute walk no thank you.	1
Living closer to school.	1
Me being closer to the school, walking would make me 30 minutes late. Bus means that I will either be late or have to completely change everything and my mother wouldn't be happy with that.	1
More school buses + school buses that go to where I live(like 410))	1
None	1
None, I cant ride a bike properly	1
Not having to interact with bike riders	1
Shorter path	1
Taking the bus is just faster	1
To get to school faster	1
Traffic	1
Totals	62

Other, please specify	Count
Wake up earlier	1
When I want to I guess	1
With a friend	1
bus	1
i cant breathe when i walk for long	1
i dont like bicycles	1
i dont usually take a work or bicycle	1
i dont want to ride a bike	1
i want to but my mum want let me and my bike dont have a whell	1
if I lived closer to school	1
if there are no buses or my friend cannot pick me up	1
if there were no busses and i couldn't get dropped	1
it would take too long to ride a bike or walk	1
lighter bag, not like the school can do anything about it	1
live closer	1
money	1
more food	1
move school closer to my house	1
moving my house closer to the school	1
my bag is too heavy	1
never	1
no	1
nothing	1
nothing, what i do is fine and i wont change it	1
pay me money	1
shorter walk	1
Totals	62

Other, please specify	Count
shorter walking distance and it would take a hour to walk and 45 min to ride	1
wearing a skirt	1
would never ride a bike to school or walk to school	1
Totals	62

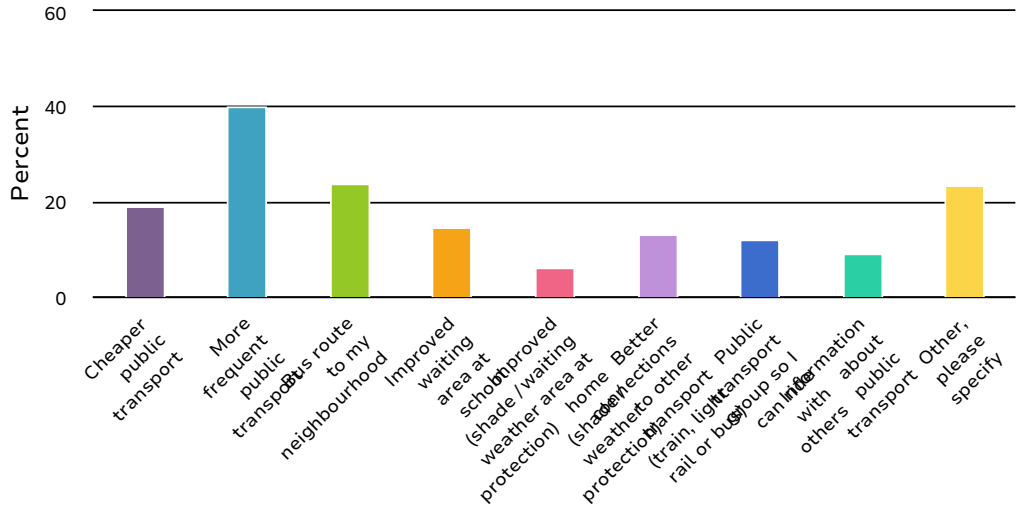
22. As you walk/cycle, which measures would you like to see more? (Please tick up to 2 options that apply)



Value	Percent	Responses
Lower speed roads	9.7%	11
Place to store my helmet	1.8%	2
Better lighting	5.3%	6
More shade	31.9%	36
More weather protection (e.g. covered walkways)	40.7%	46
Back up options in case of inclement weather (bus, train or car for rainy days or days when the weather changes)	15.9%	18
Shower / change rooms	4.4%	5
Safe bicycle parking	8.8%	10
Information on safe routes	5.3%	6
Bicycle group so I can ride with others	2.7%	3
Walking group so I can walk with others	8.0%	9
Loan / discount to buy a bicycle / helmet	2.7%	3
Other, please specify	23.0%	26

Other, please specify	Count
none	3
Bicycle paths	1
Bike path	1
Faster traffic lights	1
I don't need any of them	1
More paved sections	1
Nothing	1
T.V.	1
an easier path on loftus street	1
change rooms with doors	1
easier to cross roads, more crossings	1
free dual suspension mountain bikes	1
i dont know	1
i want cars to be patient while im crossing not that i take my time but im rushing to cross and they almost run me over	1
it's a 30 sec walk so nothing to wish	1
less waiting time at the traffic light at the intersection of burwood road and crane st, theres always too many people there	1
more food	1
more walk space/different gates	1
new pavement because it's very cracked and uneven and I always trip	1
none im fine withing everthing as it is	1
nothing	1
nothing	1
Totals	24

23. Which measures would encourage you to use public transport? (Please tick up to 2 options that apply)



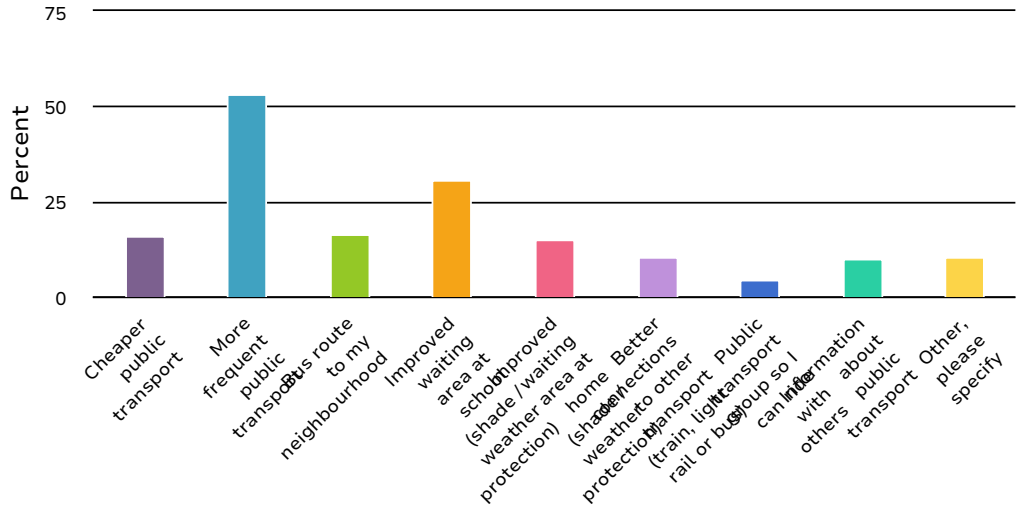
Value	Percent	Responses
Cheaper public transport	19.3%	38
More frequent public transport	40.1%	79
Bus route to my neighbourhood	23.9%	47
Improved waiting area at school (shade / weather protection)	14.7%	29
Improved waiting area at home (shade / weather protection)	6.1%	12
Better connections to other transport (train, light rail or bus)	13.2%	26
Public transport group so I can ride with others	12.2%	24
Information about public transport	9.1%	18
Other, please specify	23.4%	46

Other, please specify	Count
no covid	2
so i can make my self more independent	2
Convenience	1
Totals	44

Other, please specify	Count
Earlier buses and more seats	1
I can't get picked up or dropped off	1
I do use public transport aswell,	1
I don't need to use public transport	1
I dont like the bus	1
I take the 410 bus in the afternoons, and there isn't really anything else I would change.	1
I use public transport to get home as everyone in my family is usually at work	1
If COVID was gone	1
It would be nice if my bus were more frequent	1
It would be really convenient if the new Sydney metro connected to Lidcombe station and if there were more buses in my area to get to the station more easily.	1
Less crowded buses	1
Less trackwork	1
More bus seat please	1
More buses because the buses are very crowded	1
More buses so the buses aren't crowed and you're not needing to run to the bus line in order to try and get a seat also not immature kids screaming at the top of their lungs and pressing the stop button every stop	1
More busses so there is less people	1
More restrictions on the bus	1
None, Public transport will always be less convenient for me	1
Riding with friends	1
Train station at Collaroy	1
When my mum dosen't want to drop me off.	1
Will never use public transport to school	1
another newington bus becuas they're packed and you need another one stop being stingy	1
backup option if the car does not work	1
Totals	44

Other, please specify	Count
covid safety	1
get there faster	1
get there quickly	1
getting a seat	1
hahah yeah	1
i dont know	1
i hate it it all sucks	1
if my car is broken	1
improved safety and supervison	1
less crowded buses	1
less penalty if the bus is late	1
more busses	1
no	1
no, bus times arent good	1
reliable busses that arent crowded	1
Totals	44

24. As you take public transport, which measures would you to like to see more? (Please tick up to 2 options that apply)



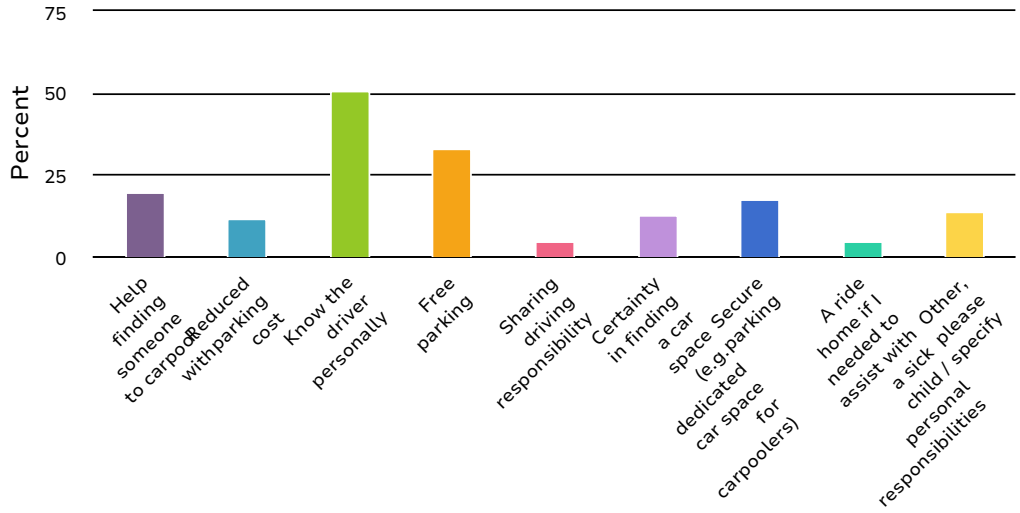
Value	Percent	Responses
Cheaper public transport	15.9%	69
More frequent public transport	53.5%	232
Bus route to my neighbourhood	16.4%	71
Improved waiting area at school (shade / weather protection)	30.9%	134
Improved waiting area at home (shade / weather protection)	15.2%	66
Better connections to other transport (train, light rail or bus)	10.8%	47
Public transport group so I can ride with others	4.8%	21
Information about public transport	9.9%	43
Other, please specify	10.4%	45

Other, please specify	Count
more seats	1
Afternoon buses to arrive on time	1
Another 760 bus, as the current one is very full and some people can't even get on	1
Totals	43

Other, please specify	Count
Another bus going through Newington as both the 760 and 761 are unbelievably packed with people.	1
Another bus going through rhodes through wentworth point as the bus is too crowded both on the way to school and on the way back. The 770 is always very late, reaching school around 3:20	1
Bus is fien	1
For the buses to actually come on time.	1
I am happy with public transport	1
I didnt know its impossible for a teacher to keep people from pushing in the bus line and creating 4 lines	1
If a bus gets canceled can i get notified	1
Less waiting time	1
Less waiting time for bus	1
MORE BUSSES TO NEWINGTON PLEASE	1
More bus lines because the buses both the first and the second are really packed are you rarely get a seat a 762 or something would be nice	1
More buses that arrive at my area because there is too many people on my bus	1
More space or more of the same bus	1
NONE OF THE ABOVE	1
Public transport on time	1
The 760-1 line needs another bus - despite the amount of people that don't scan on. The buses get really full, and just this morning when the 760 accidentally skipped the most popular stop (Newington Square), the 761 was PACKED and every standing spot was taken - at least 40 people all together.	1
The 770 is usually the last bus to arrive at school at the end of the day, I would like if it arrived earlier.	1
bus's that arrive on time and dont get cancelled	1
comes constantly every time	1
easir acess to buses around my area	1
faster bus	1
for the bus to come faster to school	1
Totals	43

Other, please specify	Count
free Starbucks Javachip Frappe	1
i don't know	1
idc tbh	1
it's fine	1
less people on the bus	1
more buses	1
more buses because of overcrowding	1
more reliable buses	1
more reliable buses that are on time	1
more seats	1
more seats for people or bigger busses	1
more space in busses	1
more transport at school as its overcrowded	1
no	1
none	1
none, I do not pay nor do I have any complaints	1
nothing	1
nothing really	1
Totals	43

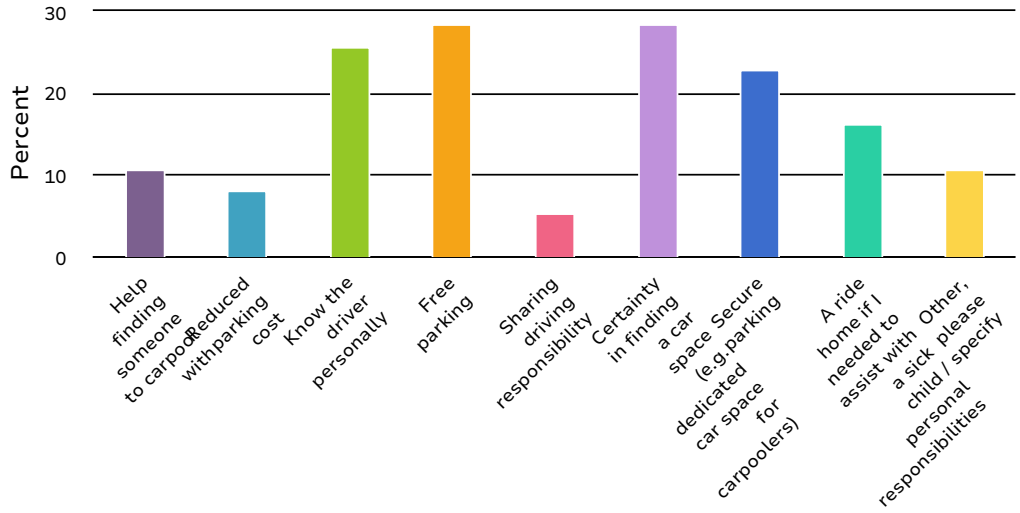
25. Which measures would encourage you to carpool? (Please tick up to 2 options that apply)



Value	Percent	Responses
Help finding someone to carpool with	19.6%	20
Reduced parking cost	11.8%	12
Know the driver personally	51.0%	52
Free parking	33.3%	34
Sharing driving responsibility	4.9%	5
Certainty in finding a car space (e.g. dedicated car space for carpoolers)	12.7%	13
Secure parking	17.6%	18
A ride home if I needed to assist with a sick child / personal responsibilities	4.9%	5
Other, please specify	13.7%	14

Other, please specify	Count
no	2
Don't need it	1
I don't know. I don't really need to carpool with anyone lol	1
I dont know	1
If a friend is driving	1
None, I don't like other people	1
We do this for visitors for talking	1
Will not carpool, COVID-19 safety reasons	1
carpool with close friend and safety	1
i dont carpool	1
i wouldnt	1
know how to drive	1
nothing	1
Totals	14

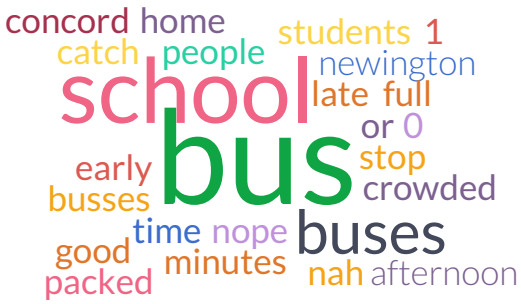
26. As you carpool, which measures would you like to see more? (Please tick up to 2 options that apply)



Value	Percent	Responses
Help finding someone to carpool with	10.8%	8
Reduced parking cost	8.1%	6
Know the driver personally	25.7%	19
Free parking	28.4%	21
Sharing driving responsibility	5.4%	4
Certainty in finding a car space (e.g. dedicated car space for carpoolers)	28.4%	21
Secure parking	23.0%	17
A ride home if I needed to assist with a sick child / personal responsibilities	16.2%	12
Other, please specify	10.8%	8

Other, please specify	Count
I do not carpool the people in the car with me are my siblings.	1
I don't have a license	1
Idk	1
i dont know	1
no	1
no carpool	1
Totals	6

27. Do you have any other transport feedback for our team?



ResponseID	Response
91	Improve Busses
94	nah
95	Nope
99	no
100	No
101	No
104	No
105	N/A
107	Would like another bus route that goes into Wentworth Point
108	Please one more school bus, its too crowded
109	nope
112	not really.
113	Lick balls.
114	no
116	no
118	Sydney has the worst public transport in the world. Do better.
121	N/A

ResponseID	Response
124	Yes, the 925 bus in lidcombe only comes to lidcombe station every hour until 4;10pm which is very infrequent
125	No
127	we are always waiting so long for the 761 after school, and staff is so annoying about waiting in a crowded space.
128	No.
129	no
130	Yep. The school buses are way way way too crowed especially the 760 and 761
131	Give us a 762 please
136	The morning 410 bus route from 8am - 8.50am is PACKED. Sometimes it has to refuse passengers on because it's so full, making students late.
138	no
142	no
148	No.
153	a better education system
154	No
155	no
156	no
159	no:)
160	No
161	No
162	We need another 760 so that the bus ride is comfortable and people can sit down.
163	More buses to Newington and Wentworth Point.
164	More busses
167	The condition is good enough already.
168	Add more school buses for Newington area (760, 761) as it is very crowded.
169	Not Att all
170	No.

ResponseID	Response
171	Nope
172	n/a
173	Nah
175	Don't cancel buses
176	no
177	no
181	don't cancel buses
182	no
183	No buddy
184	more car spaces closer to school
186	I get to school really early as one of the only buses I can catch gets to the stop at 7:30
187	no, just increase transport
190	No, that's it.
192	Bike routes and more trees for shade would be very cool.
193	No
195	No
196	Please just add more buses they get so full and everyone on board is squashed together it's horrible
197	no
199	I want my school bus to come on time and not run late, and to actually turn up, it is late every single day. It it also very late in the morning so an earlier bsu would be better. (my bus is the 659)
200	No
201	no
203	No
206	it takes half an hour to get to school and an hour to get home
208	no
211	No

ResponseID	Response
213	no
216	no i do not have any feedback
218	no
219	no
220	Put more buses that go from Newington to Concord.
221	Please get a new bus that goes to wentworth point and have the 770 come on time
222	No
223	No
224	maybe another bus from concord to newington as it is always over flowing
225	The 657 in the afternoon needs a second bus and it is always overcrowded.
226	MORE 410 FR.
229	i would like my own bus, thankyou
230	no feedback
231	Our bus is always late
232	Make bus times on the app more accurate
240	I would like it if there were more buses to travel to school because if I miss my bus then I have to be completely late, as the next one doesn't come for another 30-40 minutes.
241	no
243	No I do not
244	When teachers call out buses in the afternoon, they need to be louder. Kids always miss the bus because they don't hear it being called. Some like me don't have another bus to catch ack home and a half to walk 40 min home.
245	NO
247	no
248	657 needs another bus in the afternoon as it is always overcrowded.
250	it will be good to have more 410 bus ruing bec i the morning ad afternoon bec it is always packed ad no room to move and there is a high rick of covid
251	no
253	no

ResponseID	Response
257	no
258	no i dont, but i do think that inside school has a lot more problems. how about you open all the doors so we can actually walk through the hallways in this school
259	Transportation is very inconvinient from where I live, however this is probably due to me living outside the school area.
264	A school bus for the public bus route 410 as it is always crowded with school kids and that makes it harder for the public to get on when the bus route is for them specifically.
265	No
267	NO
268	For students and staff when we arrive to train stations sometimes the train takes 15 minutes to get there and it's hard especially when students/teachers have something on after school.
269	can the buses be more consistent in actually coming to the bus stop as there are multiple occasions where the buses come very late or do not come at all. as well as more bus times or buses in cabarita as there is only one bus that frequently comes which is the 502 which doesn't go to burwood, the 466 rarely comes and doesn't have any buses after roughly 6pm.
270	nope
274	CHeese
275	no
276	MORE 410s FR.
278	no
282	The 770 at the end of the school day is very crowded and the bus is full to the brim.
283	no.
285	No your doing good, keep up the good work.
286	no
289	No
290	no
291	no
292	g
293	no

ResponseID	Response
294	the 464 always arrive early at 3pm, and the next one is 15 minutes later
296	really no I don't like this and I am not changing my way to get to school
297	let Year 12 leave class as same as other years. We cant ride the school bus coz of them
298	stream one direction
299	For the love of god keep people from pushing in the line, I've literally been just behind the 2 people Infront and ended up having to wait until the next bus (which sometimes took 20 minutes) because the second people walked around the corner everyone starts to sprint.
300	nah
302	no
311	None
312	please get another 657 please its a safety concern how many kids get on there and i get a headache every time i have to ride it please im begging on my hands and knees pleasepleaseeplease
314	not really
316	no
319	no
320	No
323	Please provide rain protection for people riding bicycles to school as rain can damage bicycles
326	No
330	none
331	please put the newington marketplace stop back on the 760 trip, it keeps skipping my stop where the majority of the people catching the bus are. it skipped the stop today and we had to wait about 6 more minutes to find that the 761 is jam-packed with people and it was very uncomfortable in the bus. and move one of the concord 526 busses to after the 761. it would make it easier for students who miss both school busses to make it to school in time.
334	No
339	NO
340	no
343	no

ResponseID	Response
345	no
346	Yes, make more shade so when it rains im not soaking wet and make 502 come more often
347	no
353	no i dont
356	The bus I catch once came earlier and didn't stop at the stop so maybe let them come early (if they want to) and just wait so everybody has time to board the bus.
357	nope
358	you all doing great
362	No
364	sometimes the bus is too crowded, it makes bus rides really uncomfortable. maybe if there was two of one bus. sometimes the bus skips my stops so i have to catch a latter bus that could make me late for school.
365	no
366	no
367	No
368	No.
369	no
370	Sometimes, Classes run late or classes have excursions that require travelling on trans. Some people will miss their bus because of this. I think it would be better if buses came to school a second time in the afternoon for kids who missed the first one.
376	No
378	no
379	No
381	no
382	On the weekends I take either the 466 but after 11 the next one that comes is at 2pm so I have to either leave then or walk to Burwood
385	nope
387	No
391	its cool

ResponseID	Response
392	Please come on time. Do not come 8 minutes early. Please do not come 8 minutes early. Why do you come 8 minutes early? No need.
395	the 410 is too overcrowded so either the needs to be more of them or we need to get a school bus with the same route
396	no
399	uhm thanks but what is this survey for??
402	When lining up for the bus after school make sure the older kids don't push in because then the younger send up at the end of the line. More buses to come by Newington so it's not as packed all the time.
404	N/A
405	The school bus 770 that stopped near my house was too early.
407	none
408	More crossings
409	no
412	pp
414	i'm not sure
415	Keep doing whatcha doing!
419	no
421	Add a metro to Lidcombe please and more bus routes and bus stops around the area going to Lidcombe station.
422	No.
423	No, play Valorant then we'll talk
424	NO!
425	no
427	add another 770 school bus we need space to breath
429	no
431	no
432	no
433	No

ResponseID	Response
434	i would just like to be able to catch my bus is always late and recently getting cancled
435	No.
438	no
439	no
441	no
443	more busses so we can actually sit down (in newington)
445	Just maybe another bus to the strathfield and newington routes (760 and 761)
446	dont let your buses break down
449	no
450	no
451	not really
452	NO
453	no
455	No feedback
456	no
458	No
462	why yall trying to dox me
463	no
465	no
467	no, not really
469	nope
470	N/A
471	No
472	Nothing at all.
473	No
474	no
475	no

ResponseID	Response
476	No, play Valorant then we'll talk
478	for the busses to come more frequently
479	no
482	No
484	No
486	No, not really
488	More space for people to park their cars before and after school.
489	No, I do not have.
490	no
493	no
496	I'd would like to say that the school buses are nice, but I really can't. The buses severely overcrowded and this has resulted in my taking different service. I do not arrive home until 4:20 on most days. On the rare occasion I do get on the school bus, it is overcrowded and many students smoke, making it almost unbearable.
501	no
502	No.
503	None just would like more weather protection.
504	no
507	MORE BUSSES TO NEWINGTON. IT IS ALWAYS FULL AND YR7, 8, 9 LEAVING EARLY IS STUPID
508	none
510	Chiswick has no direct bus to concord which is really frustrating considering I have to catch 2-3 buses to get to school when it only takes 10 min by bus
512	contact the public busses and ask them if they can be more reliable
513	no
516	No
517	No you guys did a good job :)
518	No.

ResponseID	Response
519	No
523	no
527	no
528	sometimes the bus takes to long to pick us up from school and arrives a little late to get home
529	No.
530	No
532	No
535	make it cheaper and don't be late
537	It takes really long for the bus to come and people wait.
539	no
541	I have to get to the bus stop around 8am to catch the bus. If I miss that then I have to get driven so if there were more than 2 buses going through it would help.
542	No
545	No I don't
546	sometimes the bus wouldn't turn up or would be very late and unreliable.
547	no
548	Nope.
551	no
553	no
556	no
557	Nope
560	no
564	please remember to open the back gates, sometimes i have to walk further to enter the school as the gate is not open
565	no.
566	No
567	no

ResponseID	Response
569	most times buses that drop me to school arrive just a bit after 8:55 making me always late, sometimes they are too full, and the earlier buses are way too early making me come to school 1 hour to 30 minutes early to period 1, buses to go home are also always packed and sometimes take too long in between buses, this si because i can only take 1 bus from my house
570	The first bus stop in Wentworth point for 770 has no cover whatsoever nor a place to sit
571	no
572	Make more seats on the bus.
574	Try come to bus stop on time. Don't slack off
575	no
576	just a car
578	yes, don't make the bus overcrowded. I don't like crowds.
579	no
582	its quick
583	No
585	no
586	bus stop near my house would be good
588	No
589	no
590	no
591	No
593	no
594	no
595	no
596	N/A
597	no
599	Make the law enforcement stronger. Be more strict around school zones
600	no
601	no

ResponseID	Response
602	No
603	more 410 busess
604	nah git tripping
605	none
607	no
608	yes.
610	No
611	no
612	no
613	nah bruh
616	no
617	n/a
618	hahaha yeah so good
619	The morning and afternoon bus that goes to Wareemba/ Abbotsford is extremely crowded.
620	no
621	no, i don't have any feedback
622	less stupid bus drivers
625	No
627	no
628	659 is sometimes late
633	no thank you
634	give us more buses. they are too full. there are to many people and there is no space
635	no
637	No
638	No
640	noe :3

ResponseID	Response
642	no
644	no
646	No, not really.
647	No
648	No.
650	no
651	No.
652	no
655	no
656	no
659	NO.
660	no
661	Please mandate a rule to press charges against anybody who decides to smoke or vape on the bus
664	No
673	no
676	no
679	to make more space in the buses for more children to fit.
680	no
681	no
683	No
684	no
685	No
688	After school, the buses should come earlier and more seats
690	no
692	nope
693	yes

ResponseID	Response
694	bus gets mehome a little late
696	no
697	Make more direct bus routes to Concord High School for students south of Parramatta Road.
699	No
701	no
702	not really no
703	none
704	no
705	not really.
708	No
711	no
715	no
716	no i don't have feedback for transport
717	no
718	no
719	Cleaner busses
720	No
722	none
723	no
724	no
725	nope
726	no
728	no.
729	no
730	No
731	No

ResponseID	Response
733	No
734	no
735	No.
740	no
743	non
745	nope
746	nope
747	no
748	no
749	no
750	No
751	no
753	More weather protection (sheltered entrance), Something to help students who get completely soaked while on the way to school, A walk group would be amazing,
754	on the way to school its hard to get a seat
757	nothing
758	No
759	get another bus to Newington
764	please add another 760 im begging
765	no
766	no
768	a bus that goes tours through concord including zone 2 concord, kinda like the 407 in strathfield which passes the school and reaches a train station, or a school bus for the western canadabay suburbs ;/ pls all my friends live there w/ me these smaller suburban areas need easier transport, there are many computers that go to Strathfield as well and I think a bus that goes though there would be very helpfull
770	Get another 657 bus!! It's soo full like way over the max amount of people allowed to stand
772	Bike parking
775	no

ResponseID	Response
776	no
777	N/A
778	nup
780	no
783	No thanks.
784	no
786	stop delaying the buses
787	no
796	no
797	no
798	no
802	no
803	Sometimes the school bus doesn't come. This has happened 3 times.
811	As I have a very varying time of arrival and time of departure, I have no "typical" arrival or departure times, therefore my answer is inaccurate.
812	I would like a better place to store my bike, over the past weeks due to much rain, the bike rack was inundated with water
813	More buses for the buses that have many students going on them because it is always very crowded.
814	no
816	No.
819	Need a more frequent bus service and a bus that travels into Great North Rd and not go down garfield street
820	The school buses are a big help however i have many activities that allow me to leave early or put my in a position of having to leave later. Also the school buses can be so incredibly packed to the point where these barely any breathing room which makes public transport more appealing. However that turns my commute time from a 30 min trip to about a hour long trip. Also the cancelation of buses and trains really doesn't help sometimes haha. Overall, you are doing good- I'm just lazy lmaooo
821	No.
822	No

ResponseID	Response
824	nah
826	no
827	No.
828	no
829	No
830	no
831	no
832	no
833	no
835	maybe more bus stops could have bus shelters
836	I don't know if you can fix this but sometimes my bus drives past my stop and doesn't stop so I cant get on
837	No
838	The buses to get home usually come at a random time varying from 3:00 to 3:40, could there please be a speciffic time period when it is most likely to come? E.g. 3:05 - 3:15.
839	no
840	no
844	bring back the 439
845	no
848	None
849	No
853	No
854	no
856	The school buses are too crowded, wish there were more buses for the more crowded areas.
861	No
864	-
866	The buses are always extremely cramped and infrequent, making the commute experience displeasurable.

ResponseID	Response
874	No.
882	try to minimise junkies on trains

This report is filtered
Only show: #1 Question "Are you staff, student or parent / carer of a student? " is one of the following answers ("Staff - Permanent","Staff - Temporary","Staff - Casual","Volunteer")

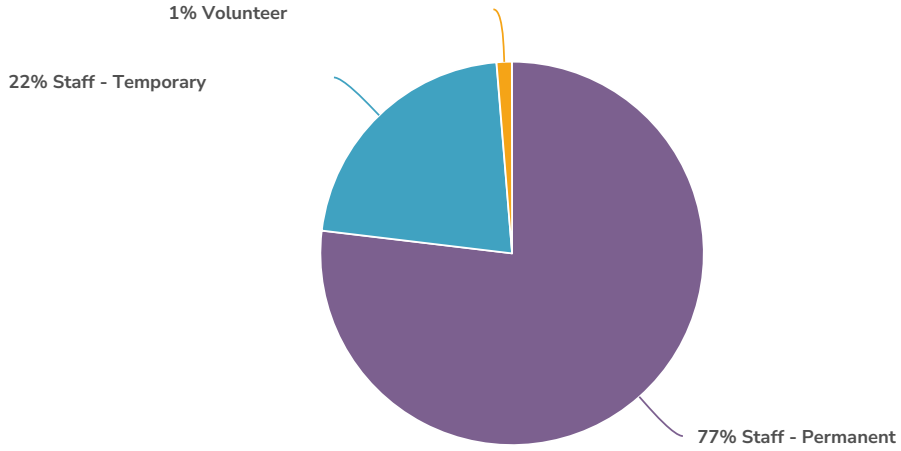
Report for Concord High School Travel Mode Survey

Response Counts

Completion Rate:	**94.9%**		
	Complete		74
	Partial		4

Totals: 78

1. Are you staff, student or parent / carer of a student?



Value	Percent	Responses
Staff - Permanent	76.9%	60
Staff - Temporary	21.8%	17
Volunteer	1.3%	1

Totals: 78

2. What year group are you in?

No data to display

3. Which postcode do you normally travel from?

ResponseID	Response
10	2136
11	2170
12	2045
13	2133
14	2745
15	2116
16	2144
17	2127
18	2048
19	2216
20	2211
21	2131
23	2132
24	2154
25	2228
27	2037
29	2194

ResponseID	Response
30	2138
31	2034
32	2170
33	2037
34	2137
35	2038
36	2125
37	2125
38	2193
39	2081
40	2211
41	2234
42	2264
43	2234
44	2131
45	2137
46	2170
47	2207
48	2198
49	2114
50	2127
51	2114
52	2194
53	2137
54	2200
55	2046
56	2223

ResponseID	Response
57	2113
58	2140
59	2045
60	2043
61	2140
62	2046
63	2134
64	2567
65	2112
66	2191
67	2193
68	2045
69	2138
70	2137
71	2206
72	2199
73	2043
76	2118
85	2130
165	2046
249	2065
261	2137
390	2152
394	2138
437	2206
555	2140

ResponseID	Response
641	2145
654	2141
771	2046
859	2206
863	2135
868	2137
878	2127
881	2204

4. Which suburb do you normally travel from?

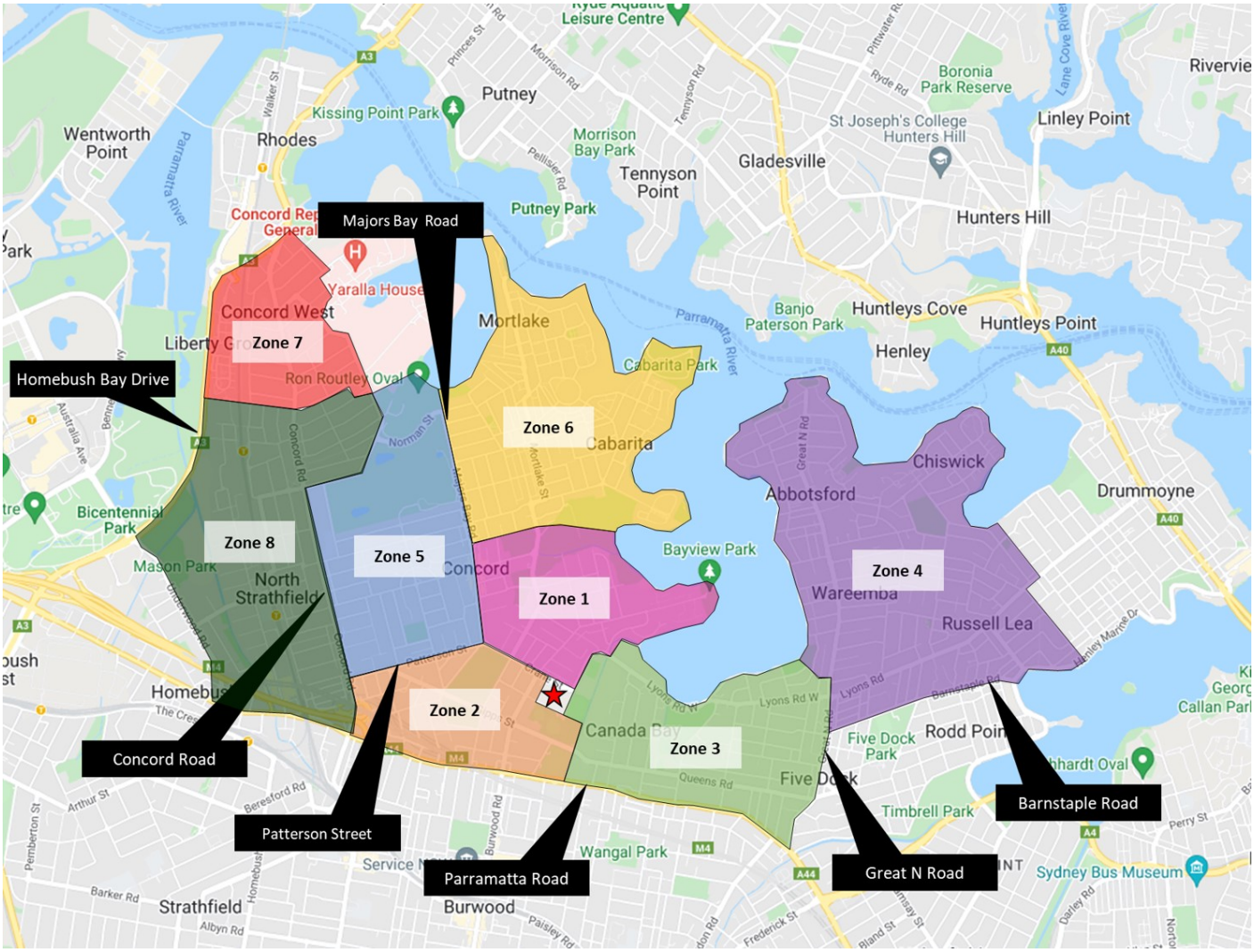
ResponseID	Response
10	Strathfield South
11	Casula
12	Haberfield
13	Croydon Park
14	2137
15	Rydalmere
16	Auburn
17	Wentworth Point
18	Stanmore
19	Brighton Le Sands
20	Padstow
21	Ashfield
23	Croydon
24	Castle Hill
25	Yowie Bay
27	Glebe
29	Campsie

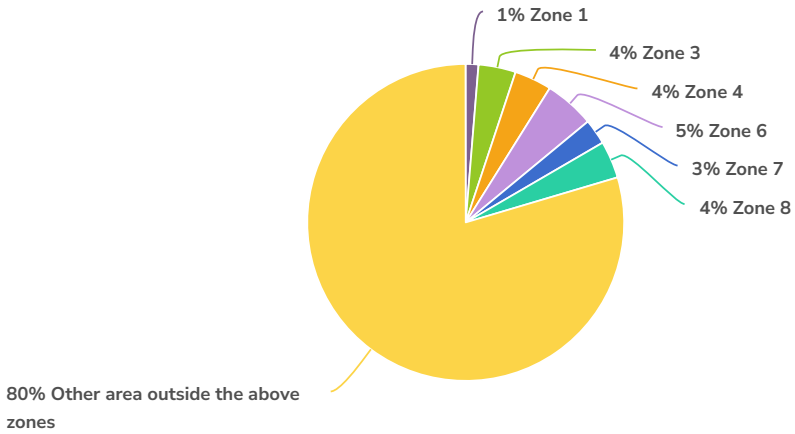
ResponseID	Response
30	Liberty Grove
31	Coogee
32	Moorebank
33	Glebe
34	Concord
35	Annandale
36	West Pennant Hills
37	West Pennant Hills
38	Canterbury
39	Berowra
40	Padstow
41	Menai
42	Morriset
43	Menai
44	Ashfield
45	North Strathfield
46	Moorebank
47	Bexley
48	Georges hall
49	Melrose Park
50	Newington
51	Meadowbank
52	campsie
53	Mortlake
54	Bankstown
55	Chiswick
56	Oatley

ResponseID	Response
57	North Ryde
58	Homebush
59	Haberfield
60	Erksineville
61	Homebush
62	Canada bay
63	2134
64	Chatswood
65	Ryde
66	Belfield
67	canterbury
68	Haberfield
69	Concord West
70	Concord
71	Clemton Park
72	Yagoona
73	Erskineville
76	Carlingford
85	Summer Hill
165	Chiswick
249	Crows Nest
261	Cabarita
390	Northmead
394	Concord West
437	Earlwood
555	Homebush

ResponseID	Response
641	Girraween
654	lidcombe
771	ABBOTSFORD
859	Earlwood
863	Strathfield
868	Concord
878	Newington
881	Marrickville

5. Where do you live?

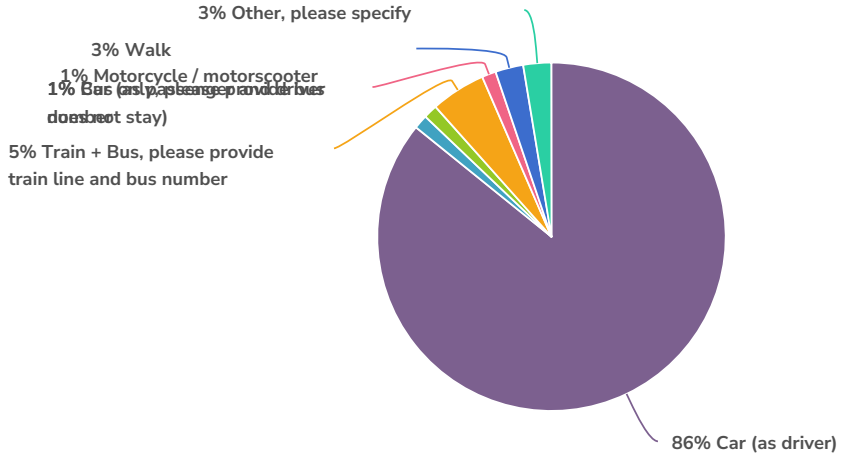




Value	Percent	Responses
Zone 1	1.3%	1
Zone 3	3.8%	3
Zone 4	3.8%	3
Zone 6	5.1%	4
Zone 7	2.6%	2
Zone 8	3.8%	3
Other area outside the above zones	79.5%	62

Totals: 78

6. How do you travel to school on a typical morning?



Value	Percent	Responses
Car (as driver)	85.9%	67
Car (as passenger and driver does not stay)	1.3%	1
Motorcycle / motorscooter	1.3%	1
Train + Bus, please provide train line and bus number	5.1%	4
Bus only, please provide bus number	1.3%	1
Walk	2.6%	2
Other, please specify	2.6%	2

Totals: 78

Train + Bus, please provide train line and bus number	Count
410	1
Illawarra line, 410	1
T2, 410/464/466	1
platform 3	1
Totals	4

Bus only, please provide bus number	Count
501	1
Totals	1

Other, please specify	Count
I catch the bus 410 three days a week and drive two days a week. The days I drive are usually Wednesday and Friday.	1
Train and then walk from North Strathfield	1
Totals	2

7. If you travel by car, how many other Concord High School students travel with you in the car?

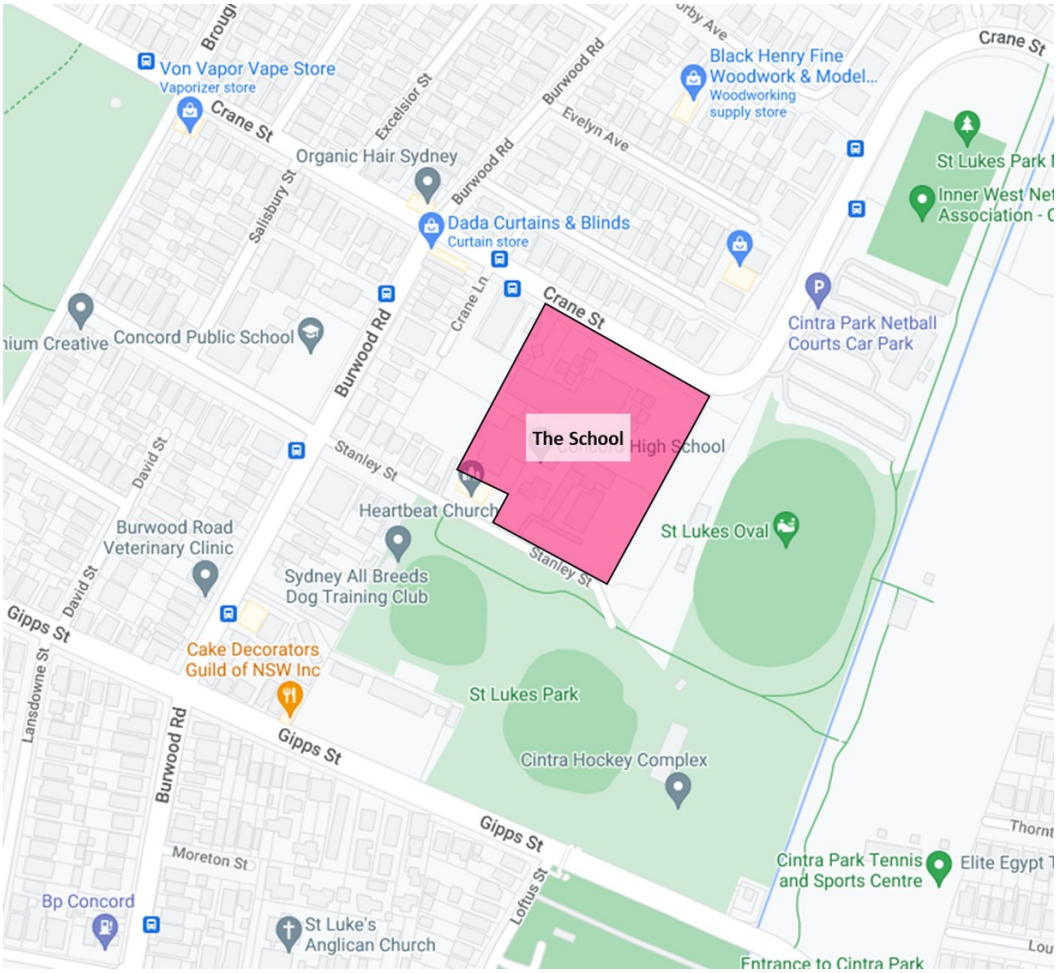
No data to display

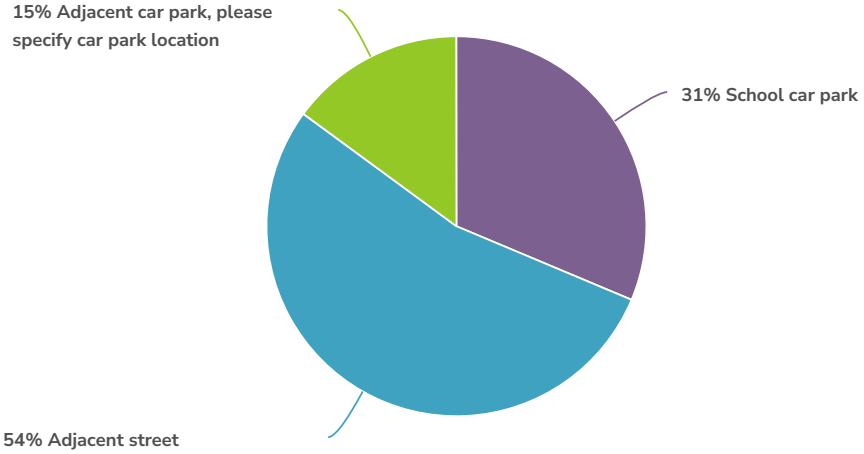
8. If you are dropped off by a car, where does the car go next?

No data to display

Other, please specify (e.g. shopping, delivery etc.)	Count
Totals	0

9. Where do you normally park?





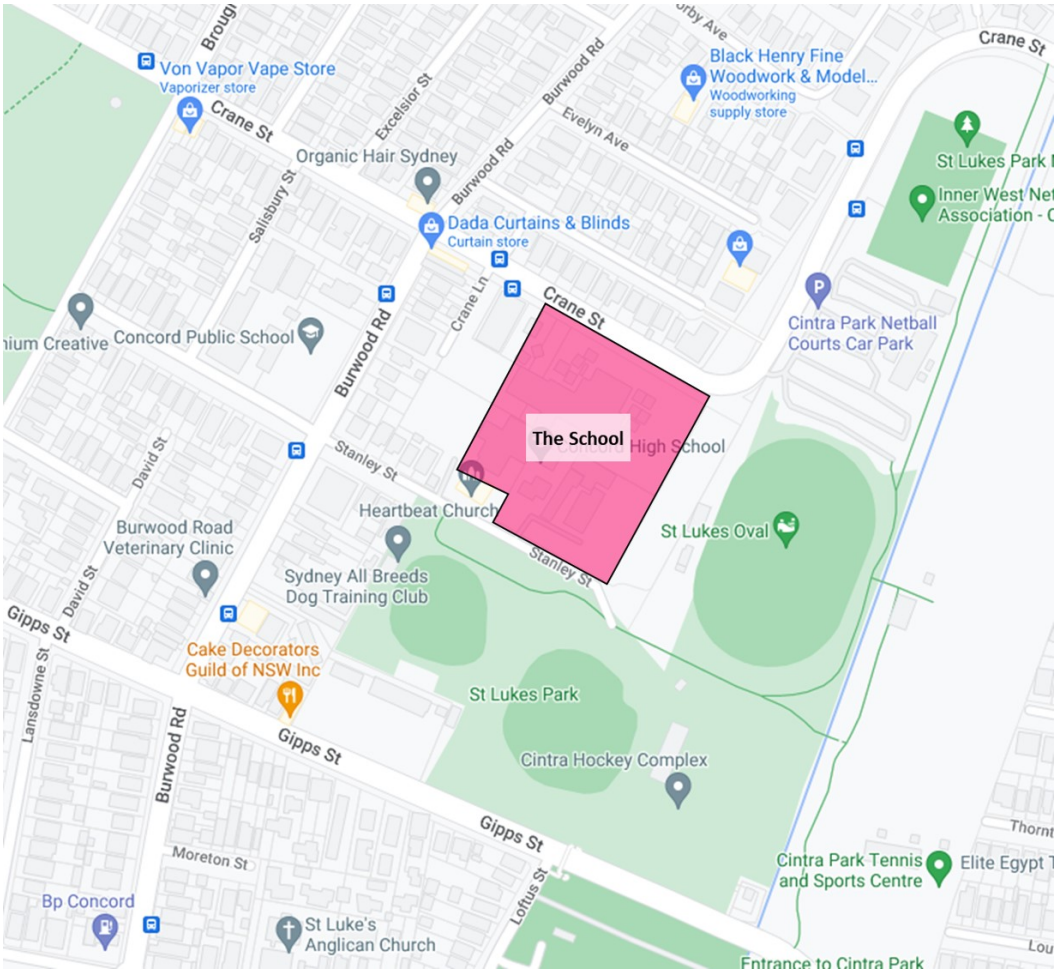
Value	Percent	Responses
School car park	31.3%	21
Adjacent street	53.7%	36
Adjacent car park, please specify car park location	14.9%	10

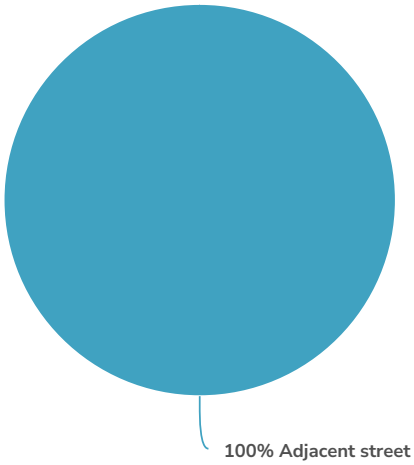
Totals: 67

Adjacent car park, please specify car park location	Count
Cintra Park	4
St Lukes	3
Cintra Park	2
Cintra/St Luke's Oval carpark	1
Totals	10

Other, please specify	Count
Totals	0

10. Where are you dropped off in the morning?





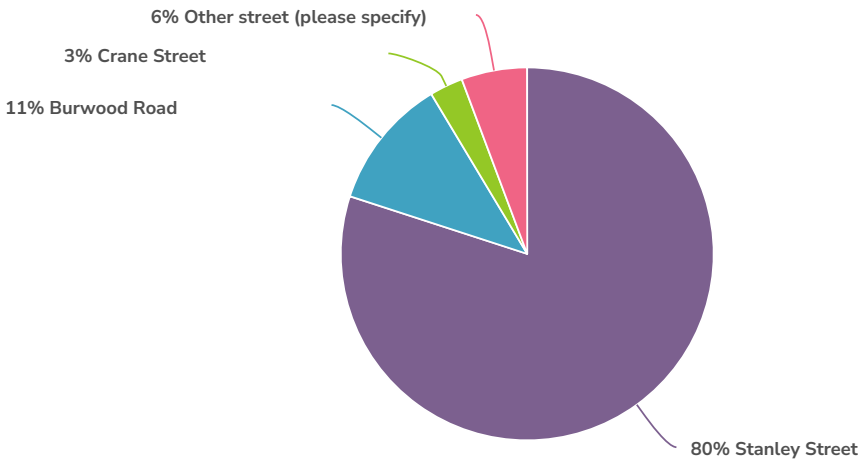
Value	Percent	Responses
Adjacent street	100.0%	1

Totals: 1

Adjacent car park, please specify car park location	Count
Totals	0

Other (please specify)	Count
Totals	0

11. Please specify street name

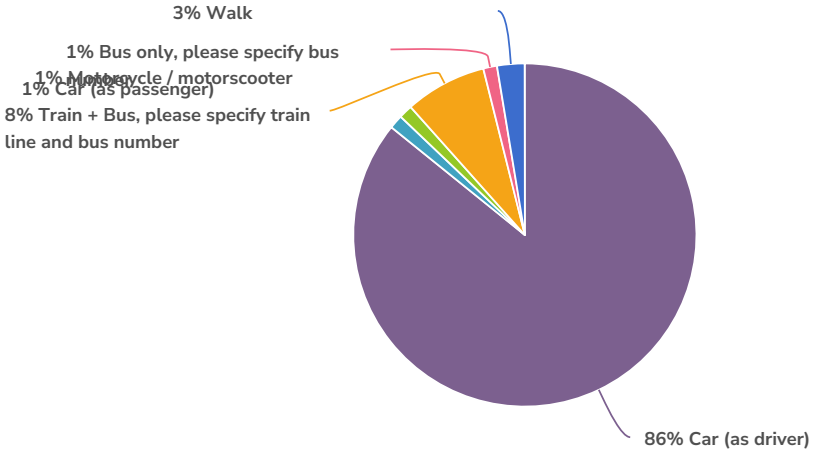


Value	Percent	Responses
Stanley Street	80.0%	28
Burwood Road	11.4%	4
Crane Street	2.9%	1
Other street (please specify)	5.7%	2

Totals: 35

Other street (please specify)	Count
Finch Avenue	1
finch av	1
Totals	2

12. How do you travel from school on a typical afternoon?



Value	Percent	Responses
Car (as driver)	85.9%	67
Car (as passenger)	1.3%	1
Motorcycle / motorscooter	1.3%	1
Train + Bus, please specify train line and bus number	7.7%	6
Bus only, please specify bus number	1.3%	1
Walk	2.6%	2

Totals: 78

Train + Bus, please specify train line and bus number	Count
410	1
410 bus, City Circle Train	1
410, Illawarra line	1
T2, 410/464/466	1
bus to Burwood station, the T9 Northern line and metro	1
Totals	5

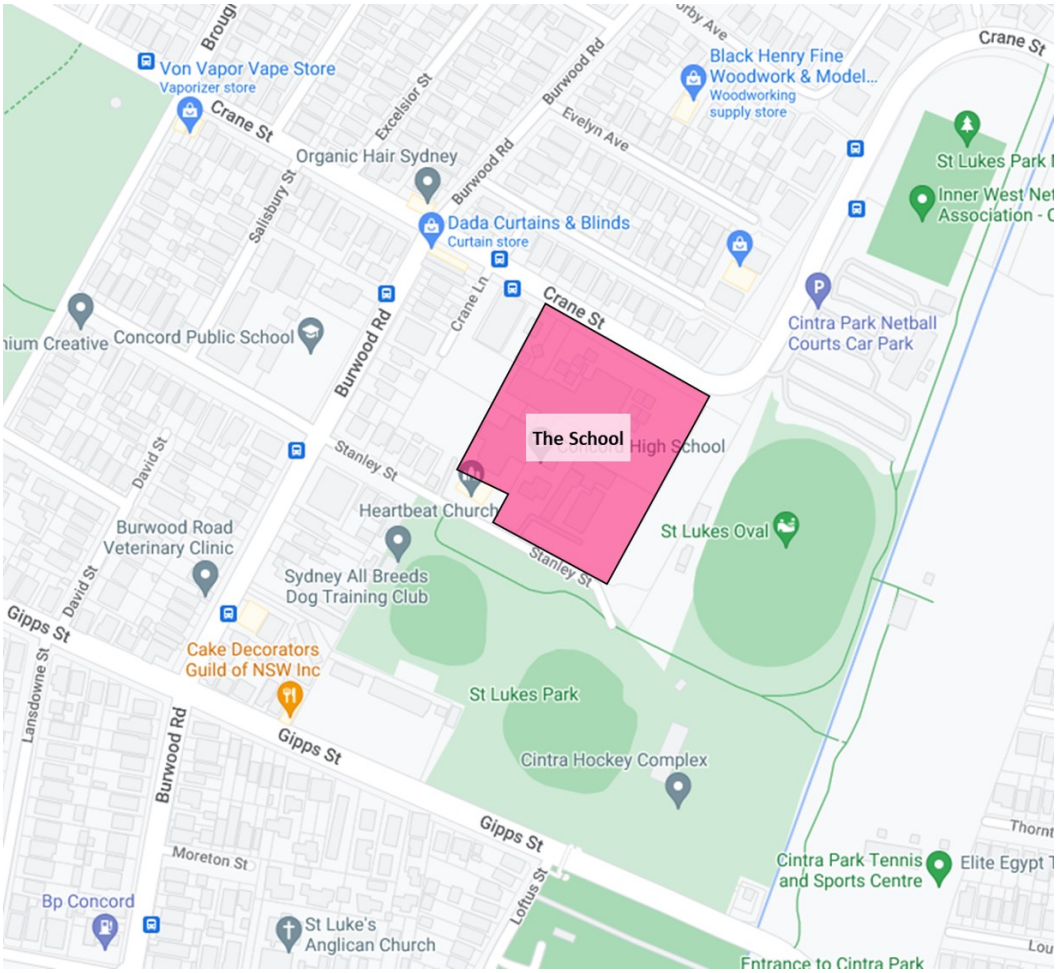
Bus only, please specify bus number	Count
501	1
Totals	1

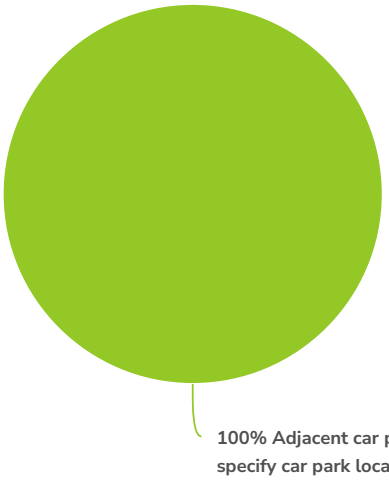
Other, please specify	Count
Totals	0

13. If you travel by car, how many other Concord High School students travel with you in the car?

No data to display

14. Where are you picked up in the afternoon?





Value	Percent	Responses
Adjacent car park (please specify car park location)	100.0%	1

Totals: 1

Adjacent car park (please specify car park location)	Count
Upper Staff carpark	1
Totals	1

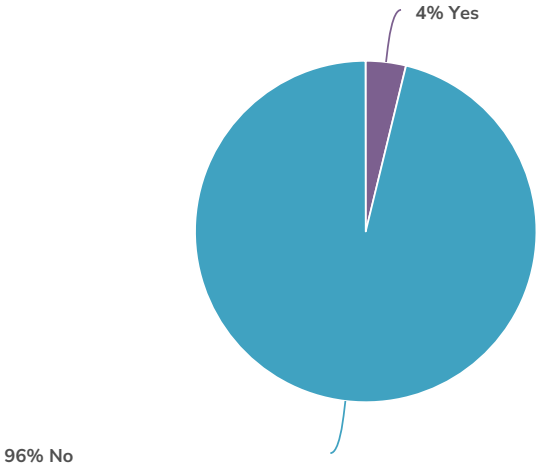
Other (please specify)	Count
Totals	0

15. Please specify the street name

No data to display

Other street (please specify)	Count
Totals	0

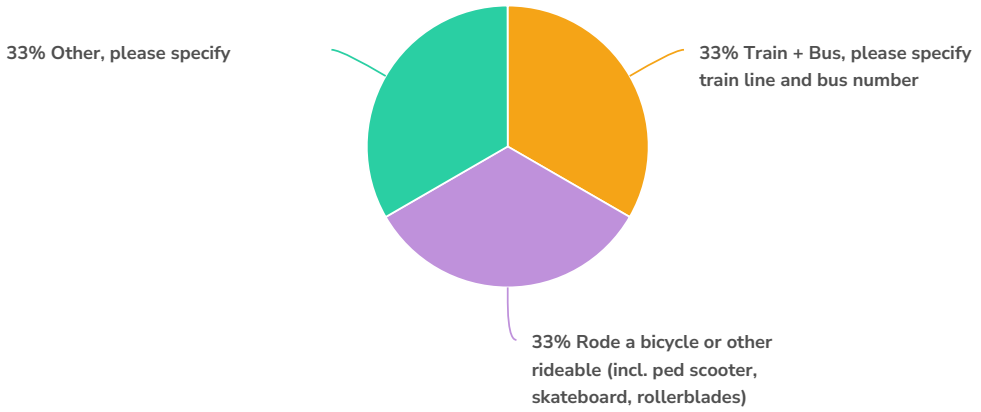
16. Do you use a different transport mode since Covid-19?



Value	Percent	Responses
Yes	3.8%	3
No	96.2%	75

Totals: 78

17. How did you travel to school before Covid-19?



Value	Percent	Responses
Train + Bus, please specify train line and bus number	33.3%	1
Rode a bicycle or other rideable (incl. ped scooter, skateboard, rollerblades)	33.3%	1
Other, please specify	33.3%	1

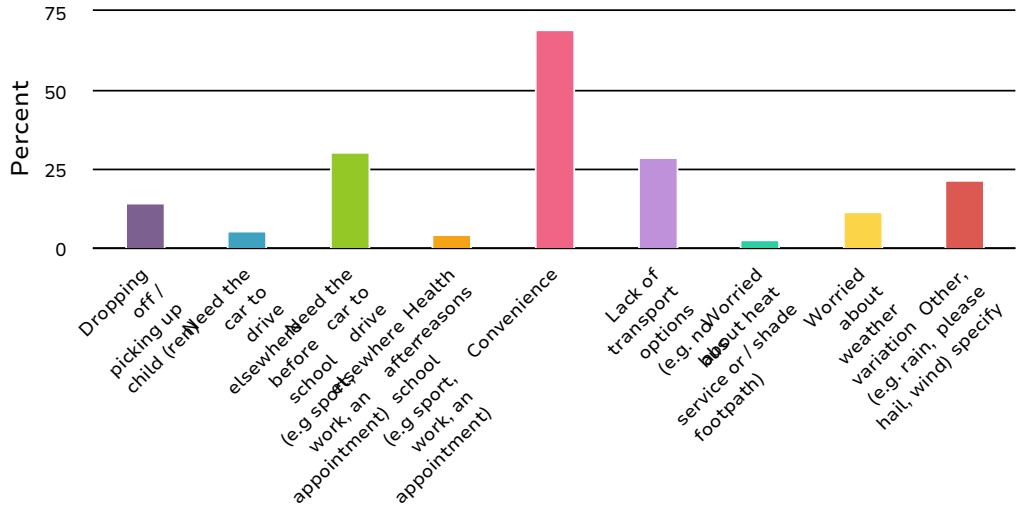
Totals: 3

Train + Bus, please specify train line and bus number	Count
Totals	0

Bus only, please specify bus number	Count
Totals	0

Other, please specify	Count
Train and then walk, but often now I have to drive as well.	1
Totals	1

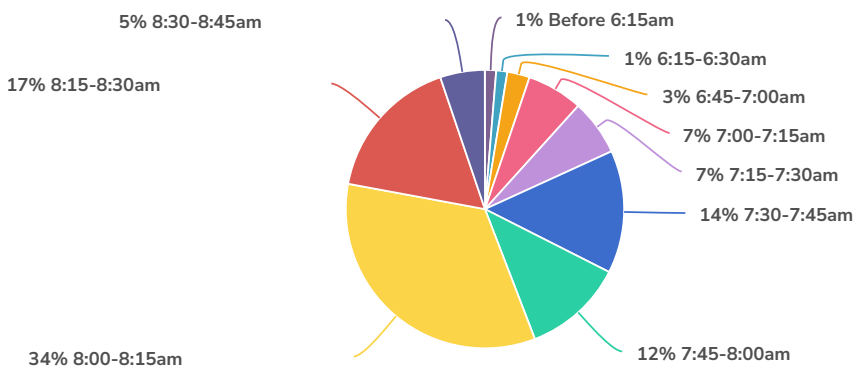
18. What is your primary reason for using a car to travel to/from school? (Please tick up to 3 options that apply)



Value	Percent	Responses
Dropping off / picking up child (ren)	14.5%	10
Need the car to drive elsewhere before school (e.g sport, work, an appointment)	5.8%	4
Need the car to drive elsewhere after school (e.g sport, work, an appointment)	30.4%	21
Health reasons	4.3%	3
Convenience	69.6%	48
Lack of transport options (e.g. no bus service or footpath)	29.0%	20
Worried about heat / shade	2.9%	2
Worried about weather variation (e.g. rain, hail, wind)	11.6%	8
Other, please specify	21.7%	15

Other, please specify	Count
I'm a teacher. I am always carrying a box of marking, which is not practical to do on public transport.	1
It would increase my travel time.	1
Length of time to catch public transport	1
Not wanting to use public transport due to covid	1
Pandemic / others' non-compliance of mask wearing	1
Public transport is significantly longer than car travel and I need to transport materials between school and home.	1
Public transport would increase my travel time.	1
Reducing exposure to COVID	1
Time constraints	1
Time demands (getting to school early)	1
To travel to and from school	1
Too far for public transport	1
Travelling to and from work	1
distance	1
public transport is expensive	1
Totals	15

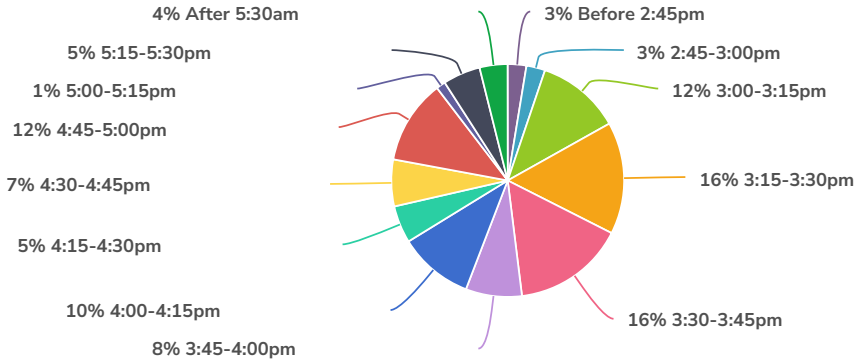
19. What time do you normally arrive at school on a typical morning?



Value	Percent	Responses
Before 6:15am	1.3%	1
6:15-6:30am	1.3%	1
6:45-7:00am	2.6%	2
7:00-7:15am	6.5%	5
7:15-7:30am	6.5%	5
7:30-7:45am	14.3%	11
7:45-8:00am	11.7%	9
8:00-8:15am	33.8%	26
8:15-8:30am	16.9%	13
8:30-8:45am	5.2%	4

Totals: 77

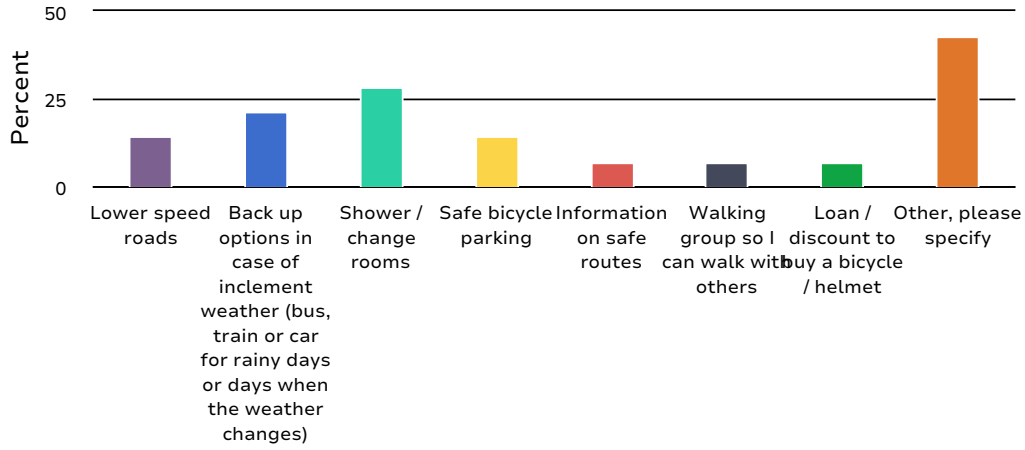
20. What time do you normally leave school on a typical afternoon?



Value	Percent	Responses
Before 2:45pm	2.6%	2
2:45-3:00pm	2.6%	2
3:00-3:15pm	11.7%	9
3:15-3:30pm	15.6%	12
3:30-3:45pm	15.6%	12
3:45-4:00pm	7.8%	6
4:00-4:15pm	10.4%	8
4:15-4:30pm	5.2%	4
4:30-4:45pm	6.5%	5
4:45-5:00pm	11.7%	9
5:00-5:15pm	1.3%	1
5:15-5:30pm	5.2%	4
After 5:30am	3.9%	3

Totals: 77

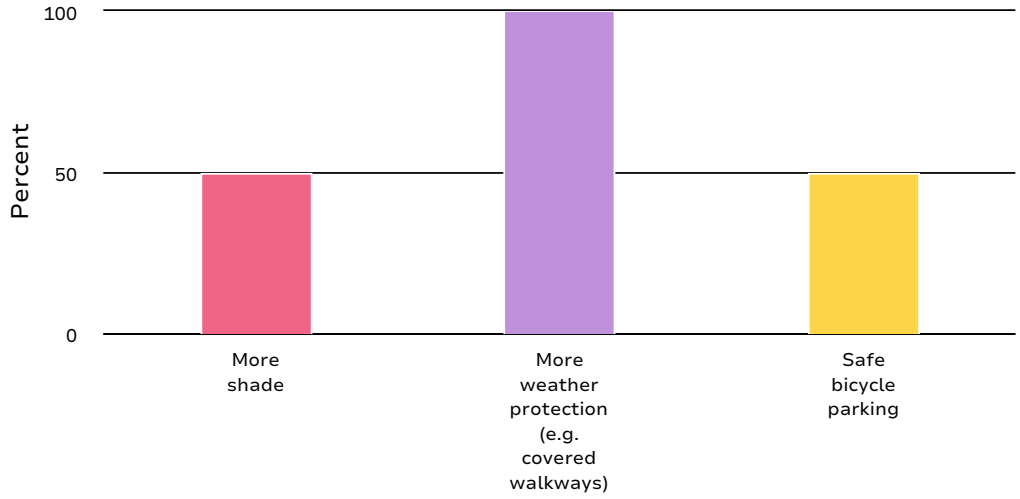
21. Which measures would encourage you to walk or ride a bicycle? (Please tick up to 2 options that apply)



Value	Percent	Responses
Lower speed roads	14.3%	2
Back up options in case of inclement weather (bus, train or car for rainy days or days when the weather changes)	21.4%	3
Shower / change rooms	28.6%	4
Safe bicycle parking	14.3%	2
Information on safe routes	7.1%	1
Walking group so I can walk with others	7.1%	1
Loan / discount to buy a bicycle / helmet	7.1%	1
Other, please specify	42.9%	6

Other, please specify	Count
Dedicated bike lanes	1
More planning time during school hours so I wouldn't be carrying boxes of work home and then back to school the next day.	1
NONE	1
None	1
not having things to carry	1
too far to walk to school and unsafe road conditions for bicycle	1
Totals	6

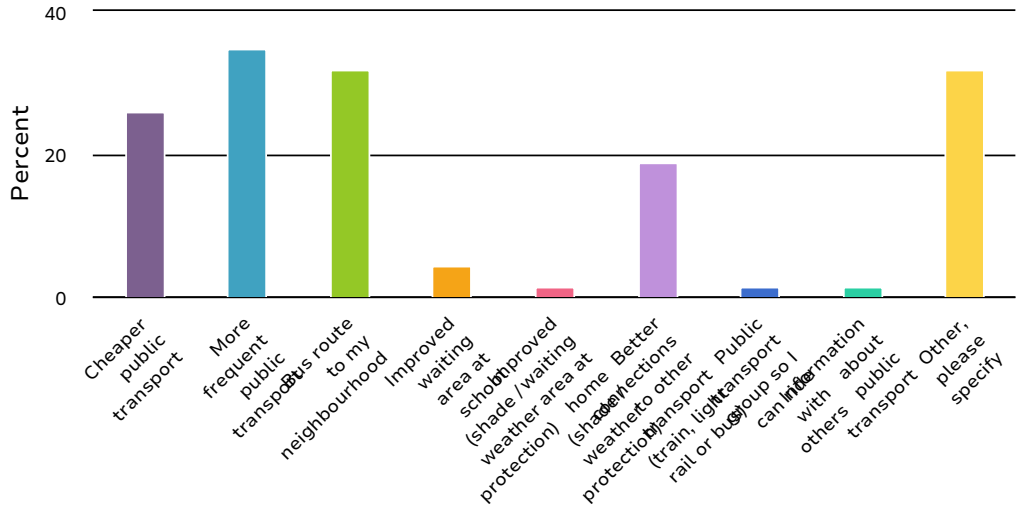
22. As you walk/cycle, which measures would you like to see more? (Please tick up to 2 options that apply)



Value	Percent	Responses
More shade	50.0%	1
More weather protection (e.g. covered walkways)	100.0%	2
Safe bicycle parking	50.0%	1

Other, please specify	Count
Totals	0

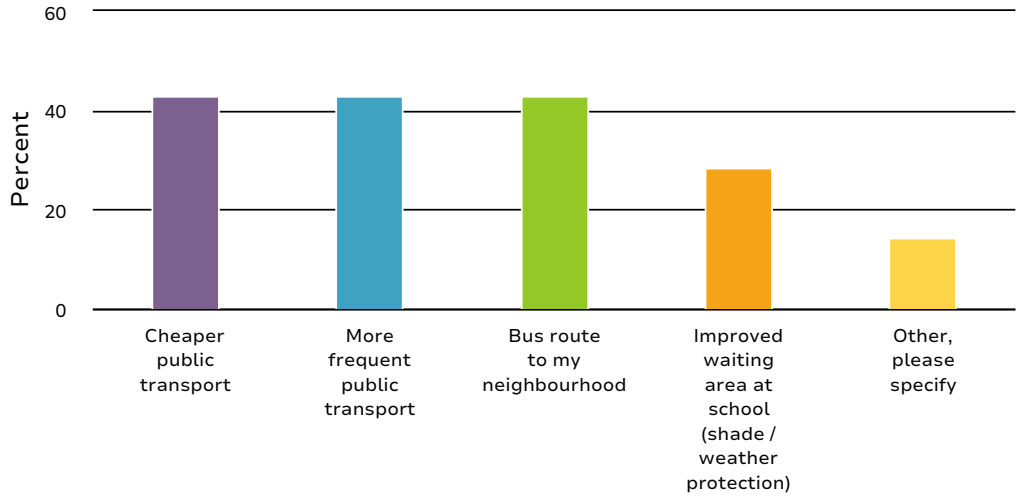
23. Which measures would encourage you to use public transport? (Please tick up to 2 options that apply)



Value	Percent	Responses
Cheaper public transport	26.1%	18
More frequent public transport	34.8%	24
Bus route to my neighbourhood	31.9%	22
Improved waiting area at school (shade / weather protection)	4.3%	3
Improved waiting area at home (shade / weather protection)	1.4%	1
Better connections to other transport (train, light rail or bus)	18.8%	13
Public transport group so I can ride with others	1.4%	1
Information about public transport	1.4%	1
Other, please specify	31.9%	22

Other, please specify	Count
A shorter trip	1
I would have to walk to the main street to catch a bus then change 2 trains then walk or bus from Burwood station to school , too time consuming and not cost effective	1
I would not change my mind	1
It wouldn't. Concord High School is to far from home to use public transport.	1
Less smokers around train stations when I walk to and from school.	1
More planning time for teachers during school hours so I don't need to carry large amounts of work home.	1
NONE	1
Nil	1
No COVID	1
No pandemic/mask wearing compliance	1
None	1
None of these options -- I will always drive unless in walking distance	1
None.	1
Nothing	1
Nothing - it takes too long	1
Will continue to travel via car	1
closer train stations to the school	1
none	1
none - live too far away	1
none of the above	1
nothing it takes twice as long to catch public transport than to drive	1
prefer to drive myself	1
Totals	22

24. As you take public transport, which measures would you to like to see more? (Please tick up to 2 options that apply)



Value	Percent	Responses
Cheaper public transport	42.9%	3
More frequent public transport	42.9%	3
Bus route to my neighbourhood	42.9%	3
Improved waiting area at school (shade / weather protection)	28.6%	2
Other, please specify	14.3%	1

Other, please specify	Count
Improved waiting area on Burwood Road	1
Totals	1

25. Which measures would encourage you to carpool? (Please tick up to 2 options that apply)

Other, please specify	Count
Totals	0

26. As you carpool, which measures would you like to see more? (Please tick up to 2 options that apply)

Other, please specify	Count
Totals	0

27. Do you have any other transport feedback for our team?

ResponseID	Response
12	Parking far too limited to cater to staff students and community
16	More parking should be incorporated into the Master Plan to cater for those staff who reside out of the school zone.
18	A larger car park would be greatly beneficial for the school as students, community, and staff alike use the streets (Concord PS included). Due to the renovation of the field, it has been difficult getting to the Crane St car park. Having an underground or maximising the space behind the basketball courts for parking would greatly assist in the stressed parking.
25	nil.
32	Need additional parking for staff at the school as there is not enough street parking.
33	I have only started working at the school since COVID so one reason I drive is to minimise my exposure.
34	More car-parking is required at the school, particularly with senior students also driving to school.
38	With the improved bus shelters around the school, and the introduction of the Metro rail down the road, I think the transport options will be ample.
40	No
50	no
55	No
56	The intersection of Burwood Rd and Stanley St floods in heavy rain making it difficult to cross Burwood Rd safely as a pedestrian. The roadway is also very uneven with multiple trip hazards for pedestrians.

ResponseID	Response
62	No
68	Nil
69	It comes down to convenience safety and reliability wrt public transport
72	n/a
73	More school buses at peak times.
76	Nil.
390	There needs to be more parking at the shcool. Parents take up places to drop their kids off and then sit in their cars on their phones for 10 minutes before leaving so there is barely every any space to park. If, for some reason, we are running late and get to work after 8.20, you usually have to circle the block to find a spot.
394	Efficient transport involves reliability, frequency, convenience, safety, and economy.
437	The main roads leading to the school are poorly maintained. Specifically, Burwood road and Parramatta rd have significant and dangerous hazards, potholes that are rarely fixed and the congestion is terrible.
555	The staff carpark needs to stay in some form, particularly for staff with mobility issues.
771	NO
868	Improve the footpath outside the front gates so that it is not prone to flooding after rain. Thank you.

Appendix 3. Design Review

PROPOSED SITE PLAN
SCALE 1:500

CRANE STREET

Minibus parking bay (3.5m x 7m)

VEHICLE ACCESS ONLY

WASTE STORAGE (EX)

PROPOSED MINIBUS PARKING HARDSTAND AND CARPORT (MIN 3.5m x 7m clear)

SECURE SSU FENCING AND LIGHTING

WATER METER AND GAS METER ENCLOSURE (EX)

PROPOSED WASTE STORAGE HARD STAND MIN 2.4m INTERNAL CLEAR, REFER TO WASTE REPORT

SHEET METAL ROOFING STRUCTURE WITH MIN 2.4m INTERNAL CLEARANCE & ALLOW VEHICLE PITCH

1.8m HIGH SHEET METAL WALLS WITH OPEN SCREEN FROM 1.5m TO ROOF, BIRD AND VERMIN PROOF

BIN CLEANING FACILITIES INCL HOSE TAP, LOCKABLE DOORS, DRAINAGE AND LIGHTING

PROPOSED LANDSCAPE WORKS REFER LANDSCAPE PLAN

NEW FOOT PATH AS REQUIRED FOR COMPLIANT CONNECTION

PROPOSED LANDSCAPE WORKS REFER LANDSCAPE PLAN

PROPOSED OUTDOOR GAMES COURTS WITH LINE MARKING, INSTALLATION EQUIPMENT AND PERIMETER FENCING AS PER SPEC

RE-ACTIVATE EXISTING CATH SHSW SECURITY REQUIRED

AWNING

BLOCK C

BLOCK B

BLOCK A

BLOCK D

BLOCK H

BLOCK G

BLOCK F

BLOCK Z

BLOCK Y

BLOCK X

LIBRARY / ADMIN WORKS INCLUDING OF REALLOCATION OF AREAS

SHSW SECURITY FENCE TO PROPOSED CARPARK AND UNIFORM SHOP

PROPOSED NEW LOCATION FOR BLOCK J ACCESS COMPLIANT RAMP / FLIGHT PATH CONNECTION AND CONNECTION TO SERVICES

EXTEND EXISTING CARPARK TO 29 SPACES (INCL 1 ACC) PROVIDE WHEEL STOPS AND SCURE TRAFFIC BARRIERS

OSD TANK

BUILD NEW ACCESS COMPLIANT RAMP AND STAIR TO BLOCK G

NEW RAMP / FLIGHT PATH / STEPS AND BALUSTRADE

PROPOSED NEW AWNING EXTENSION TO CONNECT WITH EXISTING AWNING

NEW BALUSTRADE

NEW ACCESSIBLE CAR SPACE AND KERB RAMP

NEW SUBSTATION

NEW MSB AND EV-DB

NEW WALKWAY TO EXISTING PATHS

EXISTING CARPARK GATE

RESURFACE EXISTING PAVING AND RELOCATE HERO SEATING TO CONCRETE

EXISTING GARDEN BEDS

NEW 8 STAFF BICYCLE PARKS & 6 LOCKERS INSIDE BLOCK G

NEW SPRINKLER TANK

NEW SPRINKLER ENCLOSURE

PUMP

NEW BOOSTER AND BACKFLOW DEVICE ENCLOSURE

NEW HYDRANT PUMP ENCLOSURE

RESURFACE EXISTING PAVING TO CONCRETE AND MAINTAIN EXISTING GARDEN BEDS ADJACENT. NEW WALKWAY TO CONNECT BLOCK M TO BLOCK A

EXTEND AMU LANDSCAPE WORKS TO BE REBUILT AFTER CONSTRUCTION OF BLOCK Z

RESTORE/MAKE GOOD EXISTING AMU LANDSCAPE

EXTENT OF AWNING SHOWN DASHED

NEW COVERED WALKWAY WITH HIGH SECTION TO ALLOW FOR AMBULANCE SERVICE VEHICLE TO PASS UNDER

CONNECT (OVERLAP) TO EXISTING COVERED WALKWAY

EXTENT OF COVERED OUTDOOR SPACE SHOWN DASHED

MECH PLANT

ALLOCATE ROOM UNDER STAIR FOR PLANT FOR RELOCATED HOT WATER PLANT AND FILTRATION

QSD TANK

LANDSCAPING

NEW COVERED WALKWAY (EARTH WORKS FOR ACCESS COMPLIANCE REQUIRED)

NEW 40 STUDENT BICYCLE PARKS AND 16 SCOOTER PARKING QUANTITY AND LAYOUT AS PER TRAFFIC ENGINEER PROVIDE HARD STAND

EXISTING WALKWAY

PLAY SPACE RATIO 10.0m² PER STUDENT

EXISTING AMU AWNING TO BE RETAINED

EXISTING AMU AWNING TO BE RETAINED

PROPOSED LANDSCAPE WORKS REFER LANDSCAPE PLAN

EXISTING FOOTBALL CLUBHOUSE

EXTENT OF COVERED OUTDOOR SPACE SHOWN DASHED

ST LUKE'S OVAL

ST LUKE'S PARK

STANLEY STREET

EXISTING WALKWAY

comments

TYPICAL

Please note the following compliance requirements:

Height Clearance: **2.2m** (min) throughout all areas of the car park accessible to vehicles and bicycles.
2.5m above accessible and shared bays
X wherever access is required for a refuse vehicle (and safety clearance envelope)

Sight Splays: Visibility splays in the form of a **2.5m x 2m** right-angled triangle to be provided (AS2890.1). Ensure design avoids visual obstructions in sight splay (i.e. dense landscaping, tall fencing/walls etc.)

Parking Spaces: The parking envelopes shown, must be kept clear of all physical obstructions, including height clearance reductions. Ensure that grades within the parking module do not exceed 1:20 (1:40 for accessible bays).

Accessible Spaces: To be designed in accordance with AS2890.6. i.e, standard parking space with adjacent shared bay (2.4m x 5.4m), to be installed as per AS2890.6 requirements (bollard and markings).

Bicycle Parking: Bicycle spaces are to allow for a envelope of 500mm by 1800mm, with an aisle width of 2000mm for locker storage, or 1500mm for racks.

Control Measures: Please note recommended control measures, including line markings, signage, bollards, convex mirrors, lights etc.

2.4 x 5.4m Car Parking Envelope

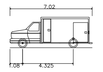
2.4 x 5.4m Accesible Shared Bay

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	5.750m

B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.900m
Overall Height	1.743m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m



Bariatric Ambulance (2.2m width)

Overall Length	7.020m
Overall Width	2.200m
Overall Body Height	2.600m
Min Body Ground Clearance	0.300m
Track Width	2.200m
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	7.650m

ptc.
Suite 502, 1 James Place
North Sydney NSW 2060
t +61 2 8920 0800
ptcconsultants.co

REV	DATE	DESCRIPTION	DRAWN	REVIEWED
P3	19/05/23	FOR INFORMATION	KP	KB
P2	15/05/23	FOR INFORMATION	HL	KB
P1	30.11.22	FOR INFORMATION	JAJ	KB

DRAWING KEY

PROJECT
CONCORD HS

DRAWING TITLE
SITE OVERVIEW

CLIENT	SI NSW
DRAWING #	ptc-001A
PROJECT #	22-0262
SCALE	1 : 500 @ A1

PRELIMINARY

REV P3

PROPOSED SITE PLAN

SCALE 1:500

SINSW SECURITY FENCE TO PROPOSED CARPARK AND UNIFORM SHOP

LIBRARY / ADMIN WORKS INLUDING REALLOCATION OF AREAS

BLOCK B

BLOCK G

PROPOSED NEW LOCATION FOR BLOCK I ACCESS COMPLIANT RAMP / FOOT PATH CONNECTION. CONNECTION TO SERVICES

EXTEND EXISTING CARPARK TO 29 SPACES (INCL 1 ACC) PROVIDE WHEEL STOPS AND SCURE TRAFFIC BARRIERS

2.4

1.0

6.0

OSD TANK

BUILD NEW ACCESS COMPLIANT RAMP AND STAIR TO BLOCK G

PROPOSED NEW A... TO CONNECT WITH

BALUSTR...

NEW RAMP / FOOT PATH / STEPS AND BALUSTRADE

MSB

NEW ACCESSIBLE CAR SPACE AND KERB RAMP

EXISTING CARPARK GATE

NEW SUBSTATION

NEW MSB AND EV-DB

NEW WALKWAY TO EXISTING PATHS

RESURFACE EXIST... INCLUDI...

AND MAINT...

NEW SPRINKLER TANK

comments

TYPICAL

Please note the following compliance requirements:

Height Clearance: **2.2m** (min) throughout all areas of the car park accessible to vehicles and bicycles.
2.5m above accessible and shared bays X wherever access is required for a refuse vehicle (and safety clearance envelope)

Sight Splays: Visibility splays in the form of a **2.5m x 2m** right-angled triangle to be provided (AS2890.1). Ensure design avoids visual obstructions in sight splay (i.e. dense landscaping, tall fencing/walls etc.)

Parking Spaces: The parking envelopes shown, must be kept clear of all physical obstructions, including height clearance reductions. Ensure that grades within the parking module do not exceed 1:20 (1:40 for accessible bays).

Accessible Spaces: To be designed in accordance with AS2890.6. i.e, standard parking space with adjacent shared bay (2.4m x 5.4m), to be installed as per AS2890.6 requirements (bollard and markings).

Bicycle Parking: Bicycle spaces are to allow for a envelope of 500mm by 1800mm, with an aisle width of 2000mm for locker storage, or 1500mm for racks.

Control Measures: Please note recommended control measures, including line markings, signage, bollards, convex mirrors, lights etc.

2.4 x 5.4m Car Parking Envelope

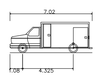
2.4 x 5.4m Accesible Shared Bay

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	5.750m

B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.870m
Overall Body Height	1.743m
Min Body Ground Clearance	0.272m
Track Width	1.860m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m



Bariatric Ambulance (2.2m width)

Overall Length	7.020m
Overall Width	2.200m
Overall Body Height	2.600m
Min Body Ground Clearance	0.343m
Track Width	2.200m
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	7.650m

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

REV	DATE	DESCRIPTION	DRAWN	REVIEWED
P3	19/05/23	FOR INFORMATION	KP	KB
P2	15/05/23	FOR INFORMATION	HL	KB
P1	30.11.22	FOR INFORMATION	JAJ	KB

DRAWING KEY

PROJECT
CONCORD HS

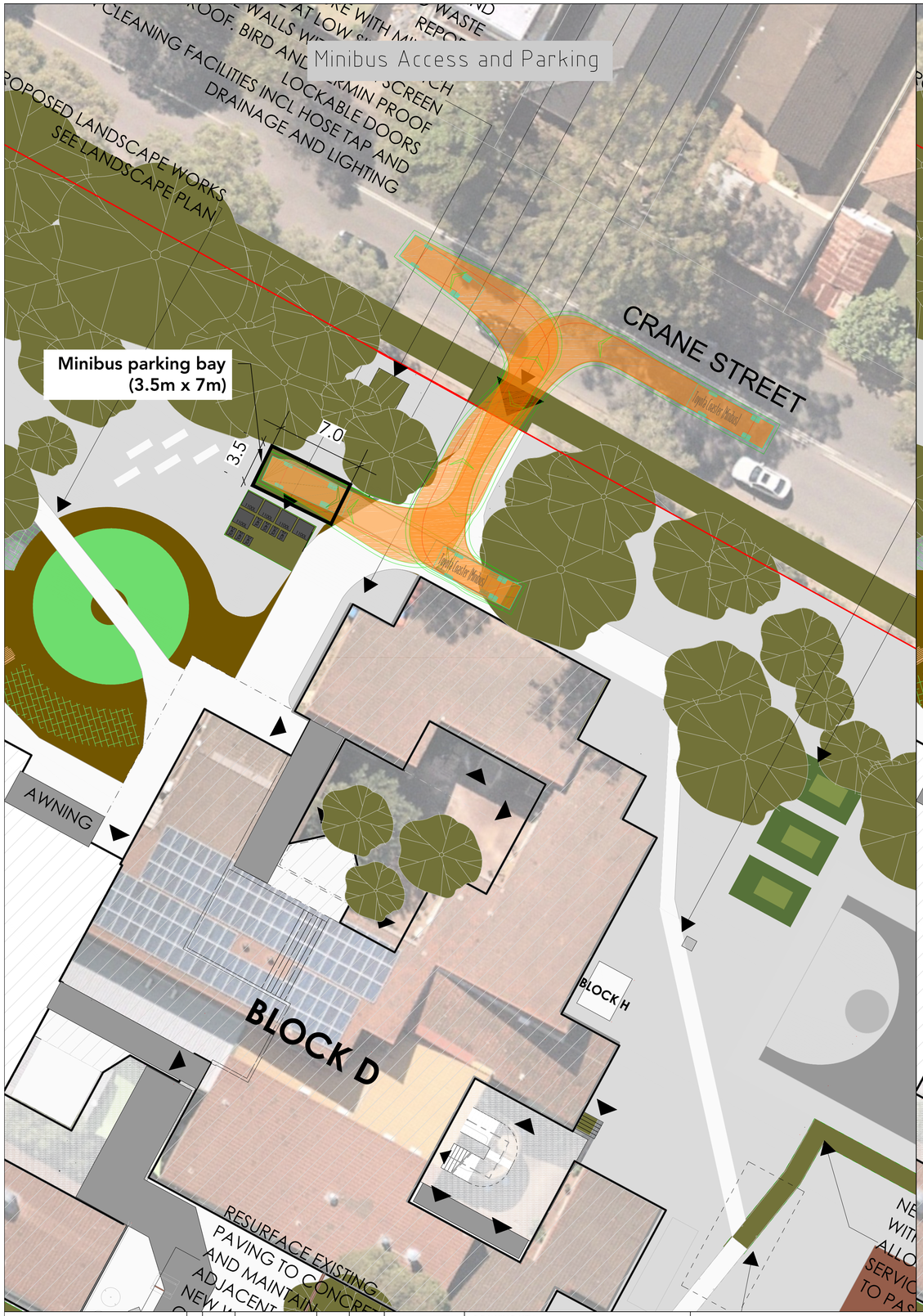
DRAWING TITLE
STANLEY STREET
CAR PARK DESIGN REVIEW
2.4 x 5.4 m PARKING SPACES SHOWN

CLIENT	SI NSW
DRAWING #	ptc-002A
PROJECT #	22-0262
SCALE	1 : 200 @ A1

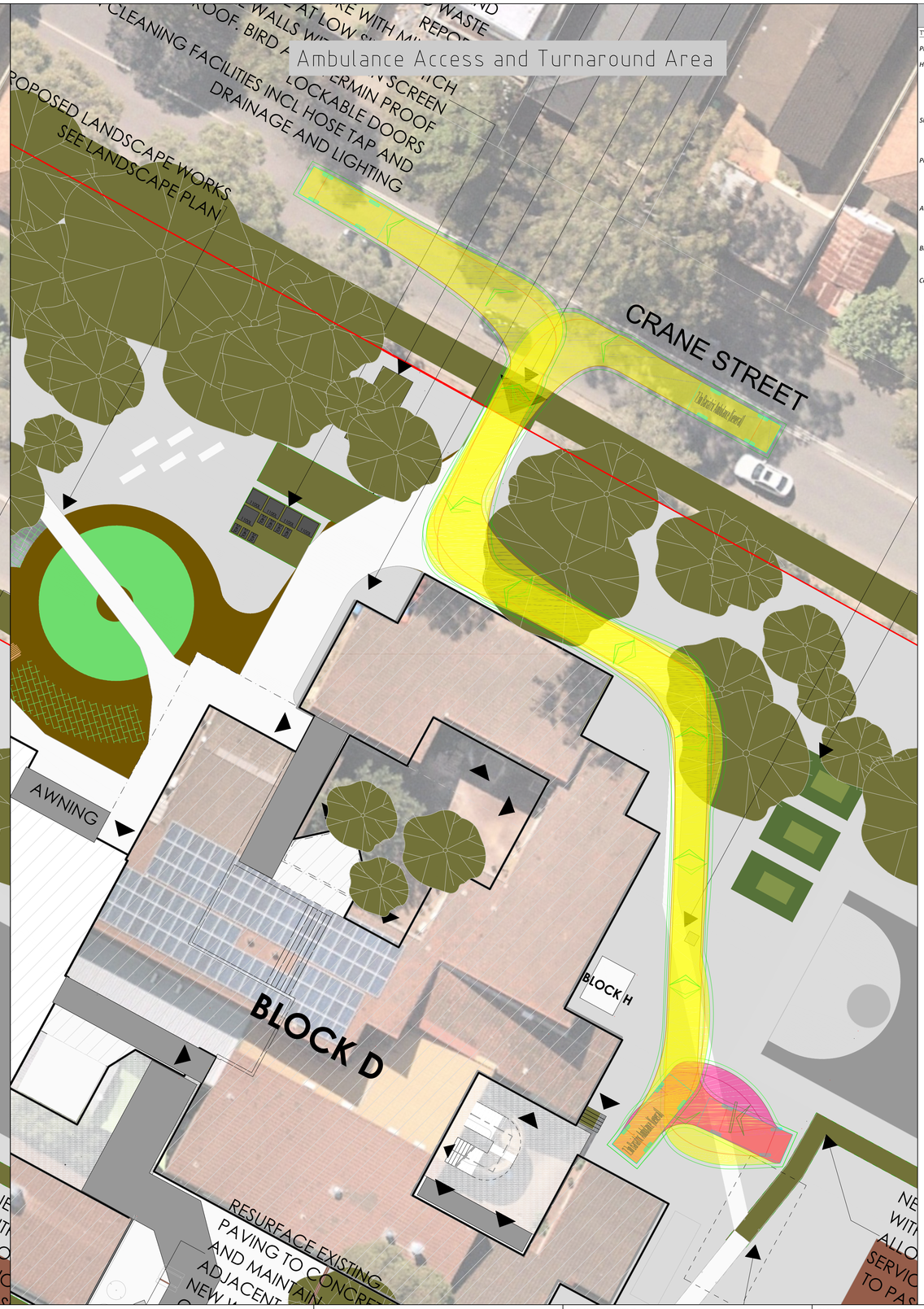
PRELIMINARY

REV P3

Minibus Access and Parking



Ambulance Access and Turnaround Area



comments

TYPICAL

Please note the following compliance requirements:

Height Clearance: **2.2m** (min) throughout all areas of the car park accessible to vehicles and bicycles.
2.5m above accessible and shared bays
X wherever access is required for a refuse vehicle (and safety clearance envelope)

Sight Splays: Visibility splays in the form of a **2.5m x 2m** right-angled triangle to be provided (AS2890.1). Ensure design avoids visual obstructions in sight splay (i.e. dense landscaping, tall fencing/walls etc.)

Parking Spaces: The parking envelopes shown, must be kept clear of all physical obstructions, including height clearance reductions. Ensure that grades within the parking module do not exceed 1:20 (1:40 for accessible bays).

Accessible Spaces: To be designed in accordance with AS2890.6. i.e, standard parking space with adjacent shared bay (2.4m x 5.4m), to be installed as per AS2890.6 requirements (bollard and markings).

Bicycle Parking: Bicycle spaces are to allow for a envelope of 500mm by 1800mm, with an aisle width of 2000mm for locker storage, or 1500mm for racks.

Control Measures: Please note recommended control measures, including line markings, signage, bollards, convex mirrors, lights etc.

2.4 x 5.4m Car Parking Envelope

2.4 x 5.4m Accesible Shared Bay

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	5.750m

B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.920m
Overall Body Height	1.743m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m

Bariatric Ambulance (2.2m width)

Overall Length	7.020m
Overall Width	2.200m
Overall Body Height	2.600m
Min Body Ground Clearance	0.348m
Track Width	2.200m
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	7.650m

Toyota Coaster (Minibus)

Overall Length	6.990m
Overall width	2.095m
Overall Body Height	2.457m
Min Body Ground Clearance	0.163m
Track Width	1.950m
Lock-to-lock time	5.00s
Wall to Wall Turning Radius	7.209m

ptc.
Suite 502, 1 James Place
North Sydney NSW 2060
t +61 2 8920 0800
ptcconsultants.co

REV	DATE	DESCRIPTION	DRAWN	REVIEWED
P3	19/05/23	FOR INFORMATION	KP	KB
P2	15/05/23	FOR INFORMATION	HL	KB
P1	30.11.22	FOR INFORMATION	JAJ	KB

DRAWING KEY

PROJECT
CONCORD HS

DRAWING TITLE
CRANE ST MINIBUS ACCESS
CRANE ST AMBULANCE ACCESS

CLIENT	SI NSW
DRAWING #	ptc-003A
PROJECT #	22-0262
SCALE	1 : 200 @ A1

PRELIMINARY

REV P3

14 x Staff Bike Parking

Existing sink and 6 x lockers

40 x Student Bike Parking & 16 Scooter Parking

96 x Student Bike Parking & 16 Scooter Parking

comments

TYPICAL

Please note the following compliance requirements:

Height Clearance: **2.2m** (min) throughout all areas of the car park accessible to vehicles and bicycles.
2.5m above accessible and shared bays
X wherever access is required for a refuse vehicle (and safety clearance envelope)

Sight Splays: Visibility splays in the form of a **2.5m x 2m** right-angled triangle to be provided (AS2890.1). Ensure design avoids visual obstructions in sight splay (i.e. dense landscaping, tall fencing/walls etc.)

Parking Spaces: The parking envelopes shown, must be kept clear of all physical obstructions, including height clearance reductions. Ensure that grades within the parking module do not exceed 1:20 (1:40 for accessible bays).

Accessible Spaces: To be designed in accordance with AS2890.6. i.e, standard parking space with adjacent shared bay (2.4m x 5.4m), to be installed as per AS2890.6 requirements (bollard and markings).

Bicycle Parking: Bicycle spaces are to allow for a envelope of 500mm by 1800mm, with an aisle width of 2000mm for locker storage, or 1500mm for racks.

Control Measures: Please note recommended control measures, including line markings, signage, bollards, convex mirrors, lights etc.

BLOCK G
REFURB FIRST FLOOR PLAN
SCALE @A1 1:200

EXISTING STAFF STUDY TO BE REFURBISHED
EOT BIKE PARKING:
ALLOW FOR POWER FOR CHARGING
RETAIN EXISTING SINK
REPLACE FLOORING (INCL. TRACK FROM EXTERNAL DOOR) TO VINYL
EXTERNAL DOOR)
PROVIDE 14 BIKE RACKS
PROVIDE 6 LOCKER SPACES
REFER TO TRAFFIC REPORT FOR LAYOUT REQUIREMENTS

NEW RAMP TO BLOCK

BOOSTER
BACKFLOW DEVICE
FIRE
PLANT
ENCLOSURE

EXTENT OF AWNING SHOWN DASHED

SOLAR

OSD TANK

P3	19/05/23	FOR INFORMATION	KP	KB
P2	15/05/23	FOR INFORMATION	HL	KB
P1	30.11.22	FOR INFORMATION	JAJ	KB
REV	DATE	DESCRIPTION	DRAWN	REVIEWED

ptc.
Suite 502, 1 James Place
North Sydney NSW 2060
t +61 2 8920 0800
ptcconsultants.co

DRAWING KEY

PROJECT
CONCORD HS

DRAWING TITLE
STAFF AND STUDENT BIKE PARKING DESIGN REVIEW

CLIENT	SI NSW
DRAWING #	ptc-004A
PROJECT #	22-0262
SCALE	1 : 200 @ A1

PRELIMINARY
REV P3

Appendix 4. SIDRA Modelling Results

MOVEMENT SUMMARY

Site: 1125 [a. Burwood Road / Crane Street - Existing AM Peak (Site Folder: Existing AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Network: N101 [1. Existing AM Peak (Network Folder: General)]

Survey date: 30/03/2023
Peak hour: 8am-9am
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Burwood Road (S)															
1	L2	All MCs	159	8.6	159	8.6	0.613	24.1	LOS B	10.2	75.7	0.96	0.81	0.96	25.4
2	T1	All MCs	66	3.2	66	3.2	0.613	84.6	LOS F	10.2	75.7	0.96	0.81	0.96	25.9
3	R2	All MCs	76	6.9	76	6.9	0.736	59.4	LOS E	4.1	30.1	1.00	0.90	1.23	8.5
Approach			301	7.0	301	7.0	0.736	46.3	LOS D	10.2	75.7	0.97	0.83	1.03	22.0
East: Crane Street (E)															
4	L2	All MCs	107	3.9	107	3.9	* 0.807	47.5	LOS D	19.6	139.4	1.00	0.95	1.11	8.8
5	T1	All MCs	611	1.4	611	1.4	0.807	41.1	LOS C	20.0	141.5	1.00	0.95	1.11	25.2
6	R2	All MCs	81	1.3	81	1.3	0.807	44.6	LOS D	20.0	141.5	1.00	0.95	1.11	24.9
Approach			799	1.7	799	1.7	0.807	42.3	LOS C	20.0	141.5	1.00	0.95	1.11	23.8
North: Burwood Road (N)															
7	L2	All MCs	205	0.5	205	0.5	0.694	45.1	LOS D	10.5	74.3	0.99	0.85	1.05	21.7
8	T1	All MCs	194	4.3	194	4.3	* 0.694	51.2	LOS D	10.5	74.3	1.00	0.86	1.07	21.9
9	R2	All MCs	12	0.0	12	0.0	0.694	62.3	LOS E	9.3	67.6	1.00	0.86	1.07	29.9
Approach			411	2.3	411	2.3	0.694	48.5	LOS D	10.5	74.3	1.00	0.86	1.06	22.1
West: Crane Street (W)															
10	L2	All MCs	21	5.0	21	5.0	0.159	26.5	LOS B	3.7	26.3	0.70	0.65	0.70	37.0
11	T1	All MCs	424	1.2	424	1.2	* 0.794	31.5	LOS C	25.3	182.6	0.90	0.84	0.94	26.7
12	R2	All MCs	223	7.5	223	7.5	0.794	37.0	LOS C	25.3	182.6	0.95	0.90	1.01	25.8
Approach			668	3.5	668	3.5	0.794	33.1	LOS C	25.3	182.6	0.91	0.86	0.96	26.9
All Vehicles			2179	3.1	2179	3.1	0.807	41.2	LOS C	25.3	182.6	0.97	0.89	1.04	24.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Burwood Road (S)											
P1	Full	52	34.5	LOS D	0.1	0.1	0.83	0.83	188.4	200.0	1.06

East: Crane Street (E)										
P2	Full	67	43.4	LOS E	0.2	0.2	0.93	0.93	197.2	200.0	1.01
North: Burwood Road (N)										
P3	Full	9	25.9	LOS C	0.0	0.0	0.72	0.72	179.8	200.0	1.11
West: Crane Street (W)										
P4	Full	41	43.3	LOS E	0.1	0.1	0.93	0.93	197.2	200.0	1.01
All Pedestrians		169	39.7	LOS D	0.2	0.2	0.89	0.89	193.5	200.0	1.03

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 2932 [b. Burwood Road / Stanley Street - Existing AM Peak (Site Folder: Existing AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Network: N101 [1. Existing AM Peak (Network Folder: General)]

Survey date: 30/03/2023
Peak hour: 8am-9am
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Burwood Road (S)															
1	L2	All MCs	17	0.0	17	0.0	0.253	14.9	LOS B	3.2	24.1	0.67	0.63	0.67	38.7
2	T1	All MCs	206	8.7	206	8.7	0.253	10.9	LOS A	3.2	24.1	0.67	0.64	0.67	38.1
3	R2	All MCs	86	2.4	86	2.4	0.253	17.1	LOS B	1.8	13.2	0.72	0.72	0.72	35.3
Approach			309	6.5	309	6.5	0.253	12.8	LOS A	3.2	24.1	0.68	0.66	0.68	37.2
East: Stanley Street (E)															
4	L2	All MCs	78	8.1	78	8.1	0.167	18.6	LOS B	1.5	11.1	0.79	0.71	0.79	33.5
5	T1	All MCs	22	0.0	22	0.0	0.173	14.7	LOS B	1.4	10.2	0.79	0.69	0.79	30.9
6	R2	All MCs	53	2.0	53	2.0	0.173	19.0	LOS B	1.4	10.2	0.79	0.69	0.79	18.5
Approach			153	4.8	153	4.8	0.173	18.2	LOS B	1.5	11.1	0.79	0.70	0.79	30.2
North: Burwood Road (N)															
7	L2	All MCs	82	6.4	82	6.4	0.342	14.1	LOS A	4.5	33.5	0.70	0.63	0.70	28.3
8	T1	All MCs	421	6.0	421	6.0	* 0.342	9.9	LOS A	4.5	33.5	0.70	0.62	0.70	38.7
9	R2	All MCs	29	0.0	29	0.0	0.342	15.6	LOS B	4.2	30.9	0.70	0.60	0.70	33.6
Approach			533	5.7	533	5.7	0.342	10.9	LOS A	4.5	33.5	0.70	0.62	0.70	37.2
West: Stanley Street (W)															
10	L2	All MCs	41	2.6	41	2.6	0.225	19.4	LOS B	2.1	15.1	0.79	0.69	0.79	29.3
11	T1	All MCs	35	0.0	35	0.0	* 0.225	13.5	LOS A	2.1	15.1	0.79	0.69	0.79	31.2
12	R2	All MCs	37	0.0	37	0.0	0.225	17.7	LOS B	2.1	15.1	0.79	0.69	0.79	36.1
Approach			113	0.9	113	0.9	0.225	17.0	LOS B	2.1	15.1	0.79	0.69	0.79	32.7
All Vehicles			1107	5.3	1107	5.3	0.342	13.1	LOS A	4.5	33.5	0.72	0.65	0.72	35.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Burwood Road (S)											
P1	Full	73	19.4	LOS B	0.1	0.1	0.88	0.88	173.3	200.0	1.15

East: Stanley Street (E)										
P2	Full	45	11.6	LOS B	0.0	0.0	0.68	0.68	165.4	200.0	1.21
North: Burwood Road (N)										
P3	Full	126	19.5	LOS B	0.2	0.2	0.88	0.88	173.3	200.0	1.15
West: Stanley Street (W)										
P4	Full	21	13.0	LOS B	0.0	0.0	0.72	0.72	166.8	200.0	1.20
All Pedestrians		265	17.6	LOS B	0.2	0.2	0.84	0.84	171.4	200.0	1.17

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 3 [c. Crane Street / Car Park Driveway N - Existing AM Peak (Site Folder: Existing AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Network: N101 [1. Existing AM Peak (Network Folder: General)]

Survey date: 30/03/2023
Peak hour: 8am-9am
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Crane Street (S)															
5	T1	All MCs	671	1.9	671	1.9	0.348	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.9
6	R2	All MCs	45	0.0	45	0.0	0.065	7.8	LOS A	0.2	1.7	0.63	0.78	0.63	39.3
Approach			716	1.8	716	1.8	0.348	0.5	NA	0.2	1.7	0.04	0.05	0.04	39.8
North: Crane Street (N)															
3	L2	All MCs	19	0.0	19	0.0	0.413	4.7	LOS A	0.0	0.0	0.00	0.23	0.00	47.8
4	T1	All MCs	777	1.8	777	1.8	0.413	1.3	LOS A	0.0	0.0	0.00	0.23	0.00	48.2
Approach			796	1.7	796	1.7	0.413	1.4	NA	0.0	0.0	0.00	0.23	0.00	48.2
All Vehicles			1512	1.7	1512	1.7	0.413	1.0	NA	0.2	1.7	0.02	0.14	0.02	43.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 4 [d. Crane Street / Car Park Driveway S - Existing AM Peak (Site Folder: Existing AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Network: N101 [1. Existing AM Peak (Network Folder: General)]

Survey date: 30/03/2023
Peak hour: 8am-9am
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Crane Street (S)															
5	T1	All MCs	716	1.8	716	1.8	0.371	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.9
Approach			716	1.8	716	1.8	0.371	0.0	NA	0.0	0.0	0.00	0.00	0.00	39.9
East: Car Park Driveway (E)															
1	L2	All MCs	28	0.0	28	0.0	0.054	8.6	LOS A	0.1	1.0	0.61	0.78	0.61	40.6
Approach			28	0.0	28	0.0	0.054	8.6	LOS A	0.1	1.0	0.61	0.78	0.61	40.6
North: Crane Street (N)															
4	T1	All MCs	777	1.8	777	1.8	0.513	1.0	LOS A	0.0	0.0	0.00	0.22	0.00	41.5
Approach			777	1.8	777	1.8	0.513	1.0	NA	0.0	0.0	0.00	0.22	0.00	41.5
All Vehicles			1521	1.7	1521	1.7	0.513	0.7	NA	0.1	1.0	0.01	0.13	0.01	40.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 1125 [a. Burwood Road / Crane Street - Existing PM Peak (Site Folder: Existing PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Network: N101 [2. Existing PM Peak (Network Folder: General)]

Survey date: 30/03/2023
Peak hour: 2:45pm-3:45pm
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Burwood Road (S)															
1	L2	All MCs	100	12.6	100	12.6	0.757	24.0	LOS B	10.7	79.7	1.00	0.92	1.13	23.7
2	T1	All MCs	112	3.8	112	3.8	0.757	71.3	LOS F	10.7	79.7	1.00	0.92	1.13	24.1
3	R2	All MCs	93	1.1	93	1.1	* 0.767	58.9	LOS E	5.0	35.0	1.00	0.93	1.25	8.5
Approach			304	5.9	304	5.9	0.767	52.0	LOS D	10.7	79.7	1.00	0.92	1.17	20.2
East: Crane Street (E)															
4	L2	All MCs	125	1.7	125	1.7	0.801	41.2	LOS C	22.5	159.5	0.98	0.92	1.07	9.5
5	T1	All MCs	689	1.5	689	1.5	* 0.801	37.8	LOS C	22.5	159.5	0.98	0.93	1.07	26.2
6	R2	All MCs	113	1.9	113	1.9	0.801	41.3	LOS C	22.1	156.7	0.98	0.93	1.07	25.7
Approach			927	1.6	927	1.6	0.801	38.7	LOS C	22.5	159.5	0.98	0.93	1.07	24.8
North: Burwood Road (N)															
7	L2	All MCs	96	0.0	96	0.0	0.461	36.2	LOS C	5.6	39.4	0.96	0.78	0.96	21.9
8	T1	All MCs	92	3.4	92	3.4	0.461	60.7	LOS E	5.6	39.4	0.98	0.77	0.98	21.5
9	R2	All MCs	13	0.0	13	0.0	0.461	63.3	LOS E	3.8	27.5	0.99	0.76	0.99	29.3
Approach			200	1.6	200	1.6	0.461	49.1	LOS D	5.6	39.4	0.97	0.78	0.97	22.4
West: Crane Street (W)															
10	L2	All MCs	17	0.0	17	0.0	0.157	27.1	LOS B	3.6	25.7	0.70	0.65	0.70	36.8
11	T1	All MCs	488	1.5	488	1.5	* 0.785	32.0	LOS C	24.3	175.8	0.90	0.85	0.94	26.7
12	R2	All MCs	142	10.4	142	10.4	0.785	37.1	LOS C	24.3	175.8	0.95	0.89	1.00	25.9
Approach			647	3.4	647	3.4	0.785	33.0	LOS C	24.3	175.8	0.91	0.85	0.95	26.9
All Vehicles			2079	2.8	2079	2.8	0.801	39.8	LOS C	24.3	175.8	0.96	0.89	1.04	24.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Burwood Road (S)											
P1	Full	3	31.2	LOS D	0.0	0.0	0.79	0.79	185.1	200.0	1.08

East: Crane Street (E)										
P2	Full	9	44.2	LOS E	0.0	0.0	0.94	0.94	198.0	200.0	1.01
North: Burwood Road (N)										
P3	Full	4	26.6	LOS C	0.0	0.0	0.73	0.73	180.5	200.0	1.11
West: Crane Street (W)										
P4	Full	18	44.2	LOS E	0.0	0.0	0.94	0.94	198.1	200.0	1.01
All Pedestrians		35	40.9	LOS E	0.0	0.0	0.90	0.90	194.7	200.0	1.03

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 2932 [b. Burwood Road / Stanley Street - Existing PM Peak (Site Folder: Existing PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Network: N101 [2. Existing PM Peak (Network Folder: General)]

Survey date: 30/03/2023
Peak hour: 2:45pm-3:45pm
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Burwood Road (S)															
1	L2	All MCs	14	0.0	14	0.0	0.190	15.2	LOS B	2.3	17.4	0.64	0.61	0.64	38.8
2	T1	All MCs	225	8.9	225	8.9	0.190	10.4	LOS A	2.3	17.4	0.64	0.62	0.64	38.4
3	R2	All MCs	32	20.0	32	20.0	0.190	15.7	LOS B	1.8	13.8	0.64	0.63	0.64	37.8
Approach			271	9.7	271	9.7	0.190	11.2	LOS A	2.3	17.4	0.64	0.62	0.64	38.4
East: Stanley Street (E)															
4	L2	All MCs	53	0.0	53	0.0	0.115	19.1	LOS B	1.0	7.1	0.79	0.69	0.79	33.4
5	T1	All MCs	11	0.0	11	0.0	0.107	14.1	LOS A	0.8	6.5	0.75	0.66	0.75	31.3
6	R2	All MCs	35	18.2	35	18.2	0.107	17.7	LOS B	0.8	6.5	0.75	0.66	0.75	19.1
Approach			98	6.5	98	6.5	0.115	18.1	LOS B	1.0	7.1	0.78	0.68	0.78	30.3
North: Burwood Road (N)															
7	L2	All MCs	29	17.9	29	17.9	0.250	13.8	LOS A	3.2	23.5	0.67	0.57	0.67	29.0
8	T1	All MCs	359	4.7	359	4.7	* 0.250	9.6	LOS A	3.2	23.5	0.67	0.57	0.67	39.2
9	R2	All MCs	12	0.0	12	0.0	0.250	14.4	LOS A	3.1	22.3	0.67	0.56	0.67	33.9
Approach			400	5.5	400	5.5	0.250	10.0	LOS A	3.2	23.5	0.67	0.57	0.67	38.5
West: Stanley Street (W)															
10	L2	All MCs	31	0.0	31	0.0	0.135	17.6	LOS B	1.3	8.8	0.76	0.67	0.76	29.4
11	T1	All MCs	15	0.0	15	0.0	* 0.135	12.7	LOS A	1.3	8.8	0.76	0.67	0.76	31.3
12	R2	All MCs	23	0.0	23	0.0	0.135	18.4	LOS B	1.3	8.8	0.76	0.67	0.76	36.2
Approach			68	0.0	68	0.0	0.135	16.8	LOS B	1.3	8.8	0.76	0.67	0.76	32.7
All Vehicles			837	6.5	837	6.5	0.250	11.9	LOS A	3.2	23.5	0.68	0.61	0.68	36.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Burwood Road (S)											
P1	Full	117	19.5	LOS B	0.1	0.1	0.88	0.88	173.3	200.0	1.15

East: Stanley Street (E)										
P2 Full	44	11.6	LOS B	0.0	0.0	0.68	0.68	165.4	200.0	1.21
North: Burwood Road (N)										
P3 Full	93	19.4	LOS B	0.1	0.1	0.88	0.88	173.3	200.0	1.15
West: Stanley Street (W)										
P4 Full	97	13.0	LOS B	0.1	0.1	0.72	0.72	166.9	200.0	1.20
All Pedestrians	351	16.7	LOS B	0.1	0.1	0.81	0.81	170.5	200.0	1.17

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 3 [c. Crane Street / Car Park Driveway N - Existing PM Peak (Site Folder: Existing PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Network: N101 [2. Existing PM Peak (Network Folder: General)]

Survey date: 30/03/2023
Peak hour: 2:45pm-3:45pm
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Crane Street (S)															
5	T1	All MCs	636	1.3	636	1.3	0.329	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.9
6	R2	All MCs	44	0.0	44	0.0	0.075	9.0	LOS A	0.3	1.9	0.69	0.84	0.69	38.4
Approach			680	1.2	680	1.2	0.329	0.6	NA	0.3	1.9	0.04	0.05	0.04	39.8
North: Crane Street (N)															
3	L2	All MCs	47	2.2	47	2.2	0.463	4.8	LOS A	0.0	0.0	0.00	0.24	0.00	47.6
4	T1	All MCs	843	1.5	843	1.5	0.463	1.3	LOS A	0.0	0.0	0.00	0.24	0.00	48.0
Approach			891	1.5	891	1.5	0.463	1.5	NA	0.0	0.0	0.00	0.24	0.00	48.0
All Vehicles			1571	1.4	1571	1.4	0.463	1.1	NA	0.3	1.9	0.02	0.16	0.02	43.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 4 [d. Crane Street / Car Park Driveway S - Existing PM Peak (Site Folder: Existing PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Network: N101 [2. Existing PM Peak (Network Folder: General)]

Survey date: 30/03/2023
Peak hour: 2:45pm-3:45pm
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Crane Street (S)															
5	T1	All MCs	680	1.2	680	1.2	0.352	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	39.9
Approach			680	1.2	680	1.2	0.352	0.0	NA	0.0	0.0	0.00	0.00	0.00	39.9
East: Car Park Driveway (E)															
1	L2	All MCs	73	1.4	73	1.4	0.184	10.0	LOS A	0.4	3.2	0.68	0.86	0.71	39.4
Approach			73	1.4	73	1.4	0.184	10.0	LOS A	0.4	3.2	0.68	0.86	0.71	39.4
North: Crane Street (N)															
4	T1	All MCs	843	1.5	843	1.5	0.646	1.0	LOS A	0.0	0.0	0.00	0.21	0.00	41.4
Approach			843	1.5	843	1.5	0.646	1.0	NA	0.0	0.0	0.00	0.21	0.00	41.4
All Vehicles			1596	1.4	1596	1.4	0.646	1.0	NA	0.4	3.2	0.03	0.15	0.03	40.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.