# **ARUP**

#### **School Infrastructure NSW**

# Fort Street Public School

#### School Transport Plan

Reference: FSPS School Transport Plan

Issue 16 | 23 December 2023

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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# **Document Verification**

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### 1. Introduction

#### 1.1 Background

Arup has been engaged by Lendlease Building on behalf of School Infrastructure NSW (SINSW) to prepare a School Transport Plan (the 'Plan') to satisfy the relevant conditions of consent for Fort Street Primary School (FSPS) State Significant Development Application (SSDA) 10340.

The purpose of the Plan is to support access for students, staff and visitors to the School during operation by providing clear, safe and efficient transport strategies for various facilities located onsite including drop-off and pickup areas, bus zones, pedestrian and cycle access.

#### 1.2 Site Location

Fort Street Public School is located in the City of Sydney council area. The School site is bordered by the Cahill Expressway to the north and Upper Fort Street to the south and east.

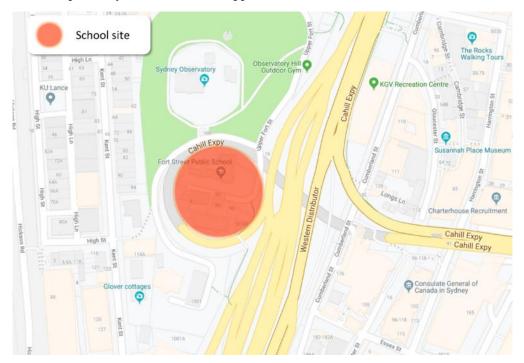


Figure 1: School site boundary

#### 1.3 School Population

The Plan considers the access requirements for the ultimate scenario of the school which can accommodate up to 550 students, which has been approved as part of the SSD-10340.

Currently the School has a population of 241 students. The school is expected to expand organically, with the ultimate capacity forecasted to be reached within 10 years upon opening.

#### 1.4 What is a School Transport Plan?

A School Transport Plan aims to provide guidance on infrastructure requirements and management measures to relevant government authorities such as the NSW Department of Education and SINSW. The School Transport Plan aims to focus on delivering efficient, safe and sustainable access methods to / from schools during the planning, construction and operation of school facilities. Requirements set by School Infrastructure NSW include undertaking the following:

- **Transport Assessment (Purpose and Framework)** to review existing transport networks, travel demand, address safety concerns and identify potential infrastructure recommendations
- **Transport Plan Framework** to identify potential facilities that may be needed to serve the site. A sustainable transport mode share target should be developed as part of this framework.
- **Transport Compliance Letters** to confirm deliverables comply with School Transport Plan processes, ensure transport recommendations are considered by the project team, outline potential transport and government risks and propose improvements to the School Transport Plan process.

The School Transport Plan applies to all people who will use the site after being developed. This includes all school staff, students and visitors who may travel to and use the site.

#### 1.5 School Transport Plan Objectives

The objectives of the School Transport Plan are as follow:

- **Deliver local infrastructure** to promote students to walk, ride and use public transport to reduce the reliance on cars and decrease traffic congestion
- **Tackle childhood obesity** by encouraging students to increase their daily physical activity through active travel to / from school or partway to school.
- **Safe:** developments should aim to minimise pedestrian and vehicle conflict, ensure schools are accessible and safe for all who attend or visit the school and the identify and implement new transport measures.
- Efficient: reduce local traffic congestion and parking impacts, outline required infrastructure and operations to be delivered prior to occupancy, communicate relevant transport policies and programs and resolve issues early in the school master planning, schematic design and business case stages.
- **Sustainable:** increase the use of sustainable travel modes, minimise car parking and kiss-and-ride provisions and integrate school transport facilities within the surrounding community.
- **Collaborative:** identify opportunities to work with state or local government authorities, share travel demand and transport initiatives and engage transport agencies to seek or improve existing transport networks
- **Replicable:** to understand the processes within relevant policies and programs and to inform government authorities on potential transport / infrastructure requirements

Moreover, to create shared value for the school and the community whilst safeguarding the planet, the objectives were also guided by the United Nations Sustainable Development (UNSDGs) in particular the goals related to

- Goal 3 Good Health and Well-Being;
- Goal 10 Reduced Inequalities; and
- Goal 11 Sustainable Cities and Communities.

These goals can be achieved through providing all students with a means to access the school through sustainable modes of travel.

With these requirements laid out, the objectives of the School Transport Plan have been synthesised to be the following:

• Encourage the use of sustainable transport modes by promoting walking, cycling and utilising public transport and car sharing rather than single occupant car travel and taxi usage. This generally requires improving people's travel choices by improving access to other modes (e.g. more public transport options, improved mobility for non-car users or greater infrastructure for active transportation). Supportive measures may include reducing convenience for car drivers by minimising parking or maintaining road capacity.

- **Reduce traffic congestion and air pollution** to enhance safer and more enjoyable journeys. This is intrinsically linked to encouraging a shift to sustainable modes. It can also be achieved through integrating school transport facilities within the nearby community.
- **Travel demand management** to reduce the need for energy intensive travel modes and single occupancy trips by combining journeys that are travelling to towards a common area.
- **Implement feasible travel options** for students, staff and other users of the site and encourage travel options that will benefit their health and wellbeing.
- **Implement, monitor, evaluate and review measures** to assess the progress of the School Transport Plan.

#### 1.6 Consultation

The development of this Plan will be undertaken, where required, in consultation with relevant stakeholders outlined below:

- City of Sydney Council (CoS);
- Transport for New South Wales (TfNSW);
- School Operations; and
- New South Wales (NSW) Department of Education.

#### 1.7 Report Structure

The report will follow a general structure provided below:

- Section 2 School travel survey presents the travel modes used by the school prior to the relocation to the Temporary Accommodation in Wentworth Park. This section will provide an overview of the baseline mode share percentages achieved and outline where these can be improved through the School Transport Plan.
- Section 3 Infrastructure assessment will document the transport networks which surround the school. This will comprise of reviewing the local pedestrian and bicycle network, public transport services and the surrounding road network. This section includes infrastructure provided by the project.
- Section 4 Future travel analysis which consists of mode share targets defined through analysis of travel to FSPS using public or active transport methods for students, staff and visitors. This will include infrastructure provided by the project to promote the use of sustainable travel methods for students, staff and visitors who may travel to and from FSPS.
- Section 5 Transport strategies aim to educate and promote sustainable travel methods for school staff, students, parents and carers.
- Section 6 Management plan for the school includes the management plan for the operation of the school's arrival modes including buses and Kiss and Ride operational times
- Section 7 Governance of the plan will outline methods of governance for the School Transport Plan by the school leadership, staff, parents and students. Governance arrangements to report transport use and operations to TfNSW, bus operators and CoS.
- Section 8 Monitoring Strategies will include agreed data collection, re-evaluating, reviewing and monitoring measures adopted by FSPS to ensure targets from the School Transport Plan are achieved. This section will aim to ensure the School Transport Plan is an evolving strategy; although the objectives of the School Transport Plan will not change, specific targets or programs may need to be revised or strengthened over time.

#### 1.8 Conditions of Consent D23

This school transport plan responds specifically to Condition D23 of SSD-10340 with the relevant sections linked in Table 1 below.

#### Table 1: Conditions of consent

Condition D23 contents	Report Reference		
Prior to the commencement of operation, a School Transport Plan (STP), must be submitted to the satisfaction of the Planning Secretary. The plan must:			
(a) be prepared by a suitably qualified consultant in consultation with Council and TfNSW	Appendix A		
(b) include arrangements to promote the use of active and sustainable transport modes, including:			
(i) objectives and modes share targets (i.e. site and land use specific, measurable and achievable and timeframes for implementation);	2.1		
(ii) specific tools and actions to help achieve the objectives and mode share targets;	5.1, 5.2, 5.3		
(iii) details regarding the methodology and monitoring/review program to measure the effectiveness of the objectives and mode share targets, including the frequency of monitoring and the requirement for travel surveys to identify travel behaviours of users of the development;	8		
(c) include operational transport access management arrangements, inc	luding:		
(i) detailed pedestrian analysis including the identification of safe route options to identify the need for management measures such as staggered school start and finish times to ensure students and staff are able to access and leave the site in a safe and efficient manner during school start and finish;	3.1		
(ii) the location of all bicycle and scooter parking spaces on the site;	4.2.2		
(iii) location and operational management procedures of the marshalling of students to prepare for drop-off and pick-up, including measures to physically separate the drop-off and pick-up zone from play areas, such as bollards and/or retractable barrier fencing;	6.1, 6.4		
(iv) the location and operational management procedures of the drop- off and pick-up parking, including staff management/traffic controller arrangements;	6.1, 6.4		
(v) the location and operation management procedures of accessible drop-off and pick-up parking, including staff management/traffic controller arrangements, during and outside of drop-off and pick-up times;	6.1, 6.4		
(vi) management of conflicts of the drop-off and pick-up zone and cyclists;	6.1, 6.4		
(vii) the location and operational management procedures for the drop-off and pick-up of students by buses and coaches including staff management/traffic controller arrangements;	6.3		
(viii) delivery and services vehicle and bus access and management arrangements;	6.8, 6.9		
(ix) management of approved access arrangements;	6.1.3 and 6.4		

Condition D23 contents	Report Reference
(x) potential traffic impacts on surrounding road networks and mitigation measures to minimise impacts, including measures to mitigate queuing impacts associated with vehicles accessing drop-off and pick-up zones;	6.1.3
(xi) car parking arrangements and management associated with the proposed use of school facilities by community members; and	6.3
(d) measures to promote and support the implementation of the plan, including financial and human resource requirements, roles and responsibilities for relevant employees involved in the implementation of the plan; and	5.1
(e) a monitoring and review program.	8

# 2. School Travel Survey

A school travel survey was undertaken for students and staff of FSPS during the months of April to May 2019. The aim of the student survey was to understand existing travel behaviour and preferences to and from school, current activities students participate in after school and potential to change travel behaviours as a result of potential public transport alternatives such as light rail, bus, and train.

The student survey received 153 responses. The split consisted of Year K-2 (65, 42%) + siblings (20, 13%), Year 3-6 (68, 45%). Assumption has been made that siblings of K-2 students travel at the same time and with their mode split.

The staff survey was focussed on understanding travel behaviours to and from the school and the potential for staff to change from private vehicles to public transport and active modes of transport. The staff survey received 20 responses.

The surveys conducted in 2019 provide evidence of travel patterns before COVID-19 during the operations of the school. The surveys may not reflect the travel behaviour changes during the pandemic and temporary shifts between modes of transportations. However, the surveys from 2019 still provide a suitable baseline for the opening of the school at completion of the development.

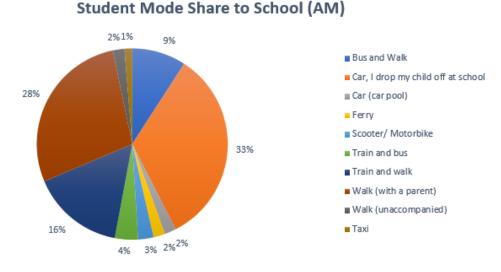
Monitoring and collating new data should be considering for updates of the school green travel plan (GTP) traffic management once the school users (students and staff) travel patterns have settled.

This section provides a summary of the existing mode shares of students and staff accessing the school and key findings from the travel survey. For more detailed analysis of the school travel survey refer to the FSPS Traffic and Transport Assessment (TTA) dated February 2020.

#### 2.1 Travel Mode

#### 2.1.1 Arrival

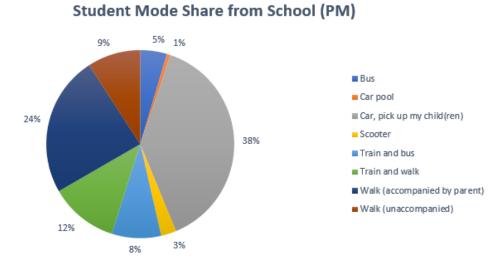
The arrival travel mode of students is shown in Figure 2. Car drop-off is the main mode share (33%), Walk with parent second most common (28%) and then catching the train (16%).





#### 2.1.2 Departure

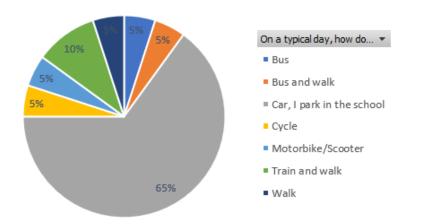
The departure travel mode of students is shown in Figure 3. Car pick-up is the main mode share (38%), Walk with parent second most common (24%) and then catching the train (12%).





#### 2.1.3 Staff Survey

There are currently 15 car parking spaces within the school grounds that are proposed to be removed. Staff travel characteristics are shown in Figure 4 and Table 2. It is noted that the staff currently travelling to and from the school by car would shift to alternative modes of transportation encouraged by the school.



#### Staff Mode Share

#### Figure 4: Staff mode of travel Table 2: Alternative mode if car not available

Alternative mode if car not available	Number	Percentage mode share
Car	4	23%
Bus	2	12%
Cycle	1	6%
Train and walk	6	35%
Light rail and walk	2	12%
Motorcycle/ scooter	1	6%

Alternative mode if car not available	Number	Percentage mode share
Walk only	1	6%
Total	17	100%

#### 2.2 Key Findings from Surveys

- Nearly half the student reportedly attended after school care some of this was located at the King George V recreational centre;
- Half of the students arrive between 8:40am-9:00am;
- Car drop off is the main mode share (33%), Walk with parent second most common (28%) and then catching the train (15%);
- Average car occupancy is 1.45 students mainly because of siblings, with limited regular carpooling occurring ;
- The most common reasons parents and students have identified why they choose not to walk or catch public transport are because the walking route is not safe, they need to be accompanied and the parent drives or they do not have convenient access to public transport;
- Preferred alternative ways to get to school included a dedicated school bus or walking with a group with friends;
- Car pick-up is the main mode share (38%), Walk with parent second most common (24%) and then catching the train (12%);
- Bad weather days don't significantly change travel patterns, as expected there are a few parents who will drop their child off instead of walking;
- Both students and parents identified that student opal travel pass would influence their travel; and
- Key additional comments are mainly regarding the cyclist issues (speed and lack of care given to pedestrians/ safety), lack of public transport options, bus stops should be closer to school, and the route 311 bus is unreliable.

# 3. Infrastructure Assessment

This section describes the infrastructure surrounding the school which includes active transport (walking and cycling), public transport and the wider road network.

#### 3.1 Active Transport Infrastructure

This section summarises the active transport infrastructure links to FSPS.

#### 3.1.1 SHB Cycleway Staging

The design of the Kiss and Ride area has been divided into two phases relating to the status of the future Sydney Harbour Bridge cycleway upgrade.

#### 3.1.2 Phase 1 – Temporary Arrangement

Phase 1 provides a temporary shared path diversion connecting into the existing shared ramp at the Western Distributor. In this phase, public access for cyclists and pedestrians are maintained via Upper Fort Street.

#### 3.1.3 Phase 2 – Final Configuration

Phase 2 of the cycleway upgrade will be upon completion of the new SHB Cycleway with all cyclist and pedestrian activity using the new facility. The delivery of this infrastructure will be critical in improving safe access to the school for students and staff as public access will be closed at the property boundary. Moreover, as pedestrians and cyclists are separated from Kiss and Ride operations, interaction points between private vehicles and public user groups are eliminated.

In consideration of this, it is recommended that the operation of Phase 1 be kept to a minimal with the NSW Government prioritising the delivery of the new SHB Cycleway.

#### 3.1.4 Pedestrian Network

The Cahill Expressway is a barrier to the pedestrian permeability of the school however there are several connections to the local street network as outlined below:

- Upper Fort Street has a footpath on the western side which enables access to the north east corner of the Site. This connects to footpaths in the Observatory Hill, Watsons Road and Argyle Street (Figure 5);
- A shared path connects to the south east corner of the Site via a pedestrian bridge over the Cahill Expressway allowing pedestrians to approach from the south (Figure 6); and
- The south west side is accessed via Kent Street using Agar Steps and walking along the footpath across observatory hill (Figure 7 and Figure 8).



Figure 5: Footpath on the western side of Upper Fort Street



Figure 6: Shared path overpass on the south-east side of the school



Figure 7: Bottom of Agar Steps



Figure 8: Top of Agar Steps

#### 3.1.5 Cycling Network

The school is relatively well connected to the City of Sydney cycling network, with a number of cycle routes surrounding the Site. An off-road shared path is provided along the western side of the Western Distributor linking to the shared path across the Sydney Harbour Bridge. Kent Street, Argyle Street and Upper Fort Street are all low traffic streets which are considered suitable for cycling. All these routes and a component of the wider City of Sydney cycling network are presented on Figure 9.



Figure 9: Local Cycling routes

#### 3.2 Active Transport Route Assessment

In order to understand route conditions along key walking and cycling routes to the school, the following four (4) routes were surveyed to determine existing pedestrian and cyclist amenities, wayfinding and accessibility provisions. These routes are displayed in Figure 10 below.

- Route 1 north via Millers Point;
- Route 2 east via Circular Quay;
- Route 3 south via Townhall and Wynyard Station; and
- Route 4 west via Pyrmont Bridge

Considering the routes are well connected to the CBD with the majority of intersections signalised, a review of the route conditions can highlight opportunities to implement additional wayfinding to better support access to the school.



#### Figure 10: Active transport routes assessed.

Table 3 summarises the travel times and distances for each of the routes with the subsequent section describing the route conditions. The average speed used to assess the travel time is 4.2km/h, which is a typical walking speed for primary school age children.

Route number	Distance to school	Travel time to school					
Walking							
1 – via Pyrmont	1.6km	21 minutes					
2 – via Townhall	1.4km	20 minutes					
3 – Via Circular Quay	1.1km	16 minutes					
4 – via Millers Point	0.8km	11 minutes					
Cycling							
1a – via Townhall	2.9km	11 minutes					
1b – via Townhall	1.7km	8 minutes					

#### 3.2.1 From Pyrmont Bridge (Route 1)

#### Sussex Street / Hickson Road

#### Pedestrian/cycling amenities

Intersections along this road are mainly signalised, with the exception of an unsignalised crossing at Sussex Street and Slip Street as shown in Figure 11. An unmarked crossing was observed on the western leg of this intersection. To avoid this crossing, pedestrians on this route should use the signalised crossing at the Sussex Street and Market Street intersection adjacent to Pyrmont Bridge to cross to the eastern kerb of Sussex Street, however as Slip Street is mainly a loading access with low traffic volumes expected, this is not likely to be an issue for walking to FSPS.



#### Figure 11: Missing crossing on the western leg of Sussex Street and Slip St intersection

A one-way southbound cycleway converts to a shared path along Hickson Road shown in Figure 12 The cycleway currently runs from Napoleon Street to the signalised crossing below Wynyard Walk.

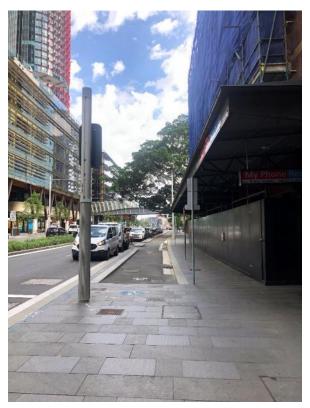


Figure 12: Dedicated one-way southbound cycleway connecting into a shared path along Hickson Road Wayfinding

Two information maps are provided along Sussex Street and Hickson Street guiding pedestrians to Barangaroo, Townhall Station and George Street as shown in Figure 13.

Fort Street Public School School Transport Plan

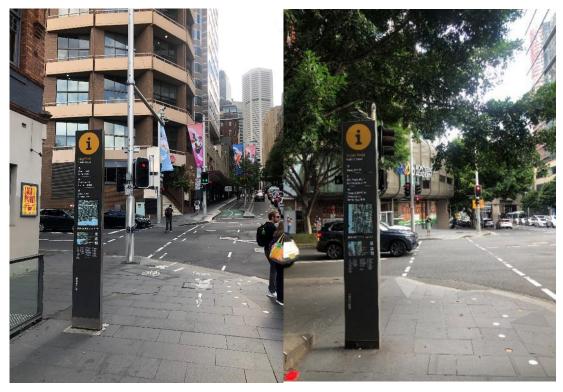


Figure 13: Wayfinding along Sussex Street at King Street (left) and Erskine Street (right) Accessibility

Access to Kent Street is provided by stairs from Hickson Street and an adjacent lift as shown in Figure 14. Students cycling or scooting can use the lifts to access Gas Lane. A steep grade was observed at Gas Lane just before connecting to Kent Street as shown in Figure 15 which may be a barrier to mobility impaired students/staff.



Figure 14: Stair (left) and lift (right) access from Hickson St to Kent St

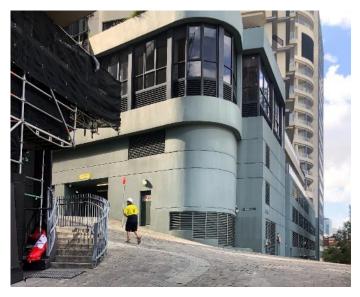


Figure 15: Steep incline at Gas Lane before Kent Street

#### Kent Street/ Agar Steps

#### Pedestrian/cycling amenities

Two pedestrian crossings are provided on Kent Street, one adjacent to Gas Lane and another adjacent to the Agar steps as shown in Figure 16. The crossing near the Agar steps is located on the northern leg of the Kent Street and High Street intersection. An unmarked crossing was observed at this intersection across High Street to connect northbound pedestrians on the western side of Kent Street to the pedestrian crossing. Student would need to wait for a clear gap on High Street before crossing the road. As an alternative, students would be required to cross at the pedestrian crossing near Gas Lane to travel on a continuous footpath to the school and avoid this unmarked crossing.



Figure 16: Kent Street crossing after Agar steps Wayfinding

A number of wayfinding signs are provided along various points on the Agar Steps to direct students to the school as shown in Figure 17.



Figure 17: Wayfinding along the Agar steps at the bottom (left) and mid-point (right) Accessibility

Students with mobility issues or travelling to school by scooting or cycling are recommended to use the shared path adjacent to the Western Distributor upon exit from Gas Lane to access the school.

#### **Observatory Hill**

#### Pedestrian/cycling amenities

A footpath provides a connection between the Agar steps and the turnaround to Sydney Observatory as displayed in Figure 18. This footpath discontinues east beyond this point, highlighting an opportunity to improve the walking route to the school as currently students will be required to walk on the grass verge or on the access roads.



Figure 18: Footpath between Agar Steps and Sydney Observatory (source: Google Maps) Wayfinding

An information map is provided near the entrance to Sydney Observatory to guide pedestrians through Observatory Park.



Figure 19: Observatory Hill wayfinding Accessibility

Observatory Hill is step free therefore appropriate for all users including scooters, bikes and people with mobility issues.

#### 3.2.2 From York Street (Route 2)

**York Street** 

#### Pedestrian/ cycling amenities

Intersections along this road are generally signalised. The signalised intersection between York Street and Harris Street and York Street and Erskine Street does not have a crossing provided on the southern side as this is not likely to be a major crossing movement due to the Wynyard Walk. However, as pedestrians will be accessing the underpass near the Western Distributor the predominant movements will be serviced by eastern and western crossings provided. Kerb ramps are present at each crossing legs and the footpaths are in good condition.

#### Wayfinding

Limited wayfinding to Observatory Hill along York Street for pedestrians travelling north – south. As the walk from Town Hall to Observatory Hill is 1.5km long, it is considered unlikely that pedestrians will require wayfinding signage directing them there. Due to the route being directly along York St until wayfinding signage outside Wynyard Station as shown in Figure 20 limited wayfinding should not be an issue.



Figure 20: Wayfinding near Wynyard Station entrance Accessibility

This route is step free therefore appropriate for any pedestrians with mobility issues.

#### **Underpass near Western Distributor**

#### Pedestrian/ cycling amenities

The underpass provides a connection between York Street and Kent Street near Observatory Tower. Pedestrians are provided with a wide footpath between the two access points.

#### Wayfinding

A directional sign is provided prior to the underpass exit to direct pedestrians to the Sydney Harbour Bridge as shown in Figure 21



Figure 21: Wayfinding at underpass directing to Sydney Harbour Bridge Accessibility

This route is step free therefore appropriate for any pedestrians with mobility issues.

#### Shared path adjacent to Western Distributor

#### Pedestrian/ cycling amenities

A shared path provides a connection between the underpass and a shared ramp to the north. Pedestrians accessing the school are provided a direct link via the shared ramp as shown in Figure 22.



Figure 22: Shared path connecting to ramp to the school Wayfinding

Limited wayfinding was provided as the path is generally used by local residents who are familiar with navigating to Observatory Hill.

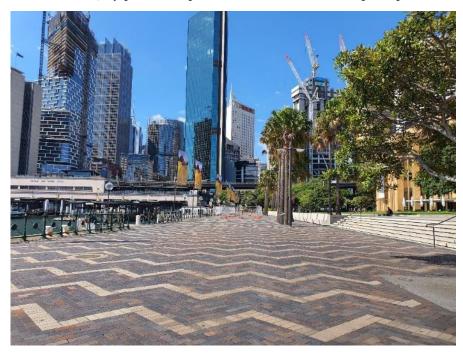
#### Accessibility

The footpath along this road is slightly sloping, with adequate spacing for pedestrians and cyclists to pass.

#### 3.2.3 From Circular Quay (Route 3) Circular Quay promenade/ Argyle Street

#### Pedestrian/cycling amenities

The Circular Quay precinct is pedestrianised with wide footpaths provided as shown in Figure 23.



#### Figure 23: Wide pedestrian precinct at Circular Quay

Most crossing opportunities between Circular Quay and along Argyle Street are unsignalised as this is area is generally pedestrianised. There is a crossing opportunity on the western leg of the Argyle Street and George Street intersection connecting the Circular Quay promenade to Argyle Street as shown in Figure 24.



Figure 24: Pedestrian crossing on the western leg of Argyle Street and George Street intersection Wayfinding

Wayfinding signage on Argyle Street is located on both the eastern and western kerb of the Watson Road and Argyle Street intersection to guide students to Observatory Hill. as shown in Figure 25



Figure 25: Wayfinding and information map on Argyle Street at the bottom of Watson Road Accessibility

The route along Argyle Street from Circular Quay is generally step-free up, with the exception of the steps to Watson Road, however students are able to use the alternative route via Watson Road and Argyle Street to access the shared path on Watson Road as aforementioned.

#### 3.2.4 From Dalgety Road (Route 4)

#### **Dalgety Road**

#### Pedestrian/cycling amenities

Dalgety Road has a generally wide footpath for walking. An on-road dedicated cycleway is provided on Dalgety Road which connects students to the school as shown in Figure 26



Figure 26: Wide footpath and on-road cycleway along Dalgety Road Wayfinding

There is limited wayfinding signage along Dalgety Road which is expected as the path is generally used by local residents who are familiar with navigating to Observatory Hill.

#### **Accessibility**

The footpath along Dalgety Road was observed to be slightly sloping as shown in Figure 27.

#### Watson Road

#### Pedestrian/cycling amenities

The road leading up to the school on Watson Road is shared between pedestrians and vehicles as shown in Figure 27.

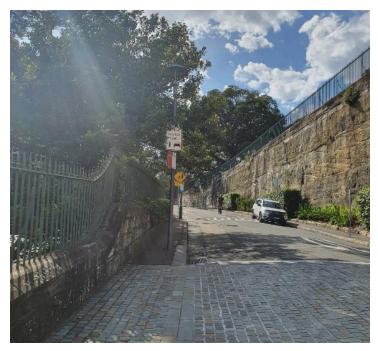


Figure 27: Shared pedestrian and vehicle path on Watson Road

#### Wayfinding

Wayfinding is provided at the Watson Road and Argyle Street intersection, directing students to the school as shown in Figure 28.



Figure 28: Wayfinding at the bottom of Watson Road Accessibility

Students are able to use the steps provided on Argyle Street as an alternative option to access Watson Road from Argyle Street as shown in Figure 29 located further east of the Argyle Street, Watson Road intersection. However, students with mobility issues or scooting and cycling to school are recommended to access the school via the Watson Road and Argyle Street intersection.

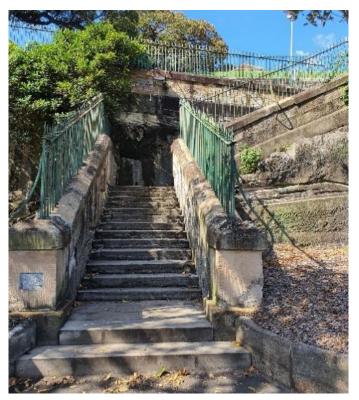


Figure 29: Steps connecting Argyle Street to Watson Road

#### 3.2.5 Summary of Active Transport Routes

The infrastructure assessment above indicates that generally pedestrian and cycling amenities within the CBD area are well provisioned. As stated previously, provision of additional wayfinding or amendments to existing wayfinding at a number of locations along the key routes could greatly assist students navigating to the school via walking and cycling. Figure 30 displays the location of existing wayfinding, amendments proposed for a number of existing wayfinding and new locations. The changes proposed are outlined below:

- Amendment to existing wayfinding signage located at The Bond near Hickson Road to include FSPS; and
- Amendment to existing wayfinding signage located at the exit of the underpass outlined in Section 3.2.2to include FSPS in order to direct cyclists to the shared path adjacent to the Western Distributor which connects into the shared ramp and school.

It should be noted that these recommendations may be discussed in consultation with Council to obtain their support, with the intention that Council updates their wayfinding and signage plans to incorporate the changes outlined for FSPS.

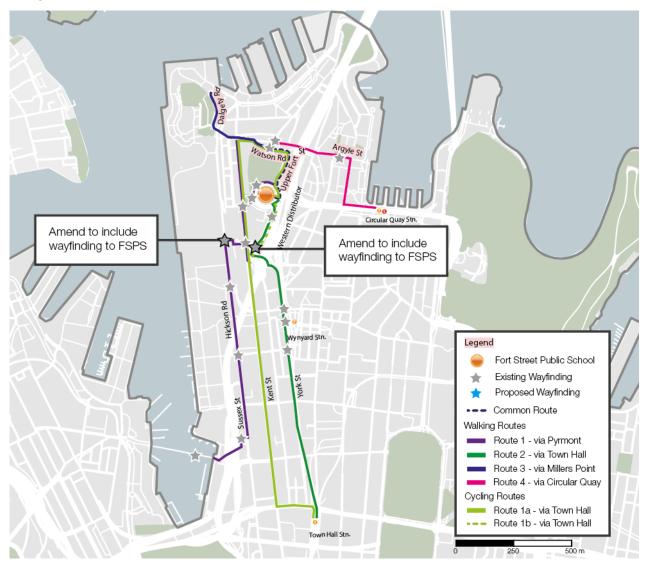


Figure 30: Locations of existing and proposed wayfinding based on infrastructure assessment

#### 3.3 Public Transport

The site is in direct proximity to various transport modes – including primarily light rail, train stations, bus and ferry options exist in an approximate 20-minute walking travel catchment. The distribution of public transport services is illustrated in Figure 31.



Figure 31: Public transport services around Fort Street Public School

#### 3.3.1 Bus Network

The primary existing public bus route which services FSPS is route 311. The route connects Millers Point and Railway Square via Potts Point with services running approximately every 30 minutes. The closest stop is located on the eastern kerb of Argyle Street near its intersection with Watson Road.

#### 3.3.2 Rail Network

The school is located a within an approximately 10 - 15 minute walking distance from Wynyard and Circular Quay station respectively. The railway stations provide access to the T1, T2, T3, T4, T8 and T9 rail lines. Services are fairly high frequency in both directions with short headway periods.

#### 3.3.3 Light Rail Network

The school is located within walking distance of several light rail stops as part of the Central South East Light Rail (CSELR) route which includes the L2 Randwick Line and L3 Kingsford Line. Circular Quay, Bridge Street and Wynyard light rail stops are all located within a 10 - 15 minute walking distance from the school.

The Pyrmont Bay light rail stop serves the L1 Dulwich Hill Line and is located within an approximately 30minute walk from the school.

#### 3.3.4 Ferry Network

The main ferry terminus at Circular Quay is located within walking distance of the school (approximately 10 minutes). The services connect Manly, Taronga Zoo, Neutral Bay and Double Bay and services traveling west along Parramatta River.

#### 3.3.5 Future Public Transport – Sydney Metro

The Sydney Metro City & Southwest (SMCSW) project is comprised of a 30-kilometre metro rail line that extends the existing Metro Northwest Line from Chatswood, under Sydney Harbour, passing through new Sydney CBD stations, before heading southwest towards Bankstown.

Anticipated to commence operations in 2024, this project will introduce new metro stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street and Waterloo, as well as underground metro platforms at Central Station. Metro trains are expected to run at least every four minutes during peak periods. Barangaroo Station will be located underground at the northern end of Hickson Road, south of Munn Street, in Millers Point.

The introduction of the Barangaroo Metro Station will improve public transport access by providing a highly accessible, high-capacity alternative to Wynyard Station and Circular Quay. It will direct access to key strategic centres such as Bankstown, Waterloo, North Sydney, Crows Nest and Macquarie Park.

In the future, students will have the opportunity to use the Sydney Metro City & Southwest metro line to access Barangaroo Station and walk to school. The station will be located beneath the northern end of Hickson Road, south of Munn Street in Millers Point. Students using the station will be accessing the school from the west via Hickson Road and Argyle Street which connects into Watson Road and Upper Fort Street.

#### 3.4 Road Network

The school is bordered by the Cahill Expressway to the north and west and Upper Fort Street to the east and south. Upper Fort Street provides the only vehicular access to the school. Vehicles approaching from the south would use Kent Street and Argyle Street as the main access route. The route from the north is more complex with vehicles needing to turn off the Western Distributor onto Grosvenor Street and use Harrington Street to connect to Argyle Street. The surrounding roads are all local roads except for the Cahill Expressway which is a state road. The road network surrounding the school is presented on Figure 32.

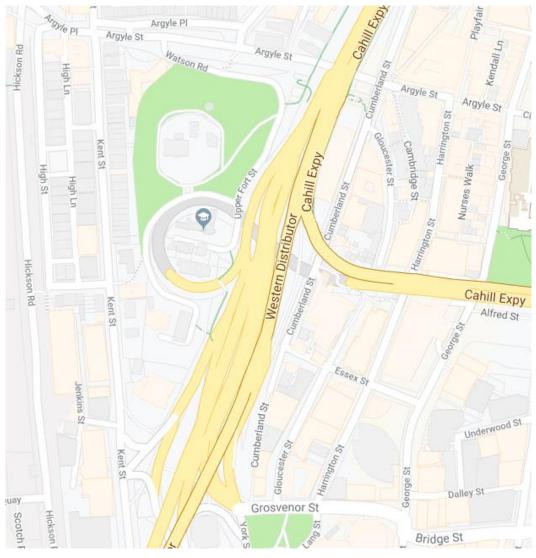


Figure 32: Road Network surrounding the site

#### 3.4.1 Kent Street

There are 4 car parking spaces in Kent Street adjacent to the tennis courts (and hence not in front of private residences) which are accessible via the Agar Steps. There would be issue with using these for school pick-up:

- Only providing for 4 cars limits the ability for proper operation. Cars will queue and wait in the traffic lane blocking southbound traffic.
- Council are reluctant to lose resident permit holder spaces due to high resident demand for car parking
- =Cars may wait in the taxi zone or 5 minute parking zone in front of the Langham Hotel opposite.



Figure 33: 4 parking spaces in front of tennis courts on Kent Street



Figure 34: 2P parking restriction with permit holders accepted

#### 3.4.2 Argyle Street

Along Argyle Street there is a No Stopping zone along the southern kerb associated with the pedestrian crossing and beyond this a bus zone as shown in Figure 35. The northern kerb provides 2P parking (resident permit holders excepted).

Similar issues to those identified for Kent Street would exist however if use of Argyle Street was considered for formal school use:

- Only a limited number of spaces could be provided which limits the ability for proper operation. Cars would queue and wait in the traffic lane blocking westbound traffic.
- Council are reluctant to lose permit holder spaces due to high resident demand for car parking



Figure 35: Argyle Street southern kerb

# 4. Future Travel Analysis

#### 4.1 Methodology

Planning for FSPS is based on the principle of achieving the objectives as outlined in Section 1.5 which looks to promote greater public and active transport usage. Key findings from the school travel surveys have indicated demand and willingness from students and parents to walk to school if a walking group is provided or by bus if a school bus is provided. This indicates potential to achieve higher public and active transport mode share for the school and has been the basis for the targeted mode share informing the future travel demand.

Catchment analysis of future student enrolments was also carried out for the purpose of supplementing travel demand mode share targets. By analysing potential students' proximity to the school, the proportion of students living within feasible walking distance or within bus catchments can be generated and compared to the mode share.

The catchment analysis also aims to inform locations where students are beyond walking distances, without access to current public transport services and are likely to be driven to school.

#### 4.1.1 School Population

The ultimate capacity for the school consists of a population of 550 students. The future student split across the school years has been based on the student split from the school travel survey undertaken as outlined in Table 4 and Table 5. This makes the same allowance for siblings of the junior years as they often dictate the travel mode.

Year	K-2	+ siblings	3-6	Total
Number	6	20	68	152
Percentage	42%	13%	45%	100%

#### Table 4: Existing student split across school years

#### Table 5: Future student split across school years

Year	K-2	+ siblings	3-6	Total
Number	231	72	247	550
Percentage	42%	13%	45%	100%

#### 4.1.2 Staff Population

The forecasted staff population has been based on a ratio of 1 staff for every 15 students. At ultimate capacity, 37 staff are expected at the school.

#### 4.1.3 Travel Demand

#### 4.1.3.1 Student Mode Share

The TTA prepared by Arup provided a summary of student travel modes and numbers for pick-up and dropoff based on no change from existing mode choice provided in the school travel survey as shown in Table 6 and Table 8. Furthermore, the TTA also proposed a 25% reduction in car mode share targeted through the Green Travel Plan (GTP) resulting in a reduction in car pick-up and drop-off mode as shown in Table 7 and Table 9.

#### Table 6: Future student travel (drop-off) based on existing mode share

Drop-off mode in peak hour	K – 2+ Siblings		3 - 6		Total
	%	Number	%	Number	
OOSH before	-	25	-	15	40
Car/Taxi	36%	100	32%	74	174
Walk	28%	78	32%	74	152
Public transport	36%	100	36%	84	184
Total	100%	303	100%	247	550

#### Table 7: Future student travel (drop-off) based on mode shift to public transport

Drop-off mode in peak hour	K – 2+ Siblings		3 - 6		Total
	%	Number	%	Number	
Car/Taxi	28%	85	24%	59	144
Walk	28%	85	32%	79	164
Public transport	44%	133	44%	109	242
Total	100%	303	100%	247	550

#### Table 8: Future student travel (pick-up) based on existing mode share

Drop-off mode in peak hour	K – 2+ Siblings		3 - 6		Total
	%	Number	%	Number	
OOSH before	-	180	-	70	250
Car/Taxi	40%	49	38%	67	116
Walk	30%	37	37%	65	102
Public transport	30%	37	25%	45	82
Total	100%	303	100%	247	550

#### Table 9: Future student travel (pick-up) based on mode shift to public transport

Drop-off mode in peak hour	K – 2+ Siblings		3 - 6		Total
	%	Number	%	Number	
Car/Taxi	30%	91	28%	69	160
Walk	30%	91	37%	91	182
Public transport	40%	121	35%	87	208
Total	100%	303	100%	247	550

As the pick-up and drop-off scenarios with a 25% mode shift to public transport (Table 7 and Table 9) display a similar mode shift and associated student numbers, an average was taken across the two scenarios to determine a future student mode shift which considers both pick-up and drop-off as displayed in Table 10 below.

Drop-off mode in peak hour	K – 2+ Siblings		3 - 6		Total
	%	Number	%	Number	
Car/Taxi	29%	88	26%	64	152
Walk	29%	88	34.5%	85	173
Public transport	42%	127	39.5%	98	225
Total	100%	303	100%	247	550

 Table 10: Average future student travel based on mode shift to public transport

As outlined previously in Section 1.3, the school is expected to reach ultimate capacity by the 10th year. The mode share targets outlined above have been developed for the ultimate capacity and therefore it is recommended that the transport strategies be staged using a 0-5 year and a 5-10 year horizon to suit the growth of the School.

## 4.1.3.2 Staff Mode Share

As outlined in Section 2.1.3, 65% of staff survey respondents indicated that they access the school by car. Given that the school has not proposed parking onsite, staff will be required to make alternative arrangements such as using public transport and active transport (walking and cycling), which will be supported by the provision of end of trip facilities at the school. Staff can also be dropped off using the turnaround outside the entrance of the Sydney Observatory before school starts.'

As a result of eliminating the provision of carpark spaces within the school, a 65% reduction in car mode share targeted for staff is achieved.

## 4.1.4 Catchment Analysis Methodology

Locations of Expressions of Interest (EOIs) for student enrolment were received from SINSW and analysed to understand the distribution of students around the school. It should be noted that only students living within the enrolment catchment were considered as part of this assessment based on the intention of the school to enrol within this catchment in the future. The analysis included identifying any clusters of students living within walking distance to the school, which has been defined as within a 20-minute/ 1.6km walk from the school and students living within the free travel zone which is applicable for students living more than 2.3km walking distance from the school.

## 4.1.5 Student Travel Discounts

School student travel discounts were considered in the catchment analysis. TfNSW grants students free travel on the public transport network to and from school through the School Student Transport Scheme (SSTS). Eligibility for free travel depends on the student residential location. For primary students, free travel is granted for those living more than 2.3km walking distance from the school.

Students who live too close to the school to qualify for free travel may be granted a School Term pass which allows for discounted public transport travel.

# 4.2 Walking and Cycling Catchment Analysis

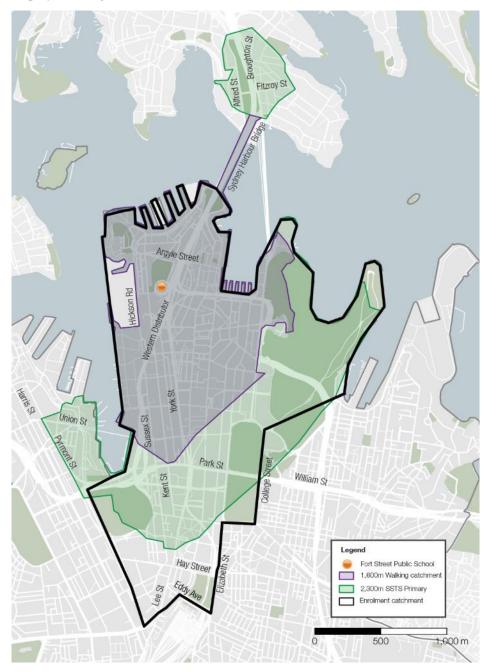
Walking catchment analysis was completed on the expression of interest data and applied to the current school catchment. Assumptions for the walking analysis are as follows:

• All streets within 400m of the school are included as part of the walking network;

- Beyond 400m, only sections of streets which have footpaths on either side are considered part of the walking network;
- The SSTS grants free travel to school via public transport for primary students living further than 2.3km walking distance from school;
- This transport plan takes into consideration a more conservative and realistic walking distance of 20 minutes/1.6km to be the maximum most students would likely to walk from home to school, before potentially considering using other modes.

#### 4.2.1 Catchment Analysis Findings

1.6km (approximately 20-minute) and 2.3km are considered to be acceptable walking distances for students travelling to / from the school. Buffer zones have been identified and used for walking catchment analysis as displayed in Figure 36.





The catchment analysis results in Table 11 indicate that in general, approximately 40% of students are within a 20-minutes' distance of the school. This indicates the potential to further increase the walking and cycling

mode share when compared to the future walking mode share proposed in Section 4.1.3(31%). Furthermore, it stresses the importance of the School Transport Plan in being the key driver in fulfilling the proposed mode shift and the need for the school and parents to be advocators for active travel as a healthy and preferred way of traveling to school. Ways to promote sustainable travel as well as communicate the health benefits of walking are expanded on in Section 5.1.

#### Table 11: Walking catchment analysis results

Extents	Students	
% within walking access (numbers are cumulative)		
400m (5-min walk, cycle or scoot)	0	
800m (10-min walk, cycle or scoot)	20%	
1200m (15-min walk, cycle or scoot)	29%	
1600m (20-min walk, cycle or scoot)	39%	
2300m (SSTS exclusion zone)	88%	

## 4.2.2 End-of -trip Facilities

End-of-trip facilities (EoT) provided for the new school, up to 32 student bicycle parking and 30 scooter bays within the school grounds. For staff, 8 bicycle parking spaces and access to dedicated shower and locker facilities. As the school grows there is the potential to provide an additional 20 scooter bays and 32 bicycle parking.

The bicycle parking provision for students and staff is strategically located within the school in secured areas and of easy access. The bicycle parking provision also considered reducing any impacts obstructing walkways and play areas.

Locations of the EoT facilities, bicycle parking and future scooter parking for opening day and future provisions are displayed in Figure 37.

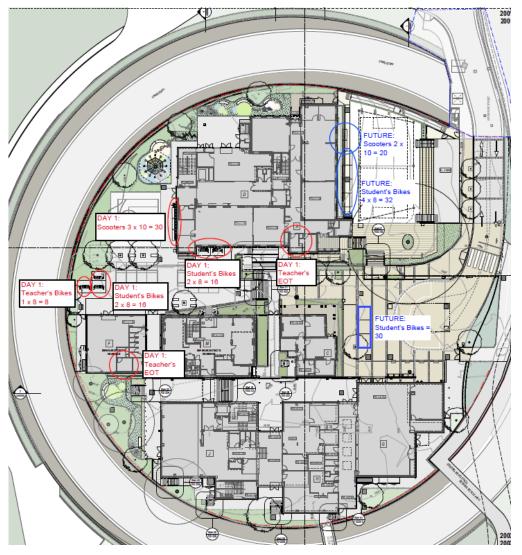


Figure 37: Location of EoT facilitis (opening day and future)

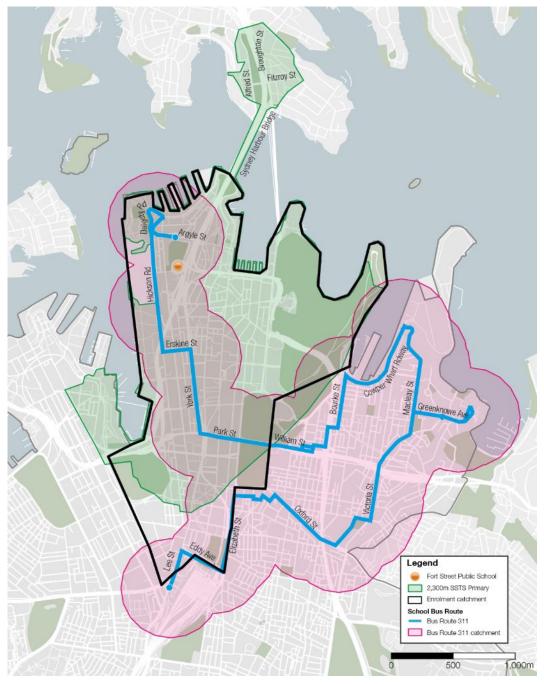
# 4.3 Public Transport Analysis

The public transport analysis captures students living outside of a walking distance to the school and therefore are likely to be using public transport as a means of travel. Understanding the quantum of students living within walking distance to a public transport stop and eligible for free travel is important in establishing future travel demands as these students can be targeted by the school transport plan, boosting public transport usage whilst lowering travel costs for parents associated with private car usage.

A 400m catchment from the public bus (route 311), light rail stops, and railway stations have been considered as part of the walking network. This transport plan takes into consideration a more conservative and realistic walking distance of 400m to be the maximum most students would likely to walk from home to a public transport stop before potentially considering using other modes.

## 4.3.1 Public Bus

The existing public transport coverage was also mapped to gain an understanding of the level of public transport coverage offered within the school enrolment catchment. Bus stops on the current Route 311 (outbound) were mapped and future enrolment EOIs which were within 400m of these bus stops were counted. The outbound route was assessed as part of the Plan instead of the inbound route (which has a slightly different route and stopping pattern) which was determined as the worst case for this highest potential bus loads. This is due to the fact that students would typically depart around the same time in the afternoon compared to staggered arrival in the morning. Figure 38 displays the existing Route 311 bus coverage in blue and the 20-minute walking catchment in orange.



#### Figure 38: Bus route 311 (outbound) coverage with 2.3km SSTS extents

Table 12 provides a breakdown of the catchment analysis relating to public bus access. It has been assumed that students who are within the 20-minute walking distance will choose to walk and therefore are not included as bus users. The results shows that approximately half of the students (49%) live within 400m of a bus stop, however, most of these students are within the SSTS exclusion zone. Of those eligible for free travel, only a proportion (11% of total students analysed) are located within the Route 311 catchment and are able to conveniently travel to school via bus.

#### Table 12: Route 311 bus stop catchment results

Extents	Students
Within 400m access to route 311 bus stop	49%
Within 400m access to bus route 311 and beyond 2.3km SSTS extents	11%

#### 4.3.2 School Bus

The school enrolment data was used to understand in which areas students were located and whether there was a need to provide a school bus. Provision of a school bus would be dependent on the number of students living within or nearby the school catchment but outside of the 2.3km SSTS exclusion zone and therefore eligible for free travel.

As stated previously, a high proportion of students (88%) are concentrated within the 2.3km SSTS exclusion zone and therefore, travel via a school bus would be difficult without application for a concession.

A number of clusters eligible for free travel were highlighted on the southern side of Goulburn Street near Townhall and in Pyrmont, accounting for a 11% proportion of total students. Provision of a bus service via Central Station which was identified as the location requiring the least amount of transfers via Pyrmont and in a walkable distance from Goulburn Street can provide these students an additional sustainable transport option for accessing the school. However, it should be noted that numerous public transport options are already available and within walking distance to the clusters including light rail, Central Station and Museum Station and therefore provision of a school bus is likely to not provide a significant amount of additional benefits.

#### 4.3.3 Light Rail

As discussed in Section 3.3.3, public transport options to the school include the Dulwich Hill Light Rail (L1) and CSELR (L2 and L3 Line). A 400m catchment (approximately 5-minute walk) is considered to be an acceptable walking distance for students accessing a light rail stop and therefore was used for the light rail catchment analysis as displayed in Figure 39.

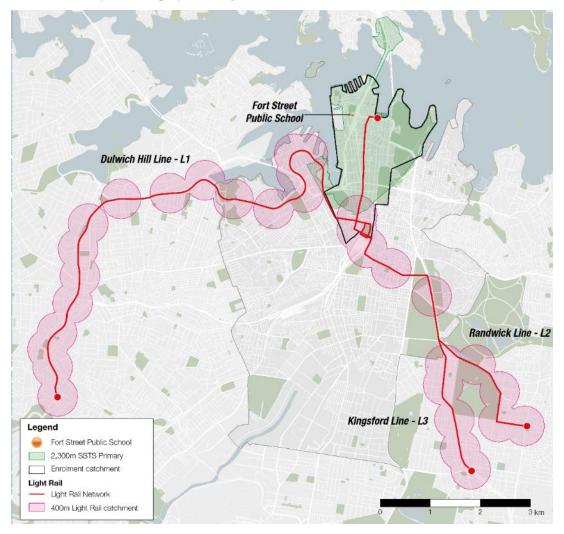


Figure 39: Light Rail Catchment

The light rail catchment analysis results in Table 13 indicates that in general, a significant proportion of students are within walking distance to a light rail stop; 61% of students are within a 5-minutes' walk of the light rail network. Furthermore, 12% of students have access to free travel through the light rail network as they are also located beyond the SSTS 2.3km zone.

 Table 13: Light rail catchment analysis results

Extents	Students
Within 400m access to the light rail network	61%
Students within the light rail catchment and beyond 2.3km SSTS extent	12%

## 4.3.4 Train and Metro

Similar to the light rail analysis, a 400m (approximately 5-minute) was used for the train and future metro catchment analysis.

The catchment analysis results in Table 14 indicates that 22% of students are within a 5-minutes' walk of the rail network. From the total students analysed, 5% of students have access to free travel via rail.

Table 14: Rail catchment analysis results

Extents	Students
Within 400m access to the rail network	22%
Students within the rail catchment but beyond 2.3km	5%

# 4.4 Off-street parking facilities

Staff encouraged to use alternative modes of transport to access the school. However, should they still wish to drive, they may park at the nearby public car park. The school may organise an internal car-pool scheme where staff can share the cost of parking by connecting staff with similar postcodes to reduce the amount of car travel.

EoT facilities will be provided on the school premises in order to support staff travelling to and from site via the alternative modes of transport.

# 4.5 Catchment Summary

There is a need to assess whether public transport operators and the walking network will provide a greater mode shift towards sustainable modes of travel in line with achieving a lower car mode-share. The coverage of the existing bus route 311, rail, light rail, future metro and active travel network were analysed in order to determine whether students had access and could travel to school via these modes.

Table 15 summarises the mode share targets approved as part of the SSDA and the mode share based on the catchment analysis, which represents stretch mode share targets. From this, travel demand targets have been developed, which form the basis for the transport strategies developed.

The travel demand targets for active transport uses the higher active transport mode share from the catchment analysis, being around 40% of students may be within walking distance (1.6km) to school. For public transport, it has been assumed that 50% of students within the SSTS exclusion may still travel using public transport with the remaining being driven to school. This would mean 36% of students may use public transport with 25% of students being driven.

Catchment analysis shows that 99% of students are likely to have access to at least one sustainable mode of transport. This indicates there is there is sufficient potential to meet targets of lower car mode share and the role of the transport strategies may be used to encourage travel by these modes.

#### Table 15: Summary and comparison of catchment analysis

Catchment Analysis		SSDA Travel Demand	Travel Demand Targets	
Catchment Boundary	Catchment Results	Mode share target	Mode of travel	Mode share target
Students within 20-min walk/cycle/scoot	39%	31%	Active Transport	39%
Students with access to free public transport under SSTS (train, light rail, bus)	12%	41%	Public Transport	36%
Students with access to public transport within SSTS exclusion zone (train, light rail, metro, bus)	49%			
Remaining (assume drive)*	0%	28%	Car	25%
Total	100%	100%	All	100%

\*assumes that 50% will take the paid option for public transport

# 4.6 User Group Movements

As the catchment results are reflective of stretch mode share targets, Figure 40 was developed to demonstrate the movement patterns and associated proportional split of students accessing the school from the north (Watson Road and Upper Fort Street) and the south via the SHB shared path. It should be noted that this map represents students who live within the enrolment catchment and includes students both eligible and ineligible for free public transport under the SSTS.

A large proportion of students are shown to be accessing the school from the north as a result of students travelling from Circular Quay Station and the bus stop on Argyle Street (Route 311). When excluding the students within a 20-minute walking distance, 100% of the remaining students are within a 5-minute walk of a light rail stop, 36% are within walking distance of a train or metro station and 80% are within a walking distance of a Route 311 bus stop. It is likely that students will prefer using rail options over bus and walking based on travel survey results outlined in Section 2 meaning that bus use will likely be low as students are generally within a rail or light rail stop.

Table 16 displays the split of students for each mode share based on the opening school population (241 students) and ultimate capacity (550 students).

Mode of Travel	Opening Capacity (241 students)	Ultimate
Students within 20-min walk/cycle/scoot	94	215
Students with access to free public transport under SSTS (train, light rail, bus)	30	68
Students with access to public transport within SSTS exclusion zone (train, light rail, metro, bus)	117	267
Total	241	550

#### Table 16: Mode share split for opening and ultimate capacity

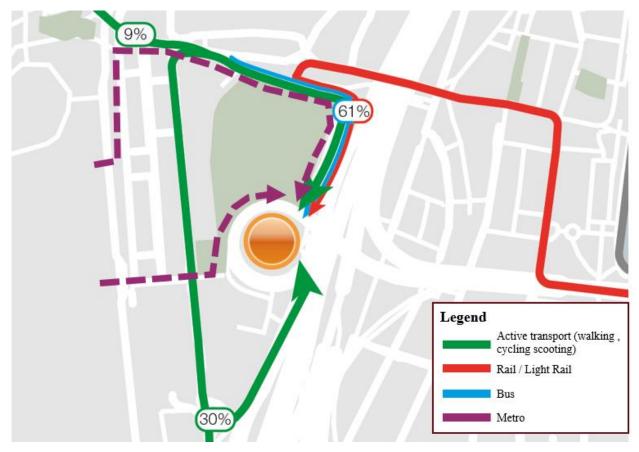


Figure 40: Proportional split of mode share by active transport, bus and rail options

# 5. Short / Medium-term Transport Strategies

Through consultation with SINSW and FSPS school executive, the following short / medium-term transport strategies have been identified and developed with the aim of maximising the target mode for active and sustainable travel to the school. Recommended timeframes for implementation and revisions are provided in Section 8 – School Transport Plan Monitoring.

These measures are proposed to be staged in line with the growth of the school as outlined in Section 4.1.3 and in relation to Phase 1 and Phase 2. Near term strategies (0-5 year horizon) are identified in Table 17 with future strategies (5-10 year horizon) displayed in Table 18.

Transport strategy	Target mode	Phase 1	Phase 2	Responsibility
Encourage new students to walk, cycle, scooter or use public transport when travelling to/from school during orientation periods.	Walk, Cycle, Bus	Organising material outlining active transport routes to school and provide relevant resources from TfNSW	Review material and uptake of active transport for new students after one term	FSPS
Promote Walk to school day and Ride2School day	Walk, Cycle	Raise awareness of the events and potential health and wellbeing benefits leading up to the day.	Review student participation in the event yearly	FSPS
Organise bike and scooter education, run a bicycle use, maintenance and safety training program with students.	Cycle	Organise suited to primary school students	Review performance of bike and scooter education based on general feedback from students and support an increase uptake in cycling	FSPS
Carpooling where the school raises awareness of reputable services for parents to organise	Car	Carpooling occurs organically over time between parents	Carpooling occurs organically over time between parents	Parents
Bus pooling to pair students for bus travel, where the parents are able to facilitate these connections	Bus	To occur organically over time between parents	To occur organically over time between parents	Parents
Students buddy up to sustainably travel.	Walk, Cycle, Bus	To occur organically over time between parents	To occur organically over time between parents	Parents
Walking school bus that runs along planned walking routes at set times	Walk	To occur organically over time between parents	To occur organically over time between parents	Parents
Wayfinding upgrades on key routes	Walk, Cycle	Liaise with council to implement new wayfinding signage specific to FSPS	Review location of the signage	City of Sydney Council.

Table 17: Summary of 0	- 5 year horizon (short	term) transport strategies	s which may be considered

Transport strategy	Target mode	Phase 1	Phase 2	Responsibility
Articles on school Enews app to include travel tips for students	Walk, Cycle, Bus	Organise transport information to be included on the app	Review relevance of information and determine additional information students and parents may want to be informed on	FSPS
Staff organised carpooling system to nearby paid parking carparks	Car	To occur organically over time between staff	To occur organically over time between staff	Staff
Provision of end of trip facilities at the school	Cycle	For students, include locations of bike/ scooter racks in orientation material. For staff, this will also include shower and locker facilities.	Review and monitoring cycling provisions and continue to support demand.	FSPS

#### Table 18: Summary of possible future strategies (5 - 10 year horizon) medium-term

Transport strategy	Target mode	Responsibility
Bike and scooter education and tracking using a tool like RideScore, a third party run program which tracks student bicycle trips, sending arrival and departure information to parents	Cycle	FSPS

# 5.1 Promote Walking and Cycling

The School Transport Plan aims to promote sustainable and active travel to and from FSPS within a reasonable distance. Measures which promote sustainable and independent travel for students can result in healthier lifestyles. The programs identified within this section are encouraged to be promoted by parents and carers.

With Observatory Hill located immediately outside of FSPS, it has been identified to be a key potential recreational activities attractor for students outside of school times. Strategies to promote independent travel for students along with potential methods are described in the following sections.

## 5.1.1 Encourage Students to participate in Walk and Ride to School Programs

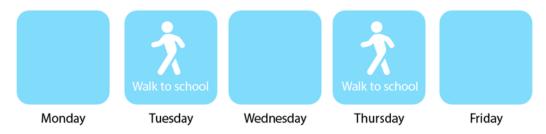
FSPS may encourage students to participate in annual school events such as 'Walk Safely to School Day' and 'Ride2School'. The school website news and events feed will advertise the dates of these annual school events three – four weeks prior to ensure students are aware. Dates for nationwide events such as Walk Safely to School Day and Ride2School alternate throughout the year and are provided on official webpages.

The school may register with 'Walk Safely to School Day' to obtain a kit which contains stickers, posters and flyers which can be distributed throughout the school. The link to register is located at: <a href="https://www.walk.com.au/WSTSD/register-for-publicity.asp">https://www.walk.com.au/WSTSD/register-for-publicity.asp</a>.

To ensure students are aware of the benefits of cycling, FSPS could provide bike education programs lead by external coordinators. Bicycle Network is Australia's biggest bike riding organisation which provide bike education programs to schools. FSPS could enquire about education programs. Enquiry information is available at <a href="https://www.bicyclenetwork.com.au/rides-and-events/ride2school/programs/bike-education/">https://www.bicyclenetwork.com.au/rides-and-events/ride2school/programs/bike-education/</a>.

## 5.1.2 Advocate Weekly Walking or Cycling Plans

This aims to encourage students to walk or cycle to school one day a week to reduce car pollution and to improve health and fitness. The School would set up a program where students are provided with a week plan and are given the task to nominate one day a week for walking or cycling to school. An example of a potential weekly plan is provided below.



#### Figure 41: Potential weekly 'walk to school' day plan

Students will then be encouraged to take the plan home to discuss with their families. The plan should be placed in a prominent place at home to remind students and family members of the plan. Reminders on digital devices or personal phone calendars should be set up to further encourage students to align with the scheduled plan. Information of this activity should be sent to parents to explain the aim and objective of the activity.

#### 5.1.3 Develop a 'Travel with a buddy' Program for Students

Parents will be introduced to a safe forum where other parents can coordinate a travel buddy. Parents could potentially pair up existing students who regularly walk, cycle or travel to school independently with students from different school levels or the same class. It is encouraged that students should be paired up with other students who live nearby each other. Parents would be able to coordinate this through social groups.

#### 5.1.4 Run Step Count Challenges in the Classroom

In a step count challenge, students (and teachers) wear a pedometer to measure the number of steps taken throughout the day. Experience from Victoria Walks suggests that students enjoy wearing and using a pedometer and that a classroom-led program can encourage many students to rise to the challenge of increasing their step counts.

Classroom activities centre around allowing students to identify ideas for increasing and incorporate more walking and daily activity in their lives. Students also develop skills in recording, interpreting and analysing data through classroom activities.

These could be combined with home-based activities that encourage parents and children to walk around local streets completing simple challenges.

Further information can be found at https://www.victoriawalks.org.au/school.

#### 5.1.5 Facilitate a Walking School Bus Program

A Walking School Bus is a school bus with legs. It is a group of students who walk to and from FSPS along a set route whilst being accompanied with an adult 'driver' in the front and an adult 'conductor' at the rear. The size of the bus is dependent on the number of accompanying adults, with a maximum of 10 students per adult. It is recommended that parents / carers involved within the walking school bus program should be volunteers and organise this amongst themselves. They should also be encouraged to undertake regular reviews of the program and assess the ongoing stability, safety and risk management of the program.

The decision to implement this walking strategy should be made at a local school level in consultation with the schools Parents and Citizens (P&C) as a number of concerns should be considered before implementing the program.

The school could potentially liaise and require liaising with the Department of Education Road Safety Officer on recruiting suitable personnel to run the walking school bus program. Routes and stops would be identified based on the enrolment data received.

## 5.1.6 Advertise Cycling and Walking Events

Advertisements for events such as 'Walk Safely to School Day' or 'Ride2School' days will be promoted via emails, school website News and Events page or school notice boards. As outlined above, if the school registers with Walk Safely to School Day, advertisement material can be provided. To register, the school must fill in the provided form at <u>https://www.walk.com.au/WSTSD/register-for-publicity.asp</u>. Advertisement resources for Ride2School are also provided by Bicycle Network at

<u>https://www.bicyclenetwork.com.au/rides-and-events/ride2school/ride2school-day/</u>. FSPS could utilise the templates provided by Bicycle Network. Classroom activities would be organised by teachers under the direction of the school executive.



Resources

Figure 42: Ride2School Day resources (Source: Ride2School Day, 2020)

# 5.1.7 Upgrade Walking and Bicycle Infrastructure

School Infrastructure NSW, in consultation with FSPS to collaborate with TfNSW and other government agencies to provide and implement more walkable and cycle friendly routes around the site.

The school could engage with CoS to assist in improving access to the school such as the provision of additional wayfinding as outlined in Section 3.2.5. Furthermore, with the vision of providing a more sustainable transport network, this could aim to meet the needs of the school's travel demand and active transport targets. Group meetings with members of the Council, TfNSW and FSPS could include discussions on monitoring the Plan and potential issues to devise future actions to further promote the Plan.

The school, School Infrastructure and the Council will meet as required during the earlier establishing period and afterwards the parties can agree on a reasonable consultation strategy. These meetings should be framed to discuss Kiss and Ride facilities, cycling and walking to school.

# 5.2 Promote the Use of Public Transport

The surrounding public transport network has improved significantly, particularly with the school shuttle bus service. School students, staff, parents and carers should be encouraged to utilised public transport networks when travelling to and from school as it is more sustainable. Through providing a multiplicity of travel options, school students and staff may reconsider travel methods and switch from trips taken by car to other modes of transportation which are more sustainable.

## 5.2.1 Develop a Transport Access Guide

To encourage school staff, students, teachers and carers and visitors to use active or public transport options, a Travel Access Guide (TAG) has been developed. It is designated to lead school members to reconsider transport options and reduce the emphasis on car travel.

The TAG highlights key public transport routes and walking / cycling routes to and from FSPS and well as the bicycle parking provision and end of trip (EoT) facilities location within the school.

The TAG was prepared in accordance with the recommendations from TfNSW and the Department of Education; TAG's templates.

The TAG should be updated on a regular basis following outcomes of data collation, monitoring travel patterns and user's feedback,

## 5.2.2 Display Public Transport Options on FSPS's Location and Transport Webpage

Information for sustainable travel methods can be displayed on school home pages for students and staff. Specifically, they should be provided on the schools 'Contact' page along with the 'Parent Information' page. The TfNSW Trip Planning Widget can be implemented on the webpage to encourage parents to plan trips to and from the school via public transport. The widget includes departure times, service, alert information and opal far estimates. The Trip Planner widget code can be implemented into the website and is available at <a href="https://opendata.transport.nsw.gov.au/dataset/tfnsw-trip-planning-widget">https://opendata.transport.nsw.gov.au/dataset/tfnsw-trip-planning-widget</a>.

The transport dedicated web page should also outline travel information in relation to active or public transport alternatives. Information should be specific to FSPS. Travel Access Guides (TAGs) and maps outlining walking, cycling and public transport routes. As mentioned previously, this should be provided to educate students and staff of alternative transport options. A potential webpage design to incorporate more transport information for the 'Contact' and 'Parent Information' page is located below.

## 5.2.3 School Travel Passes

To align with NSW Government policy the following students are eligible for free school travel passes:

- All students in Years K to 2; and
- Students in Years 3-6 who live more than 1.6km (radial distance) from school, or 2.3km or more by the most direct practical walking route.

These are issued by Transport for NSW and can be used on all local buses. The school will coordinate the process of having bus passes arranged for students.

# Location and transport

×

Location and transport
School bus service
Enrolment
Financial contributions and
assistance

Uniform

Crunch&Sip

Our staff
Rules and policies
What we offer
Classes
Our proud history



#### Getting to and from school safely

As a parent or carer, it's your responsibility to get your child to and from school safely. Student safety is our priority.

Keep our school community safe by:

- **A** G
- driving and parking safely C, even if it means parking further away and walking the rest of the way to school
  - being a good role model

GLEBE NSW 2037

- never calling your child from across the road
- using the safest place to cross the road.

#### For parents and carers of younger children

Discuss with your child how to be safe when:

- walking
- .

Figure 43: Potential webpage design for FPSP's location and transport webpage (Source: Arup, 2021)

Home / About our school / Location and transport

#### Location and transport

#### For parents and carers of younger children

Discuss with your child how to be safe when:

- walking 🖸
- in the car
- waiting for, travelling on, and getting off the bus
- riding <u>bikes, scooters and skateboards</u> C.

Also talk about and practise:

- safe travel routes
- · plans for when unexpected things happen
- what to do in wet weather.

<ul> <li>what to do in wet weather.</li> </ul>	Reference to Transport
Subsidised school travel	Access Guide here

Transport for NSW C provides subsidies to assist school students.

- The <u>School Student Transport Scheme</u> I provides eligible students with free or subsidised travel on public transport between home and school.
- The <u>School Drive Subsidy</u> C may help towards the costs of driving children to school if you live in an area where there is no public transport.

#### Figure 44: Potential webpage design for FSPS's location and transport information webpage (Source: Arup, 2021)

## 5.2.4 Improve Mode Share Summary

Planning for FSPS is based on the principle of achieving high usage of public transport and active transport as methods to travel to and from the school. An assessment of existing travel patterns has been summarised within Section 2 of this report. The travel analysis suggests that there will still be several travellers via car. As such, promoting ride share or carpooling may be a potential alternative for these travellers. The school will be responsible for assessing the mode share summaries for individuals travelling to and from FSPS. The proposed transport strategy timeframes are summarised in Table 17.

## 5.2.5 Appoint a Travel Plan Coordinator

A dedicated Travel Plan Coordinator (TPC) will coordinate and monitor all travel plan activities to ensure the targets and objectives specified within the School Travel Plan (STP) are met. The school will assign an administrative staff member to this role. External support will be sought as required to assist this role.

## 5.2.6 Manage Sustainable Transport Expectations for New Staff

Encouraging the use of public transport supports the main objectives of the School Transport Plan. As mentioned above, school staff should be encouraged to use public transport when traveling to and from FSPS. To ensure that the future staff of FSPS are aware and adopt sustainable travel methods, outlining the school's expectations of sustainable travel could be at the forefront when advertising new staff positions at FSPS. This will allow for transparency and manage the school's expectations for new staff. It is also suggested that an induction program for new staff should highlight the wider benefits of reducing single occupancy trips and utilising alternative modes of transportation such as public transport.

# 5.3 Reduce Single Occupancy Trips

Reducing single occupancy car trips, particularly via private vehicle will support the objective of reducing car dependency. Carpooling aims to limit the amount of single occupancy trips taken via private vehicle. As such, it is recommended that parents and staff school should also be encouraged to change up their behaviour by sharing car trips.

The school will liaise with the P&C to discuss the potential for a carpooling scheme as a means to connect parents who live in close by or within the same suburb and potentially organise carpool arrangements for their children. However, noting it will be the responsibility of parents to organise carpooling with other parents. The school can assist in raising awareness of the potential benefits (social, economic and environmental) afforded by parents taking turns picking up and dropping off children to and from the school. Carpooling opportunities can also be included in the school's intranet and notice boards to raise awareness to students and parents.

There are a number of free apps currently available which would help organise and operate the carpooling. GoKid is a complete service that manages and organises the creation and operation of carpooling groups, specifically for school kids. Another carpooling alternative is Liftango <u>https://www.liftango.com/carpool</u>. Features include the function to create and moderate groups via invitation; this way parent groups can manage the carshare group safely. Operation wise, the app features scheduling, in app chat, live tracking and routing, meaning parents can easily organise and streamline pickups.

# 6. Management Plan for School Facilities

This section increases the level of detail of the school operations approved in the Response to Submission (RtS) report.

# 6.1 Kiss and Ride

Two main operations occur at the school, normal hours kiss and ride and out of school hours care kiss and ride.

As outlined previously, the design of this area has been divided into two phases relating to the status of the future Sydney Harbour Bridge southern cycleway upgrade.

The revised Phase 1 layout for the school moves the kiss and ride area (where students enter or exit vehicles) to the U-turn (single manoeuvre) turnaround provided in the main forecourt of the school. In Phase 2 when the SHB cycleway conflict is resolved, the kiss and ride area will relocate adjacent to the amphitheatre.

During kiss and ride hours, there is space for about three vehicles to safely manoeuvre through the turnaround as shown in Figure 45. The bays will not be marked as to allow flexibility for mobility impaired students to access any of the parking bays.

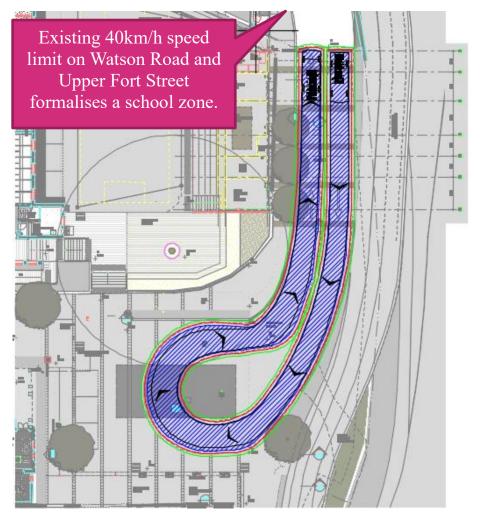


Figure 45: Plan view of kiss and ride operations during Phase 1 with existing cycleway

## 6.1.1 Kerbside Controls

The Traffic and Transport Assessment RtS (TTA RtS) presented a possible kerbside arrangement to provide for up to 48 cars queued without impacting on Argyle Street traffic. This consists of a 30 main queue on Upper Fort Street starting at the proposed 4P parking zone south of the SHB terminus and extending south to the school kiss and ride area and an additional queueing area on the northern side of Watson Road accommodating for approximately 18 vehicles.

This arrangement in addition to retain the existing 40km/h speed limit on the entire length of Upper Fort Street formalises a school zone for pick-up and drop-off times. For the remainder of the day, a 4P and restriction controls would apply.

Along Watson Road the existing No Parking control is retained along the northern kerb. Modification to the existing 2P parking for a 4P parking is proposed along the southern kerb on Watson Road.

It was agreed with Council that a 10-minute free parking zone is provided to permit parents to park for access to the Out of School Hours (OOSH) or at times when the pick-up line is not in operation. This arrangement is provided for on Upper Fort Street and Watson Road.

A No Stopping zone is retained at the Watson Road/Upper Fort Street corner associated with the pedestrian crossing. This also allows vehicles to pass in this location when cars are queued waiting in the pick-up line in the afternoon.

Kerbside parking restriction design sketches were issued for consultation in October 2023 to the CoS Traffic Committee (LPCTCC). Design sketches are included in Appendix C of this report.

The existing metered parking bays on the school property will be removed and converted to No Stopping as to form part of the main queue area for the kiss and ride operations. These works will be undertaken as part of the Upper Fort Street widening.

Swept path analysis undertaken for the proposed kerbside controls demonstrate that Upper Fort Street will be able to accommodate two-way travel for a B99 (i.e. large cars during school travel times as shown in Figure 45.

Figure 46 and Figure 47 illustrate the kerbside controls during kiss & ride operation of the school in accordance with CoS proposed parking changes for Upper Fort Street / Watson Road November 2023.

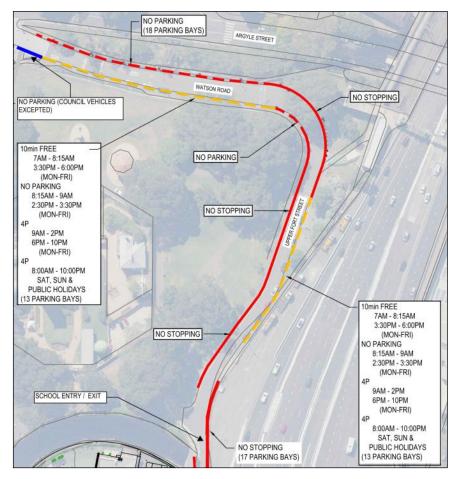


Figure 46: Kerbside controls Upper Fort Street and Watson Road

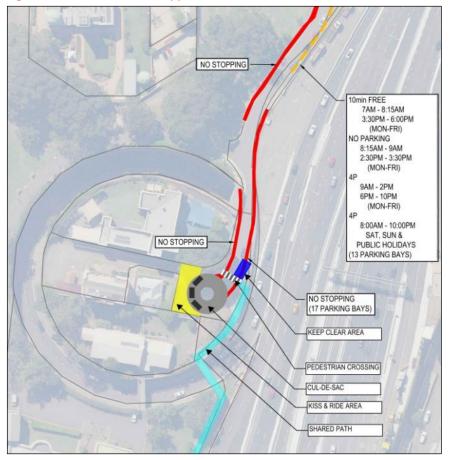


Figure 47: Kerbside controls Upper Fort Street / Kiss & Ride area

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## 6.1.2 Timing

Kiss and ride times are proposed to occur at the following times:

- Drop-off 8:30am 9:00am; and
- Pick-up 3:00pm 3:30pm.

## 6.1.3 Operation Management

The playground/kiss and ride area will be controlled by staff at the changeover times from school play area to vehicle operations. Students waiting in the afternoon will be required to wait in the play space outside Building A. A potential sequence of events for this process is presented below:

- 10 minutes before kiss and ride time staff will begin to clear the area of children and close access to the playground area;
- 0 minutes before kiss and ride time staff will open the secure gates;
- 0 minutes after kiss and ride time staff will close the secure gates; and children will be permitted into the area.

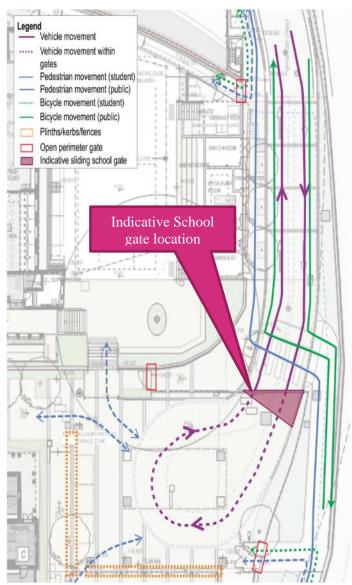


Figure 48: Gate lines and transition

## 6.1.4 Student Expectations

Students will be under supervision from staff to know that during the transition times, the playground area is to be cleared for Kiss and Ride operations. Through the provision of dedicated marshalling areas in nearby marshalling areas and child education, a safe transition between school play area to vehicle operations can be achieved. Students waiting in the afternoon for pick-up will be required to wait in the play space outside Building A.

### 6.1.5 Parent Communication

Parents should be well educated on how the new Kiss and Ride arrangements will work as well as guidance and rules to abide by. This should be clearly communicated before commencement of the school term and continually shared amongst new users of the Kiss and Ride zone.

There are various resources under TfNSW Centre for Road Safety "pick-up and drop-off initiative" which includes template parent letters, brochures for Kiss and Ride safety tips. The School will develop suitable communication items outlining measures parents can take to facilitate the safety and efficient of the Kiss and Ride zone in consultation with the school executive. These are to be circulated prior to the start of the school term. This can be done through various channels such as onboarding letters to parents, the school website's travel page, school newsletter and at the school throughout the school term.

Separate to this, there would be the requitement to alert parents to the potential for high speed vehicles, and also a reporting mechanism (non-emergency policy hotline 131444) for times of high risk during the morning drop off period.

#### 6.1.6 Staff and visitors

As stated in Section 4.4, staff and visitors are encouraged to use alternative modes of transport to access the school. The school will be committed to Encourage the use of sustainable transport modes by promoting walking, cycling and utilising public transport and car sharing rather than single occupant car travel and taxi usage. EoT facilities will be provided on the school premises in order to support staff travelling to and from site via the alternative modes of transport.

The school may organise car-pool schemes where staff can share the cost of parking by connecting staff with similar postcodes to reduce the amount of car travel.

## 6.2 Excursion Bus Management

Current arrangements for school excursions requiring bus access will be retained as previously managed by the school. Students will be picked up and dropped off at the Bus Zone located at the Argyle Street and Lower Fort Street intersection and use the Argyle stairs to access the Upper Fort Street footpaths to the school as shown in Figure 49.



Figure 49: Excursion bus access to school

# 6.3 Community use of School Facilities

Selected facilities, including but not necessarily limited to the communal hall and internal spaces may be operated outside of standard school hours. Non entertainment venue activities have been proposed for the school facilities as follows:

- Sporting activities provided there is no spectator seating (thereby not considered an indoor sports stadium), all sporting activities would be permitted (whether as part of the school or outside the school).
- Any activities by the school and part of general school operations.
- Public meetings and assemblies.
- Lectures, seminars, corporate events and functions (excludes events with entertainment).

These events will be subject to an Out of Hours Event Management Plan as per the conditions of consent E3. More details about the management of the events will be provided in that plan.

# 6.4 SHB Cycleway Operation

## 6.4.1 Phase 1 – During School Hours

#### Phase 1

For Phase 1, whilst the gate is open during operation of the Kiss and Ride area, access to the SHB cycleway will be maintained via the shared ramp to the south, with a crossing opportunity provided adjacent to the pedestrian crossing.

The management of the Shared Path to the east of the school site (which is Department of Education Land) will be covered through an Access License with TfNSW.

During kiss and ride hours, there is space for three large cars to safely complete their kiss and ride manoeuvres as shown in Figure 53. Furniture items such as plinths, benches and landscaping will assist in defining the vehicle only area as shown in Figure 50 (plan view) and Figure 51 (perspective view).

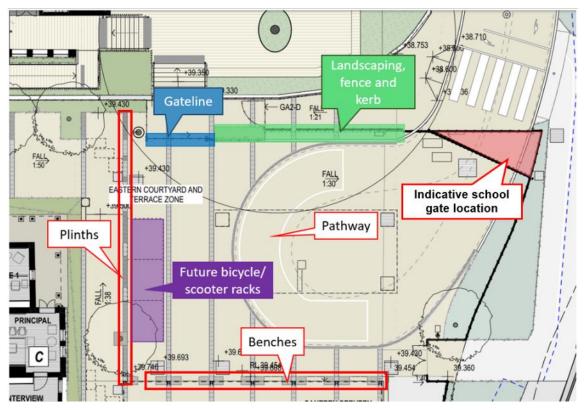


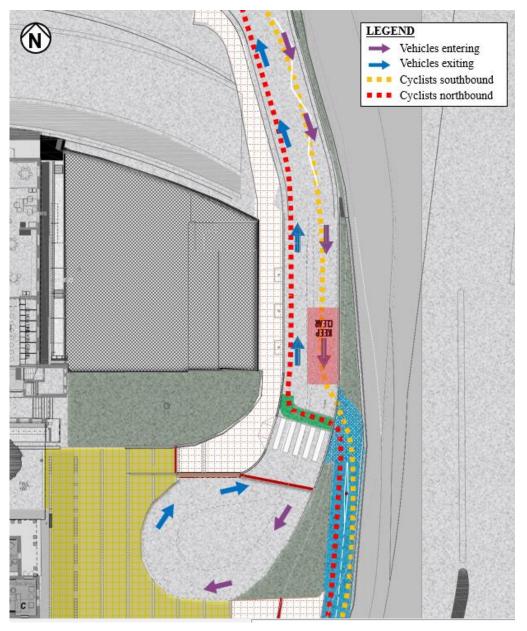
Figure 50: Location of furniture delineating vehicle and pedestrian areas (plan view)



Figure 51: Location of furniture delineating vehicle and pedestrian areas (perspective view)

During the morning drop-off period, the cycleway will be at its busiest with morning commuter cyclists. In this period cars are moving along Upper Fort Street and cyclists mix with the traffic flow. Cyclists will be able to bike past the stopped cars and enter the cycleway at the school boundary. During the afternoon pick-up period, cars queue along Upper Fort Street for up to 10 minutes waiting to enter the school. In this period bicycle traffic is significantly lower than in the commuter peaks and cyclists use the western lane of Upper

Fort Street for two-way travel. A plan view of the interactions at the pedestrian crossing is shown in Figure 52 with a perspective view displayed in Figure 54.



#### Figure 52: Diagram of cyclist parent interaction (plan view)

The area for cars will be delineated through pavement types that is continuous from Upper Fort Street. Staff will stand in this area observing students accessing parent's cars. Students will marshal in the in the playground pocket outside Building C and G while waiting for pickup while waiting for pickup (shaded red in Figure 53 below).

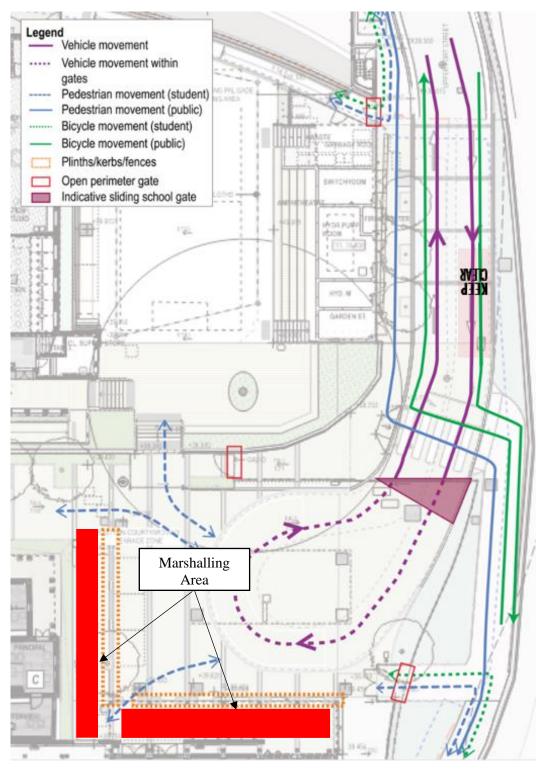


Figure 53: Diagram of DOPU operations during phase 1 with proposed marshalling area



#### Figure 54: Diagram of cyclist parent interaction (perspective view)

The proposed pedestrian crossing to the north of the school gate will be bi-directional, allowing for pedestrians to cross on both sides. Cyclists travelling northbound will be provided a separated crossing, adjacent to the pedestrian crossing, which will connect into the SHB cycleway to the north. The on-road route for cyclists travelling southbound will be maintained, with cyclists joining into the SHB cycleway.

Providing one safe crossing and interaction point is likely to generate the benefit of making things safer for all road users, as it limits multiple interactions points along Upper Fort Street. It is imperative that pedestrians be provided a dedicated crossing point to safely clear the pinch point in Upper Fort Street.

In addition, the provision of a combined bicycle and pedestrian crossing at this location, along with the road rules requiring drivers to not queue over pedestrian crossings, should keep this area clear at school times. The Modification report describes this arrangement and the benefits it provides.

## 6.4.2 Phase 2 – During School Hours

The new school will open before the upgrades to the SHB Cycleway. With increased activity associated with school drop-off and pick-up, interaction between cyclists and cars using Upper Fort Street will need to be considered.

Ultimately, the NSW Government proposed future Sydney Harbour Bridge SHB southern cycleway upgrade is to be widened to provide separated pedestrian and cyclist paths from Kent Street to Upper Fort Street as shown in Figure 55.



**Figure 55: Artist's impression of the proposed Sydney Harbour Bridge southern cycleway connection looking north.** Diagrams showing the school's operation before and after the SHB Cycleway opening are included in Appendix A. These show that the school grounds will be closed off using a gate across the drop-off pick-up loop whilst maintaining access to Upper Fort Street for cyclists. During the morning drop-off and afternoon pick-up periods the gate will be opened to create the vehicle turnaround.

It is envisaged that when the proposed SHB southern cycleway upgrade opens, the school grounds will be closed at the property boundary with all cyclist and pedestrian activity using the new facility. A new fence and gate will be installed at the property boundary. During the drop-off and pick-up periods, this gate will be opened. This operation is shown in Figure 56.

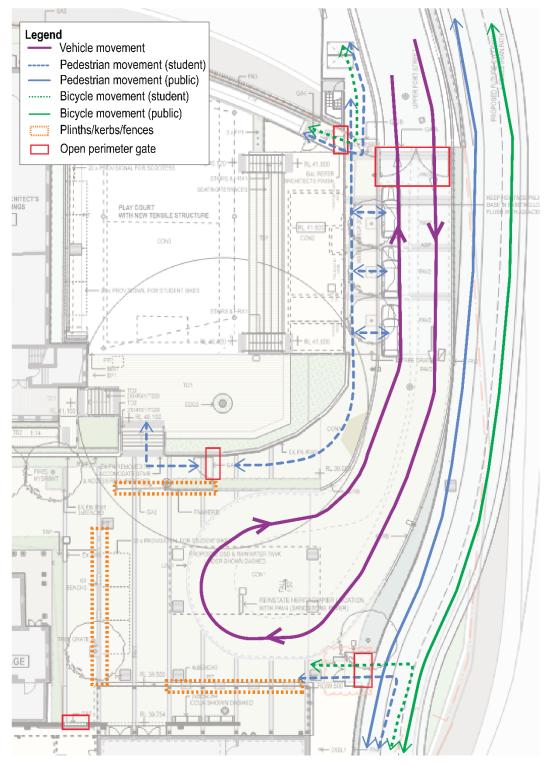


Figure 56: Diagram of DOPU operations during phase 2 - proposed SHB southern cycleway upgrade

#### 6.4.3 Outside of School Hours

For the duration of Phase 1, the school is not expected to be managing operations outside of school hours as cyclists will be continuing to access the SHB cycleway as per the existing case once the Kiss and Ride area is closed as shown in Figure 57.

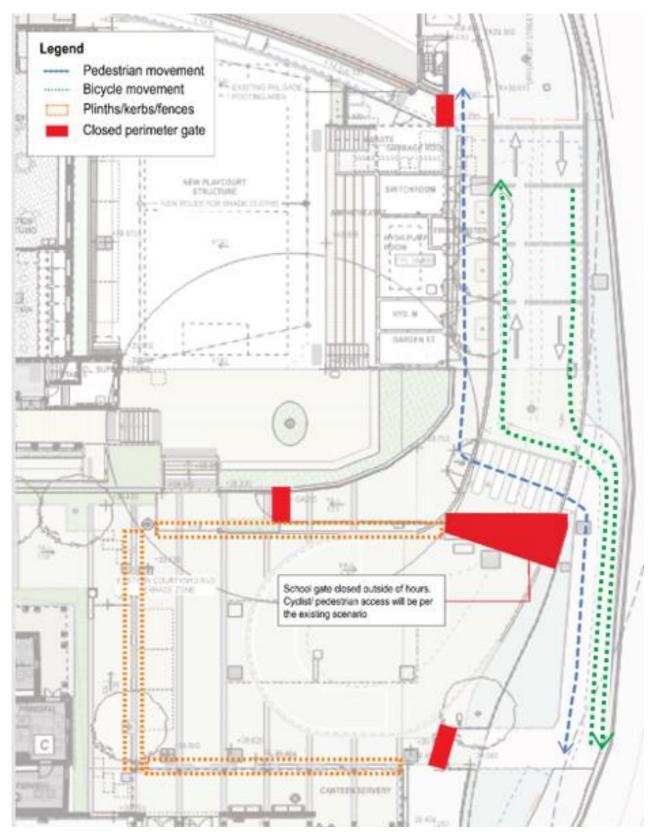


Figure 57: Diagram of pedestrian and cyclist access during phase 1 - outside of school hours

# 6.5 Signage and Linemarking

To manage interactions between the school and the existing SHB cycleway the following measures have been proposed in regard to retaining existing or proposing new signage and linemarking

## 6.5.1 Watson Road

Traffic management provisions on Watson Road are displayed in Figure 58 and include:

- Retain existing 40km/h speed limit;
- School zone signage;
- No Parking on the northern side;
- On-street parking restrictions as CoS recommendations in November 2023:
  - P10min Free 7am 8:15am and 3:30pm 6pm (Monday to Friday)
  - 4P Ticket 9am-2pm and 6pm -10pm (Monday to Friday). 8am-10pm Sat, Sun and Public Holidays"
  - 'No Parking' 8:15am 9am and 2.30-3.30pm (Monday to Friday)
- Retained speed humps on Watson Road.

Proposed on-street parking restrictions and retained existing signage on Watson Road, as part of the redevelopment of FSPS, are shown in image below for Phase 1 and Phase 2. Details of proposed and retained signage are provided in design sketches included in Appendix C of this report.

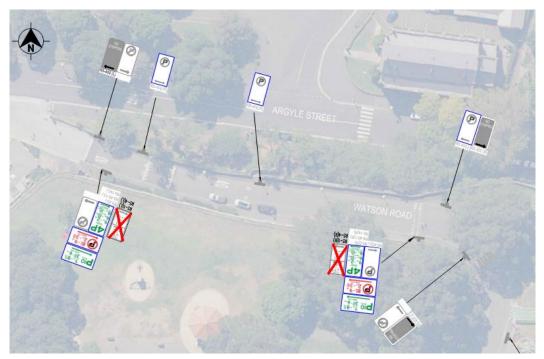


Figure 58: Existing and proposed signage and linemarking on Watson Road

#### 6.5.2 Upper Fort Street, between Watson Road and Observatory Hill Access Road

Retained and proposed traffic management provisions on this section of Upper Fort Street, for Phase 1 and Phase 2 are displayed in Figure 59 below, and are summarised as follows:

- School zone signage;
- Cyclist warning signage for vehicles;
- No Stopping signage;
- No Entry signage at the SHB emergency breakdown entrance;

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- On-street parking restrictions as CoS recommendations in November 2023:
  - P10min Free 7am 8:15am and 3:30pm 6pm (Monday to Friday)
  - 4P Ticket 9am-2pm and 6pm -10pm (Monday to Friday). 8am-10pm Sat, Sun and Public Holidays"
  - 'No Parking' 8:15am 9am and 2.30-3.30pm (Monday to Friday)
- Retained speed bump near the Watson Road/ Upper Fort Street intersection.



Figure 59: Existing and proposed signage and linemarking on Upper Fort Street on approach to school

## 6.5.3 Upper Fort Street, fronting the school

Existing traffic management provisions at this location are as follows:

- Pedestrian and cyclist warning signage;
- Give-way signage approaching from the existing shared ramp to the south; and
- 4P parking on the eastern side.

To facilitate the operation of the new Kiss and Ride area and allow for appropriate queuing space, the following measures have been proposed for Phase 1:

- "No Entry", Except As Signed, 8.30-9am 3.00-3:30pm School Days" and "Bicycles Excepted" signs have been proposed, one on the eastern and western kerbside on approach to the school. The intention of these signs is to prevent vehicles accessing the Kiss and Ride area outside of hours, however maintaining access for pedestrians and cyclists.
- Removal of signage 4P parking zone fronting the main entrance of FSPS;
- Provision of a 'No Stopping' area within the school boundary, formalising a Kiss and Ride area.
- Adjustments to existing shared path signage and provision of additional shared path signage.

In Phase 2, as public access will be relocated to the proposed SHB southern cycleway upgrade, the following measures have been proposed:

- Removal of pedestrian and cyclists crossing fronting the main entrance of FSPS;
- Removal of signage related to a Shared Path through the school site; and
- Kerb ramp restoration adjacent to the pedestrian crossing proposed for removal.

# 6.6 Before and After School Care (OOSH)

Before and after school care will operate on a regular daily (Monday-Friday) basis between 7:00am – 9:00am and 3:00pm - 6:00pm. The operator will also be able to offer holiday care during the 12 weeks of holiday periods, between the hours of 7:00am to 6:00pm, Monday to Friday. As access to the kiss and ride facilities will be closed during OOSH hours, parents dropping off or picking up their child will be required to park on Upper Fort Street and walk to the OOSH facility.

## 6.6.1 School pick-up and drop off Operations

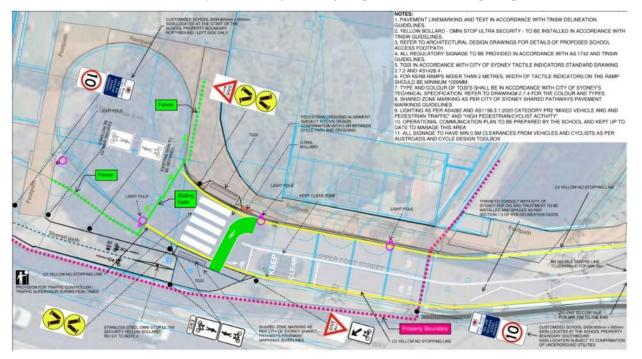
Parents accessing the OOSH facilities outside of kiss and ride times can use the parking bays with 10-minute time restricted parking proposed on Upper Fort Street. These parking bays will be free and allows for adequate time for parents to pick-up or drop-off their child.

To prevent parents accessing the kiss and ride area outside of operation (i.e. when the gates are closed), additional signage and line marking will be implemented which include two (2) "No Entry", Except As Signed, 8.30-9am 3.00-3:30pm School Days" and "Bicycles Excepted" signs located on the eastern and western kerbside in clear view on Upper Fort Street, prior to entering the kiss and ride area.

Parents can then choose to use the turnaround in front of the Sydney Observatory as shown in Figure 61, or the parking provided on the southern side of Watson Road to pick-up or drop-off their child.

# 6.7 Summary of Traffic Management Strategy

The aim of the traffic management strategy is to provide guidelines to minimise the risk of injury to students, parents/carers, pedestrians and cyclists due to the location of the Sydney Harbour Cycleway sharing the school's entrance which is heavily used during morning drop off and afternoon pickup of students.



#### Figure 60: Traffic Management Strategy

The first element of the strategy is to reduce pedestrian activity in the proximity of the pedestrian crossing during drop off and pick up times. This will be achieved by providing advice to parents and students regarding access points to the school.

For pedestrian students and parents, and students on bikes or scooters:

• The entry point for those approaching from the City (South) direction is to be the entry gate located adjacent to the School Hall - Access Gate South.

• The entry point for those students approaching from the Observatory Hill (North) direction will enter the school at the gate located at the entrance to the driveway at the North-eastern corner of the school access gate North.

This strategy will not eliminate all pedestrian activity near the entry of the cycleway to DoE property as members of the public will still have access to the shared path, however the strategy will reduce pedestrians to a minimum during peak times.

In the afternoon, all students who are walking or riding bikes/scooters will leave via the respective gate depending on which direction they are travelling.

The second element of the strategy will involve a communication strategy to inform parents of how the "kiss and ride" area of the school cul-de-sac will operate and emphasise the importance of slow speed and observance of road rules in the area of the crossing and the entry/exit interface with the cycle way.

The "kiss and ride" area within the cul-de-sac is expected to safely hold approximately three vehicles. Parents will be instructed that they are not to enter the "kiss and ride" area until cars exit and there is free space to enter. Vehicles will be expected to queue behind the KEEP CLEAR line and only proceed when the space is available, and the pedestrian crossing and cycleway are clear.

The school will provide this advice to parents through regular newsletter items, advice on the school website and to new parents when students are enrolled at the school.

The third element of the strategy is the safe management of the "kiss and ride" area. The school will develop a supervision plan to assist in the entry and exit of students from vehicles. Students arriving in the morning will be required to immediately leave the cul-de-sac area in front of the school hall and enter one of the playground areas. Students waiting in the afternoon will be required to wait in the play space outside Building A and will be called to their vehicle by a staff member once their parent/carer has arrived in the "kiss and ride" area.

The management of the Shared Path to the east of the school site (which is Department of Education Land) will be covered through an Access License with TfNSW.



Figure 61: Southbound vehicle during gate closure turning path

# 6.8 Emergency Vehicles

Fire trucks can access the fire boosters located inside the school gate using Upper Fort Street. Other emergency vehicles can use the turnaround after gaining access through the school gate as shown in Figure 62 Students using the playground at these times will need to be managed by school staff.



Figure 62: Emergency vehicle access

# 6.9 Deliveries and Waste Management

The waste recycling collection point is the designated position or area where waste or recyclables are loaded onto the collection vehicle. The central storage room for storing waste and recycling will be located on the Ground Level under the amphitheatre, adjacent to Upper Fort Street as shown in Figure 63. The collection will be timed to be outside of school hours, with access provided to the site for the waste contractor to undertake collection. The vehicle will be able to then use the turnaround to enter and exit in a forwards direction.

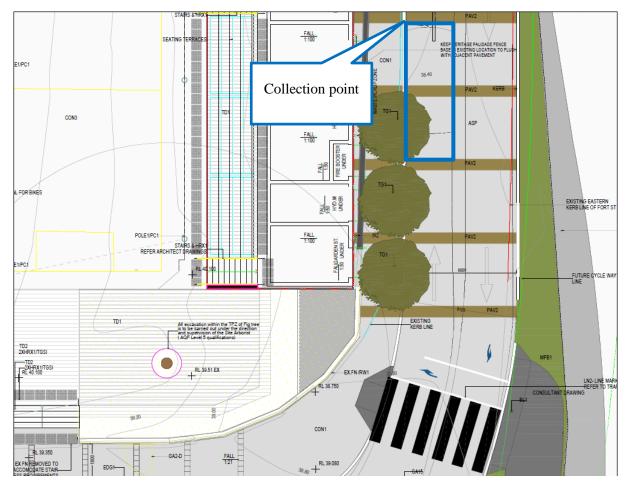


Figure 63: Location of collection point (blue)

# 6.10 Opening Day Considerations

During the first few weeks of transition, additional staff will need to be present to help navigate parents to the changed Kiss and Ride location and to ensure that cars waiting for access are queuing appropriately along Upper Fort Street as to not impact Argyle Street traffic.

# 6.10.1 Prior to School Opening

Communications will be developed, and information sessions will be made available on top of information packs being issued to the families and students covering access. There will be information packs going out addressing how students can travel to school through the various modes.

The resources described in this section report are available from Council and TfNSW and can be provided along with school specific information to parents prior to school opening. This will encourage travel to school to be orderly with appropriate travel choices made.

## 6.10.2 School Opening

A traffic management company will need to be employed to manage the opening period of the school, over a two week period. It is envisaged that personnel and variable message signage will be implemented at key locations to educate drivers, walkers and cyclists of the correct procedures including:

- Directional signage to the main school entries;
- Student kiss and ride area and queuing locations on Upper Fort Street; and
- Walkers and cyclists using the new marked cyclist and pedestrian crossings.

# 7. School Transport Plan Administration

Administration of the transport plan also involves the maintenance of necessary systems, data and paperwork, consultation and promotion. Senior management support is critical to ensuring the success of any travel plan for several reasons such as to:

- Lead by example;
- Allow budget allocations for the implementation of measures; and
- Give support to changes or development of policy documentation.

# 7.1 Staff Induction

To ensure new members of staff are aware of transport arrangements and the overall function of the School Transport Plan, all staff members should be made aware of the Plan as part of their induction process. The School Transport Plan section of the induction should provide new starters with the following:

- A brief introduction to the School Transport Plan and its purpose;
- Tour of the schools to include visit cycle parking areas and shower and
- changing facilities; and
- Provision of a School Transport Plan information package

# 7.2 Community Consultation

Additionally, to further encourage the adoption and use of the travel plan, the School can potentially engage the P&C group made up of parents and neighbours to help apply transport strategies outlined within the Plan.

The School could also liaise with local council and TfNSW to resolve infrastructure, training and safety issues as they arise.

### 8. School Transport Plan Monitoring

The School Transport Plan is a constantly evolving strategy, and its success will rely on ongoing monitoring and review. Although the objectives of the School Transport Plan will remain constant, it may be possible to re-define specific targets over time. Target setting should aim to reflect a shared goal for continued progress. Assessing the provided targets and identifying whether they are being met will provide opportunities to reevaluate, review and redefine targets.

### 8.1 Reviewing Framework

It is recommended that the Plan be included in ongoing monitoring and reviews to maintain consistency with the targets defined. The objectives provided in the School Transport Plan can act as measures of success and may be used to identify potential refinements. The School can further engage with Council where required to assist in designing and operating services which aim to meet and supports the needs of the school's users and furthermore support the use of active and public transport.

This monitoring strategy will aid the School in the identification of measures to be taken where travel mode targets are not met, parking issues have been identified on neighbouring private land, access ways or the surrounding road network.

This transport plan is meant to be a "**living document**" and updated as required by FSPS to suit the performance of the school against the targets outlined in this plan and to amend the transport strategies based on success or not of the strategies. This document will also be updated to reflect any changes to key walking and cycling routes as major infrastructural improvements are undertaken in the future.

### 8.2 Monitoring

The Plan will be reviewed and monitored to make sure the proposed targets outlined in Section 4 are being met and the strategies continue to be appropriate for the school. Performance report to identify and action outstanding mode share targets and re-define timeframes for improvement and adjustments to strategies.

Reviewing and monitoring mechanisms could include collecting data such as residential postal code and preferred mode of transportation from travel patterns from students, staff and visitors for journeys to and from FSPS. Recorded data will outline modes of transportation and distance travelled by each mode, from which will provide insights on how people are travelling to and from the school.

Additionally, this will provide insights on how school facilities are being used during peak times and could potentially help identify future demand to accommodate for growth. Data can be collected by a variety of methods, including the following:

- Staff and student travel surveys, in particular, monitoring bicycle and scooter uptake and determine whether footpath upgrades are needed to accommodate changes in cycling volumes;
- Video camera surveys at the school entrance to obtain data on pedestrian, scooter and cycling arrivals to school. Schools are permitted to install surveillance cameras around school premises as part of their safety and security systems. It is recommended that schools develop a surveillance policy to outline the intent for the collection and use of recordings to limit potential confusion. Data storage protocols should be defined to ensure that all recordings are secure. Individuals recorded should remain anonymous and all recordings should be erased after an agreed time period. Consent from students, parents, staff or visitors may be required and all parties should be informed of the school's use of the video surveys. There is an opportunity to include a video footage agreement as part of student enrolment. Video surveys can be done by accessing videos from equipment installed as part of the school's security systems or by engaging a suitable consultant to conduct active travel surveys, (i.e. pedestrian and cyclist counts).
- Feedback through observation of the Kiss and Ride area;
- Meetings, facilitated by School, with relevant residential representative groups; and
- Community feedback direct to the school or directed via CoS.

### A plan for the monitoring program is outlined in Table 19 below.

Table 19: Monitoring Strategy

Monitoring Strategy	Monitoring Activity	Timeframe	
Travel survey	TPC to coordinate and review all required steps to undertake surveys for staff and students (parents) to fill out on their travel patterns.	Twice yearly for the first year of operation.	
	Surveys, at discretion of TPC, can be 'hands up' printing copies or suitable online base; e-correspondence (Email), Survey Monkey®, Microsoft Forms®, etc.		
Walking, cycling and scooting arrival data	TPC to undertake an observational survey to obtain data on pedestrian, cycling and scooting use to support the travel survey.	Yearly.	
Observations and notes	TPC to conduct site visits of the school's transport systems and report on operations of buses and other issues	Once mid-term after opening and yearly thereafter	
Consultation with TfNSW and Council	Using the travel coordination meetings, the TPC should discuss any issues that have been raised to these bodies such as bus demand, parking issues or pedestrian path concerns.	Two occasions after the start of the new school then as required	
Consultation with the Parents and Citizens (P&C) group	TPC to organise question and answer (Q&A) events with the P&C to broadcast travel issues and obtain feedback.	Twice yearly.	
Identify any school parking demand that spills out beyond the Kiss and Ride area	Car parking demand surveys (undertaken during and after school hours).	Twice yearly.	
Records, data collation, evaluation	Performance report including outcomes and analysis of conducted surveys, on- site observations and monitoring mode of transportation (mode share targets).	Annual	

# Appendix A

CV of suitable qualified consultant





**Current position** Senior Traffic and Transport Planner and Project Manager

Joined Arup 2018

Years of experience 16

Nationality Australian

#### Qualifications

BArch Architecture (2008), Lead Road Safety Auditor Level 3 (2012) NSW ID RSA-02-0805.)

#### Professional associations

Registered Architect (No. 2999 -College of Architects of Guatemala Member of the Australasia College of Road Safety (ACRS)

#### Committees

Member of the Arup management systems (AMS)

#### **Publications**

IPWEA NSW State Conference 2016 – Infrastructure, Innovation and Resilience 'Refining Road Safety Strategies'.

#### Software skills

- AutoCAD, Autodesk
- Vector Works, Architectural
- Form-Z AutoDesSys, 3D
- TraSiCAD,
- TSS-Aimsun
- TransCAD
- SIDRA, Intersection Analysis

#### International recognitions

- Award 'Iconic Excellence'; The Core Project, International Urban Design Competition, Special Citation, (Sebastopol California 2012).
- Participant in Competition D3 Space, New York, US, 'Close The Gap – East River'. .Greenway, (2012)

### Antonio Villacorta

Antonio is a senior transport planner with over 16 years' experience in traffic engineering, transport planning and design of active travel, project developments and major highways schemes.

Antonio has a vast experience in delivering transport and traffic assessments, green travel plans, parking and pedestrian studies, construction traffic management plans and intersection and corridor traffic modelling for a range of sectors; public and private, including residential, commercial, educational, logistics and healthcare.

Antonio has a strong technical background managing and contributed to multi-disciplinary road design upgrades.

He is also an accredited lead road safety auditor with over 80 road safety audits and multiple safety in design evaluations and crash data analysis conducted across Australia, New Zealand and Hong Kong.

In addition, his exceptional architecture and urban design skills are a great asset for projects with high demand and attention to conceptualization, visualisation and design integration.

#### **Project experience**

#### Harbour Bridge Cycleway (HBC) Fort Street Public School, (2020-2023)

Project manager for the design of the Harbour Bridge cycleway on Upper Fort Street and associated works for a temporary cycleway (Phase 1). Responsible to deliver a detailed design civil package for a temporary cycleway diversion on from Sydney Harbour Bridge to Kent Street, Sydney CBD.

#### Fort Street Public School (School Transport Plan), (2022-2023)

Project manager for the delivery of the school traffic and transport assessment and school transport plan of the Fort Street Public School and associate construction and pedestrian traffic management plans on behalf of Lendlease.

### 101-121 Castlereagh Street Sydney, Building Management – User Experience, (2021-2023)

Project manager for the delivery of a user experience program of the proposed basement carpark. intended to be automated with integration systems for trip journeys, identifying the functionality and useability of the proposed design and to facilitate seamless integrations between connecting systems.

#### 101-121 Castlereagh Street Sydney, Green Travel Plan (2021-2023)

Project manager for the delivery of a green travel plan (GTP) as part of the active mode of transportation strategy for the site and in accordance with the requirements from City of Sydney Council,

#### Wells Crossing to Glenugie Pacific Highway Upgrade Construction Phase, (2021)

Project manager for the construction phase of the Woolgoolga to Glenugie (W2G) scheme for the construction of approximately 8 km of a new two-lane northbound carriageway and associated works from Wells Crossing to Glenugie (WC2G).

#### Alexandria to Moore Park (A2MP). (2021)

Interim project manager for the design and construction phase on Fountain Street and McEvoy Street intersection as part of continuous flow intersection (CFI) improvements of a 4km urban arterial road at the complex and busy intersections of Anzac Parade, Alison Road, Fountain Street and Dacey Avenue at Moore Park.

#### Safer Roads Program 2021/2022 Review – TfNSW,(2023)

Project manager for the delivery of a review of 50 selected road safety infrastructure treatments founded and constructed by TfNSW in 2021-2022 across New South Wales.

#### Safer Roads Program 2020/2021 Review – TfNSW, (2022)

Project manager for the delivery of a review of 50 selected road safety infrastructure treatments founded and constructed by TfNSW in 2020-2021 across New South Wales.

#### Safer Roads Program 2019/2020 Review – TfNSW, (2021)

Project manager for the delivery of a review of 50 selected road safety infrastructure treatments founded and constructed by TfNSW in 2019-2020 across New South Wales.

#### Western Sydney Airport – Airport Terminal and Speciality Services, 2022

Lead auditor for the concept and detailed designs road safety audits for the Terminal and Specialty Works Package includes the external landscaped forecourt area, the integrated terminal approach in the dropoff/pick-up zone, connections to public transport (including connection to the terminal rail station) and the on-grade car parks.

#### Quay Quarter Loftus Precinct, (2022)

Lead auditor for the pre-opening road safety audit for the new development (Quay Quarter Sydney QQS), and Loftus Lane South connecting Loftus Street and Young Street upgrades.

## Sydney Children's Hospital Stage 1 / Children's Comprehensive Cancer Centre (SCH1 / CCCC), (2022 / 2023)

Lead auditor for the concept design audits for the Randwick Hospital (SCH / CCCC) and proposed works for the new Emergency Department, Short Stay Unit; Children's Comprehensive Cancer Centre (CCCC); and relocated existing SCH clinical spaces.

#### 130-150 Bunnerong Road, Pagewood

Project manager for the redevelopment of approximately 4,000 residential units at 130 Bunnerong Road, Pagewood, Stages B, E and F.

#### 112 Tallavera Street, Towers A, B and C, Macquarie Park, (2021-2023)

Project manager for the delivery of a traffic impact assessment for a development of approximately 1,200 residential units, commercial and retail areas of the development of three high rise buildings at 112 Tallavera Street in Macquarie Park.

#### Ashmore Development precinct, Erskineville (2022)

Project manager for the delivery of traffic impact assessments for a development of approximately 850 residential units, commercial and retail areas of Ashmore Street development precinct in Erskineville.

#### **List of Projects**

#### Fort Street Public School (Facades), (2020-2022)

Project manager for the redevelopment of the Fort Street Public School facades new buildings, and associate construction works on behalf of Lendlease.

#### Ascham School Fiona Redevelopment, Edgecliff, (2021-2022)

Project manager for the delivery of the school traffic management plan and operational traffic management plan (OTMP and TMP), green travel plan (GTP) and preliminary construction traffic management plan (CTMP), of the redevelopment of the Fiona building on behalf of BVN Architects.

#### Parramatta West Public School redevelopment, (2021)

Project manager for the delivery of the school traffic green travel plan (GTP), operational waste management plan (OWMP), school speed zone signage, out of hours event management plan (OHEMP of the redevelopment of the Parramatta West Public School on behalf of Taylor Construction.

#### Bunnings Leppington, Traffic Safety Assessment, (2021)

Project manager to deliver a traffic safety assessment report for the proposed carpark, internal roads and loading areas of the Bunnings Warehouse centre in Leppington.

## Site Formation and Infrastructures for Development at Pok Fu Lam South – Investigation, Design and Construction, Hong Kong, (2021)

Lead auditor for the Stage 2 RSA conducted in accordance with Chapter 7 of Volume 5 of the TPDM. The RSA covers the project area comprising all roadworks under the project including at-grade carriageway, road bridge, footbridges, footpath, pedestrian crossing, junctions, accesses, lay-bys, road marking, traffic signs, lighting, drainage, and landscaping.

### Site Formation and Infrastructure Works for Public Housing Developments at Long Bin, Yuen Long, Hong Kong, (2021)

Lead auditor for the Stage 2 Road Safety Audit: Detailed Design for the proposed road works under both Phase 1 and Phase 2 for this project.

#### Infrastructure Works for Public Housing development at Area 54, Tung Chung, Hong Kong, (2021)

Lead auditor for the Stage 3 road safety audit for the pre-opening of Road L3 and the associated roadworks at the junction of the Tung Chung Waterfront Road/Ying Hei Road and Yi Tung Road.

#### Woolgoolga to Glenugie Pacific Highway Upgrade, Detailed Design (W2G) - 2020

Interim project manager for the Woolgoolga to Glenugie project, for the upgrade of 31.5km of the Pacific Hwy from Arrawarra to Glenugie.

#### Nowra Bridge Project - New crossing over Shoalhaven River, (2020)

Lead auditor for the detail design road safety audits for the proposed bridge over Shoalhaven River.

#### Woolgoolga to Ballina Pacific Highway Upgrade (W2B) - 2018-2020

Design lead of three separated design packages for Road Furniture, Delineation and signage of Portion C of Pacific Highway between Woodburn and Broadwater (over 35km of dual motorway design).

#### M4 Smart Motorway Project (M4SM), (2018-2021)

Project design lead for the construction phase of Package C; Mamre Road and Kent Street.

#### Barangaroo – Hickson Road, Safety review – 2018-2022

Lead auditor for the road safety assessment on Hickson Road for the temporary works. Construction traffic management plans for the traffic diversions required for the environmental remediation.

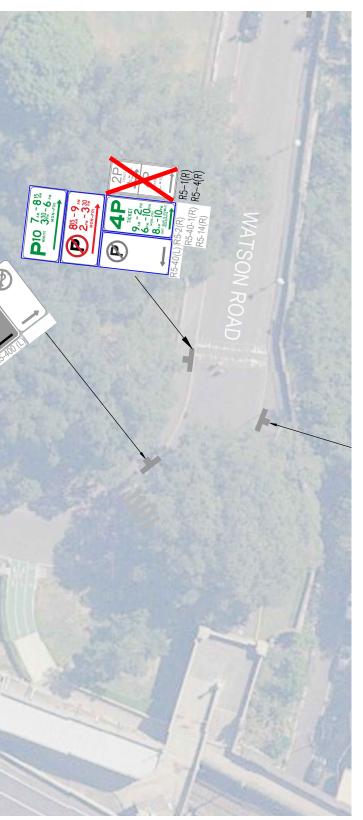




### C.1 Kerbside Controls

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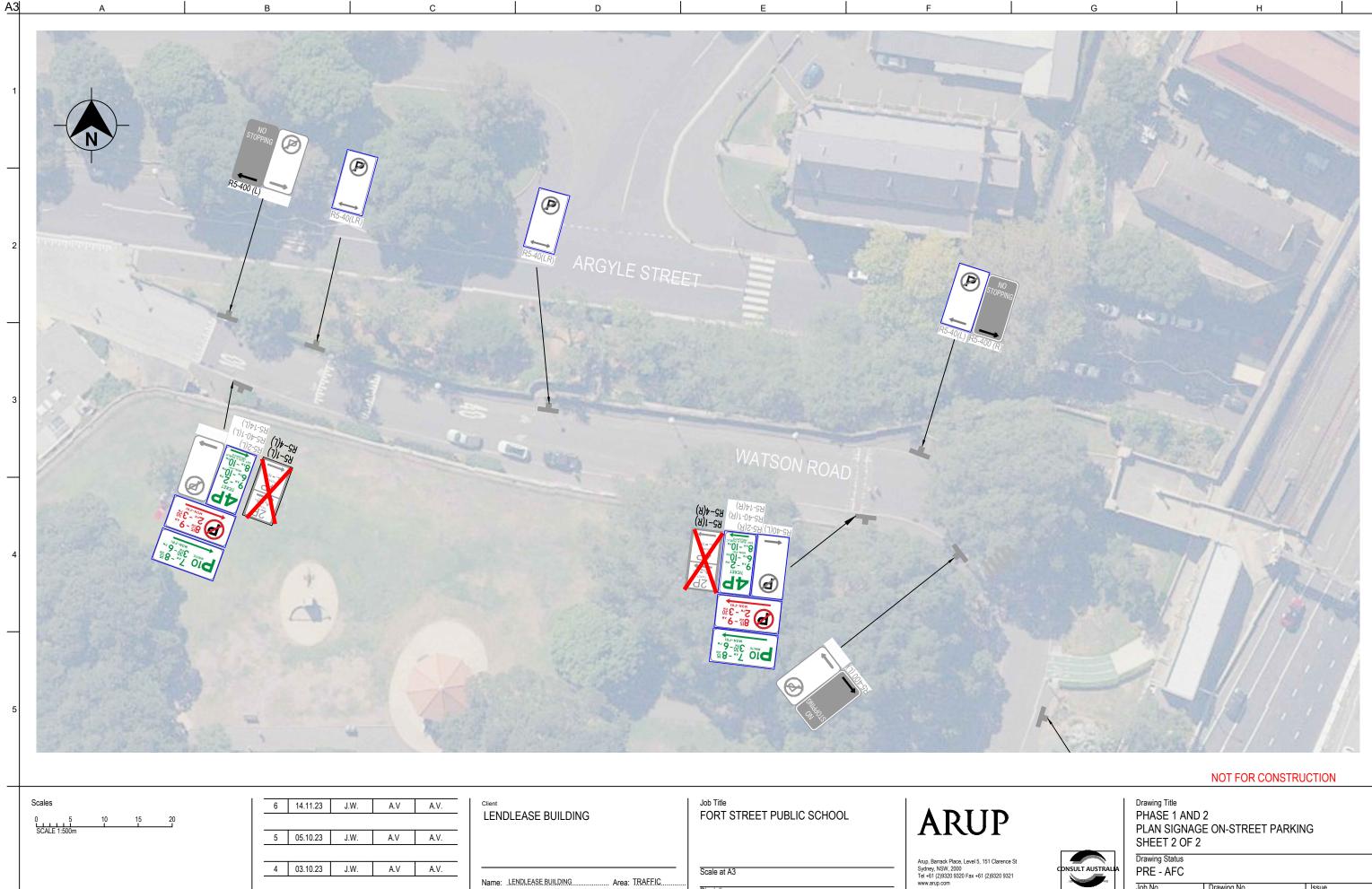
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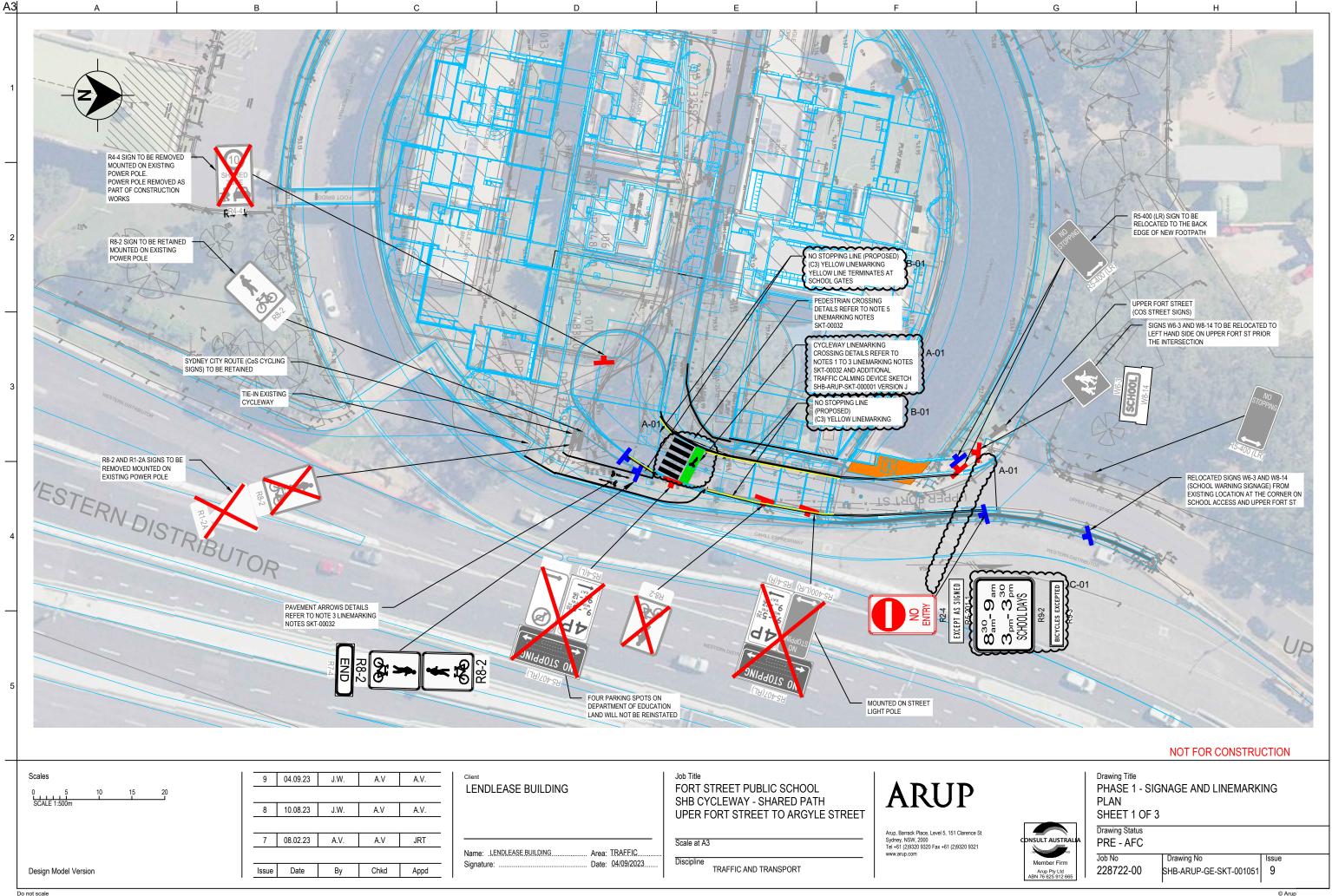
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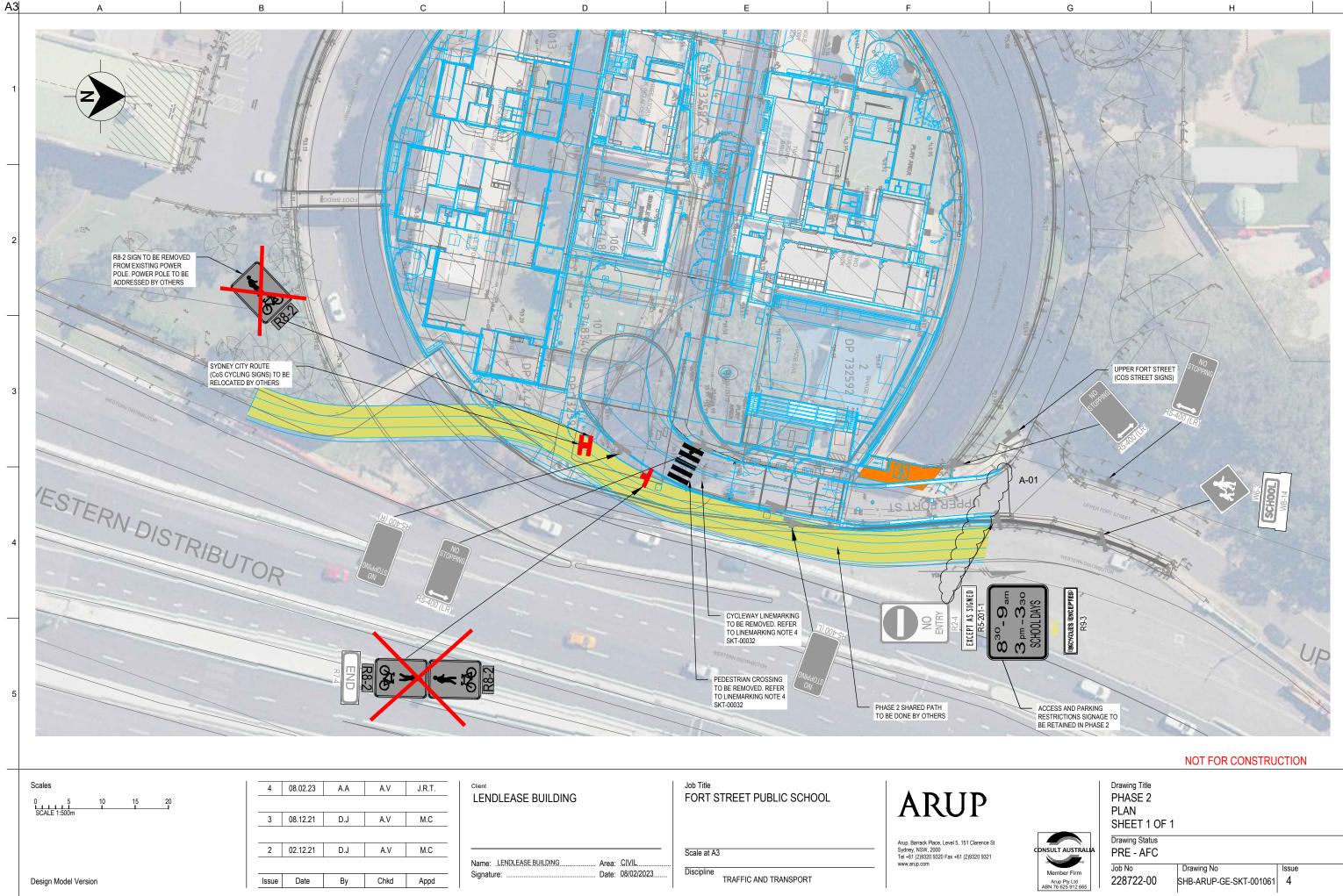
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## C.2 Signage Plan

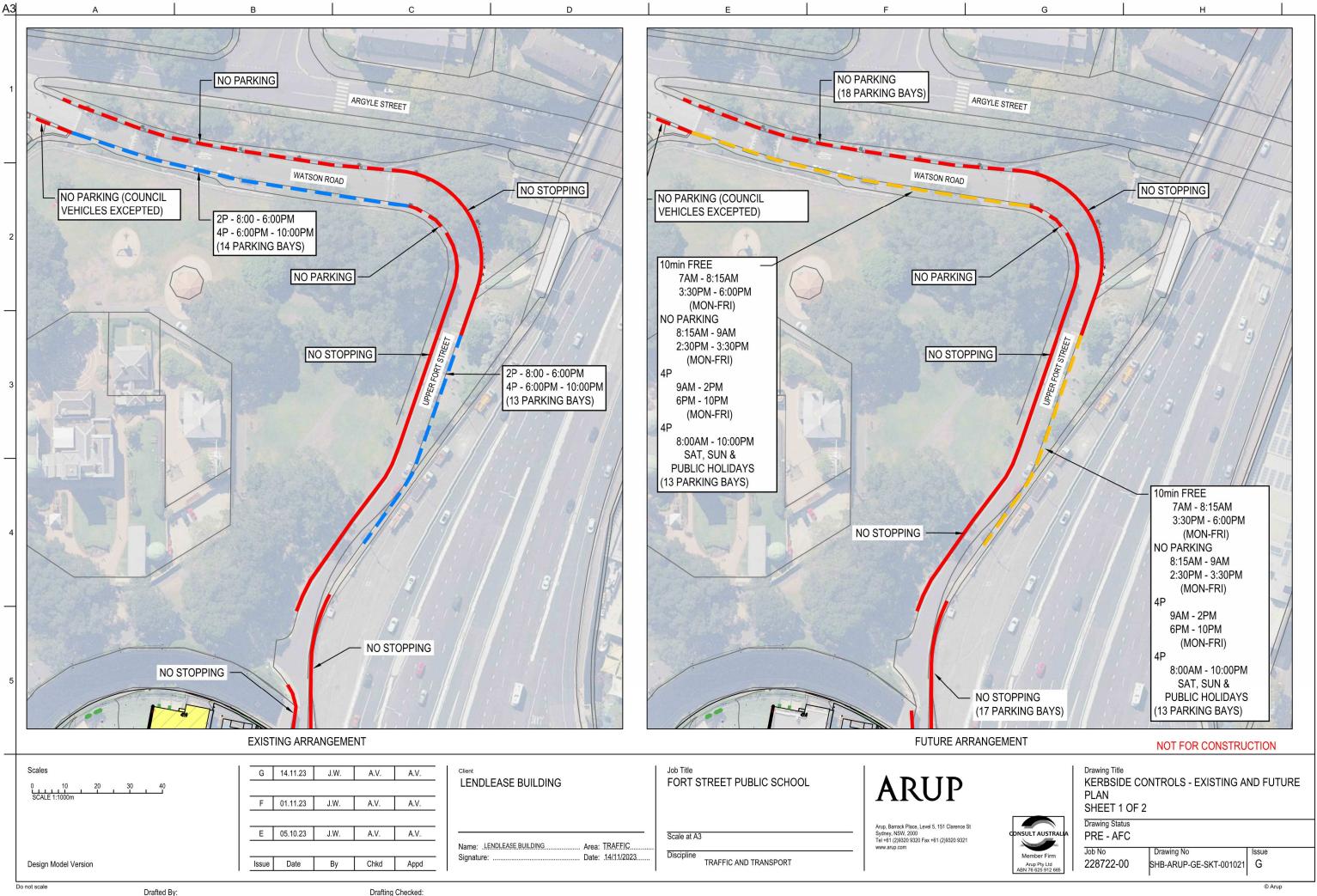




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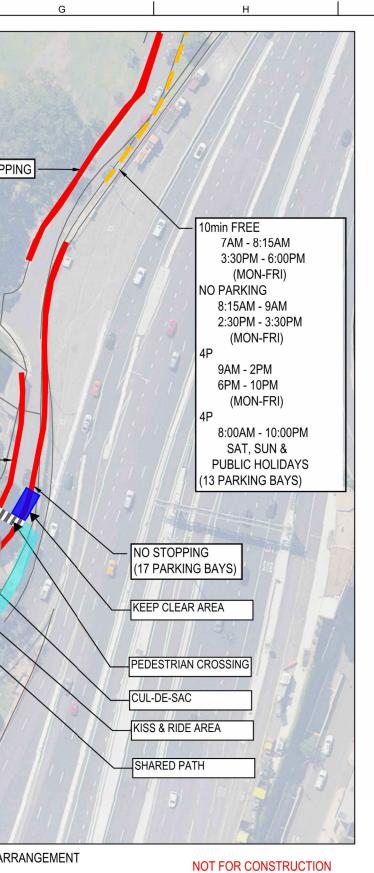
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## C.3 Queueing Plan



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### C.4 Additional Traffic Calming

