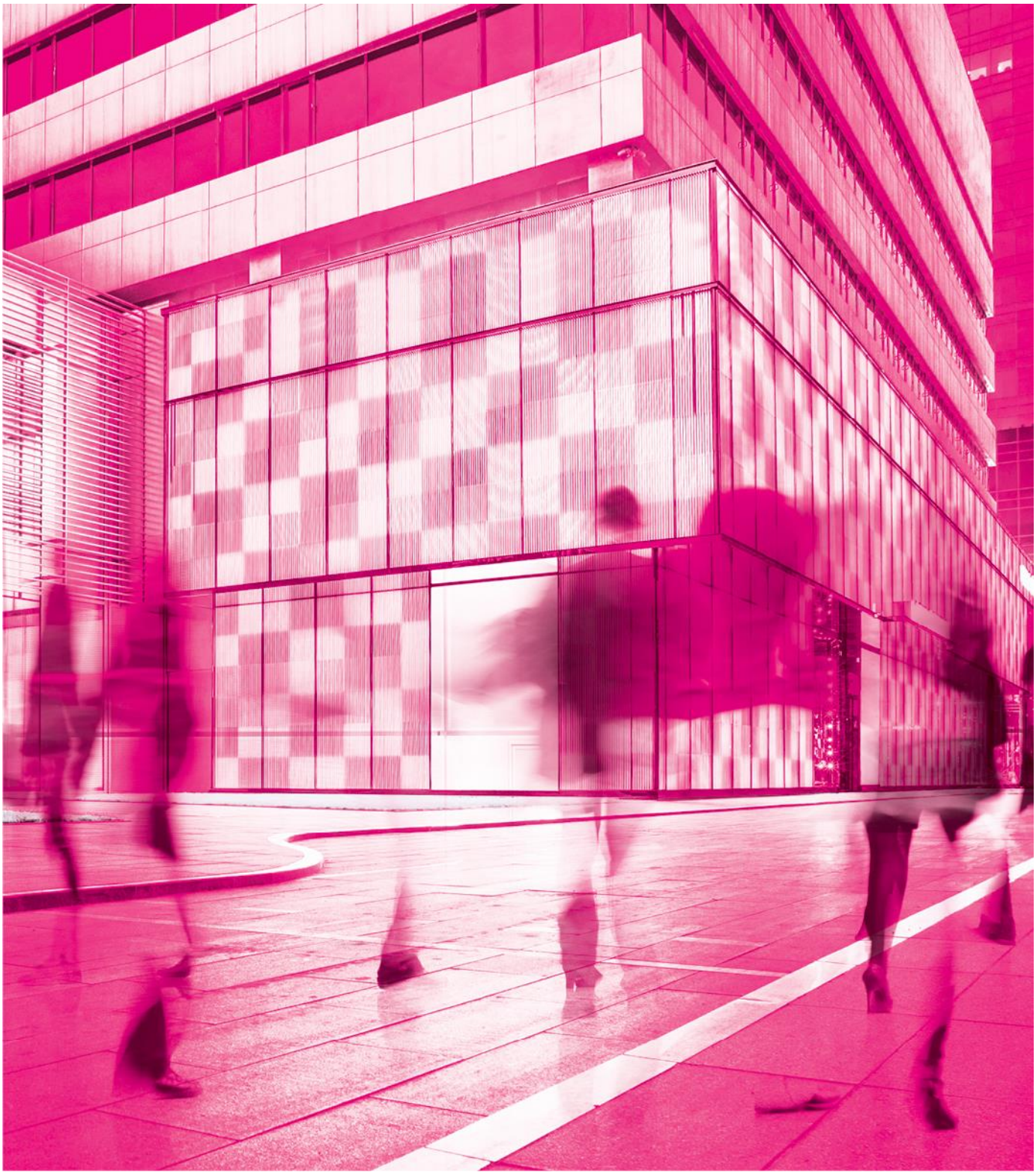


Green Travel Plan;

Mosman High School

For SINSW

8th June 2021

parking;
traffic;
civil design;
wayfinding;

ptc.

Document Control

Mosman High School, Green Travel Plan

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1. Introduction

ptc. has been engaged by Schools Infrastructure New South Wales (SINSW) to prepare a Green Travel Plan (GTP) for the proposed redevelopment of Mosman High School, located at 745 Military Road. The redevelopment involves the uplift of the current capacity of 1,116 Year 7-12 students to 1,200 students by 2031. The increased capacity will be achieved through the construction of a new school building including associated core infrastructure, new outdoor play areas, roof top play areas and associated landscaping works.

The location of the subject site is outlined in Figure 1.

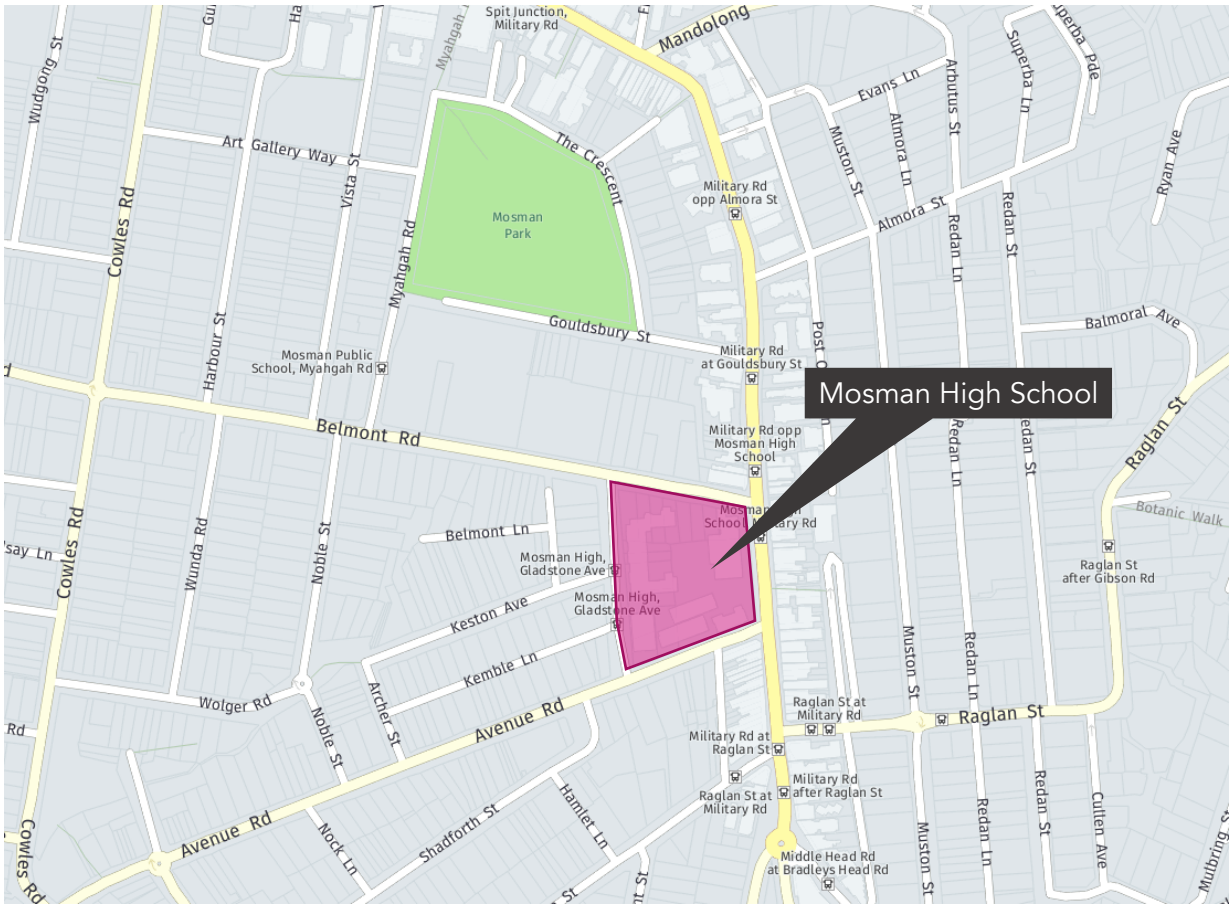


Figure 1 - Site Location (Source: Google Maps)

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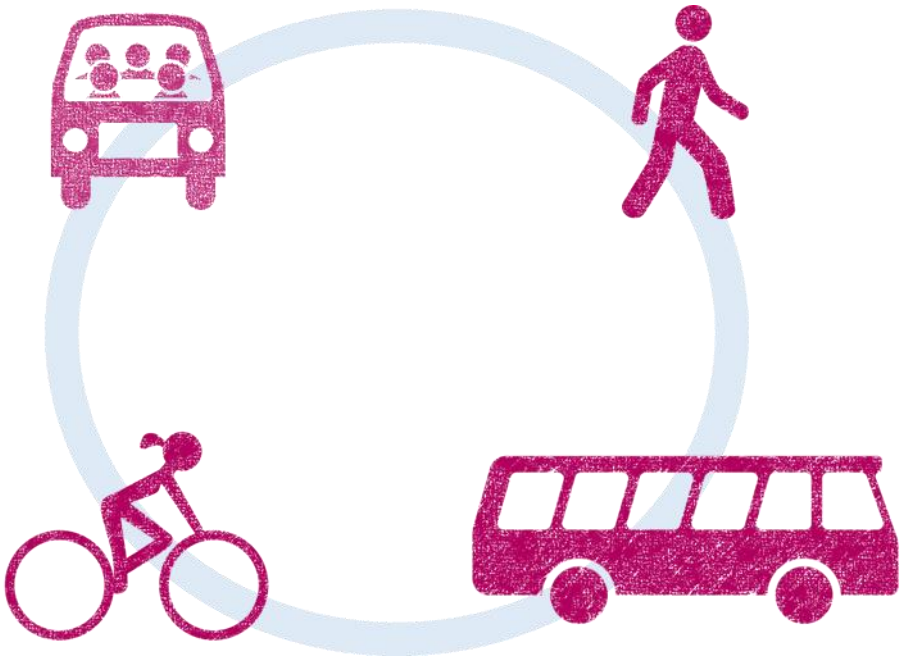
The scope of the proposed works for the subject SSDA include:

- Demolition of Building B, Building C and part Building E;
- Removal of existing sports court and surrounding retaining walls and nominated trees;
- Construction of a new part 3/ part 4 storey building plus lift overrun and net enclosure to rooftop multi-court (Building G) on the corner of Military Road and Belmont Road providing:
    - administration and staff facilities;
    - multipurpose gym/hall;
    - library;
    - canteen facilities;
    - general and senior learning units;
    - science learning unit;
    - health / PE and performing arts unit; and
    - learning and admin support unit.
- Associated landscaping works including new outdoor play areas, a rooftop play space and rooftop multi-purpose court; and
- Relocation of the main pedestrian entrance from Military Road to Belmont Road.

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2. Background

2.1 Purpose of the Plan



This document identifies the following:

- Review of existing public transport infrastructure and future transport options;
- Assessment of existing travel patterns within the area;
- A modal share target for the development;
- A framework to identify and respond to travel demand from the development and surrounding area;
- Strategies to implement prior and during occupancy; and
- The monitoring strategy to track performance of the GTP.

2.2 Government Policy

In order to prepare a state significant development application, the Secretary's Environmental Assessment Requirements (SEARs) need to be met. The requirement below directly relates to the Green Travel Plan which accompanies the development proposal.

- Details of travel demand management measures to minimise the impact on general traffic and bus operations, including details of a location-specific sustainable travel plan (Green Travel Plan) and the provision of facilities to increase the non-car mode share for travel to and from the site.

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3. Green Travel Plan

3.1 What is a Green travel Plan?

A GTP is a document which outlines how a development intends to make travel to and from the site safer and more sustainable. The GTP addresses local traffic issues around the site and encourages active, safe and sustainable travel methods, such as walking, cycling, scooting, public transport or car sharing. A GTP correlates with the development's overall aspirations and is a document that is monitored and reviewed regularly.

A GTP is not just the installation of bike racks or provision of end-of-trip facilities. A good GTP aims to promote and maximise the use of more sustainable modes of travel via a range of actions, promotional campaigns and incentives. The plan includes site management tools that encourage students, staff and visitors to make more sustainable transport choices. A GTP requires ongoing implementation, monitoring and review. As such, nominating an individual or a team to oversee the implementation of a travel plan is a crucial component of success.

An effective GTP can offer many benefits such as reduced parking costs, less congestions on the public road networks, health and environmental benefits which generally results in healthier and happier students and staff.

3.2 Why is a Green Travel Plan required?

Development of a Travel Plan is widely accepted as one of the best ways to increase active travel around the site. A successful GTP offers many benefits for the staff, students and visitors, including:

- Building confidence and improving social interaction by walking and/or cycling;
- Assists in implementation of health, fitness and wellbeing programs;
- Improving social interaction with others to be more interested and involved within the precinct as they walk or cycle;
- Improving safety by reducing traffic and local road congestion;
- Improving the environment by reducing air pollution from private vehicles;
- Creating opportunities for healthier lifestyles and more vibrant, cohesive and accessible communities; and
- Providing individuals with leadership opportunities.

It is likely that students, staff and visitors with good understanding of an active and sustainable mode of transport will follow a healthy and active lifestyle, care about the environment and prioritise location and lifestyle over car ownership.

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3.3 The purpose of a Green Travel Plan

The purpose of the GTP is to provide a package of measures with the aim of promoting and reducing the reliance of private car usage. Strategies are recommended to encourage and support the uptake of daily travel methods in a more sustainable way. This may be achieved through the review of existing policies and identifying programmes to encourage students, staff and visitors to adopt more active and sustainable forms of transport.

This document identifies the following:

- Review of existing public transport infrastructure and future transport options;
- Assessment of existing travel patterns within the area;
- A modal share target for the development;
- A framework to identify and respond to travel demand from the development and surrounding area;
- Strategies to implement prior and during occupancy; and
- A monitoring strategy to track performance of the GTP

The GTP is intended to contain information for the management of the development, SINSW. It contains strategies to achieve the sustainable transport targets established in the document and does not directly communicate to users of the development. However, this information is envisioned to be passed onto students, staff and visitors by SINSW via different measures recommend in the action plan. Subsequently, the flow of information resulting from the aforementioned intentions of this document is illustrated in Figure 2 below.

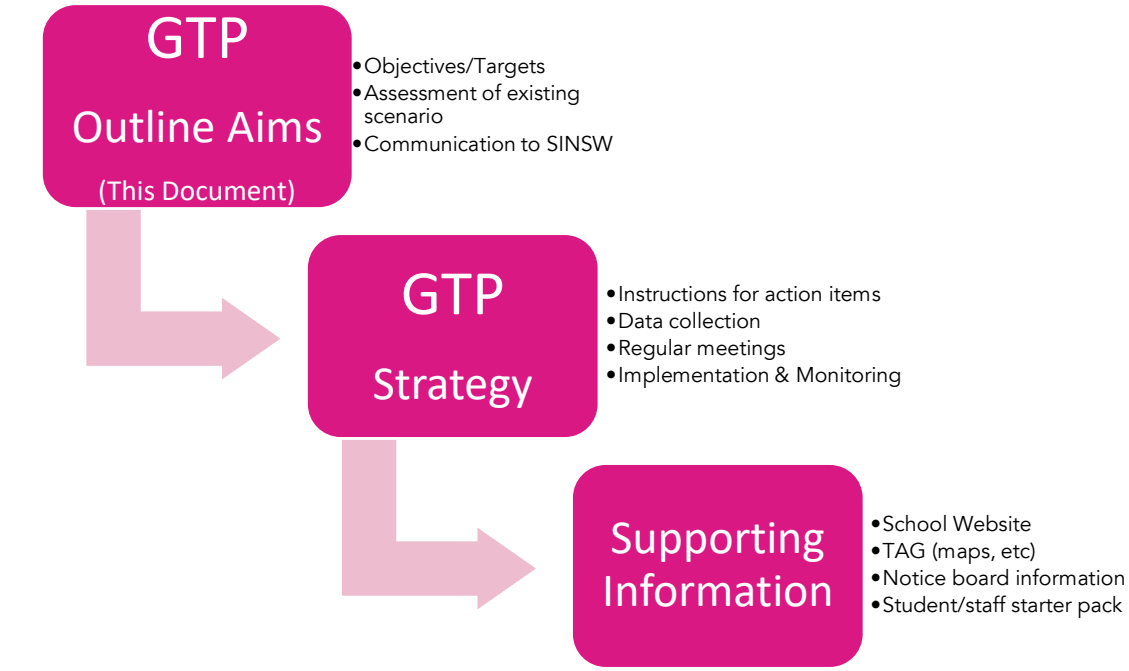
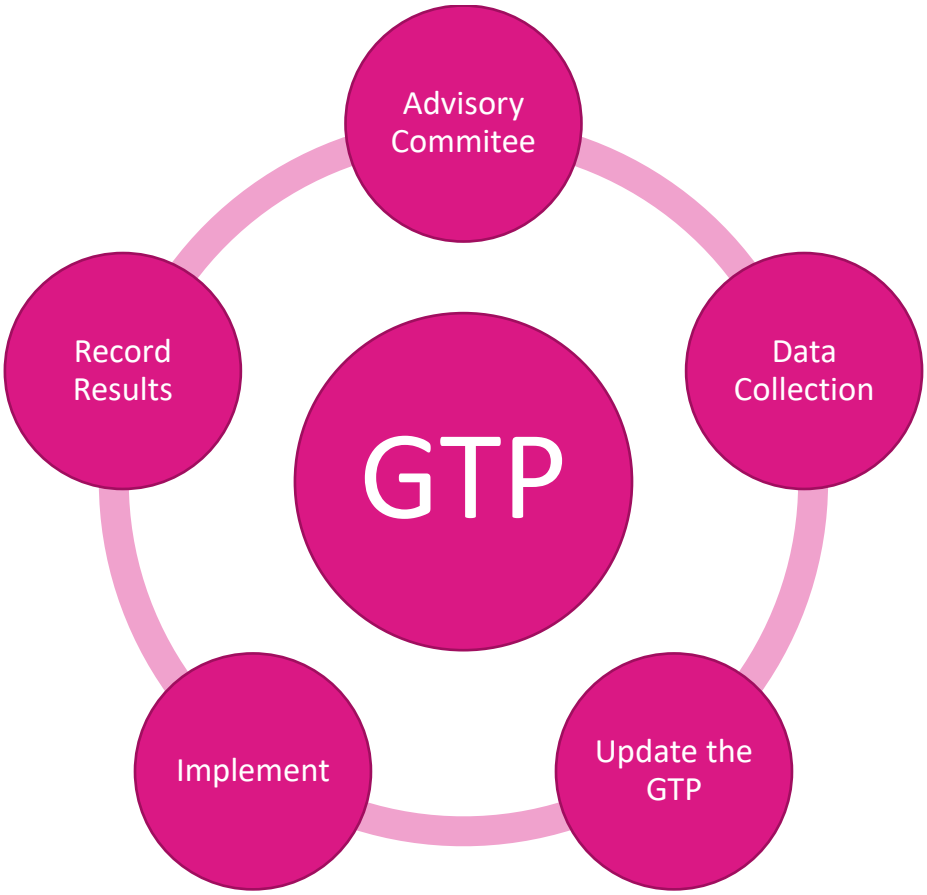


Figure 2 - Flow of information of the GTP

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4. Steps to develop the Green Travel Plan

To develop a GTP, there are five key steps to follow to commence its operation:



4.1 Step 1 – Set up a Travel Plan (TP) Coordinator and an Advisory Committee

- Appoint an individual to coordinate specific actions and to track the progress of this work;
- Develop a working group that involves representatives including staff and parents (P&F Committee)
- Identify ways how the whole community will be involved and informed of the work (e.g. regular articles in the precinct website/ social media)
- Discuss the involvement of the school in the Travel Plan with the principal
- The cost of the TP Coordinator should be equivalent to that of a part time role of 4-8 hours a fortnight.

4.2 Step 2 – Data Collection & Review Existing Situation

As part of the redevelopment of the school, there will be an influx in new students and staff travelling to and from the site on a daily basis. It is anticipated that the new commuters will adopt a similar travel mode split to the existing staff and students. However, to verify travel behaviours an initial survey should be conducted to identify travel behaviour. This is recommended to be conducted as an online survey (e.g. Survey Gizmo). The results would assist with developing travel planning schemes and how existing facilities are able to improve around the site area and beyond.

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4.2.1 Staff & Student Questions

As a minimum the following questions should be considered:

- Are you a staff member, student, or visitor of the site?
- What is the postcode of your place of residence?
- How do you currently travel to work / school and what is the distance of travel?
    - Walk/run
    - Bicycle
    - Bus
    - Train
    - Combination of bus and train
    - Car (Driver)
    - Car (Passenger)
    - Other _____
- If you drove, please answer the following:
    - Did you park on site today? If so where?
    - Did you park on-street? If so where?
- Were you dropped off by private vehicle? If so where?
- What time do you usually arrive at the school in the morning and how long is the trip?
- What time do you leave the school in the afternoon and how long is the trip?
- Is your residence in an area not serviced by any of the identified transport options?
- Do you need to drive to work for another reason? Why and how often does this occur (e.g. dropping off or collecting children from school/childcare, shopping on the way home, etc.)

4.2.2 Additional Questions

- Have you heard of car share? Do you know where the nearby car share locations are? If yes, would you use it?
- If not, what are the barriers to you using car share to travel to and from the school?
- What would make you consider using car share as a form of transportation?
- If you would like to take part in walk/cycle groups and/or carpooling please specify which group, contact details (email) and postcode below.
- Do you have any suggestion/recommendations to encourage sustainable modes of transport?

Once the survey findings are available, methods to achieve specific targets will be identified with proposed time frames. This could include adopting strategies outlined in Section 7, which is undertaken by the

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Advisory Committee. These methods and targets are then available for monitoring by SINSW (refer to Section 7.3)

4.3 Step 3 – Prepare the Travel Plan

The travel plan is a document intended to include information for the TP Coordinator and SINSW to communicate to the respective attendees of the development. The document should include instructions on how to undertake these via recommended strategies and a respective action plan.

Based on the data, an overall vision on the modal travel should be considered with clear objectives. The GTP should be prepared based on those objectives, notably:

- Build a precinct culture that supports active travel by motivating and encouraging the user to get involved;
- Set specific SMART (Specific, Measurable, Achievable, Relevant, Timed) targets;
- Develop an action plan that lists activities and strategies that eliminates the community's barriers to active travel to meet the objectives;
- Estimate the budget required to meet the objectives, identify funding source and develop implementation strategies; and
- Review and consult with SINSW.

4.4 Step 4 – Deliver & Implement

Once the GTP is developed and launched, regular monitoring (every 12 months) is required by SINSW as part of the implementation strategy. This is to be done with an appointed TP Coordinator who is employed by the school.

4.5 Step 5 – Recognise Process

The successes of the GTP should be celebrated regularly, for example at key events. The plan should regularly be reviewed and include new ideas, targets and benchmarks. This should be undertaken by the SINSW and the TP Coordinator.

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5. Local Transport Infrastructure

The locality has been assessed in the context of available forms of transport that may be utilised by prospective students, employees and visitors. When defining accessibility, the NSW Guidelines to Walking & Cycling (2004) suggests that 400-800m is a comfortable walking distance when considering the distance to public transport, which equals a 5-10 minute walk. SINSW defines 1.2km distance, which equals a 15 minute walk as acceptable. The comfortable cycling distance is defined by the Guide to be between 800m-1.5km, which equals a 5-10 minute cycle. SINSW considers distances up to 3.6km as acceptable for cycling.

5.1 Existing Active Transport Infrastructure

5.1.1 Pedestrian Infrastructure

Pedestrian walking catchments as defined above are shown in Figure 3.



Figure 3 - Walking catchment map

The pedestrian network in the locality of the School has been assessed to provide a reasonably high level of amenity. These amenities include raised pedestrian crossings adjacent to the intersections of Military

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Road/Avenue Road and Belmont Road/Gladstone Avenue as well as signalised pedestrian crossings on each of the approach arms of the Military Road/Belmont Road intersection, which facilitate pedestrian movements across Military Road.

However, students walking eastbound towards the school along Avenue Road will experience inconvenience when attempting to cross the road to reach the closest entrance off Gladstone Road due to a lack of pedestrian crossing. Students will therefore either need to travel an additional 150 m to use the front entrance off Military Road, or they may decide to jay walk which will create safety issues. As discussed later in Section 7.2.1, it is recommended to investigate the implementation of a zebra crossing at Gladstone Avenue to increase pedestrian safety. For this to happen, discussion with TfNSW and Council will be required.

It is acknowledged that Mosman has a hilly topography, which can potentially deter some students from walking.

The footpath along Military Road is 3.5m wide and footpaths along all other bounding roads are between 1.2m and 1.8m wide.

Figure 4 shows the surrounding pedestrian amenities.



Figure 4 - Local pedestrian amenities

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5.1.2 Cycling Infrastructure

The surrounding locality within the vicinity of MHS comprises predominantly on-road marked cycle routes as shown in Figure 5. The on-road cycle paths extend across the Mosman LGA, providing connection to Spit Junction, Clifton Gardens, Balmoral and Georges Heights. These routes are mostly along low-volume residential roads and are considered acceptable for high school students.

It is acknowledged, however, that Military Road extends along a downward slope towards the Taronga Zoo Wharf, which may mean that cycling as a mode of transport would be influenced by the residential location of students and staff and their ability to ride across steep terrain in some areas.

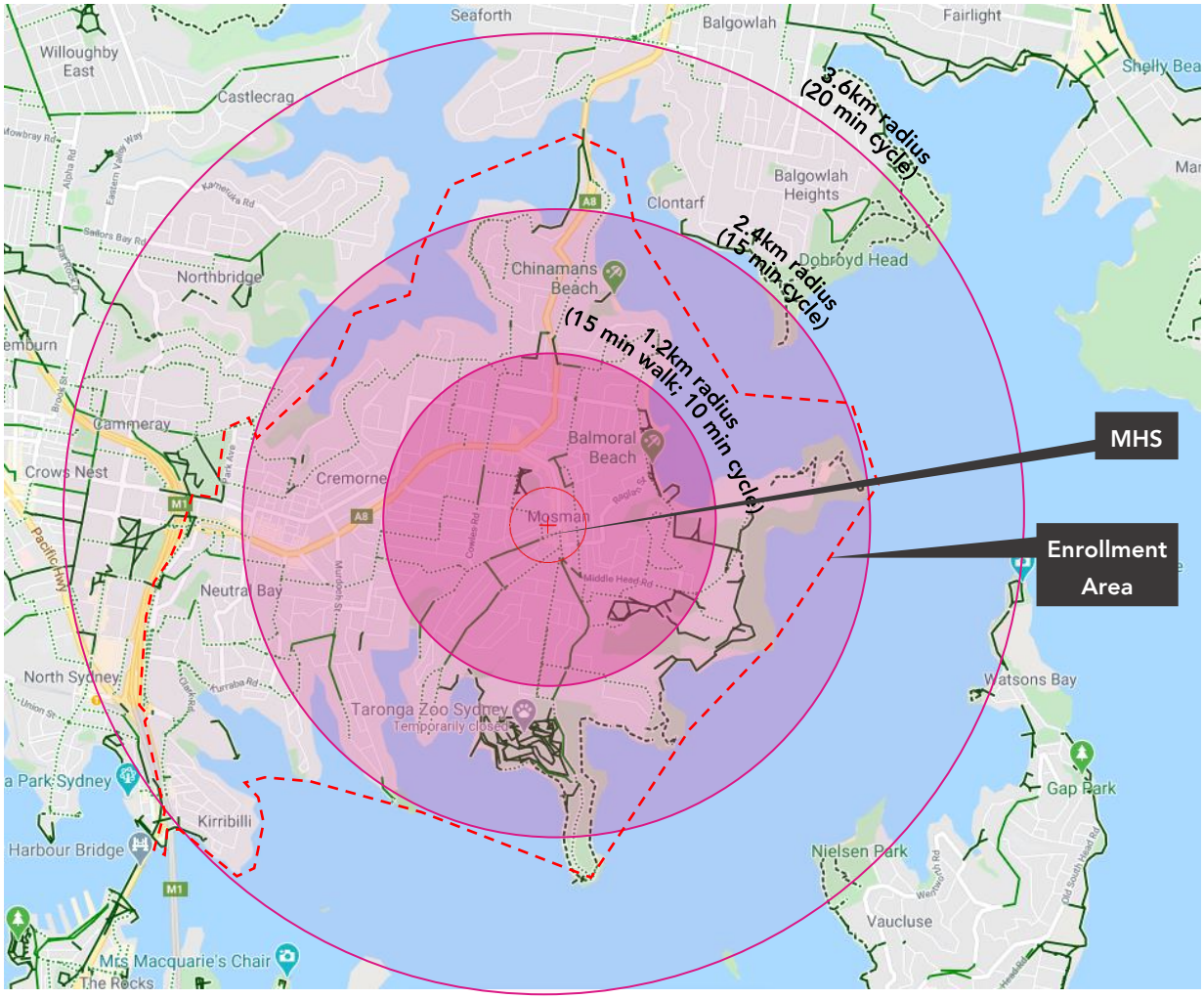


Figure 5 - Cycling catchments (Source: Google Maps)

It is also noted that, while bicycle routes have been implemented, the vast majority of them are on-road, which is not considered to be a safe option for students. While a shared arrangement is acceptable on quiet residential streets, Belmont Road, Avenue Road or Military Road should provide physically separated bicycle lanes to offer a safe active travel option.

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5.2 Future Active Transport Infrastructure

Mosman Municipal Council encourages students, staff and visitors to cycle within the Local Government Area (LGA). In 2014, a Bike Plan was published and the plans identify a number of goals and strategies to provide improved connections and accessibility through the LGA's suburbs, centres and open spaces. The Bike Plan took a 5 year span into consideration and at the time of writing this report no updated plans have been found. The primary objectives of the bike plan were to:

- Make cycling in Mosman safer;
- Encourage local residents to cycle;
- Reduce traffic congestion, pollution, noise and road maintenance costs;
- Implement bicycle infrastructure works with no loss of parking and at a low cost to Council; and
- Strategically plan works that contribute to the bicycle network, so the money is spent effectively and efficiently.[1]

Figure 6 shows both the existing and proposed in 2014 cycling infrastructure within Mosman.

It is important that cycling connections are consistently improved to increase options for students and staff to commute safely to the school. Although the cycle routes are of abundance and most of the proposed upgrades have been implemented, it should be noted that there are some connections missing within the 400m radius of the school. An expansion along Belmont Road should be considered to improve connections to the west. There is also a missing segment along Military Road south of the school, which should be implemented to avoid safety issues and detours for cyclists travelling from the south.

It is also noted that, while bicycle routes have been implemented, the vast majority of them are on-road, which is not considered to be the safest option for students. While a shared arrangement is acceptable on quiet residential streets, Belmont Road, Avenue Road or Military Road should provide physically separated bicycle lanes to offer a safe active travel option.

Further relevant planning provisions, goals and strategic planning objectives have been explored in the following documents:

- Future Transport Strategy 2056;
- State Infrastructure Strategy 2018-2038: Building the Momentum;
- Sydney's Cycling Future 2013; and
- Sydney's Walking Future 2013.

The relevant information in relation to Mosman High School has been extracted and it includes:

- Future Transport Strategy 2056 explores future active transport infrastructure in relation to Greater Sydney which includes Mosman LGA. Future Transport Strategy 2056 aims to provide "*local corridors that support walking and cycling, to connect people with their nearest centre and transport interchange", "where people can access the jobs, education and services they need within 30 minutes by active transport".*

[1] Mosman Municipal Council Bike Plan 2014 - 2019

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- State Infrastructure Strategy 2018-2038: Building the Movement appears to explore opportunities at a high level. " *The NSW Government has set a new vision for growing Greater Sydney based on a metropolis of three cities: the established Eastern Harbour City, the developing Central River City and emerging Western Parkland City centred around the new Western Sydney Airport. Each city will have its own unique identity and endowments, and the infrastructure needed for each must be planned to optimise its liveability, productivity and sustainability."* This document does not explore any specific future active transport infrastructure within the Mosman LGA.
- Sydney's Cycling Future 2013 explores the cycle connections between the Naremburn Cycleway and the Sydney Harbour Bridge. The provision of safe and separated cycle connections in North Sydney, Willoughby, Chatswood and Mosman are to be developed in the longer term. There are no further details for the suburb of Mosman.
- Sydney's Walking Future 2013 explores improvements to infrastructure at a high level and focuses *"on completing connections within two kilometres of centres and public transport interchanges [which] will make walking a better option for these short trips, freeing up capacity on the transport network for those who need to travel further".* This document does not explore any specific future active transport infrastructure within the Mosman LGA.

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Figure 6 - Cycling Infrastructure within Mosman (Source: Proposed and existing routes in Mosman, 2014-2019)

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5.3 Existing Public Transport Infrastructure

Within the radius of 400m walking distance from the school, there are many local bus services operating along Military Road. They provide connectivity within the suburb of Mosman and to the Sydney CBD and the northern beaches.

The available public transport options such as buses and trains within comfortable walking distance are shown in Figure 7.

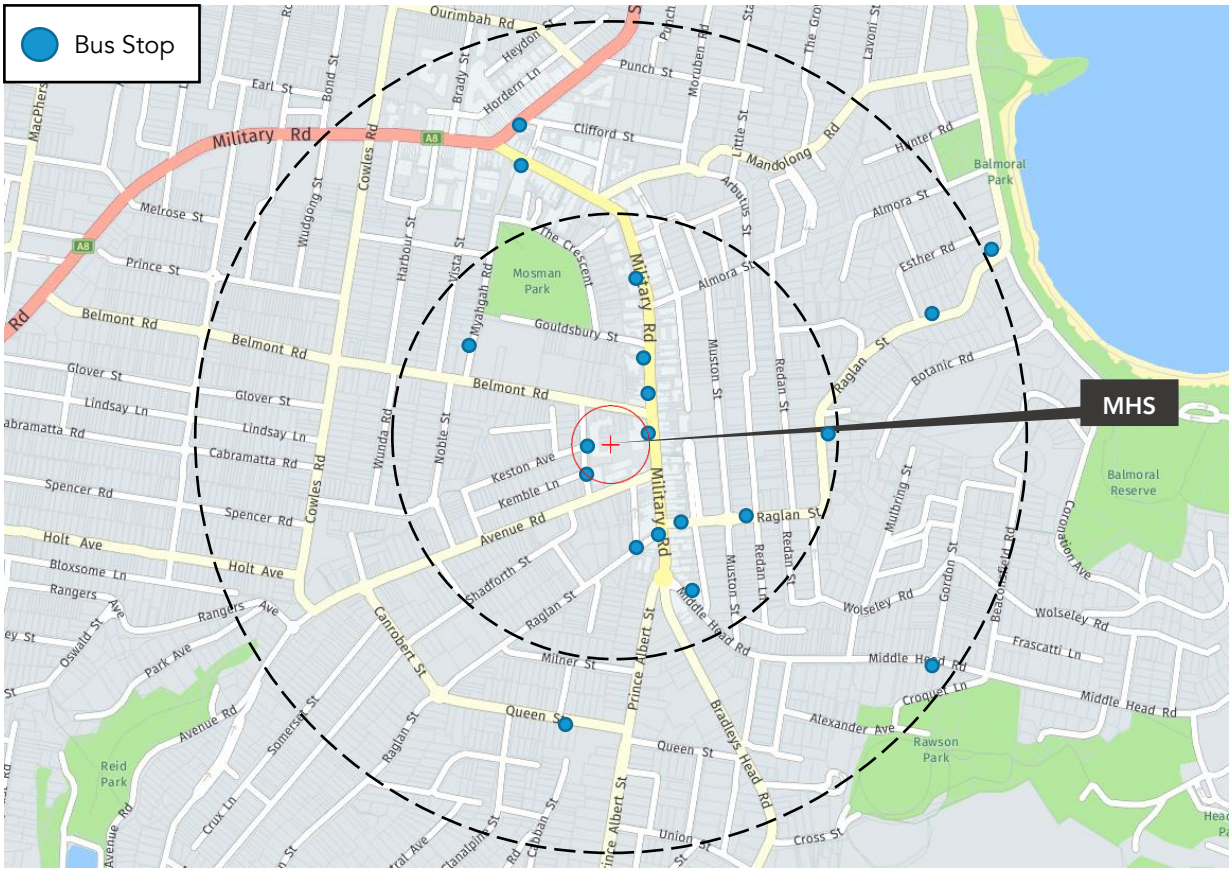


Figure 7 - Public Transport Accessibility Map

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5.3.1 STA Bus Services

The review indicates that the most easily available public transport mode is via bus, with numerous services operating along Military Road providing connectivity to the Sydney CBD and the northern beaches. The closest public bus stop is located immediately adjacent to the school on Military Road.

A map of the existing bus network is illustrated in Figure 8.

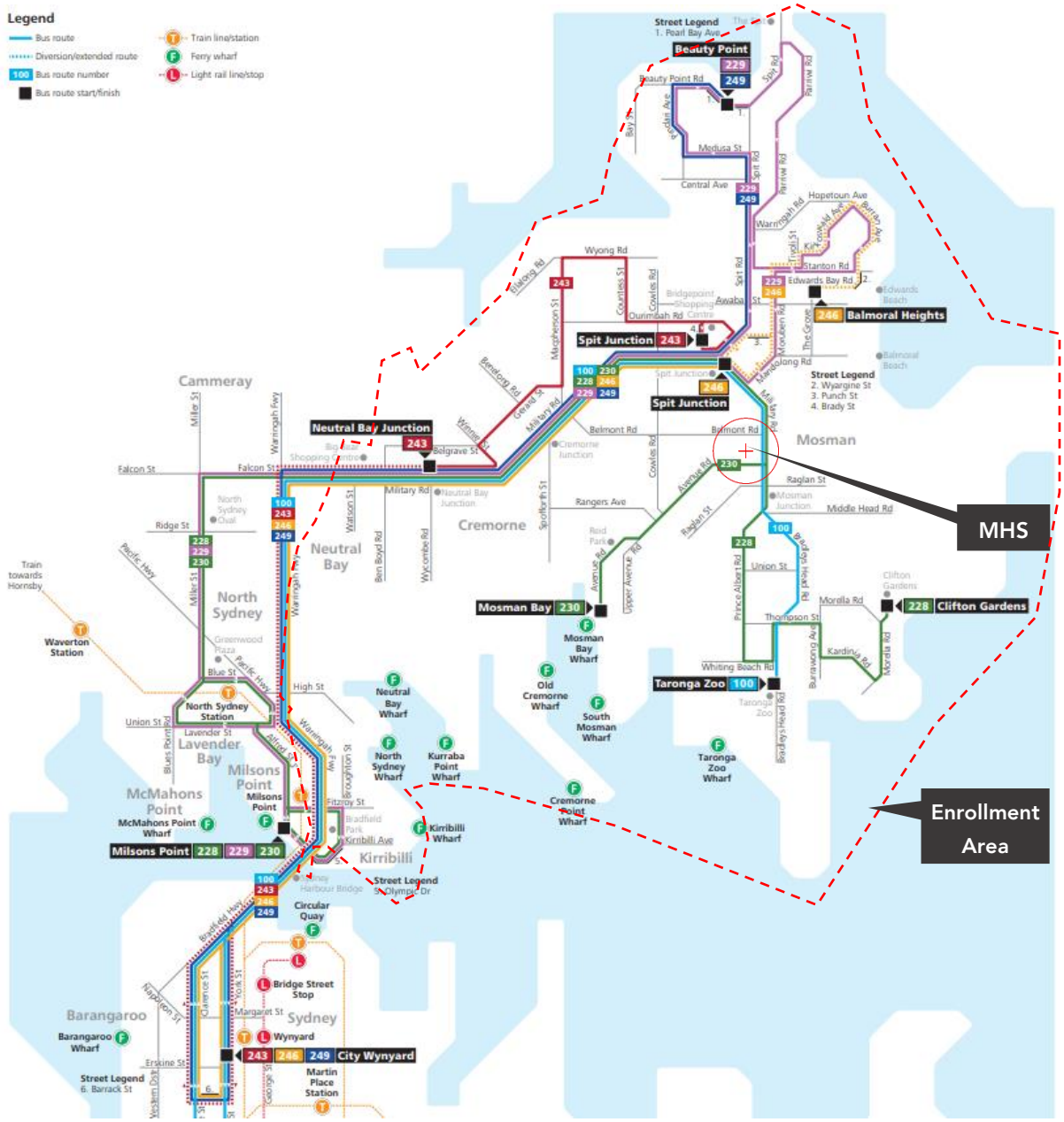


Figure 8 - Bus Network Map (Source: Transport for NSW, 2018)

Based on the frequency of services and the number of routes operating within the vicinity of MHS, the school is considered to be generally well connected via bus for staff who live outside of Mosman. However, some students would need to change buses, which is inconvenient and therefore public transport may not be an attractive travel mode. Therefore, an analysis of a 1-seat trip journey to and from the school has been undertaken.

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A 1-seat trip involves no interchanges and is typically the most convenient way to travel on public transport. Figure 9 shows the 1-seat trips for public bus routes within the enrolment catchment, together with the 2.0 km SSTS exclusion zone. As shown, the majority of the school's enrolment catchment area is within this exclusion zone, meaning that most of the students are not eligible for free or discounted public transport (63% of all students and 71% of students living within the enrolment area).

In regard to the network of services offering a 1-seat trip, the buses provide a wide coverage of the southern and eastern parts of the catchment area. These buses are convenient for students living around close to the end stations of buses 100, 111, 114, 228 and 230 considering the hilly topography of Mosman. The north and west sections are not serviced at all by 1-seat trip routes, meaning that students are more likely to choose private transport as a means of getting to and from school.

Sections of the western enrolment area are outside of the SSTS exclusion zone hence allowing students to acquire benefits to the price of opal fares. However, there are no direct buses between this area and the school. This is seen as a gap, and it would be recommended to provide new bus routes if these students are to choose buses over less sustainable forms of transport.

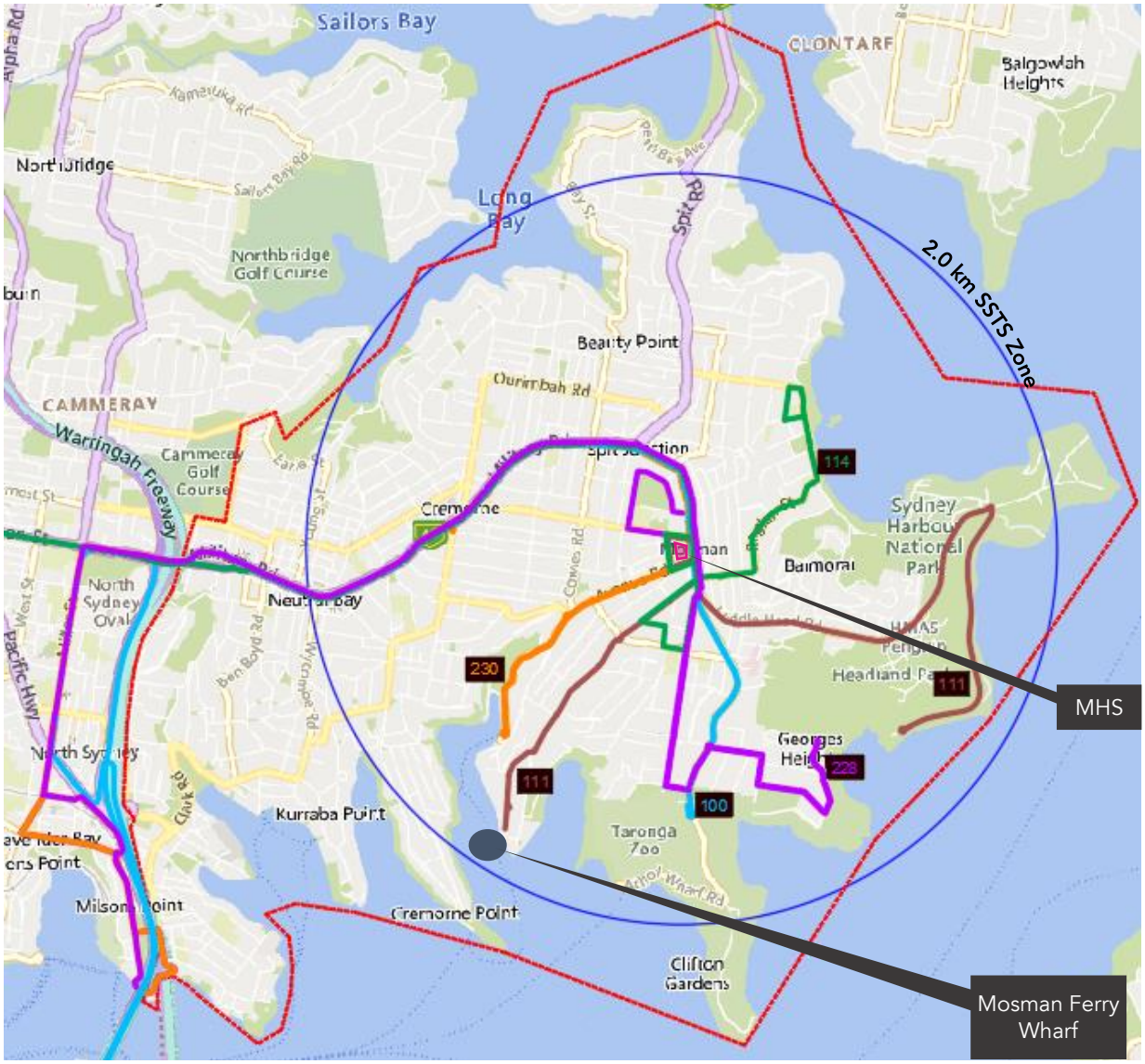


Figure 9 - 1-seat trip bus routes within school catchment area

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A summary of the existing public bus frequencies and services operating from the bus stop adjacent to MHS offering the 1-seat trip is outlined in Table 1.

Table 1 - Summary of Public Bus Services

Route No.	Frequency (approximate)	Coverage	Bus Stop	Walking Distance to Bus Stop	Frequency AM Peak	Frequency PM Peak
114	Once a day	Balmoral to Royal North Shore Hospital	Stop ID: Gladstone Avenue near Mosman High, Mosman - 208867	25m	8:28am	
	Services every 2-30 min from 5:51am to 12:33am on weekdays	Royal North Shore Hospital to Balmoral	Stop ID: Mosman High School, Military Road - 208864	45m	7:36am, 7:38am, 7:43am, 7:52am, 8:02am, 8:06am, 8:11am, 8:21am, 8:31am, 8:36am, 8:41am, 8:47am, 8:51am, 9:00am, 9:01am, 9:11am, 9:24am, 9:31am	2:30pm, 2:41pm, 2:50pm, 2:59pm, 3:11pm, 3:16pm, 3:31pm, 3:37pm, 3:51pm
		Balmoral to Royal North Shore Hospital	Stop ID: Military Road opposite Mosman High School - 208847	110m	7:36am, 7:38am, 7:43am, 7:52am, 8:02am, 8:06am, 8:11am, 8:21am, 9:00am	2:30pm, 2:41pm, 2:50pm, 2:59pm, 3:11pm, 3:16pm, 3:31pm, 3:37pm
230	Services every 2-30 min from 5:22am to 12:42am on weekdays	Mosman Wharf to Milsons Point via North Sydney	Stop ID: Mosman High School, Military Road - 208864	45m	7:38am, 7:40am, 7:44am, 7:51am, 7:55am, 7:59am, 8:10am, 8:14am, 8:21am, 8:25am, 8:37am, 8:40am, 8:44am, 8:51am, 8:58am, 9:08am, 9:10am, 9:18am, 9:28am	2:40pm, 2:58pm, 3:10pm, 3:28pm, 3:39pm, 3:43pm
		Milsons Point to Mosman Wharf via North Sydney	Stop ID: Avenue Road at Carney Lane - 2088162	60m	7:41am, 7:56am, 8:11am, 8:26am, 8:41am, 9:11am	2:41pm, 3:12pm, 3:37pm
111	Once a day	Chowder Bay to South Mosman Wharf	Stop ID: Gladstone Avenue near Mosman High, Mosman - 208867	25m	8:40am	

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Route No.	Frequency (approximate)	Coverage	Bus Stop	Walking Distance to Bus Stop	Frequency AM Peak	Frequency PM Peak
	Services every 12-60 min from 5:22am to 8:27pm on weekdays	Chowder Bay to South Mosman Wharf	Stop ID: Military Road at Raglan Street - 208863	176m	7:44am, 7:56am, 8:18am, 8:41am, 8:49am, 9:19am, 9:24am	2:49pm, 2:57pm, 3:19pm, 3:26pm, 3:49pm, 3:56pm
		South Mosman Wharf to Chowder Bay	Stop ID: Military Road at Raglan Street -208863	176m	7:44am, 7:56am, 8:18am, 8:41am, 8:49am	2:49pm, 2:54pm, 3:19pm, 3:26pm, 3:56pm
100	Services every 4-20 min from 5:06am to 12:54am on weekdays	Taronga Zoo to City QVB	Stop ID: Mosman High School, Military Road - 208864	45m	7:31am, 7:36am, 7:40am, 7:44am, 7:48am, 7:52am, 7:57am, 8:02am, 8:07am, 8:12am, 8:17am, 8:22am, 8:27am, 8:32am, 8:38am, 8:44am, 8:49am, 8:54am, 9:00am, 9:06am, 9:11am, 9:17am, 9:22am, 9:26am	2:32pm, 2:40pm, 2:48pm, 2:58pm, 3:08pm, 3:18pm, 3:26pm, 3:36pm, 3:43pm, 3:51pm, 4:00pm
		City QVB to Taronga Zoo	Stop ID: Military Road opp Mosman High School - 208848	110m	7:26am, 7:35am, 7:44am, 7:54am, 8:02am, 8:12am, 8:22am, 8:32am, 8:41am, 8:51am, 9:01am, 9:11am, 9:21am, 9:30am	2:37pm, 2:45pm, 2:53pm, 3:01pm, 3:09pm, 3:18pm, 3:27pm, 3:35pm, 3:43pm, 3:50pm, 3:55pm, 4:01pm
228	Limited to 5-7 services per day	Clifton Gardens to Milsons Point	Stop ID: Military Road at Raglan Street - 208863	45m	7:23am, 8:08am, 8:29am	3:23pm, 4:17pm,
		Milsons Point to Clifton Gardens	Stop ID: Military Road near Belmont Rd (opposite Mosman High School – 208847)	110m	8:29am	3:23pm, 4:17pm

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5.3.2 School Bus Services

MHS is serviced by several school bus services, some of which stop at the bus zone along Gladstone Avenue. At the beginning of Year 7 students receive a "Travel Kit" prepared by the school. It entails an A4 page with the summary of bus services and the timetable, as well as a generic information brochure about the Opal Card. However, it is noted that no travel information is provided on the school's website. Also, as discussed above, the majority of students do not qualify for the discounted or free public transport travel.

Figure 10 shows a summary of the school bus services for Mosman High School and Table 2 and Table 3 show the coverage of school buses within the enrolment catchment and their arrival times. The school bus timetables have been provided by TfNSW on 2nd June 2021.

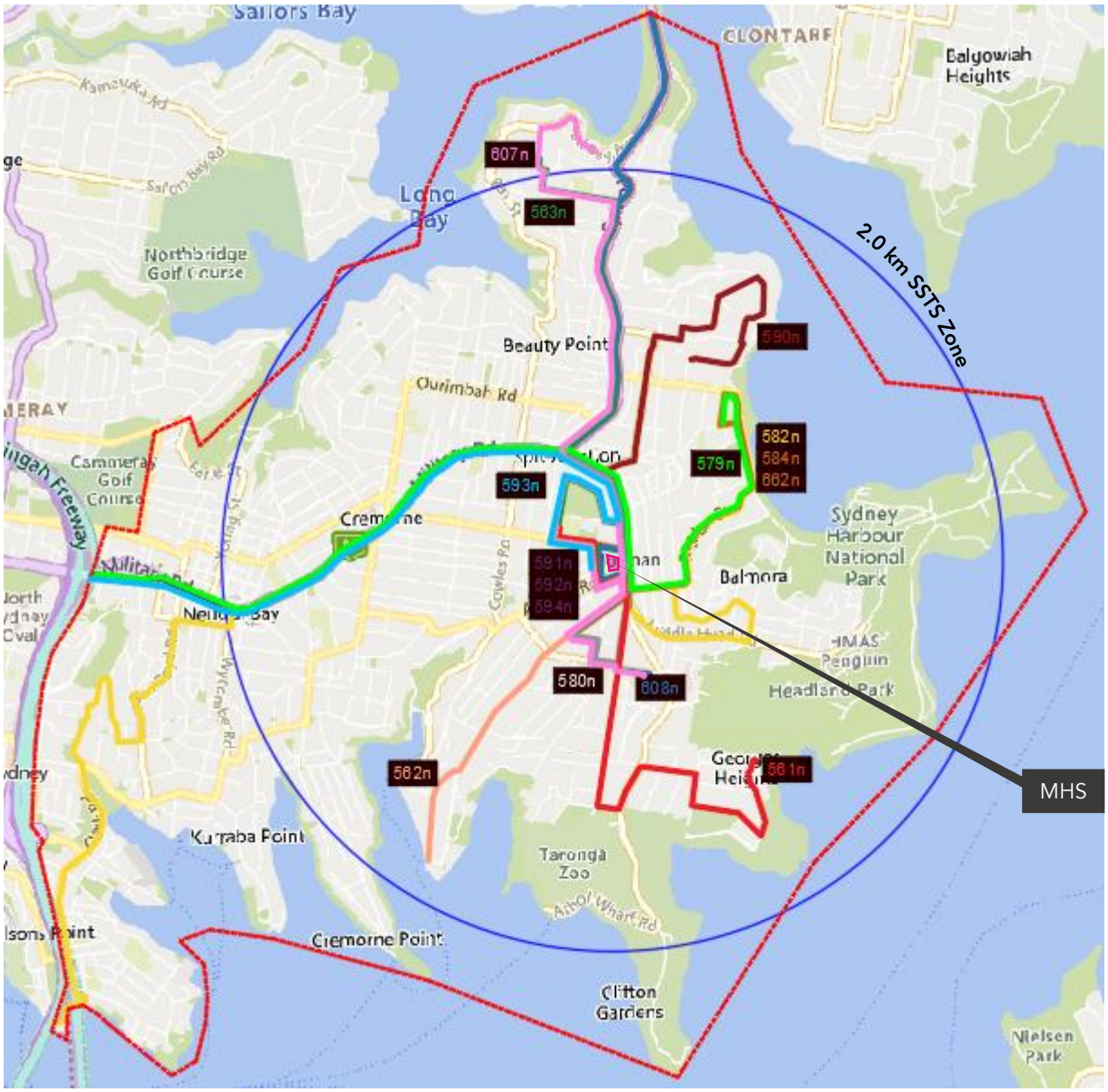


Figure 10 - 1-seat trip school bus routes within school catchment area

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Table 2 - Summary of School Bus Services – AM Peak

Route No.	Coverage	Bus Stop	Walking Distance to Bus Stop	Frequency AM Peak
579n	Chatswood Station to Queenswood	Stop ID: Raglan Street opposite Martens Lane – 208872	126m	7:56am
580n	Castlecrag to Mosman Prep. School	Stop ID: Military Road opposite Mosman High School – 208847	58m	8:16am
593n	Chatswood to Mosman High	Stop ID: Mosman High, Gladstone Avenue - 208865	25m	8:25am
563n	Pindari Avenue and Euryalus Street to Mosman High School	Stop ID: Gladstone Avenue near Mosman High, Mosman - 208867	25m	8:33am

Table 3 - Summary of School Bus Services – PM Peak

Route No.	Coverage	Bus Stop	Walking Distance to Bus Stop	Frequency PM Peak
562n	Mosman Public to Mulgrave Street Wharf	Stop ID: Gladstone Avenue near Mosman High, Mosman - 208867	25m	3:21 pm
591n	Mosman High to Lane Cove Shops	Stop ID: Gladstone Avenue near Mosman High, Mosman - 208867	25m	3:24pm
594n	Mosman High to Milsons Point	Stop ID: Gladstone Avenue near Mosman High, Mosman - 208867	25m	3:24pm
608n	Blessed Sacrament to Seaforth	Stop ID: Gladstone Avenue near Mosman High, Mosman - 208867	25m	3:24pm
561n	Mosman Public to Clifton Gardens	Stop ID: Gladstone Avenue near Mosman High, Mosman – 208868	25m	3:24pm
607n	Blessed Sacrament to Beauty Point	Stop ID: Gladstone Avenue near Mosman High, Mosman – 208865	25m	3:29pm
592n	Mosman High to Chatswood Station	Stop ID: Gladstone Avenue near Mosman High, Mosman – 208868	25m	3:34pm
580n	Castlecrag to Mosman Prep. School	Stop ID: Military Road opposite Mosman High School – 208847	110m	3:35pm
662n	Queenwood School to Avalon	Stop ID: Gladstone Avenue near Mosman High, Mosman – 208865	25m	3:42pm
582n	Queenwood to Milsons Point	Stop ID: Gladstone Avenue near Mosman High, Mosman – 208865	25m	3:43pm
590n	Mosman Junction to Balmoral Heights	Stop ID: Gladstone Avenue near Mosman High, Mosman – 208865	25m	3:45pm
584n	Queenwood to Warringah Mall	Stop ID: Gladstone Avenue near Mosman High, Mosman – 208865	25m	3:45pm

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The existing school bus routes provide coverage within the catchment area primarily south and east of the school. Most of the bus routes are directed through Military Road and Split Road. There is a lack of routes which go through local roads north and west of the school.

It is noted that currently the bus stop located on Gladstone Avenue is too short as the scheduled buses queue along Gladstone Avenue while blocking a travel lane. This is seen as a safety issue, as visibility is reduced and drivers may undertake hazardous manoeuvres. It is therefore recommended that the current parking restrictions be amended to provide a longer bus bay.

Another option would be to investigate the possibility of amending the bus schedules. As shown in Table 3, four buses are scheduled to leave the school at 3:24pm, with other buses just 3-5 minutes before / after, but only one or two buses at times before or thereafter. An even spread of bus departure times would reduce the number of buses waiting at any one time along Gladstone Avenue.

Communication with bus operators is underway to review timetables of buses.

In regard to waiting areas, there is a large hard surfaced area behind the gate off Gladstone Avenue where students can wait for the buses to arrive. The footpath along Gladstone Avenue is approximately 1.5m wide. It is noted that no shelter is currently provided, which should be added in order to make the public transport option more attractive.

5.3.3 Ferry Services

It is noted that ferry services also operate in the locality with the nearest ferry wharf being the Mosman Bay Wharf. The wharf is located approximately 1.6km walking distance from MHS. Although this is outside of the comfortable walking catchment of 800m, it is anticipated that some staff may utilise this as a method of travel to and from the school, particularly in combination with a bicycle, or bus services connecting the wharf and the school.

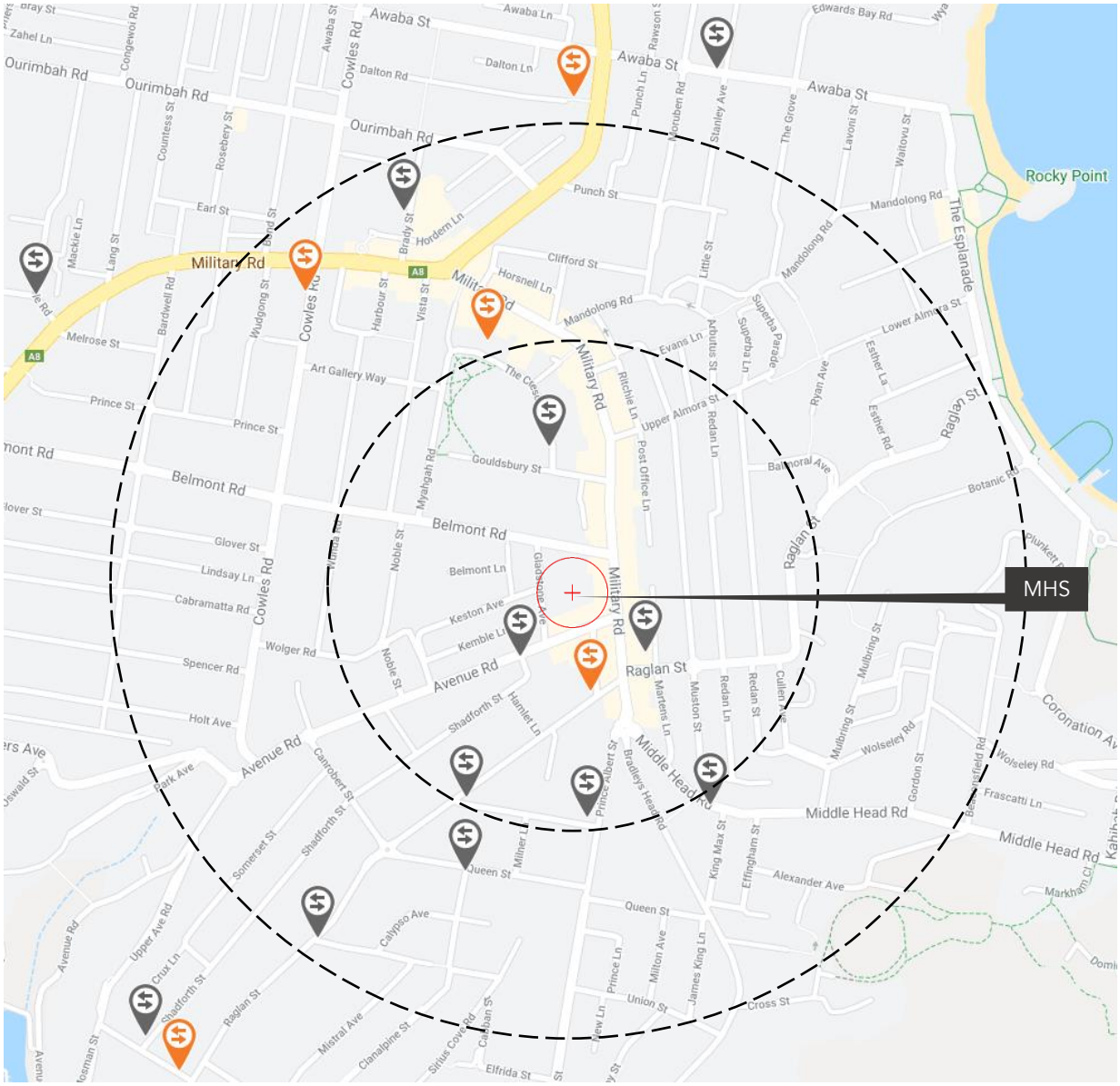
Table 4 - Ferry Services

Route No.	Frequency (approximate)	Coverage
F6	Services every 30 min during weekdays and every 1 hour during weekends and public holidays	Circular Quay to Mosman Bay

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5.3.4 Car Share Services

GoGet Car Share and PopCar are existing carpooling services which operate within Mosman through apps supported by IOS and Android devices. Mosman Council currently provides 3 GoGet cars within the direct vicinity of the school, further 3 within the 400 m and another 6 within the 800 m catchment of the school. There are also three PopCar vehicles spaces within 800 m of the school. This option would only be available to staff members.


MHS
Awaba St
Ourimbah Rd
Military Rd
Belmont Rd
Avenue Rd
Raglan St
Middle Head Rd
Rocky Point
Cowles Rd
Punch St
Mandolong Rd
Clifford St
Horsnell Ln
Gouldsbury St
Glover St
Spencer Rd
Holt Ave
Queen St
Alexander Ave
Cross St
Prince St
Melrose St
Art Gallery Way
Upper Almora St
Lower Almora St
Belmont Ln
Keston Ave
Kemble Ln
Wolger Rd
Cabramatta Rd
Lindsay Ln
Shadforth St
Calypso Ave
Mistral Ave
Clanalpine St
Elfrida St
Union St
Milton Ave
Prince Ln
Bradleys Head Rd
Prince Albert St
Muston St
Martens Ln
Redan St
Redan Ln
Ritchie Ln
Post Office Ln
Evans Ln
Abutus St
Superba Ln
Superba Rd
Ryan Ave
Esther La
Esther Rd
Botanic Rd
Baths Rd
Baths Ln
Wolseley Rd
Frascatti Ln
Gordon St
Mulbring St
Coronation Av
Markham Cl
Alexander Ave
Effingham St
King Max St
James King Ln
Milner Ln
Hamlet Ln
Noble St
Harbour St
Vista St
Brady St
Hordern Ln
Earl St
Mackie Ln
Lang St
Bardwell Rd
Wudgong St
Countess St
Rosebery St
Congewoi Rd
Zahel Ln
Dalton Rd
Dalton Ln
Punch Ln
Norruben Rd
Stanley Ave
The Grove
Lavoni St
Waitoyu St
Edwards Bay Rd
The Esplanade
Raglan St
Myehgah Rd
Wimbo Rd
Cabbage Tree Rd
Crux Ln
Somerset St
Canrobert St
Park Ave
Upper Ave Rd
Avenue Rd
Oswald St
Cowles Rd
Awaba Ln
Rawson St
Little St
Mandolong Rd
Lower Almora St
Botanic Rd
Plunkett Rd
Wolseley Rd
Mulbring St
Cullen St
Redan St
Muston St
Martens Ln
Hamlet Ln
Shadforth St
Noble St
Keston Ave
Belmont Ln
Glover St
Lindsay Ln
Cabramatta Rd
Wolger Rd
Spencer Rd
Holt Ave
Avenue Rd
Queen St
Calypso Ave
Shadforth St
Crux Ln
Upper Ave Rd
Avenue Rd
Somerset St
Canrobert St
Park Ave
Oswald St
Raglan St
Mistral Ave
Clanalpine St
Sirius Cove Rd
Elfrida St
Union St
Cross St
Milton Ave
Prince Ln
James King Ln
Bradleys Head Rd
Prince Albert St
Middle Head Rd
Alexander Ave
Effingham St
King Max St
Milner Ln
Hamlet Ln
Shadforth St
Calypso Ave
Queen St
Middle Head Rd
Wolseley Rd
Frascatti Ln
Gordon St
Mulbring St
Coronation Av
Markham Cl
Botanic Rd
Plunkett Rd
Baths Rd
Baths Ln
Raglan St
Esther Rd
Esther La
Ryan Ave
Superba Rd
Superba Ln
Abutus St
Evans Ln
Ritchie Ln
Post Office Ln
Redan Ln
Upper Almora St
Lower Almora St
Mandolong Rd
Clifford St
Horsnell Ln
Punch St
Rocky Point
The Esplanade
Edwards Bay Rd
Awaba St
Awaba Ln
Dalton Rd
Dalton Ln
Punch Ln
Norruben Rd
Stanley Ave
The Grove
Lavoni St
Waitoyu St

5.4 Future Public Transport Infrastructure

Relevant planning provisions, goals and strategic planning objectives have been explored in the following documents:

- Future Transport Strategy 2056;
- State Infrastructure Strategy 2018-2038: Building the Momentum; and
- Sydney's Bus Future 2013.

The relevant information in relations to Mosman High School have been extracted and they include:

- Future Transport Strategy 2056 explores future public transport infrastructure in relations to Greater Sydney which includes Mosman LGA. Future Transport Strategy 2056 aims to provide *"an integrated network of corridors [that] will support the efficient movement of people and goods"* including public transport movements such as buses and trains. This integrated network of corridors will help connect people with their nearest centre and transport interchange, *"where people can access the jobs, education and services they need within 30 minutes by public transport".*
- State Infrastructure Strategy 2018-2038: Building the Movement appears to explore opportunities at a high level. *"The NSW Government has set a new vision for growing Greater Sydney based on a metropolis of three cities: the established Eastern Harbour City, the developing Central River City and emerging Western Parkland City centred around the new Western Sydney Airport. Each city will have its own unique identity and endowments, and the infrastructure needed for each must be planned to optimise its liveability, productivity and sustainability."* This document does not explore any specific future public transport infrastructure within the Mosman LGA.
- Sydney's Bus Future 2013 explores the provision of simpler, faster and better bus services to connect customers more efficiently and effectively across metropolitan Sydney. A three-tiered network including rapid routes, suburban service routes and local service routes are looked into, each providing a certain level of service, streamlining bus services progressively across Sydney. Bus Services in Northern Sydney which includes Mosman will provide more appropriate "*peak period local bus services from Northern Sydney suburbs such as Dee Why, Warringah, Mosman, Top Ryde and Gladesville to match customer demand for fast, convenient and limited stop access to the Sydney CBD during peak hours."* This document does not delve into further details on the future bus infrastructure within Mosman LGA other than the aforementioned.

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5.5 Future Sustainable Transport

5.5.1 Car Share / Car Pooling

Car Share spaces can provide more efficient use of parking space, with a single car share vehicle potentially replacing up to 12 private vehicles that would otherwise compete for local parking.[2] Car share users are charged by time and distance, at a rate set by each operator.

The key benefits of car share/pooling include:

- Save money – ride sharing with just one person;
- Gain comfort – sharing a ride relieves the stress of daily traffic pain, it also reduces the stress of your commute so that you arrive more relaxed;
- Save time - gain more personal time to spend with friends and family by taking advantage of T2 and T3 lanes; and
- Peace of mind –staff do not have to worry about driving when they don't need to (i.e. too tired/fatigue etc.)

There is a number of car sharing options available within a 400-800 m walking radius, with the closest options from the company GoGet having 10 spaces within the 800 m catchment. Two car share pods should be provided along the school's boundary to provide a convenient location for staff. Locations closest to entries should be chosen, such as along Military Road, Gladstone Avenue near the car park entry or Belmont Road.

5.5.2 Electric Vehicles

There are no requirements or guidelines given by Mosman Council for the introduction of electric vehicle (EV) charging station facilities at new developments. However, should there be a demand for this in the future, SINSW may consider retrofitting existing parking spaces into EV spaces.

[2] Source: City of Sydney Council, 2015

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5.6 Existing Student Catchment

Depersonalised student data (1091 students) was used to assess the distances of students from the school. The distance of where students reside can be categorised into different catchments. As discussed in Section 5.1, the comfortable walking distance is defined to be within the 400 m, 800 m by the Guide to Walking and Cycling and 1200 km defined by SINSW. Students are also able to comfortably cycle to and from school within the catchments of 1200 m to 3600 m distance.

Table 5 summarises the number of students within each catchment. Included in the table is also the catchment area for children excluded from the School Student Transport Scheme (SSTS), which are not eligible for free or discounted public transport travel.

Table 5 - Existing Student Catchments

Catchment Analysis	Number of students	Percentage of all students (within enrolment catchment)
Within Enrolment Catchment	**854**	**78% (100%)**
0 - 400 m	52	5% (6%)
400 - 800 m	134	12% (16%)
800 m - 1.2 km	169	15% (20%)
Total within walking catchment	**355**	**32% (42%)**
1.2 - 2.4 km	374	34% (44%)
2.4 km - 3.6 km	150	14% (18%)
Total within cycling catchment	**524**	**48% (48%)**
Total outside active transport catchment	**212**	**20% (0%)**
0 - 400 m to 1-seat PT outside active transport catchment	18	2% (0%)
0 - 2.0 km (Secondary SSTS Excl. Zone)	604	63% (71%)
> 2.0 (Within SSTS)	414 (233 within the enrolment catchment)	37% (27%)
0 – 400 m to 1-seat PT within SSTS	114	10% of students within SSTS

Table 5 outlines that 32% of students reside within a comfortable walking distance while a further 48% are within a comfortable cycling distance. This leaves 20% of students outside of the comfortable active transport catchments who could be encouraged to use the benefits of the SSTS. However, it is noted that only 2% of those outside the comfortable active transport catchment reside within 400 m from a bus stop, and only 10% of those who are eligible for the SSTS reside within 400 m from a bus stop offering a 1-seat connection to and from the school.

Currently, 76% of enrolled students live within the school enrolment are. It is noted that the school will follow the enrolment boundaries more strictly in the future.

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5.7 Public and Active Travel Summary

Ultimately, within the 1.2km walking and 3.6km cycling distance, there are many residential properties. As a result, the site is well positioned in a location that provides benefits to promote more active and sustainable methods of travel for many students residing within Mosman.

There are many active transport routes which enable safe and comfortable travelling, although some gaps have been identified. While most approaches to the school offer good pedestrian amenities, there is a pedestrian crossing missing across Gladstone Avenue, which would benefit students living west of the school. In regard to bicycle infrastructure, it has been identified that there are some gaps in the current network. Also, while many bicycle routes are defined and line marked, the vast majority of them are on-road in the form of a shared arrangement with private vehicles. While this is acceptable on quiet roads, Military Road, Belmont Road and Avenue Road are considered to be too busy to enable safe cycling along with cars.

Within the radius of 400m walking distance from the school, there are many local bus services operating along Military Road. They provide connectivity within the suburb of Mosman and to the Sydney CBD and the northern beaches. Some of the bus routes provide 1-seat trips for students and staff commuting from the south and east of the school, from along Military Road and from the City. However, the areas north of Military Road and the western area of the LGA are not connected through a 1-seat service.

It is important that the advisory committee ensure that the various sustainable public and active transport options are endorsed effectively.

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6. Opportunities and Targets

A GTP is not a one-off document – it is a process of ongoing implementation, review and improvement. As such, setting out the objectives and targets are the first step in preparation of a GTP. When developing objectives, site context is important.

Targets must be specific, reasonable and achievable, and should be associated with measurable improvement in mode share. They need to be realistic but ambitious and must be time-bound so that progress is assessed against targets.

Objectives and targets should also consider any overarching Mosman Municipal Council policies or plans such as the State Government's mode share target in the area.

6.1 Existing Transport Use

An online questionnaire was conducted with students and staff (two separate questionnaires) as part of the Traffic Impact Assessment for the proposed redevelopment. The objectives of the questionnaire were to identify the existing travel behaviour & transport demand.

Initially the student and staff surveys were conducted between 19 November 2019 – 6 December 2019 (3 weeks). As part of the response to submissions, the student survey was repeated in May 2021 (1 week).

Overall, a total of 539 student responses and 70 staff responses have been analysed. The response rate for students is 48% (out of 1,116 students[3]) and for staff it is 58% (out of 120 staff members[4]).

The survey results are shown below.

6.1.1 Student Surveys

In order to be able to analyse the correlation between travel behaviour and the distance between place of residence and the school, the local residential areas surrounding the school have been divided into zones 1 – 10 as shown in Figure 12. The questionnaire also offered a response "Outside these areas", and it has been determined that 19% of students live outside the school catchment area.

In the future, the school will enrol students primarily from within the enrolment area. Therefore, to represent accurate data for the future, students living outside the enrolment area were excluded from further analysis. Taking the above into consideration, responses from 437 students were analysed, which accounted for 39% (out of 1,116) of students.

Further information regarding the survey can be found in the Traffic Impact Assessment for Mosman High School redevelopment.

The likely travel route of where students commute to and from school based on the assumption that the trips originate from their place of residence in the morning and vice versa in the afternoon can be deduced based on these residential zones. It is noted that the boundaries of Zones 1 to 5 take into consideration an approximate 800m radius from MHS, which is considered a comfortable walking catchment to public transport, in accordance with the NSW Planning Guidelines for Walking & Cycling (2004).

[3] Existing student enrolments as per MySchool website for 2018.

[4] Existing staff population as advised by Project Team (total head count including permanent and temporary staff members).

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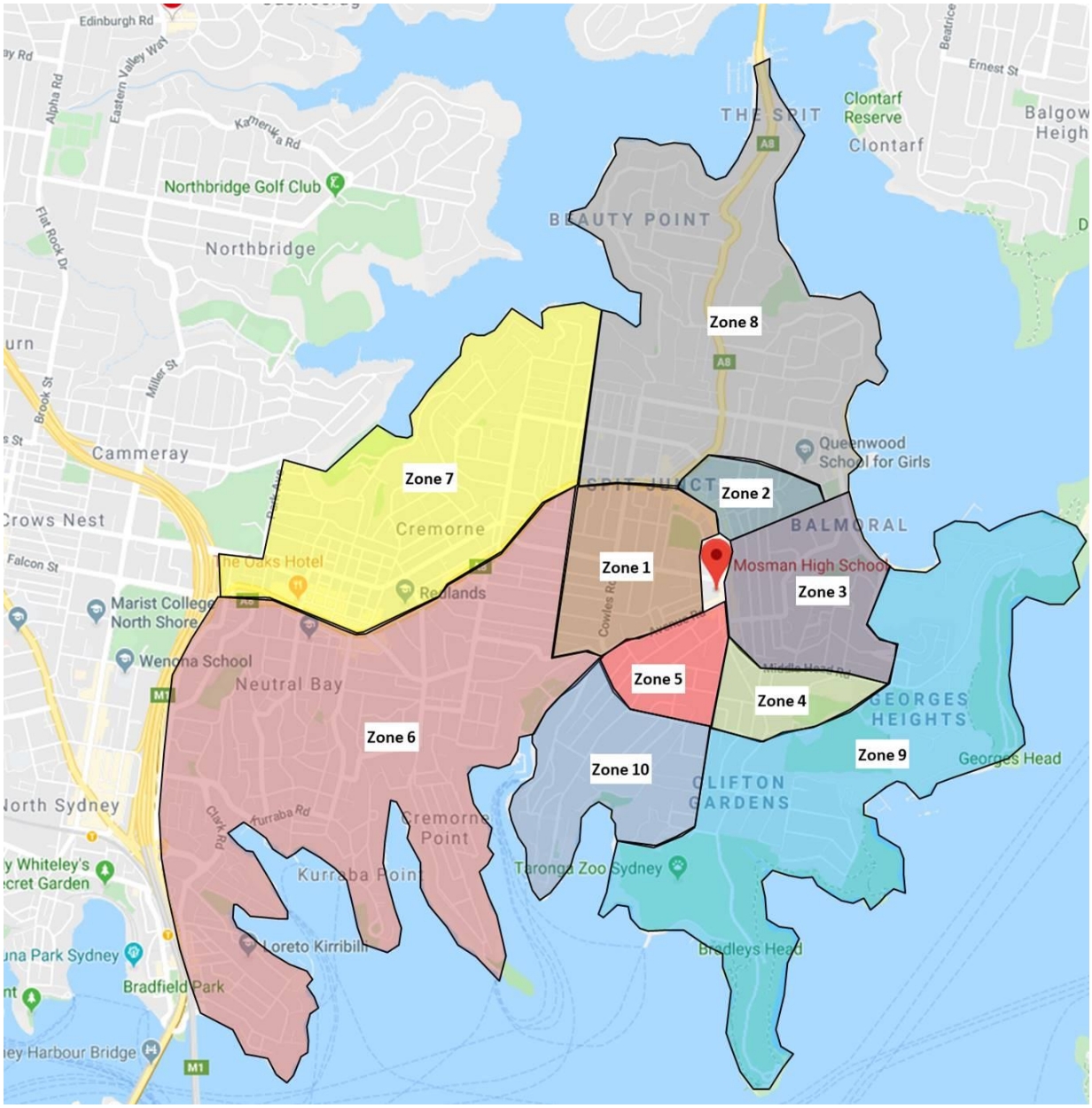


Figure 12 - Surveyed zones

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6.1.1.1. Zones 1-5

A summary of the travel mode share of the 110 students who reside within Zones 1–5 (accounting for approximately 11% of the existing student population) is illustrated in Figure 13. The travel mode data indicates that 76.4% of students walk, 14.5% who travel by car, and 4.5% who catch the bus only.

Given that these residential zones are situated within the 800m walking catchment to MHS, the proportion of students who walk as their primary mode of travel to the school in the morning indicates a high level of active transport utilisation. However, ideally, all students from within these zones would walk or ride to and from school.

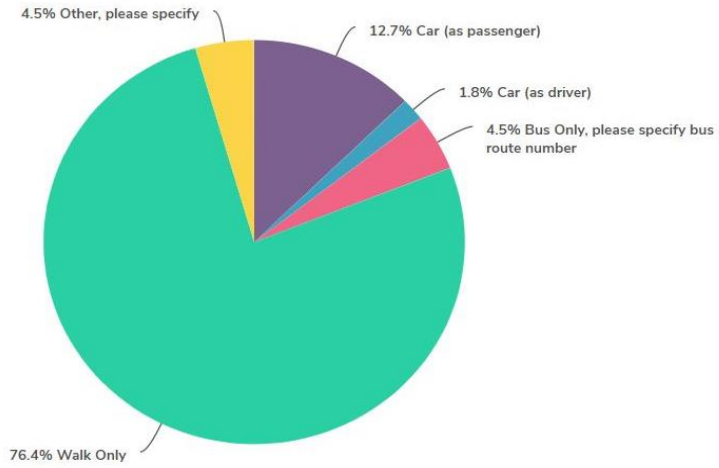


Figure 13 - Surveyed existing transport mode split of students in the morning (Zones 1-5)

The travel mode share for students travelling from school in the afternoon is illustrated in Figure 14

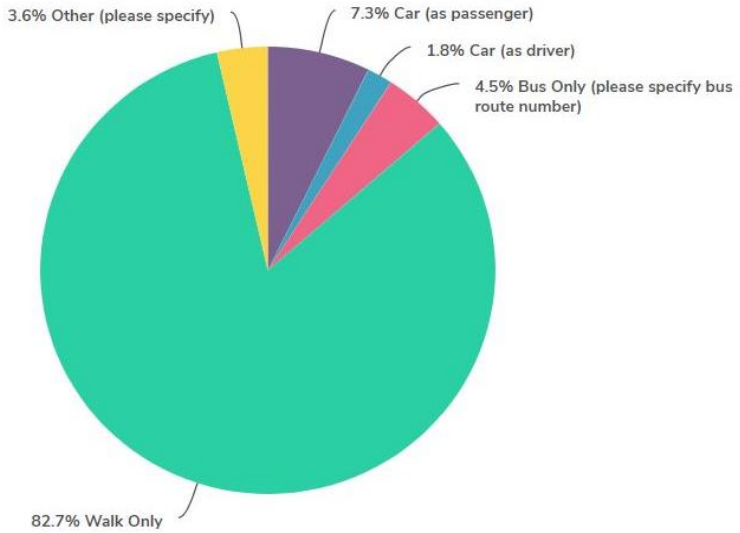


Figure 14 - Surveyed existing transport mode split of students in the afternoon (Zones 1-5)

As shown in Figure 14, the proportion of students who walk in the afternoon increases to 82.7%, followed by 9.1% who travel by car and 4.5% of students who travel by bus.

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The increase in the number of students walking in the afternoon is a positive trend which should be encouraged.

6.1.1.2. Zones 6-10

A summary of the travel mode share of the 311 students who reside in Zones 6–10 (accounting for approximately 28% of the existing student population) on a typical morning is illustrated in Figure 15. These residential zones represent students who reside outside the comfortable walking catchment of 800m from MHS.

Based on the survey data for this portion of the student cohort, the most utilised travel mode on a typical morning is bus (39.1%), followed by car (27.1%), and travel by walking (21.8%). Given the increased walking distance, it is expected that the proportion of those who walk will reduce in comparison with students residing in Zones 1-5 and will utilise alternative transport modes such as bus and travel by car.

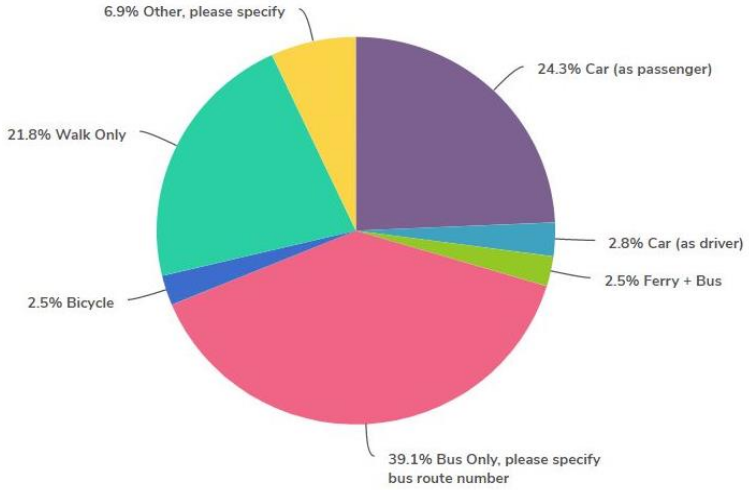


Figure 15 - Surveyed existing transport mode split of students in the morning (Zones 6-10)

On a typical afternoon, the mode share is similar to that of a typical morning with the travel mode share illustrated in Figure 16. Travel by bus follows a similar trend with a mode share of 45.7%, followed by 29.3% walk only and car usage of 13.2%.

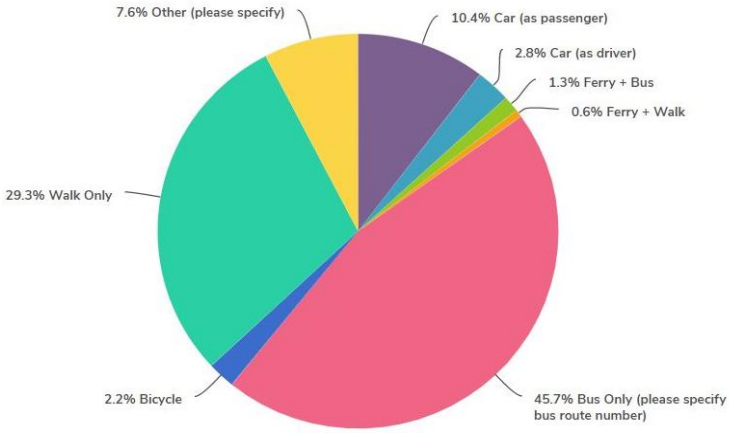


Figure 16 - Surveyed existing transport mode split of students in the afternoon (Zones 6-10)

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The reduction in car usage in the afternoon pick-up period is consistent with the trend for those living in Zones 1-5 and may be attributed to students being dropped-off by parents on their way to work in the morning and students travelling home independently in the afternoon.

6.1.1.3. Zones 1-10

The survey responses collected from the student survey (Year 7 to Year 12) show the existing travel modes to school on a typical morning comprise predominantly bus usage (30.2%), followed by walking (35.8%) and then private car usage (21.3% as a passenger, 2.6% as driver), as shown in Figure 17.

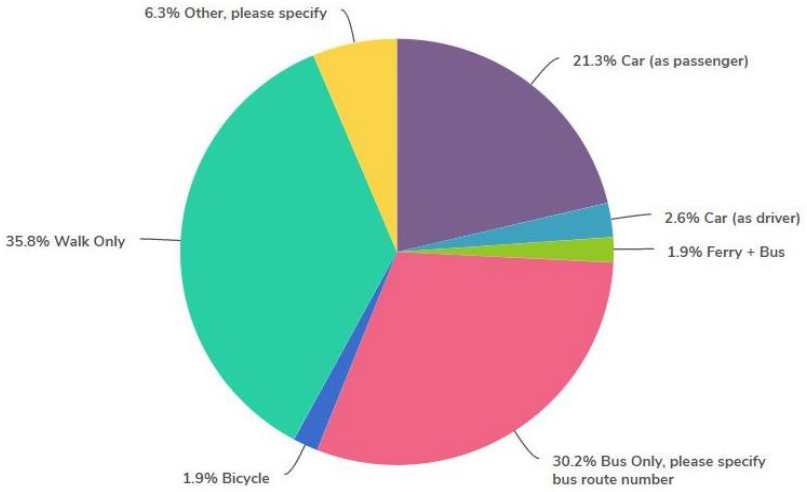


Figure 17 - Surveyed existing transport mode split of students in the morning (Zones 1-10)

In the afternoon, 43.1 (+7.3%)* of students walk, 35.1% (+4.9%)* travel by bus and only 9.6 % (-11.7%)* travel by car as passenger, as shown in Figure 18.

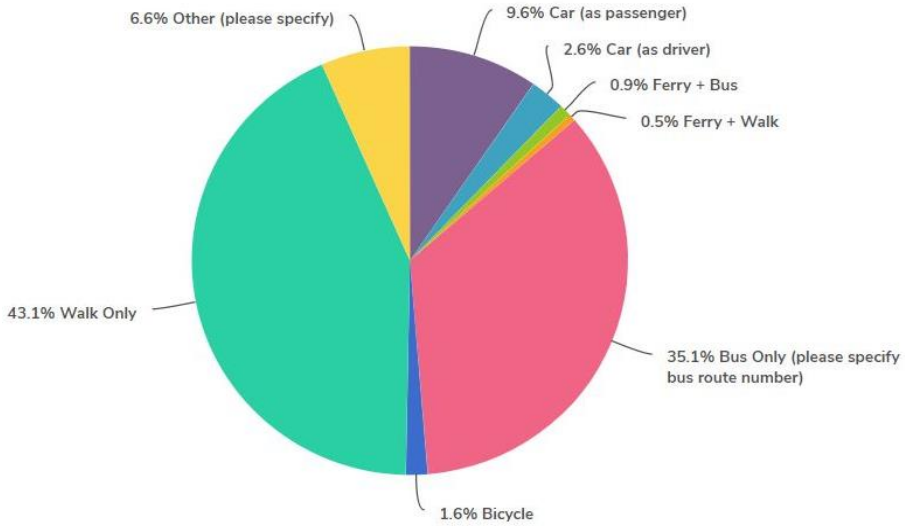


Figure 18 - Surveyed existing transport mode split of students in the afternoon (Zones 1-10)

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6.1.2 Staff Surveys

A total of 70 (out of 120) staff members[5] responded to the questions.

Regarding the travel mode survey for school staff, the results indicate that the majority of staff travel to and from the school by car (as driver) accounting for 71.4% of the overall mode share. A breakdown summary of the various travel modes is illustrated in Figure 19.

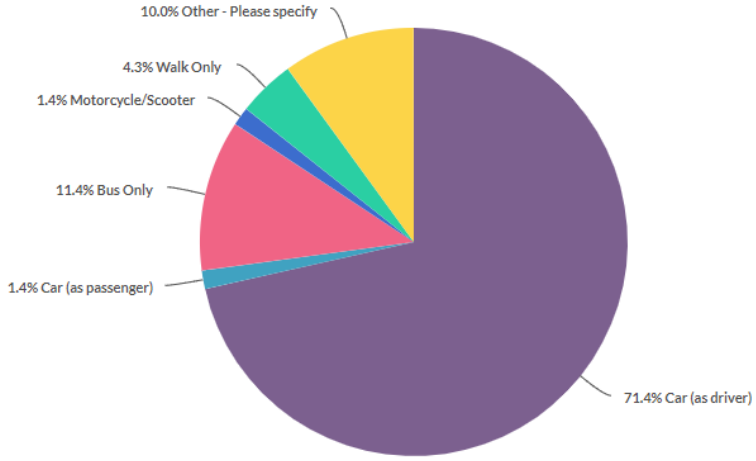


Figure 19 - Surveyed existing transport mode split of staff

Furthermore, the area of residence for the staff survey respondents was analysed and is illustrated in Figure 20. The map illustrates that there is a number of staff residing in Mosman (12 staff, postcode 2088), Cremorne (4 staff, postcode 2090) and Neutral Bay (1 staff, postcode 2089), however, there is a relatively wide spread of where staff travel from, including the northern beaches, north-west and western suburbs.

From the survey, it has been determined that 24% of staff reside within the school's catchment area. Out of those staff members, 53% travel to and from the school by car.

6.1.3 Existing Transport Use Summary

A comparison of results from the 2019 and 2021 surveys shows a decrease in bus usage by 11%. However, walking, car usage and other (includes a combination of travel mode) increased by 3%, 5% and 3% respectively. The decrease of public transport use is likely to be attributed to the impact that COVID-19 has had on travel behaviour. The increase in "car as driver" responses by 2% is likely to be attributed to Year 12 students being included in the recent survey.

Figure 3 summarises the abovementioned existing mode shares taken from a mode share survey undertaken during the Traffic Impact Statement.

The values for students are taken as an average of the PM and AM mode spilt of the data for zones 1-10.

[5] Existing staff population as advised by Project Team (total head count including permanent and temporary staff members).

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Table 6 - Existing Mode Share

Mode	Students (average)		Staff (average)
	2019	2021	
Walk	37%	40%	4.3%
Bicycle	2%	2%	-
Bus	44%	33%	11.4%
Car Passenger	13%	16%	1.4%
Car Driver	1%	3%	71.4%
Other (motorcycle, taxi, car share)	3% (incl. combination of modes)	6% (incl. combination of modes)	11.4%

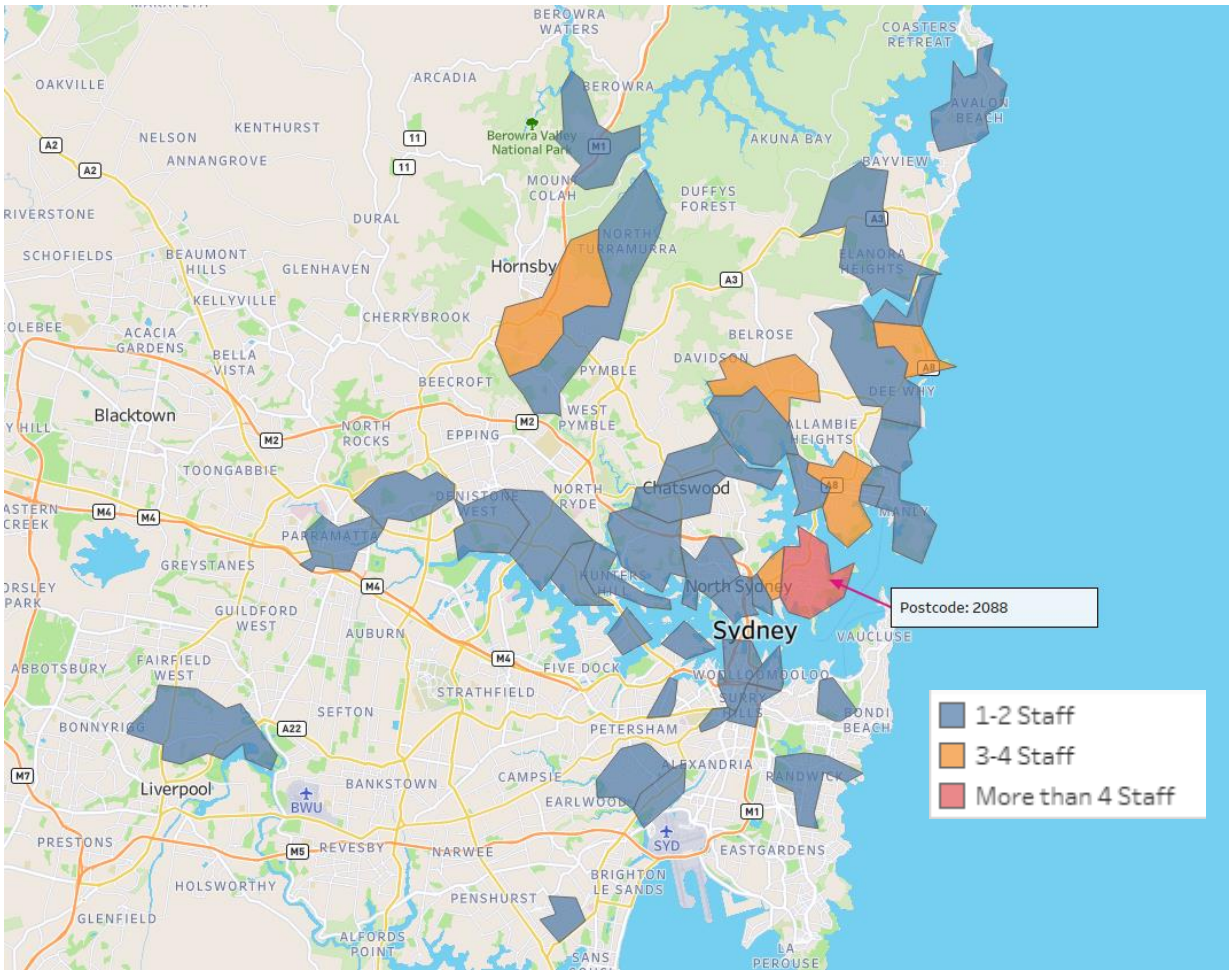


Figure 20 - Staff Area of Residence

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6.2 Future Transport Targets

Future transport targets can be developed by analysing a variety of different targets, such as those set by the local Council or similar comparable sites. Mosman Council has not developed any targets; however, future transport targets for students can be developed by understanding the gaps from the travel behaviour determined from the surveys.

Based on the surveys, 40% of students walk to school, which exceeds the percentage of students living within the notional active transport catchment (refer to Section 5.6). However, surveys conducted for zones 1-5 show that 24% of students do not walk to school despite the zones being within the 800 m walking catchment (refer to Section 6.1.1.1). This percentage accounts for 7% of all students across the AM and PM peaks. Ideally, all students within the 800 m catchment should walk, therefore, the target for walking has been set by adding the 7% of students that do not walk within the 800 m catchment to the existing average of students walking (40%). This equates to 47% of students that should walk to school.

In regard to the cycle target, the following has been considered. Although there are 48% of students living within 1.2km – 3.6km catchment it is acknowledged that the topography is challenging and the current cycle infrastructure within Mosman is not ideal. However, the principal of the school indicated that there is an increasing uptake in students that would like to cycle. Therefore, reference is made to the bicycle rack provision rate within the DCP, where 3% - 5% of students and staff shall be provided with a bicycle rack. Taking into account the proposed future student population of 1,200 and the higher provision rate, the school should provide at least 60 bicycle racks for students. If cycling becomes more popular, more spaces shall be provided. The bicycle space envelopes have the dimensions of 1.8m x 0.5m each and can be achieved by installing 30 U-rails near the entry points. It is recommended to install a cover over the spaces.

The student survey shows that the existing public transport mode share is 33%. In the future, the school will promote public transport by providing a Transport Assess Guide and brochures showing 1-seat trip routes and bus stops. It is proposed that this mode share shifts back towards the pre-COVID level, and therefore, an increase of approximately 7% is targeted, resulting in 40% of students choosing buses to commute to and from school.

Ideally, all staff would live locally so that they are not dependent on a car. However, as stated in Section 6.1.3, currently only 24% of staff live within the Mosman High School enrolment area. It is assumed that the same active and public transport catchments should be applied to staff as to students, therefore, the 24% of staff living locally can be split into 10% walkers, 5% cyclists and 9% bus users.

The staff transport target for car usage is based on the number of staff parking available on site. There are 33 car spaces available, which accounts for 28% of the total staff numbers and ideally, this is the maximum percentage of staff driving to school.

Further, with 2 car share pods directly in the vicinity of the school and with numerous other car share vehicles available in the vicinity, a target of 5% is set. Considering that 33% would still drive to school, (28% in a private vehicle and 5% in a shared car), further 16% of staff can travel as a passenger of the former drivers.

The remaining 27% can be encouraged to travel by public transport.

It is noted that one of the most dominant reasons why staff travel to and from school by car is that they need to carry bulky goods, but also because it takes longer by public transport and because there is no direct route. In regard to bulky goods, it is recommended that the school provides sufficient storage facilities, and that a car share is provided for the days when the goods need to be transported.

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In order to encourage staff to travel by public transport subsidies could be introduced.

Table 7 summarises the targets for both students and teachers.

Table 7 - Mode Share Targets

Mode	Students (average)					Staff (average)	
	2019 actual mode split	2021 actual mode split	As the Crow Flies Catchment		Proposed mode split		
			All Students	Within Enrolment Catchment		Current mode split	Proposed mode split
Walk	37%	40%	32%	42%	47%	4.3%	10%
Bicycle	2%	2%	48%	58%	5%	-	5%
Bus	44%	33%	2%	-	40%	11.4%	36%
Car Passenger	13%	16%	18%	-	6%	1.4%	16%**
Car Driver	1%	3%		-	1%	71.4%	28%
Other (motorcycle, taxi, car share)	3%*	6%*	-	-	1%	11.4%*	5%

*Note: within surveys "Other" refers to a combination of modes rather than motorcycle / taxi / car share.
**Note: Car passenger target for staff includes car-pooling with colleagues.

Within 6 months of completion of the redevelopment, a new survey will be conducted to assess whether the abovementioned targets have been met or if they need to be adjusted. It is not possible to guarantee that these modal split targets will be achieved as it is beyond the control of any Advisory Committee or TP coordinator, since staff and students are subject to free choice. Nevertheless, it is important that sustainable travel options and strategies are communicated and reviewed consistently to ensure a trend towards the set targets.

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7. Strategies

Strategies for the implementation and monitoring of the GTP is detailed in the following section.

7.1 Promotion and Marketing Strategy

Once the Travel Plan has been adopted, it is essential to maintain interest in the scheme. Each new initiative in the plan will need to be publicised by the TP Coordinator with effective marketing. The GTP needs to have a variety of actions that guide strategies relating to promotion, facilities and policies to create incentives for sustainable travel behaviour. A staging strategy should also be outlined in the plan for any actions which may need it.

Greater awareness of initiatives through the promotion of the travel plan tend to result in higher uptake of sustainable travel modes. To ensure all users are aware of the initiatives it is important to seek assistance from Mosman Municipal Council, Bicycle NSW, Pedestrian Council Australia, TfNSW and other stakeholders from time to time.

A take home 'transport brochure' containing information of all existing public transport within a 1.2km walking radius and links to surrounding suburbs will be an effective strategy in informing staff and parents of children. The already existing Travel Kit should be expanded by maps showing bus routes and relevant timetables as well as bicycle friendly routes and the location of bicycle storage facilities. Presenting travel options during school assembly is another effective way to start conversation about sustainable travel behaviours between staff member and between children and parents. Best practice suggests that information presented should be concise, simple and as site specific as possible. Other strategies can include classroom initiatives, rewarding students for using more sustainable forms of transport where possible. Most importantly the school website should be used as a platform to recommend the most energy efficient form of travel.

7.2 Proposed Action Items

It may not be possible to implement all action items at the same time. Therefore, a hierarchy should be considered which assess actions based on the 'greener' option to enable priority on which should be implemented first.

Before implementing any actions, relevant stakeholders must be consulted to approve the changes.

The travel mode hierarchy is presented in Figure 21.

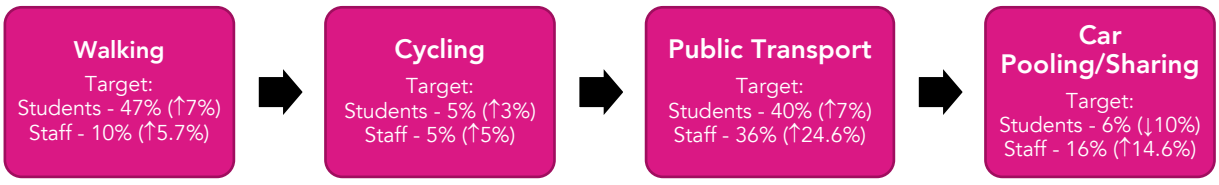


Figure 21 - Mode Hierarchy

The targets outlined beneath each mode of transport in Figure 21 are discussed in Section 6. There are a number of actions which will be employed to encourage non-car modes of transport to and from the school.

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7.2.1 Walking

Section 5.1.1 states that the existing pedestrian access is generally good in three directions, but that there is a missing pedestrian crossing across Gladstone Avenue. Walking is also the most space efficient mode of transport for short trips. It also provides many benefits, including health benefits, reduced congestion on the road and reduced noise and emission pollution. The following actions are recommended to increase the existing walking trips for the school:

- Analyse the possibility to provide a pedestrian crossing across Gladstone Avenue. Discussions with TfNSW and Council will be required;
- Pedometer-based walking program for both staff and students;
- Walking buddy scheme;
- Tree planting schemes along safe routes to promote natural shelter; and
- Advocating the use of the end of trip facilities for staff.

7.2.2 Cycling

As outlined in Section 6.2, there is a target of 5% staff members to be encouraged to cycle to work. In line with this, at least 6 bicycle parking spaces dedicated for staff use only shall be provided conveniently located close to the End of Trip Facility (EOTF). The EOTF should have a total of four showers and two change rooms.

Similar to the walking initiatives the cycling actions should include:

- Provide bicycle amenities for students and staff;
- Cycling buddy scheme;
- Advocating the use of the EOTF provided for staff;
- Liaising with Mosman Council to provide complete cycling route connections to the school as described in Section 5.2; and
- Promote the use of the new bicycle parking facility and ensure it is placed in an easily accessible and sheltered location to provide passive surveillance.

7.2.3 Public Transport

There are a multitude of public transport options which are within the 400m catchment for walking. There are 4 bus stops at the frontages of the of the school as well as Macquarie University Metro Station 20 minutes walking or 10 minutes cycling distance away. It is important that staff and students understand the viability of these options and the sustainable benefits they provide. Initiatives for using public transport include:

- Travel Access Guide (TAG) can be distributed to all who need to travel to and from the school;
- Providing dynamic and passive timetables on-site to promote public transport usage;
- Liaising with Mosman Council to ensure good quality and accurate directional signage to promote walking and cycling. Directional signage should also be used at the exits of the school to allow commuters to understand which way they should exit; and

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- Endorsing real-time information through apps such as TripView and on public transport.

7.2.4 Car Share / Car Pooling

The introduction of many new car share and car-pooling companies such as GoGet Car Share, PopCar and UberPool has enabled the reduction in private car usage for those who do not have access to the active and public transport.

- Providing informative brochures from respective companies to staff members;
- Implementation of a carpooling program (with the benefit of knowledge of staff members' place of residence) enabling carpooling between co-workers;
- Converting 2 spaces along the school's boundary to car share spaces, which needs to be discussed with Council; and
- Requesting car share spaces from companies such as GoGet to enable a carpooling club between staff members to allow access to nearby stations. This may be coordinated by the formally appointed Travel Coordinator.

7.3 Monitoring and Evaluation

The GTP does not only outline actions and strategies but also ensures monitoring and evaluation of those initiatives. This is a crucial part of the travel planning process as it ensures maximum benefits are gained. Initially, there will be a review of the mode share targets after 6 months of the completion of the redevelopment, followed by yearly tracking and reassessment. There may be cases that new initiatives may need to be implemented or new targets may need to be set if they are exceeded or too ambitious.

The overall success of the travel plan is dependent on good communication between various entities such as the SINSW, the TP Coordinator, Principle, P&F, Mosman Municipal Council and TfNSW. The TP coordinator must ensure all parties including students and staff are well informed about reasons for adopting the plan, promote the benefits and provide information about alternatives and initiatives. It is also important to receive feedback through the annual travel surveys to ensure staff, and students and their parents/carers are understanding and realising the benefits.

After the data collected after each travel survey, the TP coordinator can make subsequent changes to initiatives or to the targets. The review of the data should consider the following questions.

- Are the targets still realistic? Are they still ambitious? Should they be updated?
- Are there difficulties in achieving particular targets? What are the likely reasons for this?
- Are there any gaps with regards to actions?
- What is preventing further improvement on mode share and how can this be addressed?

The ongoing cycle of the review process must ensure people's reasons for travelling are considered and understood. Any barriers to changes in their behaviour should be considered as it will help decide for the most effective actions to be identified. This review process is also an opportunity the communicate progress to the school community which can encourage more change from feedback of the results.

To ensure that all commuters to the school understand the benefits of sustainable travel, key elements to development and implementation must be practiced. These include:

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- Communication – It is necessary to explain the reason for adopting the plan and all the benefits. Information on alternatives must also be readily available so it is easier for people to make the change.
- Commitment – The TP coordinator must ensure consistent action to help change established habits. Using communication and the provision of necessary resources impetus for commuters can be provided to switch from using private vehicles.
- Consensus – Broad support is necessary for the introduction of the TP. If it is not received well by the school community the targets will not be achieved.

Progress from the travel plan will also be presented to council by SINSW and TP Coordinator after each annual review for a recommended period of five years after the issue of the Occupation Certificate (OC). The progress to be presented includes:

- Number of students and staff;
- Details of mode split (initial survey results);
- Progress towards the 60% private vehicle/40% public and active transport target and the progress towards any new targets;
- Success of initiatives (as outlined in Section 8 of this document); and
- Details of any rectification measures proposed.

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8. Action Plan Initiatives

Below are initiatives that will be employed by the TP coordinator to encourage sustainable travel behaviours among students, parents and staff. The aim of these actions is to encourage people to improve their travel mode accordingly to the hierarchy in Figure 21.

8.1 Informational Initiatives

Strategy: Distribute a Transport Access Guide (TAG) to all students and staff

Why	To increase awareness of the location of public transport in the vicinity. To inform commuters of different modes of transport and the platforms/apps they can use to find sustainable transport options. It should also advise safety.
How	Issue an information package both in the mail and electronically.
Who	TP Coordinator
When	Can be emailed to all students and teachers instantly, however a physical copy should be provided upon completion of the redevelopment. Should also be provided on the school's website.
Resources	TAG

Strategy: SSTS Information Pack

Why	Inform students who live outside the SSTS exclusion zone of the services available.
How	Issuing a brochure within the 'Information Pack'. The brochure will show 1-seat trip routes and bus stops.
Who	TP Coordinator
When	At the beginning of each year an email or a physical copy should be provided to parents and students. A copy should also be found on the school website.
Resources	Brochure

Strategy: School Website Transport options

Why	Allows online access to all the various transport options for accessing the school.
How	Having a webpage which covers all available options and links to learning more about them.
Who	Principle or TP Coordinator in conjunction with the webmaster
When	Available all the time, updated as required. Review at least every 6 months.
Resources	Website

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Strategy: Newsletter items and social campaigns

Why	Reinforces climate-friendly and active transport aspirations and targets
How	Principle or TP coordinator to incorporate information and articles in ongoing newsletters to parents and students. The information can include current topics on climate change etc. as a means to connect the public and active transport utilisation to an external goal
Who	Principle or TP Coordinator
When	At least once a term
Resources	Newsletters, website and campaigns

Strategy: Company brochures and cards

Why	Promotes the use of various wayfinding apps and carpooling/sharing services available.
How	Having brochures readily available in the school office and also giving each student and staff member
Who	TP Coordinator
When	Providing brochures each year and having them readily available at the school office and incorporating this information in the Travel Access Guide.
Resources	Brochures

Strategy: Consistent reminders through school assemblies

Why	Reinforces the idea of sustainable travel and can encourage discussion
How	Principle or TP coordinator to provide a concise presentation about the benefits of sustainable travel options.
Who	Principle or TP Coordinator
When	Once a term to show commitment to achieving targets
Resources	List of benefits and a PowerPoint

Strategy: Annual Assemblies to announce progress

Why	To inform students and staff about progress to achieving travel mode split targets. Will encourage healthy competition to beat the target.
How	Short presentation at annual assemblies
Who	Principle or TP Coordinator
When	At the beginning or end of each year
Resources	Survey results and PowerPoint

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8.2 Behavioural Initiatives

Strategy: Safety programs/courses

Why	Allows kids to be more informed about any dangers of being a pedestrian and provides ease of mind to parents/carers.
How	Pedestrian safety can be taught during class and reinforced by teachers and parents. Information can also be provided in the 'information pack'.
Who	Teachers and TP Coordinator
When	After completion of redevelopment with reinforcement every 6 months to a year.
Resources	Information pack and brochures

Strategy: Pedometer-based walking programs

Why	Promote healthy competition between students. Can also be used to enable active transport for other trips
How	Providing a cheap pedometer for each student and recording each student total for a month. Can be introduced as part of Steptember. Can be run on a participation basis for individual students or pedometer based for entire classes / years
Who	TP Coordinator
When	During the month of September. Preferably choosing a different month to the 'classroom competitions' action to encourage students and staff all year round.
Resources	Pedometer and a progress board to tally the progress of each class.

Strategy: Classroom competitions

Why	Promote healthy competition between students.
How	Classroom with the most children (can include the teacher) who take sustainable forms of transport will win an incentive. Should be done as a tally over a month as children can decide to take the "greener option". Can also be combined with Strategy 2: Pedometer-based walking program.
Who	Teachers
When	As an activity throughout the whole first month after completion.
Resources	Information sheets and a progress board to tally the progress of each class.

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Strategy: Walking and Cycling buddy scheme

Why	Motivates people to use active transport more often
How	Sending out a questionnaire to everyone asking about their area of residence and contact details so they can be buddied up.
Who	TP Coordinator
When	Sent out every term to accommodate new students and staff
Resources	Questionnaire

Strategy: Participation in the "RideScore" program

Why	To support and enable more children and young people to scoot and ride a bike to school
How	*"students will receive a personal sensor (beacon) that is attached to their bicycle or scooter. The school bicycle storage facility is fitted with a Bluetooth reader that detects the signal from the sensor, and immediately sends a notification to the nominated contact that the student has arrived at, or departed the school gate."*
Who	TP Coordinator
When	Sent out an invitation every term to accommodate new students and staff
Resources	Personal sensor (beacon) and a Bluetooth reader

Strategy: After school bicycle and scooter training course

Why	Reaches out to students who would like to participate in cycling and scooting
How	Providing courses after school to teach how to ride a bike or scooter and traffic rules
Who	TP Coordinator
When	Courses starting each term
Resources	Scooter parking

Strategy: Carpooling scheme

Why	Motivates people who live in close proximity to use carpooling services
How	Analise residential data and buddy up students and staff
Who	TP Coordinator
When	Sent out once a year to accommodate new students and staff, review after 6 months
Resources	Residential data

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8.3 Physical Initiatives

Strategy: Bicycle and scooter parking facility

Why	Provides cyclist with a safe and secure place to leave their bicycles/scooter while at school/work.
How	Including additional bicycle parking spaces on an "as required basis" in an easily accessible space with passive surveillance.
Who	SINSW
When	Completion of redevelopment and as required in the future
Resources	New bicycle racks

Strategy: End of trip facilities (for staff)

Why	Allows active transport commuters to shower and change to be comfortable at work.
How	Including a shower and change room in the new redevelopment and informing staff about its availability
Who	SINSW
When	Completion of redevelopment
Resources	Shower and change room facilities

Strategy: Convert the most convenient car spaces to carpooling staff (staff only)

Why	Encourages staff to use more sustainable forms of transport.
How	Signpost or line mark spaces allocated to carpooling
Who	TP Coordinator
When	During construction of the new carpark and as required
Resources	Carpark space

Strategy: Dynamic and passive timetables on-site

Why	Enables students and staff to easily access public transport information
How	Include near the exits of the school to allow commuters to check their next travel option before they leave.
Who	TP Coordinator
When	Completion of redevelopment
Resources	Information board

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Strategy: Ensuring directional signage is clear and functional

Why	Allows easy wayfinding for students and staff
How	Include directional signage at the schools exits and liaise with City of Ryde to ensure signage is clear in all directions.
Who	TP Coordinator
When	Completion of redevelopment
Resources	Signage

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8.4 Review and Monitoring Initiatives

Strategy: Employment of travel coordinator

Why	This TP coordinator will coordinate specific actions and track the progress of implementation of the GTP
How	Email invitation for expression of interest internally and advertisement of job opening for external employment
Who	SINSW
When	Completion of the redevelopment
Resources	Emails

Strategy: Conduct travel surveys

Why	To identify current travel behaviour and update targets and objectives based on the survey findings
How	TP Coordinator will conduct a survey and update the targets and objectives as per the survey findings. A copy of the updated plan to be submitted to the Department of Education for information.
Who	TP Coordinator
When	Within 3 months of the commencement of operation
Resources	Online survey and update the GTP

Strategy: Form an advisory committee involving staff and P&F members

Why	Monitor the progress of the GTP
How	Email invitation for expression of interest
Who	TP Coordinator
When	Completion of the redevelopment
Resources	Emails

Strategy: Annual Survey

Why	Monitor, review and evaluate the progress towards the travel mode targets
How	Online and letterbox surveys to all staff and students. Can be included as part of the information pack.
Who	Advisory Committee and TP Coordinator
When	Beginning or end of each year
Resources	Email and letters

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Strategy: Regular meetings

Why	Discuss the effectiveness of initiatives
How	In person meeting at a specified location within the school
Who	Advisory Committee
When	Every 6 months
Resources	Meeting agenda and action plan

Strategy: Update all noticeboards

Why	Ensuring all information is accurate and up to date for those travelling through active and public transport
How	Updating information on boards
Who	Advisory Committee
When	Every month (or more frequently if necessary)
Resources	Information boards

Strategy: Review and update of GTP

Why	Evaluate the success of the GTP implementation and to add any new objectives.
How	Meetings with advisory committee and SINSW to suggest any changes
Who	TP Coordinator
When	Every year for a 5-year period
Resources	GTP objectives, targets and progress checklist.

Strategy: Presentation of annual monitoring review results to council

Why	To present to City of Canterbury-Bankstown Council the progress of the GTP target and objectives
How	Submit monitoring report to City of Canterbury-Bankstown Council
Who	TP Coordinator
When	Every year for a 5-year period
Resources	GTP objectives, targets and progress checklist.

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Attachment 1 - GTP Guide for the TP Coordinator & SINSW

Advisory Committee

- The formation of an Advisory Committee should be coordinated by the PT Coordinator and SINSW upon opening the redevelopment;
- The Advisory Committee will assist in the progress and monitoring of the GTP; and
- The Committee should ensure the notice board is updated regularly (monthly or when necessary) with up-to-date information on sustainable transport

SINSW / TP Coordinator

- Distribute information on sustainable transport options to students and staff (i.e. Transport Access Guide);
- Contribute to the promotion of car share and carpooling services;
- Workshops to implement and modify initiatives; and
- Incentives may be issued to students and staff to encourage public transport use (e.g. competition prizes)

Information Pack

- Annual Survey – through letter or via URL link;
- Transport Access Guide
- Information on platforms/apps including sustainable transport information (i.e. Google Maps, TripView, etc); and
- Information on sustainable transport facilities available on-site (i.e car share (GoGet), carpool (UberPool), bicycle parking, etc)

Annual Survey

- An initial survey should be done 3 months after completion of the redevelopment to track progress. This can be done through websites such as Survey Gizmo. (https://www.surveygizmo.com/); and
- An annual survey should be conducted by the TP Coordinator to collect information on new travel patterns.

Regular Meetings

- Regular meeting should be held every 6 months involving SINSW, the TP Coordinator and the Advisory Committee members; and
- Sustainable transport should be discussed including feedback from the initial survey data.

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