

Department of Education
Parramatta West Public School
Green Travel Plan

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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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1 Introduction

Arup was commissioned by Conrad Gargett Ancher Mortlock Woolley Architects on behalf of the NSW Department of Education and Communities to prepare a Green Travel Plan to support the State Significant Development application for Parramatta West Public School.

This Green Travel Plan provides the framework for the school to implement Green Travel Plan initiatives.

1.1 Site Description

The school is bounded by Railway Street in the north, Franklin Street in the east and Auburn and Young Streets in the south. The primary pedestrian access is located on Railway Street. Vehicular accesses to the school are located on Franklin Street and Young Street. These local roads are segregated from the Western Motorway in the south shown in Figure 1. The school is located in the suburb of Parramatta in a primarily low-density residential area. North Campus is located just opposite the existing school buildings and will be the site of the new buildings for the expansion of the school.



Figure 1: Parramatta West Public School boundary

1.2 School population

The school is a Kindergarten to Year 6 School and had 766 students enrolled during the 2017 school year, supported by 49 staff (including 10 non-teaching staff). The proposed upgrades provide twenty new learning areas to cater for a total of 961 students and 13 additional staff. It should be noted that the 2018 enrolment has climbed to 854 students, placing additional pressure on the school buildings. The upgrades to the school will support the growth of primary-school aged children within the Parramatta Centre primary schools assets cluster over the next 13 years.

1.3 What is a Green Travel Plan?

A Green Travel Plan is a package of measures put in place to try and encourage more sustainable travel whilst commuting and also during the course of activities, including business and delivery travel or other visitors to the site. For a school environment it applies to both staff travel and to student travel. It is a means for an organisation to demonstrate a commitment and take a pro-active step towards improving the environmental sustainability of its activities.

More generally, the principles of a Green Travel Plan are applied to all people travelling to and from a site. Government authorities are placing increasing emphasis on the need to reduce the number and lengths of motorised journeys and in doing so encourage greater use of alternative means of travel which have less environmental impact than the car.

1.4 Objectives

The objectives of a Green Travel Plan are:

1. **Travel Demand Management** which reduces the need for energy intensive car, taxi or air travel by combining journeys for different purposes, travelling to alternative closer locations, or using other means of communications e.g. audio conferencing, video conferencing and working at home or other off-site locations using email or wireless telecommunications.
2. The use of **more sustainable transport modes** i.e. walk, cycle, bus, motorcycle, car sharing, tram, bus and rail in place of the higher energy consumption travel modes such as single occupant car travel, taxi and air travel. This generally requires improving people's travel choices by making more travel modes available (i.e. to improve mobility for non-car-drivers). The alternative measures of reducing mobility for car drivers by increased road usage and parking charges or restricting road and parking capacity are also an option, particularly in congested locations.

2 Transport and Access Service Strategy

2.1 Staff Travel characteristics

The Bureau of Transport Statistics (BTS) 2016 Journey to Work data provides travel characteristics of workers in the local employment area. Figure 2 illustrates the travel zone extent that contains the school.



Figure 2 Journey to Work (2011) mode share

The data identified that 161 people work in the area, destination zone (DZN 114923747). Their mode share breakdown is shown in Figure 3:

There is an approximate private vehicle usage of 87% (driver and passenger) and 9% public transport utilisation. The low usage of public transport could be due to the proximity of the railway station and the abundance of on-street parking available in the area.

Mode share for workers in the destination zone catchment

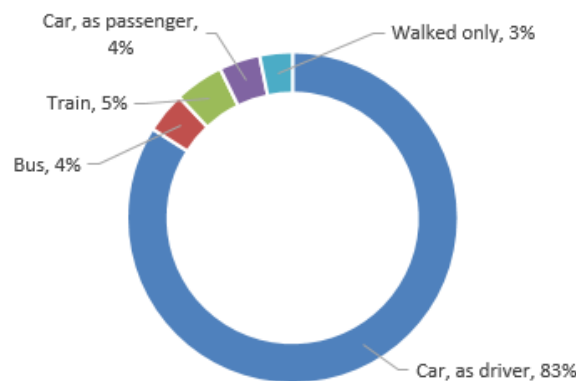


Figure 3: Mode share of workers in the study area (BTS 2016 Journey to Work)

2.2 Public transport

The existing public transport network in the area is primarily bus-based (public and school services). The closest train stations include Merrylands, Harris Park and Parramatta and are all located approximately 2 kilometres from the school.

The key public transport nodes around the school are shown in Figure 4.

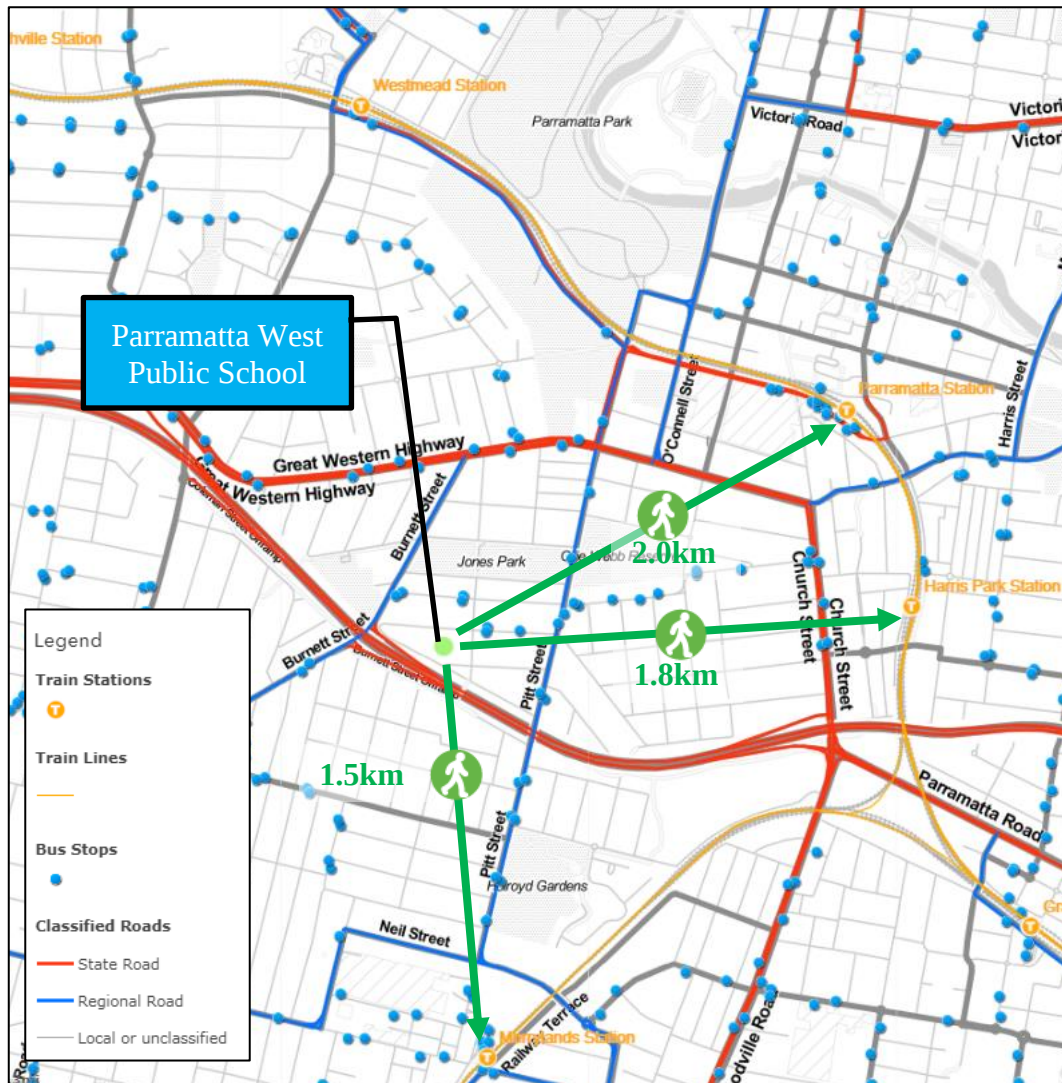


Figure 4: Key public transport nodes and classified roads around the school

2.2.1 Trains

The school is located outside of a recommended walking catchment from the nearest train stations. The nearest train stations to the school are:

Merrylands Train Station is located 1.5km away and is the closest to the school. The number of services operating on the relevant train lines are shown below, where the AM peak is 8:00am-9:00am:

- T2 Inner West & Leppington Line

- 6 eastbound trains in the AM peak
 - 6 westbound trains in the AM peak
- T5 Cumberland Line
 - 1 northbound train in the AM peak
 - 2 southbound trains in the AM peak

Harris Park Train Station is located 1.9km away from the school. The number of services operating on the relevant train lines are shown below, where the AM peak is 8:00am-9:00am:

- T1 Western Line
 - 6 eastbound trains in the AM peak
 - 6 westbound trains in the AM peak
- T2 Inner West & Leppington Line
 - 4 eastbound trains in the AM peak
 - 4 westbound trains in the AM peak
- T5 Cumberland Line
 - 2 northbound trains in the AM peak
 - 2 southbound trains in the AM peak

Parramatta Train Station is located 2.1km away from the school. The number of services operating on the relevant train lines are shown below, where the AM peak is 8:00am-9:00am:

- T1 North Shore Line & Northern Line
 - 13 eastbound trains in the AM peak
 - 12 westbound trains in the AM peak
- T1 Western Line
 - 22 eastbound trains in the AM peak
 - 20 westbound trains in the AM peak
- T2 Inner West & Leppington Line
 - 4 eastbound trains in the AM peak
 - 4 westbound trains in the AM peak
- T5 Cumberland Line
 - 2 northbound trains in the AM peak
 - 2 southbound trains in the AM peak
- Blue Mountains Line
 - 4 eastbound trains in the AM peak
 - 2 westbound trains in the AM peak

2.2.2 Buses

Five different bus routes serve the school. Nearby bus stops and routes are shown in Figure 5. Key bus routes are:

- 802 Liverpool to Parramatta via Guilford, Green Valley, Fairfield West and Miller. Service operates daily.
- 804 Parramatta to Liverpool via Merrylands, Chetwynd Road (Guildford), Fairfield, Hamilton Road (Fairfield West), Greenfield Park, Bonnyrigg, Hinchinbrook, Miller and Sadleir.
- 806 Parramatta to Liverpool via Merrylands, Greystanes, Wetherill Park, Prairiewood, Abbotsbury, Edensor Park, Bonnyrigg and Reservoir Road (Mount Pritchard). Service operates daily
- 810 Merrylands to Parramatta via Merrylands West, Pemulwuy and Greystanes, Service operates daily.
- 811 Greystanes to Parramatta via Merrylands West and Pemulwuy. Service operates daily.



Figure 5: Bus stops and routes surrounding the school

2.2.3 School buses

School bus 9402 services the school in the morning. On 13 December 2017, 20 students were observed to be dropped-off at the bus zone along Railway Street at 8:38am, as shown in Figure 6.

School bus 9574 services the school in the afternoon. On 13 December 2017, approximately 20 students were observed to be picked-up from the bus zone along Railway Street at 3:00pm.

Site observations estimated that school bus occupancy levels were no more than 50% in both cases. These school buses also serve other surrounding schools besides Parramatta West Public School



Figure 6: School bus 9402 on Railway Street

2.2.4 Cycling

The RMS recommended cycling routes near the school are shown in Figure 7. A shared path, south of the Western motorway provides a continuous east-west connectivity. Pitt Street provides a certain degree of north-south connectivity to the school. While certain sections do not have dedicated paths, other alternate local routes can be utilised such as Franklin Street.

The school is well placed to make use of the comprehensive cycling network, to encourage older students and staff to cycle to school.

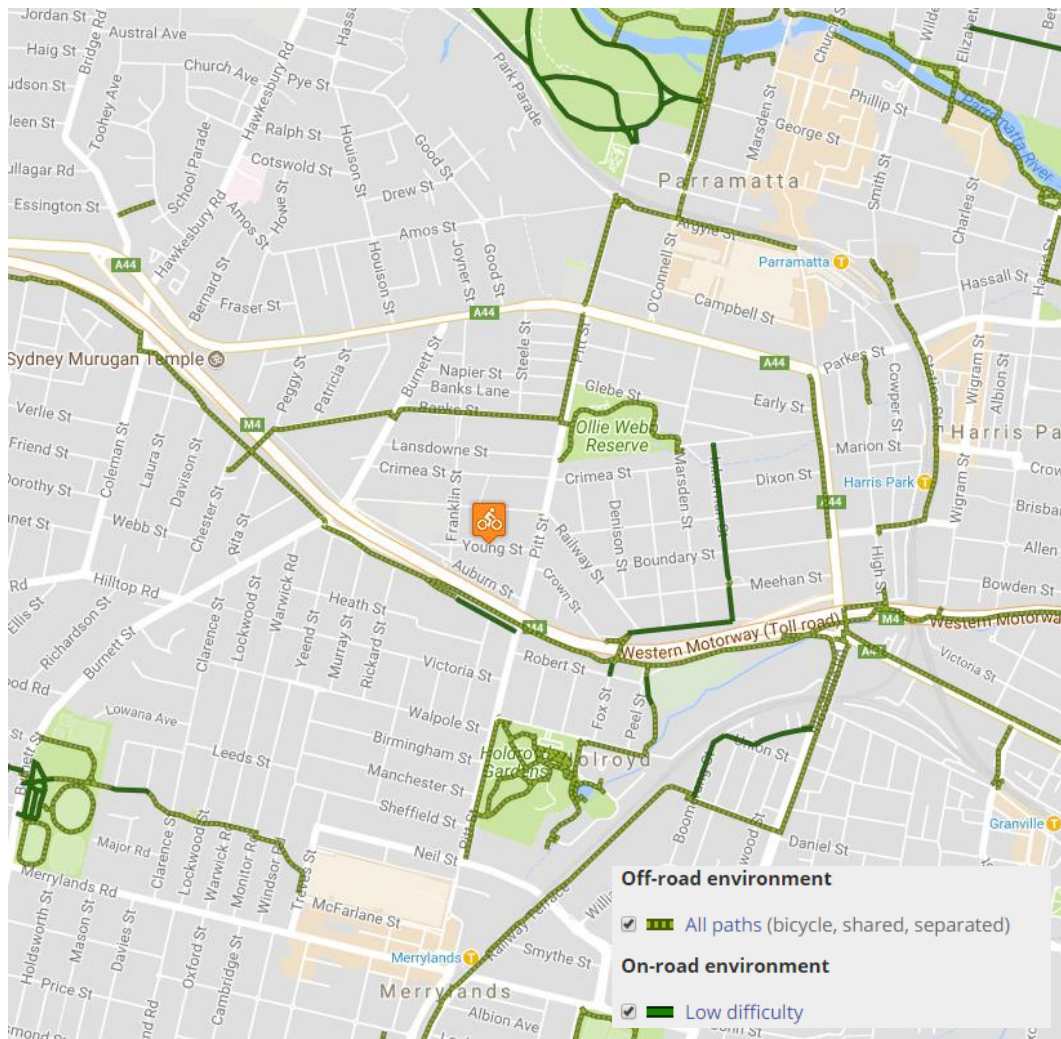


Figure 7: RMS cycleway finder near the school

Source: <http://www.rms.nsw.gov.au/roads/bicycles/cyclewayfinder>

2.3 Pedestrian safety

The surrounding streets consist of local roads which predominantly serve low density residential dwellings. Traffic volumes are therefore significantly lower during school off-peak hours. Streets surrounding the school are typically wide, for example Railway Street having a kerb to kerb width of 12 metres. Wider streets tend to give cars a sense of priority and a tendency to speed. School Zones are enforced along Auburn Street, Railway Street and Franklin Street and the raised pedestrian crossing in Railway Street forms of traffic calming device to reduce traffic speeds.

The school has a network of footpaths leading to bus stops and school entries. A pedestrian overbridge is provided across the Western Motorway. Some of the local roads such as Auburn Street and parts of Railway Street have footpaths on only one side of the road. The main pedestrian entry is along Railway Street, with a raised zebra crossing connecting Railway Street and entry to the school sportsground, as shown in Figure 8.



Figure 8: Pedestrian entries and crossings

2.4 Indicative school catchment

The indicative school catchment is shown in Figure 9 and shows that the catchment extends approximately 1.2 kilometres south and 800m north of the school.

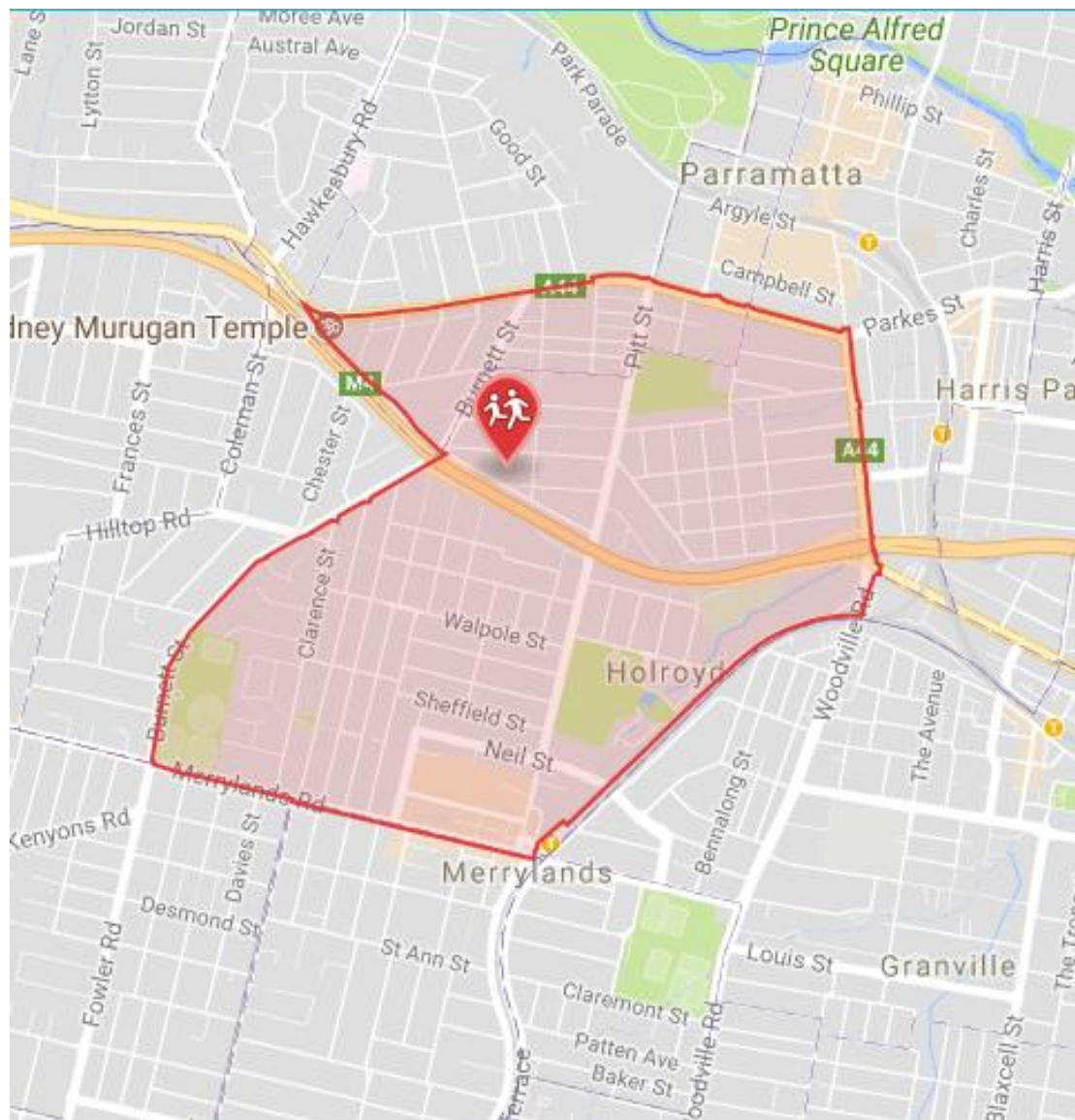


Figure 9 School catchment area

Source: <http://schoolzones.net.au/nsw/schools/parramatta-west-public-school/>

3 Travel mode targets

3.1 Staff travel

Based on the journey to work travel data, some 87% of employees in this area drive to work. For Parramatta West Public School with 49 existing staff, and based on observed parking on the nearby streets, it is assumed that this appropriately represents the existing number of staff who drive to the school.

The target for staff travel by private car should be 70%. For the future 52 staff on the site, this would result in 36 by private car and 16 by public transport, carpooling or active travel modes.

3.2 Student travel

In order to understand the nature of private vehicle trips made by students of the school, Arup has conducted on-site surveys on 13 December 2017 at drop-off / pick-up locations surrounding the school.

The surveys recorded the number of students alighting / boarding each car.

3.2.1 Existing Drop off

During the survey period from 8:00am to 9:00am, a total of:

- 429 students arrived by car
- 286 cars were recorded dropping off students
- An average 1.5 students to car occupancy rate was observed
- Based on an existing 766 students, a car mode share of 56% was observed

3.2.2 Existing Pick up

During the survey period from 2:40pm to 3:20pm, a total of:

- 346 students departed by car
- 211 cars were recorded picking up students
- An average 1.64 students to car occupancy rate was observed
- Based on an existing 766 students, a car mode share of 45% was observed

3.2.3 Future target

For student travel a 10% reduction target should be set for private vehicle drop-off. For a total future student population of 961 students, this would result in 442 students arriving by car generating 294 car movements for the same car occupancy levels. This may be further reduced if carpooling strategies are adopted.

4 Green Travel Plan Framework

This Green Travel Plan specific for the school needs to address the following issues:

- What are the **objectives** for the school in terms of travel journeys to and from the school, during school hours and other travel to and from the school?
- How are the set objectives going to be met? What **measures** are going to be implemented and encouraged?
- Who is going to be responsible for the management, implementation and administration of the measures?
- How will students and staff be encouraged to reduce car dependent travel?

These matters are addressed in the following sections.

4.1 Green Travel Plan Objectives

The main objectives of the Green Travel Plan are to reduce the need to travel and promotion of sustainable means of transport.

The more specific objectives include:

- High modal share for public transport, cycling and walking to school journeys;
- To ensure adequate facilities are provided at the site to enable staff, visitors and students to commute by sustainable transport modes;
- To reduce the number of car journeys associated with business travel by staff and visitors;
- To facilitate the sustainable and safe travel of new staff;
- To reduce the need to travel for work-related activities; and
- To raise awareness of sustainable transport amongst staff, students and visitors.

4.2 Green Travel Plan Measures

A range of travel method alternatives have been recommended as well as incentives to change travel behaviour over the short and longer term period. The purpose is to encourage mode shifts away from private vehicle usage and create a positive outlook for active transport.

These initiatives aim to improve the existing and future conditions of the school population increase by:

- Reducing private vehicle usage from staff and therefore parking demand
- Reducing private vehicle usage (pick-ups and drop-offs) from students
- Reducing traffic congestion and improving intersection performance

The modal shift associated with these travel methods aim to reduce car trips to the development so there is no net impact from School population and proposed development increases on existing traffic conditions.

4.2.1 Existing School Measures

Currently students have to pay for public transport if they live within a certain distance of the School. This varies between the year groups and costs up to \$52 per term if they live within the distances as follows:

- a primary student (Years 3-6) who lives more than 1.6km (radial distance) from school, or 2.3km or more by the most direct practical walking route

It should be noted that an infant student (K, Year 1 and Year 2) older than 4 years and 6 months who lives any distance between home and school does not need to pay for public transport passes.

The School currently coordinates the process of having bus passes arranged for students. The School will continue to do this and raise awareness of this as an offering, to encourage greater use of public transport.

4.2.2 General Marketing and Promotion

The objectives of the Green Travel Plan will only be achieved with the support of staff and student's parents. Marketing the benefits and promoting the sustainable alternatives available are therefore crucial in encouraging staff and students to adopt the Green Travel Plan measures. It is important that at an early stage, everyone is made aware of the need for the Green Travel Plan, and that it is emphasised that the measures are being introduced to support and encourage people to use cars more wisely.

This is especially pertinent with staff. Existing staff travel modes consist of some 87% driving to school. The new school will provide no on-site parking.

In addition to raising general awareness, any successes achieved will be fully publicised to staff and students in order to motivate them to use sustainable modes of transport.

- A dedicated webpage for employees could be created to include travel information section containing information on cycle parking and useful links to public transport websites specific to the school location; and
- Support and promote events such as National Bike Week, Bike2Work Days, walk to work day to staff through lunch time presentations or students during assembly, notice board posters, newsletters intranet and email.

4.2.3 Cycling

As described in Section 2.2.4, the school has good access to the cycling network and will provide onsite facilities for cyclists (i.e. easily accessible bike room/shelter, changing rooms and showers, lockers etc.). There are no known planned upgrades to cycle facilities in the immediate area however the school will

take an interest in future redevelopment of initiatives through Parramatta Council. In order to activate and promote cycling the following measures should be considered:

- Supply a Green toolkit-this can consist of puncture repair equipment, a bike pump, a spare lock and lights;
- Come to an arrangement with a local cycle retailer for cheap servicing of student and staff bikes. If people buy enough bikes from the retailer, they may agree to service them for free;
- Consider providing interest-free loans for staff to buy a bicycle and accessories, which they then pay back from their wages;
- Provide cycle maps to staff and students;
- Participate in annual events such as 'Ride to Work Day';
- Notice boards should have news of events / generic posters promoting cycling;
- The schools should have a 'Cycling to school' webpage specific for their school containing details of storage areas, shower facilities and links on the intranet containing useful links to journey planning websites in Sydney;
- Make staff and students aware of public transport cycling carriage policies and cycle storage facilities at rail stations;
- Staff and students who cycle should be encouraged to form a Bicycle User Group in order to provide a body of regular cyclists who can discuss issues relating to the provision of on-site cycling facilities and the maintenance of off-site cycle routes; and
- Set up 'Bike Buddies' scheme for less confident people interested in cycling.

4.2.4 Public Transport

To promote the use of public transport for travel to school and school-related journeys during the day.

- Provide a minimal number of parking spaces for staff within the school sites to encourage the use of public transport travel;
- Manage the student drop-off and pick-up areas surrounding the schools;
- Provide an intranet public transport page to contain useful links to journey planning websites in Sydney;
- Provide useful public transport maps and promotional items to potential and current public transport users in the existing induction pack for new employees; and
- Provide notice boards that should have news of events / generic posters promoting public transport.

4.2.5 Walking

Specific Travel Plan measures designed to encourage more walking trips to and from the schools by those staff and students living within a reasonable distance. The existing footpath network is well connected with safe crossing locations

available at zebra crossings and traffic signal crossings. Safety of pedestrian routes will be monitored by the school and parents and where necessary the School will work with Council to address any identified issues.

Other initiatives that could be explored include:

- Produce a map showing the most direct route connecting the transport interchange and schools, along with the estimated walking time;
- Produce walking related articles for inclusion in the school newsletters focussing on ‘walking champions’ to highlight best practise in walking;
- Create and maintain an intranet ‘useful walking routes’ containing useful routes to key areas;
- Make pedometers available to staff and students expressing an interest in walking to school;
- Participate in Walk to Work day and look into holding a ‘healthy breakfast’ as a reward to all those who participate; and
- Facilitate the walking school bus initiative.

4.2.6 Car pooling, taxi share and shuttle bus service

In order to reduce the number of car trips and especially trips made to common destinations the following measures should be considered:

- Set up a journey to/from school car share system for all staff who are willing to participate in the scheme. The system would inform participants of other staff who live in the same area or who pass through the area on their way to the schools. The participants either share the costs or alternate in driving to the schools;
- Utilise a range of free apps currently available online to assist with the implementation of this initiative. The schools will need to investigate the most appropriate app that aligns with its Child Protection Policies before promoting this initiative; and
- Introduce a taxi or pool car share system for trips during the day for staff.

4.2.7 Staff Induction

To ensure new members of staff are aware of car parking arrangements and the Green Travel Plan, all staff members should be made aware of the Plan as part of their induction process. The Green Travel Plan section of the induction should provide new starters with the following:

- A brief introduction to the Green Travel Plan and its purpose;
- Tour of the schools to include visit cycle parking areas and shower and changing facilities; and
- Provision of a Green Travel Plan information package which would include information on incentives to use sustainable means of transport e.g. pool bikes and car/taxi share system.

4.3 Scheme Administration

4.3.1 Administration

An essential part of an effective Green Travel Plan is to nominate a Travel Plan Co-ordinator for both the primary and secondary school. The role should be undertaken by enthusiastic and high quality communicators in order to promote measures that will encourage people to think about travel other than as a single occupancy car user. He/she will need to be an enthusiastic and respected member of staff who is keen to champion the cause of the Travel Plan. Other qualities that may be appropriate include the capability of dealing with all types of people within the schools and external organisations, the ability to lead by example, the ability to approach issues with a practical and balanced perspective and the capability for original and innovative thinking to raise awareness of the Travel Plan at a local level.

Senior management support is critical to ensuring the success of any travel plan for a number of 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.

Administration of the Travel Plan involves the maintenance of necessary systems, data and paperwork, consultation and promotion.

4.3.2 Consultation

The success of the Green Travel Plan will rely on the support of the employees which will be overseen by the Green Travel Plan co-ordinator. The school should also support staff administrative needs such as providing lockers and storage spaces, reducing the need for staff to carry bulky items home.

The Green Travel Plan co-ordinator will be responsible for all liaisons with outside bodies, including local transport operators, planning and highway authorities.

Liaison with officers of the Council (e.g. those responsible for cycling and public transport will be undertaken as required). The co-ordinator will also seek to join and attend meetings with any local travel forums as appropriate in order to exchange ideas with other like-minded organisations.

4.3.3 Promotion

All students and staff will be made aware of the details of the Green Travel Plan, its objectives in enhancing the environment and the role of individuals in achieving its objectives at its launch.

Other promotional material will take a variety of forms and will be issued either to individual staff members and students, displayed in a prominent location in the school or provided in the form of 'one off' marketing initiatives. This would

include outlining the benefits for the school in participating in government travel surveys to both improve public transport services and promote the use of public transport.

The promotional material will advise employees wishing to raise specific transport-related matters to discuss them with the appropriate nominated Travel Plan co-ordinator who in turn would liaise with the Green Travel Plan management team, transport operators and the local authority as required.

4.3.4 Updating, reviewing and monitoring

The Green Travel Plan is a strategy that will evolve over time. Although the objectives of the Plan to ‘educate’ students and staff, and to facilitate travel by sustainable modes will not change, it may be possible over time to define or re-define specific targets. Target setting should reflect an ambition for continued progress year on year and there should be a mechanism to review targets in light of monitoring surveys. The monitoring measures could include collecting data on travel patterns for journeys to school and also during the school hours. The recorded data would inform modes of transport and distance travelled by each mode, from which energy consumption and emissions could be estimated.

Following the implementation to the Green Travel Plan, the Green Travel Plan management team should meet annually to undertake a review of the Travel Plan measures in place. The objective will be to measure their success and to identify the potential for refinements. The plan would be updated to consider firmer details of the initiatives of the Future Transport Strategy 2056, as they are forthcoming. The management team will further engage with Government to assist in designing and operating services which best support the needs to the students and staff, and therefore promote high levels of sustainable transport modes.

The Green Travel Plan management team will then compile a review report outlining the results of the review. The report will also incorporate the results of on-going monitoring processes throughout each of the preceding periods.

5 Conclusion

Implementation of a Green Travel Plan and travel demand measures are essential for providing access to students, staff and visitors of Parramatta West Public School in a sustainable way and meeting lower car mode share targets. The Green Travel Plan will contribute to a healthier and better quality of life for students and staff, and a reduction in air and noise pollution. The schools will benefit from more productive staff and students, cost savings and reduced demand for car parking.

Staff should be informed, inducted and educated of the travel mode targets. They should also be given ample notice and support in transitioning from driving to work, to taking public transport. The school should also support staff administrative needs such as providing lockers and storage spaces, reducing the need for staff to carry bulky items home.