

# Green Travel Plan

## Meriden CMD

Prepared for Carmichael Tompkins Property Group / 4 April 2022

181478 TAAA

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## Revision Register

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## 1.0 Introduction

### 1.1 Background

Taylor Thomson Whitting (TTW) has been engaged by Carmichael Tompkins Property Group to provide a Green Travel Plan (GTP) incorporating the recommendations of the the Sustainable Travel Plan (STP) and Workplace Travel Plan (WTP) that were previously prepared as part of the State Significant Development Application approval process.

Meriden ('the school') has been serving the Strathfield community for more than 125 years. Over recent years, the school has been developing a Master Plan to guide planning of the campus for the next 30 years. The Master Plan will allow for a new campus wide planning approach offering the opportunity to strategically review and plan for the future in sustainable way.

This Green Travel Plan (GTP) has been prepared to address the following Condition of Consent E9:

<i>Prior to the issue of an occupation certificate, a Green Travel Plan (GTP), must be submitted to the satisfaction of the Planning Secretary to promote the use of active and sustainable transport modes. The plan must:</i>	Reference:
<i>a) be prepared by a suitably qualified traffic consultant in consultation with Council and (Sydney Coordination Office) Transport for NSW;</i>	This report has been prepared and reviewed by qualified traffic engineers as outlined on Page 4.
<i>b) include objectives and modes share targets (i.e. Site and land use specific, measurable and achievable and timeframes for implementation) to define the direction and purpose of the GTP;</i>	Section 4.0 describes the mode share targets for students and staff, and Section 3.0 discusses the objectives of the GTP.
<i>c) include specific tools and actions to help achieve the objectives and mode share targets</i>	Section <b>Error! Reference source not found.</b> outlines several actions and strategies to achieve the objectives and mode share targets.
<i>d) include measures to promote and support the implementation of the plan, including financial and human resource requirements, roles and responsibilities for relevant employees involved in the implementation of the GTP</i>	Section 5.5.3 outlines the roles and responsibilities of the Transport Coordinator in charge of the implementation and reviewing of the plan.
<i>e) include details regarding the methodology and monitoring/review program to measure the effectiveness of the objectives and mode share targets of the GTP, including the frequency of monitoring and the requirement for travel surveys to identify travel behaviours of users of the development;</i>	Section 5.5.2 details the frequency with which the GTP should be reviewed and what this review should include such as an updated travel survey.

<i>f) incorporate the strategies and recommendations of the Green Travel Plan, Issue 3, dated 26 November 2019, prepared by Ason Group; and</i>	The objectives, targets and strategies outlined in the GTP prepared by Ason Group have been included in Sections 3.0, 4.0 and <b>Error! Reference source not found..</b>
g) incorporate the strategies and recommendations of the Workplace Travel Plan Issue 3, dated 26 November 2019, prepared by Ason Group provided in the RtS	The objectives, targets and strategies outlined in the Workplace Travel Plan prepared by Ason Group have been included in Sections 3.0, 4.0 and <b>Error! Reference source not found..</b>

A GTP is a way to manage the transport needs of staff, students, contractors, volunteers, and visitors of the proposed development. The aim of the Plan is to reduce the traffic congestion in the area, environmental impact of travel to and from the development and it typically includes support for walking, cycling, public transport and car sharing, while reducing dependence on private vehicles and parking.

This Plan has been developed in consultation with the school and with consideration to the community's concerns and authority requirements.

## 1.2 Objectives

The objectives of the school in implementation of this Plan include:

- Reduce the environmental impact of travel to and from the school through recommendations of programs to encourage walking, cycling and public transport use.
- Reduce the use of private cars at the site by senior students, staff and parents dropping off and picking up students.
- Recommend transport mode targets.

## 1.3 Benefits

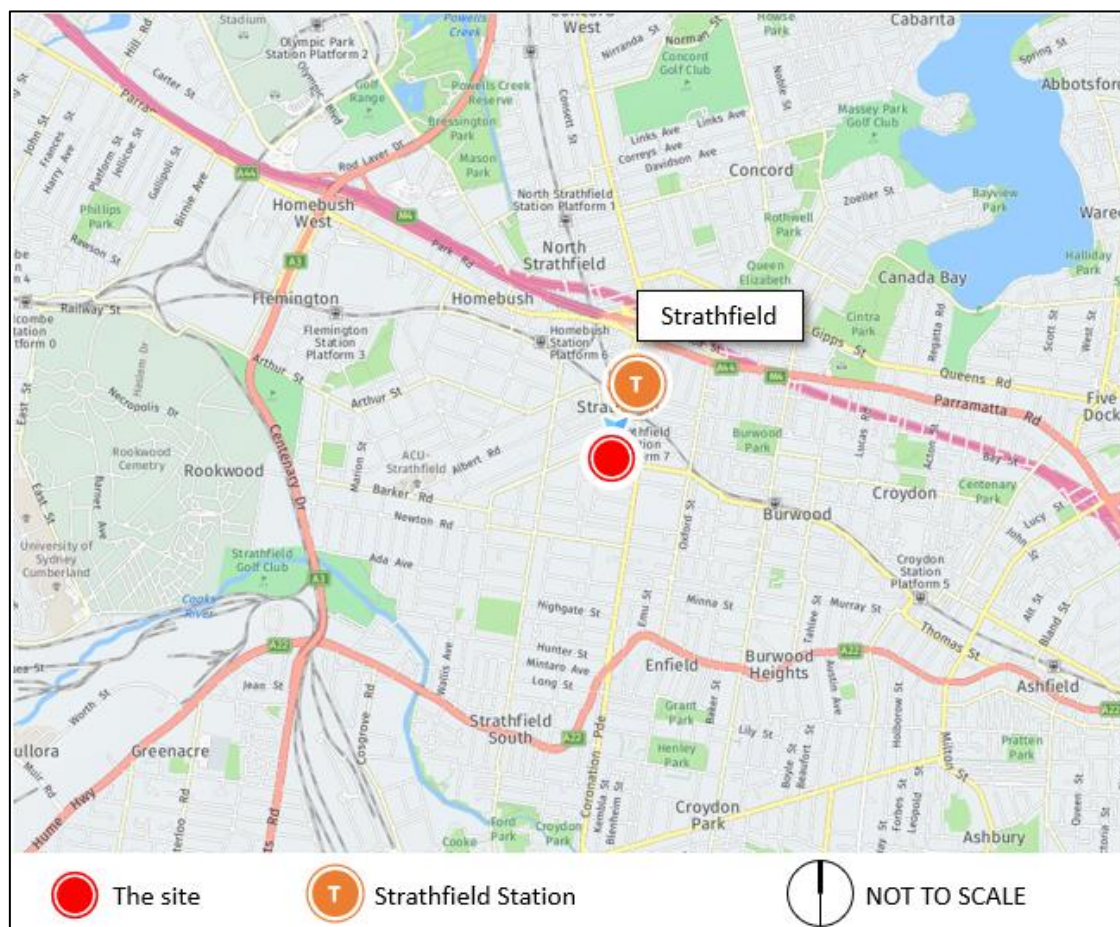
The aim of this Plan is to encourage active and sustainable travel behaviours. Environmental and social benefits commonly result from Green Travel Plans.

## 2.0 Travel Audit

### 2.1 Site Location

Meriden is located within the local government area (LGA) of Strathfield Council, approximately 250m south-west of the Strathfield Train Station, which is equal to 400m walking distance. (refer to Figure 2.1).

The Site campus is located at 10–12 Redmyre Road, Strathfield, and comprises three campus sites in close proximity to each other. The school is bound by Redmyre Road (to the north), Carrington Avenue (to the south), The Boulevard (to the east) and Vernon Street (to the west). Detached dwellings on individual residential lots abut the southern boundary of the site. Figure 2.2 provides an aerial map of the site and its immediate surrounds.



**Figure 2.1: Meriden School Location Context Plan**  
Source: NearMap





Figure 2.2: Aerial Map of the Meriden Campus sites



## 2.2 Active Transport

### 2.2.1 Pedestrian Facilities

The school is well serviced by pedestrian facilities in the surrounding areas. There are concrete footpaths available along both kerbsides on Redmyre Road, Margaret Street, Vernon Street and The Boulevard. Along the frontage of both Senior and Prep School sites, Margaret Street has wide footpaths up to 2.5 metres in width on both kerbsides.

Majority of the intersections near to the school contain pedestrian crossings or are signalised. Figure 2.3 indicates the key intersections along popular pedestrian routes between campuses and to the train station. Table 2.2 summarises the types of crossings along these popular pedestrian routes and should be read with reference to Figure 2.3. This analysis indicates that the main pedestrian routes to and from the school are adequately serviced by footpaths and road crossings, providing safe route options.



Figure 2.3: Key Pedestrian Intersections around the Site

**Table 2.1: Schedule of Pedestrian Crossings**

Intersection Reference	Type of Crossing
1	Unsignalised zebra crossing with wide pedestrian median
2	Unsignalised zebra crossing
3	Unsignalised zebra crossing
4	Signalised crossing on western and northern intersection legs. Wide median provided on northern leg and narrow median on western leg
5	Signalised crossing on southern and eastern intersection legs / zebra crossing on western leg with median. Narrow median provided on southern leg.
6	Unsignalised zebra crossing
7	Pedestrian refuge across southern leg
8	No crossing infrastructure
9	Signalised crossing on western and northern intersection legs. Wide median provided on western leg and narrow median on northern leg.
10	Signalised crossing on southern and eastern intersection legs. Wide median provided on southern leg.
11	Unsignalised zebra crossing

## 2.2.2 Bicycle Facilities

The existing bicycle routes available in the Strathfield LGA are shown in Figure 2.4. The map identifies several local on-road cycling routes and the Bay-to-Bay route which is a 23-kilometre shared pathway track extending from Ryde to Botany Bay via Strathfield. As the figure indicates, the school does not contain nearby cycling routes, limiting the opportunity for students or staff to travel to and from school via bicycle.

The Strathfield Active Travel Plan prepared by GHD in 2016 includes a network map of the proposed bicycle routes for Strathfield Council. This network can be viewed in Figure 2.5. Redmyre Road is identified as a local on-road cycling route, and The Boulevard is proposed to be a shared path.

The school does not currently contain any on-site provisions for bicycle parking which restricts students from travelling to school via bicycle.

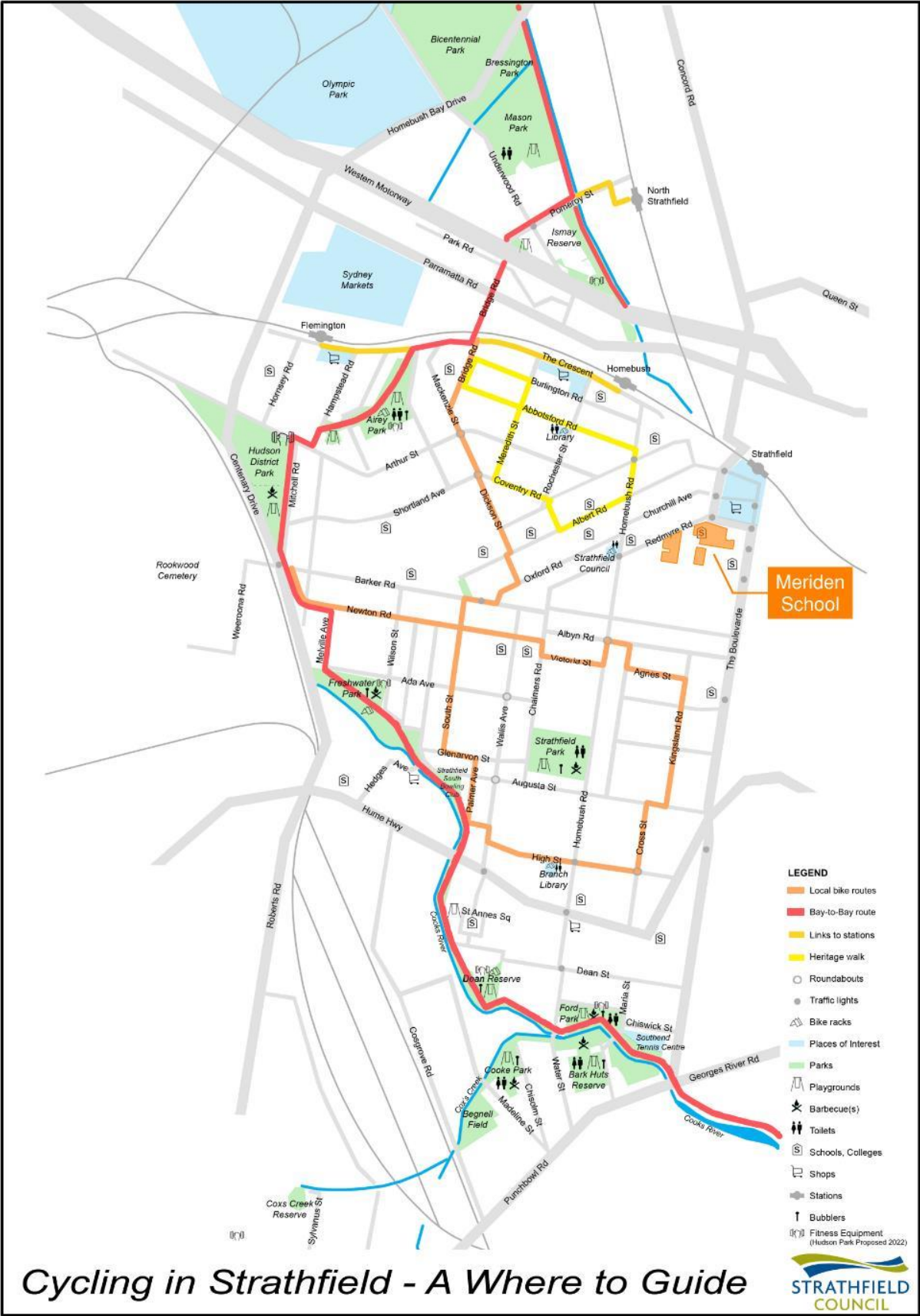


Figure 2.4: Strathfield Cycleway Map (Strathfield Council, 2021)



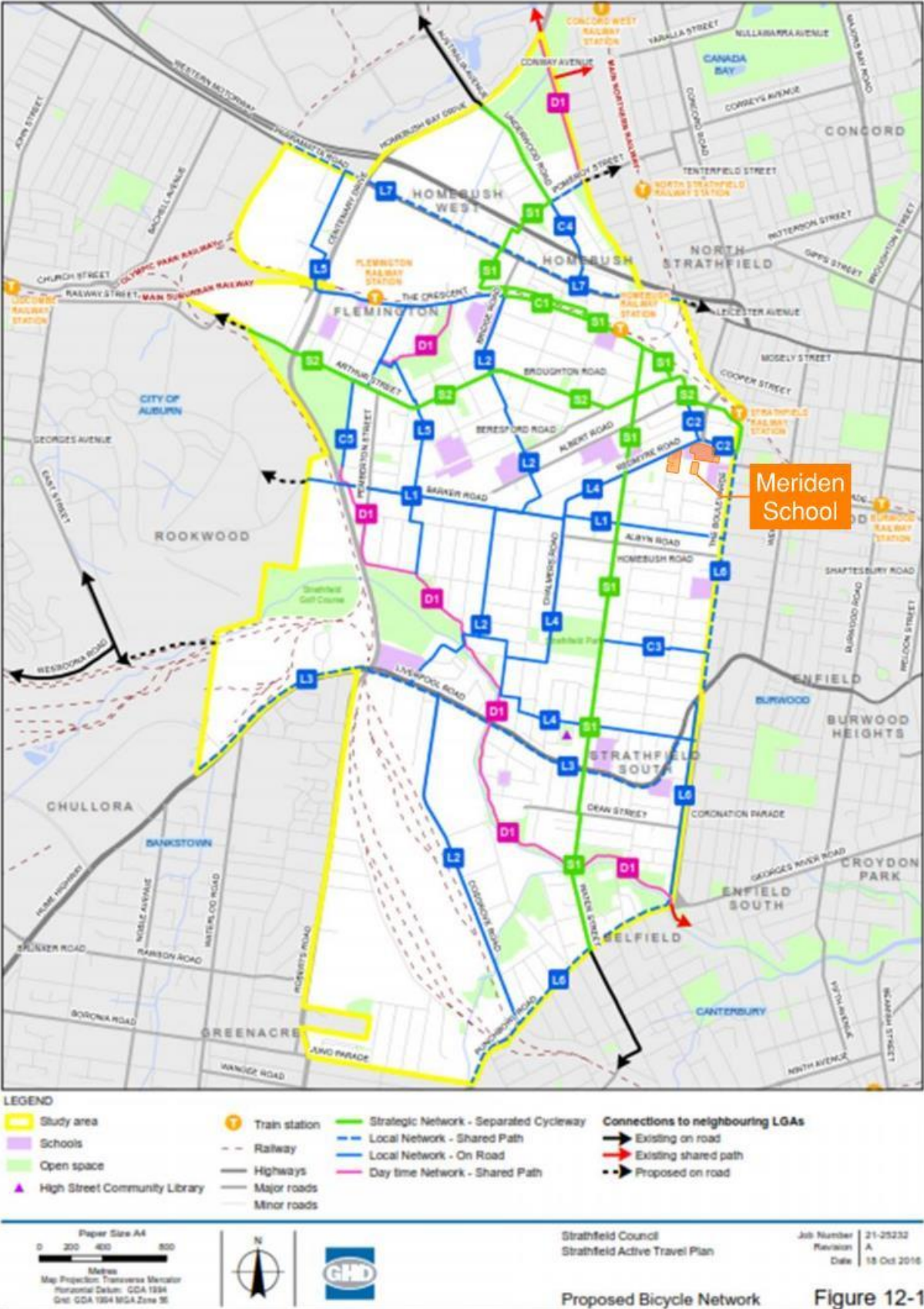


Figure 2.5: Proposed Bicycle Network (Strathfield Active Travel Plan, 2016)

## 2.3 Public Transport

### 2.3.1 Public Bus Services

The school is well serviced by public bus routes, with several bus stops within 400 metres of the school. These bus stops are located along Redmyre Road, The Boulevard, Albert Road and Strathfield station, and can be seen in Figure 2.6.

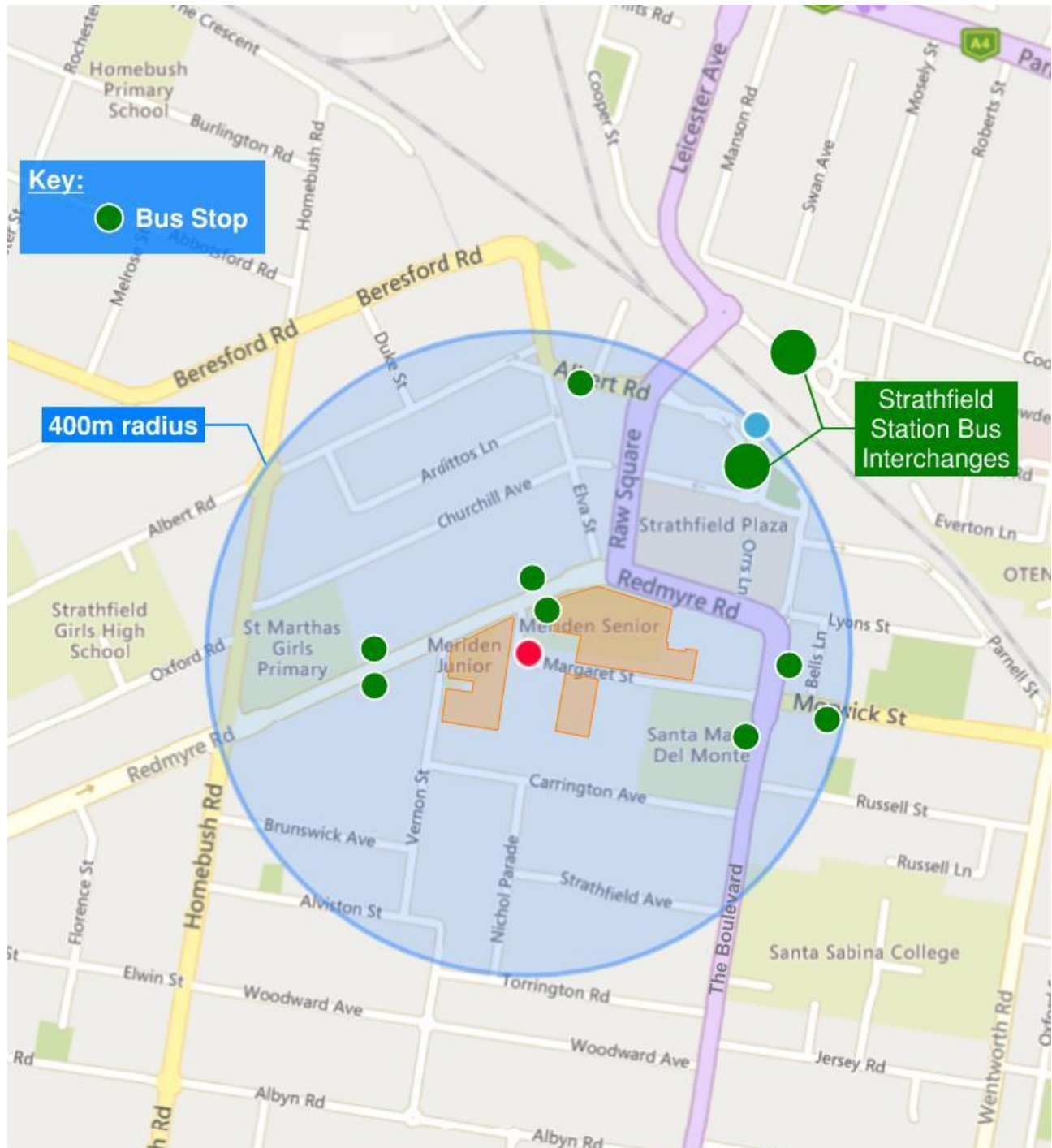


Figure 2.6: Locations of Nearby Bus Stops

There are four main bus providers operating from the bus stops surrounding the school:

- Busways
- Transit Systems
- Transdev NSW
- Punchbowl Bus Company

A summary of the available bus routes from each operator are included in Table 2.2.

**Table 2.2: Summary of Bus Routes**

Bus Operator	Route Number	Bus Route	Frequency during Weekday AM and PM Peak
<b>Busways</b>	525	Parramatta to Strathfield via Sydney Olympic Park	20 to 30 mins
<b>Transit Systems</b>	407	Burwood to Strathfield	30 mins
	408	Rookwood Cemetry to Burwood via Flemington	60 mins
	415	Campsie to Chiswick	20 to 30 mins
	458	Ryde to Burwood	30 mins
	466	Cabarita to Burwood	20 to 30 mins
	480	Strathfield to Central Pitt St via Homebush Rd	20 to 30 mins
	483	Strathfield to Central Pitt St via South Strathfield	20 to 30 mins
<b>Transdev NSW</b>	526	Burwood to Rhodes Shopping Centre	15 to 30 mins
	913	Strathfield to Bankstown	60 mins
	914	Greenacre to Strathfield	30 mins
<b>Punchbowl Bus Company</b>	m90	Burwood to Liverpool	10 to 15 mins
	450	Strathfield to Hurstville	15 mins

A copy of the network maps for each of the bus providers are included below in Figure 2.7, Figure 2.8, Figure 2.9 and Figure 2.10.





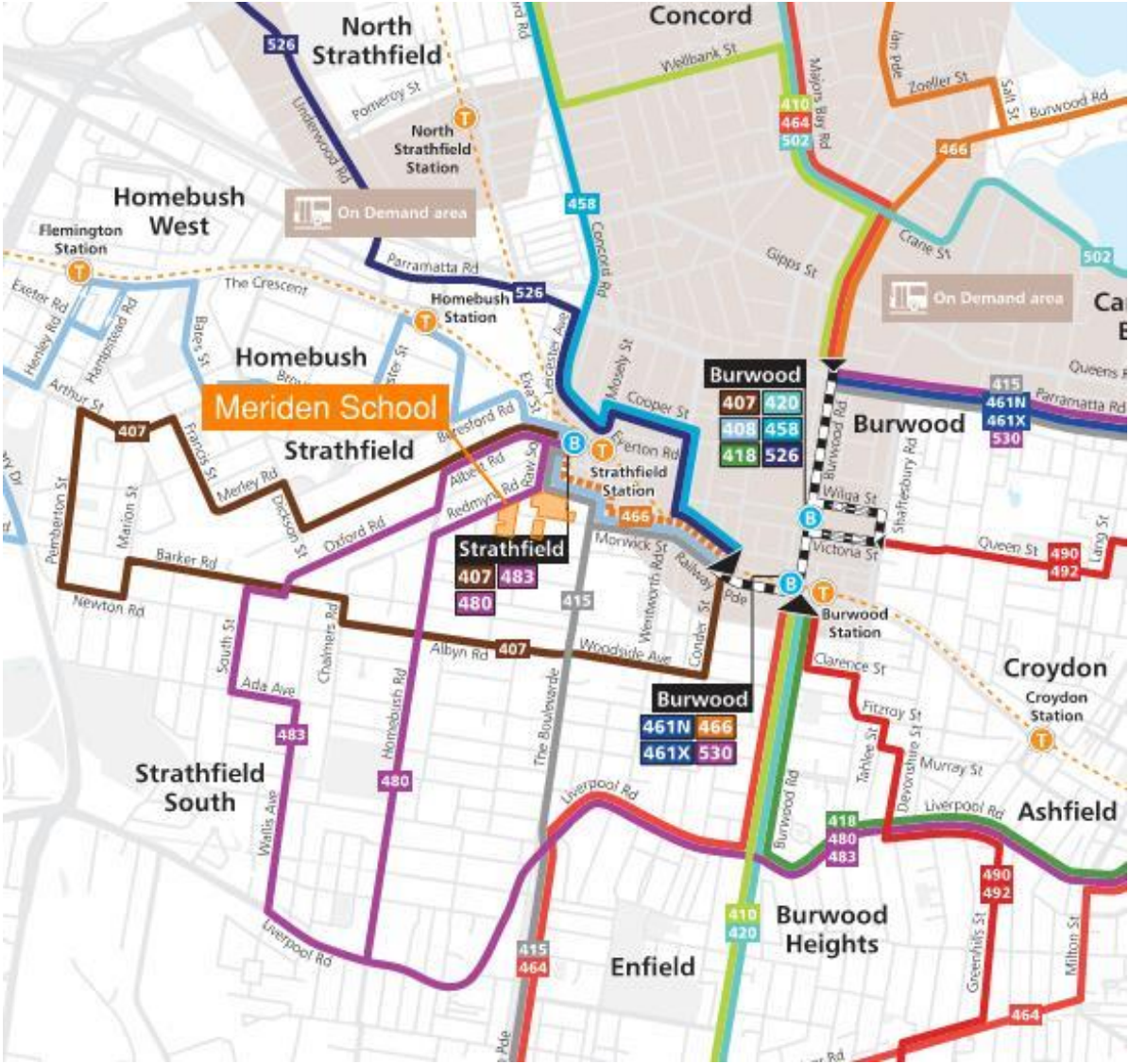


Figure 2.8: Transit Systems Bus Network Map (Transit Systems, 2021)

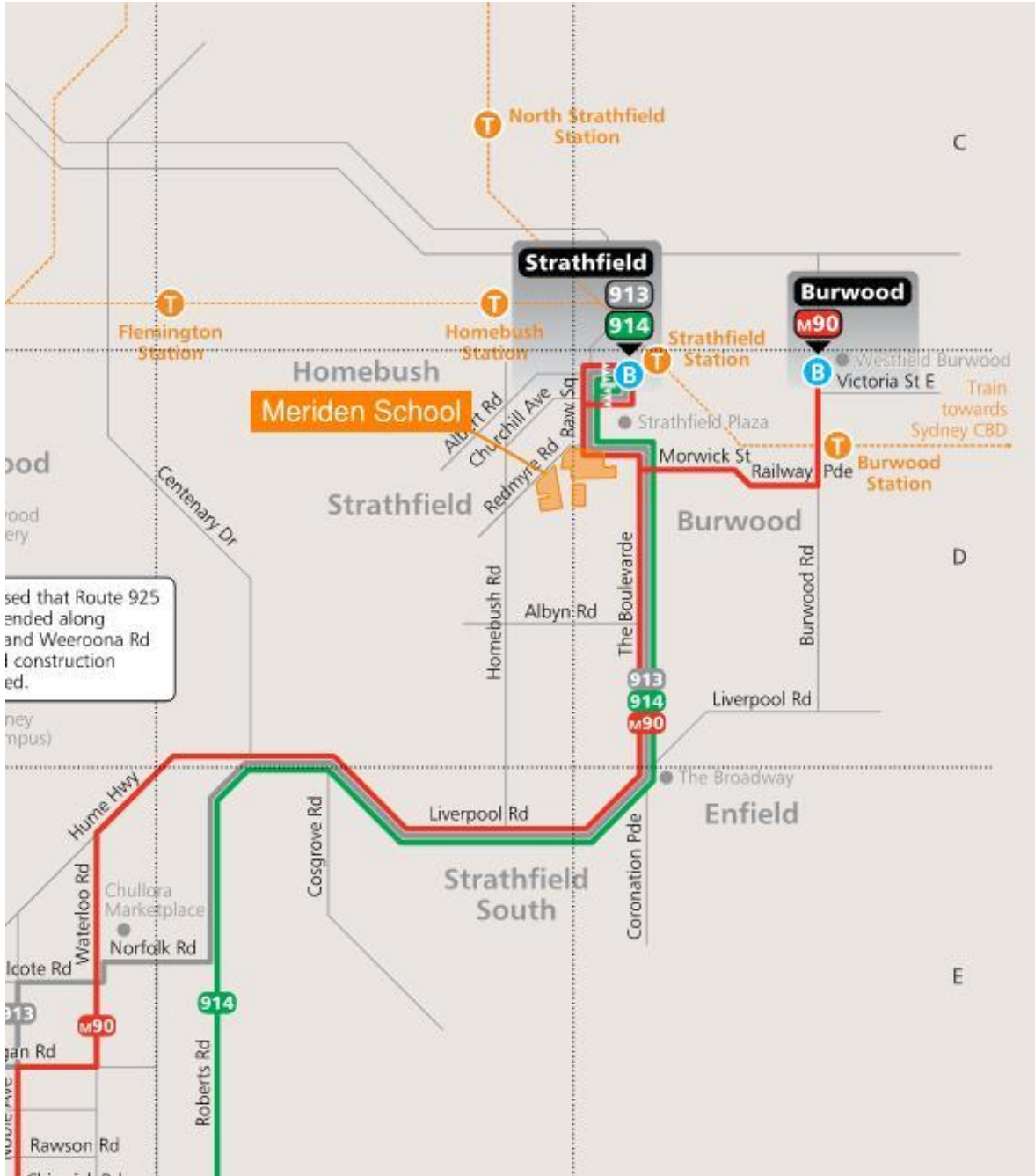


Figure 2.9: Transdev Bus Network Map (Transdev NSW)



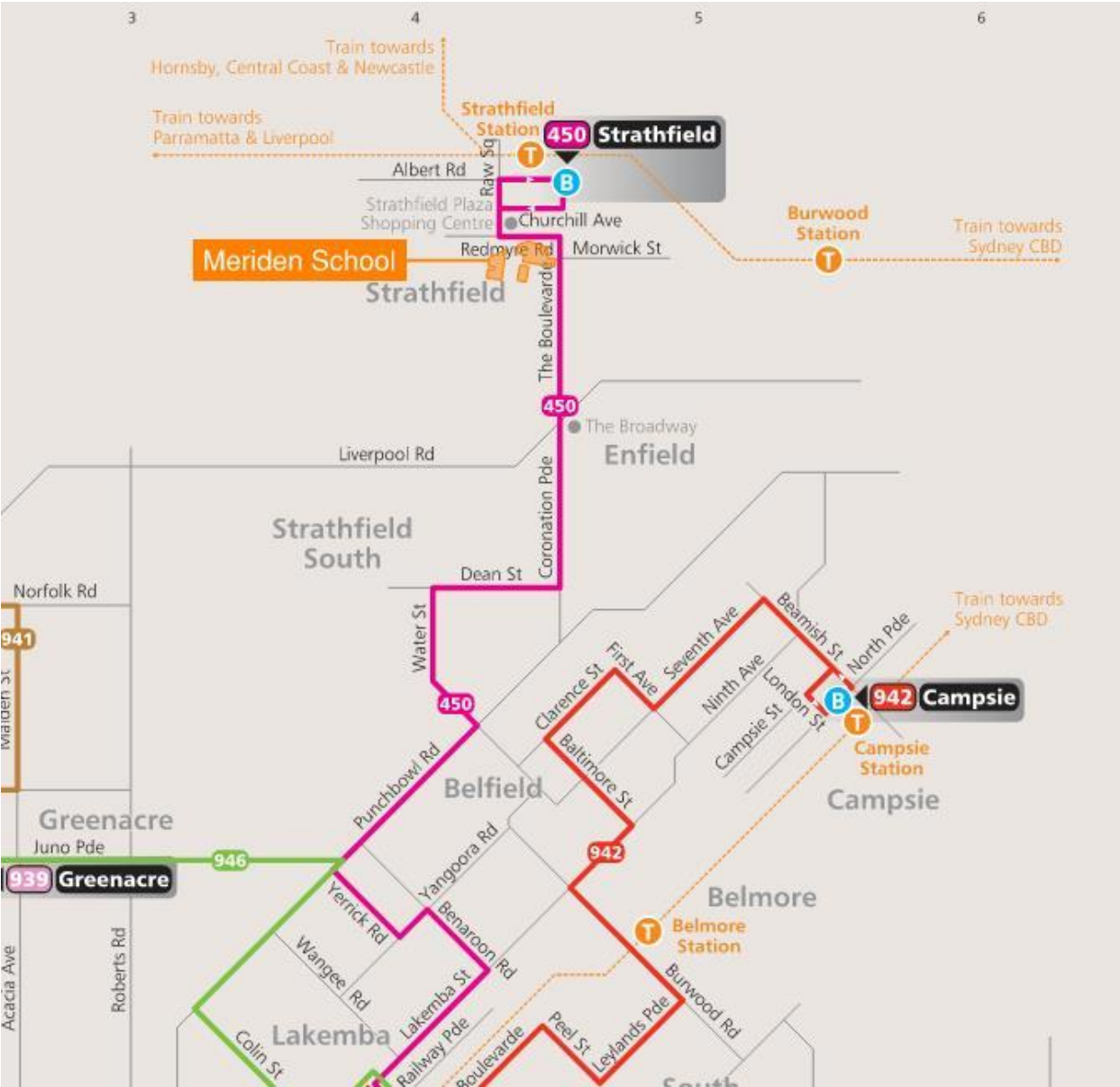


Figure 2.10: Punchbowl Bus Company Bus Network Map (Punchbowl Network Map, 2020)

### 2.3.2 Meriden School Bus Services

The school has one school bus zone on Margaret Street, positioned out the front of the main entry to the Senior School Campus. Meriden school buses typically arrive between 8:00am and 8:20am during the morning peak hour, and depart between 3:20pm and 3:30pm in the afternoon peak hour. The school also offers an evening bus service departing at 5:15pm which stops at Strathfield Park, Beverly Hills and Hurstville.

The school bus services offered to students are summarised in Table 2.3, and a network map is available in Figure 2.11.

**Table 2.3: School Bus Services**

Route Number	Route
1	Taren Point, Miranda, Sylvania, Blakehurst, Hurstville, Beverly Hills, Strathfield Park
2	Woolwich, Hunters Hill, Gladesville, Tennyson Point, Putney, Rhodes, Concord West
3	Illawong, Alfords Point, Padstow Heights, Oatley, Strathfield Park
4	Balmain, Rozelle, Leichhardt, Dulwich Hill, Summer Hill, Enfield
5	Drummoyne, Russell Lea, Five Dock, Canada Bay, Concord
6	Concord, Breakfast Point, Cabarita, North Strathfield
7	Carlingford, Ermington, Dundas, Dundas Valley, Newington, Wentworth Point, Sydney Olympic Park
8	Earlwood, Canterbury, Ashbury, Croydon Park, Campsie, Belmore, Belfield



Figure 2.11: School Bus Network Map (Meriden School, 2021)



### 2.3.3 Train Services

Strathfield Station is located approximately 400 metres walking distance to the north of the school. Based on the Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area (Transport for NSW (TfNSW), December 2013), the train services influence the travel mode choices of areas within 800 metres walk (approximately 10 minutes) of a train station. As the school is within 800 metres, it is located within acceptable walking distance from the Strathfield Train Station.

The station is serviced by T1 – North Shore and Western Line, T2 – Inner West & Leppington Line, and T9 – Northern Line with a frequency of approximately 5 to 10 minutes during commuter peak period in both directions of travel. The Sydney Trains network map for services offered from Strathfield station can be seen in Figure 2.12.



Figure 2.12: Sydney Trains Network Map (TfNSW, 2021)

## 2.4 Car Share Services

The nearest car sharing pods are available approximately 400 metres from the school. Figure 2.13 shows the location of nearby car sharing pods within the vicinity of the school site.

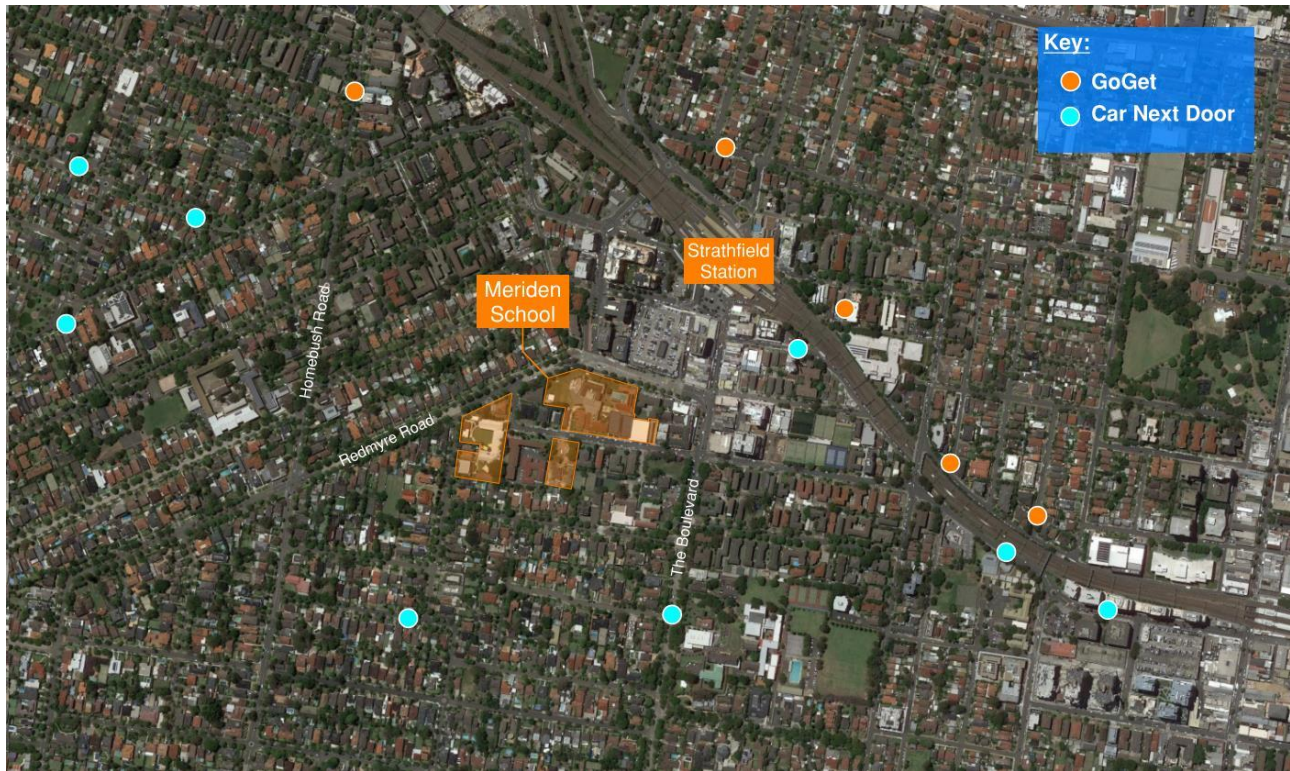


Figure 2.13: Locations of Nearby Car Share Pods



## 2.5 Parking

### 2.5.1 On-Site Parking

A total of 106 parking spaces are currently available across all three campuses. A recently approved Section 4.55 modification to the works at the Prep School will reduce the seven available parking spaces to six, totalling to 105 parking spaces. Figure 2.14 outlines the location and number of spaces in each available car park and can be summarised as follows:

- **Car Park 1:** underground parking in the Sports Centre accessible via Margaret Street
- **Car Park 2:** ground level parking accessible via Margaret Street providing access to the Prep School
- **Car Park 3:** underground parking accessible via Margaret Street providing access to the Junior School Campus
- **Car Park 4:** ground level parking accessible via Vernon Street, located outside Blackman Auditorium, providing access to the Junior School Campus.



**Figure 2.14: On-Site Car Parking Locations**

Table 2.4 summarises the on-site car parking provisions, including the number of standard and accessible spaces available.

**Table 2.4: On-Site Car Parking Allocation**

Location	Total Number	Standard	Accessible
<b>Car Park 1 – Sports Centre</b>	60	58	2
<b>Car Park 2 – Prep School</b>	7	6	1
<b>Car Park 3 – Junior School</b>	36	36	-
<b>Car Park 4 – Auditorium</b>	3	2	1
<b>Subtotal</b>	<b>106</b>	<b>102</b>	<b>4</b>
<b>Prep School S4.55 Change</b>	-1	-1	-
<b>Total</b>	<b>105</b>	<b>101</b>	<b>4</b>

### 2.5.2 Off-Site Parking

The school contains provisions for semi-permanent off-site parking spaces, summarised in Table 2.5. A total of 45 off-site parking spaces are available across the locations shown below, including three spaces attached to property owned by the school, and 42 spaces available to rent within walking distance of the school.

**Table 2.5: Off-Site Parking Allocation**

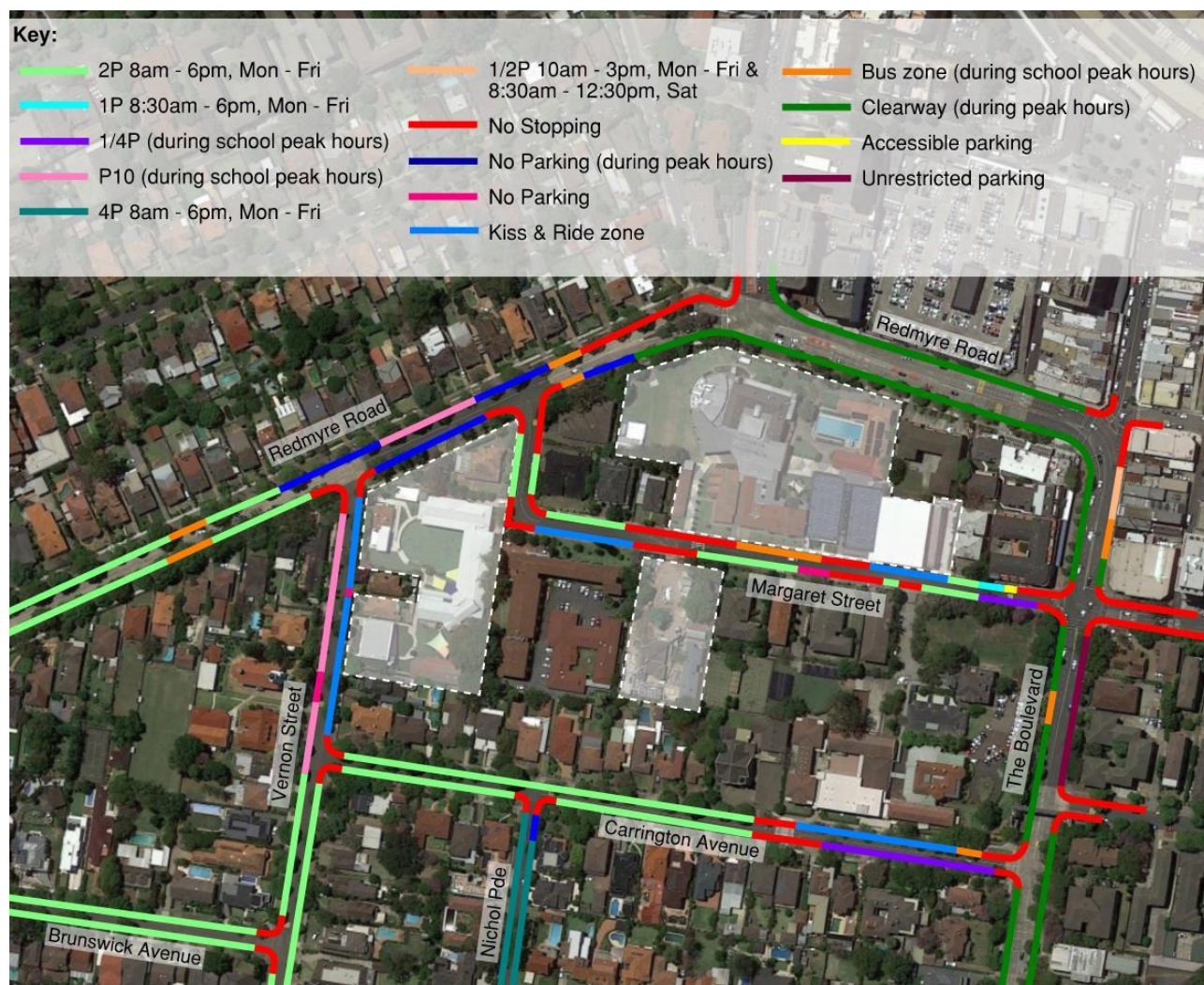
Location	Total Number	Detail
<b>Unit 4/19-21 Margaret St</b>	2	This unit is owned and leased out by the school but without the two attached parking spaces.
<b>4 Vernon St</b>	1	This house is owned by the school and contains one parking space.
<b>2 Raw Square</b>	42	Located approximately 5 minutes from the school with a commercial arrangement to rent parking spaces.
<b>Total</b>	<b>45</b>	

### 2.5.3 On-Street Parking

Margaret Street, Redmyre Road and Vernon Street have some availability for time-restricted on-street parking. A study of the on-street parking restrictions can be shown in Figure 2.15 which indicates a complex network of varying time restricted parking opportunities in the surrounding road network. The notable on-street parking restrictions include:

- 2 hour parking (8am – 6pm, Monday – Friday) on Redmyre Road, Vernon Street, Brunswick Avenue, Carrington Avenue and sections of Margaret Street.
- Clearways are in place along The Boulevard and Redmyre Road.
- 10 minute parking (during school peak hours) is available on Redmyre Road and Vernon Street.
- No Stopping zones are currently present along Margaret Street while temporary pedestrian crossings are in place due to the works occurring at the Senior School.
- No Parking during peak hours along Redmyre Road near the intersections with Vernon Street and Margaret Street.







## 2.6 Access

This Section reflects the access arrangements at the time of writing, with consideration that the construction works at the Senior School Campus has resulted in some modifications to available accesses.

### 2.6.1 Vehicle Access

There are several vehicular access points available across each school campus, with entry from Margaret Street, Redmyre Road and Vernon Street. These are outlined in Figure 2.16 and are as follows:

- **Senior School Campus:**
  - Two-way driveway at the eastern end of Margaret Street providing access to the underground car park
  - Vehicular access point on Redmyre Road providing access to green space
- **Junior School Campus:**
  - Two-way driveway on Margaret Street providing access to Junior School parking facilities
  - Service vehicle access driveway on Redmyre Road
  - Vehicular access point on Vernon Street providing access to a small car park outside the Blackman Auditorium
  - Vehicular access point on Vernon Street providing access to Junior School
- **Prep School Campus:**
  - Two-way driveway on Margaret Street providing access to Prep School parking facilities



Figure 2.16: Locations of Vehicle Access Points



The school also has several pedestrian access points across the three campuses as shown in Figure 2.17.



**Figure 2.17: Location of Pedestrian Access Points**

## **2.7 Service and Delivery**

Emergency vehicles can access the school site via the vehicle access point on the north-western side of the Senior School Campus (see Figure 2.16). Emergency vehicles can access the other campuses via the various access driveways or on-street if possible.

The Junior School Campus contains an access driveway to the north of the site for waste collection. This driveway also contains a fire pump and a hydrant booster.

Deliveries occur at the Senior School Campus. Some loading activities are undertaken within the driveway to the Sports Centre on Margaret Street.

## **2.8 Pick Up and Drop Off**

### **2.8.1 Private Cars**

The school has several Kiss & Ride and 10-minute parking zones along Margaret Street, Vernon Street and Redmyre Road as identified in Figure 2.18. The Junior School has two Kiss & Ride zones, one on Vernon Street and one on Margaret Street. The Senior School has a Kiss & Ride zone positioned on Margaret Street near the main entry.

There are also 10-minute parking zones available near the Junior School on Vernon Street and Redmyre Road. These parking zones are in place during school day peak hours between 8 – 9:30am and 2:30 – 4pm on Redmyre Road, and between 8 – 9am and 2:30 – 3:30pm on Vernon Street.





Figure 2.18: Pick Up and Drop Off Zones



## 2.8.2 Meriden School Bus Zone

The school bus zone is located on Margaret Street near to the main entry to the Senior School Campus. This bay has capacity for approximately four buses at a time. The location of the school bus zone is shown in Figure 2.19.

Prior to the arrival of the afternoon buses, Junior and Senior School students assemble in the bus marshalling area to wait for their respective buses. The school buses arrive in two fleets of four buses, the first scheduled to depart at 3:20pm to create space for the second fleet to arrive and depart by 3:30pm. These activities are supervised by a member of staff to ensure student safety and encourage prompt boarding of buses.



Figure 2.19: Meriden School Bus Zone

## 2.9 Existing Travel Patterns

### 2.9.1 Travel Survey

In 2019 Ason Group conducted a travel mode survey to determine the staff and student travel pattern to and from the school.

Based on the survey outcomes, it was noted that out of the 1,080 existing students approximately 55% responded to the survey. The survey concluded that approximately 42% of Senior School students drive or are driven to/from the school, whereas 58% of Senior School students use public and/or active transport modes. This result is considerably different to the Junior School survey results which showed that 86% of Junior School students are driven to/from the site, whereas only 14% of Junior School students travel via public and/or active transport.

In addition, out of 242 staff, 54% responded to the survey. The results indicate that 69% of staff drive or are driven to/from the school, whereas 31% of staff use public and/or active transport modes to travel to/from the school.

Table 2.6 shows the existing travel mode share of student and staff as ascertained through travel mode survey.

**Table 2.6: Existing Mode Share Summary**

Travel Mode	Existing Mode Share of Junior Students	Existing Mode Share of Senior Students	Existing Mode Share of Staff
Vehicle Driver	N/A	6%	69%
Dropped Off / Picked Up	86%	36%	0%
Taxi / Uber	0%	0%	0%
Train	1%	32%	24%
Public Bus	1%	7%	2%
Meriden School Bus	5%	11%	N/A
Bicycle	0%	0%	0%
Walk	5%	5%	2%
Other Mode	2%	3%	3%

### 2.9.2 Car Occupancy

The travel mode survey determined the average vehicle occupancy rate for students to be 1.5 students per vehicle, noting that senior students had a slightly higher rate of 1.6 students per vehicle.

This Travel Plan acknowledges that it is difficult to reduce private vehicle dependency, particularly for Junior and Prep School students. Therefore, as well as targeting active and public transport, the strategies in this Plan will also aim to increase the average vehicle occupancy and decrease the overall number of private vehicles driving to and from the site.

## 3.0 Objectives

### 3.1 Reduce the Environmental Footprint of the Development

Reducing the environmental footprint of a development is an essential component of any sustainable transport plan. The use of private vehicles by students, parents/carers and staff members is a major contributor to the environmental footprint of the school.

This Plan seeks to decrease the school's environmental footprint by promoting and increasing the use of more sustainable travel options such as public and active transport, and educate users about the importance of sustainable practices. These measures aim to decrease the overall environmental impact of the school development, advocating the importance of sustainable behaviours to the students, parents/carers and staff attending the site and providing a sustainable future.

### 3.2 Promote Sustainable Transport Usage

As part of any long-term sustainable transport plan, promotion of sustainable travel modes is a critical component. Users often face difficulties in using alternative modes due to a simple lack of awareness of their options. If these options can be presented to users in an easy to understand format, they may be more likely to change their travel behaviours.

To improve user understanding of alternative and sustainable transport, this GTP seeks to clearly and regularly inform all users including staff and students.

Promotion of sustainable travel modes assists in educating the community in their awareness of transport opportunities, travel safety, and becoming generally more comfortable with using modes other than a private car. This is of significant long-term benefit to the general public, by developing a community with a good understanding of transport and who are more likely to consider their transport choices in the future.

### 3.3 Reduce Reliance on Private Vehicle Use

Meriden School is located adjacent to Redmyre Road and is surrounded by residential housing. Redmyre Road and The Boulevarde along with adjoining streets to the school remain busy during school AM and PM peak hours. Traffic congestion issues can be improved as students and staff shift away from private vehicle usage.

Reduction in the reliance on private vehicle use will also become critical for the long-term operation of the site. Local population growth also results in an increased level of background traffic, which may lead to worsening traffic congestion regardless of the site's operation and activities.

Furthermore, reduced dependence on private vehicles lessens the possibility for overflow parking to occur on local streets. This GTP seeks to reduce the total volume of vehicles being driven to site, and therefore alleviate any potential impacts.

### 3.4 Encourage Higher Vehicle Occupancy Rates

This GTP provides actions to encourage higher vehicle occupancy rates, with the aim to reduce the number of vehicles travelling to and from site during peak school hours. As outlined in Objective 3.3, this has several benefits including a reduction in traffic congestion and parking impacts.

This objective is aimed at students across all campuses as well as school staff.



### **3.5 Improve Student Safety**

In the interest of student safety, it is critical that the volume of vehicles moving around the site is reduced as much as possible, especially as students are often exposed to traffic as they travel between campuses or wait at the pick up and drop off zones. This applies to vehicles interacting with pedestrians, and vehicles interacting with other vehicles. While pedestrian paths and crossings are provided around the site providing separation, mistakes and accidents can occur which cannot be foreseen or fully prevented.

To improve user safety for pedestrians and vehicles around the site, this Travel Plan seeks to reduce the total volume of vehicles travelling to the site.

We note that it is not only user safety but also the safety of the wider road network and community that shall be improved by a reduction in vehicle volumes.

### **3.6 Improve Health and Wellbeing**

It is the responsibility of the school to ensure the health and wellbeing of staff and students. A change from vehicular transport to active transport such as walking, or cycling provides health benefits to users by increasing their amount of daily physical activity.

To improve health and wellbeing of staff and students, this Travel Plan seeks to increase the use of active transport modes such as walking or cycling.

A reduction in vehicle usage will also create environmental benefits through reduced emissions, which provides further improvements to health and wellbeing of the community more broadly.

## 4.0 Targets

### 4.1 Key Issues

- The following key issues have been considered when developing this Green Travel Plan for Meriden School:
  - The limitation of the cycling path around the school that can be seen as a barrier to active travel;
  - Staff being residents of distant suburbs that may require significant travel distances;
  - Requirements of staff to often transport learning materials; and
  - The limited sustainable travel options available to Prep School aged children

### 4.2 Student Mode Share Targets

A review of existing student mode share, achieved from the travel mode survey undertaken by Ason Group, split within the context of the site provides an estimate of short and long term mode share targets for Junior and Senior students shown in Table 4.1 and Table 4.2.

**Table 4.1: Junior Students Mode Share Targets**

Mode	Existing Travel Mode	Short Term Targets	Relative Change from Existing	Long Term Targets	Relative Change from Existing
Driver	N/A	N/A	N/A	N/A	N/A
Dropped Off / Picked Up	86%	80%	-6%	65%	-21%
Taxi / Uber	0%	0%	No Change	0%	No Change
Train	1%	3%	+2%	5%	+4%
Public Bus	1%	1%	No Change	3%	+2%
Meriden School Bus	5%	9%	+4%	12%	+7%
Bicycle	0%	0%	No Change	5%	+5%
Walk	5%	5%	No Change	8%	+3%
Other	2%	2%	No Change	2%	No Change

**Table 4.2: Senior Students Mode Share Targets**

Mode	Existing Travel Mode	Short Term Targets	Relative Change from Existing	Long Term Targets	Relative Change from Existing
Driver	6%	5%	-1%	4%	-2%
Dropped Off / Picked Up	36%	26%	-10%	10%	-26%
Taxi / Uber	0%	0%	No Change	0%	No Change
Train	32%	35%	+3%	38%	+6%
Public Bus	7%	11%	+4%	15%	+8%
Meriden School Bus	11%	14%	+3%	17%	+6%
Bicycle	0%	1%	+1%	5%	+5%
Walk	5%	5%	No Change	8%	+3%
Other	3%	3%	No Change	3%	No Change

### 4.3 Staff Mode Share Targets

A review of existing staff mode share split within the context of the site provides an estimate of mode share targets as shown in Table 4.3.

**Table 4.3: Staff Mode Share Targets**

Mode	Existing Travel Mode	Short Term Targets	Relative Change from Existing	Long Term Targets	Relative Change from Existing
Driver	69%	59%	-10%	49%	-20%
Vehicle Passenger	0%	5%	+5%	7%	+7%
Dropped Off / Picked Up	0%	0%	No Change	0%	No Change
Taxi / Uber	0%	0%	No Change	0%	No Change
Train	24%	27%	+3%	30%	+6%
Public Bus	2%	3%	+1%	5%	+3%
Meriden School Bus	N/A	N/A	N/A	N/A	N/A
Bicycle	0%	1%	+1%	2%	+1%

<b>Walk</b>	2%	2%	No Change	4%	+2%
<b>Other</b>	3%	3%	No Change	3%	No Change



## 5.0 Implementation Strategies

As previously discussed, the main objectives of this Green Travel Plan are to:

- Reduce environmental footprint of the development;
- Promote sustainable transport usage;
- Reduce reliance on private vehicle use;
- Increase vehicle occupancy rates;
- Improve student safety; and
- Improve health and wellbeing

In order to achieve these objectives, a number of initiatives and programs are recommended to be implemented as detailed in the following sections. The following base strategies are considered which aim to meet the objectives of the Plan:

- Enable informed users
- Encourage active transport
- Encourage public transport
- Encourage carpooling
- Ongoing management

Actions to encourage active transport, public transport and carpooling would help in reducing total vehicular demand and vehicle activity around the site. By ensuring users are enabled with the appropriate information and undertaking continued management of the sustainable travel strategies, the objectives of the Travel Plan can best be achieved over time.

Each strategy consists of a number of actions which should be implemented to achieve a shift toward the ultimate objectives of the Plan. These actions are summarised and included in a table which can also be used as a convenient checklist to assess the site's progress with sustainable travel initiatives. The staff member responsible for travel (as recommended in these initiatives) should review this checklist periodically to reflect on the site's progress and opportunities.

### 5.1 Strategy 1: Enable Informed Users

#### 5.1.1 Provide a Transport Access Guide

Users often face difficulties in using sustainable travel modes due to a simple lack of awareness of their travel options. If these options can be presented to users in an easy to understand format, they may be more likely to change their travel behaviours.

It is recommended that a brochure or leaflet be developed that provides information on bus routes and active transport facilities near the site. Brochures can easily be given to staff and visitors and can be developed in-house or by an external consultant. The brochure should also be uploaded to the school website to provide

information for visitors. Additionally, a poster or Transport Access Guide may be displayed on notice boards around the school. A sample Transport Access Guide prepared by Ason Group can be see in Figure 5.1.

To reduce reliance on private vehicles, event attendees should be provided with the Transport Access Guide to make them aware of the public and active transport options available to them.

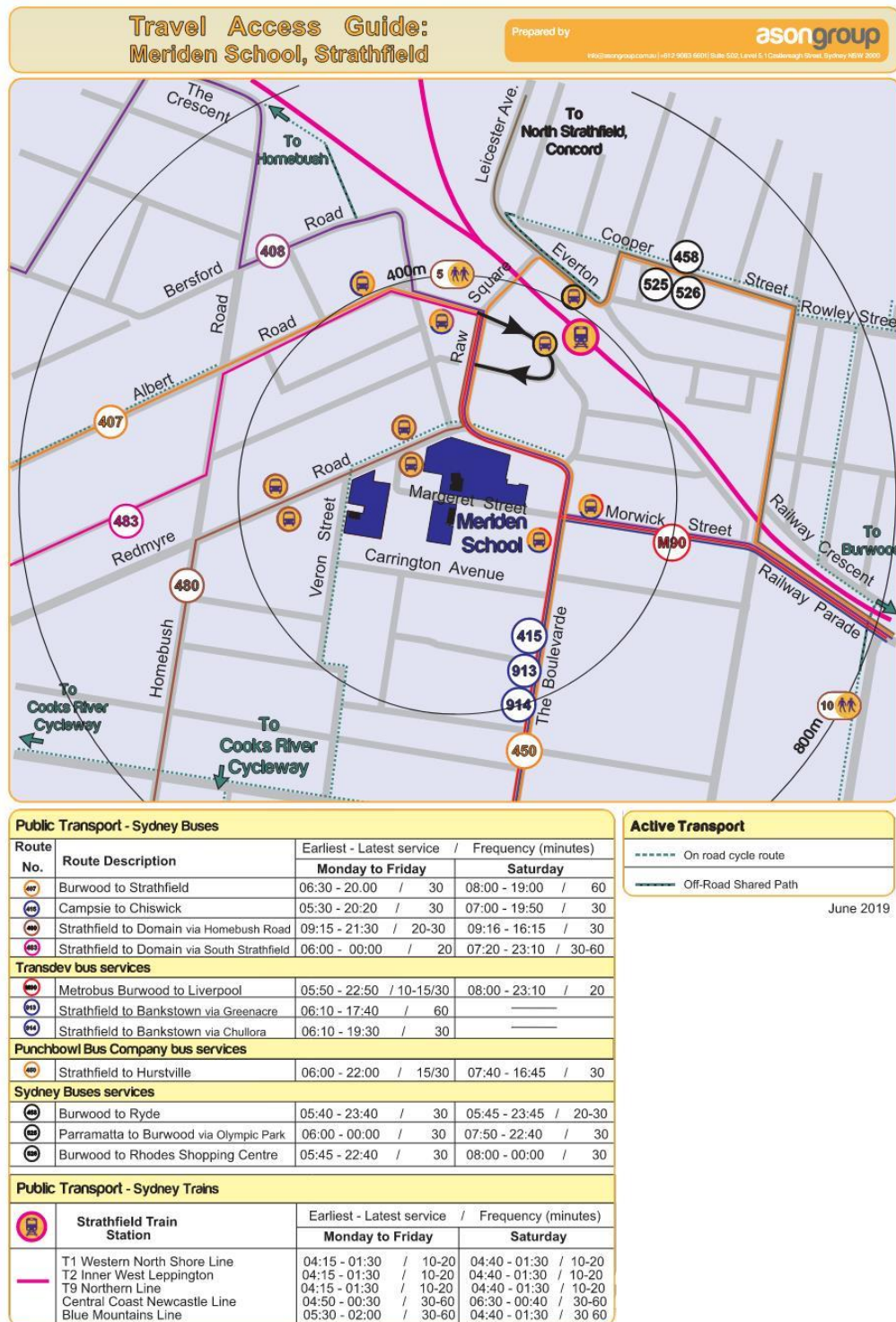


Figure 5.1: Sample Transport Access Guide (Ason Group, 2019)

### 5.1.2 Induction Information for New Users

It is important that both staff and students at the school are aware of the travel options available to them. Particularly for new users, the default option may be to drive to the site or be dropped off if they are unfamiliar with the area.

To ensure that users are aware of their options, a Transport Access Guide (discussed above) and any other relevant information such as health and activity leaflets should be distributed to all users. Distribution methods could include information being included in induction or orientation packages. Information provided directly in this manner results in users being more likely to engage in sustainable travel patterns, rather than being required to seek out information independently.

### 5.1.3 Periodic Reminders

Travel options often change over time, and new site users may miss pieces of information provided to them. Periodic reminders can assist in providing continued information to users and aim to provide a greater reach and impact. One convenient way to reach a broad user base is to include information and reminders in the school newsletter, on the school website or via an email chain. Content could include details on new travel initiatives, mode share progress, and upcoming events or changes, including Sydney Metro future lines, as well as reminding users of the importance of sustainable travel.

This style of communication could also request feedback from students, parents/carers and staff regarding current initiatives and any other travel-related concerns.

## 5.2 Strategy 2: Encourage Active Transport

### 5.2.1 Cycling Infrastructure

Strathfield Council has outlined plans to improve the bicycle network within the streets surrounding the school including a shared path on The Boulevard and an on-road route on Redmyre Road. The school may wish to approach Strathfield Council to discuss additional opportunities regarding the connectivity of the local cycling routes to the site.

The mode share targets indicate an aim for a slight increase in the use of bicycles for Senior Students and staff and so the provision of bicycle parking on-site should be investigated by the school. The school should taking into consideration the following requirements for bicycle facilities:

- Bicycle parking should be located at easily accessible and convenient locations around the school site. Bicycle parking areas should be undercover.
- Bicycle storage areas should be maintained and kept to an appropriate standard, including any security or monitoring systems present. Usage of the storage should be monitored, and additional storage provided if demand increases.
- Installation of bicycle rails should be in accordance with Australian Standards AS2890.3 Bicycle parking, and any other specifications from authorities including Strathfield Council.
- Bicycle storage areas should be well signposted within the site to assist with wayfinding for staff and students travelling via bicycle. Frequent signage can also bring awareness to the available cycling facilities.

### 5.2.2 End-of-Trip Facilities



End-of-trip facilities including showers, change rooms and lockers are important in encouraging students and staff to travel using active transport such as cycling and walking. In particular, these facilities are important for those travelling long distances or during warmer seasons.

As a long term strategy, the school should investigate opportunities to provide end-of-trip facilities to support the long term active transport mode share targets. Usage of these facilities should be monitored over time and additional showers and/or change rooms provided if demand requires. Promotion of these facilities may include:

- Nominating lockers to be used only by staff/students who travel via active transport modes to encourage more active transport users
- Wayfinding to improve accessibility of end-of-trip facilities
- Promoting end-of-trip facilities through correspondence with staff e.g. staff newsletters or staff meetings

### **5.2.3 Cycling Training Course**

Students could be encouraged to use bikes through learning to cycle programs at school as practical skill development or as a co-curricular activity. The option for students to share or loan a bike could be applied while taking the program.

### **5.2.4 'Ride2School Day' and Health Events**

Various organisations and groups develop programs and events to encourage active transport. For example, Bicycle Network coordinates a Ride2School Day each year. These events provide a good opportunity for schools to encourage cycling for their students and each event can also assist in influencing the travel behaviour of other groups through general publicity and awareness. These events could include organised preferred cycling routes, bike safety programs, bike maintenance instructions and more.

Subject to further discussion, incentives may include competitions or rewards such as a free breakfast.

This and other events should be considered annually.

### **5.2.5 Walking School Bus**

In a Walking School Bus program, students walk to and from school in a group supervised by parents, with a specified route and pick-up points similar to that of a school bus. This supervised and organised system is considered to provide improved safety for students walking to school, which is an encouragement to children and their parents/carers. It is recommended that this system be put in place for primary school students.

### **5.2.6 Subsidised Carry Bags**

The school may wish to investigate opportunities to provide subsidised backpacks or panniers (for bicycles) for students and staff who are committed to practice sustainable travel to and from school. Historically, teachers have been reluctant to engage with sustainable transport options due to the large amount of resources requiring transportation each day. This strategy is proposed in response to this issue and should allow sustainable transport to become a more feasible option.

### **5.2.7 Salary Sacrifice for Active Transport Purchases**

This strategy involves providing the option for staff members to participate in salary sacrificing for the purchase of micro-mobility vehicles such as bicycles, e-bikes or electric scooters. By reducing the upfront cost of these types of vehicles, active transport may become more desirable and accessible.

### **5.2.8 Reward Participating Students**

The school could encourage students to participate in active transport by initiating some friendly competitions and challenges to reward students who choose to join in and use active travel modes. Furthermore, a free breakfast for those using active travel may be provided to act as an incentive.

## **5.3 Strategy 3: Encourage Public Transport**

### **5.3.1 Opal Top-up Facilities**

There is limited availability of physical top-up facilities for Opal cards in the vicinity. If users do not utilise automatic top-up, they may avoid public transport options if unsure about their Opal balance or where to add funds to their card. Transport for New South Wales (TfNSW) has recently started facilitating debit/credit cards as a replacement to Opal cards. By placing an information board or leaflets outlining options for opal top-up and use of credit/debit card at tapping points would encourage students and staff to use these options.

It is noted that staff and student public transport use will be subject to the state of COVID-19 restrictions.

### **5.3.2 Walking Group to Strathfield Station**

The school is located in an ideal area for public transport use, with Strathfield station only a six minute walk from the site. From the station, students are able to access train and bus networks. To encourage the use of these public transport opportunities for children in late primary school and early high school, a walking group may be established. This would consist of a supervised group of students who walk via a safe pedestrian route to Strathfield station and are provided assistance with boarding trains or buses if required. From there, students travelling in the same direction are able to stick together.

The walking group supervisor may be a member of staff or a senior student leadership role.

### **5.3.3 Increased Public Transport Services**

The school should remain up to date with any proposed plans by Council or TfNSW to increase the public transport services as the local area goes through future development. If the current public transport services are not meeting the demand from school students and staff, the school may consult with Council and TfNSW about potential upgrades to the offered services.

## **5.4 Strategy 4: Encourage Carpooling**

### **5.4.1 Staff and Student Pairings**

Staff and students could be encouraged to carpool by sharing information about potential carpooling pairs. Not all staff, students or families may be aware of others who live near to them, or along their travel route to the site.

For staff, a meeting could be held to provide an opportunity for staff members to discuss carpooling options, including coordination of staff by region and place of residence. A similar system could be put into place for parents/carers and students, perhaps via an online register system.

Increasing the uptake in carpooling is an effective way to increase the average vehicle occupancy rate, which is one of the objectives of this Plan.

It is noted that carpooling will be subject to the state of COVID-19 restrictions.

#### **5.4.2 Priority Parking**

Staff committed to carpooling with others could be allocated priority parking spaces in an area of the staff car park. The provision of dedicated spaces, ensuring that these users will be able to find a space on-site, may encourage users to investigate carpooling. Priority spaces could also come with other benefits such as weather protection or better location, as further encouragement for staff.

### **5.5 Strategy 5: Ongoing Management**

#### **5.5.1 Parking Management**

To discourage reliance on private vehicle usage, a parking management strategy could be implemented. This strategy would operate parallel to the priority parking strategy above, in giving parking priority to those staff and students who participate in sustainable travel alternatives such as car pooling or car sharing. Furthermore, parking priority would be given to Electric Vehicle (EV) drivers. The provision of EV charging points is also recommended as part of this strategy as a further encouragement.

#### **5.5.2 Regular Reviews of Travel Plan**

This Green Travel Plan, and other associated documentation (such as a Transport Access Guide) should be reviewed regularly and updated as required. It is recommended that an annual review would be an appropriate update schedule. This annual review should include:

- Updating to reflect any travel-related changes in the local area such as bus services, new cycle routes or pedestrian crossings (this should occur as changes arise rather than annually)
- Reviewing progress against the proposed mode share targets and update targets if required
- Identification of any shortfalls in the Plan and an updated action plan to address these shortfalls
- An updated travel mode survey to be distributed to all students and staff. Collect student and staff data including residential postcodes to inform where students/staff are travelling from
- Consultation with staff and students
- Adjustments to initiatives and targets based on updated survey results and in response to any issues that may arise

#### **5.5.3 Transport Coordinator**

To ensure that the ongoing review of this Plan is carried out as expected, responsibility of this task should be allocated to a specific staff member or Transport Coordinator. This staff member could form a sustainability group that would assist in updating the Green Travel Plan and champion the travel initiatives. Responsibilities of the Transport Coordinator may include:

- Implementation and promotion of the actions outlined in the GTP
- Monitoring the effectiveness of the actions
- Ongoing maintenance of the GTP
- Providing advice to students, staff, parents/carers, visitors or contractors about transport-related issues
- If required, liaising with external parties such as Council or public transport operators



## 5.6 Implementation Plan

Implementation Strategy	Why	How	Responsible Person	Timing
<b>Strategy 1: Enable Informed Users</b>				
<b>1.1 Develop a Transport Access Guide for the site</b>	Important to make travel choices clear for site users, including walking, cycling, and public transport services nearby.	Develop brochure or leaflet outlining sustainable travel options to the site and provide to users (including on website)	Transport Coordinator	Prior to operation
<b>1.2 Include travel information into the induction process for new staff and visitors</b>	Information should be convenient and accessible for users.	Include TAG and any other relevant information sheets in induction packs.	Transport Coordinator	Prior to operation
<b>1.3 Provide travel information and reminders</b>	Periodic information ensures staff are kept up to date on any changes, and reminded of travel options	Allocate staff member responsible for periodic newsletter schedule or column relating to sustainable travel	Transport Coordinator	Every 6 months
<b>Strategy 2: Encourage Active Transport</b>				
<b>2.1 Cycling infrastructure</b>	Staff and students with knowledge of safe cycling routes and adequate storage spaces are more likely to cycle to the school.	The school may wish to consult Council about future cycling routes and consider the need for on-site bicycle parking provisions.	School principal	Ongoing
<b>2.2 End-of-trip facilities</b>	Staff and students with showers and change rooms are more likely to travel to school via active transport.	The school may wish to consider the need for end-of-trip facilities over the long term.	School principal	Ongoing
<b>2.3 Cycling training course</b>	Students with the skills to safely ride a bicycle are more likely to engage with this active travel mode.	Provide cycle training courses to students as part of outdoor education or a co-curricular program.	Transport Coordinator	Annual or once a term courses
<b>2.4 Promotion of 'Ride2School Day' and other health events and days</b>	Staff and visitors exposed to active travel in an organised manner may be more likely to consider it for their own travel, and may also enjoy improved education regarding their options and safety.	Ensure events such as 'Ride2School Day' and other relevant events are advertised.	Transport Coordinator	Annual or once a term events
<b>2.5 Walking school bus</b>	To provide a safe and supervised way for primary school aged children to walk to and from school.	The Transport Coordinator should assist with identification of students who live along routes suitable for the walking bus and manage parents/carers who are willing to act as supervisors.	Transport Coordinator	Prior to operation. Update register regularly, say at the start of each term
<b>2.6 Subsidised carry bags</b>	Historically, teaching staff have been reluctant to commit to sustainable travel due to the resources requiring transportation to and from the school each day. This strategy may incentivise and facilitate active travel with large or heavy baggage.	The school should investigate opportunities for subsidising carry bags to students and staff who are committed to active travel.	School principal	Ongoing
<b>2.7 Salary sacrifice for active transport purchases</b>	Reducing the upfront cost of bicycles, e-bikes or electric scooters can encourage staff to invest in these active transport options.	The school should investigate opportunities for salary sacrifice options and promote these to all staff members.	School principal	Ongoing
<b>2.8 Reward participating students</b>	A reward system will incentivise students to participate in active travel modes.	The school may initiate fun competitions or provide a free breakfast for students participating in active travel.	Transport Coordinator	Regular competitions or free breakfast say once a term

Implementation Strategy	Why	How	Responsible Person	Timing
<b>Strategy 3: Encourage Public Transport</b>				
<b>3.1 Opal card top-up facilities</b>	There are limited top-up facilities (e.g. retail stores) near the site. Users may avoid public transport if they are unsure of their Opal balance or know they have insufficient funds. Facilities also act as a reminder of public transport availability to influence travel habits.	Develop information brochure or leaflet outlining options for online Opal top-up and use of credit/debit cards as a replacement of opal cards.	Transport Coordinator	Prior to operation
<b>3.2 Walking group to Strathfield station</b>	Strathfield station has many train and bus connections which provide opportunities for students to travel sustainably. A walking group provides a safe and supervised route for children in late primary school and early high school.	Allocate member of staff or senior student leader to escort students to Strathfield station along designated safe pedestrian route.	Transport Coordinator	Prior to operation
<b>3.3 Increased public transport services</b>	If public transport services do not meet the school's demand, then students and staff are more likely to use unsustainable travel modes.	The school should consult with Council and TfNSW about plans to upgrade the local public transport services.	School principal	If issue arises
<b>Strategy 4: Encourage Carpooling</b>				
<b>4.1 Introduce staff living in appropriate geographical pairings</b>	Staff may not be aware of others who live near to them or along their route to work	Arrange a meeting or workshop between staff with intention of arranging and organising by region and place of residence	Transport Coordinator	Meet regularly, say at the start of each term
<b>4.2 Provide priority parking for carpooling staff</b>	Staff are more likely to use carpool programs if parking is guaranteed, particularly if parking capacity experiences high demand	Develop a register of staff who wish to regularly carpool including vehicle registration. Allocate several parking spaces to carpooling staff only.	Transport Coordinator	Prior to operation. Update register regularly, say at the start of each term
<b>Strategy 5: Ongoing Management</b>				
<b>5.1 Implement a parking strategy</b>	Provide priority parking for car share, car pool and electric vehicle users.	Develop a register of staff who regularly travel via more sustainable private vehicle modes, including vehicle registration. Allocate several priority parking spaces to these staff only.	Transport Coordinator	Prior to operation. Update register regularly, say at the start of each term
<b>5.2 Review this Green Travel Plan regularly</b>	Consistent review will allow revision of mode share targets and provide an understanding of any deficiencies and possible improvements	Undertake and annual review of this Green Travel Plan including an updated travel mode survey of staff and students	Transport Coordinator	Annually
<b>5.3 Allocate responsibility to a staff member</b>	Sustainable travel documentation, initiatives, and education are unlikely to be maintained if responsibility is not allocated to a particular staff member.	Seek out one or more members who wish to take responsibility for sustainable travel. Staff members should also ensure that responsibility is transferred if they leave the school.	Transport Coordinator	Prior to commissioning

## 6.0 Conclusion

This Green Travel Plan is a critical step in achieving more sustainable travel behaviour for staff and students at Meriden School.

This document should not be taken as a strict guide to strategies and actions for the site, but rather a suggested framework based on preliminary assumptions and investigations. Some actions may not ultimately be suitable for the site, and additional actions may be identified which could provide further improvements not yet identified in this initial plan.

Importantly, this document should be recognised as a site-specific Plan for Meriden School, and actions listed here should be undertaken in association with typical sustainable transport plans and actions. These could include adequate signposting of active and public transport infrastructure, sufficient lighting and security in all areas, and other actions relevant to all kinds of development.

It is recommended that this Plan, including its targets and methodologies, be updated regularly once the Stage 1 works have been completed for some time (say 12 months). Updates to the Plan should consider consultation with relevant stakeholders such as staff and visitors, and external bodies such as Strathfield Council if deemed necessary.