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Green Travel Plan

Loreto Normanhurst Master Plan

Prepared for Loreto Normanhurst / 8 December 2020

181202 TAAB

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Contents

Revision Register

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1.0 Introduction

1.1 Background

This Green Travel Plan has been prepared by Taylor Thomson Whitting (TTW) for the Loreto Normanhurst Master Plan project as part of the State Significant Development Application Approval process (reference number SSD17_8996).

Loreto Normanhurst (School) has been serving the Hornsby Shire community for more than 120 years. Over recent years, 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) will form part of a response to submission to Department of Planning, Infrastructure and Environment (DPIE).

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 with consideration to the staged development of the Campus throughout the staged Master Plan.

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

Loreto Normanhurst is located within the local government area of Hornsby Shire Council, approximately 750m south of the Normanhurst Railway Station (refer to Figure 2.1).

The site comprises the existing campus grounds of the Loreto Normanhurst school at 91 – 93 Pennant Hills Road, Normanhurst. The campus itself is bound by Pennant Hills Road (to the north), Osborn Road (to the west) and Mount Pleasant Avenue (to the east). 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.
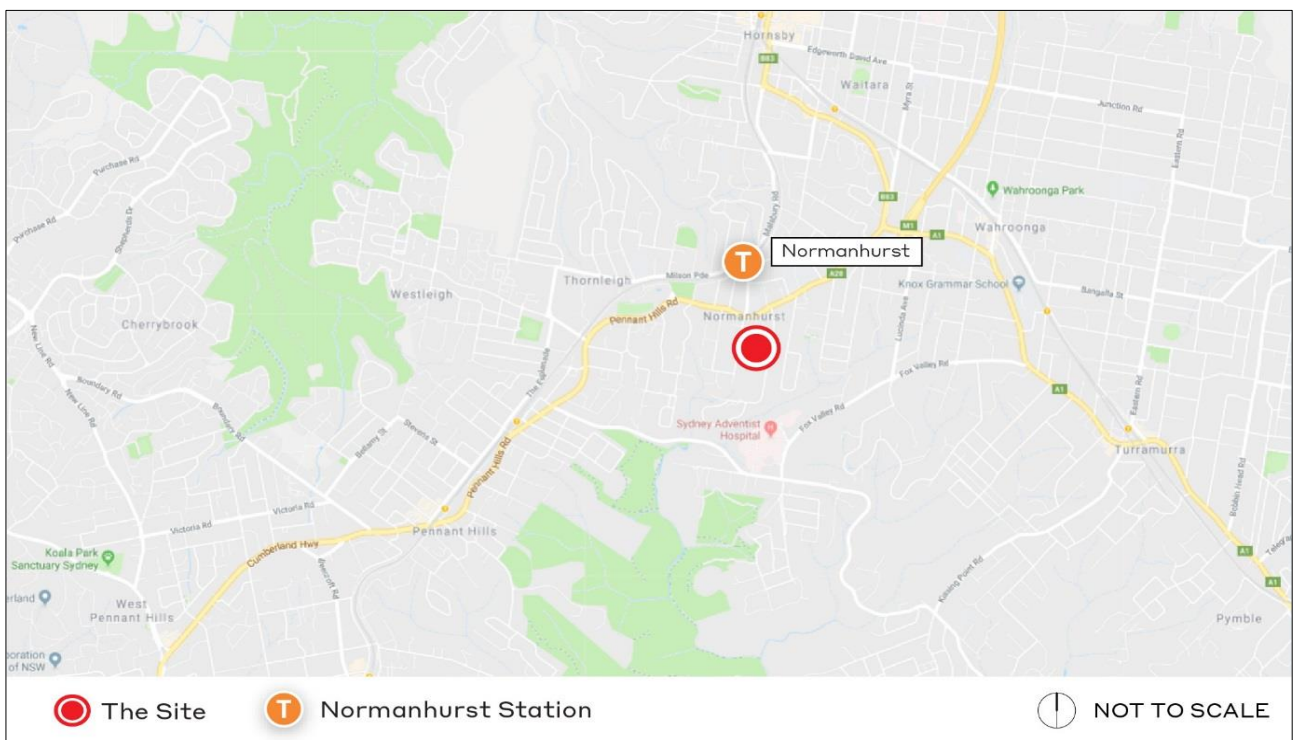

Figure 2.1: Loreto Normanhurst Campus Location Context Plan
Source: Ethos Urban
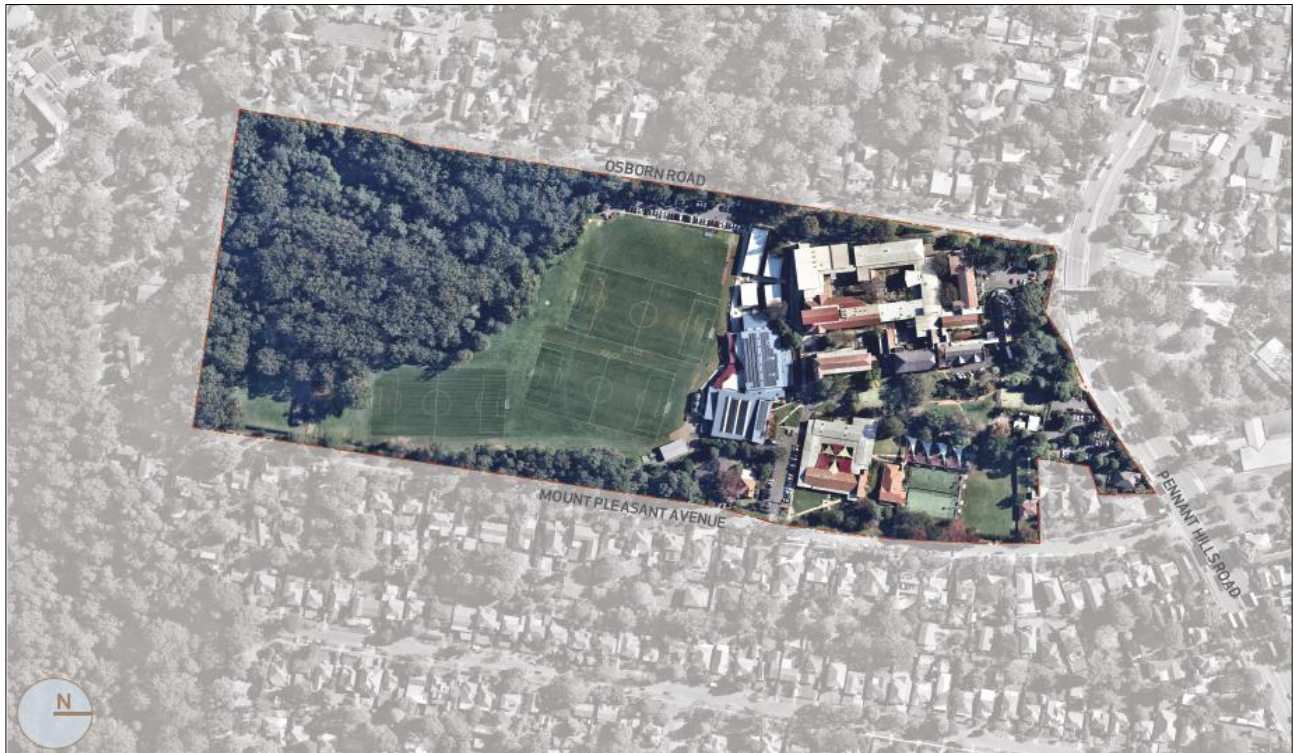
Figure 2.2: Aerial Map of the Loreto Normanhurst Campus
Source: AJ+C Architects

2.2 Active Transport

2.2.1 Pedestrian Facilities

Pennant Hills Road provides concrete footpaths on both kerbsides, with a footbridge crossing and a signalised crossing at Osborn Road. This footbridge crossing provides access from Normanhurst Station. No formalised pedestrian crossing is available along Mount Pleasant Avenue.

2.2.2 Bicycle Facilities

The School is not linked with any dedicated cycling track in the surrounding area, noting that there are very few cycling facilities and little to no connectivity to other areas (see Figure 2.3). The existing cycleways in the general vicinity are labelled as 'moderate' and 'high' difficulty, therefore these routes are suitable for confident and experienced cyclists.

It is noted that Hornsby Shire Council is currently reviewing Hornsby Shire Bike Plan and may seek to develop local cycling facilities in the vicinity of the School.
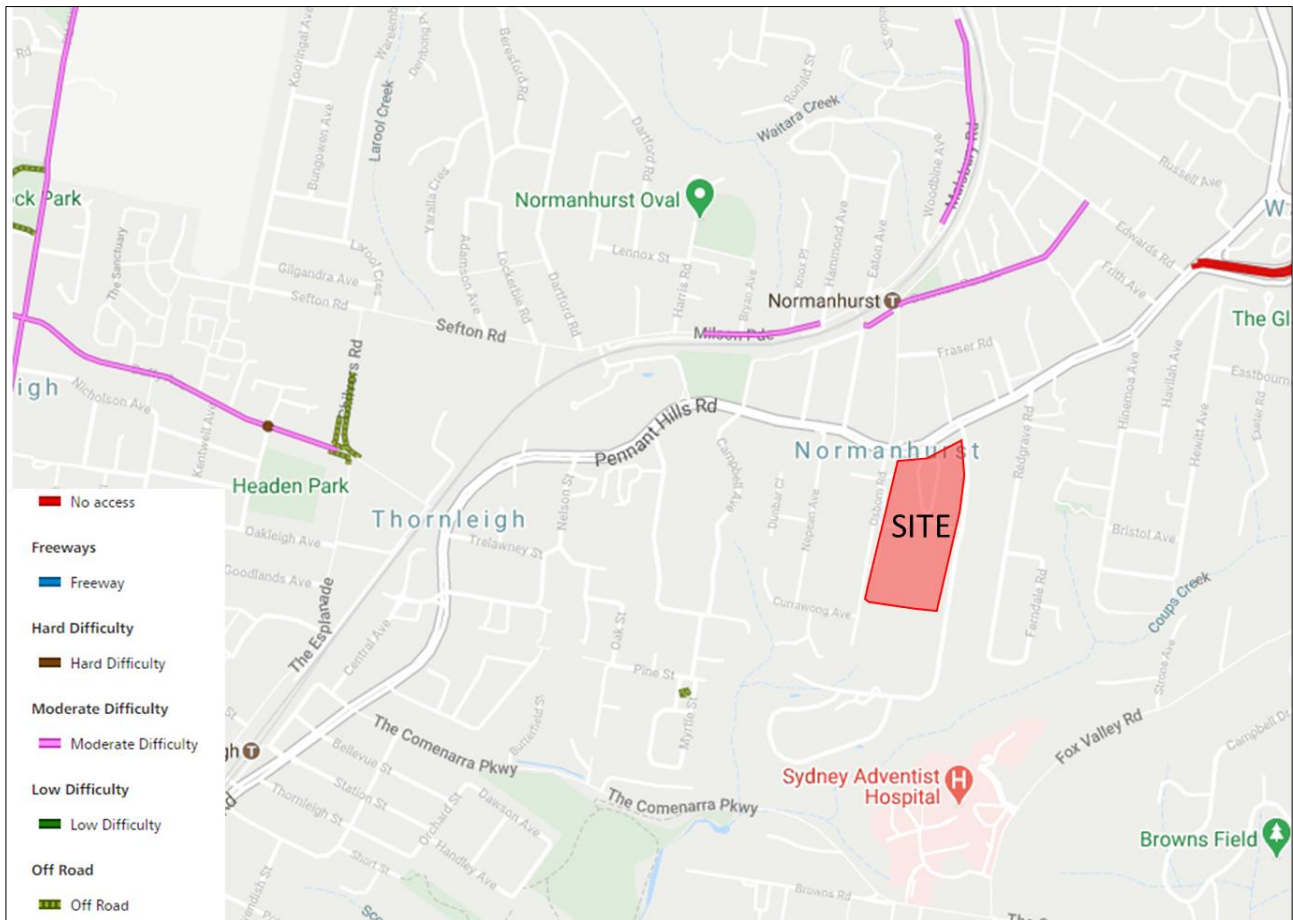
Figure 2.3: Bicycle Network Map
Source: RMS cycleway finder

2.3 Public Transport

2.3.1 Bus Services

There are three bus routes available within 400 metres walking distance from the Site. The nearest bus stop is located immediately adjacent to the School's northern frontage to the Pennant Hills Road. An overhead pedestrian crossing bridge is also available to the north of the site that connects public transport users to the bus stop available along the eastbound alignment of the Pennant Hills Road. Table 2.1 outlines the bus services servicing the nearest bus stops.

The slip road also services government school bus services for students of Loreto Normanhurst and in the surrounding area.

Overall, the School has good access to bus services, noting that all the available bus routes run at a high frequency during commuter peak periods.

Table 2.1: Bus Services

Bus Routes	Areas of Service	Frequency
587	Hornsby to Westleigh loop service	Every 15 minutes during peak hours
589	Sydney Adventist Hospital to Hornsby	Every 15 minutes during peak hours
M60	Hornsby to Parramatta	Every 15 minutes during peak hours

2.3.2 Train Services

Normanhurst Station is located approximately 800 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 Normanhurst Train Station.

The station is serviced by T9 – Northern Line with a frequency of approximately 15 minutes during commuter peak period in both directions of travel.

2.4 Car Share Services

The nearest car sharing pod is available approximately 1.5 km west of the School. Figure xx shows the car sharing pod available near the School site.
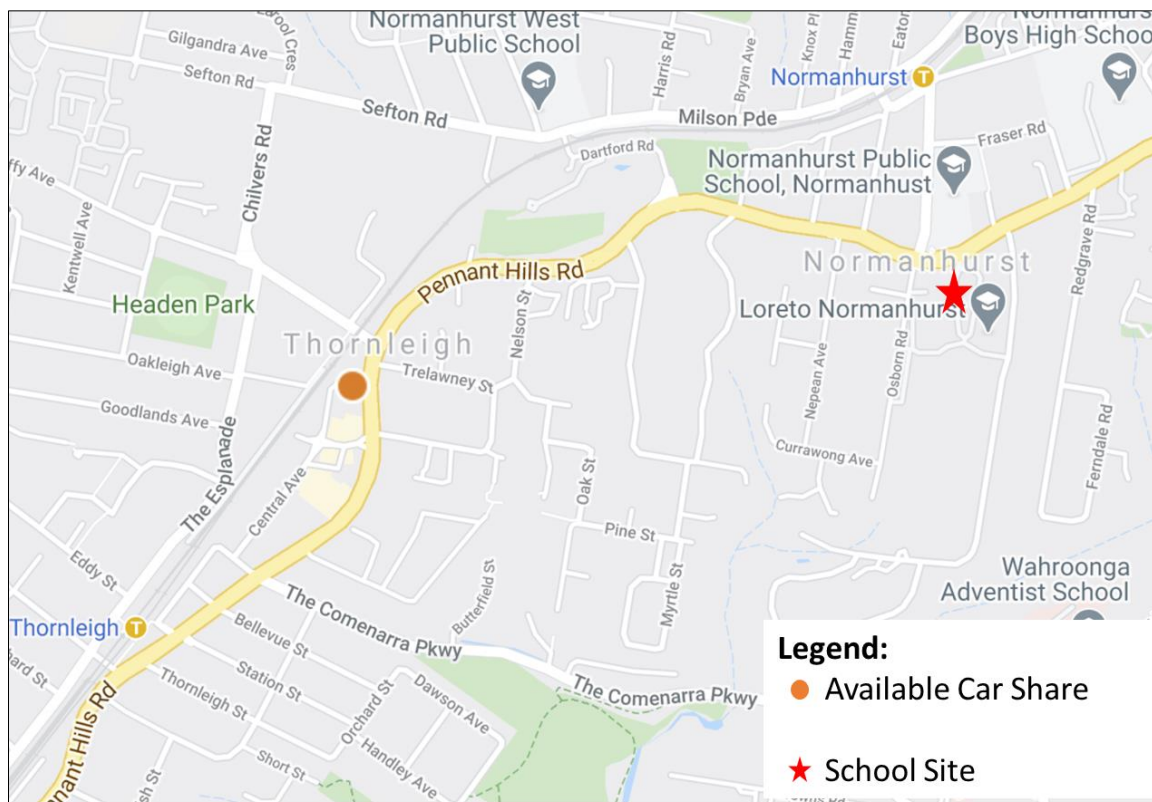

Figure 2.4: Car share Services
Source: GoGet

2.5   Parking and Access

The existing on-site parking consists of 187 spaces located across the site with the main two car parks accessed from Osborn Road to the west of the site and centrally to the site from Mount Pleasant Avenue. There are access driveways to the School from Osborn Road, Mount Pleasant Avenue and Pennant Hills Road.
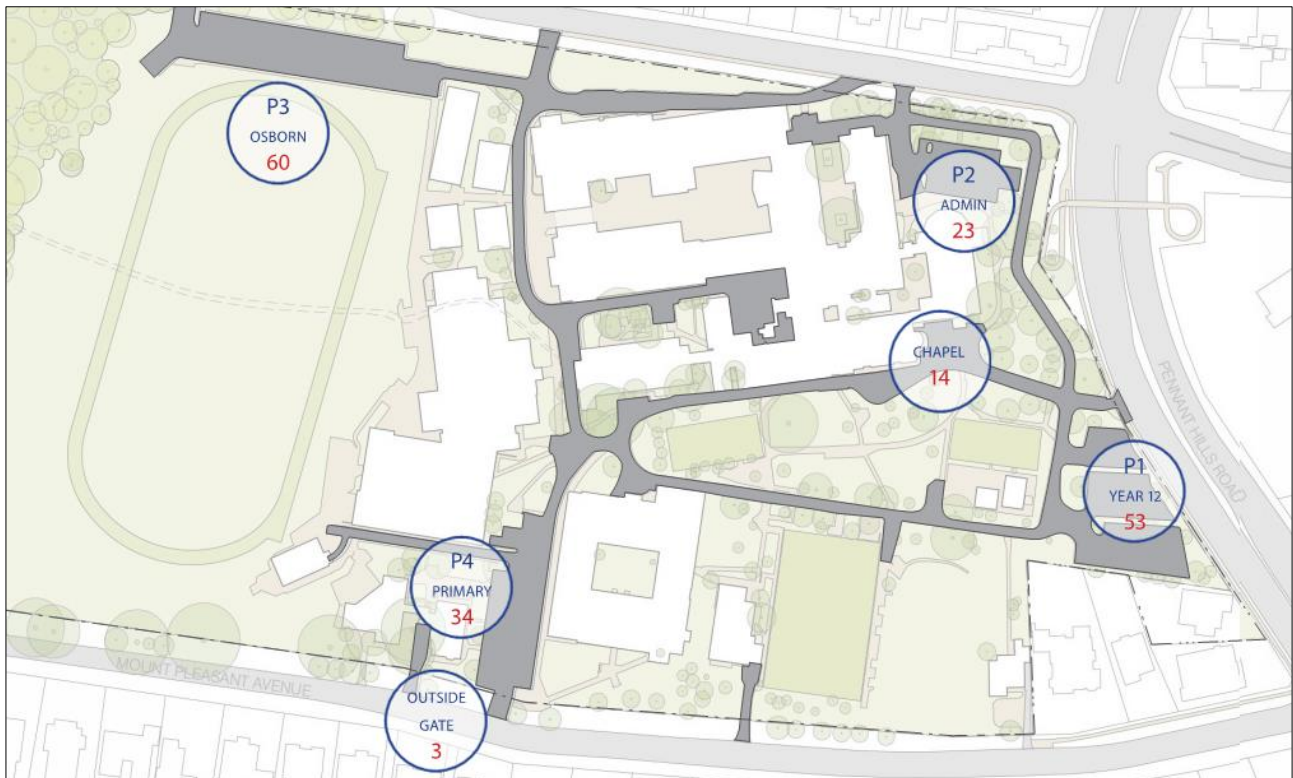
Figure 2.5: Existing On Site Car Parking
Source: AJ+C

2.6   Pick Up and Drop Off

2.6.1 Private Cars

There is a dedicated pick-up and drop-off (PUDO) facility accessed from Osborn Road that accommodates approximately four vehicles in a separated drop off bay along the western kerbside with a through lane and bus drop off on the eastern side that can accommodate two bus vehicles.

During drop off times, vehicles are marshalled into drop off bays where students disembark and cross the through road to access the School. If no spaces are available, drivers are instructed to recirculate. Similarly, during pick up drivers are instructed to continue to recirculate if their child is not yet ready. This recirculation is intended to reduce queuing from the PUDO into Osborn Road.
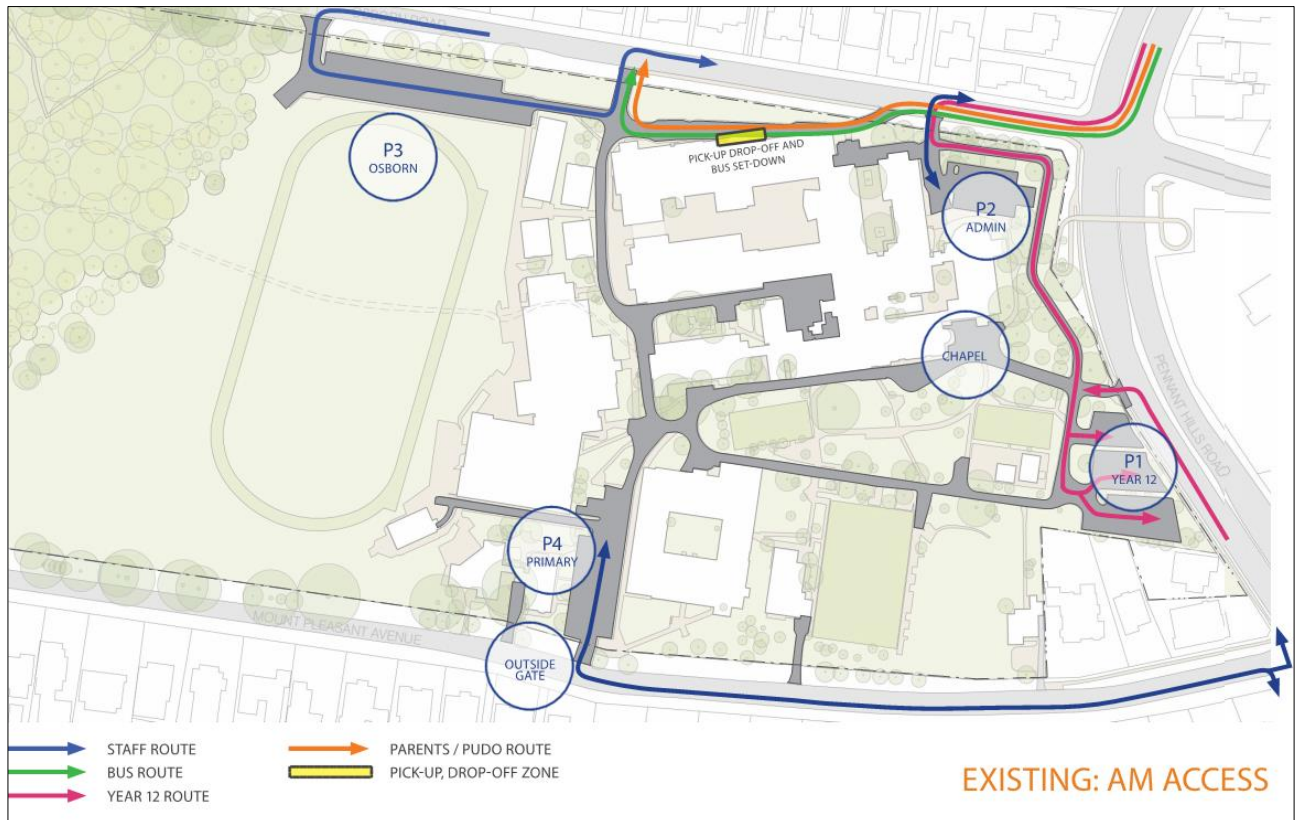
Figure 2.6: Existing Traffic Flows in PUDO Facility
Source: AJ+C

2.6.2 Buses

There is a dedicated bus layover within the Osborn Road PUDO facility that can accommodate two buses. The School currently manages bus pick-up by organising students into bus lines prior to the bus arriving to make the boarding process quicker. The access driveway to the bus layover is shared with the traffic generated by the PUDO. The School currently operates 6 private buses to pick up and drop off students. This is illustrated in Figure 2.6.

2.6.3 Special Events

Loreto Normanhurst hosts a number of events within the School grounds including sporting competitions, open days, and fairs. The School also provides use of its Chapel for ceremonial events including weddings.

Typically visitors for these events park within the school and, if required, overflow parking provided within the School oval accessed by the Osborn Road car park.

2.7   Existing Travel Patterns

In 2018, as part of the Loreto Normanhurst Master Plan, 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 existing students approximately 75% responded to the survey. The survey concluded that approximately 30% of the students drive or are driven to/from the School, whereas 70% of students (including 10% who live on-campus) use public and/or active transport modes.

In addition, out of 300 staff (including permanent, temporary and casual) 70% responded to the survey. The results indicate that 90% of staff drive or are driven to/from the School, whereas 10% staff use public and/or active transport modes to travel to/from the School.

Table 2.2 shows the existing travel mode share of student and staff as ascertained through travel mode survey.

Table 2.2: Existing Travel Mode Share

Travel Mode	Existing Mode Share of Students	Existing Mode Share of Staff
Vehicle driver	13.9%	89.1%
Dropped Off	15.8%	0.5%
Taxi / Uber	0.2%	0.0%
Train	19.5%	5.7%
STA Bus	16.2%	0.0%
Loreto School Bus	12.7%	0.0%
Bicycle	0.0%	0.5%
Walk	3.7%	2.6%
Live on Campus	10.4%	0.0%
Other mode	7.5%	1.6%

3.0 Objectives

3.1 Reduce Traffic Congestion

The School is located adjacent to Pennant Hills Road and is surrounded by low residential housing. Pennant Hills road along with adjoining streets to the school remains busy during School drop-off and pick-up periods.

To reduce the amount of traffic congestion experienced by users and the general public, this GTP seeks various actions as outlined in Section 4.0, which would contribute to reduce the total volume of vehicles travelling to and from the site.

Reduction in traffic congestion 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.

3.2 Reduce Parking Impacts

Small changes in overall travel habits can have significant benefits to local streets, reducing any overflow parking onto local streets that may occur in peak periods.

To reduce parking demands within and around the site, this GTP seeks to reduce the total volume of vehicles requiring parking at the site. In addition, as a part of redevelopment process, the School has also proposed additional on-site parking provision to reduce the parking demand on surrounding streets.

3.3 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. This applies to vehicles interacting with pedestrians, and vehicles interacting with other vehicles. While pedestrian paths 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.

3.4 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.

3.5 Promote Public 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.

4.0 Targets

4.1 Key Issues

The following key issues have been considered when developing this Green Travel Plan for Loreto Normanhurst:

- The surrounding topography 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 location of the site such that there are limited access routes.

4.2 Student Mode Share Targets

A review of existing student mode share split within the context of the site provides an estimate of mode share targets in the short and long term as shown in Table 4.1.

Table 4.1: Student Mode Share

Mode	Existing Travel Mode	Short Term Mode Share Targets	Long Term Mode Share Targets
Driver	13.9%	3.5% (-10.4%)	2% (-10.9%)
Dropped Off	15.8%	15.0% (-0.8%)	10% (-5.8%)
Taxi/Uber	0.2%	0.0% (-0.2%)	0.0% (-0.2%)
Train	19.5%	23.0% (+3.5%)	25.5% (+6%)
STA Bus	16.2%	17.0% (+0.8%)	19.0% (+3.8%)
Loreto Bus	12.7%	14.0% (+1.3%)	15.0% (+2.3%)
Bicycle	0	2.0% (+2.0%)	2.0% (+2.0%)
Walk	3.8%	4.0% (+0.2%)	5.0% (+1.2%)
Live on Campus	10.4%	14.0% (adjusted for increase in Boarding students)	14.0%
Other	7.5%	7.5% (no change)	7.5% (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 in the short and long term as shown in Table 4.2.

Table 4.2: Staff Mode Share

Mode	Existing Travel Mode	Short Term Mode Share Targets	Long Term Mode Share Targets
Driver	89.1%	84.0% (-5.1%)	80% (-9.1%)
Dropped Off	0.5%	0.5%	0.5%
Taxi/Uber	0%	0.0%	0.0%
Train	5.7%	10.8% (+5.1%)	12.8% (+7.1%)
STA Bus	0%	0.0%	2.0% (+2.0%)
Loreto Bus	0%	0.0%	0.0%
Bicycle	0.5%	0.5%	0.5%
Walk	2.6%	2.6%	2.6%
Live on Campus	0%	0.0%	0.0%
Other	1.6%	1.6%	1.6%

5.0   Actions

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

- Reduce traffic congestion;

- Promote public transport usage;

- Reduce parking impacts;

- Improve health and wellbeing; and

- Improve user safety.

In order to achieve these objectives, a number of initiatives and programs are recommended to be implemented as detailed in the following sections. 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. This will assist in achieving the objectives of reduced traffic congestion, improved road safety, and reduced need for on-street parking. Encouraging active transport is intended to improve health and wellbeing for staff and students. Additionally, 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 site website to provide information for visitors.

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.
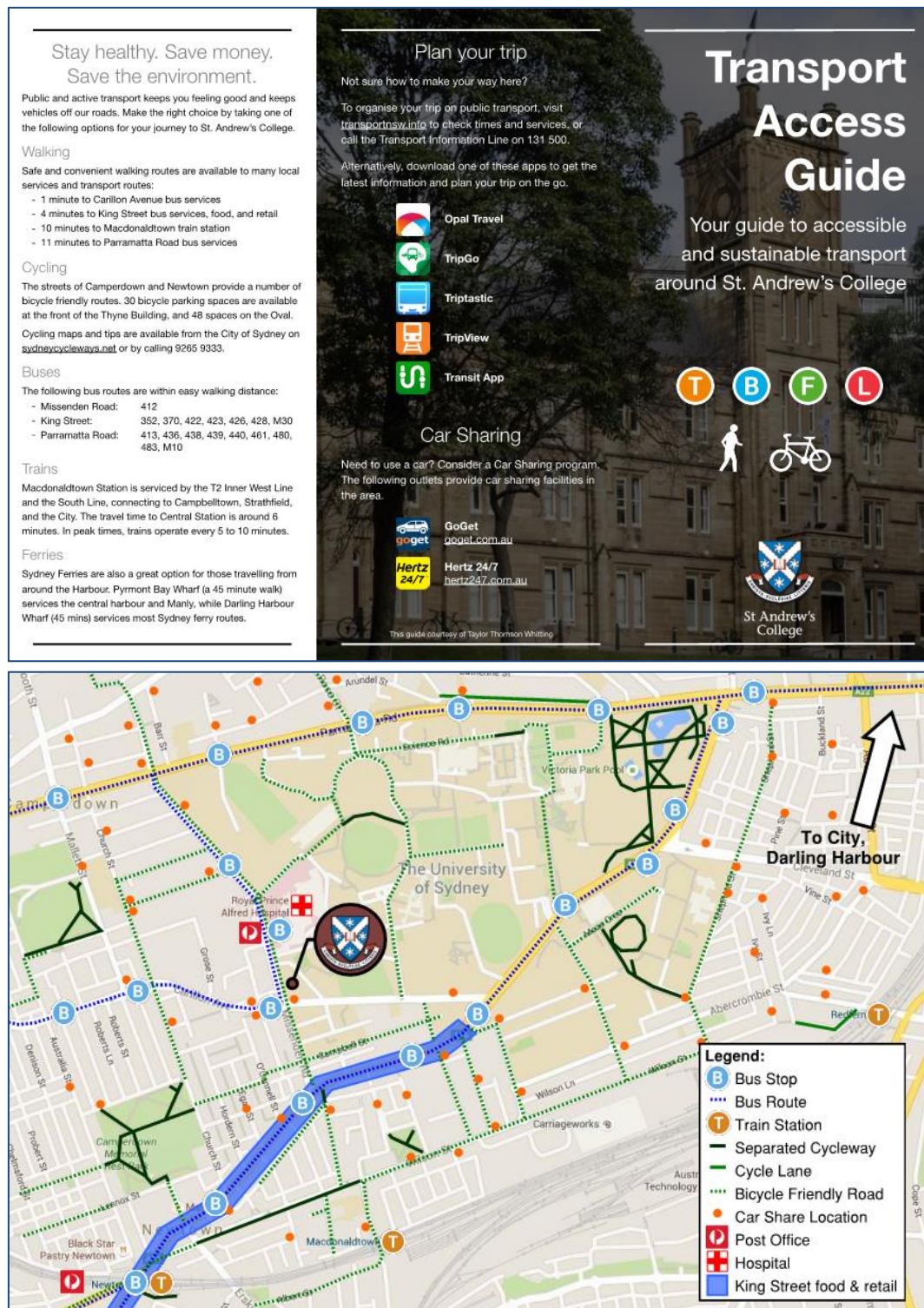

Figure 5.1: Transport Access Guide brochure example
Source: Developed by TTW for St Andrews College at the University of Sydney

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 site newsletter. 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 employees regarding current initiatives and any other travel-related concerns.

5.2   Strategy 2: Encourage Active Transport

5.2.1   Additional Staff Bicycle Storage

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 Hornsby Shire Council.

5.2.2   End-of-Trip Facilities

Users wishing to engage in active transport often face difficulties dealing with physically exerting journeys travelling long distances or along steep grades. These journeys can leave travellers sweaty and uncomfortable, particularly during the warmer months of the year. End-of-trip facilities are designed to allow users to shower and change after their journey, feeling refreshed and ready for their daily routine.

End-of-trip facilities should ideally provide showers, change rooms, lockers, and drying facilities for users. Many locker systems are available which can provide vertical space for clothes hangers and storage for personal items in an L-shaped system, providing a high density of lockers in a room.

Figure 5.2: Storage locker example
Source: 'L Shape Locker', Storage Aspects (storageaspects.co.uk)

5.2.3 '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.

5.3 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 School Shuttle Bus

The location of the School on the Northern Line may discourage students on the North Shore Train line from adopting train as their mode of travel. The feasibility of a shuttle bus to a popular North Shore Train Station could be investigated. This shuttle bus could be synced with train arrival and departure times to reduce waiting times of students and make the option more attractive.

5.4 Strategy 4: Encourage Carpooling

5.4.1 Staff Pairings

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

A meeting could be held for staff to provide an opportunity for staff members to discuss carpooling options, including coordination of staff by region and place of residence.

It is noted that staff 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 Regular Reviews of Travel Plan

This Green Travel Plan, and other associated documentation (such as a Transport Access Guide) will 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 an updated travel mode survey, consultation with staff and students, and adjustments to initiatives and targets.

5.5.2 Staff Responsibility

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. This staff member could form a sustainability group that would assist in updating the Green Travel Plan and champion the travel initiatives.

5.6   Action Checklist

Action	Why	How	When
Strategy 1: Enable Informed Users			
1.1 Develop a Transport Access Guide for the site	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)	Prior to Stage 1 completion
1.2 Include travel information into the induction process for new staff and visitors	Information should be convenient and accessible for users.	Include TAG and any other relevant information sheets in induction packs.	Prior to Stage 1 completion
1.3 Provide travel information and reminders	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	Every 6 months
Strategy 2: Encourage Active Transport			
2.1 Provide bicycle storage area for staff and students	Staff and students with knowledge of a safe storage spaces are more likely to cycle to work.	Storage should have sufficient security features including access and surveillance.	Throughout Master Plan
2.2 Provide end-of-trip facilities for staff	End-of-trip facilities with showers, change rooms, and lockers encourage greater usage of active transport from users who may otherwise avoid due to long distances, steep grades, etc.	Install lockers for staff including provision for clothes hanging space (e.g. L-shaped lockers). Provide access to shower and change facilities.	Throughout Master Plan
2.3 Promotion of 'Ride 2 School Day' and other health events and days	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 'Ride2Work Day' and other relevant events are advertised. This may be organised by the sustainable travel representative.	After Stage 1
Strategy 3: Encourage Public Transport			
3.1 Opal card top-up facilities	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.	After Stage 1
3.2 School shuttle bus	The location of the School on the Northern Line may discourage students that live on the North Shore Line to travel via train.	Undertake feasibility study into providing a shuttle bus to a popular train station on the North Shore line that is synced to train arrival and departure times.	After Stage 1

Action	Why	How	When
Strategy 4: Encourage Carpooling			
4.1 Introduce staff living in appropriate geographical pairings	Staff may not be aware of others who live near to them or along their route to work	Arrange meeting or workshop between staff with intention of arranging and organising by region and place of residence	Prior to Stage 1 completion
4.3 Provide priority parking for carpooling staff	Staff are more likely to use carpool programs if parking is guaranteed, particularly if parking capacity experiences high demand	Develop register of staff who wish to regularly carpool including vehicle registration. Allocate several parking spaces to carpooling staff only.	Prior to Stage 1 completion
Strategy 5: Ongoing Management			
5.1 Review this Green Travel Plan regularly	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	Ongoing
5.2 Allocate responsibility to a staff member	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.	Prior to commissioning

6.0   Conclusion

This Green Travel Plan is a critical step in achieving more sustainable travel behaviour for staff and student at Loreto Normanhurst.

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 Loreto Normanhurst, 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 the Hornsby Shire Council if deemed necessary.