

# green travel plan;

## Bankstown North Public School

For SINSW 30 September 2020 parking; traffic; civil design; wayfinding; ptc.

## **Document Control**

Bankstown North Public School, Green travel plan

lssue	Date	Issue Details	Author	Reviewed	For the attention of
1	20/03/20	Draft	JM	КВ	Vlad Hripac
2	17/04/20	Final	JM	КВ	Giuseppe Lauriola
3	13/07/20	Revision 1	JM	KB/AM	Simon Collins
4	20/07/20	Revision 2	JM	KB/AM	Simon Collins
5	25/09/20	Revision 3 Draft	JM	KB/AM	Simon Collins
6	30/09/20	Revision 3	JM	KB/AM	Simon Collins
7					
8					

### Contact

### Andrew Morse

+61 2 8920 0800 +61 414 618 002 andrew.morse@ptcconsultants.co

### Kasia Balsam

+61 2 8920 0800 +61 478 848 945 kasia.balsam@ptcconsultants.co

COMMERCIAL IN CONFIDENCE

The information contained in this document, including any intellectual property rights arising from designs developed and documents created, is confidential and proprietary to **ptc.** 

This document may only be used by the person/organisation to whom it is addressed for the stated purpose for which it is provided and must not be imparted to or reproduced, in whole or in part, by any third person without the prior written approval of a **ptc.** authorised representative. **ptc.** reserves all legal rights and remedies in relation to any infringement of its rights in respect of its intellectual property and/or confidential information.

© 2020

**ptc.** Suite 502, 1 James Place North Sydney NSW 2060 info@ptcconsultants.co t + 61 2 8920 0800 ptcconsultants.co

## Contents

1.	Introduction	1
1.1	Project summary	1
2.	Background	2
2.1	Purpose of the plan	2
2.2	Government policy	2
3.	Green Travel Plan	3
3.1	What is a Green Travel Plan?	3
3.2	Why is a Green Travel Plan required?	3
3.3	The purpose of a Green Travel Plan	4
4.	Steps to develop the Green Travel Plan	5
4.1	Step 1 – Set up a travel plan (TP) coordinator and an advisory committee	5
4.2	Step 2 – Data collection & review existing situation	5
4.2.1	Staff & student questions	6
4.2.2	2 Additional Questions	6
4.3	Step 3 – Prepare the travel plan	7
4.4	Step 4 – Deliver & implement	7
4.5	Step 5 – Recognise process	7
5.	Transport Analysis	8
5.1	Overview	8
5.1.1	Enrolment Catchment	8
5.1.2	2 Survey Data Mode Split	9
5.1.3	B Depersonalised Data Catchments (Students only)	10
5.1.4	Site Access	11
5.2	Walking	13
5.2.1	Catchment Areas	13
5.2.2	2 Opportunities & Targets	16
5.2.3	3 Existing Infrastructure	16
	Future Infrastructure	17
5.2.5	5 Infrastructure Gap Analysis & Proposed Improvements	18
	5 Strategies	20
5.3	Cycling	22
	Catchment Areas & Travel Desire Lines	22
	2 Opportunities & Targets	23
	3 Existing Infrastructure	24
	Future Infrastructure	24
	5 Infrastructure Gap Analysis & Proposed Improvements	25
	5 Strategies	25
5.4	Public Transport	28
	Catchment Areas & Travel Desire Lines	28
	2 Opportunities & Targets	30
5.4.3	3 Existing Infrastructure	30

5.4.4 Future Bus Routes	31
5.4.5 Infrastructure Gap Analysis & Proposed Improvements	32
5.4.6 Strategies	32
5.5 Car Share / Car Pooling	33
5.5.1 Catchment Areas	33
5.5.2 Opportunities & Targets	33
5.5.3 Existing and Future Infrastructure	34
-	
5.5.4 Infrastructure Gap Analysis & Proposed Improvements	34
5.5.5 Strategies	34
5.6 Summary of all Targets	36
5.7 General Strategies	37
6. Monitoring and evaluation	41
Attachment 1 - GTP Guide for the TP Coordinator & SINSW	43
Figure 1 – Site location	1
Figure 2 – Flow of information of the GTP	4
Figure 3 – Enrolment Catchment (Source: NSW Public School Finder)	8
Figure 4 – Staff questionaire zones	10
Figure 5 – Surrounding school amenities	12
Figure 6 – Walking Desire Lines	14
Figure 7 – Walking Catchments Figure 8 – Pedestrian infrastructure	15 18
Figure 9 – Infrastructure gaps and proposed improvements	19
Figure 10 – Cycling Catchments	22
Figure 11 – Surrounding cycle paths (source: Bankstown Cycleways Map)	24
Figure 12 – Infrastructure gap analysis and proposed infrastructure	25
Figure 13 – Bus routes	29
Figure 14 – Existing Bus Infrastructure.	31
Figure 15 – Mode share averages (Source: City of Canterbury-Bankstown Connective City 2026 LSPS)	36
Figure 16 – Mode heirachy	40
Table 1 – Surveyed existing mode share	9
Table 2 – Staff within each zone	9
Table 3 – Existing Student Catchments	11
Table 4 – Directional split of Students within the walkable catchment	13
Table 5 – Depersonalised data walking catchment Table 6 – Strategies for walking	16 20
Table 7 – Directional split of students within cycling catchments	20
Table 8 – Depersonalised data cycling catchment	23
Table 9 – Strategies for cycling	26
Table 10 – Directional split of students using the SSTS catchment	28
Table 11 – Bus service frequency	28
Table 12 – Depersonalised data bus catchments	30
Table 13 – Strategies for public transport	32
Table 14 – Number of students per vehicle	33
Table 15 – Strategies for public transport	34
Table 16 – Mode split targets	37
Table 17 – General Strategies	37

## 1. Introduction

### 1.1 Project summary

**ptc.** has been engaged by Schools Infrastructure NSW (SINSW) to undertake a green travel plan that is intended to accompany a State Significant Development Application at Bankstown North Public School, Bankstown.

A masterplan is purposed to increase student enrolment from the current 330 students to 644 students.

Currently the kiss and drop off area on Beresford Avenue is observed to be queued back from the cul-desac to the Hume Highway intersection. With increasing drop off / pick up demand, the queue is expected to extend onto Hume Highway. A number of options have been explored to cater for the increasing demand for drop off / pick up by altering the traffic flow on Beresford Avenue and/or Davis Lane, as well as within the School.

This report sets out the methodology and findings of the study to assess the traffic, parking and the road network related considerations associated with the proposal.

This study addresses the key topics related to traffic and parking impacts typically associated with the School, being:

- Traffic activity associated with students and the impact on the road network,
- Traffic activity associated with staff and the impact on the road network,
- On-campus parking provision and demand associated with staff,
- The safety of pedestrians, students and other road users in the vicinity of the School,
- The warrants for providing additional traffic and/or parking facilities either within the road network or within the School.



Figure 1 – Site location

## 2. Background

### 2.1 Purpose of the plan

This document identifies the following:

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



### 2.2 Government policy

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

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

## 3. Green Travel Plan

### 3.1 What is a Green Travel Plan?

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

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

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

### 3.2 Why is a Green Travel Plan required?

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

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

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

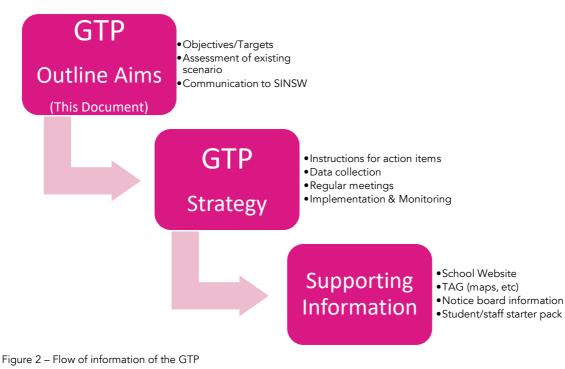
### 3.3 The purpose of a Green Travel Plan

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

This document identifies the following:

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

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



## 4. Steps to develop the Green Travel Plan

To develop a GTP, there are five (5) key steps to follow to commence its operation:



### 4.1 Step 1 – Set up a travel plan (TP) coordinator and an advisory committee

- Appoint an individual to coordinate specific actions and to track the progress of this work;
- The TP coordinator shall be employed on a 4-8 hours per week basis;
- Develop a working group that involves representatives including staff and parents (P&F Committee);
- Identify ways how the whole community will be involved and informed of the work (e.g. regular articles in the school website/ social media).

### 4.2 Step 2 – Data collection & review existing situation

As part of the development, it is expected that there will be an influx in new students and staff travelling to and from the site on a daily basis. It is anticipated that the new commuters will adopt a similar travel mode split to the existing staff and students. However, to verify travel behaviours an initial survey should be conducted to identify travel behaviour. This is recommended to be conducted as an online survey (e.g. Survey Gizmo). This would assist with developing and reviewing travel planning schemes and how the existing facilities can be improved around the site area and beyond. It would help contribute towards the City of Canterbury-Bankstown's Vision to encourage more sustainable modes of transport.

- Did you park on site today? If so where?
- Did you park on-street? If so where?
- Were you dropped off by private vehicle? If so where?

### 4.2.1 Staff & student questions

As a minimum the following questions should be considered:

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

### 4.2.2 Additional Questions

- Have you heard of car share? Do you know where the nearby car share locations are? If yes, would you use it?
- If not, what are the barriers to you using car share to travel to and from the school?

- What would make you consider using car share as a form of transportation?
- If you would like to take part in walk/cycle groups and/or carpooling please specify which group, contact details (email) and postcode below.
- Do you have any suggestion/recommendations to encourage sustainable modes of transport?

Once the survey findings are available, methods to achieve specific targets will be identified with proposed time frames. This could include adopting strategies outlined in Section 5.7, which is undertaken by the Advisory Committee. These methods and targets are then available for monitoring by SINSW (refer to Section 6).

### 4.3 Step 3 – Prepare the travel plan

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

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

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

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

### 4.4 Step 4 – Deliver & implement

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

### 4.5 Step 5 – Recognise process

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

## 5. Transport Analysis

### 5.1 Overview

### 5.1.1 Enrolment Catchment

Bankstown North Public School's enrolment catchment covers an area of approximately 2.3 km<sup>2</sup> surrounding the school. There are currently 325 students enrolled at Bankstown North Public School with 72% of students located within the enrolment catchment. The majority of the catchment is located within a comfortable walking distance defined as 1.2km (15 minutes) if walking is the only mode of transport.

Figure 3 maps the enrolment catchment for Bankstown North Public School.



Figure 3 – Enrolment Catchment (Source: NSW Public School Finder)

### 5.1.2 Survey Data Mode Split

An online questionnaire was conducted with both students and staff (two separate questionnaires). The objective of the questionnaire was to identify the existing travel behaviour. It is anticipated that once the school is redeveloped the new staff and students would adopt similar travel behaviours if no changes to active and public transport infrastructure and promotion are implemented. The full survey results for the online questionnaire can be found in the accompanying Traffic Impact Assessment prepared by **ptc.** and dated 13<sup>th</sup> July 2020. It should be noted that out of 335 enrolled students, only 170 completed the survey and out of 33 staff members, only 15 surveys were completed. Table 1 summarises the results of the travel mode share as an average of AM and PM mode splits.

Mode	Students (average)	Staff (average)
Walk	24.7%	0%
Bicycle	0.6%	0%
Train/Bus	1.2%	0%
Car Passenger	71.8%	0%
Car Driver	-	100%
Other (motorcycle, taxi, car share)	1.8%	0%

Table 1 – Surveyed existing mode share

Analysis of the mode share survey indicates the following:

- Students' primary form of transport is as a car passenger. The factors that contribute to a high proportion of parents who drive to school include the multi-purpose use of car (e.g. driving to work), safety and increased journey time associated with travelling by public transport.
- Private vehicles are the only form of transport used by the surveyed staff. There are currently more parking spaces available on the premises than there are staff members, hence enabling the use of private vehicle. The main reason for staff driving to school as per the surveys is that it takes longer by public transport and that there is no direct route meaning they must interchange between services.

Figure 4 shows the zones used within the survey to understand where staff reside, whereas Table 2 shows the results from the questionnaire. It is apparent that the vast majority of staff reside more than 4km away from the school, which is a significant contributor to car journeys being the most convenient mode to commute.

Zone	Percent (Number)
Zone A	6.7% (1)
Zone B	0% (0)
Zone C	13.3% (2)
Zone D	0% (0)
Outside of the zones	80% (12)

Table 2 – Staff within each zone

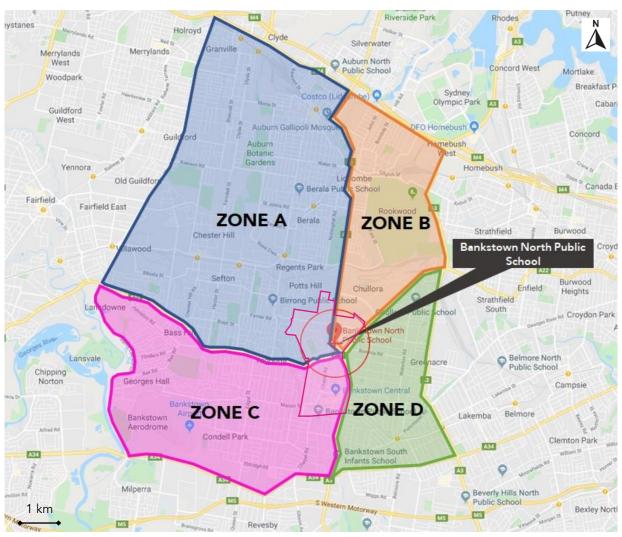


Figure 4 – Staff questionaire zones

### 5.1.3 Depersonalised Data Catchments (Students only)

Depersonalised student data (325 students) was used to assess the distances of students from the school. The distance of where students reside can be categorised into different catchments. The comfortable walking distance is defined by SI to be within the 400m, 800m and 1200m catchments. The walking catchments can be assessed using a notional radius from the school's location or it can be assessed by calculating the actual distance of all possible routes. Students are also able to comfortably cycle to and from school within the catchments of 1200m to 3600m distance.

Table 3 summarises the number of students within each catchment for both notional distances and actual distances. Included in the table is also the catchment area for children excluded from the School Student Transport Scheme (SSTS), which are not eligible for free or discounted public transport travel.

Catchment Analysis	Number of students (Notional)	Percentage of students (Notional)	Number of students (Actual)	Percentage of students (Actual)
0 - 400 m	36	11%	29	9%
400 - 800 m	127	39%	94	29%
800 m - 1.2 km	92	28%	90	28%
Total within walking catchment	253	78%	213	66%
1.2 - 2.4 km	29	9%	-	-
2.4 km - 3.6 km	20	6%	-	-
Total within cycling catchment	52	16%	-	-
Total within active transport catchment	305	94%		
Total outside active transport catchment	20	6%		
0 - 400 m to 1-seat PT outside active transport catchment	7	35%*	1	5%*
0 - 1.6 km (Primary SSTS Excl. Zone)	267	82%	-	-
> 1.6 (Within SSTS)	58	18%	-	-
0 – 400 m to 1-seat PT within SSTS	32	55%**	24	41%**
400 – 800 m to 1-seat PT within SSTS	10	17%**	12	21%**
Within Enrolment Catchment	235	72%	-	-

### Table 3 – Existing Student Catchments

\* Percentage out of students outside active transport

\*\*Percentage out of students within SSTS

Table 3 outlines that a total of 78% (notional) / 66% (actual) of students reside within the previously described walking catchment while a further 16% (notional) live within the defined cycling catchment. This leaves only 6% outside of the notional active transport catchment who could be encouraged to use the benefits of the SSTS services. 35% (notional) / 5% (actual) of students outside the notional active transport catchment are within 400 m walking distance to a 1-seat bus trip. Out of all students within the SSTS benefit zone, only 55% (notional) / 41% (actual) reside within 400m of a 1-seat trip bus stop.

The difference between both notional and the actual distances can highlight gaps in the connectivity of the active transport routes between two points. The differences experienced for this school are primarily caused by the layout of the road and footpath network; however, in some cases there is a lack of crossing opportunities.

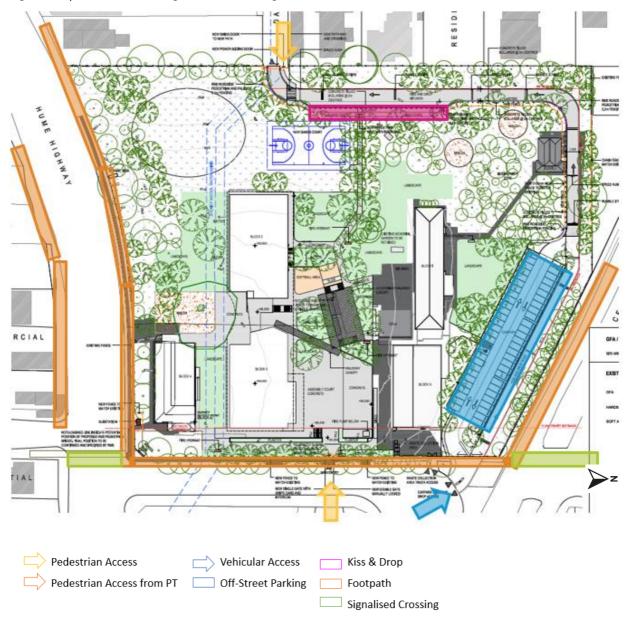
### 5.1.4 Site Access

The proposed layout of the school's redevelopment is shown in Figure 5. It also highlights the infrastructure amenities available within close proximity of the school. The school will provide two pedestrian access points off Davis Lane and Beresford Avenue. The Beresford Avenue access would mostly be accessible for students travelling from the south and east, whereas the Davis Lane access would mostly serve students travelling from the northwest and west.

The school will also provide a new drop off and pick up facility which will allow vehicles to enter from Beresford Avenue and leave from Davis Lane.

For students arriving via the Davis Lane access, a zebra crossing will be provided to enable safe crossing opportunity across the pick-up and drop-off lane. It is proposed that a staff member will be positioned at the crossing and supervise the vehicular and pedestrian manoeuvres.

The school is bound by three major roads – Hume Highway, Stacey Street and Rockwood Road, which represents a challenging environment for primary school students. The only way to access the school is via signalised pedestrian crossings, as shown in Figure 5.





### 5.2 Walking

### 5.2.1 Catchment Areas

Walking is a viable transport option for distances under one kilometre (approximately 15-20min) and is often quicker for short trips door to door. Walking is also the most space efficient mode of transport for short trips and presents the highest benefits. Co-benefits where walking replaces a motorised trip include improved health for the individual, reduced congestion on the road network and reduced noise and emission pollution.

Using depersonalised data, the directional split of students was obtained. Table 4 summarises the directional split of students using Hume Highway and Stacey Street as boundaries for each directional quadrant. It should be noted that the North-East quadrant is primarily industrial zoned land, hence no students reside there. A map showing the individual areas with the percentage of students residing there is displayed in Figure 6.

Catchment Analysis	Total Students in Catchments (Notional)	Directional Quadrant	Number of students	Percentage of Students out of Catchment Total
0 – 400 m	36	North-West	24	67%
		North-East	0	0%
		South-East	0	0%
_		South-West	12	33%
400 – 800 m	127	North-West	21	17%
		North-East	0	0%
		South-East	2	2%
		South-West	104	81%
800 – 1200 m	92	North-West	9	10%
		North-East	0	0%
		South-East	4	4%
		South-West	79	86%
Enrolment	235	North-West	50	21%
Catchment		North-East	0	0%
		South-East	0	0%
		South-West	185	79%

Table 4 – Directional split of Students within the walkable catchment

## ptc.

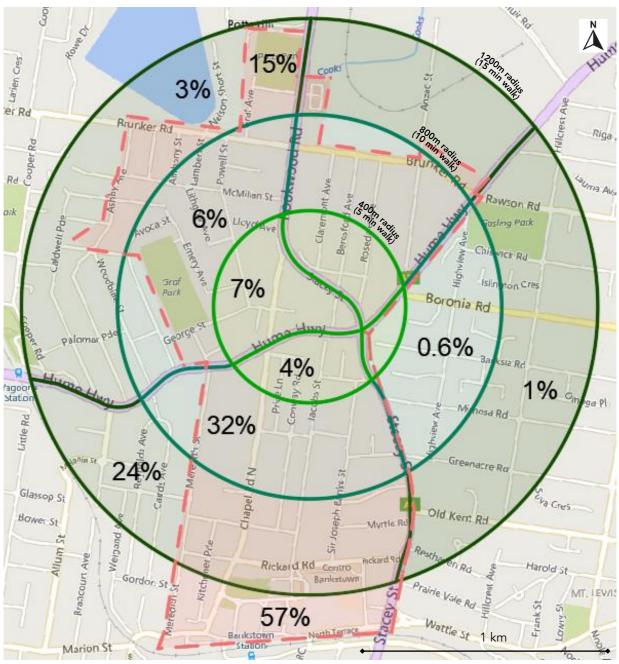


Figure 6 – Walking Desire Lines

As shown in the above figure, the majority of students live south of Hume Highway. The state road provides a significant barrier for 60% of students who could potentially walk to school.

Figure 7 shows the notional and actual walking catchment distances from the school as described in Section 5.1.2. Comparing the directional split with the notional catchment routes, desire lines can be created which can be outlined to promote the walking to school. The following roads are part of recommended desire lines for students:

- Hume Highway;
- Jacobs Street;
- Powell Street;
- Chapel Road.

It is important that these routes are maintained and provide a safe environment for the students to travel to and from the school.

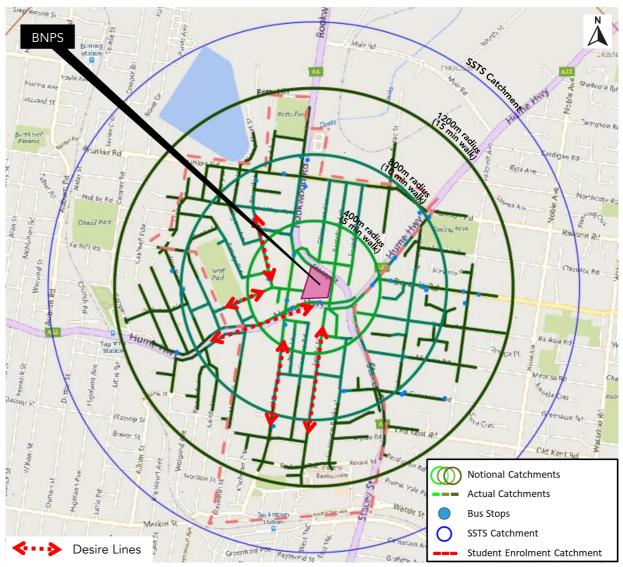


Figure 7 – Walking Catchments

### 5.2.2 Opportunities & Targets

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

The targets are developed through the comparison of surveyed mode splits and depersonalised data showing the location of students based on catchment areas. The survey data can be found in Section 5.1.2 and the depersonalised walking catchment data can be found below in Table 5.

Objectives and targets should also consider any overarching City of Canterbury-Bankstown Council policies or plans such as the State Government's mode share target in the area.

Catchment Analysis	Number of students (Notional)	Percentage of students (Notional)	Number of students (Actual)	Percentage of students (Actual)
0 - 400 m	36	11%	29	9%
400 - 800 m	127	39%	94	29%
800 m - 1.2 km	92	28%	90	28%
Total within walking catchment	253	78%	213	66%

Table 5 – Depersonalised data walking catchment

The survey data collected shows that only 24.7% of students walk to the school; however, there is a total of 78% (notional) / 66% (actual) who are within the walking catchment. To implement a target for walking, the actual catchments were used which measure the distance from each student. Therefore, a target of 66% could be set which would require an improvement of 41.3%.

To achieve the target for walking, a range of infrastructure improvements has been proposed in Section 5.2.5, which, if implemented, will provide a more comprehensive and safer environment for active transport. These may involve liaison with City of Canterbury-Bankstown Council, TfNSW and SINSW to pursue upgrades to the existing pedestrian amenities. In addition, strategies presented in Section 5.2.6 should be considered as a means of educating and encouraging both students and parents to walk and cycle to and from school.

Targets for staff can be found in Section 5.6.

### 5.2.3 Existing Infrastructure

Figure 8 maps the existing pedestrian infrastructure within 800m of the school. The directional split of the students summarised in Section 5.2.1 shows that the majority of students live in the south and north-west quadrants. The figure shows that pedestrian amenities are relatively good for students travelling from the southern quadrant while those travelling from the north-western quadrant would have difficulties walking to the school due to a lack of footpaths. However, it is noted that the signalised crossing across Hume Highway is challenging for student due to the width of the carriageway.

Generally, the pedestrian network in the locality has been assessed to provide a reasonable level of walking amenities in the vicinity of the school. Major roads such as Hume Highway and Rockwood Road generally have footpaths on both sides of the road. Stacey Street provides a footpath on the western side only;

however, this is likely due to the industrial character of the area north east of the school, hence students are unlikely to travel in that direction.

Some roads in the north western residential area have been identified to have either just one or no footpaths on either side of the carriageway. While it is acknowledged that the area is residential and traffic volumes are likely to be minor, at least one footpath on one side should be provided.

It should be noted that there is a substantial amount of tree canopy providing shelter for students and staff who wish to walk to and from the school.

An analysis of the pedestrian traffic signal phasing has been undertaken at the Hume Highway / Beresford Avenue and Rockwood Road / Davis Lane intersections. It has been determined that during school peak times, students need to wait the following times for a green signal:

- Across the Hume Highway at Beresford Avenue:
  - Up to 45 seconds in the morning;
  - Up to 45 seconds in the afternoon;
- Across Rockwood Road at Davis Lane:
  - 20 seconds in the morning;
  - 20 seconds in the afternoon.

### 5.2.4 Future Infrastructure

A pedestrian bridge is currently being planned across the Hume Highway to replace the signalised pedestrian crossing at Beresford Avenue. This proposed infrastructure change will provide a safer and more comfortable experience for students as they will be physically separated from vehicles and will not have to wait to cross the busy highway. It is noted that the timing of the new footbridge is unknown at this stage, and that the new school will most likely be operating prior to the commencement of the footbridge project. In this regard, other pedestrian safety improvements should be considered. Therefore, it is proposed to work with the authorities to implement a staggered pedestrian crossing with a holding area at the median of the Hume Highway.

It is understood that as part of the "Stacey St and Hume Highway, Bankstown upgrade" currently planned by TfNSW, upgrades to footpaths along Hume Highway and additional footpaths along Stacey Road will be provided.

Discussions with Council indicated that ongoing maintenance and upgrades to footpaths across the LGA are in process.

The upgrade of Bankstown Station to a Metro station will provide new transport and pedestrian amenities opportunities. Footpaths south of the school may be extended to provide better connectivity to the station which is about 1.5 km away.

## ptc.



Figure 8 – Pedestrian infrastructure

### 5.2.5 Infrastructure Gap Analysis & Proposed Improvements

As shown in Figure 8 within Section 5.2.3, there is a lack of pedestrian footpaths and crossings available for students who reside in the north-western quadrant. This will require liaison with TfNSW and the City of Canterbury-Bankstown Council to provide new footpaths and crossings, which will encourage more students to walk.

Figure 9 identifies the gaps which should be addressed to benefit the student walkability. It includes:

• Installing footpaths on at least one side of the carriageway on McMillan Street, Lloyd Avenue, Lithgow Avenue, Bowden Boulevard and Emery Avenue;

- Ideally, pedestrian access off Davis Lane would be located on the southern side of the gate in order to avoid the requirement for students to cross the pick-up and drop-off lane. This would trigger the requirement to construct a footpath on the southern side of Davis Lane and an upgrade of the Davis Lane / Rockwood Road intersection to incorporate a pedestrian crossing on the eastern arm. The incorporation of the southern footpath would require discussions with Council, as new setbacks may need to be imposed to the properties on the southern side of Davis Lane. It is noted that an upgrade of the Davis Lane / Rockwood Road intersection is already being considered by TfNSW, which would benefit this arrangement.
- Jacobs Street lies along the pedestrian desire line for students living south of Hume Highway. This road being within a residential area is a safer option than using Stacey Road or Chapel Road. In addition, there is a direct link to the school via the signalised pedestrian crossing (and future pedestrian bridge). However, this road has only 1-1.2m wide footpaths. A construction of a shared or a wider footpath along the eastern carriageway Jacobs Street may be capable of improving the walkability to and from the school.
- As the timing of the bridge construction across the Hume Highway is not known yet, an implementation of a staggered pedestrian crossing in conjunction with the installation of a pedestrian landing area at the median of the carriageway would benefit and therefore encourage students who live south of the school. TfNSW has been supportive of this proposal.

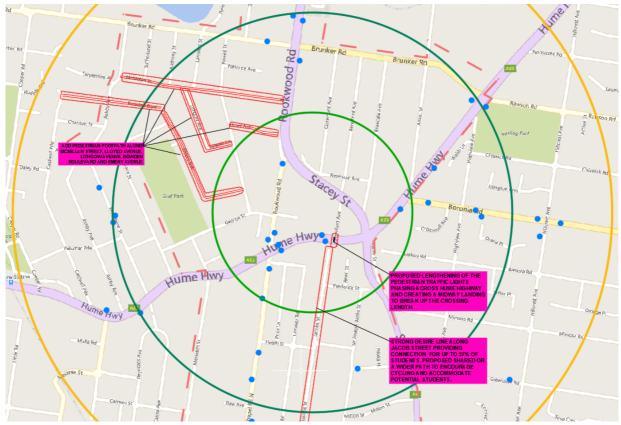


Figure 9 – Infrastructure gaps and proposed improvements

### 5.2.6 Strategies

The school can also promote active transport through various programs and initiatives to encourage students and staff. Table 6 summarises the strategies which are applicable for walking.

Table 6 – Strategies for walking

Strategies for walking	
Strategy 1: Safety pro	ograms/courses
Why	Allows kids to be more informed about any dangers of being a pedestrian and provides ease of mind to parents/carers.
How	Pedestrian safety can be taught during class and reinforced by teachers and parents. Information can also be provided in the 'information pack'.
Who	Teachers and TP Coordinator
When	After completion of redevelopment with reinforcement every 6 months to a year.
Resources	Information pack and brochures
Strategy 2: Pedomete	er-based walking programs
Why	Promote healthy competition between students. Can also be used to enable active transport for other trips
How	Providing a cheap pedometer for each student and recording each student total for a month. Can be introduced as part of Steptember. Can be run on a participation basis for individual students or pedometer based for entire classes / years
Who	TP Coordinator
When	During the month of September. Preferably choosing a different month to the 'classroom competitions' action to encourage students and staff all year round.
Resources	Pedometer and a progress board to tally the progress of each class.
Strategy 3: Classroon	n competitions
Why	Promote healthy competition between students.
How	Classroom with the most children (can include the teacher) who take sustainable forms of transport will win an incentive. Should be done as a tally over a month as children can decide to take the "greener option". Can also be combined with Strategy 2: Pedometer-based walking program.
Who	Teachers
When	As an activity throughout the whole first month after completion.
Resources	Information sheets and a progress board to tally the progress of each class.

Strategy 4: Walk	ring and Cycling buddy scheme
Why	Motivates people to use active transport more often
How	Sending out a questionnaire to everyone asking about their area of residence and contact details so they can be buddied up.
Who	TP Coordinator
When	Sent out every term to accommodate new students and staff
Resources	Questionnaire
Strategy 5: Parti	cipation in the "RideScore" program
Why	To support and enable more children and young people to scoot and ride a bike to school
How	"students will receive a personal sensor (beacon) that is attached to their bicycle or scooter. The school bicycle storage facility is fitted with a Bluetooth reader that detects the signal from the sensor, and immediately sends a notification to the nominated contact that the student has arrived at, or departed the school gate."
Who	TP Coordinator
When	Sent out an invitation every term to accommodate new students and staff
Resources	Personal sensor (beacon) and a Bluetooth reader
Strategy 6: Afte	r school scooter training course
Why	Reaches out to students who would like to participate in scooting
How	Providing courses after school to teach how to ride a scooter and traffic rules
Who	TP Coordinator
When	Courses starting each term
Resources	Scooter parking
Strategy 7: End	of trip facilities (for staff)
Why	Allows active transport commuters to shower and change to be comfortable at work.
How	Including a shower and change room in the new redevelopment and informing staff about its availability
Who	SINSW
When	Completion of redevelopment

### **C** 1 4. Walkin d Cycling buddy ch

Shower and change room facilities

Resources

### 5.3 Cycling

### 5.3.1 Catchment Areas & Travel Desire Lines

Cycling is a great active transport alternative to using private and public transport for shorter trips which are under 3.6km. However, it can pose safety challenges when the infrastructure provided does not cater for cyclists.

To assess the feasibility of cycleways, similarly to the walking catchments, the directional split of students within the cycling catchments is summarised in Table 7. Each quadrant is split using Hume Highway and Stacey Street as the boundaries.

There is currently poor cycleway connectivity surrounding the vicinity of the school as shown in Figure 10. The figure also shows the desire lines which connect the southern quadrant and the north-western which will be the most beneficial to a substantial number of students.



Figure 10 – Cycling Catchments

Catchment Analysis	Total Students in Catchments (Notional)	Directional Quadrant	Number of students	Percentage of Students out of Catchment Total
1.2 – 2.4 km	29	North-West	7	22%
		North-East	0	0%
		South-East	7	22%
		South-West	15	47%
2.4 – 3.6 km	20	North-West	4	20%
		North-East	0	0%
		South-East	7	35%
		South-West	9	45%

Table 7 – Directional	split of students	within cycling	catchments

### 5.3.2 Opportunities & Targets

Targets are developed through the comparison of surveyed mode splits and depersonalised data showing the location of students based on catchment areas. The survey data can be found in Section 5.1.2 and the depersonalised cycling catchment data can be found below in Table 8.

Objectives and targets should also consider any overarching City of Canterbury-Bankstown Council policies or plans such as the State Government's mode share target in the area.

Catchment Analysis	Number of students (Notional)	Percentage of students (Notional)	Number of students (Actual)	Percentage of students (Actual)
1.2 - 2.4 km	29	9%	-	-
2.4 km - 3.6 km	20	6%	-	-
Total within cycling catchment	52	16%		

The survey data collected shows that only 0.6% of students cycle to school, whereas 16% of students live within the cycling catchments (plus the 66% who live within the walking catchment, who could cycle). It is noted in the surveys that children are generally dropped off to school since it is claimed to be safer than taking active transport. This can be attributed to the lack of cycleways available in the vicinity of the site and to the lack of end of trip facilities provided. It would not be realistic to expect primary school children to cycle 3.6 km along roadways to get to the school, hence the target should be set within the 2.4 km catchment, no higher than 9%.

To achieve the target for cycling, a range of strategies presented in Section 5.3.6, should be considered which involve liaison with City of Canterbury-Bankstown Council, TfNSW and SINSW to pursue upgrades to the existing pedestrian amenities.

Targets for staff can be found in Section 5.6.

### 5.3.3 Existing Infrastructure

A mentioned within Section 5.3.1, the subject site currently has poor connectivity to the bicycle network. Figure 11 shows the City of Canterbury-Bankstown council's cycle map. This will discourage cycling as an alternative mode of transport for staff and students.

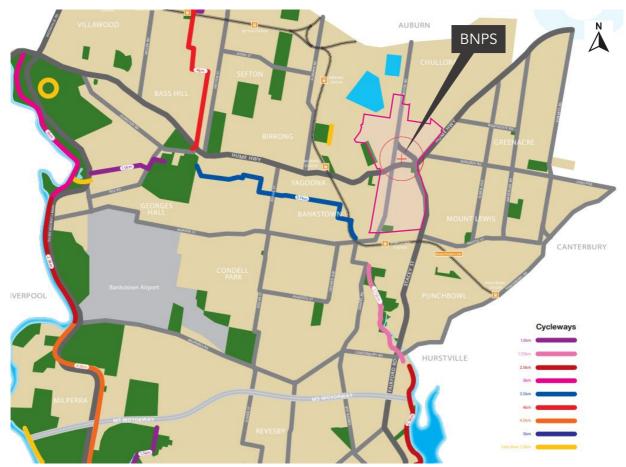


Figure 11 - Surrounding cycle paths (source: Bankstown Cycleways Map)

### 5.3.4 Future Infrastructure

There are currently no proposed changes to the cycleways within the vicinity of the school. However, the City of Canterbury-Bankstown Council have plans to improve active transport connectivity in light of the upgrade of Bankstown Station to a Metro station. A shared path is proposed along the western side of Chapel Road.

It is understood that as part of the "Stacey St and Hume Highway, Bankstown upgrade" currently planned by TfNSW, upgrades to footpaths along Hume Highway and addition footpaths along Stacey Road will be provided.

There is also a proposed pedestrian bridge which will cross the Hume Highway to replace the Beresford Avenue intersection. The pedestrian bridge should be designed to allow for student cyclist to cross the Hume Highway safely.

### 5.3.5 Infrastructure Gap Analysis & Proposed Improvements

As discussed, there is a lack of cycling infrastructure available surrounding the vicinity of the school. Providing new cycleways to support cycling to and from the school will require liaison with TfNSW and the City of Canterbury-Bankstown Council.

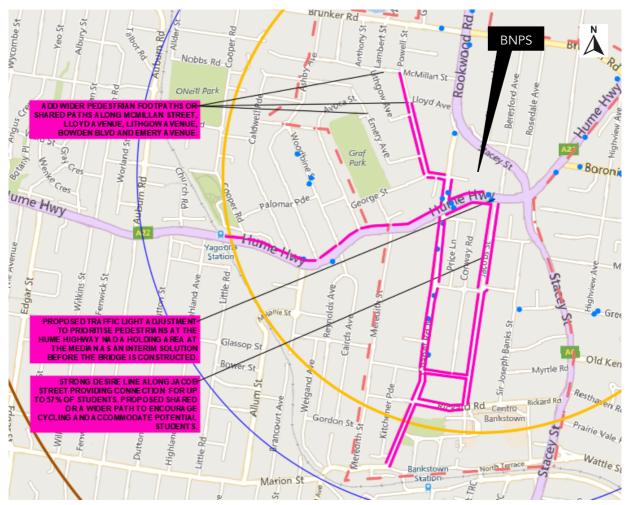


Figure 12 – Infrastructure gap analysis and proposed infrastructure

One upgrade which may be capable of improving the attractiveness of cycling is the include a shared or at least a wider footpath along the desire line along Jacobs Street shown in Figure 12. Jacob Street provides a desire line for up to 57% of students who live south of the School up to 1.2 km away. This link provides direct access to the crossing at the Hume Highway avoiding unnecessary travel along the busy highway. By creating a shared path, students would be encouraged to both walk and cycle, particularly when the option for a safer and more comfortable route is available. This, in combination with the pedestrian bridge over Hume Highway will provide a safe connection for a large proportion of students.

### 5.3.6 Strategies

The school can also promote active transport through various programs and initiatives to encourage students and staff. Table 9 summarises the strategies which are applicable for cycling.

### Table 9 – Strategies for cycling

Strategies for cy	cling
	ty programs/courses
Why	Allows kids to be more informed about any dangers of being a pedestrian and provides ease of mind to parents/carers.
How	Pedestrian safety can be taught during class and reinforced by teachers and parents. Information can also be provided in the 'information pack'.
Who	Teachers and TP Coordinator
When	After completion of redevelopment with reinforcement every 6 months to a year.
Resources	Information pack and brochures
Strategy 2: Class	sroom competitions
Why	Promote healthy competition between students.
How	Classroom with the most children (can include the teacher) who take sustainable forms of transport will win an incentive. Should be done as a tally over a month as children can decide to take the "greener option". Can also be combined with Strategy 2: Pedometer-based walking program.
Who	Teachers
When	As an activity throughout the whole first month after completion.
Resources	Information sheets and a progress board to tally the progress of each class.
Strategy 3: Walk	sing and Cycling buddy scheme
Why	Motivates people to use active transport more often
How	Sending out a questionnaire to everyone asking about their area of residence and contact details so they can be buddied up.
Who	TP Coordinator
When	Sent out once a year to accommodate new students and staff
Resources	Questionnaire
Strategy 4: Parti	cipation in the "RideScore" program
Why	To support and enable more children and young people to scoot and ride a bike to school
How	"students will receive a personal sensor (beacon) that is attached to their bicycle or scooter. The school bicycle storage facility is fitted with a Bluetooth reader that detects the signal from the sensor, and immediately sends a notification to the nominated contact that the student has arrived at, or departed the school gate."
Who	TP Coordinator
When	Sent out an invitation every term to accommodate new students and staff
Resources	Personal sensor (beacon) and a Bluetooth reader

Strategy 5: End of trip facilities (for staff)		
Why	Allows active transport commuters to shower and change to be comfortable at work.	
How	Including a shower and change room in the new redevelopment and informing staff about its availability	
Who	SINSW	
When	Completion of redevelopment	
Resources	Shower and change room facilities	

### Strategy 5: End of trip facilities (for staff)

### 5.4 Public Transport

### 5.4.1 Catchment Areas & Travel Desire Lines

Public transport is a suitable option for students who are unable to use active transport as a form of transport and to replace private car use. Every primary school has a SSTS catchment of 1600m radius which is used to assess the eligibility for a student to have discounted opal travel. Students who live outside of the SSTS exclusion zone are eligible for the discount, therefore they can further benefit from public transport.

Using depersonalised data, the directional split of the students can be assessed to better understand at a high level the coverage of public transport routes.

Catchment Analysis	Total Students in Catchments (Notional)	Directional Quadrant	Number of students	Percentage of Students out of Catchment Total
Within SSTS	267	North-West	55	20%
exclusion zone 0 – 1.6 km		North-East	0	0%
0 – 1.0 km		South-East	10	4%
		South-West	202	76%
Outside SSTS	58	North-West	18	31%
exclusion zone		North-East	2	3%
>1.6 km		South-East	18	31%
		South-West	20	35%

Table 10 – Directional split of students using the SSTS catchment

The closest bus stop is located on Hume Highway which is 50 metres away from the School. The bus services, including coverage, approximate operation times and frequency, are summarised in

Table 11 – Bus service frequency

Route	Frequency (approx.)	Coverage	Stop Location
907	Every 20 minutes from 5:13am to 9:54pm Mon-Fri Every 20 minutes from 7:07am to 8:36pm on weekends	Parramatta to Bankstown via Bass Hill	300m
908	Hourly from 7:25am to 5:50pm Mon-Fri Hourly from 9:00am to 4:21pm on weekends	Merrylands to Bankstown via Birrong and Auburn	260m
913	Only operate hourly from 5:32am to 4:49pm Mon-Fri	Bankstown to Strathfield	50m
925	Every 30 minutes from 7:02am to 9:06pm Mon-Fri Hourly from 7:43am to 6:43pm on weekends	East Hills to Lidcombe via Bankstown	50m
M90	Every 20 minutes from 6:20am to 8:52pm Mon-Fri Every 20 minutes from 7:05am to 8:12pm on weekends	Burwood to Liverpool	50m
M91	Every 10 minutes from 5:20am to 11:30pm Mon-Fri Every 20 minutes from 6:36am to 11:20pm on weekends	Hurstville to Parramatta via Padstow & Chester Hill	300m

Route	Frequency (approx.)	Coverage	Stop Location
M92	Every 10 minutes from 6:06am to 9:20pm Mon-Fri Every 20 minutes from: 7:26am to 8:26pm on weekends	Sutherland to Parramatta	260m

The development is relatively well serviced by buses, with regular services every 10-60 minutes throughout the day on weekdays. However, the routes generally cover the main roads surrounding the school, but not the residential areas in the vicinity. Therefore, buses may provide an alternative mode share option for staff, subject to the availability of convenient bus stops close to their home location, but students are not likely to utilise this mode share.

Figure 13 maps the 1-seat trip bus routes within the SSTS exclusion zone with bus stops within the proximity of the school.

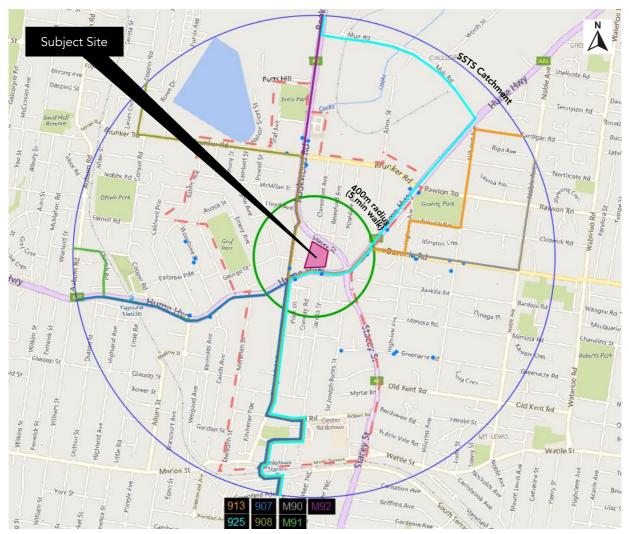


Figure 13 – Bus routes

### 5.4.2 Opportunities & Targets

Targets are developed through the comparison of surveyed mode splits and depersonalised data showing the location of students based on catchment areas. The survey data can be found in Section 5.1.2 and the depersonalised catchment data can be found below in Table 12.

Objectives and targets should also consider any overarching City of Canterbury-Bankstown Council policies or plans such as the State Government's mode share target in the area.

Catchment Analysis	Number of students (Notional)	Percentage of students (Notional)	Number of students (Actual)	Percentage of students (Actual)
Total outside active transport catchment	20	6%		
0 - 400 m to 1-seat PT outside active transport catchment	7	2% (35%*)	1	<1% (5%*)
0 - 1.6 km (Primary SSTS Excl. Zone)	267	82%	-	-
> 1.6 (Within SSTS)	58	18%	-	-
0 – 400 m to 1-seat PT within SSTS	32	10% (55%**)	24	7% (41%**)
400 – 800 m to 1-seat PT within SSTS	10	3% (17%**)	12	4% (21%**)

\* Percentage out of students outside active transport

\*\*Percentage out of students within SSTS

The survey data collected shows that only 1.2% of all students use public transport. The depersonalised data shows that 10% (notional) / 7% (actual) of students have both the SSTS benefits and are within 400 m of a 1-seat trip bus stop. Therefore, a realistic target for using public transport should be based on the actual catchment coverage which is 7%.

It also shows that out of all the students eligible for the SSTS benefits 55% (notional) / 41% (actual) have access to a bus stop within 400 m of where they reside. However, in the scheme of the actual enrolment data, the vast majority of students live within a walkable distance to the school.

To achieve the public transport target, a range of strategies presented in Section 5.4.6, could be considered which involve liaison with City of Canterbury-Bankstown Council, TfNSW and SINSW to pursue upgrades to the existing pedestrian amenities.

Targets for staff can be found in Section 5.6.

### 5.4.3 Existing Infrastructure

Figure 14 shows that the existing school site is currently serviced by eight bus stops within 400 m of the site. Three of the seven bus routes described in Section 5.4.1 are serviced by the two bus stops located directly at the frontage of the school. Only the bus stop on the western end provides shelter for students waiting. The bus stops which provide services in the opposite direction will require students to cross the Hume Highway at the Beresford Avenue intersection. These students should use the Beresford Avenue entrance to avoid further conflicts along the Hume Highway. This bus stop also does not have any shelter for students.

The bus stop on Rockwood Road is sheltered and services 2 of the buses. Students using this bus stop will be required to either travel south down Rockwood Road, then along the Hume Highway and turn left into

Beresford Avenue, or walk north, cross Davis Lane, then turn left to access the site. The opposing bus stop also provides shelter, however, does not provide a clear indication that it is a bus stop and requires students to cross the road.

There are also two stops along either side of Chapel Street which service the final two bus routes. The stops will require students to cross the Hume Highway, walk towards Beresford Avenue and turn left, or walk northbound along Rockwood Road, cross Davis Lane, then turn left to access the site. Only the bus stop on the western side has a shelter for travellers.

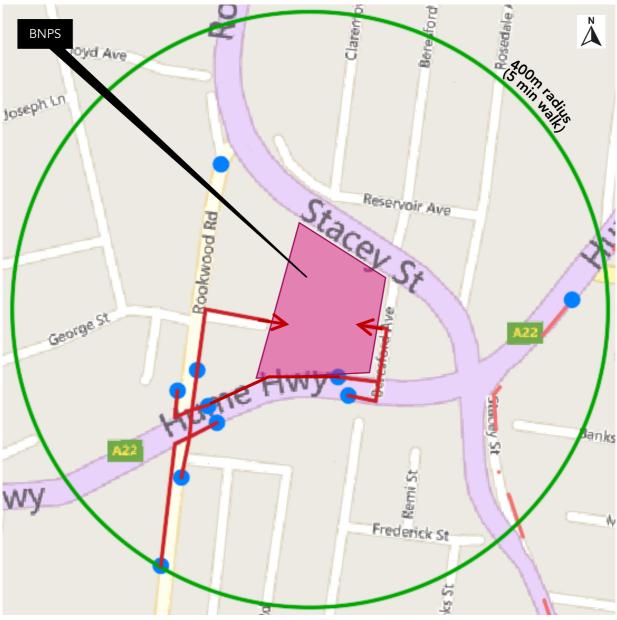


Figure 14 – Existing Bus Infrastructure.

### 5.4.4 Future Bus Routes

There are no proposed changes to the existing bus routes within Bankstown. However, with future upgrade of Bankstown Metro Station, the City of Canterbury-Bankstown Council will liaise with TfNSW to achieve new connections to the stations which may affect routes to and from the school.

### 5.4.5 Infrastructure Gap Analysis & Proposed Improvements

The existing infrastructure for the bus stops provides minimal shelter and creates conflict points for children getting to school. To ensure safety and comfortability of students by amending public transport infrastructure, the school will require liaison with TfNSW and the City of Canterbury-Bankstown Council.

In order to make a safer pedestrian access to the bus stops, the following upgrades would be required:

- Widen footpaths along the northern side of the Hume Highway;
- Implement pedestrian crossing across Davis Lane. This is part of the upgrades proposed by TfNSW;
- Improve the pedestrian crossing at the Hume Highway.

Shelter should be provided at each bus stop to further promote safety.

### 5.4.6 Strategies

The school can promote public transport through various programs and initiatives to encourage students and staff. Table 13 summarises the strategies which are applicable for public transport.

Table 13 – Strategies	for public transport
-----------------------	----------------------

Strategies for p	ublic transport	
Strategy 1: Safe	ty programs/courses	
Why	Allows kids to be more informed about any dangers of being a pedestrian and provides ease of mind to parents/carers.	
How	Pedestrian safety can be taught during class and reinforced by teachers and parents. Information can also be provided in the 'information pack'.	
Who	Teachers and TP Coordinator	
When	After completion of redevelopment with reinforcement every 6 months to a year.	
Resources	Information pack and brochures	
Strategy 2: SST	S Information Pack	
Why	Inform students who live outside the SSTS exclusion zone of the services available.	
How	Issuing a brochure within the 'Information Pack'. The brochure will show 1-seat trip routes and bus stops.	
Who	TP Coordinator	
When	At the beginning of each year an email or a physical copy should be provided to parents and students. A copy should also be found on the school website.	
Resources	Brochure	

### 5.5 Car Share / Car Pooling

### 5.5.1 Catchment Areas

Students who live outside of the active transport catchment and the SSTS exclusion zone and are not within walking distance to a bus stop are forced to use private vehicles. To promote sustainability students should consider carpooling particularly students who reside close to one another.

Staff can also benefit by using carpooling to lower the number of vehicles used to access the school. Staff can also use a Car Share option which eliminates the need for their own vehicle and can potentially replace up to 12 private vehicles parking spaces<sup>1</sup>. Car share users are charged by time and distance, at a rate set by each operator. Car Share can also be combined with carpooling so that the cost is split among staff members.

The key benefits of car share/pooling include:

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

### 5.5.2 Opportunities & Targets

Targets are developed through the comparison of surveyed mode splits found in Section 5.1.2 and depersonalised data showing the location of students based on catchment areas found in Section 5.1.3. Out of all students living outside of the active catchment area it is recorded that 4% do not have access to a 1-seat trip via public transport. The survey results show that 71.8% of students use private vehicles as transport, of which 68.3% carry more than 1 student. The full breakdown of the number of students per car is shown in Table 14.

No. of students per vehicle	Percentage of students travelling by car
1	31.7%
2	28%
3	22%
4	11%
5	4.9%
6+	2.4%

Table 14 – Number of students per vehicle

<sup>&</sup>lt;sup>1</sup> Source: City of Sydney Council, 2015

Bankstown North Public School; SINSW; 30 September 2020; © Copyright; **ptc.** 

Although there is a significant number of students travelling by private vehicle, more than half are already carpooling. The car occupancy rate by BNPS students is approximately 1.8 students per car, which is higher than recorded at other schools (generally 1.2). This is a good trend and should be encouraged to be continued.

Targets for staff can be found in Section 5.6.

### 5.5.3 Existing and Future Infrastructure

There are currently not many car sharing options available within the City of Canterbury-Bankstown, however companies such as GoGet are increasing in popularity and may become a valid option within the coming years.

Carpool services are also increasing in popularity such as Liftango. This service encourages users to share their ride to a destination in comparison to private car usage. These options are generally cheaper than private car use and as the options become more popular and the competitive market saturates, they will only become cheaper.

### 5.5.4 Infrastructure Gap Analysis & Proposed Improvements

To make car sharing a viable option particularly for staff, discussions with Council and car share / car pool providers shall be commenced to provide pods in close vicinity of the school.

### 5.5.5 Strategies

The school can promote Car Sharing/ Carpooling through various programs and initiatives to encourage students and staff. Table 15 summarises the strategies which are applicable for the mode of travel.

Strategies for cy	cling			
Strategy 1: Carpooling scheme				
Why	Motivates people who live in close proximity to use carpooling services			
How	Sending out a questionnaire to everyone asking about their area of residence and contact details so they can be buddied up.			
Who	TP Coordinator			
When	Sent out once a year to accommodate new students and staff			
Resources	Questionnaire			
Strategy 2: Com	pany brochures and cards			
Why	Promotes the use of various wayfinding apps and carpooling/sharing services available.			
How	Having brochures readily available in the school office and also giving each student and staff member			
Who	TP Coordinator			
When	Providing brochures each year and having them readily available at the school office and incorporating this information in the Travel Access Guide.			
Resources	Brochures, printed on the Travel Access Guide			

Table 15 – Strategies for public transport

share		
Why	Encourages staff to use more sustainable forms of transport.	
How	Seeking approval from council and liaising with Car Share companies	
Who	TP Coordinator	
When	During construction of the new carpark	
Resources	Carpark space	

## Strategy 3: Provide a car chare pod within school car park and convert the most convenient car spaces to car share

### 5.6 Summary of all Targets

Future transport targets can be developed by analysing a variety of different targets, such as those set by the local Council or similar comparable sites. The City of Canterbury-Bankstown's Connective City 2036 LSPS shows mode share targets shown in Figure 15 which plan to be achieved by 2036. As shown from the survey results in Section 5.1.2, all the school staff use private vehicles to reach the school. The staff targets currently do not perform to the existing targets and so therefore, should work towards the 2036 goal.

Future transport targets for students can be developed by understanding the gaps from the travel behaviour determined from the surveys. This has been done within each section and is summarised with the staff targets below in Figure 15.

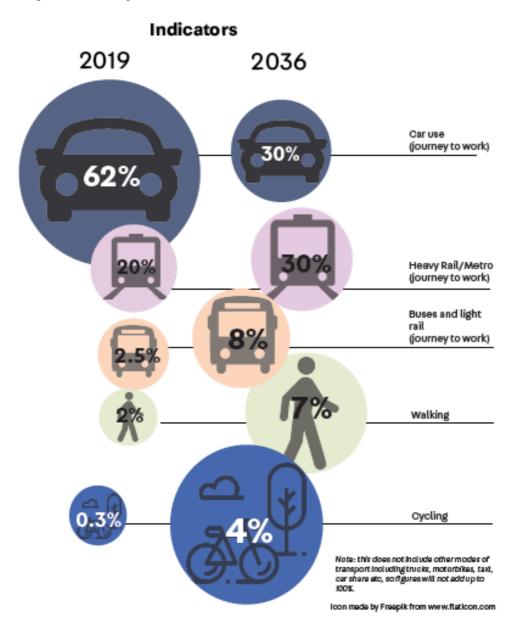


Figure 15 - Mode share averages (Source: City of Canterbury-Bankstown Connective City 2026 LSPS)

Mode	Students (average)			Staff (average)	
	Current	Potential*	Proposed	Current	Proposed
Walk	24.7%	78%	66%	0%	2%
Bicycle	0.6%	16%	7%	0%	1%
Public Transport	1.2%	10%	7%	0%	23%
Car Passenger	71.8%		20%	0%	0%
Car Driver	-	]-	-	100%	69%
Other (motorcycle, taxi, car share)	1.8%	-	-	0%	5%

Table 16 – Mode split targets

\* Based on the actual student population data living within the notional catchments

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

### 5.7 General Strategies

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

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

Table 17 summarises the general strategies which will help promote and educate students, parents and staff about safe sustainable travel.

Strategy 1: Distribute a Transport Access Guide (TAG) to all students and staff	
Why	To increase awareness of the location of public transport in the vicinity. To inform commuters of different modes of transport and the platforms/apps they can use to find sustainable transport options. It should also advise safety.
How	Issue an information package both in the mail and electronically.
Who	TP Coordinator
When	Can be emailed to all students and teachers instantly, however a physical copy should be provided upon completion of the redevelopment. Should also be provided on the school's website.

Table 17 – General Strategies

**General Strategies** 

Resources	TAG			
Strategy 2: News	sletter items and social campaigns			
Why	Reinforces climate-friendly and active transport aspirations and targets			
How	Principle or TP coordinator to incorporate information and articles in ongoing newsletters to parents and students. The information can include current topics on climate change etc. as a means to connect the public and active transport utilisation to an external goal			
Who	Principle or TP Coordinator			
When	At least once a term			
Resources	Newsletters and campaigns			
Strategy 3: Cons	istent reminders through school assemblies			
Why	Reinforces the idea of sustainable travel and can encourage discussion			
How	Principle or TP coordinator to provide a concise presentation about the benefits of sustainable travel options.			
Who	Principle or TP Coordinator			
When	Once a term to show commitment to achieving targets			
Resources	List of benefits and a PowerPoint			
Strategy 4: Annu	al Assemblies to announce progress			
Why	To inform students and staff about progress to achieving travel mode split targets. Will encourage healthy competition to beat the target.			
How	Short presentation at annual assemblies			
Who	Principle or TP Coordinator			
When	At the beginning or end of each year			
Resources	Survey results and PowerPoint			
Strategy 5: Form	an advisory committee involving staff and P&F members			
Why	Monitor the progress of the GTP			
How	Email invitation for expression of interest			
Who	TP Coordinator			
When	Completion of the redevelopment			
Resources	Emails			
Strategy 6: Annu	al Survey			
Why	Monitor, review and evaluate the progress towards the travel mode targets			
How	Online and letterbox surveys to all staff and students. Can be included as part of the information pack.			
Who	Advisory Committee and TP Coordinator			
When	Beginning or end of each year			
Resources	Email and letters			

Strategy 7: Regu	Strategy 7: Regular meetings			
Why	Discuss the effectiveness of initiatives			
How	In person meeting at a specified location within the school			
Who	Advisory Committee			
When	Every 6 months			
Resources	Meeting agenda and action plan			
Strategy 8: Upda	ate all noticeboards			
Why	Ensuring all information is accurate and up to date for those travelling through active and public transport			
How	Updating information on boards			
Who	Advisory Committee			
When	Every month (or more frequently if necessary)			
Resources	Information boards			
Strategy 9: Revi	ew and update of GTP			
Why	Evaluate the success of the GTP implementation and to add any new objectives.			
How	Meetings with advisory committee and SINSW to suggest any changes			
Who	TP Coordinator			
When	Every year for a 5-year period			
Resources	GTP objectives, targets and progress checklist.			
Strategy 10: Pre	sentation of annual monitoring review results to council			
Why	To present to City of Canterbury-Bankstown Council the progress of the GTP target and objectives			
How	Submit monitoring report to City of Canterbury-Bankstown Council			
Who	TP Coordinator			
When	Every year for a 5-year period			
Resources	GTP objectives, targets and progress checklist.			

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

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

The travel mode hierarchy is presented in Figure 16.



Figure 16 – Mode heirachy

\*Carpooling target for students is equal to the target set for car passengers.

The targets outlined beneath each mode of transport in Figure 16 are discussed in Section 5. There are a number of actions which will be employed to encourage non-car modes of transport to and from the school.

## 6. Monitoring and evaluation

The GTP does not only outline actions and strategies but also ensures monitoring and evaluating of those initiatives. This is a crucial part of the travel planning process as it ensures maximum benefits are gained. Initially, there will be a review of the mode share targets after 3 months of the completion of the redevelopment, followed by yearly tracking and reassessment. There may be cases that new initiatives may need to be implemented or new targets may need to be set if they are exceeded or too ambitious.

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

The survey should be similar

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

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

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

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

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

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

- Number of students and staff;
- Details of mode split (initial survey results);

- Progress towards the average mode split stated in the City of Canterbury-Bankstown Council's LSPS and the progress towards any new targets;
- Success of initiatives (as listed in Section 5 of this document); and
- Details of any rectification measures proposed.

## Attachment 1 - GTP Guide for the TP Coordinator & SINSW

### Advisory Committee

- The formation of an Advisory Committee should be coordinated by the PT Coordinator, SINSW and Council upon opening the redevelopment;
- A year 6 sustainable transport student reference group should be created and be involved in the processes of the Advisory Committee;
- The Advisory Committee will assist in the progress and monitoring of the GTP; and
- The Committee should ensure the notice board is updated regularly (monthly or when necessary) with up-to-date information on sustainable transport

### SINSW / TP Coordinator

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

### Information Pack

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

### Annual Survey

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

### **Regular Meetings**

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