

School Transport Plan

Wee Waa High School

Prepared for School Infrastructure

23 November 2023

211022

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Prepared by
TTW (NSW) PTY LTD



AMMAR AHEMD
 Traffic Engineer

Reviewed by
TTW (NSW) PTY LTD



GRACE CARPP
 Associate (Traffic)

Approved by
TTW (NSW) PTY LTD



PAUL YANNOULATOS
 Technical Director

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Section 1 Introduction

A School Transport Plan (STP) is a way to sustainably manage the transport needs of staff, students, and visitors to a development. The aim of the STP is to reduce the environmental impact of travel to and from the site and to provide a clear plan of management for vehicle and pedestrian movements within and around the site.

This STP has been prepared for Wee Waa High School, particularly to address condition of development consent D23 associated with a State Significant Development Application (SSD-21854025) for recent construction and operation of Wee Waa high school. The conditions of consent dated 09 March 2022 relating to the preparation of a STP are listed in Appendix B, including how each item has been addressed in this document.

This report has been prepared following consultation between the design team and relevant stakeholders including Narrabri Council, Transport for NSW (TfNSW) and Wee Waa High School. Consultation events and outcomes relevant to the design occurred as follows:

Meeting with Council 19/03/21

- Council reviewed the initial concept.
- Council requested hours not be reduced for road train vehicles on Mitchell Street.
- Council advised they were unaware of any crash issues near the adjacent school.

Meeting with Council 30/03/21

- Adjusted concept was tabled for review.
- Council requested additional car parking was to be provided.

Meeting with Council 30/04/21

- Options assessment was requested for Mitchell Street.
- Council requested consideration of roll kerbs along Mitchell Street for any narrowing works.
- Culgorga Road mentioned as a potential future road train route.

Meeting with TfNSW 21/06/21

- Pick up and drop off location was requested to be shifted from Mitchell Street.
- Additional on site parking was requested.
- Potential for pedestrian crossing to be reviewed with projected pedestrian trips.

Meeting with Council 6/10/21

- Update was provided regarding the change to pick up and drop off, bus movements and car parking numbers.
- Endorsement was received regarding the design.

Meeting with TfNSW 7/10/21

- Update was provided regarding the relocation of pick up and drop off to be away from Mitchell Street.
- It was requested that separation be provided between the pick up and drop off location to prevent overflow of pick up and drop off movements into the bus layover area. It was also requested that bus layover be relocated to Charles Street to separate these movements.
- It was stated that a pedestrian crossing at Mitchell Street would not be supported on the basis of delays to through vehicle movements.
- It was requested that traffic modelling be conducted of a potential future midblock crossing to ensure no impact to the surrounding intersections.

Meeting with TfNSW & Council 25/09/23

- Collaboration with local stakeholders for the installation of School Zone Flashing Lights, Signage, and Line Marking.
- Removal of references to Opal Card Train Travel and Pedestrian Crossings in the School Travel Plan (STP) and Travel Access Guide (TAG).
- Update all drawings, including S138 applications, to reflect the removal of pedestrian crossing references and changes to roads.
- Bus Operator to coordinate with the High School on proposed bus route changes due to school enrolments.
- TfNSW addressing Bus Interchange Issues; updates to be communicated to the TWG when resolved.
- Redirect the current bus service to the new school.
- All comments from TfNSW and Council, as well as the corresponding actions, have been implemented in the STP.

Section 2 Transport Goals

2.1 Travel Plan Objectives

A School Transport Plan is a way to sustainably manage the transport needs of staff, students, volunteers and visitors to a development. The aim of the Plan is to reduce the environmental impact of travel to and from Wee Waa High School. This includes encouraging alternate travel methods such as active transport and car-pooling, while reducing dependence on private vehicles. This Plan contains travel plan objectives for the development, the proposed design features that contribute to meeting these objectives, and management strategies intended to fulfil the outlined objectives.

The Plan provides a review of existing facilities and travel habits and offers estimations and targets for future sustainable travel use. Details of the site's sustainable travel objectives are outlined in this section and includes specific programs, design features and actions proposed to help achieve these goals. These objectives vary across any School Transport Plan but may include aims to:

- Reduce traffic congestion
- Implement student safety measures
- Support healthy and active users
- Provide sustainable travel education
- Reduce emissions
- Optimise site layout
- Find cost efficiencies
- Reduce journey times
- Improve site accessibility

The four most important and relevant objectives for this development are to implement student safety measures, optimise site layout, improve site accessibility, and increase active transport usage. Details of these goals are outlined below.

2.1.1 Implement Student Safety Measures

The safety of students attending site is of critical importance and measures to increase sustainable transport usage will aid in achieving a high level of safety. By reducing traffic volumes along the network surrounding the school, especially those traversing Mitchell Street, the safety of students walking and cycling to and from the site is maintained.

To encourage students and parents to select active transport modes, student safety must be a main focus of travel management measures. If safety measures such as these are present and operational, students are more likely to participate in a sustainable transport option. Education and training courses on the topic of road safety are additional factors in implementing student safety and are further discussed in Section 2.1.4. Providing students with the information and skills required to safely travel to school using active transport improves their overall safety and therefore the desirability of that mode of travel.

2.1.2 Optimisation of Site Layout

A critical component of the design and development of a school consists of outdoor recreation and play areas. These features may include sports fields, paved space or covered outdoor learning areas (COLAs). The provision of car parking on a school site can significantly reduce the availability of outdoor recreational areas, and so minimising the number of car parking spaces is beneficial. The application of this School Transport Plan and the provision of no through site link will ensure that other facilities which are critical to the function of the school and the development of its students can be achieved with sufficient funds and available space.

2.1.3 Improve Site Accessibility

Pedestrian access to site will be available along George Street and Mitchell Street. Pedestrian pathways are proposed to allow access between these three entry points.

School bus and PUDO zones are provided along George Street adjacent to the site to allow ease of entry for students utilising these travel modes. Private vehicle access is also provided along George Street.

2.1.4 Increase Active Transport Usage.

Increasing the active transport usage for staff and students is an important factor in producing a sustainable transport plan. Encouraging the use of active transport facilities is highly effective in reducing congestion issues, alleviating parking constraints and increasing pedestrian safety. Achieving this objective will result in decreasing any local traffic congestion by reducing the number of students being driven by their parents. Furthermore, by reducing the number of vehicle movements, less on-site parking spaces are required, and the likelihood of pedestrian crashes also decreases, thereby creating a safe and low risk environment.

2.2 Mode Share Targets

Mode share targets have been identified separately for students and staff due to the identified variable travel requirements between the two categories. The targets have been generated in accordance with the recent travel mode survey conducted at Wee Waa High School, as well as the relevant JTW Usual Residence and Place of Work Data. The goal of attaining the mode share targets for both students and staff is set to be accomplished within a span of five years.

2.2.1 Student Mode Share

Students mode share targets are shown in Table 2.1.

Travel Mode	Wee Waa High School Travel Survey	Mode Share Targets
Car	20%	10%
PUDO	45%	40%
Bus	20%	25%
Bicycle	0%	5%
Walk	15%	20%

Table 2.1 Student mode share

2.2.2 Staff Mode Share

Several assumptions have been made to capture the unique requirements for commuting teaching staff. These include a need to transport and carry teaching equipment to and from the workplace which is difficult to execute utilising public transport modes. Additionally, it is recognised that from the Travel Mode Survey that several members of staff are required to travel large distances and time between the school site and home. Review of the JTW data and the travel mode survey data from this perspective has led to the estimates in Table 2.2.

Travel Mode	Wee Waa Staff Travel Survey	Mode Share Targets
Car	94%	90%
Carpooling	6%	10%

Table 2.2 Staff mode share

2.3 Design Features

As outlined above, the main objectives of this School Transport Plan are to:

- Implement student safety measures
- Optimise the site layout
- Improve site accessibility

To achieve these objectives, several strategies relating to proposed design features and ongoing management techniques are advised. The following section outlines the development's proposed design features that will contribute to the fulfilment of these objectives.

2.3.1 Bus Facilities

A designated bus bay is located east of site along George Street immediately adjacent to the primary pedestrian entry gate to site. The proximity to site combined with additional safety of the bay will encourage additional students to adopt school bus use as a primary travel mode. There is also potential for bus services to be directed to students who have expressed interest in utilising bus travel modes, proposed school bus routes are attached in Appendix D.

2.3.2 Bicycle Facilities

Cyclist improvements including bicycle storage have been included for the equivalent of 3% of current students, with area for future provision as the school increases in enrolments.

2.3.3 End of Trip Facilities

Showers and change rooms are provided within Building B located to the south of site.

2.3.4 Pick-up and Drop-off Zones (PUDO)

PUDO zones are located adjacent to the site's east along George Street. These operate within the same bay as the school buses and are to be separated via the use of signage during peak school hours. The PUDO zone is located adjacent to a primary pedestrian access point to site, and it is hoped that this encourages the use of carpooling as opposed to personal vehicular transport modes.

2.4 Management Strategies

This section contains details about various initiatives and strategies that have been proposed to assist in the success of the School Transport Plan's objectives. Five strategies are outlined in the following section of this School Transport Plan and they are as follows:

- Information campaigns
- Active transport
- Public transport
- Car parking management
- School Transport Plan management

Actions to encourage and inform users of the use and benefits of active and carpooling, will aid in reducing vehicular volumes accessing the site and therefore the surrounding road network. This will assist in achieving the outlined objectives of combating vehicle safety associated with Mitchell Street, implementing student safety and optimisation of the site layout. By ensuring staff and students are provided with information required for the continual management of these sustainable strategies, the School Transport Plan objectives can be accomplished.

Each strategy contains relevant actions required to fulfil the overall objectives of this Plan. These actions can be used as a checklist to assess the progress and effectiveness of the school's sustainable transport initiatives and management procedures. Regular reviewing may also bring attention to any deficiencies in the development's progression or opportunities for improvement.

2.4.1 Strategy 1: Information Campaigns

Action 1: Transport Access Guide

The aim of a Transport Access Guide is to present staff and students with information about the available safe and sustainable transport options in the Wee Waa local area. This action involves presenting this information in a simple and understandable manner, such as through an educational brochure. Staff and students are more likely to change their travel behaviour after being made aware of the active transport options and how to safely and easily utilise these alternatives.

Recommendations for the brochure content includes a summary of bus routes servicing the development as well as how to access these from the site. It should also include information about end-of-trip facilities and safe routes to surrounding neighbourhoods for staff and students able to participate in active transport.

Transport Access Guides can be distributed to staff, students and parents and can be developed in-house or by an external consultant. The brochure should also be accessible online through the school's website for ease of access for both users and visitors to site. A Transport Access Guide is provided in Appendix A.

Action 2: Induction Information for New Travellers

To ensure new travellers have information regarding all their travel options, a Transport Access Guide has been provided. This brochure can easily be included as part of an induction or orientation package. This is especially important for travellers new to the area and who may be completely unfamiliar with the transport options especially distances of travel to the school.

By emphasising the benefits of active transport through a brochure, sustainable travel alternatives are more likely to be selected. Information provided directly to users and eliminating the need to seek out information independently increases the likelihood for engagement with sustainable options.

Induction information should also include details about on-site facilities, such as bicycle storage areas for staff and students, as well as any end of trip facilities.

Action 3: Periodic Reminders

The changing nature of transport means regular updating and conveying of new information is required to ensure travellers have the most accurate and recent information. Through regular and periodic communication, the information will reach a wider audience and have a more significant impact.

One method to enable periodic information sharing is to include a sustainable travel section within a school newsletter. The recommended content to be included would consist of details about new travel initiatives, mode share progress updates, upcoming events or changes, as well as reminding travellers about the importance of sustainable travel. It should also allow for feedback or questions regarding any travel-related concerns.

2.4.2 Strategy 2: Active Transport

Action 4: 'Walk Safely to School Day' and Health Events

Various organisations and groups develop programs and events to encourage active transport. For example, Bicycle Network coordinates a Ride2Work and Ride2School Day each year. These events provide a good opportunity for organisations to encourage staff and students to participate in cycling. Additionally, these initiatives create awareness and are useful for influencing the school community's travel behaviours. The school should investigate avenues to promote this event to those students living locally within Wee Waa, noting

that 63% of students are located within 2.4 kilometres of the proposed school. An additional suggestion is to introduce incentives such as competitions or rewards. These are not required to be extravagant and may be as simple as a free breakfast.

Bicycle training workshops can also be a component of these programs to enable users to become familiar with bicycle maintenance, recommended cycling routes and general bicycle and road safety. Rideability is an example of a cycling education service that delivers workshops in schools with an emphasis on road safety and cycling skills. This would be of additional benefit due to the age of the students and the likelihood of bicycle use outside of the context of travel to and from site, such as exercise or entertainment.

Other health events encouraging active transport include Bike Week, Walk Safely to School Day and Health and Wellness Fairs. These initiatives expose staff and students to the many benefits of choosing active transport.

Notifying students of those currently utilising active transport may also increase the number of users due to the desire for increased social interactions amongst friendship and year groups.

Annually hosting these events provides the community with a continual reminder and is therefore more likely to influence their behaviour.

2.4.3 Strategy 3: Car Parking Management

Action 5: Staff Pairing

A strategy to encourage staff to carpool involves a pairing system that notifies staff members of other staff who live in nearby areas or along their travel route. It is accepted that this method of car parking management is unlikely to be as effective as in an urban setting due to the large distances many staff travel to and from work, many originating from outside of the suburb of Wee Waa. However, it would still remain beneficial and allow staff the option should carpooling become an available option.

Initiating this system might involve a meeting to provide an opportunity for staff members to discuss carpooling options, including coordination of staff by region or place of residence.

Action 6: Priority Parking

Staff committed to carpooling should be allocated priority parking spaces in a desirable area of the staff car park, such as those accessed via George Street. Having a designated parking space ensures that users will be able to park on-site. This may act as an incentive for others to investigate carpooling opportunities. Priority spaces could also come with other benefits such as a prime location with good accessibility as a further encouragement.

2.4.4 Strategy 4: School Transport Plan Management

Action 7: Regular Reviews of the School Transport Plan

The School Transport Plan and other associated documentation including the Transport Access Guide should be regularly reviewed and updated as required. It is recommended that an annual review would be an appropriate schedule. The review should include an updated travel mode survey, consultation with staff, students and visitors, and adjustments to initiatives and targets.

Action 8: Staff Responsibility

To ensure the ongoing review of this Plan is carried out as expected, responsibility of this task should be allocated to a specific staff member.

Section 3 Policies and Procedures

The following sections outline the main policies, procedures and management strategies which Wee Waa School will follow and implement through this STP.

3.1 Policies, Procedures and Management Strategies

3.1.1 Car Park Regulation

The provided off-street staff car park is only accessible via the gate on George Street. The parking modules can be accessed from this point via the parking aisles.

This car park is for the exclusive use of staff members. As George Street is also the primary entry point for emergency and service vehicles to site, the car park is equipped with an automated gate system that is administered through the use of FOBs by the school's administration. This protocol is in accordance with SSU requirements, ensuring that only authorised vehicles have access to the school grounds.

3.1.2 School Bus Operations

Careful management of the bus facilities at the site is required to ensure student safety and promote the successful operation of the bus system. It is recommended that staff members take on the responsibility of controlling and monitoring the bus stop operations at George Street.

It is recommended that a staff member is stationed at the bus zone in the morning and afternoon period to ensure the safety of students and to encourage smooth operation. Currently one staff member performs this task during current operation. This is anticipated to increase over time and as the school population grows, and regular reviewing should be undertaken according to the recommendations contained in Section 3.1.11. A suggestion for the bus bay staff duties are as follows:

- Monitoring student behaviour and discouraging unsafe conduct such as running and jaywalking
- Assisting students in locating the correct bus
- Ensuring an orderly loading and unloading of students from the bus
- Completing a post-trip check to ensure all students have exited the bus
- Assisting students in forming an orderly queue while waiting for the bus arrival

It is advised that staff members wear a high-visibility vest so students or bus staff can easily locate a staff member if they need assistance. This is also important for staff safety so that they can be easily visible to drivers and other road users.

George Street Bus Bay

The George Street bus bay will operate as the primary bus stop servicing the High School site and will service school buses only. This bay has capacity for up to two buses at any one time, and careful organisation and signage is likely important for the smooth operation of this facility with the pick-up and drop-off zone. Suggestions for bus bay management techniques are provided in Table 3.1.

Option	Description
1	Allocate zones along the bus bay for different bus numbers so that students can easily locate the appropriate bus. Students would wait in this zone until the bus arrives.
2	Organise students into queues according to their desired bus number within the school site. This allows for students to be removed from the main roadway to encourage student safety. A staff member would then lead the queue of students to the relevant bus at the appropriate time.

Table 3.1 Recommended guide to bus operations.

3.1.3 Pick-up and Drop-off

Activities relating to pick-up and drop-off can produce significant safety concerns and impacts on the local traffic conditions. Accordingly, PUDO zones require deliberate management to ensure user safety and maintain an acceptable traffic flow. Table 3.2 outlines a number of techniques that shall be implemented in isolation or in conjunction with one another.

Technique	Description
Staff team to be stationed in zone	<ul style="list-style-type: none"> • Stationing a team of staff in the PUDO zone will encourage sensible user behaviours. Any unsafe student behaviour or reckless driver behaviour must be reported to the school principal for further investigation. • Staff members shall assist drivers in locating spare parking spaces • Staff members shall encourage drivers to pull up to the space furthest along the zone to maximise capacity. • Vehicles are not to queue on Mitchell Street. In the event that the pick up and drop off facility in George Street is full, the traffic marshal with direct these vehicles to continue through George Street to recirculate
Parking restrictions during peak hour	<ul style="list-style-type: none"> • The on-street parking is generally unrestricted in the surrounding network. To ensure the PUDO zone remains for the exclusive use of Wee Waa High School and Primary School parents and carers, a parking restriction during the morning and afternoon peak hours shall be implemented. • The school should discuss parking restriction options with the relevant authorities including Narrabri Shire Council.

Table 3.2 Recommended guide to PUDO zone operations.

3.1.4 Delivery Scheduling

Wherever practical, all deliveries should be scheduled at least 15 minutes apart to avoid any conflicts and allow a buffer for unexpected delays. Additionally, deliveries are recommended to be scheduled outside of school hours either before 8:00am or after 3:20pm. Other considerations for the scheduling of deliveries include:

- Personnel to be available to marshal vehicles through the site for access to the main loading areas (to manage conflict and movements through pedestrian areas)
- Nominated external personnel (if available) to be recorded and provided with induction information if necessary (refer to Section 3.1.6 for further information)
- Relevant staff in departments or classrooms adjacent to loading areas to be advised of any scheduled activities which may be noisy or disruptive to classes.
- Once deliveries are completed, a record of deliveries is to be kept for at least four years after the deliveries occurred, to assist with future planning or any incidents which may occur.
- Vehicle size to be determined, and necessary traffic control measures to be considered if necessary and planned for within the scheduling system.
- Vehicle requirements (e.g. reversing alarms) are to be made clear to contractors.

To schedule a delivery, contact details for the site manager are:

- Name:
 - *Jacqueline Neil*
- Role:
 - *Principal*
- Phone:
 - *6795 4477*
- Email:

- *Jacqueline.Neil@det.nsw.edu.au*

3.1.5 Service and Loading

Delivery and service vehicles will enter the site in a forward direction via the George Street access. On completion of unloading or servicing activities, the truck should exit the site from the same access in a forward motion.

All delivery and service trucks are advised to be fitted with reversing alarms and cameras to assist truck drivers in performing reverse manoeuvres and avoiding any conflict with other vehicles and pedestrians. Given that deliveries are generally occurring outside of school hours, there is a minimal chance for any such conflict to occur. However, as a minimum safety requirement delivery and service vehicles should be fitted with the above recommended safety features.

3.1.6 School Communications

Safe and efficient management of the site will require all users to have a thorough understanding of operations and their responsibilities. Two key parts of this will be staff communications and student/parent communications (for pick-up and drop-off activity). Communication strategies may include:

- Staff reminders / staff intranet information
- All regular contractors and delivery personnel to be advised of management strategies and requirements
- Staff road safety training seminars
- Student and parent newsletters
- Transport details on school website
- Direct advice to students/parents as required (e.g. responding to unsafe activities during pick-up times)
- Classroom education or extra-curricular transport safety activities (e.g. Learn to Ride), particularly for younger students

3.1.7 Incident Recording System

It is recommended that the school should keep and maintain an on-site traffic incident record. This record would contain a description of the incident, including contact details and what actions were taken by the school in response to the incident. It is advised that records of incidents be kept for at least four years following the incident occurrence.

The school should be able to provide the traffic incident register to the Council on request.

3.1.8 Complaints Management

It is recommended that the school should keep and maintain a record of all complaints made in relation to any transport or access issues in a complaint register. Suggestions for what the record may include are:

- The date and time of the complaint
- The method by which the complaint was made (e.g. phone or email)
- Any personal details provided by the complainant
- The nature of the complaint
- Any action taken by the school in relation to the complaint including any follow-up communication

It is advised that records of the complaint be kept for at least four years after the complaint was made. The school should be able to provide a copy of the complaints register to Council on request.

3.1.9 Signage and Wayfinding

Students, staff and visitors benefit from comprehensible signage and intuitive pathways to their destinations. It is recommended for the school to implement signage and wayfinding systems. There are several methods for the design and management of these systems including the following suggestions:

- Building colour assignments
- Exterior signage visible from street-level at major entrances
- Wall signage
- Directional signposts
- A wayfinding-specific website
- Printed maps and directions available from the school reception
- Pedestrian footpath and crossing signs

3.1.10 Data Collection

Data collection is required for the ongoing management and reviewing of this Plan. These investigations are intended to evaluate whether a particular operation, facility or management system is still successfully functioning and meeting demands. Table 3.3 contains suggestions for the data collection context and the types of data to be collected.

Context	Data to be collected
PUDO Zone	<ul style="list-style-type: none"> • Number of users (morning, afternoon and overall) • Set down times • Arrival and departure times • Number of students exiting/entering vehicles • Number of any non-formal pick-up and drop-off occurrences as well as the time and location • Observational assessments (e.g. queuing, illegal stopping, safety concerns)
Car Parking	<ul style="list-style-type: none"> • Number of daily vacant and occupied spaces • Number of passengers per vehicle • Arrival and departure times
Pedestrian Facilities	<ul style="list-style-type: none"> • Number of pedestrians entering through gates • Arrival and departure times through school gates • Number of pedestrians using pedestrian crossings • Number of pedestrians jaywalking as well as the time and location
Cyclist Facilities	<ul style="list-style-type: none"> • Number of daily vacant and occupied bicycle parking spaces • Number of cyclists entering through each site access point • Number of end-of-trip facility users

Table 3.3 Data collection recommendations.

3.1.11 School Transport Plan Management

This STP is to be maintained by the school and shall be distributed to all the concerned logistic personnel and managers. The school is also responsible for distributing appropriate information to staff and contractors as necessary. A copy of the STP is always to be held on-site and available for review.

This STP should be reviewed regularly and updated as required. It is recommended that an initial review should take place twelve months of operation and subsequently every 2 years. This review should include detailed

observations of the transport operations of the site and adjustments to procedures where necessary.

Following this initial review, a review every two years would likely be an appropriate schedule. To ensure that the ongoing review of this STP is carried out as expected, responsibility for this task should be allocated to a specific staff member or school principal.

Best management of the site will occur when there is as little vehicle movement as possible. Therefore, a critical element of transport management for the site will be implementation of this School Transport Plan. Management procedures for the STP may include:

- Nominated staff member to be responsible for reviews and implementation
- STP to be regularly updated to ensure latest advice is correct
- STP to be distributed to new staff and new students

3.1.12 External Authorities

If external authorities are required to be contacted (such as for enquiries, suggestions, or local traffic issues), the School should liaise with the Narrabri Shire Council.

Contact details for Council's nominated representative are:

- Name:
 - *To be advised by Council.*
- Role:
 - *To be advised by Council.*
- Phone:
 - *To be advised by Council.*
- Email:
 - *To be advised by Council.*

Section 4 School Transport Operations

4.1 Site Access

4.1.1 Car Park Access

Primary vehicular access to site will be located on George Street due to both proximity to site as well as to enable safe use for vehicle users as they are removed from the traffic volumes and heavy vehicle movements associated with Mitchell Street.

4.1.2 Pedestrian Access

Pedestrian access to site will be through the primary gate located along George Street to the site's east. This is to align with the relocation of bus services and pick-up and drop-off zones to George Street. An additional point of entry is located south of site bordering Mitchell Street and will include a footbridge providing access to the site. It's important to note that this additional access point will be closed during the morning and afternoon student arrival and departure times.

4.2 Pedestrian Facilities

Following feedback from local students, staff and guardians, significant pedestrian infrastructure developments are to be introduced to promote user compatibility and safety. Primarily, pedestrian walkways are to be implemented around the proposed development site. There will be only one pedestrian entrance gate on Mitchell Street, which will be closed and locked during the morning and afternoon student arrival and departure times to ensure the safety of students on Mitchell Street / Kamilaroi Highway, refer to Figure 4.1.

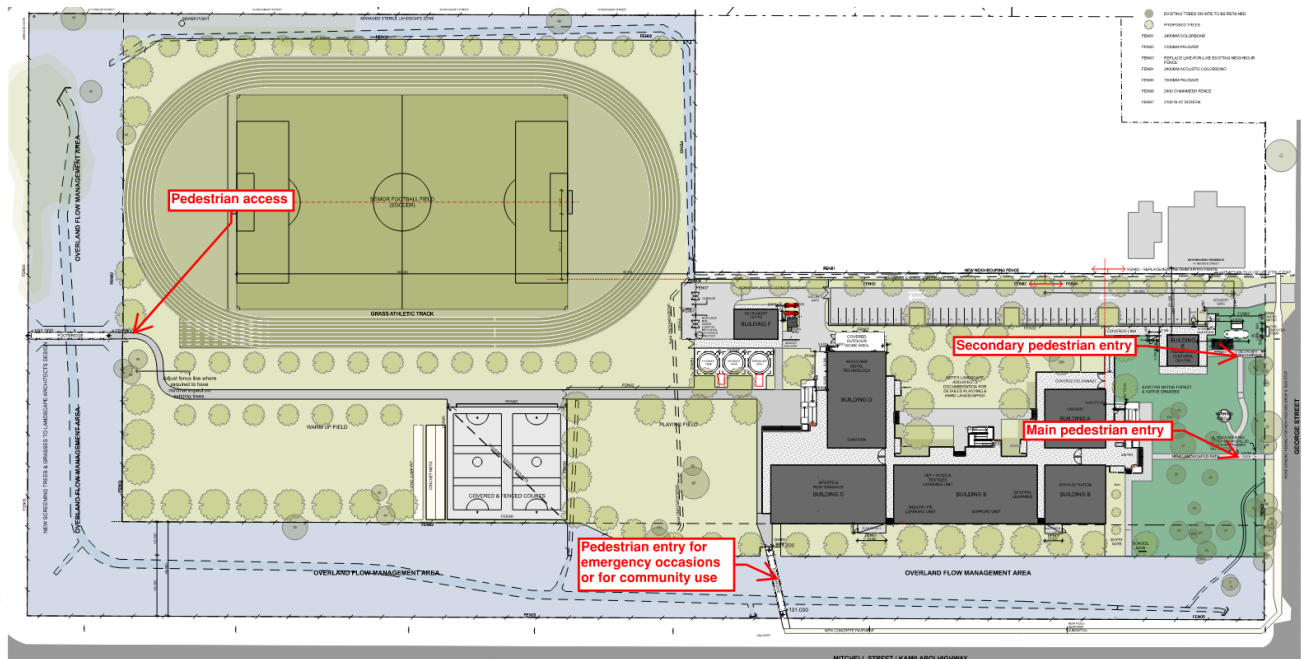


Figure 4.1 Pedestrian infrastructure and points of entry to site

4.2.1 Pedestrian Travel Analysis

The TAIA ¹ conducted in 2021 by TTW reveals that as shown in Figure 4.2 the catchments for Wee Waa High School, as provided by the NSW School Finder of the NSW government.

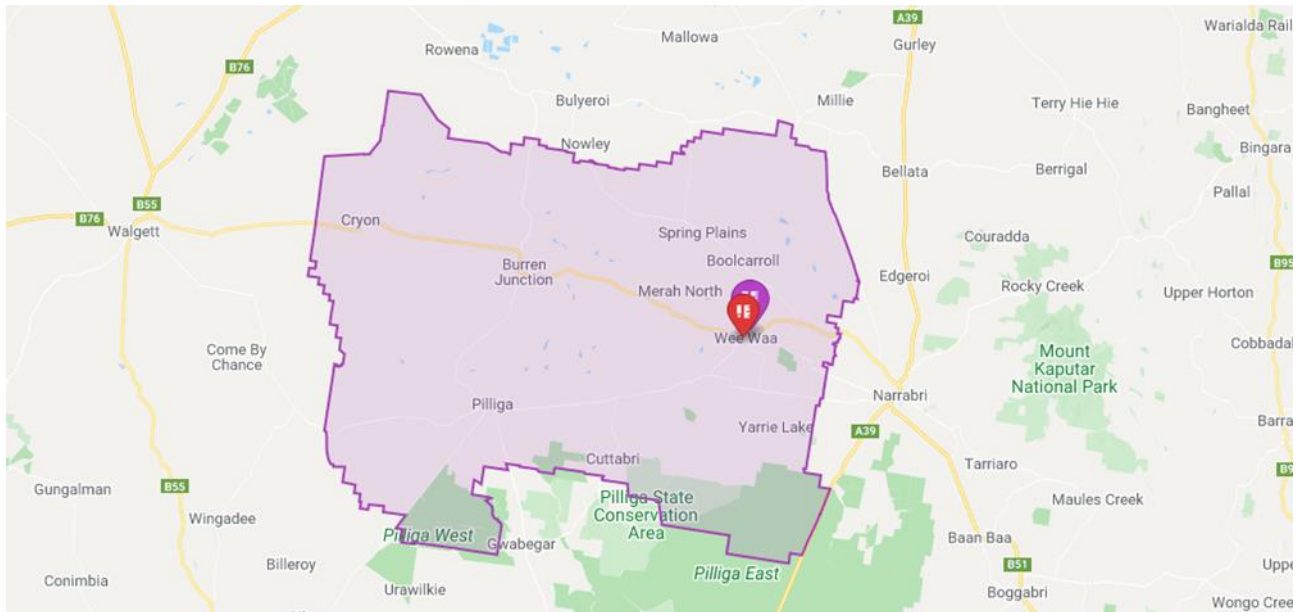


Figure 4.2: Wee Waa High School Catchment Area

It is acknowledged that the substantial catchment area of Wee Waa High School, compared to urban schools, is likely to lead to a significant reliance on private vehicle travel modes.

Wee Waa High School has identified student residences to ascertain the percentage of students living within various walking distances from the school (5-minute, 10-minute, 15-minute, 30-minute, or greater). This data serves as a guide in assessing the likelihood of students adopting alternative travel means such as public and active transport modes, as detailed in Table X below.

Table 4.1: Walking Analysis

	WWHS			
	Notional (#)	Notional (%)	Actual (#)	Actual (%)
< 400m (5-minute walk)	25	18.1%	16	11.6%
< 800m walk (10-minute walk)	78	56.5%	53	38.4%
< 1200m (15-minute walk)	88	63.8%	86	62.3%
< 2400m in catchment	92	66.7%	87	63.0%
> 2400m in catchment	138	100.0%	138	100.0%
Total enrolments within catchment	138	100.0%	138	100.0%

¹ Transportation and Accessibility Impact Assessment (TTW, 2021)

Considering the proximity of Wee Waa Public School to the proposed site, the movement patterns of the public school have also been taken into account when reviewing external transport networks.

The kerb blistering on Mitchell Street, adjacent to Dangar Park, was finalised by Narrabri Shire Council in mid-2021. This measure was aimed at implementing traffic calming measures in close proximity to the existing Public School and reducing the pedestrian crossing distance.

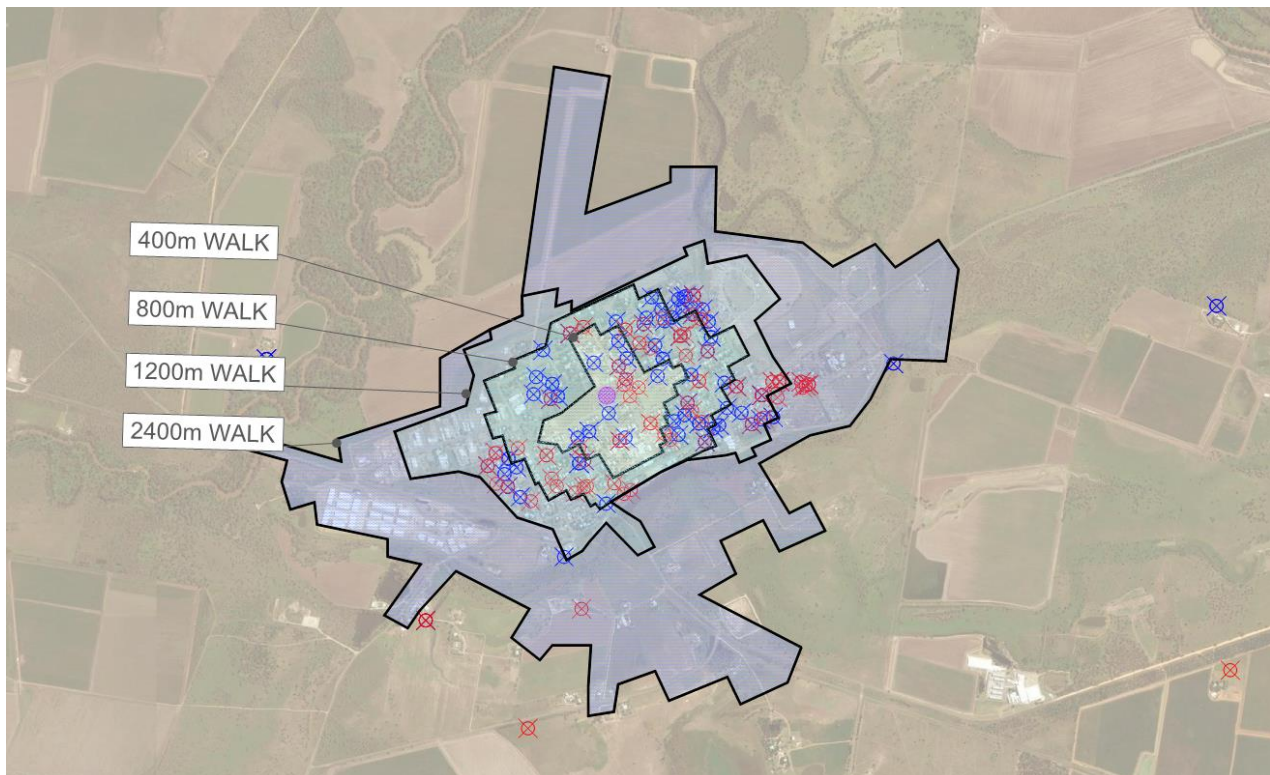


Figure 4.3: Map of student pedestrian travel distances between school site and place of residence

Note: High School Student addresses shown in blue and Public School addresses in red.

The (TAIA) conducted pedestrian counts, in addition to traffic counts, at the intersections of Mitchell Street with George Street and Mitchell Street with Charles Street. The goal was to identify the necessary pedestrian infrastructure improvements along Mitchell Street. The analysis revealed that pedestrian movements along Mitchell Street were common, but crossing Mitchell Street was infrequent. It was observed that existing infrastructure heavily influenced pedestrian movements, with fewer pedestrians walking along Mitchell Street to the north; instead, they tended to use pedestrian footpaths south of Mitchell Street before crossing when needed.

Given these findings, it is reasonable to assume that once appropriate infrastructure is developed north of Mitchell Street, pedestrian crossings are likely to increase. This effect is expected to intensify with the development of the High School site and the anticipated movements of staff and students between the High School and Primary School sites.

To assess the potential impact of a pedestrian crossing at Mitchell Street, a network SIDRA model was created. The results indicated that the intersection of George Street and Mitchell Street would maintain a high Level of Service A.

4.3 Cyclist Facilities

Secure cyclist facilities are provided on site to allow for the safe storage of vehicles and equipment during school hours. Provisions for bicycle storage are located to the north of site in a bicycle enclosure with capacity for 12 bicycles. This is in line with surrounding school areas and represents the minimal number of students

who have expressed interest in cycling as a primary mode of travel. Should the use of cycling increase as an active transport mode, additional provisions for bicycle racks may be provided on hard paving where appropriate. End of trip facilities are located to the east of building B.

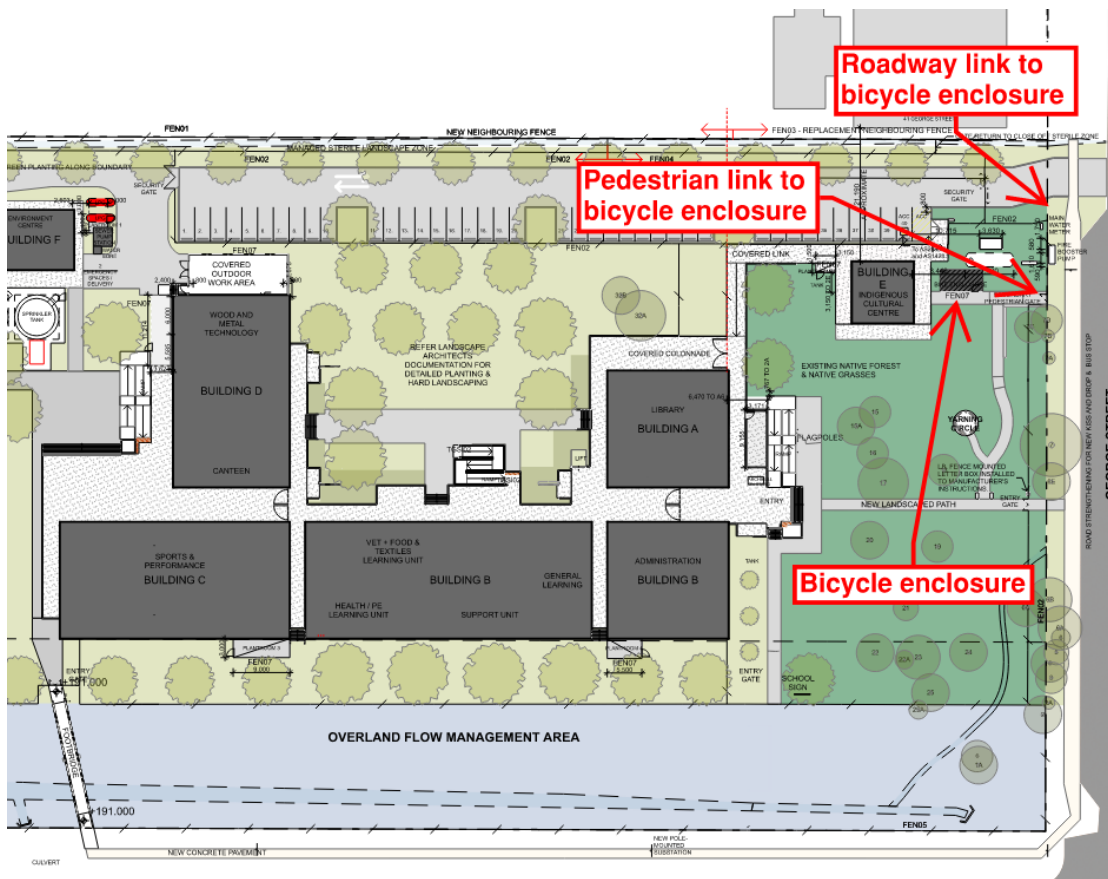


Figure 4.4 Bicycle facilities

4.4 School Bus Operations

4.4.1 Bus Route

Through consultation with the users, it was requested that direct access from the bus stop be provided into the school as close as possible to the main entry as staff currently monitor students boarding and alighting to ensure they safely enter the school grounds. It's important to note that there is no public transportation available in Wee Waa, except for the school bus.

Due to requirements for staff to monitor students entering and exiting the site and the need for access near to the administration building, the bus stop location is adjacent to the site on George Street. Works include road widening of George Street, allowing for a kerb layover that will service both public transport as well as PUDO movements. The bus zone is to service the school only and therefore will only be in operation during peak school morning and afternoon hours.

The two methods for bus bay management are provided below:

- Allocate zones along the bus bay for different bus numbers so that students can easily locate the appropriate bus. Students would wait in this zone until the bus arrives.
- Organise students into queues according to their desired bus number within the school site. This allows for students to be removed from the main roadway to encourage student safety. A staff member

would then lead the queue of students to the relevant bus at the appropriate time.

The school has confirmed that the tentative bus schedule for the proposed bus operations will occur after the primary school drop-offs. Drop-offs will take place between 8:30 – 9:00 am, and pick-ups are scheduled for 3:10 – 3:25 pm. This bus will stop at 10 locations prior to reaching the school site. These locations are largely around Narrabri Town Centre (refer to Figure 4.5).

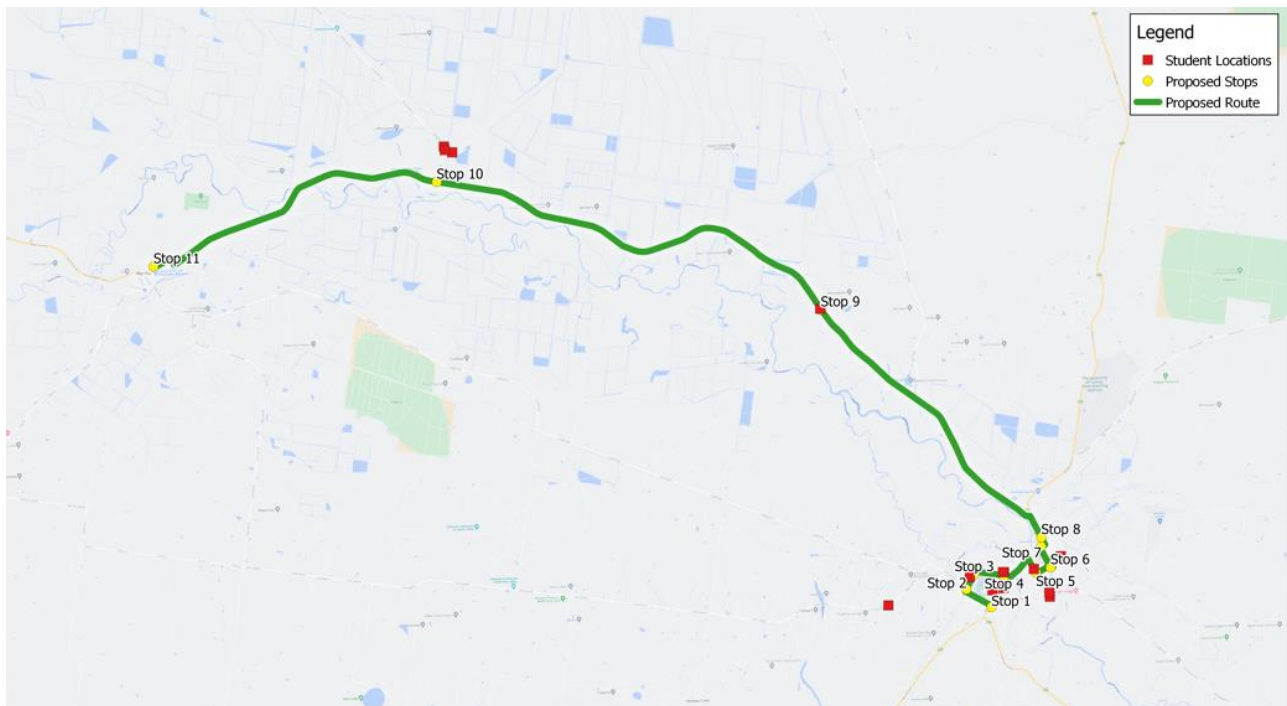


Figure 4.5: School Bus Route

Based on inspections carried out on site, it is anticipated that a maximum of 2 buses are required to queue at any one time in future. It is not expected that future growth will exceed this demand, however the management and operation of the school bus stops will require modification according to the changing demands.

Departure for bus vehicles is anticipated to involve a left turn onto Boundary Street, followed by another left turn onto Charles Street, and a direct continuation through Charles Street. The design has integrated swept paths to ensure the feasibility of bus movements along these alternative routes. Moreover, it's important to note that the bus bays on George Street will not be overwhelmed and are deemed sufficient for the intended operational purposes.

School bus movements at the bus stop will be monitored by school staff only at peak times. However, students are encouraged to safely use the available pedestrian crossings rather than jaywalking or crossing at other locations.

The staff supervisor will be required to wear a high-visibility vest so students or bus drivers can easily locate a staff member if they need assistance. This is also important for staff safety so that they can be easily visible to drivers and other road users. Bus bay staff supervision duties will include the following:

- Monitoring student behaviour and discouraging unsafe conduct such as running and jaywalking
- Ensuring orderly loading and unloading of students from the bus
- Assisting students in forming orderly queues while waiting for the bus arrival
- As student and bus numbers increase, organise students into multiple queues if necessary

The bus layover area has provision for both buses with draw in length and draw out length for both vehicles.



Figure 4.6 Bus and PUDO zones

4.4.2 Transport to Agricultural Plot

Due to site requirements, the existing agricultural plot on the previous high school site will remain and be utilised by the school. Transport to this location will occur through the use of the school’s mini-bus, of which will be parked on site near the loading area. Students will be shuttled to the location of the agricultural plot when required for study.

4.5 Delivery and Service Vehicle Operations

Service and loading vehicles will also utilise the vehicle access point connection to George Street. Waste facilities on site are to be located to the north-west of Building F. The largest anticipated vehicle is a large rigid vehicle used to refill gas facilities on site and for waste collection.

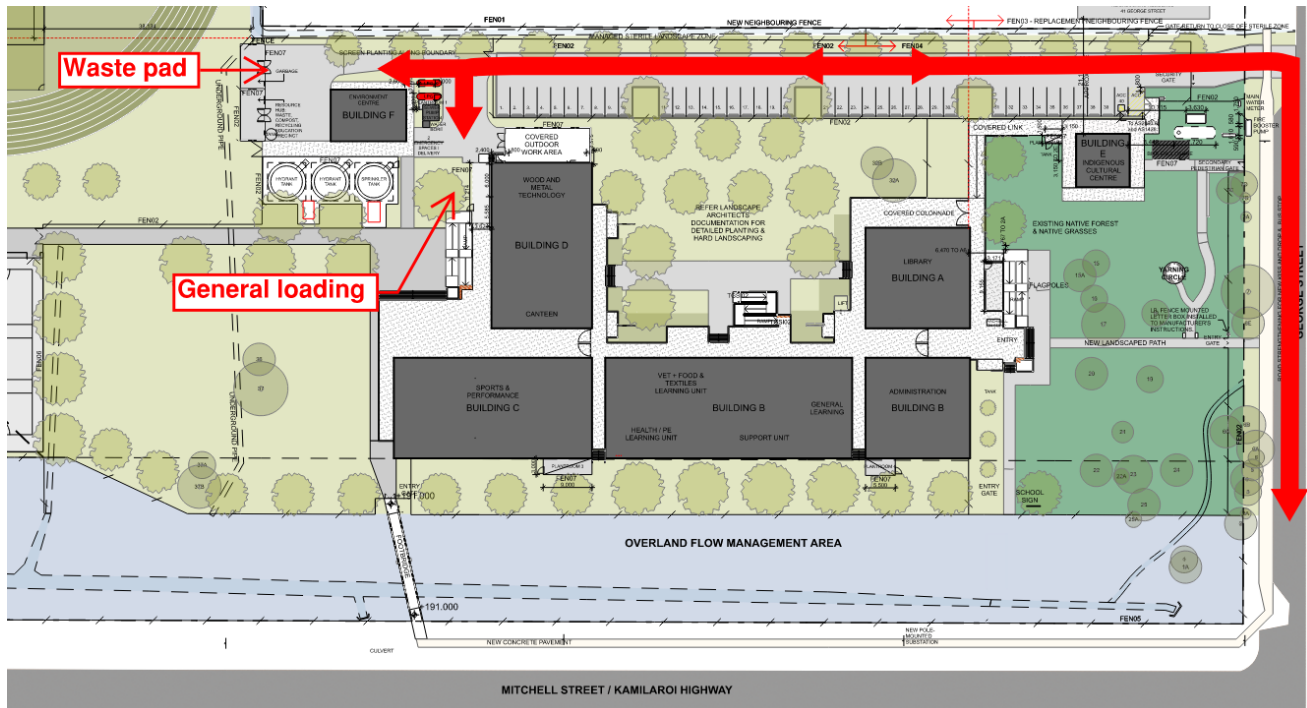


Figure 4.7 Service vehicle and loading route

4.6 Pick-up and Drop-Off (PUDO) Operations

The Travel Mode Survey identified that 45% of high school students are picked up and dropped off. At the current enrolment of 150 students, there are 68 students that will be using the PUDO location. The pick-up and drop-off capacity has been designed to accommodate this future capacity, in the meantime, the capacity of this area will be twice that of the current enrolment requirements.

To maintain access near to the main entry, the pick-up and drop off zone is provided along George Street and includes road widening to allow for parents/carers to pull into a bay and not impede traffic flows along George Street. This zone is to be shared with school bus services and therefore signage is to be implemented to distinguish between the two zones.

The proposed zone allows for a queueing of 7 vehicles which is sufficient for the full development of the school. Refer to Figure 4.6 for the location of this zone.

The activities associated with student pick-up and drop-off can give rise to significant safety concerns and have notable impacts on local traffic conditions. Effective management of PUDO zones is crucial to ensuring user safety and maintaining a smooth traffic flow. The management of the PUDO zone shall encompass the following considerations:

- **Staff Presence:** Assigning a staff member to oversee the PUDO zone can play a role in encouraging responsible user behaviours. Instances of unsafe student conduct or reckless driving can be reported to the school principal for further investigation.
- **Optimised Utilisation:** Staff members can guide drivers to occupy spaces further along the zone, optimising the usage of the area's capacity.
- **Pedestrian Safety:** If relevant, stationing a staff member near nearby pedestrian crossings can help manage traffic flow and ensure the safety of students.

4.6.1 Impact Mitigation Measures

To efficiently and safely manage the PUDO zones and implement measures to minimise impacts, the following management system shall be implemented:

- Staff member(s) along the PUDO zone to assist students as required and encourage responsible user behaviours. School staff won't serve as traffic controllers or enforcers but can contribute to maintaining orderly operations. Given the increasing independence of high school students, there will be at least 1 staff member assisting students along the PUDO zone.
- Provide families with vehicle identification labels. These labels could be in the form of family surnames or unique identifying numbers. Labels will be easily visible on the windshield, such as under the sun visor or mirror.
- Separate PUDO zones with identifying markers like coloured cones. These markers will be easy for staff to install and remove during daily pick-up periods.
- Position a staff member near the entry or arrival point of the PUDO zone to identify vehicles on or before arrival. This information can then be relayed to waiting staff and students. Students will be directed to the marked zone where their vehicle is expected based on its position in the queue. This allows students to be in place before or shortly after their vehicle arrives, resulting in quicker turnover.
- If a vehicle occupies a PUDO space without a child boarding (due to a delay, for example), the driver will be directed to exit the PUDO zone and return to the site's circulation area. This approach ensures that the spaces are available for other vehicles to use.

4.7 Car Park Operations

The site includes 40 parking spaces with access via George Street. Current travel modes indicate that the majority of staff will continue travel via personal vehicle due to large distances and time between home and work. All of the 40 spaces will be designated exclusively for staff or employee parking, clearly indicated through signage.

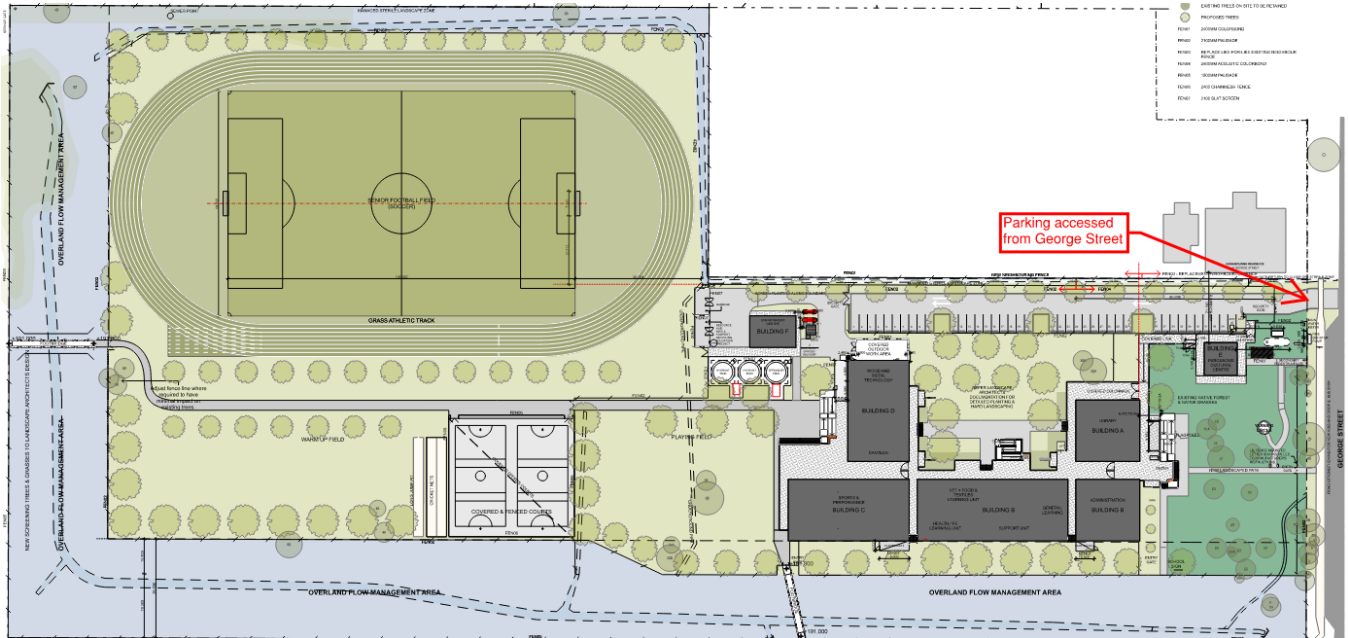


Figure 4.8 Location of the on-site carpark in relation to site

4.8 Community Use and Special Events Operations

Site access for pedestrians will primarily be through the main gate along the eastern side of the site on George Street. Additionally, there will be a supplementary entry point situated to the south of the site, connected via a footbridge bordering Mitchell Street. To enhance pedestrian movement, footpaths will be established as depicted in Figure 4.9.

Some community use of the School hall and sports field is anticipated to occur. During these events on-site parking will be available for visitors with potential for overflow to occur to Charles Street immediately adjacent to the school suitable for approximately 28 vehicles if required.

These events will exhibit varying degrees of scale, potentially drawing substantial numbers of participants to the site, thus generating heightened transportation requirements. In the case of each significant event (those expecting over 500 attendees), the school's must integrate site access and transportation considerations into their event planning. If applicable, travel access guides might be distributed to event participants. For particularly significant events, the possibility of securing off-site parking along Charles Street, Boundary Street and George Street could be explored.

Community use and special events are expected to occur outside of school peak hours such that traffic and parking impacts will not be compounded.

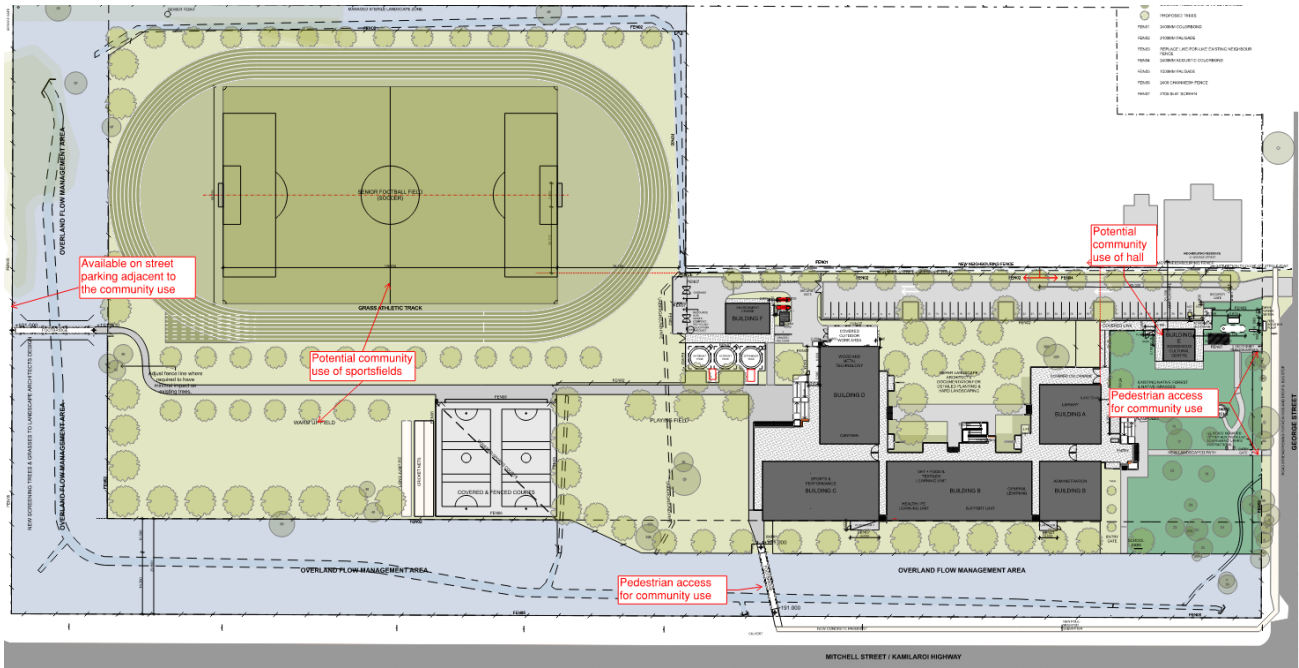


Figure 4.9: Community use facilities and access

4.9 Emergency Vehicle Operations

Emergency vehicle (e.g. police, fire, ambulance) access will be located at the vehicular entry point along George Street. Emergency protocols for the school would include on-site staff assisting with emergency access. Any vehicles located in and around the on-site carpark or access route should be cleared, and any planned vehicle movements should be temporarily suspended.

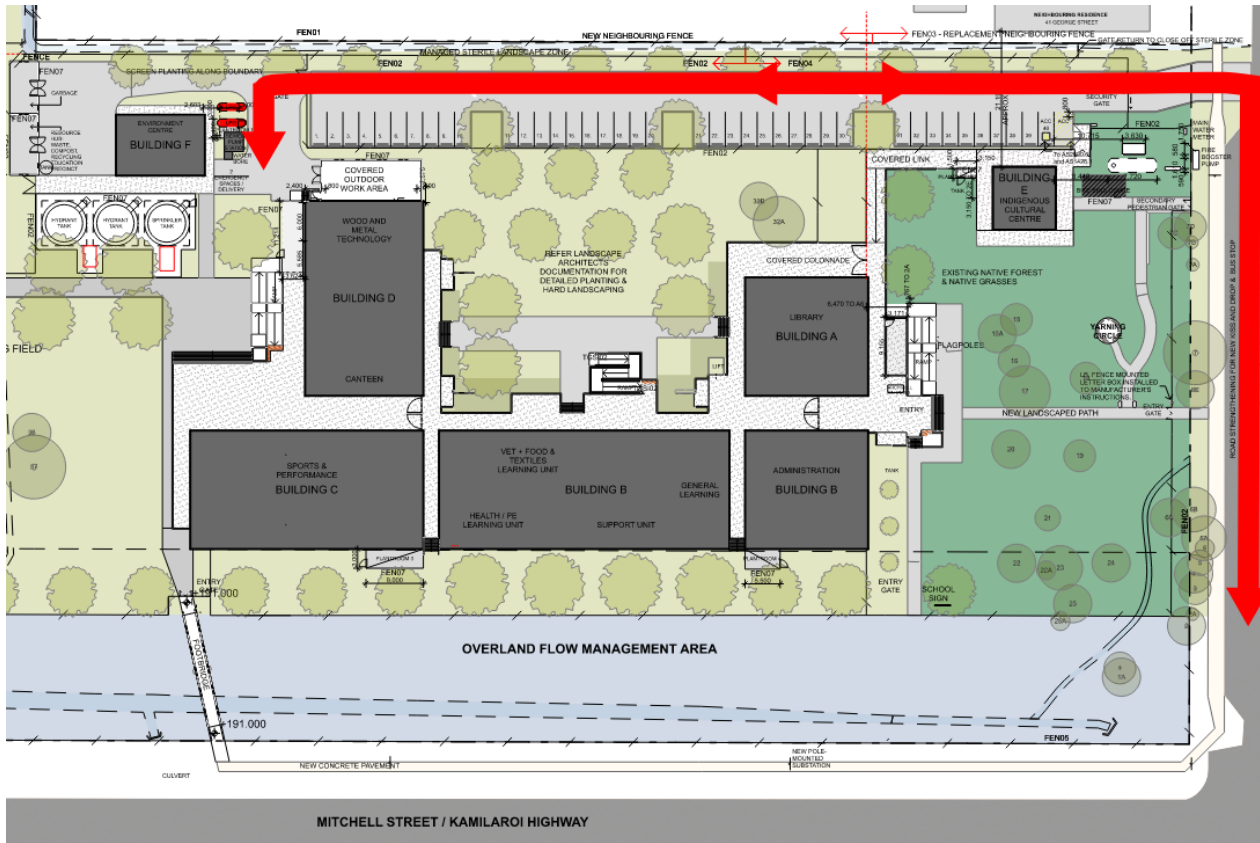


Figure 4.10 Emergency vehicle access route

Section 5 Transport Encouragement Programs

This section details various strategies targeted at encouraging sustainable travel choices for students and staff at WWHS. The following programs and initiatives are to be implemented to achieve the visions and goals of this STP.

Table 5.1: Transport encouragement programs and activities

Program / activity	Description and target outcomes	Frequency / timing	Responsible parties
New starter kits	<p>It is important that all students and staff are aware of the travel options available to them. Particularly for new users, the default option may be to drive to the site if they are unfamiliar with the area.</p> <p>To ensure that users are aware of their options, a TAG (discussed above) and any other relevant information such as health and activity leaflets will be distributed to all users. Information could be included in induction or orientation packages for new staff and students. Inductions could also promote the benefits of cycling, walking and use of active transport for people’s health. Furthermore, sustainable travel information may be shared via the school website or other online distribution (see Section 6.1.1). Users are more likely to engage in sustainable travel when provided information directly, rather than being required to seek it out independently.</p>	Annually	<p>TTW for providing the Travel Access Guide leaflets (see Appendix A).</p> <p>Travel coordinator (or equivalent) for any additional health and activity leaflets. Travel coordinator to develop (or arrange) future updates to Travel Access Guides.</p> <p>WWHS for distributing leaflets.</p>
Periodic reminders	<p>Bus and train schedules often changes and may update regularly. Staff and students are to be notified of the changes that happen to ensure they will be equipped with most recent and accurate information. As such, periodic reminders will be necessary to improve accessibility to sustainable travel through ensuring accurate conveying of information. Details of this initiative can be found in Section 6.1.2.</p>	Annually, or when any known changes occur	<p>Travel Coordination to stay up to date with regards to the changes and make reminders when necessary.</p>
School website information	<p>It is expected that any updated information can be found on the school’s website. Students and parents, staffs and visitors will be able to depend on the website as its central source of updated information.</p>	Annually, or when any known changes occur	<p>WWHS to update the website when needed.</p>

Program / activity	Description and target outcomes	Frequency / timing	Responsible parties
<p>Transport Access Guide (TAG)</p>	<p>The Travel Access Guide (TAG) is a consolidated document providing information of safe and sustainable modes of travel in the local area for students and staff. It is an educational brochure that can be distributed as a starter kit. A detailed description can be found in Section 6.3.</p>	<p>Annually</p>	<p>TTW (first time) Travel Coordinator (update annually)</p>
<p>Ride to School Day</p>	<p>Various organisations and groups develop programs and events to encourage active transport. For example, Bicycle Network coordinates a National Ride2School Day each year. These events provide a good opportunity to encourage staff and students to participate in cycling, and each event can also assist in influencing the travel behaviour of others through general publicity and awareness. Events hosted at the school could include organised preferred cycling routes, bike safety programs, bike maintenance instructions, and more.</p> <p>At time of writing, the next Ride2School Day will be held on Friday 22nd March, 2024.</p>	<p>Annually</p>	<p>WWHS to participate in regional and national programs and events.</p>
<p>Bus Safety Week</p>	<p>At time of writing, the next Bus Safety Week will run in February 2024. This annual campaign raises awareness for all road users on how to stay safe on and around buses, helping to reduce injuries and fatalities.</p> <p>The School will stay in contact with Transport for NSW and Hillsbus to review and consider any promotional material or advice that could be distributed to students and the school community.</p>	<p>Annually</p>	<p>WWHS to run the annual campaign. WWHS to keep up with promotional material or advice to be distributed.</p>

Program / activity	Description and target outcomes	Frequency / timing	Responsible parties
<p>Carpool matching incentives</p>	<p>A strategy to encourage staff to carpool involves a pairing system that informs of other staff who live in nearby areas or along their travel route. Initiating this system may involve a meeting to provide an opportunity for staff members to discuss carpooling options, including coordination of staff by local area. Off-the-shelf alternatives such as the Liftango app may also be an option for staff to utilise.</p> <p>A strategy to encourage carpooling further is to allocate priority parking spaces to those committed to carpooling. Priority parking ensures that carpooling staff will be able to park on-site, once demand grows and may exceed supply in future. This may act as an incentive for others to investigate carpooling opportunities. Priority spaces could also come with other benefits, such as a better location of configuration (such as avoiding the Small Car parking spaces).</p>	<p>Meeting within 12 months of opening</p> <p>Incentives and programs all year round</p>	<p>WWHS for initiating meetings or systems and providing incentives through parking space allocation.</p>
<p>Remote kiss & ride reminders</p>	<p>To ensure correct usage of the remote / off-site kiss & ride zones, reminders may need to be issued to students and parents about the available formal facilities. If correct usage of the facilities occurs (noting that at time of writing the facilities do not yet exist), there may be no need for this type of communication.</p>	<p>Issue information on new arrangements within 1 month of opening.</p> <p>Communicate with Council if and when needed.</p>	<p>WWHS to issue warning reminders to parents.</p> <p>WWHS to communicate with Council if needed.</p>
<p>Bike network maps</p>	<p>To encourage uptake of bicycle travel and ensure awareness of safe and convenient routes, a network map of available facilities and infrastructure could be issued to students. This could either be prepared by the Travel Coordinator (if available) or be requested from Narrabri Shire Council.</p>	<p>Within 12 months of opening</p>	<p>Travel Coordinator to liaise with Narrabri Shire Council.</p>

Program / activity	Description and target outcomes	Frequency / timing	Responsible parties
<p>Bus network maps</p>	<p>To encourage uptake of bus travel and ensure awareness of available services, a network map of available school buses could be issued to students. This could either be prepared by the Travel Coordinator (if available) or be requested from the bus service provider.</p> <p>The school will also remain up to date with any proposed plans by TfNSW to increase the school services as the local area goes through future development. If the current public transport services are not meeting the demand, the school may consult with Council and TfNSW about potential upgrades to the offered services.</p>	<p>Within 12 months of opening</p>	<p>Travel Coordinator to contact Council / TfNSW</p>
<p>Travel Coordinator</p>	<p>Subject to future arrangements by SINSW, a travel coordinator may be appointed for the site. This role's responsibility will be to further encourage sustainable transport measures (including those actions listed above), plus undertake all other elements of this School Transport Plan.</p>	<p>TBC (target within 12 months of opening)</p>	<p>SINSW to decide and appoint a travel coordinator</p>
<p>Road Safety Education</p>	<p>The Road Safety Education website offers a wealth of valuable resources, including information about the RYDA workshop.</p> <p>RYDA is a comprehensive school partnership program that assists educators in equipping their students with the knowledge and skills necessary to view themselves as engaged and responsible members of the road community.</p> <p>The website for the road safety education is https://rse.org.au/</p>	<p>Issue information on new arrangements within 1 month of opening.</p>	<p>WWHS to liaise with the teachers and the program provider</p>

Section 6 Communications Plan

Safe and efficient management of WWHS will require all users to have a thorough understanding of operations and their responsibilities. The two separate parts of this will be staff communications and student / parent communications. Communication strategies are described in the following sections.

6.1 Channels

6.1.1 New Starter Kits

To ensure new travellers have information regarding all their travel options, the Travel Access Guides (TAGs) are provided. This can easily be included as part of an induction or orientation package. This is especially important for travellers new to the area and who may be completely unfamiliar with the transport options.

6.1.2 Periodic Reminders

Travel options can change over time and regular updating and conveying of new information is required to ensure travellers have the most accurate and recent information. 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 periodic staff and parent newsletters or updates. Content could include details on new travel initiatives, mode share progress, and upcoming events or changes, as well as reminding users of the importance of sustainable travel.

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

One method to enable periodic information sharing is to include a sustainable travel section within a school newsletter. The content may include details about new travel initiatives, mode share progress updates, upcoming events or changes, as well as reminding travellers about the importance of sustainable travel. It will also allow for feedback or questions regarding any travel-related concerns.

6.1.3 School Website

The school website is to be utilised to provide up-to-date transport information, and to provide a central source of information for students and parents. External visitors will also have access to the website.

6.2 Messages

Key points of information and typical messages to the school community could include:

- Transport goals, safety requirements, and parent expectations
- On-site bicycle storage areas and end-of-trip facility locations
- School Student Transport Scheme (SSTS) and School Term Bus Pass availability
- Changes to local public transport routes (as they occur)
- Changes to local pedestrian and cyclist facilities (as they occur)
- Any available memberships or discounts
- How to contact the Travel Coordinator or governance committee

6.3 Travel Access Guide (TAG)

The aim of a TAG is to present staff and students with information about the available safe and sustainable transport options in the local area. This involves presenting information in a simple and understandable manner through an educational brochure. Staff and students are more likely to change their travel behaviour after being

made aware of the school bus and active transport options and how to safely and easily utilise these alternatives.

TAGs can be distributed to staff, students and parents, and also be accessible online through the school's website for visitors and ease of access.

The TAG prepared for WWHS is included in Appendix A.

Section 7 Data Collection and Monitoring

A key component of STP success is program evaluation and ongoing improvement. This section includes consideration of how the school and their communities will be able to adaptively respond to meet the STP goals over time.

7.1 Data Collection

The school will collect the following data:

- Transport catchment
 - GIS analysis of the school catchment boundaries and current student locations is to be undertaken whenever this STP is reviewed, using depersonalised student location data.
 - The school catchment is to be assessed against the latest available public transport data available from TfNSW and the latest pedestrian and cyclist networks.
- Staff and student travel demand
 - Annual questionnaires are to be undertaken to accurately determine travel habits and transport usage.
- Transport audits and travel data
 - As part of annual monitoring (or more frequently if required), pedestrian and vehicle counts are to be undertaken at the bus zone to review demand for individual bus services and to observe general operations. Feedback is to be provided to TfNSW if necessary.
 - As part of annual monitoring (or more frequently if required), counts and measurements are to be undertaken at each kiss & ride zone. Measurements are to include average set-down times and total duration of operations. Observations are to include any issues with queuing or problem points in the system.
 - As part of annual monitoring (or more frequently if required), spot checks of staff car park capacity are to be undertaken, to gain an understanding of trends in travel behaviour.
 - As part of annual monitoring (or more frequently if required), spot checks of bicycle storage and End of Trip Facilities (EOTF) are to be undertaken, to gain understanding of trends in travel behaviour.
 - As part of annual monitoring (or more frequently if required), pedestrian movement counts are to be undertaken at all entry / exit points into the site, to accurately determine the spread of demand across the site and the local precinct.
- Transport events and initiatives
 - Where the school hosts any transport events or initiatives (for example, a Ride 2 School Day), attendance rates at these events is to be recorded.
 - Where these events involve or are relevant to external authorities such as Council or TfNSW, consider consulting with these authorities about the types of data to be collected, or share data with them once collected.
- Digital communication strategies
 - Where available, data is to be recorded on any available digital communication such as hit rates for travel articles on the school website, click-through of links provided through email or the school apps, or downloads of the TAG.
 - Any digital communications that relate to specific events (for example, a Ride 2 School Day) should also include data collection that can correlate digital engagement to event attendance.

7.2 Program Evaluation

The data collected as outlined in Section 7.1 shall be used to evaluate the STP performance as follows:

- Progress on mode share targets
 - The outcomes of annual questionnaires and the transport audits and travel data outlined in Section 7.1 are to be reviewed against the travel targets put forward in the most current revision of the STP at the time.
 - Where mode splits fall short of sustainability targets, initiatives and communications are to be reviewed in these areas. Targets could be shifted to other sustainable travel modes if appropriate (for example, low uptake of cycling could be better addressed with higher public transport targets).
 - Where mode splits have been achieved beyond sustainability targets, these targets could be made more ambitious and some resources may be able to be re-directed to other areas.
- Bus network and operations
 - Usage of the bus zone, in particular the usage and demand for different bus routes, is to be closely analysed with information provided to TfNSW for review. Services in high demand may need to be bolstered with additional services, subject to TfNSW servicing capacity. Services with low demand may be able to be re-routed or adjusted to better suit the overall population.
- Car park occupancy and on-street parking spill over
 - Usage of the staff car park is to be closely monitored (as described elsewhere in this STP), in order to understand demand for on-site car parking over time.
 - Any usage of on-street parking is to be monitored and reviewed with consideration of the locations being used. If residential areas are being impacted, the STP is to be reviewed (and communications increased if necessary) to reduce potential parking impacts.
- Engagement with school transport articles and links
 - Varying types of articles and links should be reviewed for engagement and success. For example, “bite-sized” pieces of information might have more engagement with particular audiences or content, and longer form “articles” may have success in different areas.

7.3 Documentation Updates

This STP, and other associated documentation (such as the TAG) are to be reviewed regularly and updated as required. It is recommended that this occurs 12 months after opening the new school, and then every 2 years.

The review and update process shall include:

- Updating to reflect any travel-related changes in the local area such as bus services, new cycle routes or pedestrian crossings (this should occur as changes arise)
- Reviewing progress against the proposed mode share targets and update targets if required
- Identifying any shortfalls in the STP and updating sustainable initiatives and programs to address these shortfalls
- Distributing an updated travel mode survey to all staff and students. Collect data including residential postcodes to inform where staff and students are travelling from.
- Consulting with staff, students and parents to understand travel behaviours and any barriers and facilitators to shift to sustainable travel.
- Adjusting initiatives and targets based on the updated survey results and in response to any issues that may arise.

Section 8 Governance Framework

8.1 Travel Coordinator

Transport programs must be implemented to achieve travel behaviour change. The school principal and teachers are not travel coordinators, so a dedicated role must be provided to implement and manage these programs.

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

- Liaise with the school principal as the nominated transport representative for the school
- Liaise with other internal stakeholders
- Coordinate communications and publications to staff and students as required
- Directly oversee implementation of transport programs where relevant
- Consult and engage external parties to implement transport programs where relevant
- Liaise with the Contractor prior to the construction phase to review and approve proposed construction traffic and access methodologies
- Liaise with the Contractor during the construction phase to maintain safe operations at and around the site

At time of writing, arrangements for this role are under discussions between the School, SINSW, the Department of Education, and TfNSW.

In the interim period until a Travel Coordinator is appointed, the School will endeavour to undertake the School Travel Plan procedures and initiatives on an ongoing basis.

8.2 Internal School Working Group

An internal school working group is recommended to be formed to support the Travel Coordinator and other important school leaders. The group may include the following relevant stakeholders:

- School Principal
- Other school Executive Staff as relevant
- Road Safety Education Officer
- Asset Management
- Grounds Management
- WHS Representative
- P&C

This group must meet on a regular basis (say, quarterly) within the first 12 months of operation. Following this, the group is recommended to meet annually or as needed.

8.3 External Transport Working Group

An external Transport Working Group (TWG) provides a forum for discussing transport-related issues and seeking opportunities for improving the traffic and transport systems at WWHS. The group consists of stakeholders including Council, TfNSW and the bus operator.

It is recommended that this group meet after the first six months of operation to review the initial progress of the STP and the various transport operations at the school. The Travel Coordinator (once available) will organise and chair these meetings.

Items to be discussed within this group may include the following:

- Progress of achieving the goals of the STP and implementing recommended programs and strategies
- Operation of kiss & ride zones and any impacts to local traffic
- Usage of on-street parking by staff or students and any impacts to community
- Usage of the bus zone, taking note of capacity along the school bus route

Appendix A

Travel Access Guide



Wee Waa High School

Travel Access Guide

November 2023

Project overview

Wee Waa High School is a new high school with a capacity of 200 students in a two-storey building, an Indigenous learning centre, sporting fields and associated civil and utilities works.

Active ways to get to school

Walking is an active and healthy way to get to school



- Cross the road at crossings or traffic lights if possible
- Remember to share the footpath and stick to the left
- Look out for vehicles entering or leaving driveways
- Put away distractions such as phones and earphones



Ride your bike or scooter

- Always wear a helmet
- Children under age 16 can ride on the path, but remember to share the footpath and stick to the left
- Look out for vehicles entering or leaving driveways
- Give pedestrians right of way



Kiss and drop expectations

- The pick up and drop off zone is at George Street.
- The zone is to be shared with school bus services and signage will be implemented to distinguish between the two zones.
- Any unsafe student behaviour or reckless driver behaviour should be reported to the school principal for further investigation.

Get a discount on your Bicycle NSW membership

Bicycle NSW is offering a 15% discount on membership for families at our school. This includes insurance and discounts for recreational bike rides.

Take up the offer today:

- Visit bicyclensw.org.au
- Sign up for a membership
- Use this discount code for 15% off your membership:

nswtag

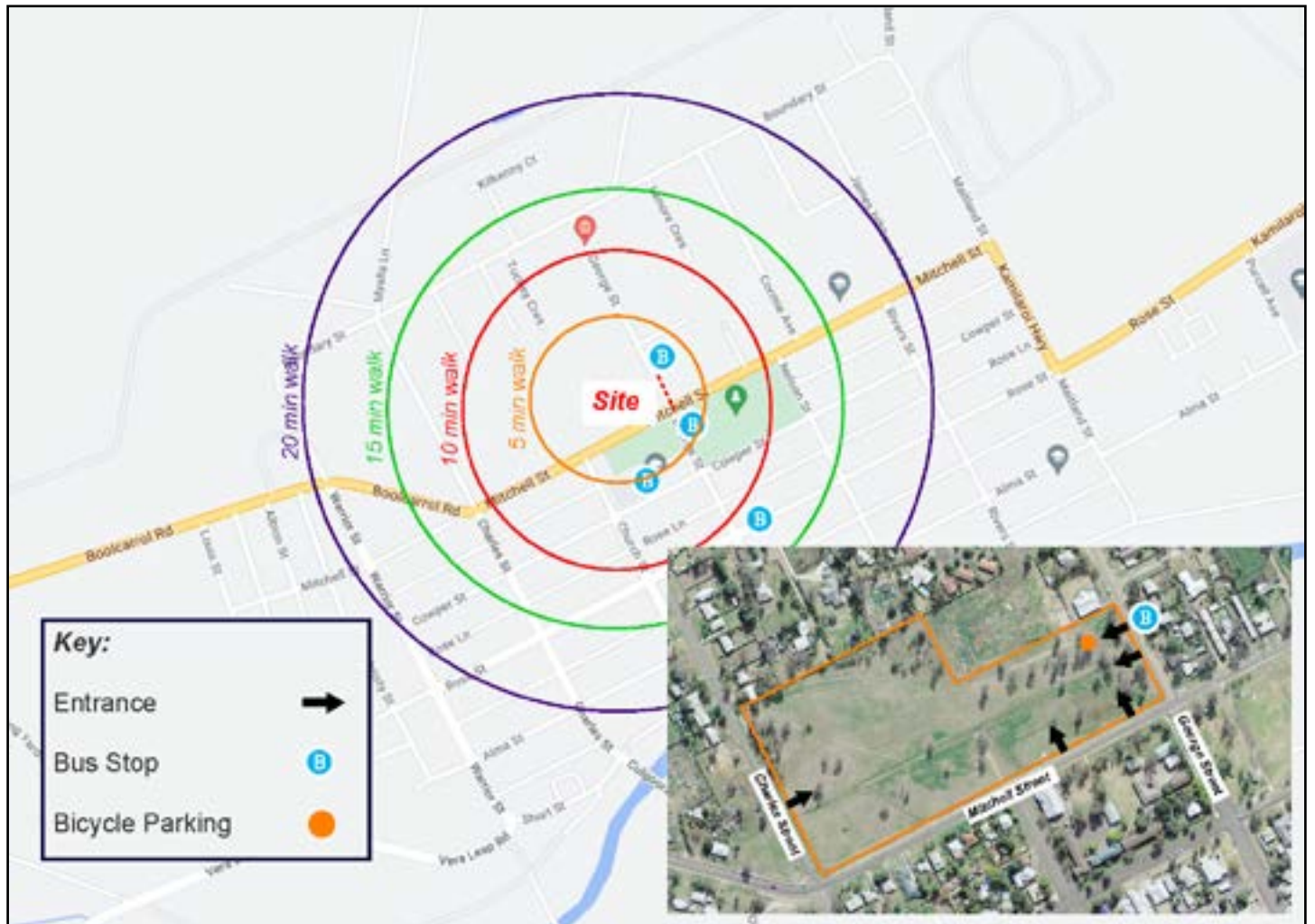
The code expires on 31 May 2024.
Don't miss out!



For more information contact:

School Infrastructure NSW
Email: schoolinfrastructure@det.nsw.edu.au
Phone: 1300 482 651
www.schoolinfrastructure.nsw.gov.au

Local map: Active Travel



For more information contact:

School Infrastructure NSW
Email: schoolinfrastructure@det.nsw.edu.au
Phone: 1300 482 651
www.schoolinfrastructure.nsw.gov.au



Wee Waa High School

Travel Access Guide

November 2023

Project overview

Wee Waa High School is a new high school with a capacity of 200 students in a two-storey building, an Indigenous learning centre, sporting fields and associated civil and utilities works.

Using the school bus to get to school



School buses and public buses

- Bus stops will be manned by teaching staff during operational hours to ensure students are entering the school after departing the bus.
- Bus stop located on George Street
- Bus zones are to service the school only and will only be in operation during peak school morning and afternoon hours.
- Transport to the Agricultural Plot location will be through the use of the school's mini-bus, students will be shuttled to the of the agricultural plot.

Safety on the School Bus

For Students

- Maintain a safe distance between you and the road when waiting for a bus
- Mind your step when getting on and off the bus

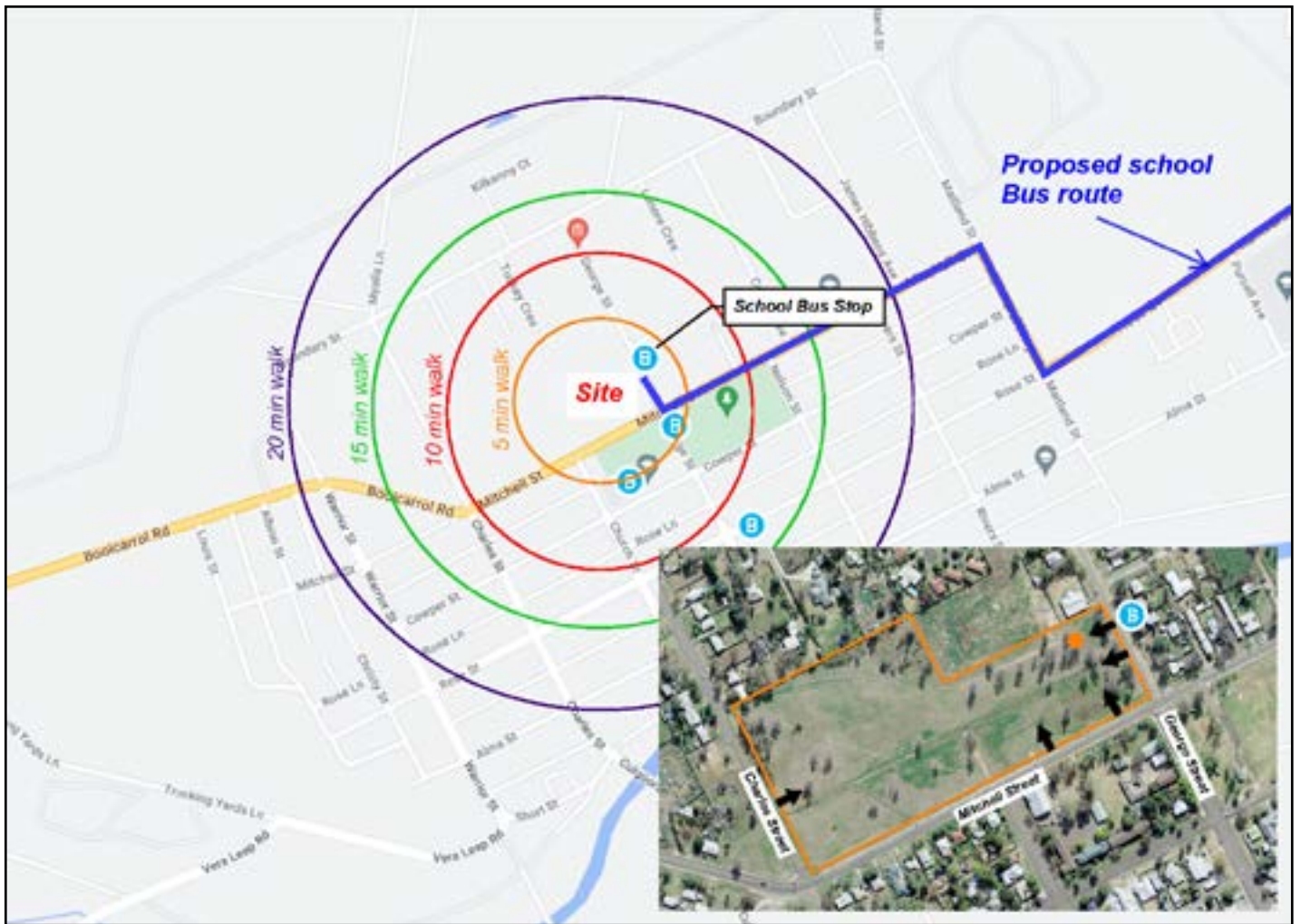
For Parents / Carers

- Talk to your child about what to do if they get lost or you are running late to meet them at a bus stop
- When meeting your child at a bus stop, never call them across a road

For more information contact:

School Infrastructure NSW
Email: schoolinfrastructure@det.nsw.edu.au
Phone: 1300 482 651
www.schoolinfrastructure.nsw.gov.au

Local map: Public transport



Tap on and tap off every time

Use your School Opal card every time you catch public transport to school.

It tells us how many people are using public transport to help us plan buses, trains and ferries to suit you.

For more information contact:

School Infrastructure NSW
Email: schoolinfrastructure@det.nsw.edu.au
Phone: 1300 482 651
www.schoolinfrastructure.nsw.gov.au

Appendix B

Conditions of Development Consent

Table 8.1: SSD consent conditions (SSD-9579147)

	Condition	Comments & references
D23	Prior to the commencement of operation, a School Transport Plan, must be submitted to the satisfaction of the Planning Secretary. The plan must:	
(a)	be prepared by a suitably qualified consultant in consultation with Council and TfNSW	Consultation was undertaken with Council and TfNSW for preparation of the overall transport strategy at the site. This includes the development of mode share targets, kiss & ride locations, and bus/loading zone operations. Consultant (key personal) CVs attached in Appendix E.
(b)	include arrangements to promote the use of active and sustainable transport modes, including:	-
(b)(i)	objectives and modes share targets (i.e. Site and land use specific, measurable and achievable and timeframes for implementation);	Section 2.1 – Travel Plan Objective Section 2.2 – Mode Share Targets
(b)(ii)	specific tools and actions to help achieve the objectives and mode share targets	Section 3 – Policies and Procedures Section 5 – Transport Encouragement Programs
(b)(iii)	details regarding the methodology and monitoring/review program to measure the effectiveness of the objectives and mode share targets, including the frequency of monitoring and the requirement for travel surveys to identify travel behaviours of users of the development	Section 7 – Data Collection and Monitoring
(c)	Include operational transport access management arrangements, including:	-
(c)(i)	detailed pedestrian analysis including the identification of safe route options to identify the need for management measures such as staggered school start and finish times to ensure students and staff are able to access and leave the Site in a safe and efficient manner during school start and finish	Section 4.1.2 – Pedestrian Access Section 4.2 – Pedestrian Facilities
(c)(ii)	the location of all car parking spaces on the school campus and their allocation (i.e. staff, visitor, accessible, emergency, etc.)	Section 4.7 – Car Park Operations Figure 4.8 – On-site car parking layout

	Condition	Comments & references
(c)(iii)	the location and operational management procedures of the drop-off and pick-up, parking, including staff management/traffic controller arrangements.	Section 4.6 – PUDO Operations
(c)(iv)	The location and operational management procedures for the drop-off and pick-up of students by buses and coaches including staff management/traffic controller arrangements.	Section 4.4 – School Bus Operations
(c)(v)	Delivery and services vehicle and bus access and management arrangements.	Section 4.5 – Delivery and Service Vehicle Operations
(c)(vi)	Management of approved access arrangements.	Section 4.1 – Site Access Section 4.7 – Car Park Operations
(c)(vii)	Potential traffic impacts on surrounding road networks and mitigation measures to minimise impacts, including measures to mitigate queuing impacts associated with vehicles accessing drop-off and pick-up zones.	Traffic impacts to the surrounding road network, including mitigation measures to minimise impacts, were assessed during the SSDA. Refer to the Transport and Accessibility Impact Assessment for traffic impacts. Mitigation measures include pedestrian crossings, new kiss & ride zones, on-site cyclist facilities and improvements to the bus zone. See also Section 4.6 – PUDO Operations
(c)(viii)	Car parking arrangements and management associated with the proposed use of school facilities by community members.	Section 4.7 – Car Park Operations Section 4.8 – Special Event Operations
(d)	detailed schedule for the proposed bus operation to ensure the bus bays on George Street are not overloaded and remain sufficient for the purposes of the operation	Section 4.4 – School Bus Operations
(e)	confirm that the two secondary pedestrian entrance gates on Mitchell Street / Kamilaroi Highway are closed and locked during the morning and afternoon student arrival and departure times or alternative measures to manage student pedestrian safety on Mitchell Street / Kamilaroi Highway agreed to by TfNSW	Section 4.2 – Pedestrian Facilities
(f)	access arrangements and management associated with the proposed use of school buildings and sporting facilities by community members	Section 4.8 – Community Use and Special Events Operations
(g)	measures to promote and support the implementation of the plan, including financial and human resource requirements, roles and responsibilities for relevant employees involved in the implementation of the plan; and	Section 8 – Governance Framework
(h)	a monitoring and review program.	Section 7 – Data Collection and Monitoring

Appendix C

Authority Consultation Records

Meeting Minutes

School Infrastructure NSW & Narrabri Shire Council

Wee Waa High School

Date and Time	Thursday 29 July 2021 @ 3:00pm
Venue	Via Zoom
Enquiries	Matthew Arnett
Teleconference Details	Refer meeting invitation for Teams Meeting details

Members	Organisation	Role	Attendance (Y, N or T/C)
Matthew Arnett	SINSW	Senior Project Director	Y
Alana Alford	SINSW	Project Officer	Y
Alejandra Rojas	SINSW	Principal Statutory Planner	Y
Fiona Larkin	Ontoit	Project Director	Y
Richard Sheraton	Ontoit	Project Director	Y
Andrew Brown	NSC	Director, Planning & Strategy	Y
Eloise Chaplin	NSC	Director, Infrastructure Delivery	Y
Donna Ausling	NSC	Manager Strategic Planning	Y
Anthony Smetanin	NSC	Manager Design Services	Y
Stewart Todd	NSC	General Manager	N
Justin Hamilton	SHAC	Director	Y
Grace Carpp	TTW	Technical Director	Y
Paul Yannoulatos	TTW	Technical Director	Y

Item	Description	Responsibility
1	Introduction & Apologies	
1.1	Attendance and apologies as above	Note
2	Design Update	
2.1	JH – Key design considerations aim to meet the specific needs of Wee Waa high school. The school has been consulted at length and design team have responded to the needs outlined in the Educational Rationale	Note
2.2	JH – The design aims to respect the site and environment, and to reflect the Indigenous presence of the school community.	Note
2.3	JH – The design comprises three precincts; the buildings precinct, sports recreation and wellbeing, and the agriculture precinct where students can continue to develop their links with local industry	Note
2.4	JH – The existing stand of trees to the east is maintained, and there are civic connections to the Public School and to Dangar Park	Note
2.5	JH – The entry has been moved to George Street with an approach to the east	Note
2.6	JH – The Banalba Aboriginal Learning Centre is immersed in the landscape and is a place for learning and sharing, and quiet engagement and interaction with the school	Note
2.7	JH – A covered outdoor line-up area next to the multi-purpose hall which can be open after hours and on weekends. The library can be jointly used as a community engagement centre	Note
2.8	JH – We've reached a positive solution for the kiss and drop. Students staff and visitors will arrive through a single controlled covered entrance	Note
2.9	JH – Built form is designed to a grid that can be assembled in a kit of parts and established quickly and efficiently	Note
2.10	JH – A range of engineering elements are being employed dealing with water on the site. Overland flow and drainage are key considerations of the design. Buildings will be raised above flood level which will allow for airflow. Onsite water detention will be employed	Note
2.11	AB - 20 parking spots are now showing which is more palatable to us – is there a reason that there's only 20?	Note
3	Transport Update	
3.1	GC - Current school catchment for the High School and Public School are quite different. The HS catchment is much bigger. Given that the PS is adjacent, TTW have looked at how these two will interact.	Note
3.2	GC – The HS current student enrolment is 150, with 50 staff. The PS current student enrolment is 117 with 11 staff	Note

3.3	GC - Pick up and drop off has moved to George Street. We've looked at the number of students expected to arrive at any one time. We can fit peak demand for drop off as well as the bus-bay on George Street. Teachers have said they like to be able to see the students as dropped off and picked off	Note
3.4	GC – The diagram presented shows onsite parking and loading area, and pedestrian pathways through the site	Note
3.5	GC – It is noted that Council are concerned about safety and the current parking situation on Mitchell Street and temporary and permanent management measures are proposed	Note
3.6	GC – As Mitchell Street is a TfNSW road, we are limited as to what we can do. We are in correspondence with TfNSW to see what is possible in the interim	Note
3.7	Temporary measures <ul style="list-style-type: none"> ▪ Instruct staff and parents/carers to not park on Mitchell Street ▪ Provide temporary signage to Public School facing Mitchell Street to alert them not to park there for safety reasons ▪ Provide map of alternative parking locations to staff and parents/carers 	Note
3.8	Permanent Measures <ul style="list-style-type: none"> ▪ Investigate potential for “No Stopping” zones to both sides of Mitchell Street fronting both the Public School and High School during school hours ▪ Works to form part of the wider High School project to allow for the approvals process with TfNSW ▪ Investigate potential to provide planting (for example low height shrubs) to act as a physical barrier from the kerb to the footpaths 	Note
3.9	GC - Current parking demand for the PS and HS is 60 spaces. Once the HS is open, the PS car park will be operational	Note
3.10	GC – Following feedback, car spaces have been increased to 20 which is in line with the facilities at the existing school. Sustainability is a key consideration	Note
3.11	GC - There are available street spaces that do not front residential properties on George Street. On Charles Street to the west, there are almost 30 spaces. We think this solution provides enough spaces on the site and enough spaces in total	Note
3.12	GC – Traffic and pedestrian counts are being organised to see if we meet the numbers for a warrant for a street crossing	Note
3.13	GC – The design response to SEARs feedback includes <ul style="list-style-type: none"> • Relocation of pick-up/drop-off to George Street • Temporary traffic control measures on Mitchell street • Proposed permanent measures • Increased parking on site in line with existing provision • Suitable locations for overflow parking 	Note
4	Discussion	
4.1	AB - We've got councillors asking us questions about how we're dealing with community concerns. It may become a political issue owing to the timing of the local elections as relates to this project	Note
4.2	AB – We appreciate the work that's gone into this but carpooling is not a realistic option for teachers. 20 simply isn't enough on-site spots. The existing	Note

	school is not beside a primary school nor surrounded by houses – it's a very different site	
4.3	AS - We are looking at having no on-street parking and all staff accommodated on-site	Note
4.4	GC - There are 11 staff at PS and 10 spaces. Some staff currently carpool. We can look at the driving rate we have from the travel mode survey. The number is likely to be about 45	Note
4.5	AR - Expanding the parking will affect the green space and the EFSG allocation of green space per student	Note
4.6	AB – I'm concerned with your comment that some of the teachers carpool. This is circumstantial and is unlikely to be the case in the future	Note
4.7	PY – Sustainability is a key consideration and Council has sustainability policies	Note
4.8	AB - At this stage, our Councillors are more concerned about the concerns of constituents. This could cause legacy issues for Council	Note
4.9	AR - Expansion of on-site parking will affect all of the other targets we have to meet from a planning and design point of view and it might affect the benchmarks we work with	Note
4.10	AR – Will develop 2 options for review – one that involves the full off-street parking allowance, and an option that moves towards greater sustainability	Note
4.11	AB - What is the reason we can't provide more parking?	Note
4.12	There is a vacant parcel right next to the site which could be acquired to deal with the parking	Note
4.13	GC – The design is at the stage where everything fits now, if you change one element, it impacts all others. We can be very clear in the pros and cons	Note
4.14	AB - The local government election has been pushed to 4 December. That gives this issue a platform. There are people who will be running in Wee Waa on platforms against decisions you've made. It is going to make everything harder	Note
4.15	AB – Key issues remain the location, parking, flooding etc. We would like the ability to say you've considered everything and we've got the absolute best option	Note
4.16	SI can provide options and opportunity constraints for each issue. It'd be good to understand what the councillors issues are and the sooner we know the sooner we can present something back to you	Note
4.17	AB - We've provided councillors with our SEARs response and they will be coming back to us with key issues	Note
4.18	EC – Flooding is key, as is the raising of the site, the fill material and the downstream implications for stormwater	Note
4.19	EC - Transport and police will be in our traffic committee meeting	Note
4.20	The demolition and remediation of the old site will become a political issue with the upcoming election	Note
4.21	MA – We are onboarding a structural engineer to do a comprehensive structural report for the existing site. This will take about the month	Note
4.23	AB – We want to know that the old site hasn't been left behind and that there is at least a plan to have it resolved. The State Member will continue to raise this particular issue	Note

4.26	RS – Can you give more detail on the neighbour concerned about raising the school and being overlooked	Note
4.27	EC - The councillor has raised concerns about what it will look like as well as the fill material to be used on site	Note
4.28	MA - Lyall and Associates flood consultant has all the background modelling for the whole town. That data will inform what's happening on the site and any required downstream works. In 2 weeks we'll be a lot better informed. The intent is not to impact neighbours	Note
4.30	MA – Scenarios need to be tested. We will ascertain if our project can afford it and if there's a compromise to be made with Council	Note
4.31	PY – Regarding the road blister happening just east of the site - is that because of the need for a crossing?	Note
4.32	The PS requested about 10 years ago that Blistering be put in for the residential boundary of the school	Note
4.33	AS - RMS will not want a pedestrian crossing. I do not believe you will meet the warrants required for a crossing	Note
4.35	AS – I believe any pedestrian crossing would be stopped because of the wide vehicles. I would be opposed to a pedestrian crossing because the wide vehicles	Note
4.36	AS – The National Heavy Vehicle Regulator is the federal body for heavy vehicles. They have all the information	Note
4.37	AS – Council is happy to meet with project consultants on-site	Note
4.38	MA - Lyall & Associates mentioned that possible piping improvements will be required to alleviate flooding. If there are sections Council wants to improve, now's the time to consider.	Note
4.39	RS - I'd like to thank the council for bringing forward the concerns of councillors and neighbours. We do appreciate that, thank you.	Note
5	Close	

Meeting Notes

21 June 2021

Wee Waa High School – Transport Strategy Review

Date	21/06/2021
Time	1:00pm
Location	MS Teams
Sensitivity classification	Sensitive: Standard
Attendees	<ul style="list-style-type: none">• Belinda Roberts - TfNSW• David Vant - TfNSW• Matthew Arnett – SINSW• Grace Carpp - TTW

Meeting Notes

KEY FEEDBACK & DISCUSSION POINTS

- TfNSW: Crossings must be supervised
- TfNSW: On site parking not enough, community use and event parking, parent parking etc
- TfNSW: Kiss n drop preferred off Mitchell Street

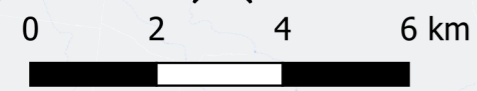
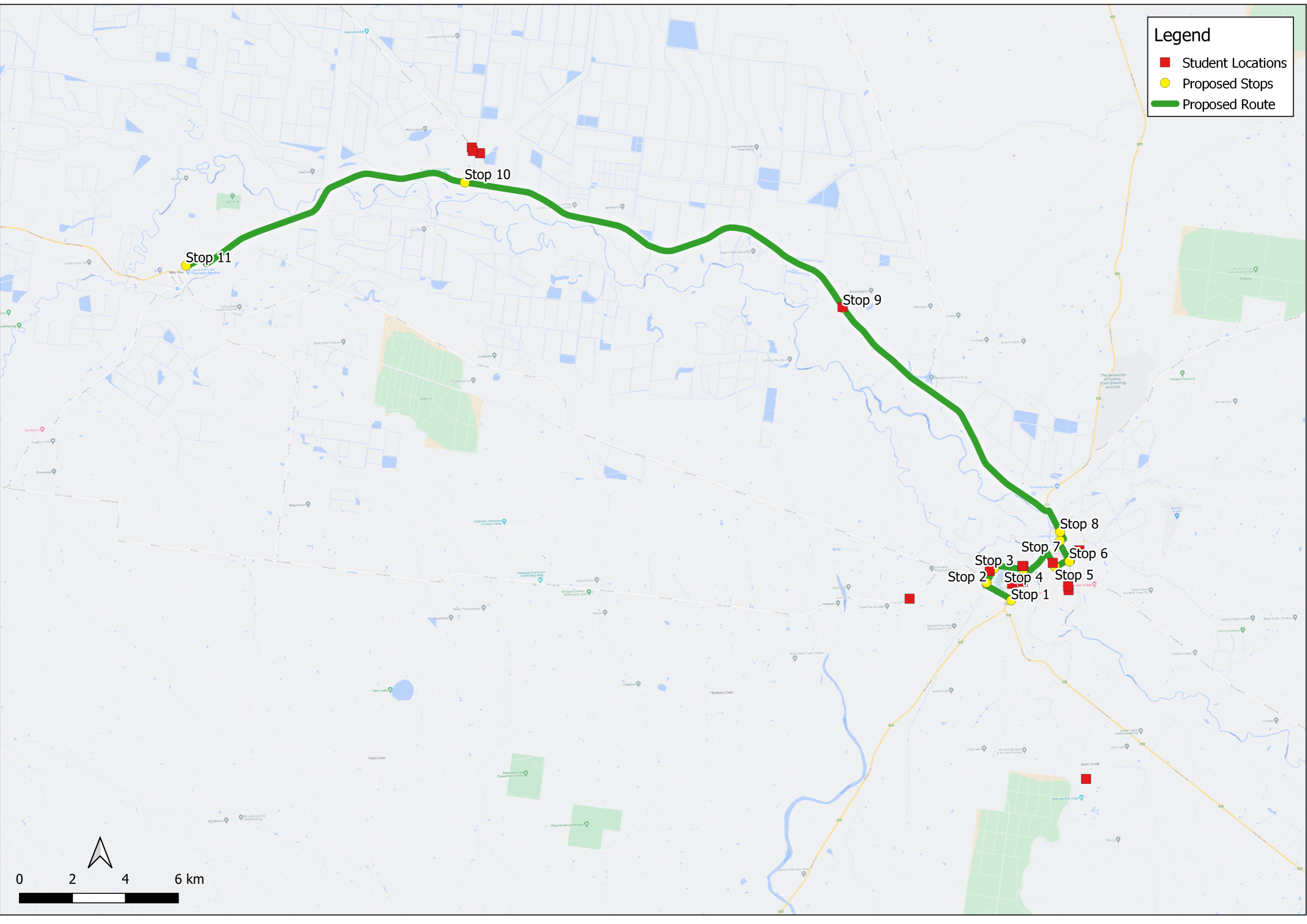
- TfNSW will be on site 26th 2:30pm and would like to have an SI rep present
- TfNSW will attend traffic committee meeting at same time
- TfNSW will get freight numbers
- TTW to get traffic numbers from council.
- Gave ok to Belinda to bring in bus company to talk about changing contract, Bus company requests change, TfNSW approved.
- TTW: Can provide traffic count in 3 weeks.
- TTW / SINSW: Provide rough numbers crossings between PS/HS per day

Appendix D

Proposed Bus Routes

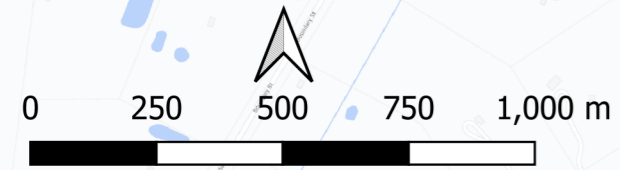
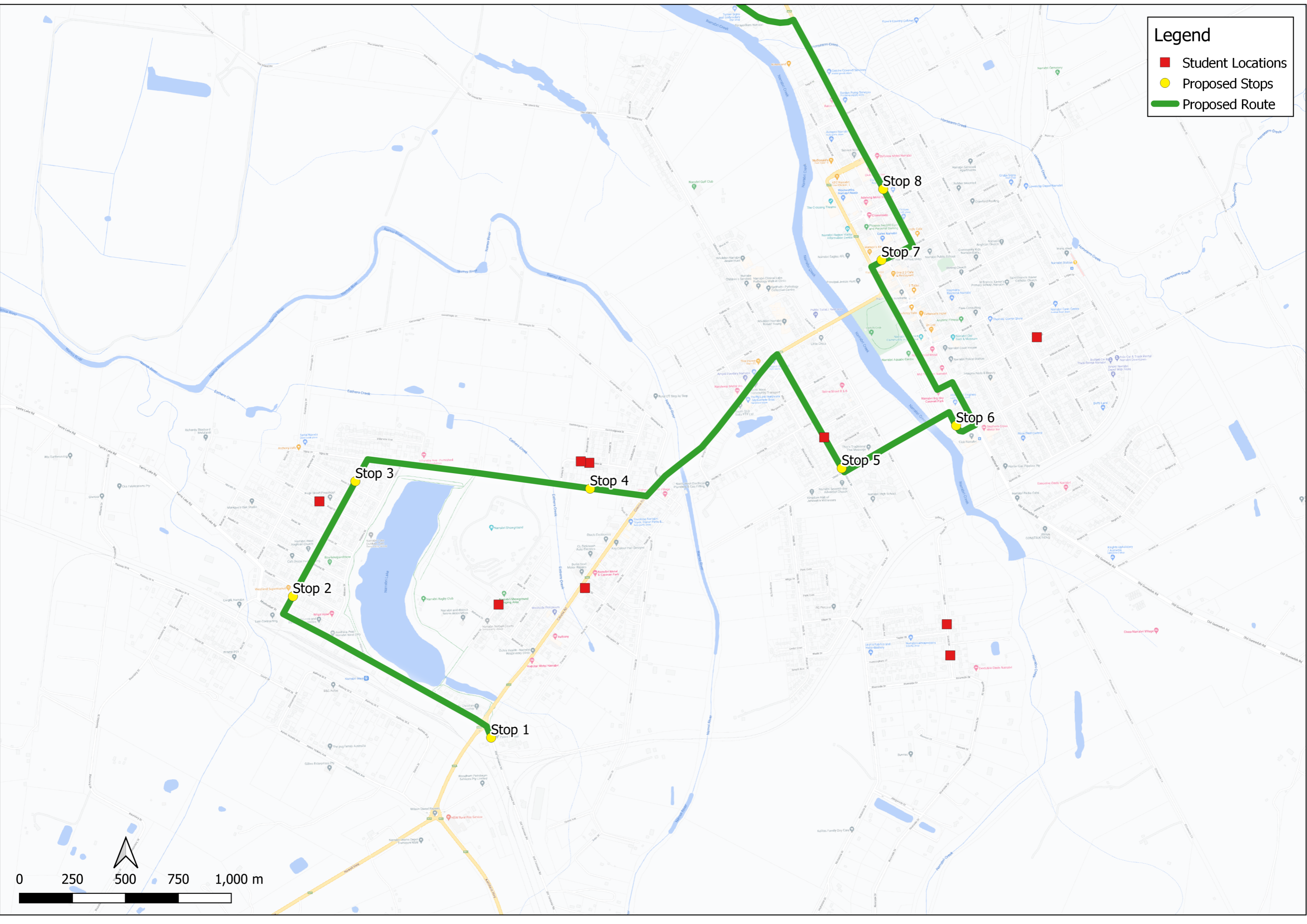
Legend

- Student Locations
- Proposed Stops
- Proposed Route



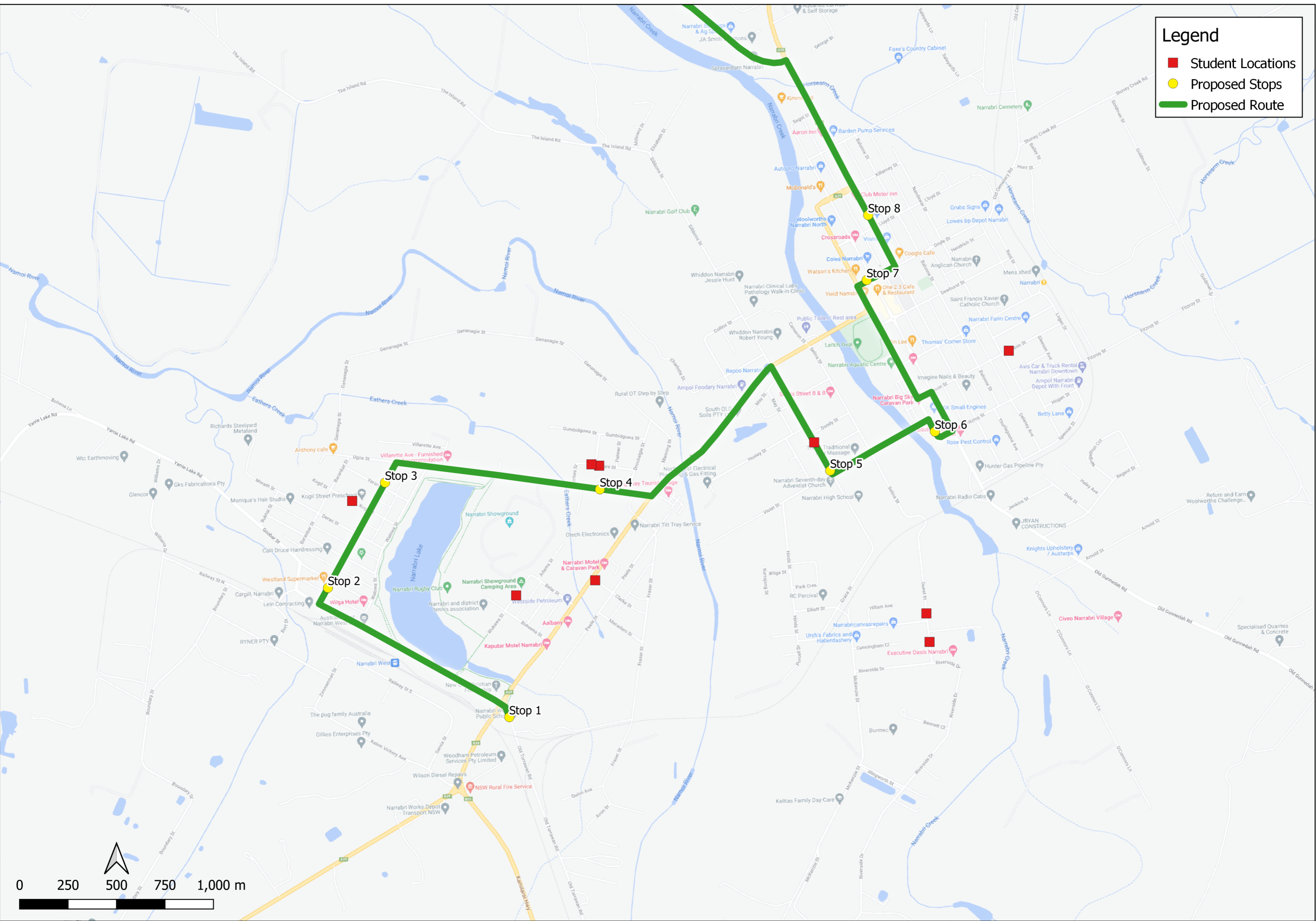
Legend

- Student Locations
- Proposed Stops
- Proposed Route



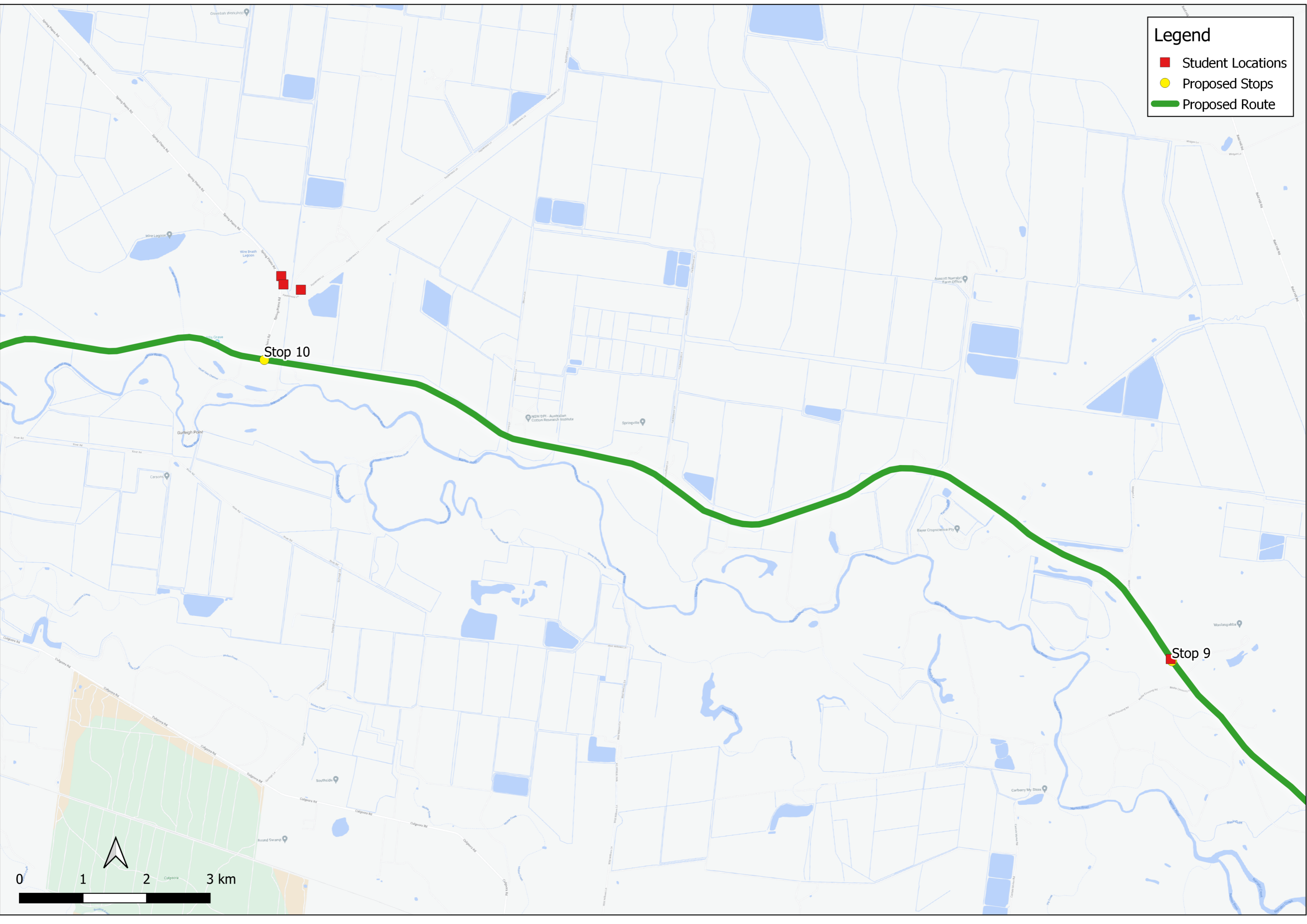
Legend

- Student Locations
- Proposed Stops
- Proposed Route



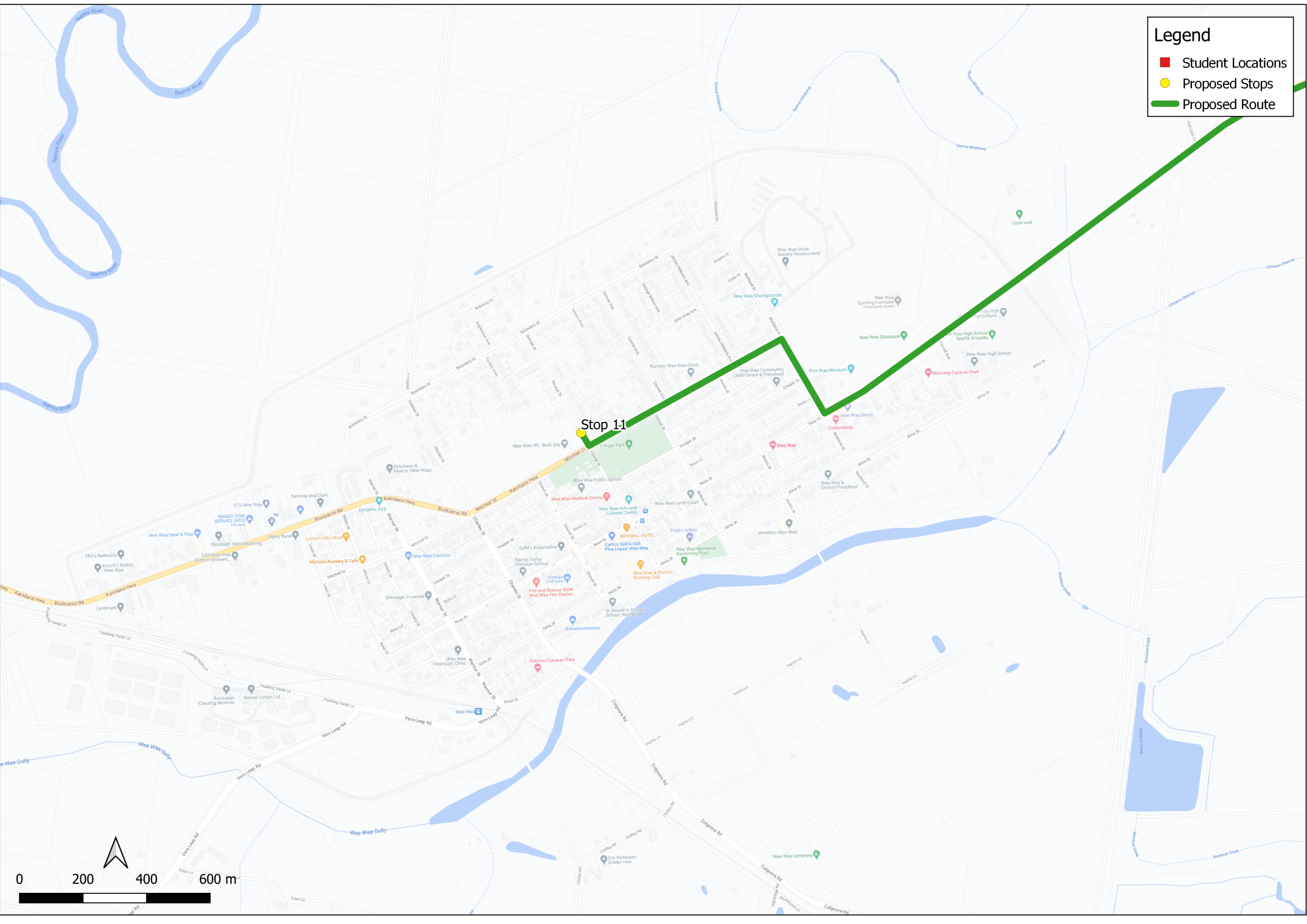
Legend

- Student Locations
- Proposed Stops
- Proposed Route

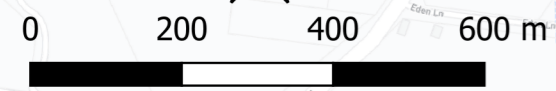


Legend

- Student Locations
- Proposed Stops
- Proposed Route



Stop 11



Appendix E

CV of Key Personal



Ammar Ahmed

Engineer, Traffic

BEng (Hons) in Civil Engineering

ammar.ahmed@ttw.com.au

Experience

2022 - Current
Traffic Engineer, TTW

During his tenure at TTW, Ammar has actively participated in numerous traffic engineering projects spanning diverse sectors, including education, health, commercial ventures, art facilities and community initiatives.

His expertise extends to the design development of car parks and various traffic elements, encompassing traffic data analysis, loading docks, and pick-up and drop-off bays. This proficiency extends to addressing intricate and project-specific requirements.

Ammar possesses valuable experience in preparing comprehensive traffic impact assessments, construction traffic management plans, school transport plans, and green travel plans across a variety of projects types, notably in the domains of schools, hospitals, and community facilities. His knowledge extends to intersection modelling and traffic data analysis, and he is proficient in utilising various software programs, including AutoTURN, AutoCAD and SIDRA

Education

UNE Tamworth Campus
Brigidne College
St Vincent's College
University of Sydney
Jerrabomberra HS stage 2
Wee Waa HS
Meriden School

Health

Bathurst Hospital

Residential + Accommodation

Wahroonga Estate Stage 3
Boarding House Project for Loreto

Commercial

NEXTDC 54 Data Centre

Community + Public

Uniting Edinglassie
Mt Druitt Hub
Barangaroo Cutaway Fitout



Grace Carpp

Associate

BE(Hons) Road Safety Auditor (Level 1)

grace.carpp@ttw.com.au

Experience

2021 – Current
Associate, TTW

2019 – Current
Senior Traffic and Civil Engineer, TTW

2015 – 2019
Traffic and Civil Engineer, TTW

Grace is part of TTW's Senior Management team and is experienced in both civil and traffic engineering as well as Road Safety Auditing, leading to solutions that are integrated and consider user safety in all aspects of design. Her experience extends across a number of sectors and regions with a particular focus on Education and Health projects. With a focus on project planning, Grace works collaboratively with the consultant design team to establish key design criteria early in the project planning process prior to these becoming critical items.

Hospitals

Cowra Hospital Redevelopment
Bathurst Hospital Redevelopment
Hornsby Ku-ring-gai Hospital Redevelopment
Lismore Base Hospital
Goulburn Hospital and Health Services Redevelopment
Bulli Aged Care Centre of Excellence
Campbelltown Hospital Multi Storey Car Park
Wyong Hospital

Aged Care

Uniting Edinglassie ILU and RACF
Schofields Age Exclusive Village
Uniting Epping ILU and RACF
Sir Moses Montefioe Jewish Home
Opal Fernleigh

Schools

St Vincents College
Meriden School
Edmondson Park High School
Brigidine College
Oxford Falls Grammar School
Knox Preparatory School
Wee Waa High School
St Catherines School
Murrumbidgee School
Willoughby Public School
Willoughby Girls High School
Russell Lea Infants School
Loreto Normanurst Early Learning Centre
Ravenswood
Barker College Master Plan

Arts & Culture

Australian Museum Master Plan
Museum of Applied Arts and Sciences
Western Sydney Performing Arts Centre
Mosman Civic Centre

Public Infrastructure

Macquarie Park Innovation Precinct
Edmondson Park North and South Commuter Car Parks
Leppington Commuter Car Park
Bondi Surf Bathers Life Saving Club
Brookvale Oval
City of Sydney Small Parks
Wombeyan Caves Precinct Plan
Young Street Plaza
Mittagong Station Transport Access Program
Hughes Street Car Park
Edgecliff Station Transport Access Program
T Way Cycleway Stage 2
Kevin Betts Stadium

Universities

TAFE Gosford Campus
CSU Port Macquarie
UOW Molecular Life Sciences Building Master Plan
UOW Arts and Social Sciences Building
UNSW Electrical Engineering Building Capital Renewal and Modernisation Project
UNSW Sciences and Engineering Building

Commercial

MADE Marrickville
Wicks Park Mixed Use
Rosenthal Avenue Redevelopment

Residential

Wahroonga Estate
Lotus Apartment
Elara Medium Density Stages 10 and 11
9A 9B Green Square
Spencer Street Rose Bay



Paul Yannoulatos

Technical Director

BE(Hons) Grad Dip LGE CPEng NER

paul.yannoulatos@ttw.com.au

Experience

1996 – Current
Technical Director, TTW

1989 – 1996
Executive Engineer - Chief Engineer,
Botany Bay Council

1980 – 1989
Snr Design Engineer, Waverley
Municipal Council

1979 – 1980
Surveying Engineer, Denny Linker &
Co

1978 – 1979
Engineer Surveyor, Panos
Constructions Pty Ltd

Technical Director of Civil and Traffic Engineering at TTW, Paul Yannoulatos has a fervent approach to every project. His work is informed by his experience as a surveyor in local government before he transitioned to engineering in 1980. With 20 years at TTW, Paul's dedication has grown the TTW Civil and Traffic division to be a major player in NSW.

His expertise extends across a folio of sectors including industrial, commercial, education, government projects, expert witness, healthcare, public buildings, parks, residential, subdivisions, traffic and transportation.

Paul has outstanding long-term relationships with both the private and government sectors and has a collaborative approach to ensure that clients receive the target civil and traffic solution.

Accommodation

46 George Street, Sydney
Esplanade Norwest
Abbotsford/Concord – Department of
Housing accommodation
Crown on Palmer, Townsville
Shell Cove Precinct 2
UNSW – Kensington and Coogee
Colleges, Student Accommodation

Retail

Charlestown Square Shopping Centre
Gateway Plaza, Circular Quay
Lake Macquarie Fair Shopping Centre

Education

Gosford TAFE
CSU Wagga Campus civil and traffic
CSU National Life Sciences Hub
CSU Port Macquarie
USyd Darlington Public Domain
USyd Nanoscience
USyd St Paul's College
Loreto Normanhurst
Meridan School
Rydalmere Education Campus
Cumberland High School
Marsden Park High School
The Kings School
UNSW Bioscience Renewal
UNSW – Scientia (Great Hall), Dalton
Upgrade

Art + Culture

ANZAC War Memorial – new café and
car park
Luna Park – café, carpark and circus
tent
Sydney Football Stadium
Barangaroo Cutaway
National Art Gallery Melbourne

Commercial

Baxter Road Hotel Mascot
Revesby Workers Club
Resmed, Norwest Business Park and
Carpark
Riverside Corporate Park

Government + Public

Ryde Central
Lane Cove Council – River Road
improvement
City of Canada Bay Council – Blaxland
Road Marina
Warringah Council – traffic calming
NSW Department of Justice – Newcastle
Courthouse
Parramatta Museum
Taronga Zoo – Eco Retreat, Asian Exhibit
Merrylands Civic Square
Riverstone Village Masterplan
Sydney City Council – Small Parks projects
Queens Square Law Courts

Sports + Leisure

Dee Why Multipurpose Sports Centre
Strathfield Golf Course
Sydney Grammar Prep School, multi-
purpose sports court
Abbotsleigh School - multi-purpose sports
hall and hockey fields
Royal Sydney Golf Club
Land Cove Sports Centre

Paul Yannoulatos

What is so great about Civil and Traffic engineering?

It's a bit of everything. In these disciplines we get involved in a project very early in the master-planning phase so are able to develop a strong relationship with the client. I enjoy the planning, creativity and being able to influence and advise on a project to achieve the desired result.

Healthcare + Research

Southern Cross Care, Turramurra
Hammondcare - Cardiff, Miranda and Nerringah
UnitingCare - Belrose, Edinglassie Village
Allity Aged Care, Pemulwuy
Catholic Healthcare, Gorman Hill Bathurst
Estia Health - St Ives Development
Cardinal Freeman Village
Northern Beaches Hospital Masterplan
Hornsby Hospital
Newcastle Strategy – John Hunter, Belmont and Mater Hospitals
Royal Prince Alfred
Campbelltown Hospital
Wyong Hospital
Sutherland Hospital
The Tweed Hospital, Tweed Heads
Shoalhaven Hospital
Cowra Hospital
Bathurst Hospital

Accessways + Car Parks

TfNSW – Commuter Carparks – Blacktown, St Marys, Warwick Farm and Seven Hills
Sydney Port Operations at Port Botany
Macquarie University
Science and Humanities Campus, Canberra
Sanitarium Private Hospital
Nepean Hospital
American Embassy
Sydney Uni Carparks

Flood Mitigation

Dunmore Equestrian Centre – flood study
Flood Relief Villages – Ballina Coraki

Subdivision + Infrastructure

Berkeley Road, Wollongong – Industrial 20 lots
Dover Heights - residential 10 lots
Market Drive, Homebush – business 6 ha
IBC Technology Estate – commercial 8.5 ha
Endeavour Enterprise Taren Point - industrial 25 ha

Traffic and Transport

Transportation Study – Westmead Hospital Master Plan
Sydney Airport Ground Transport Interchange and Hotel
Wagga Wagga Transportation and Traffic Study
North Sydney CBD Access Study
Redfern Traffic Management Scheme
Ryde Traffic Management Study
Liverpool CBD – 40km/hr study
Camden Town Centre
St Vincent's Research and Biotechnology Precinct
Kings Avenue Bridge, Canberra
Balfour Park
Woolwich Function Centre
La Perouse – Loop road and park improvements
Ravenswood School for Girls
TfNSW – Commuter Car Parks - Blacktown, St Marys, Warwick Farm, Seven Hills, Granville