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Transport and Access Impact Assessment
Lismore South Public School – Flood Recovery Rebuild

Rev 05.1

Quality Assurance

Project Details

Project	Transport and Access Impact Assessment for Lismore South Public School Flood Recovery Rebuild		
Project Reference	P2305	Contract Number	DDWO05289-23
Client	Department of Education	ABN	40 300 173 822
Prepared by	Crossley Transport Planning	ABN	18 632 881 602

Document Revision Register

Revision	Status	Prepared By	Checked By	Approved By
01	First release – 100% Schematic Design (29/11/24)	Kevin Nathaniel Sharon Chungpattana	Jennifer Chen Adrian Vuong	Stephanie Crossley
		Kevin Nathaniel S.Chungpattana	J Chen	Stephanie Crossley
		29/11/2024	06/12/2024	06/12/2024
02	Second Release – SIDRA Analysis	Jennifer Chen	Adrian Vuong	Stephanie Crossley
		J Chen		Stephanie Crossley
		09/01/2025	10/01/2025	10/01/2025
03	Third Release	Sharon Chungpattana	Jennifer Chen	Stephanie Crossley
		S.Chungpattana	J Chen	Stephanie Crossley
		17/02/2025	20/02/2025	20/02/2025
04	Fourth Release	Jennifer Chen	Jennifer Chen	Stephanie Crossley
		J Chen	J Chen	Stephanie Crossley
		21/02/2025	21/02/2025	21/02/2025
05	Fifth Release – Public works	Stephanie Crossley		Stephanie Crossley
		Stephanie Crossley		Stephanie Crossley
		16/05/2025		16/05/2025
05.1	Sixth Release – Updated site plans	Sharon Chungpattana	Stephanie Crossley	Stephanie Crossley
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		04/06/2025	04/06/2025	04/06/2025

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Glossary and abbreviations

Term	Description
Background growth	The amount of additional traffic that is expected from natural growth in population or employment size and any planned developments.
Catchment	A defined area based on criteria that can be used to understand how far people can travel.
Depersonalised data	Refers to student-related information that has been processed to remove or obscure personally identifiable details, ensuring that individual students cannot be directly identified.
Development control plan (DCP)	A document that provides detailed planning and design guidelines to support the planning controls in the Local Environmental Plan developed by a council.
Existing school site	The existing school site refers to the location of the school before the floods occurred and can be known also synonymously as the future site.
Future / proposed school site	The future / proposed school site refers to the location of where the redevelopment of the school is occurring and can be known also synonymously as the existing school site.
Hands-up travel survey	A classroom survey where teachers list transport options, and students raise their hands to indicate their travel mode for that day. The total responses are counted to determine the school's mode share, with all classes surveyed on the same day.
Kiss and drop zone	This refers to a designated area that allows for parents to stop whilst in their vehicle to pick up or drop off their child to school without obstructing traffic flow.
Mode share	Mode share refers to the percentage share of students or teachers walking, cycling, catching public transport or being driven to and from school.
Notional catchment	The notional catchment represents the maximum theoretical area that can be covered using a straight-line distance.
Principal's questionnaire	A series of questions were provided to staff by the council which recorded how they travelled to school on a daily basis.
Road user movement (RUM)	A code that corresponds to a specific action or behaviour of a road user in a crash.
Shared path	A shared path is a designated pathway that is intended for use by multiple modes of transport, typically pedestrians and cyclists. These paths are usually separated from motor vehicle traffic and designed to accommodate both walking and cycling safely.
School Student Travel Scheme (SSTS)	The SSTS is a program that gives school students free or subsidised travel between home and school on NSW public transport including trains, buses, ferries and light rail. The exclusion zone refers to the area where people live that is deemed ineligible to receive free or subsidised travel.
T&I SEPP	Refer to the State Environmental Planning Policy (Transport and Infrastructure), 2021.
Temporary school site	Temporary school site refers to the temporary learning facilities located next to Lismore South Public School. Teachers and students are currently

Term	Description
	using this school site while Lismore South Public School is being reconstructed.
Traffic management	This refers to traffic signs and road markings which control or direct the operation and behaviour of people and vehicles. For example, this includes measures like speed limits, street parking restrictions and pedestrian crossings.
TAIA	Transport and Access Impact Assessment

Executive Summary

Introduction

This Transport and Access Impact Assessment (TAIA) has been prepared to support the Review of Environmental Factors (REF) for the Upgrade to Lismore South Public School (LSPS). The purpose of this assessment is to evaluate the existing transport conditions, potential traffic and transport impacts, and any necessary mitigation measures resulting from the proposed school upgrades.

The activity will be carried out at Lismore South Public School (LSPS) located 69-79 Kyogle Street, South Lismore (the site).

Purpose

The purpose of this TAIA is to evaluate the potential impacts of the proposed activity on the surrounding road network, traffic conditions, and transport infrastructure. The TAIA specifically assesses changes in vehicular movement, pedestrian and cyclist activity, parking demand, and public transport accessibility as a result of the activity.

Traffic and Transport Assessment

The proposed activity has been assessed for its potential traffic and transport impacts, with a focus on:

a) Existing Traffic Conditions

- The school is currently served by a local road network, including Kyogle Street, Wilson Street and Phyllis Street.
- The school's main access points and pedestrian movements have been reviewed in relation to these roads.

b) Proposed Works

Transport-related works include:

- provision of a bike parking facility on the school site.
- Formalisation of the kiss-and-drop zone on Kyogle Street, including installation of one No Parking sign (with agreed operational hours) and posts at either end of the zone.
- Removal of the existing non-compliant accessible parking bay on Kyogle Street, with accessible parking relocated internally on the school site.
- Pavement adjustments on Kyogle Street to accommodate turning movements for waste vehicle.
- Targeted fencing modification on the northern footpath of Kyogle Street. It is recommended to remove the fencing panels alongside the most easterly kiss-and-drop bay to enable safe and direct footpath access for alighting students. The remainder of the fencing should remain intact to direct children to cross at the children's crossing.
- The proposed activity includes provisions for 26 off-street parking spaces for the school and childcare facility. This is 7 more parking spaces than the current school site.

c) Public Transport and Active Transport

- The school remains well-served by public transport.

- Provision of 38 bike parking spaces (19 bike racks) within the school site to support cyclists.

Conclusion

The outcomes of this traffic and transport assessment confirm that:

- The proposed activity does not alter the approved student enrolment capacity of 230 students. While improved facilities may contribute to increased enrolments over time, enrolment growth is not dictated by this activity.
- As a precautionary check, the assessment considered potential changes in traffic volumes by comparing existing enrolment numbers (133 students) to the approved capacity (230 students). This analysis determined that full capacity operation could generate up to 144 additional vehicle trips during the AM peak and 153 additional vehicle trips during the PM peak compared to existing traffic flows.
- Based on the assessment of existing conditions and the potential for full capacity operation, the additional traffic generated is not expected to impact the surrounding road network.
- Public transport services will remain unchanged.
- Parking arrangements will be improved, including the provision of a formalised kiss-and-drop zone on Kyogle Street and an increase in on-site parking spaces.

Based on the assessment of existing conditions and the nature of the activity, the level of traffic generated by the activity will not impact on the surrounding road network. No further traffic impact analysis or mitigation measures are required.

Recommendations

As the assessment has identified no detrimental impacts on the transport network, no mitigation measures are required.

To support the detailed design, approvals, and operation of the school during construction stages and transition back to the site, the following actions are recommended.

- Enact the School Transport Plan to manage demand and encourage sustainable transport behaviours.
- Update the Transport Access Guide (TAG) to reflect adjustments to kiss and drop, parking, bike parking and bus services at day of opening.
- A Construction Traffic Impact Assessment (CTIA) and Construction Traffic Management Plan (CTMP) should be prepared during the detailed design to assess and manage construction-phase traffic impacts on the surrounding road network.

1 Introduction

1.1 Background

Crossley Transport Planning (CrossleyTP) have been commissioned by Department of Education (DoE) to prepare a Transport and Accessibility Impact Assessment (TAIA) for Lismore South Public School (LSPS). The existing LSPS site was damaged during the 2022 flooding, and students and staff are currently being temporarily accommodated on the adjacent sports field. The proposed activity involves rebuilding the school on its existing site, located at Phyllis Street and Wilson Street.

This TAIA has been prepared to support a Review of Environmental Factors (REF) for the rebuilding of Lismore South Public School (the activity). The purpose of the REF is to assess the potential environmental impacts of the activity as prescribed by State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP). This activity is classified as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The activity will be undertaken in accordance with Chapter 3, Part 3.4, Section 3.37 of the T&I SEPP.

The activity will be carried out at Lismore South Public School (LSPS) located at 69-79 Kyogle Street, South Lismore (the site).

The purpose of this report is to assess the traffic and transport impacts generated by the redevelopment of Lismore South Public School at its existing site.

1.2 Site overview

The site, located at 69-79 Kyogle Street, South Lismore, consists of two separate land parcels situated on either side of Wilson Street. The proposed activity will be undertaken on the eastern parcel, where most of the school's existing structures are located. The western parcel contains sports fields and temporary learning facilities. **Figure 1-1** outlines the school's boundary, covering approximately 2.5 hectares. Due to flood damage, the existing buildings on the eastern parcel are currently unused, and students are temporarily using facilities on the sports field and oval, located on the western side of Wilson Street, adjacent to the primary school.

Figure 1-1: Aerial Image of site (Source: Nearmap)

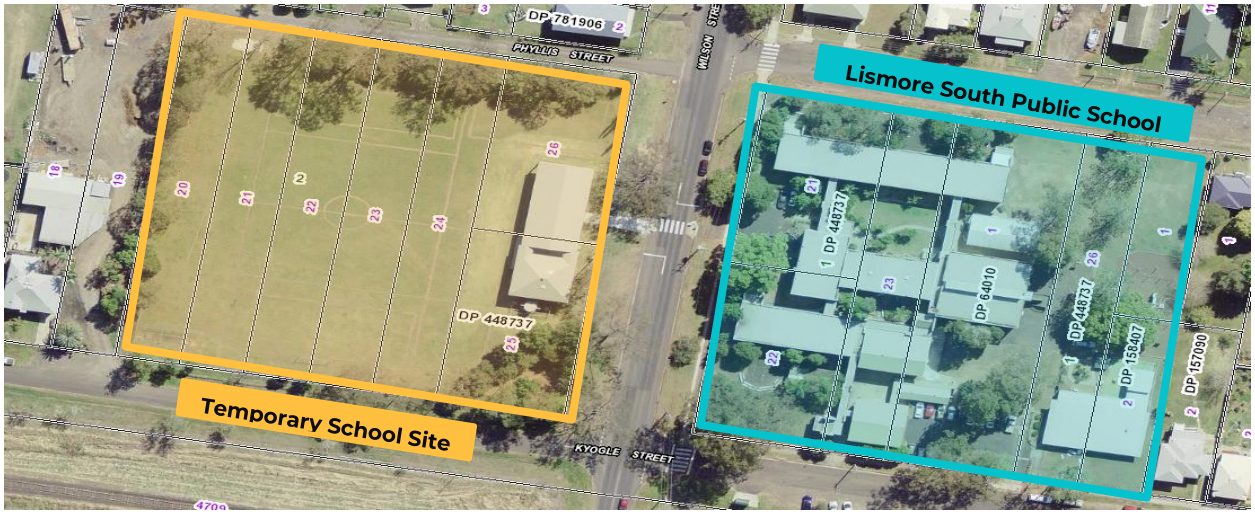


Figure 1-2: Breakdown of parcels by allotment (Source: Sixmaps)

The temporary school site and the proposed activity that is planned on the existing school site is legally divided into 15 different allotments which are visualised in **Figure 1-2** and listed within **Table 1-1.**

Table 1-1: Breakdown of parcels by allotment

Eastern Parcel	Western Parcel
• Lot 21, Section 1, DP448737 • Lot 22, Section 1, DP448737 • Lot 23, Section 1, DP448737 • Lot 1, DP64010 • Lot 26, Section 1, DP448737 • Lot 1, DP158407 • Lot 2, DP158407	• Lot 20, Section 2, DP448737 • Lot 21, Section 2, DP448737 • Lot 22, Section 2, DP448737 • Lot 23, Section 2, DP448737 • Lot 24, Section 2, DP448737 • Lot 25, Section 2, DP448737 • Lot 26, Section 2, DP448737

The site is bounded by Kyogle Street to the south and Phyllis Street to the north, surrounded by residential lots to the east and west. The site sits near the convergence of Leycester Creek (530m north of the school) and the Wilsons River (720m east of the site).

1.3 Scope of work

The assessment involved a review of transport and traffic conditions surrounding the school, focusing on:

- Traffic movements in the vicinity of Lismore South Public School.
- Parking demand and availability for staff and students.
- Pedestrian and cyclists access, including current infrastructure and future improvements.
- Public transport connectivity, including student reliance on bus services.
- Cumulative impacts from planned developments and transport upgrades.

To inform the assessment, the following tasks were undertaken:

- A site inspection held on 22nd February 2024 to observe existing traffic patterns, pedestrian and cyclists movements, and public transport accessibility.
- A student hands-up travel survey conducted on 27th November 2023 capturing mode share data.
- A crash analysis interrogating the most recent five-year record for the period 1st January 2019 – 31st December 2023.
- An analysis of student behaviour, including:
  - The number of enrolled students who live within 400 metres of a bus stop with services to the school.
  - The proportion of students with a reasonable walking and cycling distance of the school.
  - The number of students eligible for a free school travel pass, based on living more than 2.3 kilometres from the school gate (see **Figure 1-3**).

This assessment will also evaluate the traffic impact resulting from the additional trips generated by the increase in students and staff expected to travel to the school in the future.

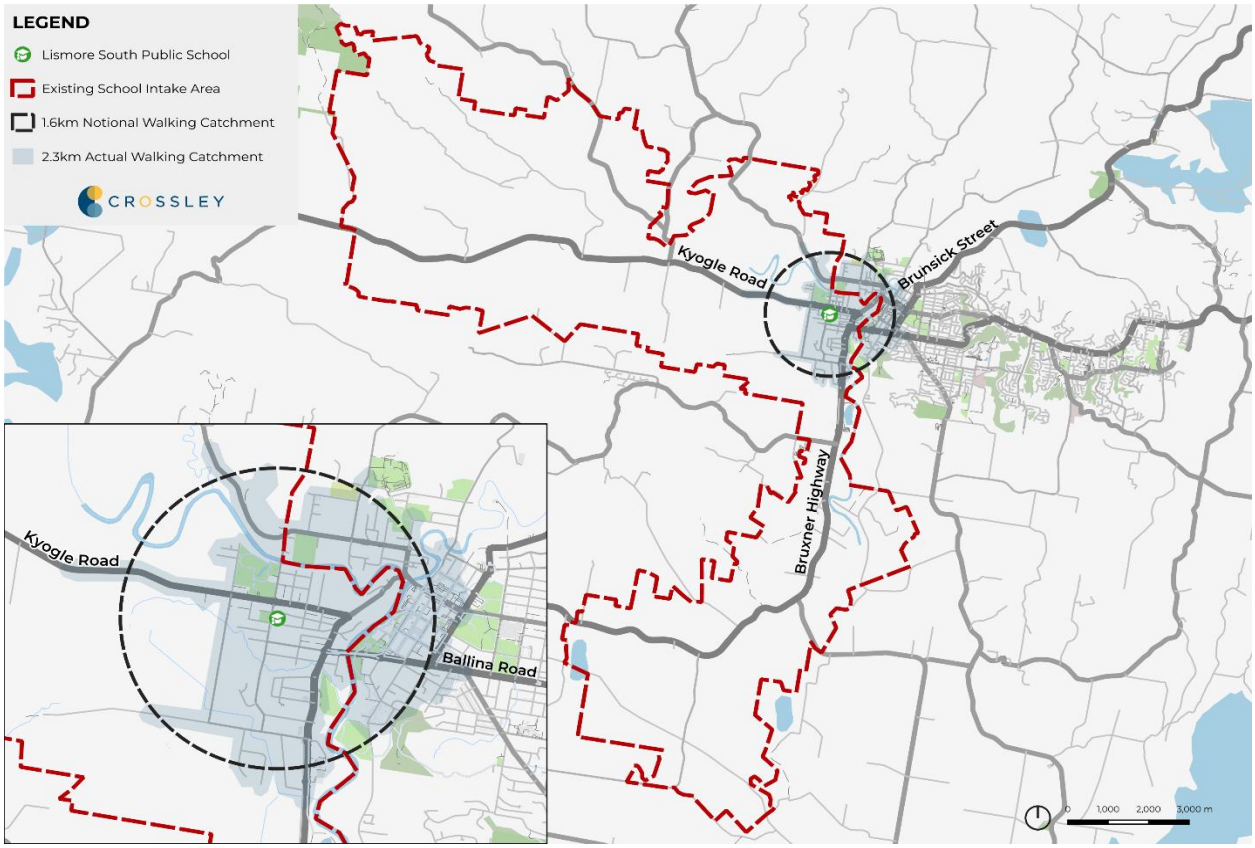


Figure 1-3 Lismore South Public School study area (Source: CrossleyTP, 2024

1.4 Consultation and stakeholder engagement

The development of this TAIA included consultation with Lismore City Council and Transport for NSW (TfNSW) via the Transport Working Group (TWG), which met on Tuesday 18th June 2024. The purpose of the consultation was to:

- Understand the proposed works around the school and identify any relevant changes to the surrounding transport network.
- Assess cumulative impacts from nearby planned developments and infrastructure upgrades that could influence traffic, parking, and active transport movements in the area.

Findings from these discussions have been integrated into the assessment to ensure the traffic and transport evaluation aligns with broader council and state transport planning objectives.

1.5 Policy context

A review of relevant local and state government policies was undertaken to ensure alignment with broader transport and planning strategies. The following documents were reviewed in relation to traffic and transport:

- Inspire Lismore 2023 – Local Strategic Planning Statement (LSPS)
- Lismore Growth and Alignment Strategy 2022
- Lismore Walking, Cycling and Micromobility Strategy 2024-2034
- Lismore City Council Development Control Plan
- NSW Walking Space Guide

The policy review identified the following planned works in the vicinity of Lismore South Public School:

- Lismore Walking, Cycling and Micromobility Strategy 2024-2034: This strategy includes the Northern Rivers Rail Trail (NRRT), a proposed 130km recreational walking and cycling trail within the disused rail corridor from Casino to Murwillumbah. Access to the NRRT is provided at Wilson Street around 50 metres from the school via the existing shared path. The NRRT will provide a traffic free east-west cycle route to the school.

2 Existing Conditions

This section provides an overview of the current transport and travel conditions surrounding LSPS. The assessment considers existing travel behaviour, active and public transport accessibility, private vehicle use, and parking availability to provide context for the activity.

2.1 Existing travel behaviour

A hands-up travel survey was conducted on Monday 27th November 2023 to capture the existing travel behaviour of students and staff attending Lismore South Public School. There are currently 133 students collectively enrolled in the primary school and pre-school and 94 students participated in the survey at the temporary school site.

The hands up travel survey results are summarised in **Table 2-1**.

Table 2-1 Existing travel to school mode share

Travel Mode	Morning Usage				Afternoon Usage				Average Mode Share Split between AM and PM peak for all students	
	Preschool Students		Primary Students		Preschool Students		Primary Students			
	#	%	#	%	#	%	#	%	#	%
Walk	1	11	10	12	1	11	9	11	**11**	**12**
Bicycle (or other wheeled toy) incl. scooter	2	22	4	5	2	22	2	2	**5**	**5**
Public Transport (bus)	0	0	24	29	0	0	24	28	**24**	**26**
Car Passenger (includes car parked nearby, pick up and drop off)	6	67	46	55	6	67	50	59	**54**	**57**
TOTAL	**9**	**-**	**84**	**-**	**9**	**-**	**85**	**-**	**94**	**-**

The survey results showed that there were either negligible to no differences for travel mode choice between the AM and PM meaning people are likely to be travelling in the same way to/from school. As a result, the average mode share split for the entire temporary school site indicated a large share of students and parents travel to school by car as a passenger (57%), with the second largest share of trips via public transport (26%). Walking and cycling are the least common modes at 12% and 5% respectively.

A separate principal questionnaire was conducted in February 2024 where it was found that 100% of staff travel to and from school by car. The questionnaire did not distinguish between part-time, full-time and volunteer staff.

2.2 Active Transport

2.2.1 Walking

The pedestrian network surrounding Lismore South Public School is limited, with an absence of footpaths directly adjacent to the temporary school site. The footpaths that are available are located on the northern side of Casino Street, eastern side of Wilson Street and northern side of Kyogle Street. This means there are large gaps within the existing footpath network that prevent students and the wider community from having a continuous connection to and from the school. The shared path on Wilson Street and Kyogle Street connects to the pedestrian entry gates located on the western and southern side of the existing school site.

Pedestrians typically travel on foot for distances up to 1.2 kilometres to reach their destinations which corresponds to approximately a 15-minute walk. **Figure 2-1** illustrates the pedestrian network and the 15-minute walking catchment around the existing and temporary school sites.

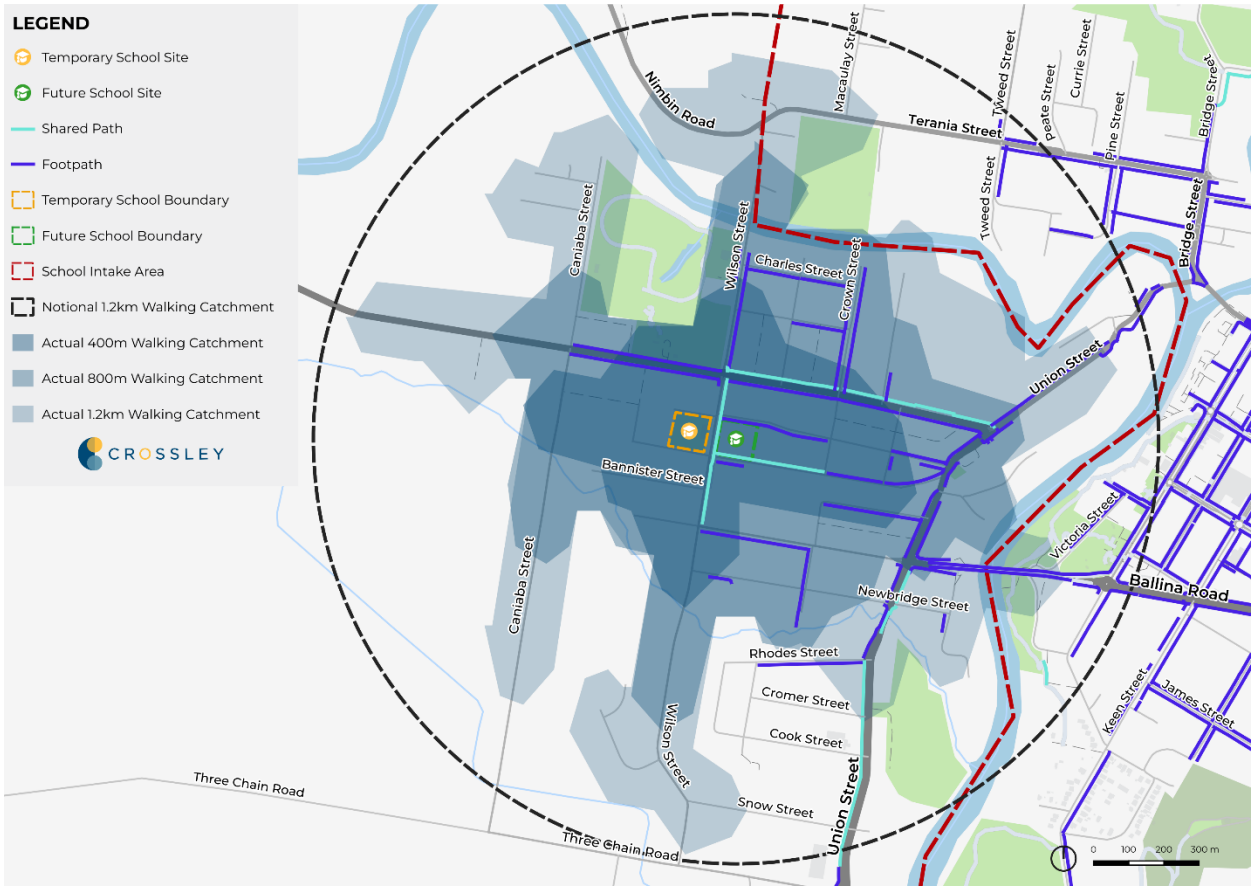


Figure 2-1: Walking catchment (Source: CrossleyTP, 2024)

A notional walking catchment defines the maximum service area accessible by foot through a straight-line (crow-flies) analysis, whereas the actual walking catchment represents the maximum area accessible via the existing footpath network.

The discrepancy between the notional and actual walking catchments showcases that the pedestrian has low permeability with large block sizes at times.

Crossing facilities are essential for ensuring comfortable and safe pedestrian journeys. **Figure 2-2** provides a visual representation of all crossing facilities around the school site.

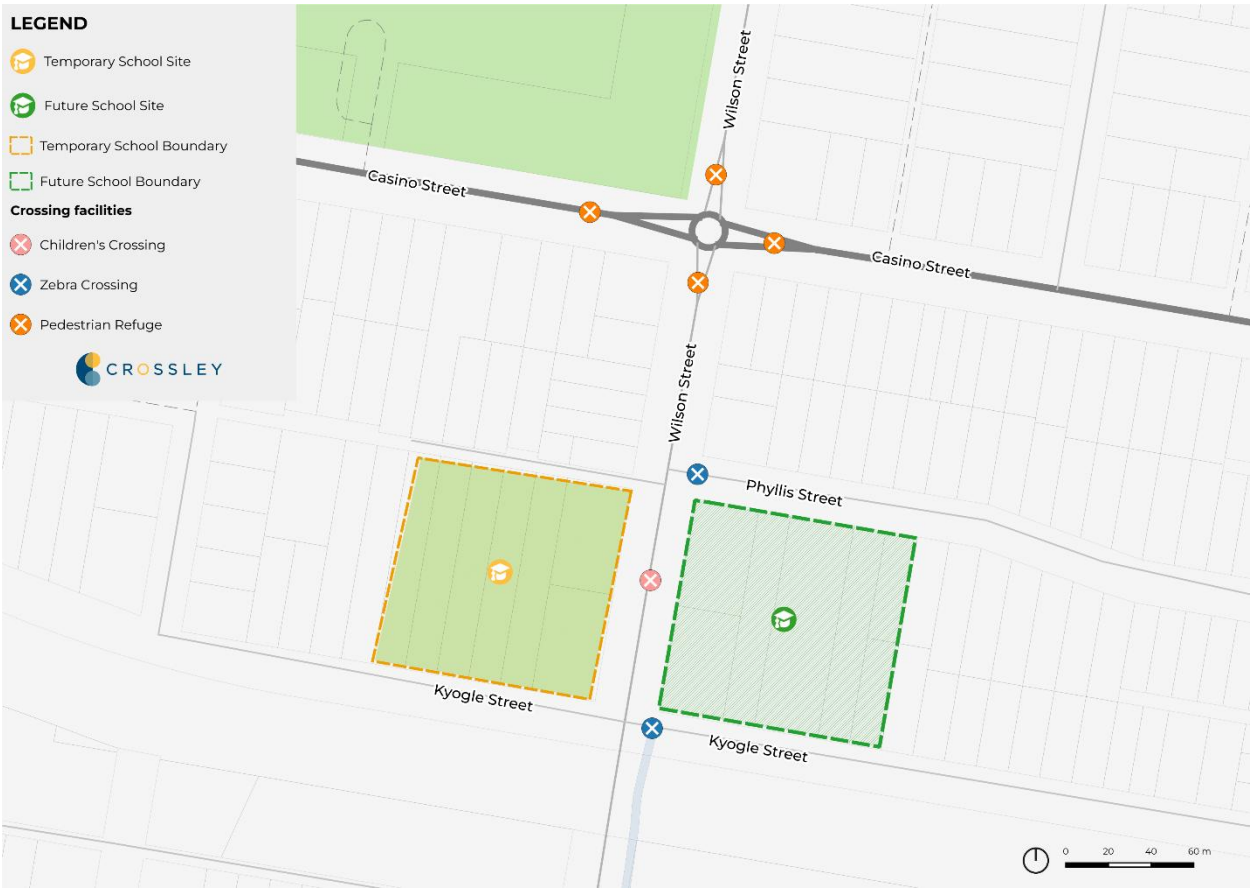


Figure 2-2: Crossing facilities around the temporary and future school sites (Source: CrossleyTP, 2024)

Pedestrian refuges are located on all legs of the Casino Street / Wilson Street intersection and only at the eastern leg of the Wilson Street / Phyllis Street intersection. A school crossing that is operational exclusively during school zone hours (i.e. the crossing is supervised to ensure the safety of children crossing) is provided along Wilson Street in front of the school. Zebra crossings are located on the eastern leg of both the Wilson Street / Phyllis Street intersection and Wilson Street / Kyogle Street intersection to help students cross side-streets.

Figure 2-3: Children's crossing on Wilson Street (Source: CrossleyTP, 2024)

Figure 2-4: Zebra crossing on Phyllis Street / Wilson Street intersection (Source: CrossleyTP, 2024)

Figure 2-5: Zebra crossing on Kyogle Street / Wilson Street intersection (Source: CrossleyTP, 2024)

2.2.2 Cycling

Although students outside of the STSS exclusion zone may take public transport, cycling may also present as a viable option for some.

Cyclists typically travel on bike for distances up to 4 kilometres to reach their destinations which corresponds to approximately a 15-minute bike ride. This may vary depending on age, physical ability and the physical environment with factors such as topography influencing the speed at which cyclists travel at.

Figure 2-6 visualises the existing cycling network sources from Transport for NSW's Infrastructure Cycleway Data and the 15-minute cycling catchment surrounding the school sites.

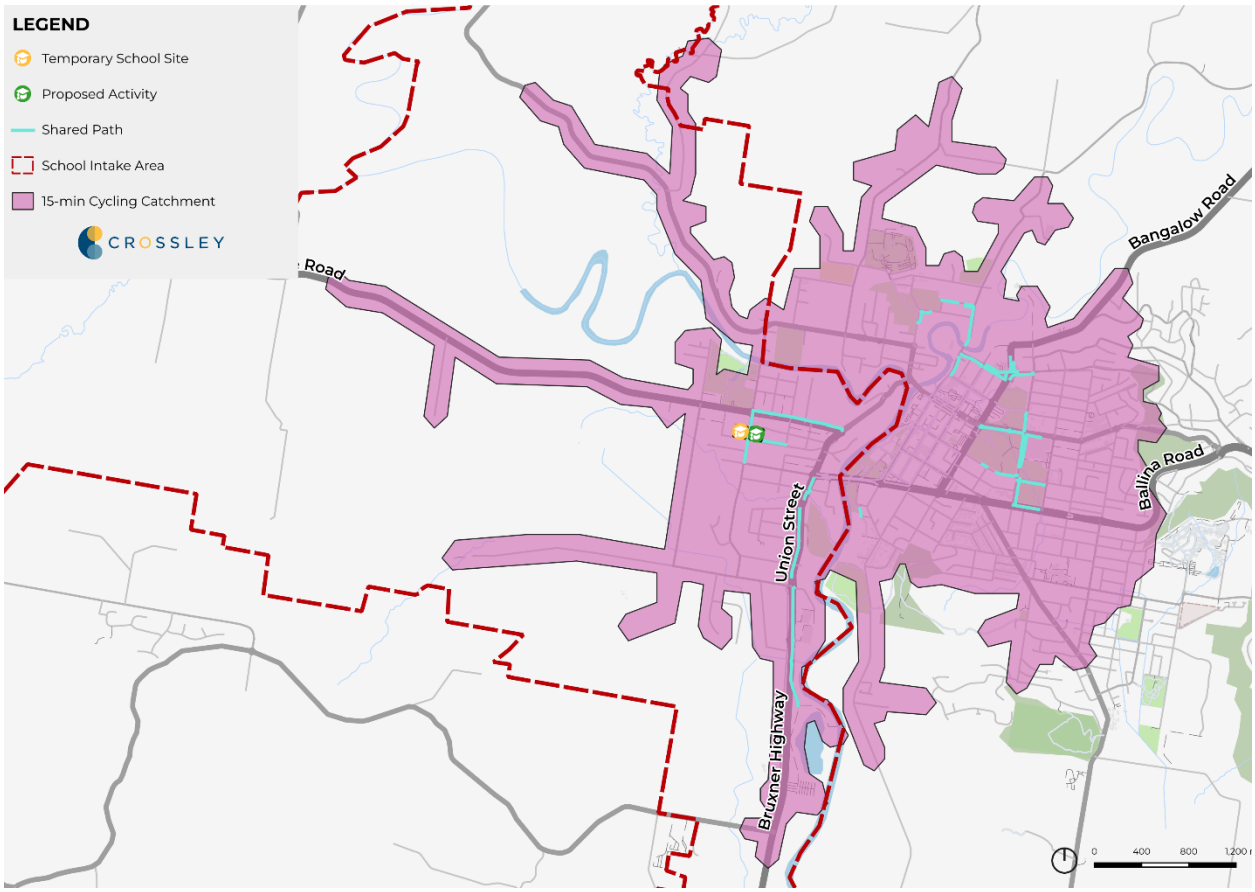


Figure 2-6: Cycling catchment and existing bicycle network around the school (Source: CrossleyTP, 2024)

Cycling infrastructure near the proposed activity is mainly provided on Wilson Street, Casino Street and Kyogle Street in the form of off-road shared paths which also serve pedestrians extensively.

However, these facilities do not continue further than 600m away from the main gate entrance meaning there is limited possibility for continuous protected cycling from greater distances.

There are two major gaps in the shared path network. The first gap is located north of Wilson Street where the bridge spans across Leycester Creek and the second gap appears between the existing shared paths along Kyogle Street and Elliott Road at the Ballina Street bridge.

2.3 Public Transport

2.3.1 Bus

The proposed site is located at South Lismore and the public transport network is limited with buses forming the only available type of public transport servicing the site directly.

The nearest bus stop that provides students with direct access to the school is located on Phyllis Street on the northern side of the school. There are two other bus stops within 400 metres walking distance from the school gates that may service school students which are located on Wilson Street and Casino Street.

Figure 2-7 provides an overview of the existing bus routes and bus stops within 400 metres of walking distance from the school gates.

Figure 2-7 Bus network around the proposed activity (Source: CrossleyTP, 2024)

Table 2-2 summarises the bus routes that service these bus stops and their frequencies.

Table 2-2 Bus routes servicing South Lismore Public School

Route	Type	Destinations	Frequency During Weekday (AM)	Frequency During Weekday (PM)
652	Public Bus	Tuntable Creek to Lismore Schools via The Channon & Keerrong.	Once at 8:25AM	Once at 3:50PM
652	Private Bus	Tuntable Creek to Lismore.	Once at 8:30AM (school days only)	Once at 3:53PM (school days only)

Route	Type	Destinations	Frequency During Weekday (AM)	Frequency During Weekday (PM)
684	Public / Private Bus	South Lismore to Lismore City Centre (Loop Service) / Lismore to South Lismore via East Lismore (Loop Service).	Every 57-89 minutes	Every 60 minutes
S231	School Bus	Lismore Schools to Leycester via Leycester Rd.	Once at 8:37AM	Once at 3:48PM
S232	School Bus	Lismore Schools to Whian Whian via Dunoon.	-	Once at 3:50PM
S347	School Bus	Whale Bus - Lismore Schools to East Lismore via Coraki.	Once at 8:55AM	-
S357	School Bus	Turkey Bus - East Lismore to Lismore Schools via Lismore and Goonellabah.	-	Once at 3:20PM
S367	School Bus	Marlin Bus - Lismore High to Lismore, N Lismore, South Lismore Schools and Lismore.	Once at 8:07AM	Once at 3:29PM
S368	School Bus	Platypus Bus - Summerland Christian Coll to Lismore, South Lismore Schools and Casino.	Once at 8:22AM	Once at 3:46PM
S370	School Bus	Polar Bear Bus - Southern Cross Uni to Lismore, Albert Park Schools and East Lismore.	Once at 8:07AM	-
S382	School Bus	Kyogle to Wollongbar TAFE College via Lismore.	-	Twice at 12:18PM and 6:02PM (Wednesdays only)
S383	School Bus	Dolphin Bus - Southern Cross University to Gwynne Rd via Tuncester and East Lismore.	Once at 7:10AM	Once at 4:50PM
S385	School Bus	Honey Bee Bus - Southern Cross University to Jiggi Rd via Blakebrook Public.	Once at 7:36AM	Once at 4:43PM
S894	School Bus	Lismore Schools to Wardell via Rous Rd	Once at 8:54AM	-
S895	School Bus	Lismore Schools to Kyogle via Bentley	-	Once at 3:40PM
S977	School Bus	Lismore Schools and Caniaba Public to Casino	Once at 8:28AM	Once at 3:14PM
S978	School Bus	Lismore Schools and Blakebrook Public to Larnook via Rock Valley	Once at 8:34AM	Once at 3:00PM
S981	School Bus	Caniaba Public and St John's College to Lismore via Perradenya Estate	Once at 8:26AM	-

Students are also able to catch local and school buses to the Trinity College Interchange which provides bus services directly to Lismore South Public School. A summary of all bus services which take students to the Trinity College Interchange site is shown in **Table 2-3**.

Table 2-3 Bus services which take students to the Trinity College Interchange

Route	Bus Route Description	Bus Operator
610	Byron Bay to Lismore via Bangalow	Northern Rivers Buslines
635	Lismore to Mullumbimby	Northern Rivers Buslines
650	Lismore to Nimbin	Northern Rivers Buslines
652	Lismore to Tuntable Creek via Keerrong and The Channon	Quinns Buses
652	Lismore to Tuntable Creek	Quinns Buses
653	Dorroughby & Dunoon to Lismore	Dunoon Bus Service
661	Ballina to Lismore via Wollongbar and Alstonville	Northern Rivers Buslines
662	Lismore to Lennox Head via Wollongbar	Northern Rivers Buslines
N0124	Bangalow to Lismore Schools via Booyong & Richmond Hill	Bulzomi Bros Pty Ltd
N0218	Bangalow to Lismore Schools via Fernleigh, Pearces Creek & Woodlawn	Bulzomi Bros Pty Ltd
N0220	Teven to Kadina via Blue Hills, Summerland & Bexhill Schools	Bulzomi Bros Pty Ltd
N0295	Whian Whian to South Lismore via Lismore Schools	Halls Bus Company Pty Ltd
N0356	Larnook to Blakebrook Public & Lismore Schools via Rock Valley	SB Coaches Pty Ltd
N0357	Cawongla to Lismore Schools	SB Coaches Pty Ltd
N0835	Leycester to Lismore Schools via Leycester Rd	Halls Bus Company Pty Ltd
N0902	Koonorigan to Blakebrook Primary & Lismore Schools via Goolmangar	Balanco Pty Ltd
N1045	-	Williams, Michael
N1169	-	Williams, Michael
N1694	Woodlawn & Numulgi to Lismore Schools via Bexhill	Halls Bus Company Pty Ltd
N2551	Terania Creek to Modanville Public & Lismore Schools	MT & CJ QUINN PTY LTD
N2568	Alstonville to Lismore via Tregeagle Rd	Sodhi Transport Pty Ltd
N2569	Wardell to Lismore Schools via Rous Rd	Sodhi Transport Pty Ltd
N2734	Kyogle to Lismore Schools via Bentley	Sodhi Transport Pty Ltd
N2823	Caniaba Rd to Caniaba Public & Lismore Schools	SB Coaches Pty Ltd
N2891	Broadwater to Lismore Schools & Goonellabah Schools via Wyrallah	MT & CJ QUINN PTY LTD
N2892	Tucki Tucki Rd to Lismore Schools via Riverbank & East Gundurimba	MT & CJ QUINN PTY LTD
N2900	Hillyards Rd to Lismore Schools via Bentley	Sodhi Transport Pty Ltd
S231	Lismore Schools to Leycester via Leycester Rd	Halls Bus Company
S232	Lismore Schools to Whian Whian via Dunoon	Halls Bus Company
S233	Lismore Schools to Numulgi and Woodlawn via Bexhill	Halls Bus Company
S264	Goonellabah Schools and Lismore Schools to Broadwater via Wyrallah	Quinns Buses
S265	Lismore Schools to Tucki Tucki via East Gundurimba	Quinns Buses
S347	Whale Bus - Lismore Schools to East Lismore via Coraki	Northern Rivers Buslines
S348	Rosella Bus - Lismore Schools to Lismore Military St via Goonellabah	Northern Rivers Buslines
S349	Kookaburra Bus - Kadina High to Lismore via Lismore Heights	Northern Rivers Buslines
S354	Kangaroo Bus - Goonellabah to East Lismore	Northern Rivers Buslines
S355	Butterfly Bus - Blue Hills Coll to East Lismore via Trinity Catholic Coll and Goonellabah	Northern Rivers Buslines
S356	Swan Bus - Southern Cross University to Lismore via East Lismore	Northern Rivers Buslines

Route	Bus Route Description	Bus Operator
S357	Turkey Bus - East Lismore to Lismore Schools via Lismore and Goonellabah	Northern Rivers Buslines
S358	Dragonfly Bus - Albert Park Public to Lismore via Lismore Schools and Goonellabah	Northern Rivers Buslines
S360	Snail Bus - Wyrallah Road Public to East Lismore via Lismore Schools and Goonellabah	Northern Rivers Buslines
S363	Duck Bus - Lismore High School to Lismore Schools and East Lismore Schools	Northern Rivers Buslines
S365	Rabbit Bus - St John's Coll to Lismore, Goonellabah Schools and East Lismore Schools	Northern Rivers Buslines
S366	Starfish Bus - East Lismore and Lismore Hts Schools to Goonellabah via Richmond Hill	Northern Rivers Buslines
S367	Marlin Bus - Lismore High to Lismore, N Lismore, South Lismore Schools and Lismore	Northern Rivers Buslines
S368	Platypus Bus - Summerland Christian Coll to Lismore, South Lismore Schools and Casino	Northern Rivers Buslines
S369	Seashell (Fan) Bus - Summerland Christian Coll to Bexhill, Eureka, Lismore Schools and E Lismore	Northern Rivers Buslines
S370	Polar Bear Bus - Southern Cross Uni to Lismore, Albert Park Schools & East Lismore	Northern Rivers Buslines
S373	Llama Bus - South Lismore to Southern Cross University via East Lismore	Northern Rivers Buslines
S375	Brown Bear Bus - Summerland Christian Coll to Southern Cross University via Blue Hills Coll	Northern Rivers Buslines
S376	Sheep Bus - Evans River Community to Evans Head via Woodburn St	Northern Rivers Buslines
S377	Fire Breathing Dragon Bus - Vistara Primary to Southern Cross University via North Lismore	Northern Rivers Buslines
S378	Skunk Bus - Summerland Christian Coll to Lismore via Blue Hills Coll and East Lismore	Northern Rivers Buslines
S379	Flamingo Bus - Evans Head to Woodburn Schools, Coraki Schools and Lismore	Northern Rivers Buslines
S383	Dolphin Bus - Southern Cross University to Gwynne Rd via Tuncester and East Lismore	Northern Rivers Buslines
S384	Ant Bus - St John's College to Nimbin via Blakebrook Public and East Lismore	Northern Rivers Buslines
S385	Honey Bee Bus - Southern Cross University to Jiggi Rd via Blakebrook Public	Northern Rivers Buslines
S386	Ibis Bus - Southern Cross University to Nimbin via Blakebrook Public	Northern Rivers Buslines
S507	Cat Bus - Goonellabah to East Ballina via Lismore and Lennox Head	Northern Rivers Buslines
S514	Koala Bus - St John's College to Ballina via Lismore	Northern Rivers Buslines
S519	Dog Bus - Lismore Heights Primary to Alstonville via Coolgardie	Northern Rivers Buslines
S520	Cow Bus - St John's to Byron Bay via Lismore Rd	Northern Rivers Buslines
S524	Snake Bus - St John's Coll Woodlawn to Alstonville via McLeans Ridges and Wollongbar	Northern Rivers Buslines
S527	Fox Bus - St John's to Alstonvale via Tuckombil	Northern Rivers Buslines
S528	Lion Bus - Southern Cross Public to Molesworth St	Ballina Buslines
S529	Squirrell Bus - Wollongbar Public to Alstonville High	Ballina Buslines
S563	Lismore Schools to Bangalow via Boat Harbour and Fernleigh	Bulzomi Bros Pty Ltd
S891	Geneva & Kyogle to Lismore Schools	Dunoon Bus Service

Route	Bus Route Description	Bus Operator
S893	Lismore to Alstonville via Tregeagle Rd	Dunoon Bus Service
S894	Lismore Schools to Wardell via Rous Rd	Dunoon Bus Service
S896	Lismore Schools to Hillyards Rd via Bentley	Dunoon Bus Service
S897	Dorroughby & Dunoon to Lismore Schools	Dunoon Bus Service
S898	Lismore Schools to Dunoon and Modanville via Borton Rd Tullera	Dunoon Bus Service
S916	Lismore Schools and Blakebrook Primary to Koonorigan via Goolmangar	Koonorigan Bus Service
S964	Lismore to Repentance Creek via St Johns College	Williams, Michael
S966	Repentance Creek to Lismore via Corndale & Bexhill	Williams Bus Lines
S978	Lismore Schools and Blakebrook Public to Larnook via Rock Valley	Simes Bros. Coaches
S979	East Lismore Schools to Cawongla	Simes Bros. Coaches
S980	Caniaba Public and Lismore Schools to Casino and Caniaba via Spring Grove	Simes Bros. Coaches
S982	Goonellabah and Lismore Schools to South Lismore via Caniaba	Simes Bros. Coaches

Analysis of depersonalised data for the student population in 2024 provided by Department of Education reveals that approximately 70% of students live within 400 metres or a 5-minute walk from a bus stop that is serviced by a route which stops at one of the three bus stops within close proximity to the school. Comparing this against existing mode share splits indicates there is still significant potential for mode share shift towards public transport.

2.4 Private Transport

2.4.1 Road network

Figure 2-8 depicts the surrounding road network, categorised according to the NSW Road Classification Review (2004) which classifies roads based on functionality with local, regional and state.

The proposed activity is bound by local roads such as Phyllis Street, Kyogle Street, and Wilson Street. Casino Street on north of the site is classified as regional road and Bruxner Highway on south-east of the site is classified as a state road.

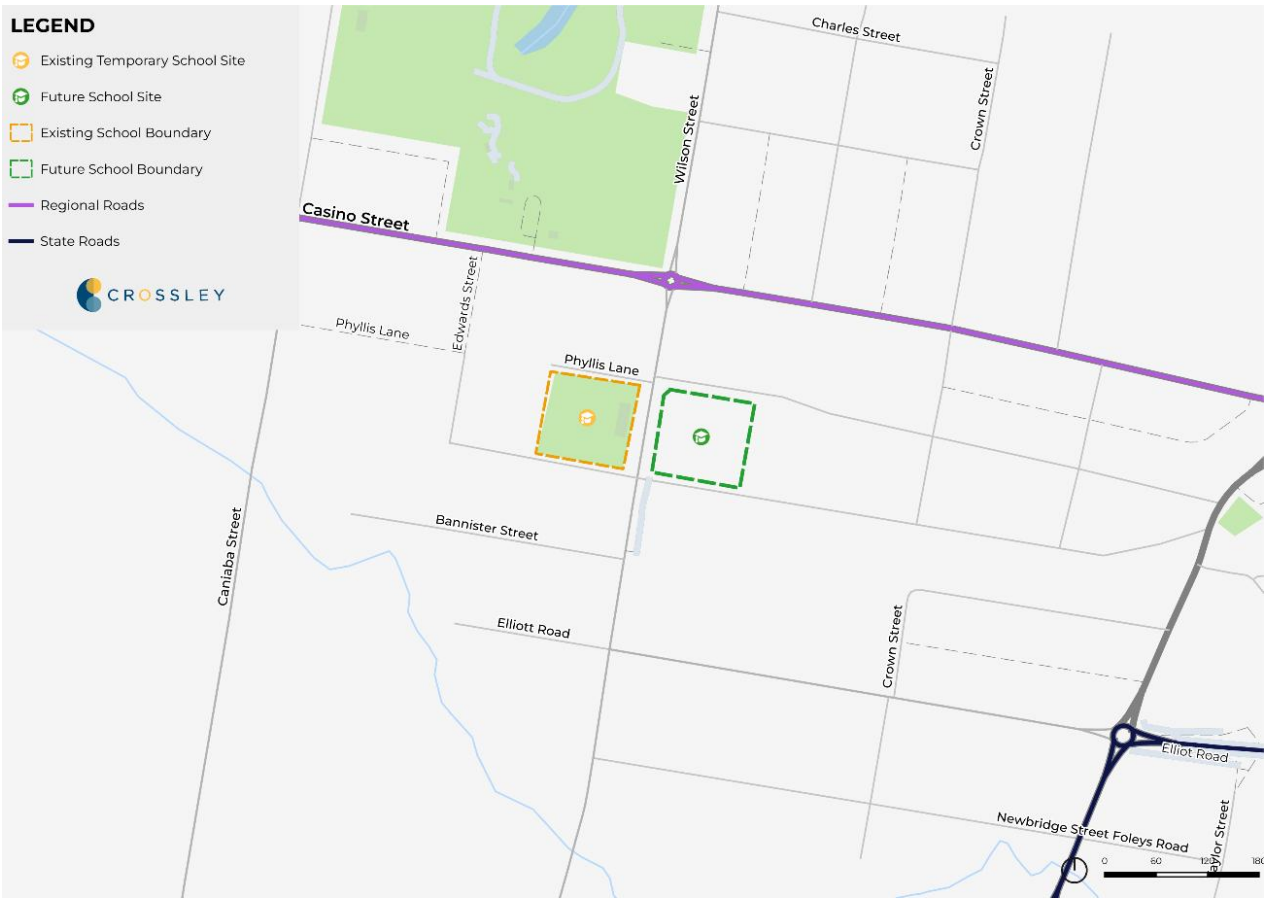


Figure 2-8: NSW Road Network Classifications around the proposed activity. (Source: Transport for NSW)

2.4.2 Vehicle access routes

Vehicles can access the off-street parking for the school and kiss and drop zones on Kyogle Street but using the following access routes:

- From the north and west: Casino Street and Wilson Street intersection.
- From the east and south: Wilson Road and Elliot Road intersection.

2.4.3 Crash analysis

The crash history data within the vicinity of the school was sourced from Transport for NSW (TfNSW) for the period 2019 to 2023. The crash analysis shows that four crashes have occurred across four locations around the school area, with one occurring during afternoon school peak hour. Most incidents involved pedestrians colliding with a vehicle.

Figure 2-9 shows the location, severity and Road User Movement (RUM) codes of the crashes which occurred during the school peak periods. The RUM codes correspond to the specific actions or behaviours of road users that contributed to each crash.

- RUM code 1 - Minor injury during school afternoon peak hour between 2pm to 4pm: A pedestrian who emerged into the traffic lane and collided with a vehicle.

Figure 2-9: Crashes near the school

2.4.4 Traffic volumes and conditions

Classified traffic counts (LV – Light vehicles, HV – Heavy vehicles, B – Buses) were conducted in August 2024 to capture the existing school-related traffic and other general traffic activity at the following intersections:

- Roundabout intersection at Wilson Street and Casino Street
- Priority controlled intersection at Wilson Street and Elliot Road

The survey was conducted during the following time periods:

- AM peak (7:30 AM to 9:30 AM)
- PM peak (2:00 PM to 4:00 PM)

Consequently, the peak hours for each intersection during the survey time periods are as follows:

- Wilson Street / Casino Street
    - AM peak hour - 8:00 AM to 9:00 AM
    - PM peak hour – 3:00PM to 4:00 PM
- Elliot Road / Wilson Street
    - AM peak hour - 7:45 AM to 8:45 AM

- PM peak hour – 3:00PM to 4:00 PM

The existing traffic volumes during the peak hour for the intersections modelled can be found in **Appendix B.**

2.4.5 Intersection performance

This section presents the results of the SIDRA Intersection modelling for intersections located on the key vehicle access routes to school including:

- Wilson Street and Casino Street
- Wilson Street and Elliot Road

Table 2-4: Scenario 1 - Base 2024 intersection operation performance

ID	Intersection	AM Peak Hour		PM Peak Hour	
		Average Delay (sec)	Level of Service (LoS)	Average Delay (sec)	Level of Service (LoS)
1	**Wilson Street and Casino Street** (Roundabout)	5.4	A	4.9	A
2	**Wilson Street and Elliott Road** (Priority intersection)	5.0	A	5.6	A

The traffic modelling results demonstrate that both intersections are operating at Level of Service A, with minimal delays experienced by drivers. This indicates the intersection have available capacity to accommodate additional vehicle traffic if required.

Detailed SIDRA modelling outputs are provided in **Appendix C**.

2.4.6 Parking facilities and demand

As illustrated in **Figure 2-10**, access to the school is facilitated by:

- On-street parking: Unrestricted parking is provided in surrounding streets of Kyogle Street and Phyllis Street. A disability parking space is also provided on the northern side of Kyogle Street near the pedestrian gate. Site inspections show that parents park along Kyogle Street near Wilson Street to pick up and drop off their children during the school peak period.
- Off-street parking: The existing school site has car park with 19 spaces which is accessible via Kyogle Street.

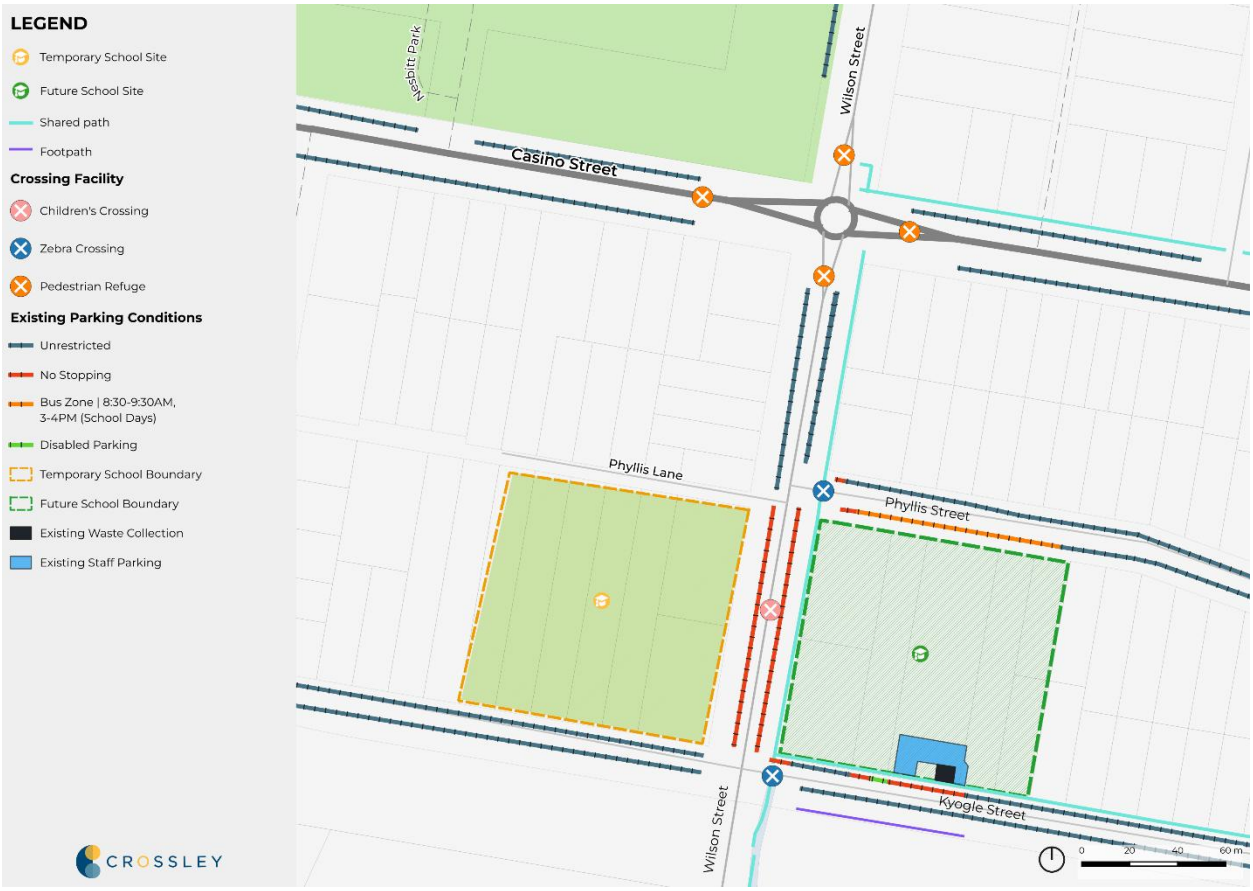


Figure 2-10: On-street parking restrictions around the proposed activity (Source: CrossleyTP, 2024)

3 Proposed Activity

3.1 Proposed activity description

The proposed activity comprises the rebuild of the LSPS on the eastern parcel of the existing site in South Lismore. The works will be delivered in a single stage. The western parcel is out of the scope of the activity. Any works required on the western parcel (such as removal of demountable classrooms) will be subject to separate approval (if required).

A detailed description of the proposal is as follows:

1. Retention of the existing play equipment, Building K and covered outdoor learning area (COLA) on the western parcel.
2. Bulk earthworks, comprising fill and excavation and other site preparation works on the eastern parcel.
3. Construction of a new building on the eastern parcel for LSPS including:
    a. A one storey building (with undercroft areas below) fronting Kyogle Street containing a general learning space (GLS) hub, hall, library, support hub, administration, and pre-school.
    b. Undercroft outdoor learning areas as well as amenities and storage located on ground level.
4. Landscaping and public domain works, including tree planting, a games court in the northeast corner and an outdoor playing area adjacent to the preschool.
5. A car park on the eastern side of the site, with access from Kyogle Street.
6. Waste collection area access from Kyogle Street.
7. Multiple entrance points, including:
    a. Primary and secondary entries distributed on site frontages.
    b. Vehicular access point to provide access to waste collection/delivery areas and car parking.
8. Ancillary public domain mitigation measures.

Figure 3-1 provides an overview of the scope of works.

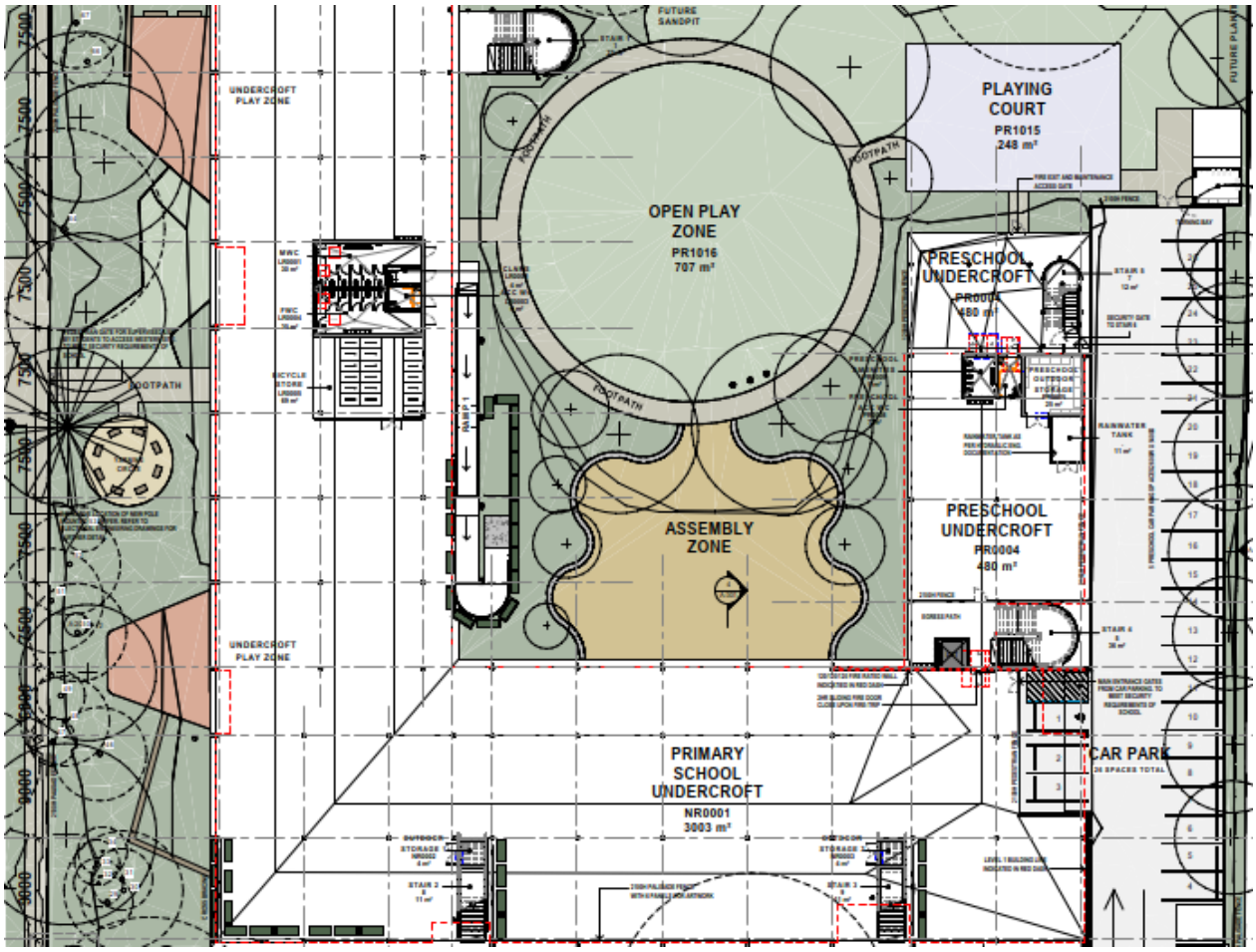


Figure 3-1: Proposed site plan (Source: EJE, 2025)

The new Lismore South Public School site is expected to service:

- 28 full time equivalent (FTE) school staff
- 230 student enrolments

The proposed onsite pre-school within the school site is expected to service:

- 2 pre-school staff
- 20 pre-school students

3.2 Land use and zoning

Figure 3-2 illustrates the land zoning designated by the Department of Planning within Lismore. The primary zoning classifications around the proposed site include – Low Density Residential zoning with lots of residential housing and RE1 – Public Recreation land zoning with Nesbitt Park located north-west of the proposed site. Land zoning classifications are not expected to change as a result of the proposed activity.

Figure 3-2: Land zoning around the proposed site (Source: CrossleyTP, 2024)

3.3 Site access

The proposed Lismore South Public School has street frontages to Phyllis Street, Wilson Street and Kyogle Street. **Figure 3-3** visualises the proposed entry points located on the three streets.

The proposed site access at LSPS is as follows:

- **Off Street parking** - The proposed off-street car park can be accessed via the southern driveway on Kyogle Street. The proposed layout provides parking for school staff as well as space for parents to drop their children off at preschool. Additionally, the new school also provides one accessible parking space on the eastern side of the lot boundary within the car park.
- **Kiss and drop** – Is available along Kyogle Street for parents to pick -up and drop -off their children in the mornings and afternoons
- **Pedestrian access** – Students can enter the school via the pedestrian gates on Phyllis Street, Wilson Street and Kyogle Street.
- **Bus access** - The bus zone is located on Phyllis Street where there is a pedestrian gate for students to enter the school.
- **Bicycle access** - Bike parking is provided near the gate on Wilson Street and Phyllis Street to allow students to park their bikes upon entering the school.

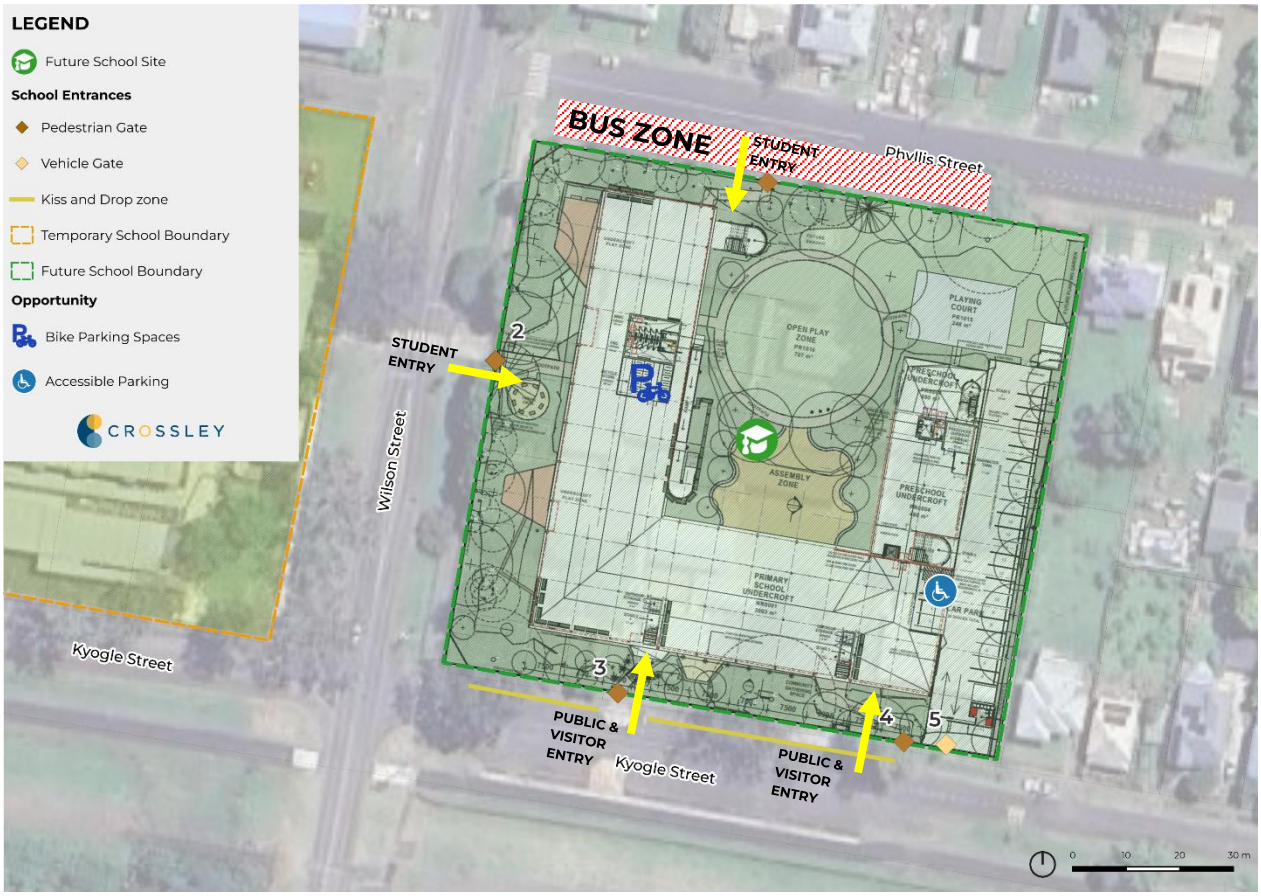


Figure 3-3: Proposed site entry points (Source: CrossleyTP, 2025)

4 Traffic and Transport Assessment

This chapter assesses the potential traffic and transport impacts of the activity at LSPS. The assessment considers existing travel behaviour, road network conditions, parking availability, public and active transport connectivity, and potential cumulative impacts from planned developments or infrastructure projects.

4.1 Summary of traffic impacts

This assessment confirms that:

- The proposed activity does not alter the approved student enrolment capacity of 230 students. While improved facilities may contribute to increased enrolments over time, enrolment growth is not dictated by this activity.
- As a precautionary check, the assessment considered potential changes in traffic volumes by comparing existing enrolment numbers (133 students) to the approved capacity (230 students). This analysis determined that full capacity operation could generate up to 144 additional vehicle trips during the AM peak and 153 additional vehicle trips during the PM peak compared to existing traffic flows.
- Based on the assessment of existing conditions and the potential for full capacity operation, the additional traffic generated is not expected to impact the surrounding road network.
- Public transport services will remain unchanged.
- Parking arrangements will be improved, including the provision of a formalised kiss-and-drop zone on Kyogle Street and an increase in on-site parking spaces.

Based on the assessment of existing conditions and the nature of the activity, the level of traffic generated by the activity will not impact on the surrounding road network. No further traffic impact analysis or mitigation measures are required.

4.2 Planned transport infrastructure

4.2.1 Active transport

Lismore Walking, Cycling and Micromobility Strategy provides a list of Council's proposed capital works in upgrading active transport within the City of Lismore and is visualised in **Figure 4-1**.

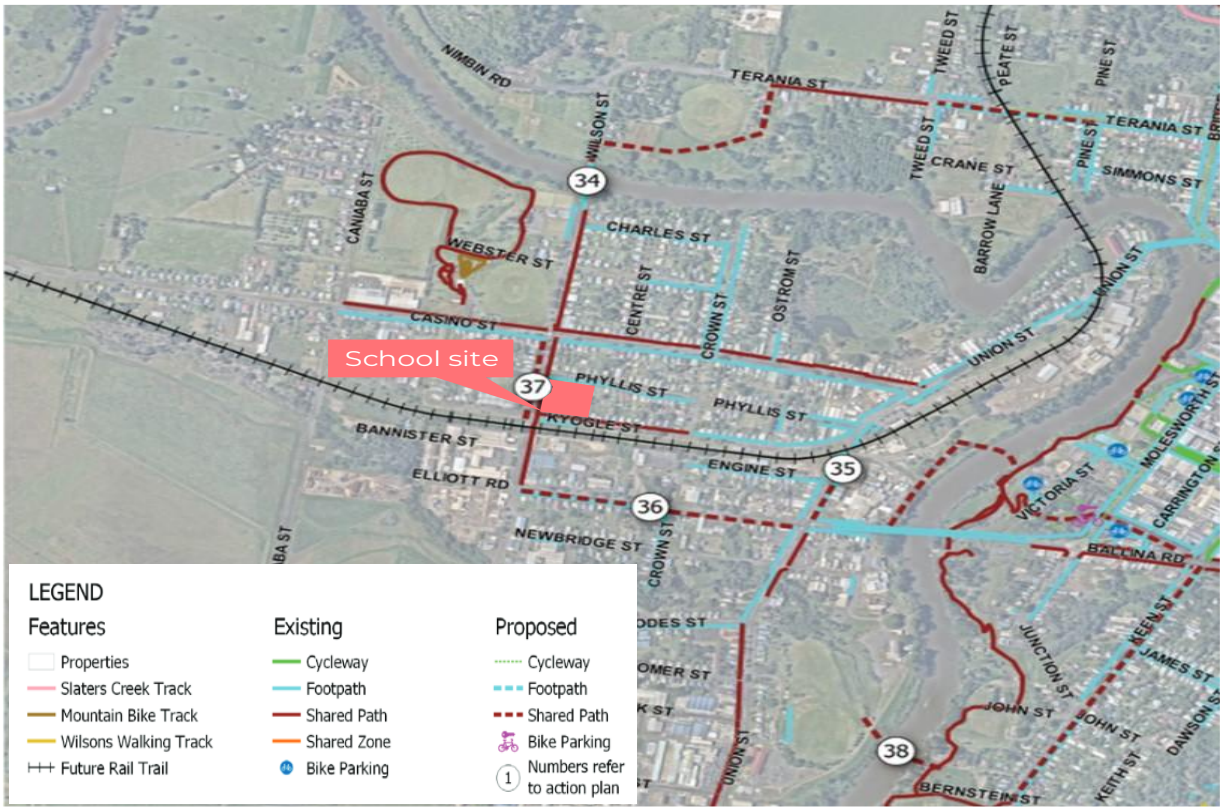


Figure 4-1 Lismore City Council Proposed Works (Source: Lismore Active Transport Strategy, 2024)

Within South Lismore there are six links where a shared path is either being planned, investigated or constructed and four of these are located near the proposed site.

Table 4-1 outlines the proposed works for each active transport link near the school.

Table 4-1: Proposed infrastructure in South Lismore

ID	Location	Proposed Infrastructure	Infrastructure Description
34	Wilson Street bridge	Shared Path	Investigate cost and feasibility of an additional separated pedestrian / cycle lane on the existing bridge.
35	Union Street	Shared Path	Widen Path on Eastern side from Elliott Rd to railway line to create a shared path.
36	Elliott Road	Shared Path	New shared path from Union St to Crown St and widen path from Crown St to Wilson St to link up with existing shared path.
37	Edward Street	Shared Path	New shared path along the full length of Edward St (formed and unformed road) from Kyogle St through to Casino St.

The construction of these shared paths will remove gaps within the existing active transport network and help extend reach of the network beyond Leycester Creek and Wilsons River, enabling students and the wider community to have uninterrupted continuous access to the school.

However, it is important to note that these future works are not expected to be completed before the opening of the new school. Council indicated that there is no set timeline for these projects, as they are subject to funding.

4.2.2 Public Transport

There are no additional public transport infrastructure upgrades or services proposed within proximity of the school in the future.

4.2.3 Private Transport

There are no private transport infrastructure upgrades proposed within proximity of the school in the future.

4.3 Cumulative traffic impacts

A review of planned future developments and transport network changes was undertaken with consultation with Lismore City Council (LCC) and Transport for NSW (TfNSW) to assess potential cumulative impacts on traffic and transport.

4.3.1 Background growth

Background traffic growth for Lismore South area has been derived from travel zone projections (see **Table 4-2**) The following travel ones were assessed for the population and employment growth in the area:

- Travel zone 7825; South Lismore

Based on the travel zone projection data, background growth around LSPS is expected to decrease slightly over the next 10 years, at an annual rate of less than 1% per year.

A conservative growth rate of 1% per year has assumed when assessing the future traffic impact around the school site.

Table 4-2 Travel zone growth projections in Lismore South

Travel zone 7825; South Lismore	2016	2021	2026	2031	Average yearly growth
Population	1681	1608	1562	1500	-0.7%
Employment	3044	3001	2936	2931	-0.2%

4.3.2 Planned developments

Based on the Development Application (DA) from Lismore City Council DA Portal from 2019 to 2024, there are some developments that are expected to generate additional trips. **Table 4-3** provides the list of the developments proposed in the area.

The Lismore City Council DA Portal does not include specific information on the traffic volumes generated by these developments. Instead, the traffic generated from these developments are calculated by applying the appropriate rates included in the *Guide to Transport Impact Assessment*.

In total, 5 additional vehicles are expected to enter the road network in the future.

Table 4-3 Developments expected to generate additional trips

Location	DA Number	Development	GFA (m2)	Rate	New Trips
105 & 109 Elliott Road	DA18/214	Warehouse distribution centre	1,055	0.5 vehicle trips / 100m^2 GFA	5 vehicle trips / peak hour

Location	DA Number	Development	GFA (m2)	Rate	New Trips
174 Wilson Street	DA20/216	Place of Public Worship	297	-	-

4.3.3 Trip generation at LSPS

Trip generation for the proposed development is assessed in relation to the potential for the school to operate at its approved capacity rather than introducing additional new trips beyond what is already permitted.

Based on the existing student and staff numbers, the assessment considered the potential for the following increases within the approved capacity:

- Pre-school: 6 additional licensed child places
- Primary School: 111 additional students
- Staff: 14 additional full-time equivalent (FTE) staff

A summary of the estimated trip generation, based on current travel behaviour patterns at the school, is provided in **Table 4-4**. The assessment is based on the following conservative assumptions:

- Each student is assumed to be dropped off by one car. While some students may carpool, this assumption provides a worst-case scenario for traffic impact assessment.
- Each staff member is assumed to drive alone to school in their own vehicle.

Table 4-4 LSPS trip generation based on the existing travel behaviour of students and staff

Scenarios	Pre school Students	LSPS Students	LSPS Staff	Total
Additional student population	6	111	14	131
Percent travelling by car (AM peak)	67%	55%	100%	-
Additional trips generated (AM peak)	8	122	14	**144**
Percent travelling by car (PM peak)	67%	59%	100%	-
Additional trips generated (PM peak)	8	131	14	**153**

4.3.4 Cumulative traffic impact

The proposed activity **does not alter the approved student enrolment capacity**; however, an assessment has been undertaken to evaluate the **potential change in traffic volumes** if the school were to operate at full capacity. This assessment estimates a maximum of 144 additional vehicle trips during the AM peak and 153 additional vehicle trips during the PM peak compared to existing conditions.

Given the proximity of the new school site to the temporary school site, overall traffic distribution patterns are expected to remain largely unchanged. However, turning movements at Wilson Street will shift, with access to Phyllis Lane and Kyogle Street moving from the eastern side to the western side.

The future performance of key intersections, including Wilson Street & Casino Street and Wilson Street & Elliott Road, considering the potential additional traffic associated with full-capacity operation, is summarised in **Table 4-5**.

Table 4-5 Scenario 2 - Future 2026 intersection operation performance

ID	Intersection	AM Peak Hour		PM Peak Hour	
		Average Delay (sec)	Level of Service (LoS)	Average Delay (sec)	Level of Service (LoS)
1	**Wilson Street and Casino Street** (Roundabout)	5.6	A	5.6	A
2	**Wilson Street and Elliott Road** (Priority intersection)	5.5	A	6.2	A

Traffic modelling indicates a slight increase in average delays (0.2-0.7 seconds) at both intersections; however, they continue to operate at Level of Service A. This demonstrates that the potential increase in traffic associated with full-capacity operation of the school will not impact the performance of the surrounding road network.

4.4 Parking facilities

The proposed activity is expected to provide 26 off street car parking spaces including 1 disabled parking space which will allow more staff to park on site and allow parents of pre-school students to drop their children off closer to the pre-school.

People using the car park are expected to enter and exit through Kyogle Street. All other people accessing the school will utilise the existing on-street parking available along Phyllis Street, Kyogle Street, Wilson Street and Casino Street.

A summary of parking provisions proposed for the activity is show in **Figure 4-2.**

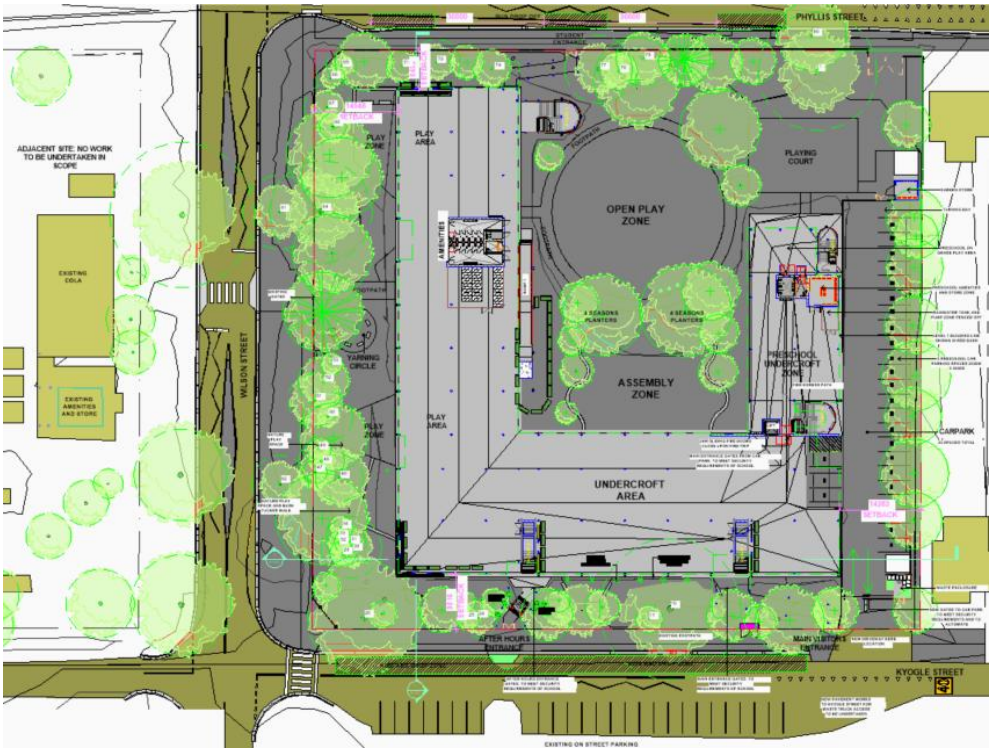


Figure 4-2 Proposed parking for the LSPS activity (Source: EJE, 2025)

4.4.1 Off-street Car Park

The Lismore Development Control Plan (DCP) specifies minimum car parking requirements for educational establishments, including primary schools and preschools/childcare facilities**,** as outlined in Schedule 1 - Car Parking Requirements for Specific Land Uses.

LSPS caregivers are not permitted to enter the school car park or site for security reasons, and therefore the car park has been designed to provide end-of-trip facilities for primary and preschool staff, as well as set-down and pick-up spaces for preschool students.

4.4.1.1 Car park provision and compliance

Table 4-6 summarises the required and provided parking spaces based on the Lismore DCP.

Table 4-6 Car parking spaces required as specified in the Lismore DCP

Type of People	Number of people	Car parking requirements	Car parking spaces required	Car parking spaces provided	Compliant
Lismore South Public School					
Staff	28	1 per 2 employees	14	21	Yes
Students	230	1 per 12 students	20	N/A (Drop-off zone provided)	N/A
Lismore South Pre-school					
Staff	2	1 per employee plus 1 per 15 children **OR**	4 **OR**	5 **OR**	Yes
Students	20	3 set down and pick up areas plus 1 per 10 children	5	5	Yes
GRAND TOTAL			**38 – 41**	**26**	

A total of 23 off-street parking spaces have been provided, exceeding the DCP minimum requirements for staff parking. Additionally, three set-down and pick-up spaces have been allocated for preschool students, in compliance with DCP requirements.

4.4.2 Availability of on-street parking

To facilitate drop-off and pick-up for primary school caregivers, two on-street parking areas are provided along Kyogle Street, near the school frontage. These include an eight-bay kiss-and-drop zone and 24 angled parking spaces. Together, these facilities adequately support student drop-off and pick-up needs, as well as any additional staff parking requirements.

4.4.2.1 Kiss and drop

The kiss and drop zone is located along the frontage of the school at Kyogle Street and provides eight parking bays. The capacity of this facility has been assessed based on:

- Maximum 2-minute dwell time per vehicle
- Gamma-distributed dwell times (weighted towards shorter stays, with an average of 1.5 minutes)
- Poisson-distributed vehicle arrival rates, reflecting natural variations in arrival patterns
- 30-minute peak drop-off and pick-up period
- 59% of students are driven to school *(based on hands-up travel survey)*.

With Poisson-modeled arrivals and Gamma-distributed dwell times, the kiss and drop zone is expected to accommodate anticipated demand, processing an average of 136 vehicles during the peak period.

4.4.2.2 Other

Immediately opposite the school are 24 unrestricted angled street parking spaces. With no other adjacent land uses, it is assumed these spaces are provided for school operations. This together with the off-street car park provides more than 1 space per employee.

To note, Department of Education in collaboration with the school is proactively promoting sustainable travel methods to the school via a school transport plan. Such schemes include encouraging walking, cycling and car-pooling to reduce car dependency.

4.4.3 Bicycle Parking

The Lismore DCP does not mandate bicycle parking for new developments. However, to meet green star ratings, secure parking for 40% of students over grade 4 (about 38 spaces) is required. The proposed activity has proposed to provide 38 bike parking spaces, which aligns with green star ratings.

4.4.4 Accessible Parking

The Lismore DCP specifies the following requirement in Chapter 7.7.1 Parking for People with a Disability:

> *"Regardless of the location of the development, parking for people with disability shall be provided at a rate of no less than 1 space for every 100 spaces provided by a development "*

This provision is consistent with the National Construction Code (NCC) for accessible bays, which similarly outlines 1 space for every 100 car parking spaces or part thereof. The proposed car park will provide an accessible bay and will be designed to comply with the DCP and NCC requirements.

4.4.5 Service Vehicles

As specified in 'Lismore DCP Section 7.6.1 General Criteria' it is required for car parks to have:

> *"Adequate provision of loading bays and manoeuvring areas within the site boundaries in accordance with AS2890.2"*

There is no specific requirement for the number of spaces that need to be provided for delivery vehicles for schools. The architectural design indicates that the service vehicle will enter the car park from Kyogle Street. The service vehicle will have to stop within the circulation roadway to load and unload as required and then proceed to exit the car park via Kyogle Street. Given that traffic flows within the car park are low and that the service vehicles will arrive at a different time period to staff, the impact to the car park operation is acceptable. Therefore, this requirement has been satisfied.

4.4.6 Car park design requirements

The LSPS carpark has been checked against Australian Standards. A summary of the findings for the carpark assessment is shown in **Table 4-7**.

Table 4-7 LSPS carpark assessment based on Australian Standards

Design Aspects	AS2890	Proposed Provision	Notes	Compliance
Parking Space Dimensions (AS2890.1 Section 2.4.1)	The carpark at Lismore South Public School is expected to be primarily for: 1. Employee parking. This would result in **User Class 1 or 1A** which requires the parking space dimensions to be: **2.4m (w) x 5.4m (l)** **1.** Parents dropping their children off at the pre-school. This would result in **User Class 3** which requires a parking space of: **2.6m (w) x 5.4m (l)**	2.4m (w) x 5.4m (l) for all car spaces for employees and 2.6m (w) x 5.4m (l) for pre-school drop off.	Parking spaces are compliant for the school.	**YES**
Parking Aisle Width (AS 2890.1 Section 2.4.1)	Minimum aisle width for a User Class 1 carpark is 5.8m Minimum aisle width for a User Class 3 car park is 6.2m	6.3m	Parking aisle widths are compliant	**YES**
Blind Aisle (AS2890.1 Section 2.4.2)	Aisle shall be extended a minimum of 1 m beyond the last parking space	Aisle extended 2.955m beyond last parking space.		**YES**
Wheel stops (AS2890.1 Section 2.4.5.4)	For front-in for a kerb <150mm high is 630mm	675mm	Wheels stops are compliant	**YES**

Design Aspects	AS2890	Proposed Provision	Notes	Compliance
Motorcycle Space Dimensions (AS2890.1 Section 2.4.7)	N/A	N/A	There are no motorcycle spaces proposed for this carpark	**YES**
Circulation Roadway & Ramp Width (AS2890.1 Section 2.5.2)	For straight circulation roadways, one-way systems require a width of 3.0m minimum and two-way systems require 5.5m minimum	7.5m (southern entrance)	Circulation roadway is compliant.	**YES**
Circulation Roadway Grades (AS2890.1 Section 2.5.3)	N/A	N/A	This carpark does not have grade changes	**YES**
Access Driveway Width (AS2890.1 Section 3.2.1)	Access Facility Category 1 Combined entry/exit width of: 3.0m to 5.5m	7.5m	Access driveway widths are compliant	**YES**
Access Driveway Sight Distance (AS2890.1 Section 3.2.4)	Minimum SSD for a 50km/h speed zone is 45m	45m	There are no permanent obstructions within 45m of the driveway.	**YES**
Access Driveway Gradients (AS2890.1 Section 3.3)	*A) Property line / building* alignment - MAX 1 in 20 (5%) between edge of frontage road and property line and for at least the first 6m into the car park D) *Across footpath* MAX 1 in 40 (2.5%) across lateral distance of 1.0m	N/A	Access driveway gradients have not been provided at this stage of the design. **To be confirmed at a later date.**	**N/A**
Minimum queueing at entrance (AS2890.1 Section 3.4)	Minimum queuing length of 2 cars / lane for a carpark with tidal traffic such as everyone arriving to work around the same time Length of 6.0m per vehicle	The distance between the control point and the traffic lane is approximately 6m for both the northern and southern entrance indicating space for only a single car to queue.	The car park will be mainly used by employees who arrive earlier and leave later than the AM peak and PM peak times and traffic flow is split across two different entrance points. Therefore, the impact to surrounding traffic and pedestrian flow to the frontage road is minimal.	**YES**
Column Positioning (AS2890.1 Section 5.2)	N/A	N/A	This carpark does not have columns	**YES**
Headroom Clearance	N/A	N/A	This carpark does not have multiple storeys	**YES**

Design Aspects	AS2890	Proposed Provision	Notes	Compliance
(AS2890.1 Section 5.3)				
Bicycle Parking Space Dimensions (AS2890.3 Section 2.1)	1000mm minimum between bicycle racks	1000mm	Bicycle parking is located away from the car park near the pedestrian gate.	**YES**
Accessible Space Dimensions (AS2890.6 Section 2.5.1)	2.4m (w) x 5.4m (l)	2.4m (w) x 5.4m (l)	Accessible spaces are compliant	**YES**
Shared Zone Dimensions (for accessible bays) (AS2890.6 Section 2.5.1)	2.4 (w) x 5.4m (l)	2.695m (w) x 5.4m (l)	Accessible spaces are compliant provided that one of the parking spaces is a shared space	**YES**
Headroom Clearance for accessible space (AS2890.6 Section 2.7)	N/A	N/A	This carpark does not have multiple storeys	**YES**
AS2890.2 Part 2: Off-Street commercial vehicles facilities	N/A	N/A	Commercial vehicles no longer access the off-street parking facilities in this design.	**YES**

4.4.7 Vehicle swept path analysis

Vehicle swept path analysis has been completed for the proposed activity based on architectural plan dated 11/02/25 using AutoTURN. Based on Lismore City Council, typical council garbage truck dimensions (see **Table 4-8**), a **Front Loading Collection Truck** was used to test the movements of a service vehicle to the waste area.

Table 4-8: Typical Council Garbage Truck Dimensions

Length	9.4 metres
Width	2.84 metres (including mirrors)
	2.25 metres (excluding mirrors)
Height	3.63 metres (operational and travel)
Weight	13 tonne (vehicle only)
	24 tonne (vehicle and load)
Turning Circle	20 metres

Vehicle swept path diagrams have been carried out for the following movements:

- Access from Kyogle Street to the waste area for the service vehicle

- Egress to Kyogle Street from the waste area for the service vehicle
- B99 vehicle manoeuvring out of the blind aisle in the car park

The swept path analysis identified that the service vehicle can access and exit the waste area from Kyogle Street without issue. The vertical clearance has not been tested as the proposed car park is uncovered.

Swept paths show that the B99 vehicle is able to exit the blind aisle without issue. Refer to **Appendix D** for the swept path diagrams for the proposed car park.

4.4.8 Road Safety Review

The car park entry on Kyogle Street has been assessed in accordance with AS2890 standards, confirming that vehicles can safely enter and exit the proposed car park.

Swept path analysis for a front-load service vehicle collecting rubbish on Kyogle Street indicates sufficient space for a car to safely pass while the service vehicle is in operation.

It is recommended that a road safety audit be conducted during the detailed design phase of the project.

4.5 Conclusion

The assessment of traffic and transport impacts associated with this activity has led to the following conclusions:

- The proposed activity does not alter the approved school capacity, but an assessment has considered the potential increase in traffic volumes if the school operates at full capacity. This could result in up to 144 additional vehicle trips during the AM peak and 153 during the PM peak. SIDRA intersection modelling confirms that this increase will not impact the performance of the surrounding road network, and as a result, no further traffic impact analysis or mitigation measures are required.
- Lismore City Council's proposed active transport improvements will enhance pedestrian and cycling accessibility, supporting the broader objectives of the development.
- No additional mitigation measures are required under the REF assessment.
- Strategies to encourage greater participation in walking and cycling are outlined in Table 1 of the Executive Summary.

5 Construction Traffic Management Plan

5.1 General principles

During construction, effective traffic management is crucial to ensure safety, minimise disruptions, and maintain smooth traffic flow. The following basic traffic management principles should be adopted during the construction period:

1. **Planning & Coordination**
   - It is recommended that a detailed CTMP is developed as part of the detailed design stage before starting construction.
   - Work should be coordinated between local government, law enforcement and transportation departments to ensure compliance with regulations.
2. **Communication**
   - Inform the public about construction schedules, road closures and alternative routes through various channels.
3. **Construction Impact Mitigation**
   - Disruption to all road users during construction should be kept to a minimum.
   - Construction and delivery vehicles entering or leaving the site compound should be restricted to non-peak traffic periods.
   - Property, vehicle, pedestrian and cyclist access should be maintained throughout the construction period with suitable alternative access arrangements provided otherwise.
   - Implement phased construction to minimise impact on traffic
4. **Temporary Traffic Control Devices and Signs:**
   - Use clear, consistent and visible signage to guide road users through detours and work zones.
   - Delineate any work zones or guide traffic using barriers and cones.
   - Traffic control would need to be provided to manage and regulate traffic movements during construction.
5. **Monitoring & Adaptation**
   - Continuously monitor traffic conditions and the effectiveness of traffic management strategies.
   - Prepare to make adjustments based on real-time traffic conditions.
6. **Incident Management**
   - Develop and communicate an emergency response plan to handle accidents or unforeseen incidents.
   - Ensure there are protocols in place for the rapid clearance of any incidents to minimise disruption.
7. **Environmental Considerations**
   - Implement measures to control noise, dust and other environmental impacts of construction on nearby residents and businesses.

5.2 Proposed working hours

The construction workforce is likely to fluctuate, depending on the stage of construction and associated activities. It is recommended for construction to be undertaken during standard

working hours which have been defined by the NSW Environment Protection Authority (EPA) as:

- Monday to Friday - between 7am to 6pm
- Saturday - between 8am to 1pm
- Sunday and public holidays - no work.

6 Conclusion

6.1 Key Findings

- The proposed activity does not alter the approved student enrolment capacity of 230 students. While improved facilities may contribute to increased enrolments over time, enrolment growth is not dictated by this activity as the site has already been assessed for this number of students.
- Compared to the current student enrolment numbers, the proposed activity is expected to generate a maximum of **144 new vehicle trips** during the AM peak and **153 new vehicle trips** in the PM peak. SIDRA intersection modelling shows that the traffic generated from this activity will not impact on the surrounding road network and therefore no further traffic impact analysis or mitigation measures are required.
- Existing pedestrian, cycling, and public transport infrastructure will continue to support sustainable school travel, with planned Council improvements enhancing active transport accessibility.
- 26 car park spaces at the car park are considered adequate for school operations as there is sufficient on-street parking available for parents and staff.
- The car park is mostly compliant against Australian Standards but will need to address the following issues:
    - Access Driveway Gradients – At this stage of design, gradients have not been provided and need to be assessed during detailed design.

6.2 Recommendations

To support sustainable travel behaviour and improve transport access, it is recommended that the Department of Education (DoE) collaborate with:

- Lismore South Public School
- Transport for NSW (TfNSW)
- Lismore City Council (LCC)

This collaboration should focus on:

- Implementing the School Transport Plan (see **Appendix A**) to actively encourage walking, cycling and use of public transport.
- Promoting the use of bike parking facilities by supporting cycling initiatives such as bike education programs and safety workshops for students.
- Encouraging active transport through school transport planning and behavioural change programs.
- Monitoring future pedestrian and cycling networks improvements to enhance connectivity for students.
- Ensuring alignment with broader transport initiatives to support safe and sustainable school travel.

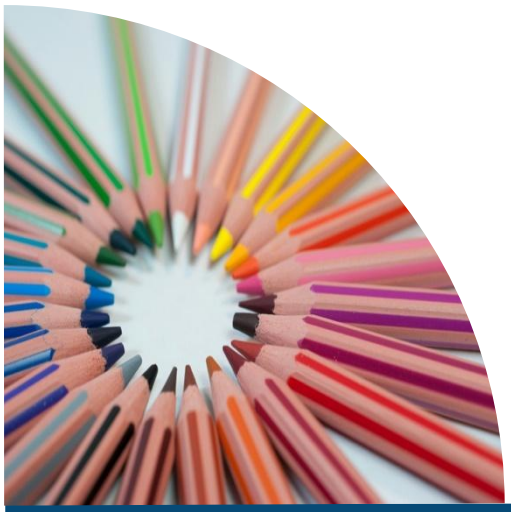
In addition it is recommended to:

- Update the Transport Access Guide (TAG) to reflect adjustments to kiss and drop, parking, bike parking and bus services at day of opening.

- A Construction Traffic Impact Assessment (CTIA) and Construction Traffic Management Plan (CTMP) should be prepared during the detailed design to assess and manage construction-phase traffic impacts on the surrounding road network

Through proactive engagement and coordination, these measures will contribute to a safer, more accessible environment that encourages more students to walk, cycle, and use public transport, while maximizing the benefits of bicycle facilities at the school.

Appendix A – School Transport Plan



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School Transport Plan
Lismore South Public School – Flood Recovery Rebuild

Rev 05

Quality Assurance

Project Details

Project	School Transport Plan for Lismore South Public School Flood Recovery Rebuild		
Project Reference	P2305	Contract Number	DDWO05428/23
Client	SINSW	ABN	40 300 173 822
Prepared by	Crossley Transport Planning	ABN	18 632 881 602

Document Revision Register

Revision	Status	Prepared By	Checked By	Approved By
01	Draft - First release	Ed Spiller Sharon Chungpattana	Jennifer Chen	Stephanie Crossley
		26/08/2024	26/08/2024	26/08/2024
02	Draft – Second release	Kevin Nathaniel Sharon Chungpattana	Jennifer Chen	Stephanie Crossley
		Kevin Nathaniel S.Chungpattana	J Chen	Stephanie Crossley
		21/10/24	21/10/24	31/10/24
03	Draft – Third release	Kevin Nathaniel Sharon Chungpattana	Jennifer Chen	Stephanie Crossley
		Kevin Nathaniel S.Chungpattana	J Chen	Stephanie Crossley
		06/12/24	06/12/24	06/12/24
04	Draft – Fourth release	Sharon Chungpattana	Jennifer Chen	Stephanie Crossley
		S.Chungpattana	J Chen	Stephanie Crossley
		21/02/25	21/02/25	21/02/25
05	Fifth release	Sharon Chungpattana	Stephanie Crossley	Stephanie Crossley
		S.Chungpattana	Stephanie Crossley	Stephanie Crossley
		04/06/25	04/06/25	04/06/25

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Crossley have based this Report on information received or obtained on the basis that such information is accurate and complete. The information contained in this Report has not been subject to an audit.

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Glossary

Term	Description
Hands-up travel survey	A survey conducted in class. Teachers read out the various transport options children could choose to arrive at school. Then the children are asked to raise their hand to indicate which travel option was chosen on that day. The number of hands raised is counted to survey the transport mode share for that class. This survey is conducted on the same day, for every class to capture the mode share of the school.
Mode share	Mode share refers to the percentage share of students or teachers walking, cycling, catching public transport or being driven to and from school.
Rapid Transport Assessment (RTA)	A Rapid Transport Assessment was completed to assess how students travel to school currently and determined how students could get to school in the future. It identified the infrastructural and operational improvements that could be implemented to encourage more students to walk, cycle and catch public transport to school.
School Student Transport Scheme (SSTS)	The School Student Transport Scheme (SSTS) provides eligible school students with free or subsidised travel on public transport between home and school. To be eligible for a free school travel pass at primary school, the student must be a resident of NSW, at least 4 years and 6 months of age and live more than 1.6 km (straight line distance) from school, or 2.3 km or more by the most direct practical walking route to the nearest entry point to the school.
Travel Coordinator	The individual responsible for implementing the transport program to achieve travel behaviour change during the duration of construction and the first year of post-occupancy.
Temporary school site	Temporary school site refers to the temporary learning facilities located next to Lismore South Public School. Teachers and students are currently using this school site while Lismore South Public School is being reconstructed.
Traffic management	This refers to traffic signs and road markings which control or direct the operation and behaviour of people and vehicles. For example, this includes measures like speed limits, street parking restrictions, and pedestrian crossings.

1 Transport goals

1.1 Introduction

This School Transport Plan has been prepared to support a Review of Environmental Factors (REF) for the rebuild of Lismore South Public School (the activity). The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37 of the T&I SEPP.

The activity will be carried out at Lismore South Public School (LSPS) located 69-79 Kyogle Street, South Lismore (the site).

The purpose of this report is to enhance the school's transport operations and address barriers that discourage active travel choices. This plan outlines the methods to achieve these improvements.

1.1.1 Site location

The site has a street address of 69-79 Kyogle Street, Lismore and comprises of two land parcels located on the eastern and western sides of Wilson Street. It is 2.2ha in area, and comprises 14 allotments, legally described as follows:

Eastern Parcel	Western Parcel
• Lot 21, Section 1, DP448737	• Lot 20, Section 2, DP448737
• Lot 22, Section 1, DP448737	• Lot 21, Section 2, DP448737
• Lot 23, Section 1, DP448737	• Lot 22, Section 2, DP448737
• Lot 1, DP64010	• Lot 23, Section 2, DP448737
• Lot 26, Section 1, DP448737	• Lot 24, Section 2, DP448737
• Lot 1, DP158407	• Lot 25, Section 2, DP448737
• Lot 2, DP158407	• Lot 26, Section 2, DP448737

The eastern parcel contains the existing Lismore South Public School buildings and facilities. The buildings were significantly impacted by the 2022 floods and have been deemed to be no longer fit for purpose. For this reason, students are utilising temporary learning facilities located on the sports field and oval on the western side of Wilson Street (see **Figure 1-1**).

The western parcel contains a sporting field, covered outdoor learning area and amenities as well as the abovementioned temporary learning facilities.

The site is bounded by Kyogle Street to the south and Phyllis Street to the north, surrounded by residential lots to the east and west. The site sits near the convergence of Leycester Creek (530m north of the school) and the Wilsons River (720m east of the site). There are existing trees located around the perimeter of both parcels. The eastern parcel also contains trees scattered across the core of the site, interspersed between buildings.

Figure 1-1: Lismore South Public School location pre-flood and post-flood (Nearmap, 2024)

1.1.2 Proposed activity

The proposed activity comprises the rebuild of the LSPS on the eastern parcel of the existing site, in South Lismore, and will be delivered in a single stage. The western parcel is out of the scope of the activity. Any works required on the western parcel (such as removal of demountable classrooms) will be subject to separate approval (if required).

A detailed description of the proposal is as follows:

1. Retention of the existing play equipment, Building K and covered outdoor learning area (COLA) on the western parcel.
2. Bulk earthworks, comprising fill and excavation and other site preparation works on the eastern parcel.
3. Construction of a new building on the eastern parcel for LSPS including:
    a. A one storey building (with undercroft areas below) fronting Kyogle Street containing a general learning space (GLS) hub, hall, library, support hub, administration, and pre-school.
    b. Undercroft outdoor learning areas as well as amenities and storage located on ground level.
4. Landscaping and public domain works, including tree planting, a games court in the northeast corner and an outdoor playing area adjacent to the preschool.

5. A car park on the eastern side of the site, with access from Kyogle Street.
6. Waste collection area access from Kyogle Street.
7. Multiple entrance points, including:
    a. Primary and secondary entries distributed on site frontages.
    b. Vehicular access point to provide access to waste collection/delivery areas and car parking.
8. Ancillary public domain mitigation measures.

Refer to **Figure 1-2** for the scope of works.

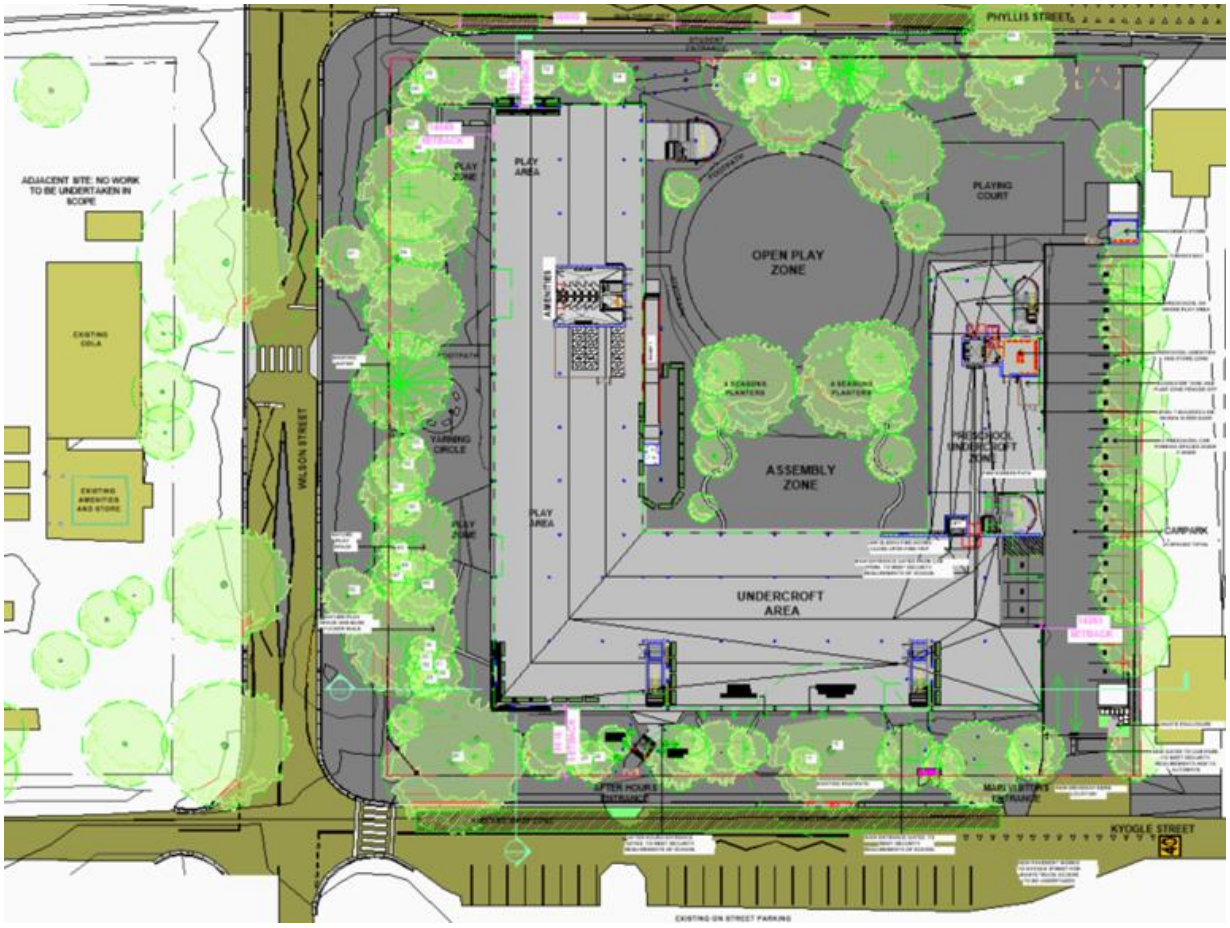


Figure 1-2: Proposed site plan *(EJE, 2025)*

1.2 School Transport Plan vision and objectives

The overall vision is to promote more children to walk, cycle, and use public transport to reach Lismore South Public School. This aligns with Lismore City Council's Walking, Cycling and Micromobility Strategy 2024 – 2034, which aims to increase the number of active transport journeys made by people of all ages and abilities. By fostering these habits, the goal is to promote active lifestyles and improve road safety around the school gates during drop-off and pick-up times. The goal is to achieve 72% of students regularly walking, cycling, or choosing public transport.

To achieve this goal, the School Transport Plan (STP) includes the following objectives:

- Promoting initiatives that enhance awareness among students, staff, parents, and caregivers regarding their travel choices to and from the school, fostering a culture of active living.
- Identifying steps to sustain and increase the number of students walking and cycling to school and utilising bus services.
- Providing tools to identify barriers to active travel and collaborating with Council and Transport for NSW to develop solutions and support in funding their implementation.
- Setting up accountability and responsibility for rolling out the School Transport Plan.
- Establishing ways to monitor progress and celebrate success in achieving the goals.

The purpose of this STP is to guide the school in making step changes to achieve the goal of 72% of students walking, cycling or choosing public transport to school and, to outline a way to monitor progress and success. The actions within the STP aim to provide options for students, parents, and teachers to reduce congestion at the school gates and to promote healthy, active transport choices.

The key objectives will be reviewed and amended as required by the Principal and/or School Travel Coordinator each year.

1.3 Consultation

The STP will be developed in consultation with the following stakeholders:

- Department of Education (DoE)
- Lismore South Public School

1.4 Links to other application documentation

The Environmentally Sustainable Design (ESD) report prepared by LCI Consultants for Lismore South Public School outlines the goal of achieving a 4-Star award under the Green Star Scheme. To achieve this accreditation, the school must implement sustainable practices with the aim of:

- Reducing the impact of climate change
- Enhancing our health and quality of life
- Restoring and protecting our planet's biodiversity and ecosystems
- Driving resiliency in buildings, fitouts, and communities

The School Transport Plan aligns with these objectives by promoting active and public transport, which complements the ESD goals. By encouraging sustainable travel options, the plan contributes to the desired sustainability outcomes and supports the school's Green Star criteria.

Lismore South Public School - Flood Recovery Build – Transport Accessibility and Impact Assessment: This document provides a comprehensive analysis of the traffic and, transport impacts associated with the proposed school upgrade. It evaluates existing travel patterns, identifies transport deficiencies, and assesses the projected impacts of the development. The document outlines proposed enhancements, including improved pedestrian, cycling and public transport infrastructure. These measures are designed to support an increased population of students travelling via walking, cycling, and public transport

2 School Travel Survey

2.1 Current travel to school

Students at LSPS completed a hands-up travel survey on Monday 27 November 2023 detailing how they travelled to and from school. The survey questions are attached in **Appendix D** and responses illustrated in **Figure 2-1** and **Figure 2-2**.

The results show that the majority of students arrive to school by car (56%) and about 18% of students walk or cycle to school. This mode share is similar in the afternoon, with the majority of children being collected by car (58%) or walk or cycle home (15%). Overall, 26-27% of student use the school bus or public bus services to and from school. The number of students walking and cycling to school indicates there is a demand, and therefore a need to support active travel choices.

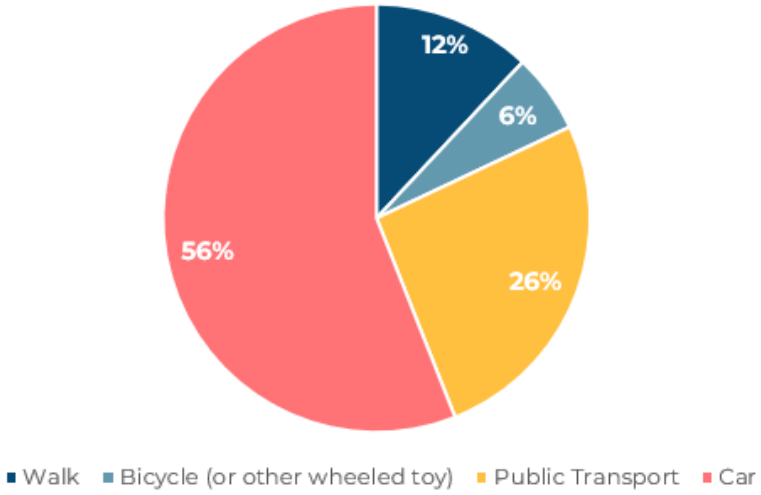


Figure 2-1: Morning school drop-off travel mode share

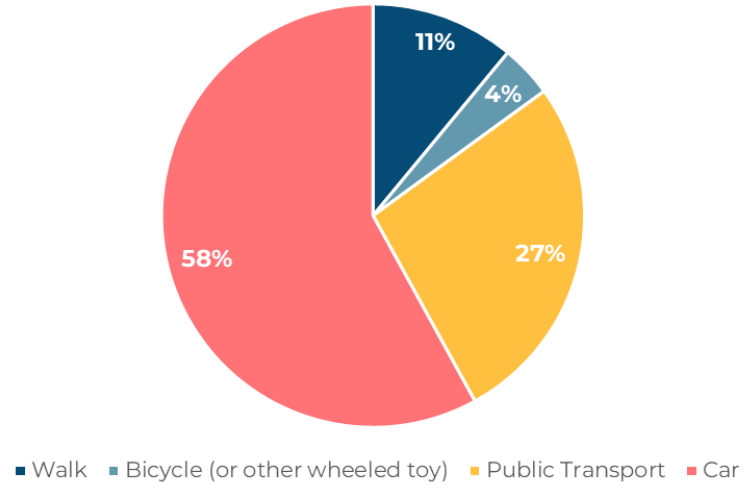


Figure 2-2: Afternoon school pick-up travel mode share

3 Future Travel Analysis

3.1 Walking catchment analysis

A walking catchment analysis was completed based on the current student depersonalised data. The analysis included identifying the number of students who live within the following distances to school:

- 400m / 5-minute walking distance
- 800m / 10-minute walking distance
- 1200m / 15-minute walking distance
- 2300m walking distance / 1600m straight line (School Student Transport Scheme exclusion zone)

The catchment extents are shown in **Figure 3-1**.

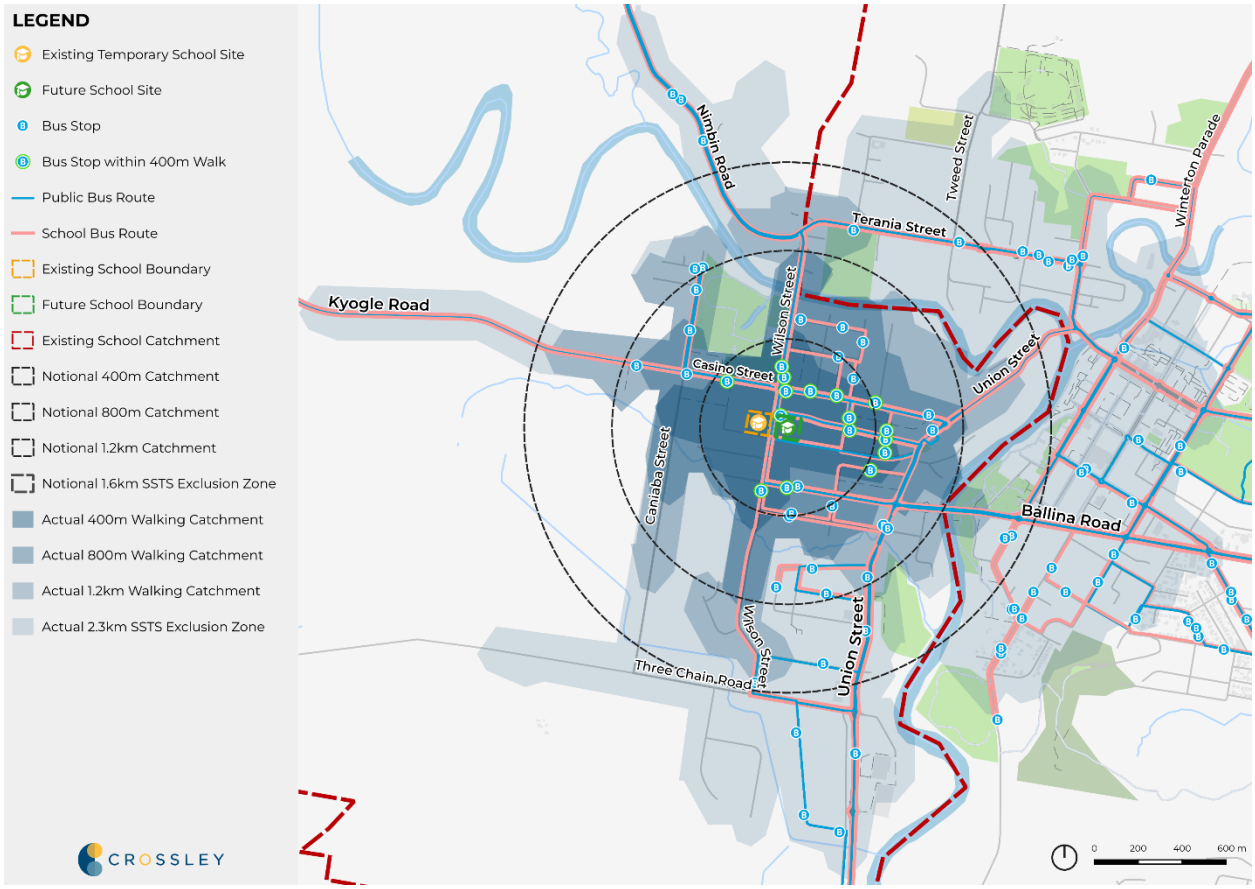


Figure 3-1: Walking catchment *(CrossleyTP, TfNSW GTFS, 2024)*

The results from the walking catchment analysis are shown in **Table 3-1**.

Table 3-1: Walking catchment analysis

Catchment Analysis	Actual (on path / using road network as a proxy)
1-400m (5-min walk)	18%
401-800m (10-min walk)	9%
801-1200m (15-min walk)	13%
2300m (SSTS exclusion zone)	5%

3.2 Public transport catchment analysis

The public transport catchment analysis identifies students who live too far to walk comfortably to school. It also considers the number of students eligible for the SSTS, as their entitlement to free public transport could influence their likelihood of using these services.

A 400m walking catchment from bus stops has been considered as the realistic maximum distance that most students will likely walk from home to a bus stop.

The results from the public transport catchment analysis are shown in **Table 3-2**.

Table 3-2: Public transport catchment analysis

Catchment Analysis	Actual (on path/using road network as a proxy)
Within 400m of a bus stop that brings them close to school	55%
Within 800m of public transport that brings them close to school	61%
Outside SSTS zone, within 400m of a bus stop	11%
Outside SSTS zone, greater than 400m to public transport	44%

3.3 Mode share targets and assumptions

The purpose of these mode share targets is to quantify the vision of promoting active travel to school and to understand what is feasibly achievable. These targets help to guide the STP in identifying practical steps to increase walking, cycling, and public transport use among students, thereby supporting the overall goal of active lifestyles and improved road safety.

The mode share targets were derived using the hands-up travel survey conducted on students at LSPS on Monday 27 November 2023. This survey date was confirmed to be a typical school day with no special events taking place. The survey provided an understanding of how students currently travel to school by asking them how they get to and from school on the day of the survey.

The targets presented in **Table 3-3**, represent the potential for walking, cycling, and travelling by bus based on the current school catchment and student enrolments.

Table 3-3: Travel mode split

Travel mode	2023 Existing Average Mode Share	2026 Moderate Average Mode Share Target	2027 Reach Average Mode Share Target
Pre-school			
Car	67%	61%	55%
Walking	11%	21%	31%
Bicycle (or other wheeled toy) incl. scooter	22%	22%	22%
Primary School			
Car	57%	48%	39%
Walk	11%	22%	32%

Travel mode	2023 Existing Average Mode Share	2026 Moderate Average Mode Share Target	2027 Reach Average Mode Share Target
Bicycle (or other wheeled toy)	4%	4%	4%
Public transport	26%	26%	27%
Staff			
Car	100%	97.5%	95%
Walking or Cycling	0%	2.5%	5%

The reach mode targets can be determined by assessing the number of students within the respective transport catchments and assigning the following:

- If students live within 1.2 kilometres (15-minute walk) walking distance from the school the aim is for those students to walk to school instead of being driven.
- If students live between 1.2 kilometres walking distance from the school and the SSTS exclusion zone, the aim is for these students to cycle to school instead of being driven.
- If students live beyond the SSTS exclusion zone and are within 400 metres of a bus stop which services bus routes that can reach the school, the aim is for these students to take public transport instead.
- If students live beyond the SSTS exclusion zone and are NOT within 400 metres of a bus stop which services bus routes that can reach the school, they are expected to be driven.
- If the reach mode share is calculated to be lower than the current mode share for walking, cycling or public transport, then the reach mode share will be equal to the current mode share.
- Based on consultation with the principal, it is expected that 13% of students will be driven regardless of their proximity to school. This proportion of students is subtracted from the transport catchment-based analysis for walking, cycling and public transport. The distribution of subtraction is as follows: 5% walking pre-school and 8% walking primary school.

Consequently, the moderate mode share targets are based on the average mode share split between the existing and reach mode share splits.

4 Policies and procedures

The School Transport Plan aligns directions and actions with local planning policies, plans, and strategies. The key objectives framing this plan are:

- Increase active and public transport use.
- Reduce car usage.
- Meet 4-star Green Star requirements.
- Manage the safety of the school environment.

These outcomes will be achieved through specific policies, which are organised around the opportunities presented by the school's reconstruction. These policies outline the methods by which the school will work towards achieving the policy goals outlined in this plan:

- Creating an improved walking environment.
- Support public transport use with upgraded facilities.
- Formalising kiss-and-drop locations to improve safety around the school
- Meeting 4-star Green Star requirements.

The following sections discuss how these policies will support the realisation of the policy outcomes.

4.1 Creating an improved walking environment

A well-designed walking environment significantly influences the likelihood of people choosing to walk rather than drive. When walking paths are safe, accessible, and pleasant, they encourage more frequent use. Improving walking infrastructure enhances physical safety and contributes to a more enjoyable walking experience.

Well-maintained and clearly marked paths with shading and safe crossing facilities make walking a more convenient and secure option for students and staff. As walking becomes a more attractive and less daunting option, individuals are more likely to incorporate it into their daily routines.

4.2 Support public transport use with upgraded facilities

Upgrading public transport facilities, such as bus shelters, seating, and accessible boarding areas, will encourage greater use of public transport. Bus shelters protect passengers from the weather, while seating makes waiting more comfortable. Accessible hard standing areas facilitate easier boarding and alighting, making public transport a more viable and appealing option for the school community.

4.3 Formalising kiss-and-drop locations

Clearly designated kiss-and-drop zones help manage vehicle traffic flow during peak times, reducing congestion and improving traffic efficiency around the school. These zones prevent vehicles from stopping in unsafe or obstructive locations, which helps protect pedestrians and cyclists from potential accidents. By formalising the kiss-and-drop zone, the pick-up and drop-off processes are conducted more safely and efficiently.

4.4 Meet 4-star Green Star requirements

The transport component for the Green Star award is based on the Sustainable Transport module and calculator. This module outlines the criteria needed to promote sustainable transport options, such as walking, cycling, and the use of public transport. Meeting these requirements can significantly increase active transport use among students by ensuring that the school environment is designed to support these modes of transport. Key actions include providing bike parking facilities within the school and creating a supportive and inviting environment that encourages students to walk or cycle more frequently.

5 School transport operations

To ensure the safe and efficient access to the school for staff, students, caregivers, and visitors, the following actions will be implemented as part of the activity. These strategies encompass the management of site transport access, day-to-day school operations, and event transport operations, along with initiatives to encourage sustainable transport. The Department of Education's (DoE) Travel Coordinator will collaborate with the school community, as outlined in the communications plan, to ensure the safe and efficient operation of the school.

5.1 Site transport access

Access to Lismore South Public School is provided by four pedestrian gates located along Kyogle Street, Wilson Street and Phyllis Street and two vehicle gates located at Kyogle Street and Phyllis Street (see **Figure 5-1**).

- Pedestrian and Bicycle Access: Students walking or cycling to school can use any of the four pedestrian entrances. The school aims to provide a safe and convenient environment for these modes of transport, ensuring that walkways and bicycle storage facilities are easily accessible and well-maintained.
- Bus Access: Students arriving by bus will use the entrance on Phyllis Street, where a designated bus zone is located. The bus services are scheduled to align with school start and end times, ensuring timely and efficient transportation for students. This coordination will be achieved through discussions with Transport for NSW and local bus providers.
- Kiss-and-Drop Zones: For parents and caregivers driving their children to school, kiss-and-drop zones are strategically located along Kyogle Street. These zones are designed to minimise congestion and enhance safety during peak drop-off and pick-up times.
- Vehicle parking: Off-street parking is provided for staff with entrances located at Phyllis Street and Kyogle Street. The exit to the car park is only at Kyogle Street. On-street parking is provided on Kyogle Street and Phyllis Street. All on-street parking has an unrestricted time limit.
- Mobility parking: The current mobility parking space on Kyogle Street is non-compliant with *AS 2890.5 - 2022 On Street Parking* and is proposed to be moved on-site within the car park.

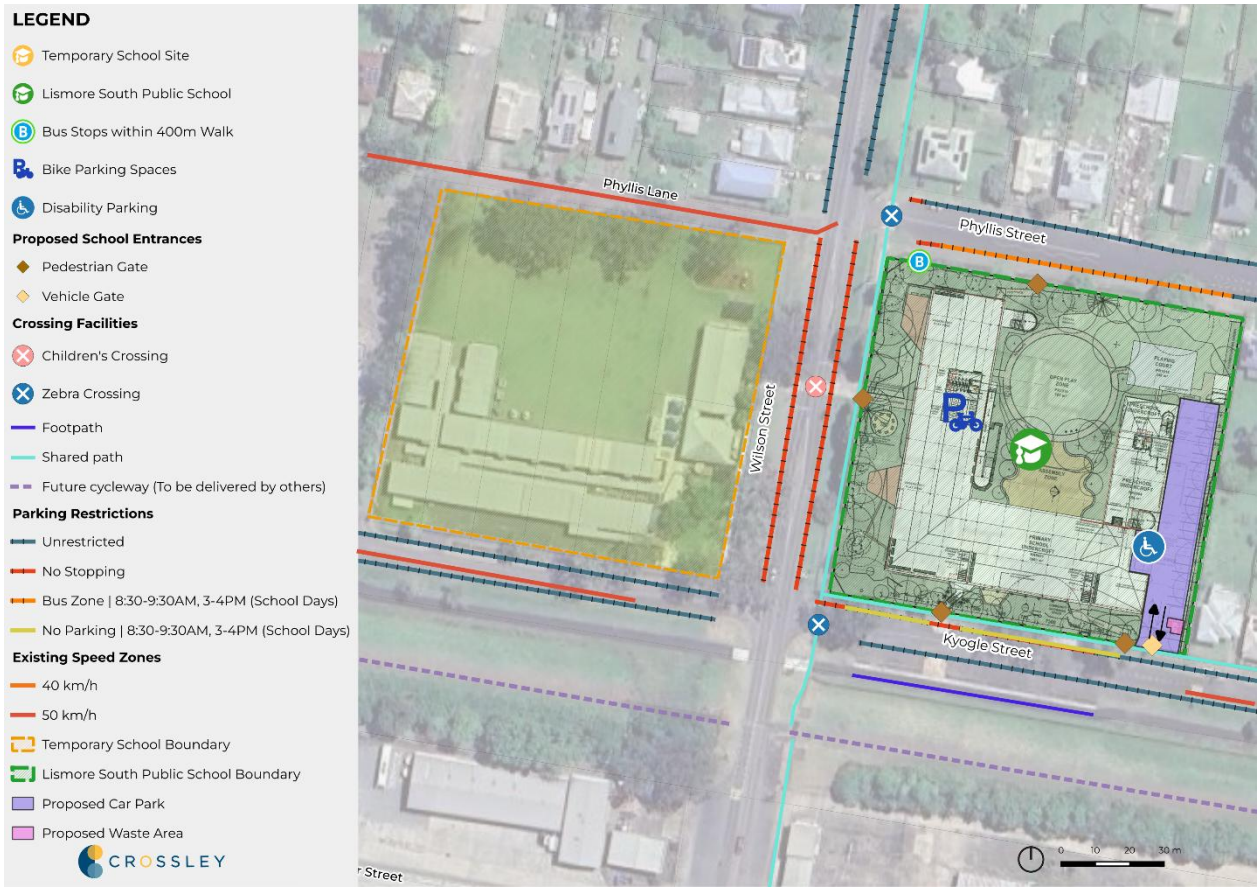


Figure 5-1: Proposed Site Transport Access for Lismore South Public School (CrossleyTP, EJE, 2025)

5.2 Traffic management

Traffic management refers to the strategies, policies, and systems put in place to control the movement of vehicles, cyclists, and pedestrians on roads and public spaces. It includes the use of traffic signals, road signs, lane markings, speed limits, and other mechanisms to guide road users effectively.

Traffic management measures in operation around the school boundary are designed to support safe access for students to and from school. These measures include:

- A 40km/h school zone which operates Monday to Friday from 8:00-9:30am and 2:30-4:00pm term-time.
- A 50km default speed zone which operates outside the school drop-off and pick-up periods.
- At Phyllis Street there is a bus zone which secures space for school bus services to drop-off and pick up students Monday to Friday from 8:07am to 3:50pm. Access to and from the bus zone is supported by the Pedestrian Gate 1.
- At Kyogle Street there is an 63 metre long No Parking Zone along the school frontage. This operated on school days from 8:30-9:30am and 2:30-3:30pm. This provides kiss and drop facilities for up to 8 cars at a time and is supported by access to the school via Pedestrian Gate 3. Outside of these times, this length of kerbside can be accessed by visitors, who then report at Reception accessed from Gate 4.
  On the other side of the street, there is unrestricted parking providing facilities for parents or caregivers who must escort and collect their children directly from the school such as pre-schoolers and kindergartens. Safe access to the school gate is facilitates by the provision of a zebra crossing at the intersection of Kyogle Street and Wilson Street.

- A second length of unrestricted parking is provided on Phyllis Street opposite the bus zones. Access to the school via Gate 1 or Gate 2 from the parking spaces is facilitated by a second zebra crossing at the intersection of Wilson Street and Phyllis Street.
- Pedestrian Gate 2 located on Wilson Street is paired with a children's crossing school crossing operated by a school crossing supervisor. Visibility to the crossing is maintained through the implementation of No Stopping Zones on both sides of the street for the entire length of the block. Adjacent to this gate is the shared-use path, and subsequently, bicycle parking is co-located at this entry point.

The traffic management measures are communicated through a series of traffic signs, lines and pavement markings (see **Figure 5-2** and **Figure 5-3**). This includes the children's crossing, which is marked by high-visibility orange flags indicating when it is in operation. Additionally, the school crossing supervisor wears a high-visibility uniform to ensure they are easily seen by road users.

Figure 5-2: Flashing LED School Zone sign on Wilson St (Google Street View, 2023)

Figure 5-3: No Stopping zone marked by unbroken yellow lines on Wilson St (Google Street View, 2023)

5.3 Day-to-day school operations

The daily transport operations at Lismore South Public School include managing various aspects of student and staff movement. This covers school drop-off and pick-up, movement between buildings on the site, access to the sports fields and other external venues, parking, and service vehicle access.

Table 5-1 summarises the types of site access for walking, cycling, public transport, and general vehicles for day-to-day school operations as well as where management measures can be found in this document.

Table 5-1: Day-to-Day School Operations

Types of Site Access	On-site	Adjacent-to-site	Management measures
Site entries, pedestrian and vehicle	Yes	Yes	Yes (refer to section 3.2.1)
Kiss-and-drop including Assisted School Transport Program	No	Yes	Yes (refer to section 3.2.3)
Buses	No	Yes	Yes (refer to section 3.2.2)
Parking incl carpool, car share pod	Yes	Yes	Yes (refer to section 3.2.4)
Deliveries and service vehicles	Yes	No	Yes (refer to section 3.2.5)

5.3.1 Site entries

The school site features four pedestrian access points and one vehicle access points as illustrated in **Figure 5-4**, each serving a specific purpose as detailed in **Table 5-2**. The purpose of each access point is influenced by the school operating hours and activities in the nearest building, as well as the availability of specific end-of-trip facilities such as pedestrian crossing facilities, bicycle parking, adjacent kiss and drop zones and car parking. The gates are carefully managed to ensure the smooth flow of students and vehicles during school hours.

The specifics of each gate and the recommended operating hours and procedures are presented in **Figure 5-4**, while **Table 5-2** summarises the location and function of each school gate.

Figure 5-4: School Access Locations *(CrossleyTP, EJE, 2025)*

Table 5-2: Details of operation for each school gate

Gate No.	Location	Purpose of gate	Operating hours and procedures
Gate 1	Northern side of the site on Phyllis Street.	Pedestrian access for: • Student entry for bus arrivals. • Students arriving and parking at Phyllis Street. • Students walking via Phyllis Street.	Gate 1 is currently manually operated and requires a staff member to open and lock the gate between operating hours. School caretakers will open gates during the following times to allow students to enter and exit the school grounds • Weekdays: Open between 8:00-9:30 am and 2:30-4:00 pm for arrivals/departures. • Weekends: Only upon arrangement with the school for special events.
Gate 2	Western side of the site at the pedestrian crossing on Wilson Street.	Pedestrian access for: • Students walking or cycling via the shared user path. • Students parking at either Phyllis Street or Kyogle Street (West of Wilson Street) via the children's crossing.	School caretakers will open gates during the following times to allow students to enter and exit the school grounds: • Weekdays: Open between 8:00-9:30 am and 2:30-4:00 pm for arrivals/departures. • Weekends: Only upon arrangement with the school for special events.
Gate 3	Southern side of the site on Kyogle Street.	Pedestrian access for: • After hours.	• Weekdays and weekends: Accessible via a staff swipe card or intercom.

Gate No.	Location	Purpose of gate	Operating hours and procedures
Gate 4	Southern side of the site on Kyogle Street near the car parking.	Pedestrian access for: • Main school office where visitors, volunteers, late student arrivals and early student leavers must report. • Access for the kiss and drop zone and unrestricted parking bays on Kyogle Street.	School caretakers will open gates during the following times to allow students to enter and exit the school grounds: • Weekdays: Open between 8:00-9:30 am and 2:30-4:00 pm for arrivals/departures. • Weekends: Only upon arrangement with the school for special events.
Gate 5	Southern side of the site on Kyogle Street at the car parking area.	Vehicle access for: • Staff car park	• Two-way operations for site entry and exit from the car park. • Weekdays: Accessible via a staff swipe card or intercom. • Weekends: Accessible via a staff swipe card or intercom.

5.3.2 Bus services

School bus services currently operate from the bus stops located on Phyllis Street. It is proposed to extend the existing bus zone to accommodate up to three buses laying over at a time. The bus zone is located adjacent to Entry Gate 1, which will be open from 8:00 AM to 4:00 PM each weekday. The first bus arrives at 8:25 AM, and the last bus departs at 3:53 PM.

To ensure the safety of students during bus operations, the following procedures will be implemented.

Morning Procedure

School supervision commences in the school playground from 08:30am. Any students arriving by bus prior to this time are walked to the entrance of the school and remain seated until the supervising teacher commences duty.

Children arriving by bus from 08:30am will be chaperoned by a staff member from the bus stop into the school grounds.

Afternoon Procedure

Students will be grouped in the undercroft area within the school grounds according to the bus they need to take. When a bus service arrives, the teacher stationed at Gate 1 will notify the teacher in the undercroft area. The students will then walk in an orderly manner to their respective buses.

To facilitate this process, it is recommended that a Bus Arrival Electronic Sign be provided to communicate bus arrivals to students. These signs, shown in **Figure 5-5**, are operated by a teacher who inputs the bus numbers into the software via a smartphone or tablet. The signs are colour-coded to indicate the expected departure times, ensuring students are ready to board promptly.

Safety Measures

The school will communicate the following road safety guidelines to parents and carers to enhance student safety when disembarking from buses:

- Wait until the bus departs before choosing a safe place to cross.
- Maintain a safe distance from the road's edge while waiting at the bus stop.
- Use the pedestrian crossing to cross the road after the bus has left.

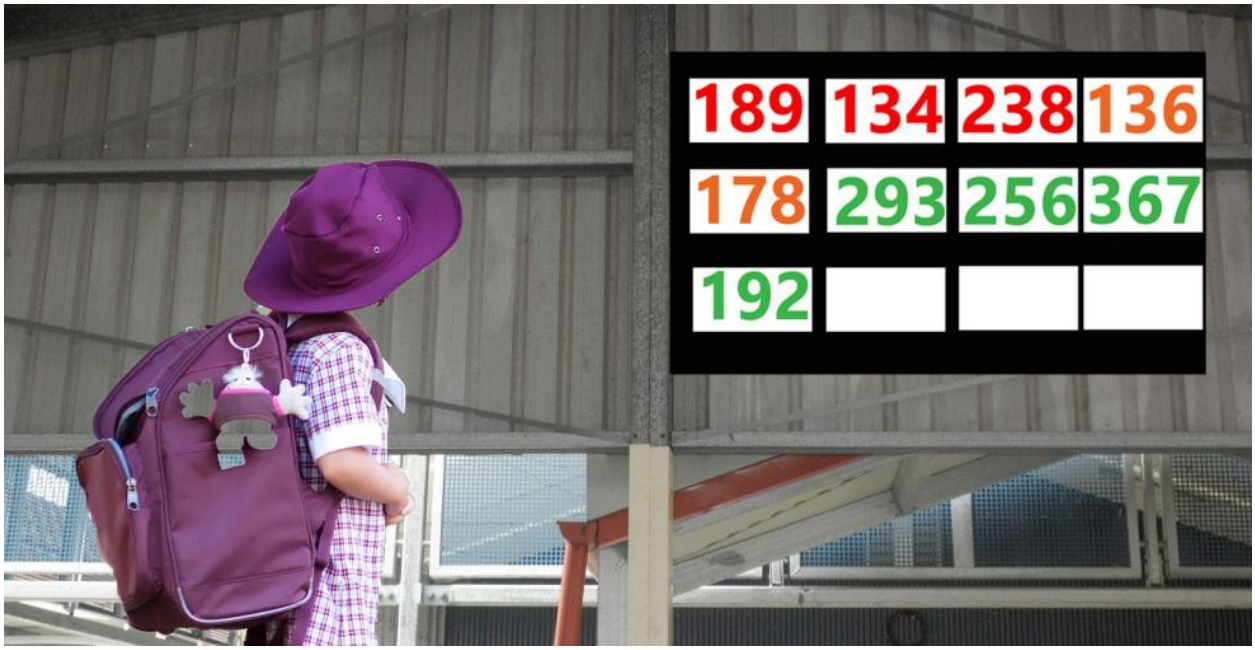


Figure 5-5: Bus arrival electronic signage *(Electronic Signs, 2024)*

5.3.3 Kiss-and-drop

A formal kiss-and-drop zone is located on the northern side of Kyogle Street, adjacent to Gate 4 and Gate 5, spanning 63 metres and providing space for 8 vehicles (see **Figure 5-6**). The school caretaker will open these gates from 8:00-9:30 am and 2:30-4:00 pm for drop-off and pick-up, respectively. This arrangement is sufficient to accommodate the estimated 64 students arriving by car from the reach mode share, as calculations show that only 4 kiss-and-drop spaces are required for the peak period, with each vehicle staying for up to 2 minutes.

No kiss-and-drop zones are planned along Wilson Street to eliminate any parking and vehicle manoeuvres from taking place near the children's crossing, ensuring clear sightlines and maintaining safety at the crossing point.

Figure 5-6: Kiss and drop locations *(CrossleyTP, EJE, 2025)*

5.3.4 Parking

The school will have an on-site car park providing 26 car parking spaces including 20 standard parking spaces for staff, 5 preschool parking spaces for parents picking up and dropping off their children and 1 accessible parking space, With a total of 30 full-time staff members expected on the school's opening day (28 primary school staff and 2 preschool staff), at least 10 staff members will need to park on-street. This does not account for the number of part-time staff and volunteers.

Figure 5-7 illustrates the locations of available parking in the area, noting that Wilson Street is designated as a no-stopping zone. This restriction extends to the property boundary, meaning verge parking is also prohibited.

Parking arrangements for staff

- The staff car park is located on the eastern side of the school, with access via Gate 5 off Kyogle Street.
- All teaching and non-teaching staff will be accommodated in the on-site car park, eliminating the need for overflow parking.
- Staff will be issued swipe cards for car park access.
- Staff are encouraged to arrive and depart outside of peak drop-off and pick-up times (between 8:00-9:30 am and 2:30-4:00 pm) to minimise conflicts with parents/carers.
- These parking arrangements will be communicated to staff at the start of each school year and reinforced with reminders at the start of each school term.

Parking arrangements for parents and carers:

The street parking arrangement is planned to support the school's delivery and collection of children procedure.

- Parents and caregivers dropping off and collecting children from the pre-school must escort and sign in/out each child. To accommodate the time to complete this procedure, pre-school parents and caregivers will be encouraged to access the unrestricted street parking spaces located on Kyogle Street opposite the main school entrance.
- Parents and caregivers are able to kiss and drop off their children from the designated kiss and drop point. However, parents will be encouraged to park away from the school and walk using the unrestricted street parking facilities located on Phyllis Street, Kyogle Street and Wilson Street (north of Phyllis Street).
- Outside of school pick up and drop off-times, the kiss and drop zone will revert to unrestricted parking. This will provide opportunity for late arriving students, or early leaving students to be dropped off or collected from the nearest parking location to the school office (Gate 4) where they must collect either Late Arrival Pass or Early Leavers Pass.
- Parking is prohibited along Wilson Street from Kyogle Street to Phyllis Street including the verge area along the sports field.

Parking arrangements for visitors:

All visitors and volunteers entering the school grounds between 9:00am and 3:00pm are required to sign in at the school office accessed from Gate 4. Unrestricted all-day parking is provided on Kyogle Street, and unrestricted parking is permitted within the kiss and drop zone from 9:30am–2:30pm.

Figure 5-7: Future parking conditions *(CrossleyTP, 2025)*

5.3.5 Service vehicles

Delivery vehicles will use an intercom system to enter the site via Gate 5 and exit through Gate 5, once approved by the school.

The waste vehicle will not be required to enter the school car park, as the designated waste area is situated along the school frontage, adjacent to Gate 5. Waste collection and larger truck deliveries will occur outside of school hours and out of school hours care (OOSH), either before 7:00am or after 6:00pm on weekdays, to avoid conflicts with pick-up, drop-off, and other service vehicles. Any changes need to be discussed with the school and recorded in this document. Access to the waste storage area will be provided by the school caretaker. Please note that the final delivery hours will be confirmed following the schematic design review.

All small deliveries (e.g., office supplies, post) can take place during the day, provided they are arranged in advance with the school. Small deliveries can enter the site at Gate 5 using the intercom and exit the site at Gate 5. Alternatively, they can use the kiss and drop zone without entering the car park.

A sign with delivery hours and a contact phone number for the school caretaker will be placed at Gate 5.

Please note that this section will be finalised after the schematic design review and in coordination with waste consultant recommendations.

5.4 Event management

Special events at the school, such as parent-teacher interviews, sports days, and excursions, require additional transport management measures. These include:

- School Information Session
- School Art Show
- Parent Teacher Interviews
- Meet and Greet BBQ Breakfast
- Sports events such as sports carnivals
- Camp
- Excursions

For events held outside of regular school hours, the main pedestrian gate (Gate 5) will serve as the primary access point. Other gates may be used depending on the specific needs of the event.

For excursions requiring students to be transported off-site by bus, the buses will be coordinated to arrive and depart within a designated timeframe to avoid congestion. Students will be organised into groups and supervised by staff to ensure orderly boarding and alighting.

For events where students are walking to a specific location like a local sports oval for a sports carnival, students will be asked to gather at a specific gate and will walk in groups supervised by staff and volunteers who will facilitate students crossing the road and keeping students safe.

5.5 Transport encouragement programs

Lismore South Public School is committed to promoting sustainable transport options through various programs aimed at encouraging active travel among students.

Active Transport Initiatives: The school will implement programs such as walking school buses and cycling groups to foster a culture of active travel. These initiatives not only promote physical health but also reduce the environmental impact of school commutes.

Public Transport Support: The school will work with local transport providers to ensure that public transport services meet the needs of the school community. Regular surveys will be conducted to assess satisfaction and identify areas for improvement.

Carpooling and Park-and-Walk: To further reduce traffic congestion, the school will promote carpooling among families and designate safe drop-off points within walking distance of the school.

The following action plan details guidance on how these actions will be implemented to achieve the school's transport policy objectives.

Table 5-3: Available transport encouragement programs (action plan)

Action	Details	How	Responsibility	Collaboration	Target timescales	Frequency	Monitoring
Deliver the road safety education program	This program aims to enhance road safety awareness among students, providing them with valuable knowledge to navigate pedestrian hazards. It enhances students' awareness of cycling safety hazards and provides peace of mind for parents and caregivers.	Integrate road safety into the school curriculum and integrate State, National and/or World road safety days into the school's calendar of recognised days.	School Travel Coordinator	Transport for NSW provides funding to support the delivery of road safety education and events. https://www.transport.nsw.gov.au/roadsafety/community/schools/road-safety-education	Short-term	Start of the Term 1 and 3	Annually review the plan.
Launch a school walking bus	The walking school bus is a group of children walking to school with one or more adults. This initiative is designed to inspire students / parents to adopt walking as their primary mode of transportation to school. It contributes to healthier lifestyles, reduces traffic congestion, and minimises environmental impact.	Identify key walking routes (to school or off-site locations for excursions), potential volunteers to run the initiative, and complete required training and work health and safety policy procedures.	School Travel Coordinator	NSW Government Department of Education provides resources to set up Walking School Buses https://education.nsw.gov.au/teaching-and-learning/curriculum/road-safety-education/safe-travel/walking#:~:text=A%20walking%20school%20bus%20is,route%2C%20accompanied%20by%20supervising%20adults.	Medium/ Long term	Depending on levels of participation and volunteers. For travel to school, this could be once a month and then increase regularity year-on-year. For school excursions, this could be used to reduce private bus operations to access nearby sports facilities etc.	Number of children per walking bus Frequency of walking bus Cost savings on private bus hire.

Action	Details	How	Responsibility	Collaboration	Target timescales	Frequency	Monitoring
Walk safely to school day	Walk Safely to School Day is an event that encourages children and families to walk to school safely, highlighting the importance of pedestrian safety and physical activity.	Register to participate in the walk safely to school day. Plan communications with staff and caregivers to encourage participation and distribute event information. Consider organising an intra-school competition or quiz on safety.	School Travel Coordinator	NSW Government Department of Education provides funding to host the Walk safely to school day event https://education.nsw.gov.au/teaching-and-learning/curriculum/road-safety-education/news/walk-safely-to-school-day--can-be-the-start-of-a-new-routine	Medium/ Long term	Occurs year with the next event being held on 16 May 2025	Number of participants (hands-up travel survey on the day)
National Ride2School Day	Ride to School Day is part of the National Ride2School program, an Australia-wide initiative. It encourages students to cycle to school on a specific day, promoting cycling as a viable and enjoyable mode of transportation.	Register to participate in National Ride to School Day. Plan with staff and caregivers to encourage participation and distribute event information and resources from the website. Consider organising an intra-school competition or quiz on safety.	School Travel Coordinator	Bike Network provides resources to set up Ride to School Day for each school https://bicyclenetwork.com.au/rides-and-events/ride2school/ride2school-day/	Medium/ Long term	Occurs year with the next event being held on 21 March 2025	Number of participants (hands-up survey on the day)
Cycling School Bus	The Cycling School Bus is a group of students who cycle to school together under the supervision of an adult leader. It is designed to make cycling to school a social and organised activity.	Identify key cycling routes to school, potential volunteers to run the initiative, and complete required training and work health and safety policy procedures.	School Travel Coordinator	Cycling school buses are supported by the NSW Government Department of Education. https://education.nsw.gov.au/teaching-and-learning/curriculum/road-safety-education/safe-travel/riding#:~:text=A	Medium/ Long term	Depending on levels of participation and volunteers. For travel to school, this could be once a month and then increase regularity year-on-year.	Number of children per cycling school bus Frequency of cycling school bus

Action	Details	How	Responsibility	Collaboration	Target timescales	Frequency	Monitoring
				%20cycling%20school%20bus%20is,rear%20of%20the%20'bus'.			
Review demand and provision of public transport	Ensure that public transport is sufficient and satisfactory to cater for students and staff.	Audit the number of students catching public transport once a year and identify if the buses they are taking have sufficient capacity when they are arriving or departing the school. Monitor any complaints from parents regarding bus capacity.	School Travel Coordinator	n/a	Medium/ Long term	A review of public transport needs can be completed once a year	Capacity of buses arriving and leaving the school.
Establish carpooling	Carpooling involves sharing a car ride with other families to reduce the number of vehicles commuting to school. It aims to decrease traffic congestion, lower emissions, and foster community connections.	Communicate with parents and caregivers about the benefits of carpooling. Encourage the facilitation of carpooling in social media groups	School Travel Coordinator	n/a	Medium/ Long term	A review of carpooling participation can be completed once a year	Number of parents /caregivers participating in carpooling on social media

6 Communication plan

The communication plan outlines the strategy for promoting and disseminating information about the various transport options detailed in the School Transport Plan (STP). This section is designed to ensure that all stakeholders, including students, parents, and school staff, are well-informed about available transportation methods, access points, and any operational changes. The Travel Coordinator will employ a variety of communication channels and methods to effectively reach these stakeholders, ensuring transparency and encouraging active participation.

6.1 Communication channels

The school will use multiple communication channels to keep parents and the school community informed, depending on the nature and frequency of the messages.

Table 6-1 provides a summary of the required communication channels, their purposes, and the individuals responsible.

Table 6-1: Communication Channels

Communication Channel	Purpose	Frequency of use	Individuals responsible
School starter kit	Parents will receive a starter kit on enrolment. This kit will include formal information on: • Bell times • Gate locations • Transport options to/from the school • What travel programs are available at the school and when they are held (e.g. walk safely to school day) • Bus route maps and timetables • Information on how to obtain a bus pass • Where parents can pick up and drop off their children • Information on appropriate behaviour during pick-up and drop-off etc.	A school starter kit should be updated each year and distributed to new enrolments	Travel Coordinator alongside the School Registrar
School Newsletter	The school newsletter will feature regular articles to keep the community informed about transport-related matters. These articles will highlight key events related to the School Road Safety Plan and Active Transport initiatives, promote upcoming events, and celebrate successes. The goal is to engage parents and carers, reinforce safe behaviour, and encourage participation in school transport programs.	The school newsletter is distributed monthly. The requirement for articles will need to be planned as part of the school's action plan.	Travel Coordinator alongside school principal and admin
School website	The school website will update the site's *location and transport* page to include comprehensive information on transport options to the school, with a focus on active and public transport.	The school website will be updated to include any transport operations changes.	Travel Coordinator alongside school principal and admin
Facebook group	The school Facebook group will be used as a promotional channel to remind parents of active and public transport options, and transport programs organised by the school.	The Facebook group will be used throughout the school year to promote road safety education and active travel events, posting as needed according to the calendar of activities.	Travel Coordinator alongside school principal and admin
School meetings	The school will have meetings with the school community to address transport concerns and explore resolutions. Engages the school community to address transport concerns and explore resolutions. Opportunity to add school transport operations as a set agenda item.	The school meeting will occur every 6 months. Suggest the first meeting of the year is to discuss the action plan, and the second to discuss progress against the plan.	Travel Coordinator alongside school principal and admin

6.2 Messages

The school will regularly distribute information using a combination of the above channels to inform parents of the following:

- School start and end times,
- Out of School Hours (OOSH) start and end times
- Principal's message about transport goals and expectations
- Construction works near the school which may impact on walking, cycling and travel routes for parents and students.
- Transport access modes, with links for more information on road safety, bus passes, and reporting issues.
- Proper behaviour at pick-up and drop-off points
- Contacting the governance committee

Appendix B provides sample messages that would be used for the School Community.

The school should also communicate with parents and caregivers on how to efficiently use the existing traffic controls surrounding the school. Messages which should be communicated to parents and caregivers include the following:

6.2.1 Kiss and Drop zones

The following messages should be communicated at the beginning of each school year through the school starter kit which will be distributed to the school community:

- Parents should try to limit their kiss and drop activities to 2 minutes. For safe and efficient operation, parents/guardians should remain in their vehicles and refrain from exiting them to collect their students.
- Vehicles are not to undertake U-turns across the designated double lines. This is to improve safety and reduce potential queueing along the local road network.

6.2.2 Parking zones

Parents/carers driving must adhere to legal and safe parking practices, even if it means walking a longer distance to reach the school gate. Parents/carers will be advised by the school to:

- Avoid illegal parking practices, such as double parking and dangerous manoeuvres like U-turns and three-point turns, as they pose risks to children's safety.
- Parking on the verge along Wilson Street is prohibited.
- Avoid parking in bus zones.

6.3 Travel Access Guide

A Travel Access Guide (TAG) has been prepared for the school, refer to **Appendix E**. This information will be shared through multiple channels, including the school website, newsletters, and during school inductions for new and returning students. The guide will cover the following key areas:

- School entry points
- Transport access, including footpaths, cycleways, public transport options, the local road network, and pedestrian crossing facilities
- Bike parking locations
- Kiss and drop zone location and expectations
- Reporting issues through Send Snap Solve

7 Data collection and monitoring

The success of the School Transport Plan (STP) hinges on the continuous monitoring and evaluation of travel behaviours among students and staff at Lismore South Public School. This chapter outlines the processes for data collection, program evaluation, and reporting, which are essential for ensuring that the transport strategies are meeting the school's sustainable transport objectives.

7.1 Data collection

To accurately assess travel patterns and identify areas for improvement, the following actions will be undertaken:

Once per year

- Transport catchment analysis: Using anonymised student data, a 5, 10, and 15-minute walking catchment analysis will be conducted to determine how accessible the school is by foot for students living nearby.
- Travel to school questionnaire: A questionnaire will be distributed to staff and parents/carers at the start of Term 1 and reviewed annually. This survey will gather consistent data on travel habits, preferences, and any barriers to active transport.

Twice a year

- Hands-up survey: Conducted in class twice a year. The hands-up survey will provide a quick snapshot of how students are travelling to school. The questions will remain consistent year on year to track changes in behaviour.

Once per term

- Site observations: Observations of student behaviours while travelling to school will be conducted to identify safety issues and opportunities for operational improvements. This includes monitoring how students walk, cycle, board and alight from buses, and use kiss-and-drop facilities.
- Infrastructure audit: An audit of the conditions and capacity of school bus stops, bike parking facilities, footpaths, and crossing facilities within the vicinity of the school will be carried out. This will help identify any outdated or overcrowded infrastructure that may require upgrades.

7.2 Program evaluation

The collected data will be analysed to assess the performance of the School Transport Plan. Success will be measured by evaluating the effectiveness of the action plan against the achievement of the mode share targets. Key areas of focus will include:

Increase in Active and Public Transport Usage: Monitoring the percentage of students walking, cycling, and using public transport year on year will help assess progress towards the school's sustainable transport goals. The target is for 32% of students to walk or cycle and 40% to use public transport. Regular tracking of these figures will identify trends and areas requiring intervention.

Car and Bicycle Parking Occupancy: Regular checks on car and bicycle parking usage will provide insight into the effectiveness of the school's transport policies. High car usage at kiss-and-drop areas or underutilised bicycle parking may indicate a need for additional initiatives to promote walking, cycling, or public transport.

Evaluate road safety and active transport marketing strategies: Understanding how the school community interacts with transport-related information provided to them helps tailor communication and engagement strategies.

- By tracking clicks on articles and links about school transport, the school can gauge which topics resonate most with students, parents, and staff. High engagement might indicate a strong interest in certain areas, such as safety tips for walking or

updates on bus routes. Conversely, low engagement could suggest that the information isn't reaching the audience effectively or that different topics should be prioritised.
- This approach will allow the school to refine its communication strategies, ensuring that the most relevant and useful information is reaching the community, which in turn supports the overall goals of the School Transport Plan.

Program Participation Rates: Monitoring student participation rates in various transport programs and events will help identify which events are:

- Successful and could be considered for program expansion or increased frequency.
- Not engaging sufficient levels of participation and may require investigating potential barriers to participation and/or appropriateness for school travel needs.

7.3 Program reporting

Following each annual review, the Department of Education (DoE) and the Travel Coordinator will compile a report summarising the findings and recommendations for the Council. This report will include:

- **Student and Staff Numbers:** An overview of the current population of the school.
- **Travel Mode Split:** Details on the distribution of different modes of transport used by students and staff, compared against the mode share targets.
- **Success or Failure of Strategies:** Evaluation of strategies based on their effectiveness in increasing active transport modes. Successful strategies will show increased participation in walking or cycling, while unsuccessful strategies will be identified as a lack of participation or no significant change.
- **Adjustment Measures:** Recommendations for any necessary adjustments, such as the installation of additional bike parking facilities to meet increased demand.

Approved modifications to the STP or actions resulting from the findings will be implemented promptly. **Appendix A** provides an Implementation Checklist summarising the necessary steps as part of the plan.

7.4 Staff induction

To ensure that new staff members are well-informed about transportation arrangements and the role of the STP, it is essential to incorporate this information into their induction process. The induction process should include:

- A concise overview of the STP, highlighting its objectives and importance.
- A tour of the school facilities, including a visit to the bike parking areas.

8 Governance framework

This section outlines the governance structure for implementing and managing the School Transport Plan (STP), defining the roles of key stakeholders and establishing collaborative frameworks to ensure the effective execution and sustainability of the plan. The Travel Coordinator will oversee the plan's execution during construction and the first year, supported by two working groups: the Internal School Working Group and the External Transport Working Group. These groups will facilitate effective communication, stakeholder engagement, and the ongoing adaptation of the plan to meet travel behaviour goals and operational needs.

8.1 Travel Coordinator

To implement the STP and effectively engage stakeholders, a dedicated Travel Coordinator is essential throughout the construction phase and the first year of post-occupancy. This role, initially funded by the project, is crucial for driving travel behaviour change. Future arrangements for the continuation of this role will be determined by Department of Education (DoE), the Department of Education and Training (DET), Transport for NSW (TfNSW), and the Department of Planning and Environment (DPE) after the first year.

The responsibilities of the Travel Coordinator are:

- **Communicating Transport Options:** Clearly convey available transport options to the school community, ensuring that information is accessible and engaging.
- **Coordinating Implementation Efforts:** Oversee the execution of transport programs and initiatives outlined in the STP.
- **Conducting Surveys and Data Collection:** Regularly gather and analyse data to measure progress and assess the effectiveness of the STP.
- **Engaging Stakeholders:** Maintain effective communication with the school principal, Road Safety Education Officer, Council, and TfNSW to align efforts and address concerns.
- **Coordinating Events and Promotions:** Organise events to raise awareness and promote the STP and associated initiatives.
- **Monitoring and Reviewing the STP:** Continuously review and update the STP based on feedback and performance data.

8.2 Internal school working group (consultation stream 3)

The Internal School Working Group will be established before the commencement of construction, focusing on school-specific issues to be discussed at quarterly meetings. This group will be formed during Consultation Stream 3, which emphasises the development of transport options.

Participants will include school leadership, the Road Safety Education Officer, the Asset Management Unit, Workplace Health and Safety, and members of the Parents and Friends committee. This group will serve as a sounding board for the Travel Coordinator and school leadership, playing a critical role in implementing and monitoring the STP's measures and goals.

The responsibilities of the internal school working group are:

- **Oversee the Implementation of STP Measures:** Ensure the STP remains a living document and adapt strategies based on performance evaluations.
- **Measure Progress:** Track progress against key targets and work towards achieving positive changes in travel behaviour.
- **Identify issues:** Report any operational, training or infrastructure issues observed during the day-to-day activities of the school.

8.3 External transport working group (consultation stream 2)

The External Transport Working Group will be established during Consultation Stream 2, focusing on broader transport concerns discussed at quarterly meetings. This group will include participants such as the Council, bus operators, and TfNSW. If an existing group from a previous SINSW project is available, its Terms of Reference will be updated to include this school project. The responsibilities of the external transport working group are:

- **Regular Meetings**: Schedule and hold regular meetings quarterly, to ensure ongoing communication and progress tracking. A monthly meeting may be held if an urgent issue arises.
- **Confirm Annual Changes in Travel Demand:** Monitor changes such as new student enrolments or graduating classes.
- **Report on Transport Usage:** Provide updates on transport usage and suggest necessary updates to the STP.
- **Inform Updates to the STP**: Use data and insights to inform and update the STP as needed.
- **Explore Funding Options:** Identify and pursue funding to address missing links or operational issues.
- **Formulate Collaborative Responses:** Develop responses to key issues by incorporating input from all stakeholders.
- **Communicate new legislation:** To communicate any changes to local planning policies, plans or standards that may impact school transport operations and associated goals for the transport plan.

Appendix A Implementation checklist

Task	Timeframe	Responsibility	Notes	Estimated Cost
Programs				
Recruit Travel Coordinator	Before construction commences	Project Team	Appoint Travel Coordinator before construction commences.	-
Develop Travel Access Guide (Brochure)	Attached to this STP	Travel Coordinator	Staff to provide assistance.	-
Convene Internal School Working Group	December 2025	Travel Coordinator	The internal school working group will consist of staff, students, parents.	-
Develop Transport Access Guide (Brochure)	December 2025	Travel Coordinator	Staff to provide assistance.	-
Develop and Distribute New Starter Kits	December 2025	Travel Coordinator	Staff to provide assistance.	-
Occupancy	Term 1 2026	Project Team	-	
Annual Transport Survey	Start of term 1 and reviewed after 6 months.	Travel Coordinator	Staff to provide assistance.	-
Road Safety Program	On-going	Travel Coordinator	Currently undertaken by Staff.	-
Walking bus program launch	Term 1 2026	Travel Coordinator	This program will need two volunteers per group (e.g. parent, staff) to lead the walking group, with one volunteer positioned at the front and the other at the back of the group.	-
Cycling bus program launch	Term 1 2026	Travel Coordinator	Staff to provide assistance.	-
Car Share/Carpooling launch	Term 1 2026	Travel Coordinator	Staff to provide assistance.	-
Review demand and provision of public transport	Annually	Travel Coordinator	Surveys to be undertaken to assess the demand.	-
Engage with TfNSW on improving public transport access	On-going	Travel Coordinator	-	-
Engage with Council on improving active transport access	Annually, tied into the active travel funding submission timescales	Travel Coordinator	-	-
Infrastructure				
Install bike parking facilities	Pre-occupancy	Project Team	-	-

Appendix B Sample messages

Sample 1 – National Road Safety Week

We have some exciting news for you. From (Date) to (Date), we are joining the National Road Safety Week, an annual campaign to raise awareness and prevent road accidents. Did you know that traffic injury is the biggest threat to Australian children under 15? That's why we need your help to make our roads safer for everyone.

Each day of the week will have a different theme. You can pledge and participate in these themes by following the tips and resources on the National Road Safety Week website. You can also show your support by wearing a yellow ribbon or displaying a sticker on your car. We know how busy you are, but we also know how much you love your children. That's why we encourage you to walk or cycle with them to school whenever you can. Walking or cycling is not only good for your health and the environment, but also a great way to bond with your children and avoid traffic stress. Our school has pedestrian crossings and bicycle racks for your convenience.

We appreciate your cooperation and participation in this campaign. Together, we can make our school and our community a safer, greener, and happier place for everyone.

Sample 2 – National Walk Safely to School Day

Join us for a safe and fun walk to school!

We are thrilled to tell you that on (Date), we are taking part in the National Walk Safely to School Day! This is an awesome initiative by the NSW Government and Transport for NSW to encourage walking and cycling as healthy and safe ways to get to school. We would love you to join us in this fun and meaningful event!

For our families who are up for the challenge and ready to walk, we have a special surprise for you. We are preparing a yummy breakfast at the school to thank and support you for your efforts. You can enjoy some fresh fruits, cereals, milk, juice, and more!

This is also a great chance to teach your children about road safety. You can talk to them about the Stop, Look, Listen, Think rule every time they cross the road:

- **Stop** one step back from the kerb
- **Look** continuously both ways
- **Listen** for the sounds of approaching traffic
- **Think** whether it is safe to cross and keep checking until safely across.

We have also attached a link to Transport for NSW's 'Back to School Safety' tips for your information. You can find these tips in several languages on their website: https://roadsafety.transport.nsw.gov.au/stayingsafe/schools/backtoschoolsafety.html

We are excited to see how many families we can get walking or cycling to our school! Let's make this day a blast and a joy for everyone.

Sample 3 – National Ride2School Day

Ride to School on National Ride2School Day!

We are excited to announce that our school will be participating in the National Ride2School Day on (Date). This is a great opportunity for us to enjoy the benefits of cycling and active travel, such as:

- **Improving our physical and mental health**: Cycling is a fun and easy way to get our daily dose of exercise, which can boost our immune system, mood, and concentration.
- **Reducing our environmental impact**: Cycling reduces greenhouse gas emissions, air pollution, and traffic congestion, which can make our school and community more liveable and sustainable.
- **Developing our independence and confidence**: Cycling teaches us valuable skills such as road safety, time management, and problem-solving, which can help us grow as responsible and capable individuals.
- **Having fun and making friends**: Cycling is a social activity that can help us bond with our family, classmates, and neighbours. We can also discover new places and experiences along the way.

To join the National Ride2School Day, all you need to do is bring your bike, helmet, and water bottle to school on (Date). We will have a designated area for bike parking and a special assembly to celebrate our achievements. We will also have prizes for the most creative bikes and outfits, so feel free to dress up and decorate your bike!

If you don't have a bike or need some tips on how to cycle safely, you can visit the Bicycle Network website (https://bicyclenetwork.com.au/rides-and-events/ride2school/) for more information and resources.

We hope that you will join us in this exciting event and make cycling a regular part of your school routine. Let's ride together and make a positive difference for ourselves and our planet!

Sample 4 – Walking School Bus

Join the Walking School Bus: A Fun and Healthy Way to Get to School!

We're excited to share a fantastic opportunity for our students to get active, have fun, and contribute to a greener environment! Introducing our **Walking School Bus** – a safe and enjoyable way for kids to walk to school together.

Why Join the Walking School Bus?

1. **Stay Active and Healthy**: Walking is a great way for kids to get their daily exercise. It helps build strong muscles and bones, improves cardiovascular health, and keeps energy levels high throughout the day.
2. **Enjoy the Fresh Air**: Instead of being stuck in a car, students can enjoy the fresh air and beautiful surroundings of our community. It's a great way to start the day on a positive note!
3. **Build Friendships**: Walking with friends and classmates makes the journey to school more enjoyable. It's a perfect opportunity to chat, play, and make new friends.
4. **Help the Environment**: By choosing to walk, students are reducing traffic congestion and lowering their carbon footprint. It's a simple way to help our planet and make our community cleaner and greener.

How Does It Work?

The Walking School Bus operates on a set route with designated pick-up and drop-off points. We have scheduled times and routes to make it easy and convenient for families to participate.

Get Involved!

Joining the Walking School Bus is easy! Simply sign up at the school office or visit our website for more details. We encourage all families to take part in this fun and healthy initiative. The more, the merrier!

Appendix C Journey to school questionnaire

Please explain the "hands up" protocol to the principal during the interview.						
Prepare the 5 question survey in your survey tool.						
Principal to distribute the link to this survey on a **typical** day with no excursions and fine weather.						
Please read the below before starting the questionnaire: School Infrastructure NSW are conducting this questionnaire to understand how your students travel to and from school. This should take 5 minutes to complete. Please complete the survey by xx/xx/xx. If you have transport feedback for our team, please contact us at _____@ .com.au						
required	1	About this class:	year group	[free form]		
			name of person completing this survey	[free form]		
			total students in your class	[free form]		
			total absent today	[free form]		
required	2	How did you travel to school on the survey day?	walked the whole trip	[for each option, please ask students to raise their hand if this is how they travelled to school this morning]		
			rode a bicycle or other rideable toy (incl ped scooter, skateboard, rollerblades)			
			bus			
			train			
			dropped off (driver did not stay)			
			drove a car and parked on-site	*additional options, high school only*		
			drove a car and parked nearby			
			motorcycle / motor scooter			
required	3	How will you go home this afternoon?	walk the whole trip	[for each option, please ask students to raise their hand if this is how they will travel home this afternoon]		
			Ride a bicycle or other rideable toy (incl ped scooter, skateboard, rollerblades)			
			bus			
			train			
			picked up by car			
			drive a car	*additional options, high school only*		
			motorcycle / motor scooter			
optional	4	How did you travel to school today?	walked the whole trip	[drop down, select one]		
			rode a bicycle or other rideable toy (incl ped scooter, skateboard, rollerblades)			

			bus			
			train			
			dropped off (driver did not stay)			
			drove a car and parked on-site			
			drove a car and parked nearby			
			motorcycle / motor scooter			
optional	5	Any other transport feedback or road safety issues you would like to alert our team to?		[free form]		

Appendix D Hands-up travel survey

Hands-up travel survey questions

Class Details

- Date of survey completion?
- What grade is this class?
- Number of students present.
- Number of students absent.

Travel to school

- How many students walked to school?
- How many students cycled to school?
- How many students took the bus to school?
- How many students were driven to school?
- How many students used other methods of travel to school? (e.g. scooters)
- For students who used other methods of travel, please provide some more details here

Travel from school

- How many students will walk home from school?
- How many students will cycle home from school?
- How many students will take the bus home from school?
- How many students will be driven home from school?
- How many students will use other methods of travel home from school (e.g. scooters)
- For students who use other methods of travel, please provide some more details here

Appendix E Travel Access Guide

Lismore South Public School

Travel Access Guide

04/06/2025

Project overview

A planning is underway to rebuild Lismore South Public School after it was damaged during floods in 2022. New educational facilities will be designed to meet the long-term needs of the school in South Lismore.

Using public transport to get to school

School buses and public buses

- There are three bus stops closest to the school, which are located at **Phyllis Street** (stop ID: 2480144), **Casino Street** (stop ID: 2480536), and **Wilson Street** (stop ID: 248059).
- Bus routes serving these stops includes 652, 684, S347, S370, S383, S385, S367, S368, S977, S978, S981.
- Students are also able to catch buses to the Trinity College site and interchange onto a bus which travels to Richmond River High Campus. Bus routes to the Trinity College interchange can be found on Table 1. The bus stop located at the school entrance provides bus services operating from Trinity College Interchange.
- Bus routes from Trinity College Bus Interchange to Lismore South Public School includes 684, S347, S368, S894, S896.
- Always wait until the school/public bus has gone, then find and use a safe place to cross.

Message from your Principal

- Insert text from Principal that lets the school community know they are becoming a public transport school.
- Principal message to include relevant safety information.
- Principal message may include their own commitment to public transport.
- Include Principal photo and signature block.

Message from your P&C President

- Insert text from P&C President that outlines their support for becoming a public transport school.
- P&C message may include information about how changing the way you get to school even one day per week can make a 20% difference to local traffic congestion.
- Include P&C President photo and signature block.

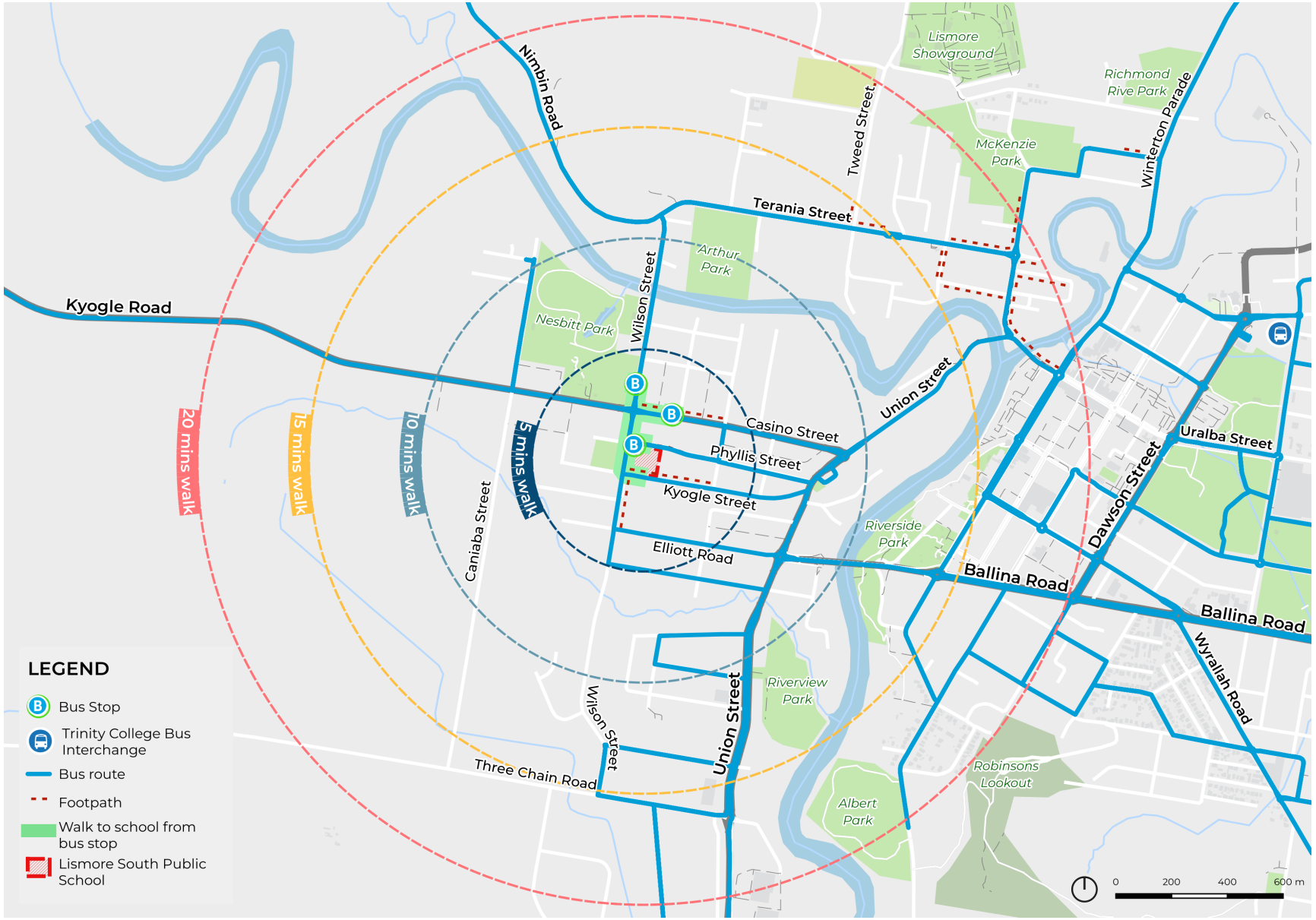
Kiss and drop code of conduct

- Parents and carers can stop in the Kiss and Drop zone for a maximum of 2 minutes to drop off their children.
- Parents and carers must remain in their vehicles at all times in the Kiss and Drop zone.
- Please ensure that children use the car door adjacent to the footpath side for entering and exiting the car.

For more information contact:

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

NSW GOVERNMENT



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.

Apply for a School Opal Card | School Term Bus Pass

- The School Student Transport Scheme (SSTS) provides free or subsidised travel to and from school for eligible school students. Visit transportnsw.info/school-travel-apply to check if you are eligible.
- Students are expected to follow the school's code of conduct while travelling on public transport.

For more information contact:

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

NSW GOVERNMENT

Plan your trip to school

You can plan ahead to make sure you get to school on time!

Visit transport.info or download an app to help:

- Trip View
- Next There

Something broken on the way to school?

Use the Snap Send Solve app or website to report issues to the people who can fix them.

Things like abandoned trolleys, broken footpaths or water leaks can all be reported in the app.

Download it from the App Store or Google Play. Or visit **www.snapsendsolve.com**

For more information contact:

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

NSW GOVERNMENT

NSW Department of Education – School Infrastructure

Active ways to get to school

Walking is an active and healthy way to get to school

- Be Aware of Your Surroundings: Watch out for potential hazards like cars reversing out of driveways, bikes, and other pedestrians.
- Follow the Safety Steps: Remember to STOP, LOOK, LISTEN, AND THINK before you cross the street.
- Use Pedestrian Crossings: Always cross at designated crosswalks and look for traffic signals if available.

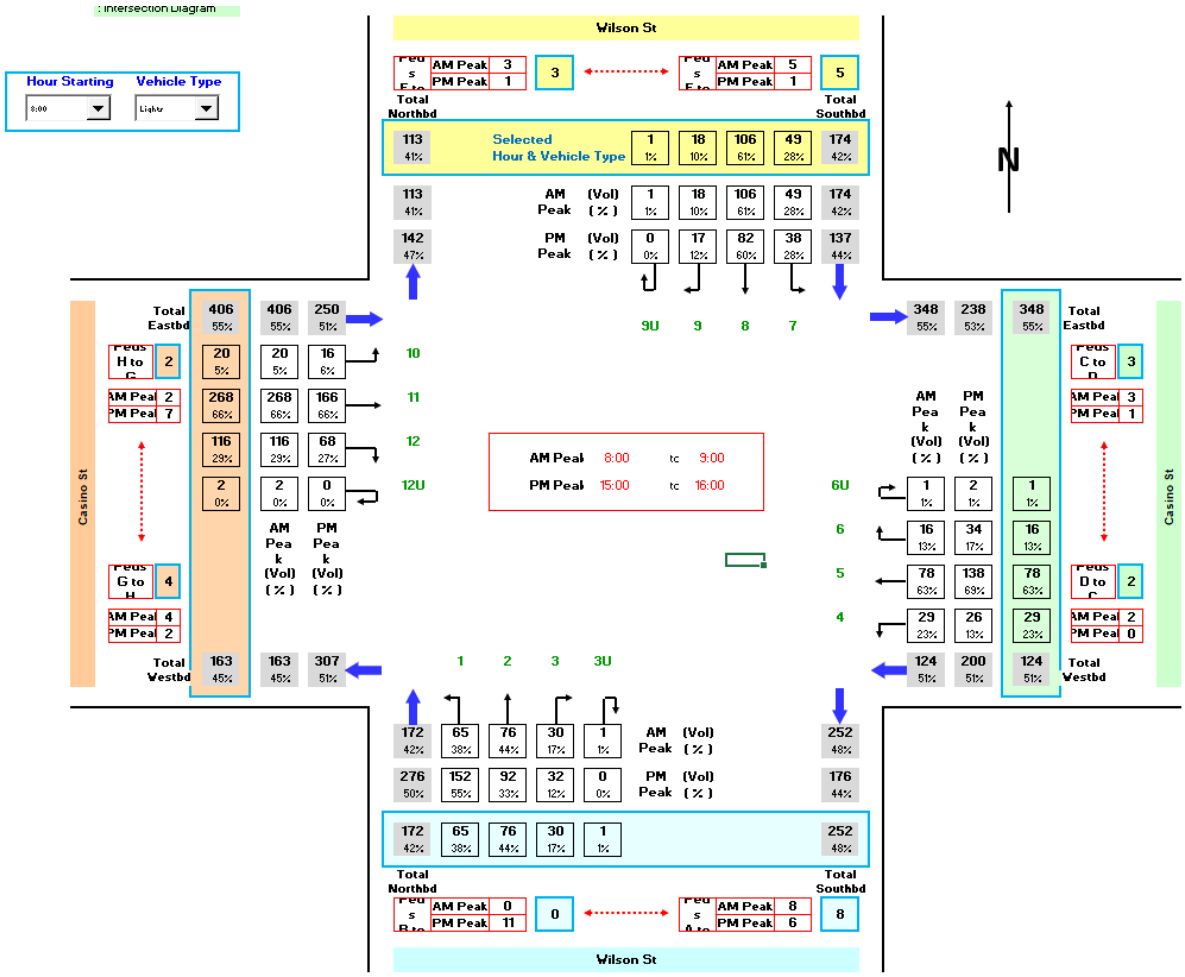
Ride your bike or scooter

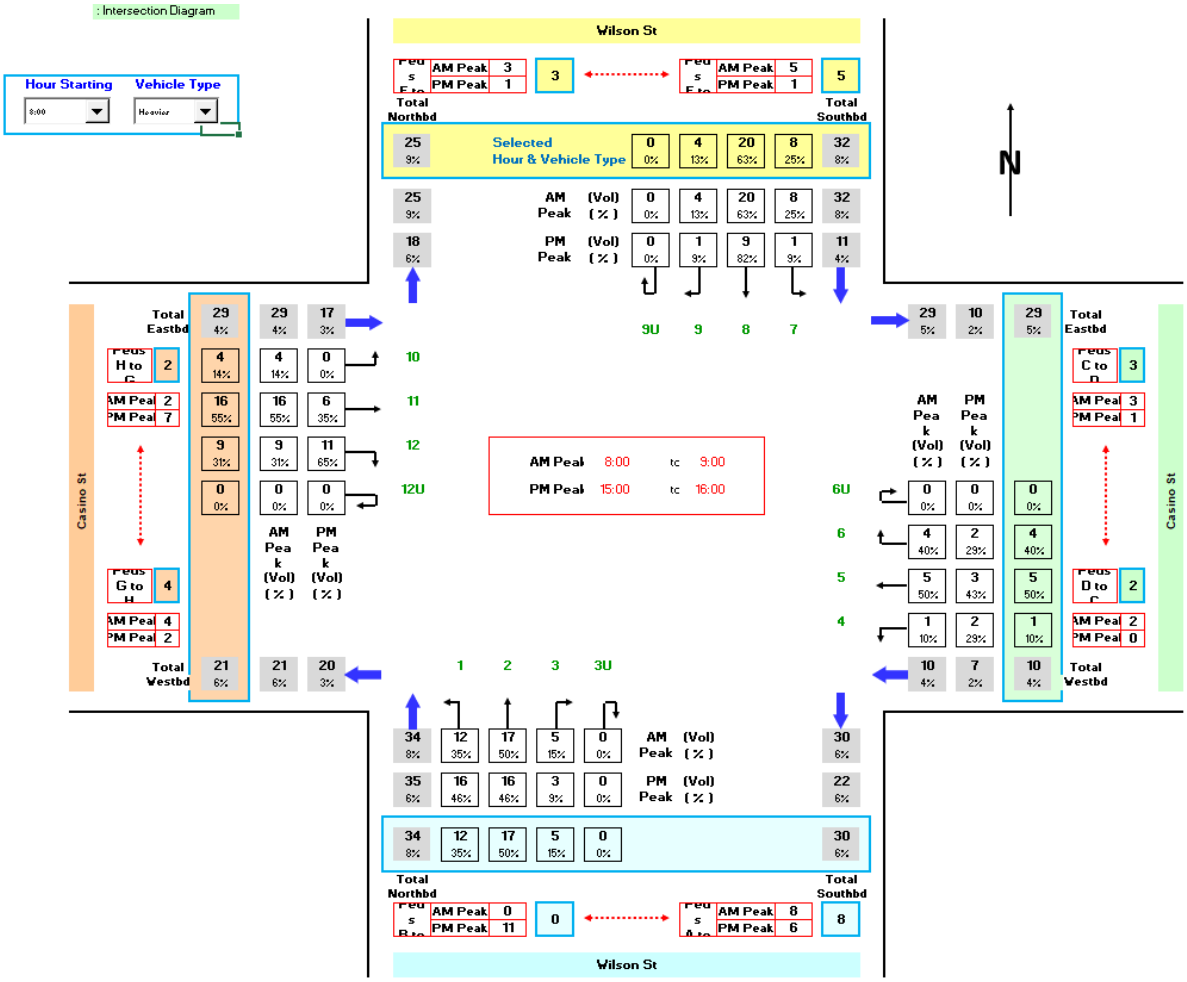
- Wear a Helmet/Protective Gear: Always wear a helmet to protect your head in case of a fall or accident and consider other protective gear like knee and elbow pads.
- Cycle on the Footpath: Children under 16 are allowed to cycle on the footpath, which keeps you safer from road traffic.
- Stay Alert: Watch out for pedestrians and other cyclists, and be cautious at intersections. Be aware of any obstacles like kerbs, cracks in the pavement.

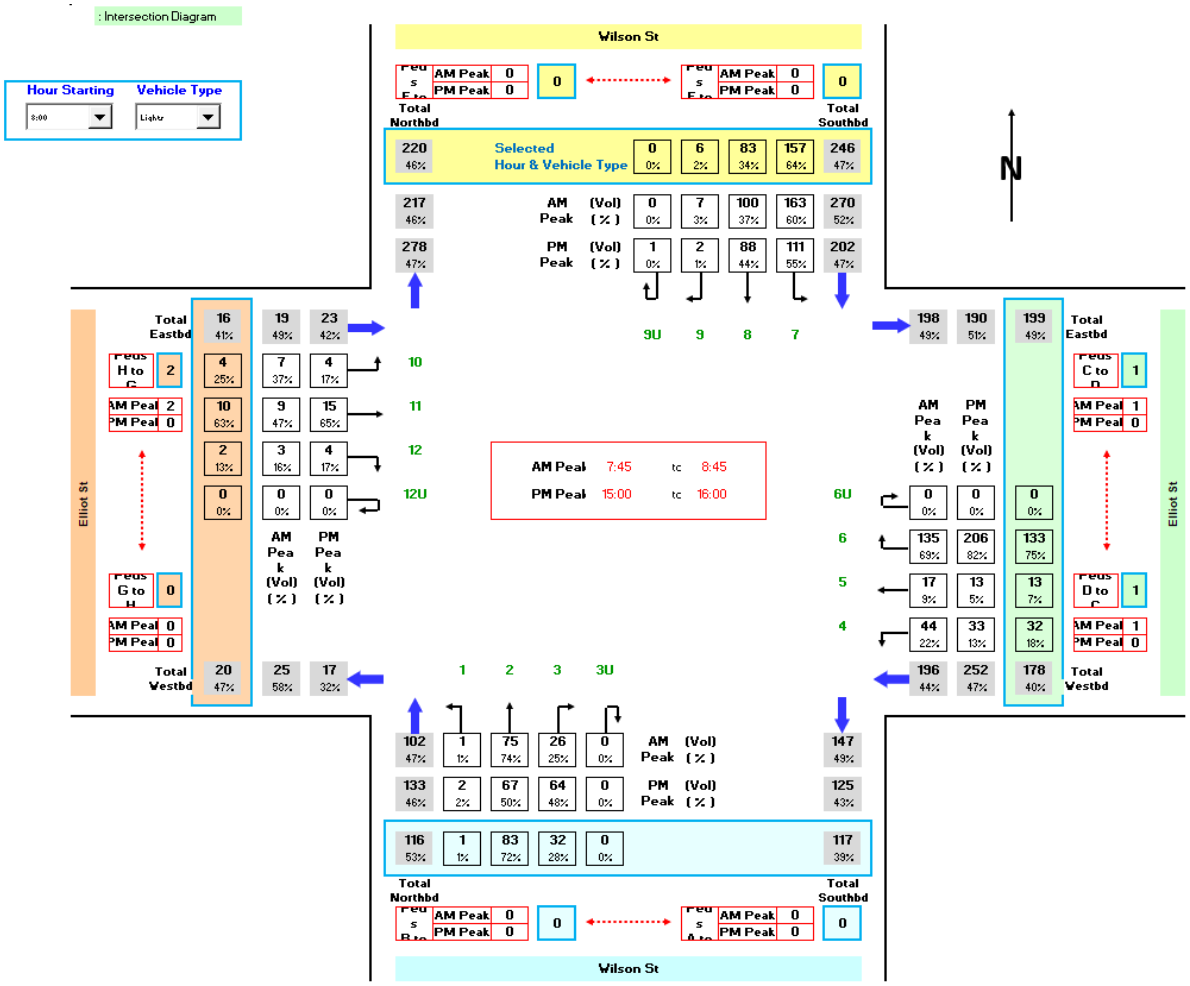
For more information contact:
School Infrastructure NSW
Email: schoolinfrastructure@det.nsw.edu.au
Phone: 1300 482 651
www.schoolinfrastructure.nsw.gov.au

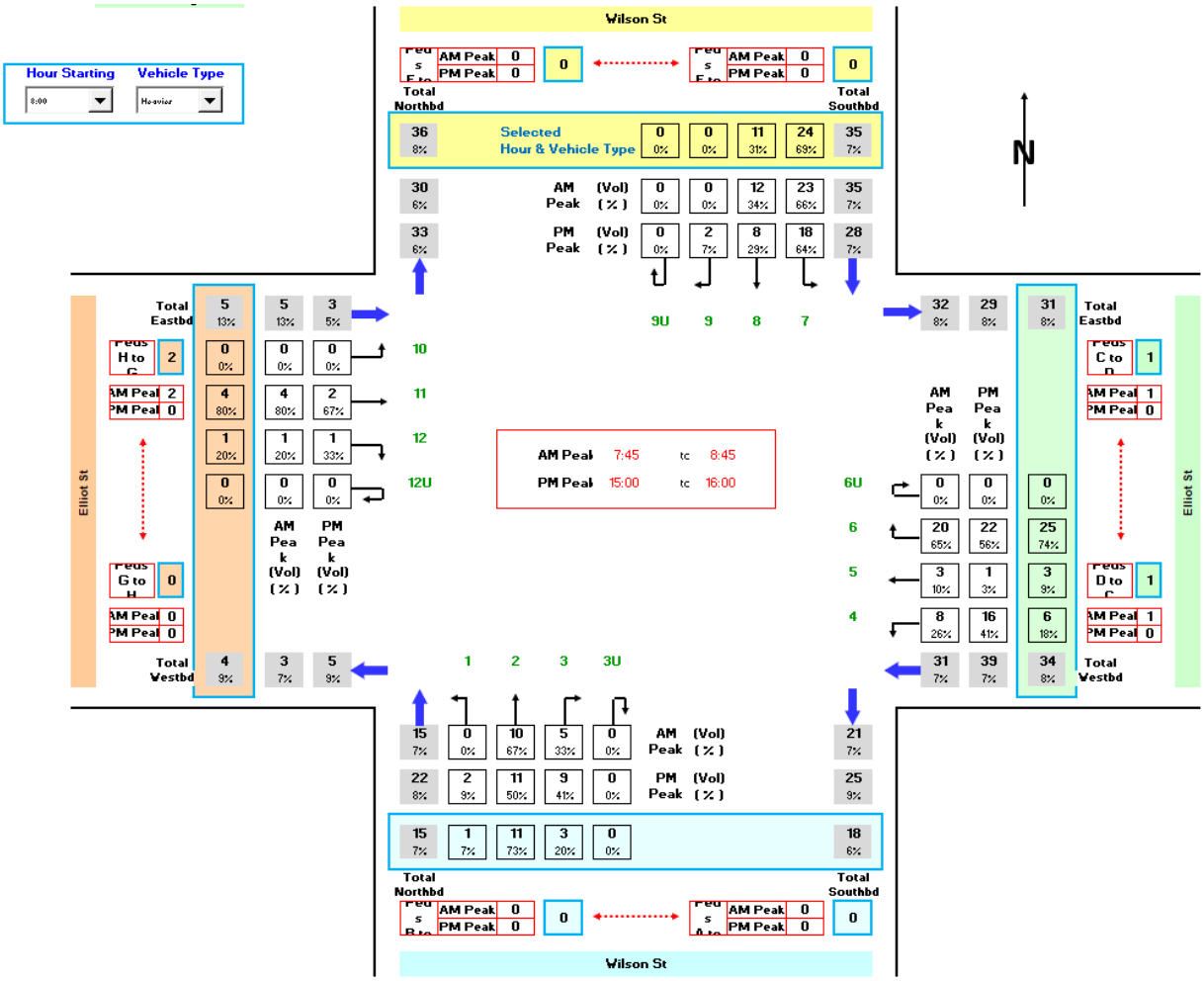
NSW GOVERNMENT

Appendix B – Traffic Count Survey




: Intersection Diagram
Hour Starting
Vehicle Type
Wilson St
Total Northbd
Total Southbd
Selected Hour & Vehicle Type
AM Peak
PM Peak
Total Eastbd
Total Westbd
Casino St
AM Peak 8:00 to 9:00
PM Peak 15:00 to 16:00
N


: Intersection Diagram
Hour Starting
Vehicle Type
Wilson St
Total Northbd
Total Southbd
Selected Hour & Vehicle Type
AM Peak
PM Peak
Elliot St
Total Eastbd
Total Westbd
AM Peak 7:45 to 8:45
PM Peak 15:00 to 16:00
N


Hour Starting
Vehicle Type
Wilson St
Total Northbd
Total Southbd
Selected Hour & Vehicle Type
AM Peak (Vol) (%)
PM Peak (Vol) (%)
N
Total Eastbd
Total Westbd
Elliot St
AM Peak 7:45 to 8:45
PM Peak 15:00 to 16:00
AM Peak (Vol) (%)
PM Peak (Vol) (%)
Wilson St

Appendix C – SIDRA Intersection Modelling Results

MOVEMENT SUMMARY

Site: 01 [01 CAS_WIL 8-9AM BASE 2024 (Site Folder: Base Model)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wilson Street_S															
1	L2	All MCs	77	15.6	77	15.6	0.186	3.3	LOS A	0.9	7.5	0.31	0.43	0.31	40.9
2	T1	All MCs	93	18.3	93	18.3	0.186	3.0	LOS A	0.9	7.5	0.31	0.43	0.31	36.4
3	R2	All MCs	35	14.3	35	14.3	0.186	6.3	LOS A	0.9	7.5	0.31	0.43	0.31	38.7
3u	U	All MCs	1	0.0	1	0.0	0.186	7.4	LOS A	0.9	7.5	0.31	0.43	0.31	31.4
Approach			206	16.5	206	16.5	0.186	3.7	LOS A	0.9	7.5	0.31	0.43	0.31	38.9
East: Casino Street_E															
4	L2	All MCs	30	3.3	30	3.3	0.129	4.8	LOS A	0.6	4.3	0.40	0.54	0.40	39.9
5	T1	All MCs	83	6.0	83	6.0	0.129	4.8	LOS A	0.6	4.3	0.40	0.54	0.40	44.0
6	R2	All MCs	20	20.0	20	20.0	0.129	8.4	LOS A	0.6	4.3	0.40	0.54	0.40	39.0
6u	U	All MCs	1	0.0	1	0.0	0.129	9.6	LOS A	0.6	4.3	0.40	0.54	0.40	42.5
Approach			134	7.5	134	7.5	0.129	5.4	LOS A	0.6	4.3	0.40	0.54	0.40	42.7
North: Wilson Street_N															
7	L2	All MCs	57	14.0	57	14.0	0.257	7.0	LOS A	1.5	11.7	0.63	0.63	0.63	39.7
8	T1	All MCs	126	15.9	126	15.9	0.257	7.1	LOS A	1.5	11.7	0.63	0.63	0.63	34.8
9	R2	All MCs	22	18.2	22	18.2	0.257	10.5	LOS A	1.5	11.7	0.63	0.63	0.63	40.7
9u	U	All MCs	1	0.0	1	0.0	0.257	11.4	LOS A	1.5	11.7	0.63	0.63	0.63	36.8
Approach			206	15.5	206	15.5	0.257	7.4	LOS A	1.5	11.7	0.63	0.63	0.63	37.4
West: Casino Street_W															
10	L2	All MCs	24	16.7	24	16.7	0.358	4.6	LOS A	1.8	13.2	0.33	0.51	0.33	42.1
11	T1	All MCs	284	5.6	284	5.6	0.358	4.3	LOS A	1.8	13.2	0.33	0.51	0.33	44.0
12	R2	All MCs	125	7.2	125	7.2	0.358	7.7	LOS A	1.8	13.2	0.33	0.51	0.33	40.9
12u	U	All MCs	2	0.0	2	0.0	0.358	9.1	LOS A	1.8	13.2	0.33	0.51	0.33	44.1
Approach			435	6.7	435	6.7	0.358	5.3	LOS A	1.8	13.2	0.33	0.51	0.33	43.1
All Vehicles			981	10.7	981	10.7	0.358	5.4	LOS A	1.8	13.2	0.40	0.52	0.40	41.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 01 [01 CAS_WIL 8-9AM FUTURE 2026 (Site Folder: Future Model)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wilson Street_S															
1	L2	All MCs	78	15.4	78	15.4	0.211	3.9	LOS A	1.1	8.7	0.43	0.48	0.43	40.4
2	T1	All MCs	95	17.9	95	17.9	0.211	3.6	LOS A	1.1	8.7	0.43	0.48	0.43	35.8
3	R2	All MCs	36	13.9	36	13.9	0.211	6.8	LOS A	1.1	8.7	0.43	0.48	0.43	38.3
3u	U	All MCs	1	0.0	1	0.0	0.211	7.9	LOS A	1.1	8.7	0.43	0.48	0.43	30.8
Approach			210	16.2	210	16.2	0.211	4.3	LOS A	1.1	8.7	0.43	0.48	0.43	38.4
East: Casino Street_E															
4	L2	All MCs	31	3.2	31	3.2	0.230	5.4	LOS A	1.1	8.2	0.49	0.58	0.49	39.4
5	T1	All MCs	158	3.2	158	3.2	0.230	5.3	LOS A	1.1	8.2	0.49	0.58	0.49	43.6
6	R2	All MCs	38	10.5	38	10.5	0.230	8.9	LOS A	1.1	8.2	0.49	0.58	0.49	39.4
6u	U	All MCs	1	0.0	1	0.0	0.230	10.2	LOS A	1.1	8.2	0.49	0.58	0.49	42.1
Approach			228	4.4	228	4.4	0.230	6.0	LOS A	1.1	8.2	0.49	0.58	0.49	42.6
North: Wilson Street_N															
7	L2	All MCs	58	13.8	58	13.8	0.304	7.8	LOS A	1.8	14.3	0.70	0.67	0.70	39.1
8	T1	All MCs	146	13.7	146	13.7	0.304	7.8	LOS A	1.8	14.3	0.70	0.67	0.70	34.1
9	R2	All MCs	22	18.2	22	18.2	0.304	11.4	LOS A	1.8	14.3	0.70	0.67	0.70	40.1
9u	U	All MCs	1	0.0	1	0.0	0.304	12.1	LOS A	1.8	14.3	0.70	0.67	0.70	36.1
Approach			227	14.1	227	14.1	0.304	8.1	LOS A	1.8	14.3	0.70	0.67	0.70	36.5
West: Casino Street_W															
10	L2	All MCs	24	16.7	24	16.7	0.428	4.8	LOS A	2.4	17.3	0.38	0.54	0.38	41.7
11	T1	All MCs	289	5.5	289	5.5	0.428	4.5	LOS A	2.4	17.3	0.38	0.54	0.38	43.6
12	R2	All MCs	201	4.5	201	4.5	0.428	7.8	LOS A	2.4	17.3	0.38	0.54	0.38	40.6
12u	U	All MCs	2	0.0	2	0.0	0.428	9.3	LOS A	2.4	17.3	0.38	0.54	0.38	43.7
Approach			516	5.6	516	5.6	0.428	5.8	LOS A	2.4	17.3	0.38	0.54	0.38	42.5
All Vehicles			1181	8.9	1181	8.9	0.428	6.0	LOS A	2.4	17.3	0.47	0.56	0.47	41.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 01 [01 CAS_WIL 3-4PM BASE 2024 (Site Folder: Base Model)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wilson Street_S															
1	L2	All MCs	168	9.5	168	9.5	0.288	3.7	LOS A	1.6	12.1	0.41	0.47	0.41	40.8
2	T1	All MCs	108	14.8	108	14.8	0.288	3.5	LOS A	1.6	12.1	0.41	0.47	0.41	36.2
3	R2	All MCs	35	8.6	35	8.6	0.288	6.7	LOS A	1.6	12.1	0.41	0.47	0.41	38.7
3u	U	All MCs	1	0.0	1	0.0	0.288	7.8	LOS A	1.6	12.1	0.41	0.47	0.41	31.0
Approach			312	11.2	312	11.2	0.288	4.0	LOS A	1.6	12.1	0.41	0.47	0.41	39.4
East: Casino Street_E															
4	L2	All MCs	28	7.1	28	7.1	0.182	4.6	LOS A	0.8	5.9	0.33	0.51	0.33	39.9
5	T1	All MCs	141	2.1	141	2.1	0.182	4.4	LOS A	0.8	5.9	0.33	0.51	0.33	44.2
6	R2	All MCs	36	5.6	36	5.6	0.182	7.8	LOS A	0.8	5.9	0.33	0.51	0.33	40.5
6u	U	All MCs	2	0.0	2	0.0	0.182	9.3	LOS A	0.8	5.9	0.33	0.51	0.33	42.7
Approach			207	3.4	207	3.4	0.182	5.1	LOS A	0.8	5.9	0.33	0.51	0.33	43.2
North: Wilson Street_N															
7	L2	All MCs	39	2.6	39	2.6	0.152	5.3	LOS A	0.8	6.0	0.48	0.55	0.48	40.9
8	T1	All MCs	91	9.9	91	9.9	0.152	5.5	LOS A	0.8	6.0	0.48	0.55	0.48	36.5
9	R2	All MCs	18	5.6	18	5.6	0.152	8.7	LOS A	0.8	6.0	0.48	0.55	0.48	41.8
9u	U	All MCs	1	0.0	1	0.0	0.152	10.1	LOS A	0.8	6.0	0.48	0.55	0.48	38.0
Approach			149	7.4	149	7.4	0.152	5.8	LOS A	0.8	6.0	0.48	0.55	0.48	38.8
West: Casino Street_W															
10	L2	All MCs	16	0.0	16	0.0	0.233	4.4	LOS A	1.0	7.6	0.32	0.52	0.32	42.5
11	T1	All MCs	172	3.5	172	3.5	0.233	4.3	LOS A	1.0	7.6	0.32	0.52	0.32	44.0
12	R2	All MCs	79	13.9	79	13.9	0.233	7.9	LOS A	1.0	7.6	0.32	0.52	0.32	40.7
12u	U	All MCs	1	0.0	1	0.0	0.233	9.2	LOS A	1.0	7.6	0.32	0.52	0.32	44.1
Approach			268	6.3	268	6.3	0.233	5.4	LOS A	1.0	7.6	0.32	0.52	0.32	43.1
All Vehicles			936	7.5	936	7.5	0.288	4.9	LOS A	1.6	12.1	0.38	0.50	0.38	41.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 01 [01 CAS_WIL 3-4PM FUTURE 2026 (Site Folder: Future Model)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wilson Street_S															
1	L2	All MCs	171	9.4	171	9.4	0.325	4.4	LOS A	1.9	14.3	0.52	0.53	0.52	40.4
2	T1	All MCs	110	14.5	110	14.5	0.325	4.2	LOS A	1.9	14.3	0.52	0.53	0.52	35.6
3	R2	All MCs	36	8.3	36	8.3	0.325	7.3	LOS A	1.9	14.3	0.52	0.53	0.52	38.2
3u	U	All MCs	1	0.0	1	0.0	0.325	8.4	LOS A	1.9	14.3	0.52	0.53	0.52	30.4
Approach			318	11.0	318	11.0	0.325	4.6	LOS A	1.9	14.3	0.52	0.53	0.52	38.9
East: Casino Street_E															
4	L2	All MCs	29	6.9	29	6.9	0.280	5.1	LOS A	1.4	9.9	0.43	0.55	0.43	39.4
5	T1	All MCs	217	1.4	217	1.4	0.280	4.9	LOS A	1.4	9.9	0.43	0.55	0.43	43.8
6	R2	All MCs	54	3.7	54	3.7	0.280	8.3	LOS A	1.4	9.9	0.43	0.55	0.43	40.2
6u	U	All MCs	2	0.0	2	0.0	0.280	9.8	LOS A	1.4	9.9	0.43	0.55	0.43	42.2
Approach			302	2.3	302	2.3	0.280	5.6	LOS A	1.4	9.9	0.43	0.55	0.43	43.0
North: Wilson Street_N															
7	L2	All MCs	40	2.5	40	2.5	0.185	5.8	LOS A	1.0	7.6	0.55	0.58	0.55	40.6
8	T1	All MCs	110	8.2	110	8.2	0.185	6.0	LOS A	1.0	7.6	0.55	0.58	0.55	36.1
9	R2	All MCs	18	5.6	18	5.6	0.185	9.3	LOS A	1.0	7.6	0.55	0.58	0.55	41.5
9u	U	All MCs	1	0.0	1	0.0	0.185	10.6	LOS A	1.0	7.6	0.55	0.58	0.55	37.6
Approach			169	6.5	169	6.5	0.185	6.3	LOS A	1.0	7.6	0.55	0.58	0.55	38.2
West: Casino Street_W															
10	L2	All MCs	16	0.0	16	0.0	0.300	4.5	LOS A	1.5	10.6	0.37	0.56	0.37	42.0
11	T1	All MCs	175	3.4	175	3.4	0.300	4.5	LOS A	1.5	10.6	0.37	0.56	0.37	43.6
12	R2	All MCs	153	7.2	153	7.2	0.300	7.9	LOS A	1.5	10.6	0.37	0.56	0.37	40.5
12u	U	All MCs	1	0.0	1	0.0	0.300	9.3	LOS A	1.5	10.6	0.37	0.56	0.37	43.7
Approach			345	4.9	345	4.9	0.300	6.0	LOS A	1.5	10.6	0.37	0.56	0.37	42.3
All Vehicles			1134	6.2	1134	6.2	0.325	5.6	LOS A	1.9	14.3	0.45	0.55	0.45	41.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [02 ELL_WIL 8-9AM BASE 2024 (Site Folder: Base Model)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wilson Street_S															
1	L2	All MCs	1	0.0	1	0.0	0.072	5.9	LOS A	0.3	2.0	0.26	0.27	0.26	42.0
2	T1	All MCs	85	11.8	85	11.8	0.072	0.6	LOS A	0.3	2.0	0.26	0.27	0.26	45.2
3	R2	All MCs	31	16.1	31	16.1	0.072	6.1	LOS A	0.3	2.0	0.26	0.27	0.26	43.5
Approach			117	12.8	117	12.8	0.072	2.1	NA	0.3	2.0	0.26	0.27	0.26	44.6
East: Elliott Road_E															
4	L2	All MCs	52	15.4	52	15.4	0.287	6.2	LOS A	1.2	9.1	0.43	0.63	0.43	41.9
5	T1	All MCs	20	15.0	20	15.0	0.287	7.3	LOS A	1.2	9.1	0.43	0.63	0.43	43.6
6	R2	All MCs	155	12.9	155	12.9	0.287	8.8	LOS A	1.2	9.1	0.43	0.63	0.43	43.4
Approach			227	13.7	227	13.7	0.287	8.1	LOS A	1.2	9.1	0.43	0.63	0.43	43.1
North: Wilson Street_N															
7	L2	All MCs	186	12.4	186	12.4	0.161	5.7	LOS A	0.1	0.5	0.02	0.37	0.02	48.9
8	T1	All MCs	112	10.7	112	10.7	0.161	0.0	LOS A	0.1	0.5	0.02	0.37	0.02	50.2
9	R2	All MCs	7	0.0	7	0.0	0.161	5.7	LOS A	0.1	0.5	0.02	0.37	0.02	47.5
Approach			305	11.5	305	11.5	0.161	3.6	NA	0.1	0.5	0.02	0.37	0.02	49.2
West: Elliott Road_W															
10	L2	All MCs	7	0.0	7	0.0	0.030	5.8	LOS A	0.1	0.9	0.35	0.55	0.35	41.7
11	T1	All MCs	13	30.8	13	30.8	0.030	8.1	LOS A	0.1	0.9	0.35	0.55	0.35	44.3
12	R2	All MCs	4	25.0	4	25.0	0.030	8.0	LOS A	0.1	0.9	0.35	0.55	0.35	37.4
Approach			24	20.8	24	20.8	0.030	7.4	LOS A	0.1	0.9	0.35	0.55	0.35	42.7
All Vehicles			673	12.8	673	12.8	0.287	5.0	NA	1.2	9.1	0.21	0.45	0.21	45.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [02 ELL_WIL 8-9AM FUTURE 2026 (Site Folder: Future Model)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wilson Street_S															
1	L2	All MCs	1	0.0	1	0.0	0.074	5.9	LOS A	0.3	2.0	0.26	0.28	0.26	42.0
2	T1	All MCs	87	11.5	87	11.5	0.074	0.6	LOS A	0.3	2.0	0.26	0.28	0.26	45.2
3	R2	All MCs	32	15.6	32	15.6	0.074	6.1	LOS A	0.3	2.0	0.26	0.28	0.26	43.5
Approach			120	12.5	120	12.5	0.074	2.1	NA	0.3	2.0	0.26	0.28	0.26	44.6
East: Elliott Road_E															
4	L2	All MCs	53	15.1	53	15.1	0.377	6.7	LOS A	1.9	14.7	0.48	0.68	0.55	41.2
5	T1	All MCs	20	15.0	20	15.0	0.377	8.0	LOS A	1.9	14.7	0.48	0.68	0.55	42.8
6	R2	All MCs	221	9.0	221	9.0	0.377	9.3	LOS A	1.9	14.7	0.48	0.68	0.55	43.0
Approach			294	10.5	294	10.5	0.377	8.8	LOS A	1.9	14.7	0.48	0.68	0.55	42.7
North: Wilson Street_N															
7	L2	All MCs	189	12.2	189	12.2	0.163	5.7	LOS A	0.1	0.5	0.02	0.37	0.02	48.9
8	T1	All MCs	114	10.5	114	10.5	0.163	0.0	LOS A	0.1	0.5	0.02	0.37	0.02	50.3
9	R2	All MCs	7	0.0	7	0.0	0.163	5.7	LOS A	0.1	0.5	0.02	0.37	0.02	47.5
Approach			310	11.3	310	11.3	0.163	3.6	NA	0.1	0.5	0.02	0.37	0.02	49.2
West: Elliott Road_W															
10	L2	All MCs	7	0.0	7	0.0	0.030	5.8	LOS A	0.1	0.9	0.35	0.55	0.35	41.7
11	T1	All MCs	13	30.8	13	30.8	0.030	8.2	LOS A	0.1	0.9	0.35	0.55	0.35	44.2
12	R2	All MCs	4	25.0	4	25.0	0.030	8.1	LOS A	0.1	0.9	0.35	0.55	0.35	37.3
Approach			24	20.8	24	20.8	0.030	7.5	LOS A	0.1	0.9	0.35	0.55	0.35	42.6
All Vehicles			748	11.5	748	11.5	0.377	5.5	NA	1.9	14.7	0.25	0.48	0.28	45.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [02 ELL_WIL 3-4PM BASE 2024 (Site Folder: Base Model)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wilson Street_S															
1	L2	All MCs	4	50.0	4	50.0	0.099	5.9	LOS A	0.5	3.6	0.32	0.37	0.32	38.3
2	T1	All MCs	78	14.1	78	14.1	0.099	0.7	LOS A	0.5	3.6	0.32	0.37	0.32	43.0
3	R2	All MCs	73	12.3	73	12.3	0.099	5.6	LOS A	0.5	3.6	0.32	0.37	0.32	42.1
Approach			155	14.2	155	14.2	0.099	3.1	NA	0.5	3.6	0.32	0.37	0.32	42.4
East: Elliott Road_E															
4	L2	All MCs	49	32.7	49	32.7	0.370	6.8	LOS A	1.9	14.4	0.46	0.66	0.51	40.5
5	T1	All MCs	14	7.1	14	7.1	0.370	7.4	LOS A	1.9	14.4	0.46	0.66	0.51	43.9
6	R2	All MCs	228	9.6	228	9.6	0.370	9.0	LOS A	1.9	14.4	0.46	0.66	0.51	43.2
Approach			291	13.4	291	13.4	0.370	8.6	LOS A	1.9	14.4	0.46	0.66	0.51	42.8
North: Wilson Street_N															
7	L2	All MCs	129	14.0	129	14.0	0.121	5.7	LOS A	0.1	0.4	0.02	0.34	0.02	49.3
8	T1	All MCs	96	8.3	96	8.3	0.121	0.0	LOS A	0.1	0.4	0.02	0.34	0.02	51.1
9	R2	All MCs	4	50.0	4	50.0	0.121	6.3	LOS A	0.1	0.4	0.02	0.34	0.02	40.7
Approach			229	12.2	229	12.2	0.121	3.3	NA	0.1	0.4	0.02	0.34	0.02	49.7
West: Elliott Road_W															
10	L2	All MCs	4	0.0	4	0.0	0.031	5.8	LOS A	0.1	0.8	0.36	0.56	0.36	42.2
11	T1	All MCs	17	11.8	17	11.8	0.031	7.0	LOS A	0.1	0.8	0.36	0.56	0.36	45.7
12	R2	All MCs	5	20.0	5	20.0	0.031	8.0	LOS A	0.1	0.8	0.36	0.56	0.36	38.2
Approach			26	11.5	26	11.5	0.031	7.0	LOS A	0.1	0.8	0.36	0.56	0.36	44.1
All Vehicles			701	13.1	701	13.1	0.370	5.6	NA	1.9	14.4	0.28	0.49	0.30	44.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [02 ELL_WIL 3-4PM FUTURE 2026 (Site Folder: Future Model)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

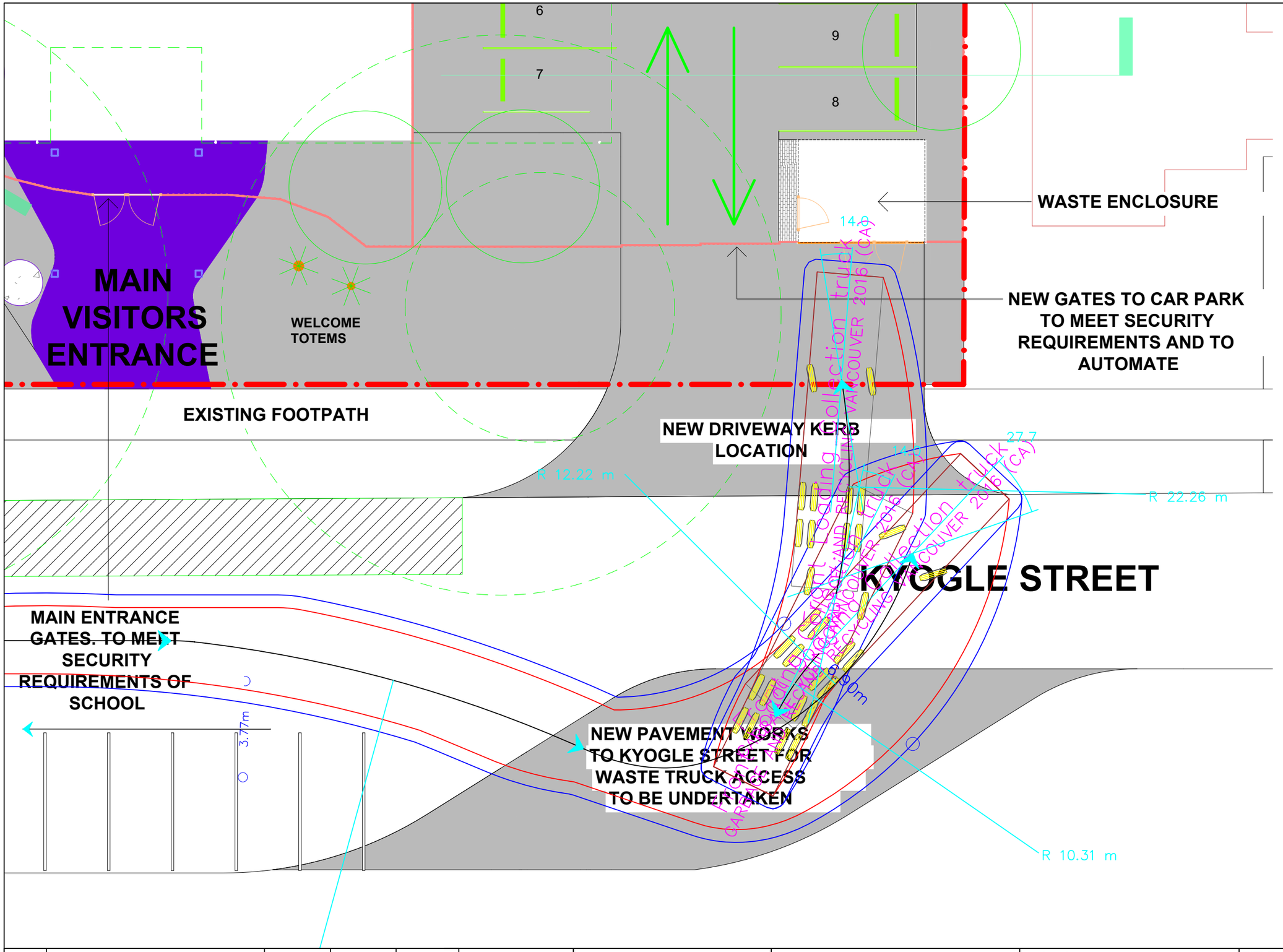
New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wilson Street_S															
1	L2	All MCs	4	50.0	4	50.0	0.101	5.9	LOS A	0.5	3.6	0.32	0.37	0.32	38.3
2	T1	All MCs	79	13.9	79	13.9	0.101	0.7	LOS A	0.5	3.6	0.32	0.37	0.32	43.0
3	R2	All MCs	74	12.2	74	12.2	0.101	5.6	LOS A	0.5	3.6	0.32	0.37	0.32	42.1
Approach			157	14.0	157	14.0	0.101	3.2	NA	0.5	3.6	0.32	0.37	0.32	42.4
East: Elliott Road_E															
4	L2	All MCs	50	32.0	50	32.0	0.459	7.4	LOS A	2.9	22.3	0.51	0.72	0.66	39.6
5	T1	All MCs	14	7.1	14	7.1	0.459	8.2	LOS A	2.9	22.3	0.51	0.72	0.66	43.0
6	R2	All MCs	294	7.5	294	7.5	0.459	9.8	LOS A	2.9	22.3	0.51	0.72	0.66	42.6
Approach			358	10.9	358	10.9	0.459	9.4	LOS A	2.9	22.3	0.51	0.72	0.66	42.2
North: Wilson Street_N															
7	L2	All MCs	131	13.7	131	13.7	0.123	5.7	LOS A	0.1	0.4	0.02	0.34	0.02	49.3
8	T1	All MCs	98	8.2	98	8.2	0.123	0.0	LOS A	0.1	0.4	0.02	0.34	0.02	51.1
9	R2	All MCs	4	50.0	4	50.0	0.123	6.3	LOS A	0.1	0.4	0.02	0.34	0.02	40.7
Approach			233	12.0	233	12.0	0.123	3.3	NA	0.1	0.4	0.02	0.34	0.02	49.7
West: Elliott Road_W															
10	L2	All MCs	4	0.0	4	0.0	0.031	5.8	LOS A	0.1	0.8	0.36	0.56	0.36	42.2
11	T1	All MCs	17	11.8	17	11.8	0.031	7.1	LOS A	0.1	0.8	0.36	0.56	0.36	45.6
12	R2	All MCs	5	20.0	5	20.0	0.031	8.0	LOS A	0.1	0.8	0.36	0.56	0.36	38.1
Approach			26	11.5	26	11.5	0.031	7.1	LOS A	0.1	0.8	0.36	0.56	0.36	44.0
All Vehicles			774	11.9	774	11.9	0.459	6.2	NA	2.9	22.3	0.32	0.53	0.39	44.2

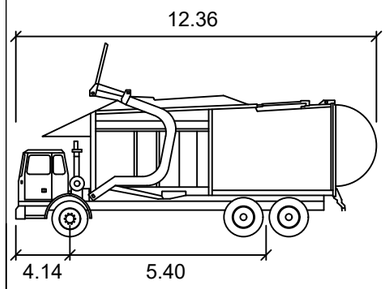
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Appendix D – Swept Path Diagram



LEGEND

- VEHICLE BODY
- 500mm CLEARANCE



Front Loading Collection truck

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 27.7

REV.	DESCRIPTION	DESIGNER	REVIEWER	DATE
01	ISSUED FOR REVIEW	S.C.	J.C.	14/02/24

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NSW GOVERNMENT Education School Infrastructure

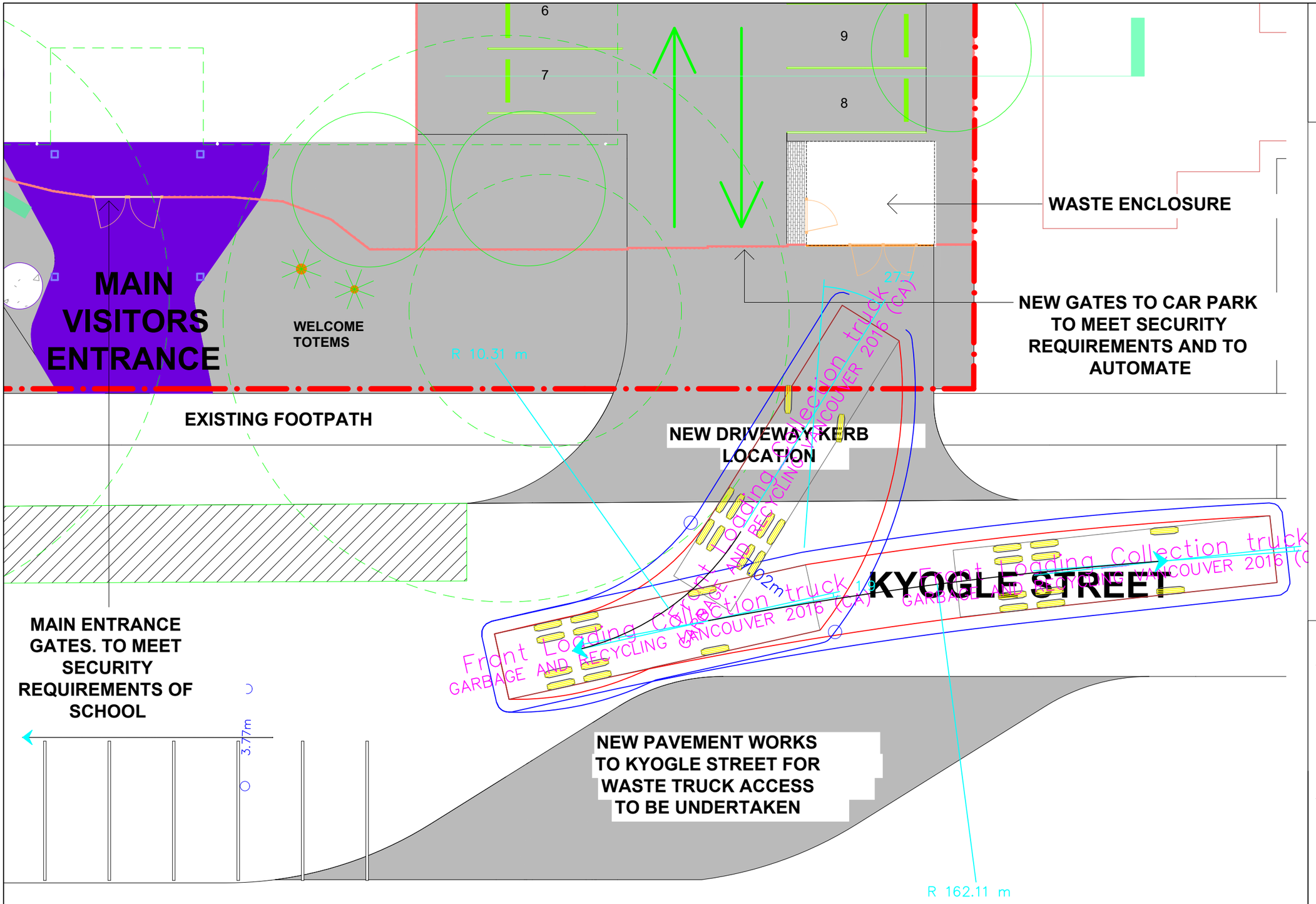
PROJECT
P2305 LISMORE SOUTH PUBLIC SCHOOL

TITLE
WASTE VEHICLE FRONT LIFT INGRESS

SHEET
1 OF 3

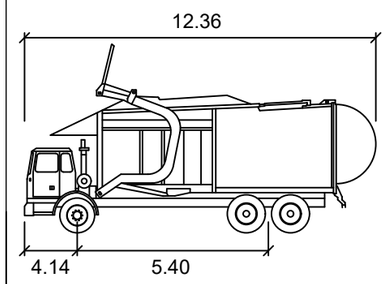
DRAWING
SWEPT PATH ANALYSIS

REV
01



LEGEND

- VEHICLE BODY
- 500mm CLEARANCE



Front Loading Collection truck

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 27.7

REV.	DESCRIPTION	DESIGNER	REVIEWER	DATE
01	ISSUED FOR REVIEW	S.C.	J.C.	14/02/24

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PROJECT
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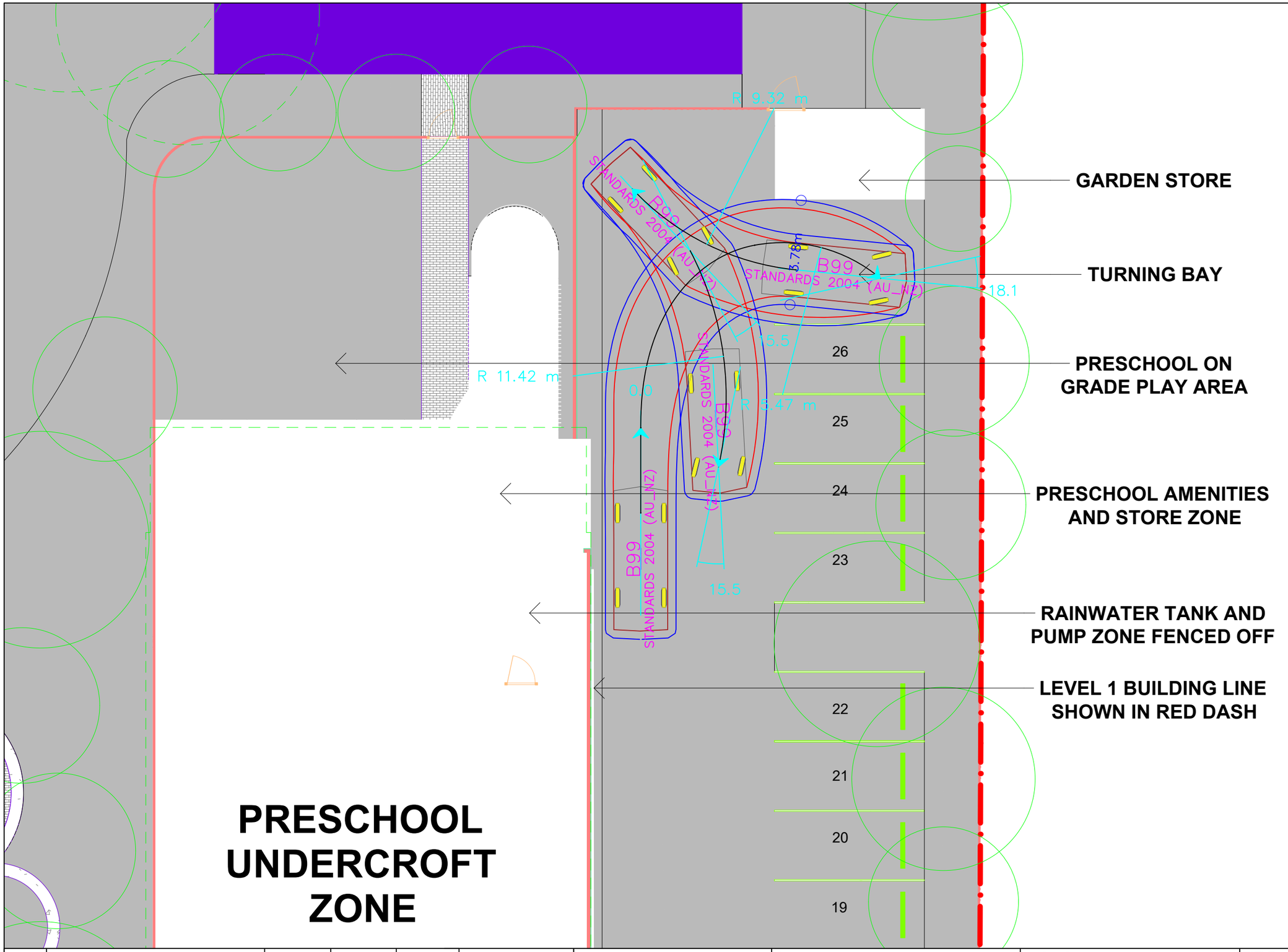
TITLE
WASTE VEHICLE FRONT LIFT EGRESS

SHEET
2 OF 3

DRAWING
SWEPT PATH ANALYSIS

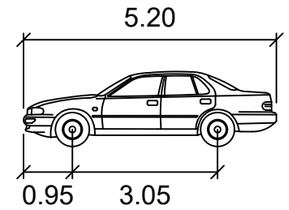
REV
01



LEGEND

VEHICLE BODY

300mm CLEARANCE



B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

REV.	DESCRIPTION	DESIGNER	REVIEWER	DATE
01	ISSUED FOR REVIEW	S.C.	J.C.	14/02/24

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DISCLAIMER
THIS DRAWING IS FOR CONCEPT DESIGN DEVELOPMENT AND NOT FOR CONSTRUCTION PURPOSES. THE DESIGN HAS BEEN DEVELOPED USING NEARMAP AERIAL IMAGERY (DATED) AND HAS EXCLUDED TOPOGRAPHIC AND UTILITY SURVEY INFORMATION.

TITLE
B99 VEHICLE

SHEET
3 OF 3

DRAWING
SWEPT PATH ANALYSIS

REV
01