



Lignum Road, Moama NSW Proposed K-12 School

Green Travel Plan

- PRELIMINARY PLAN -

Client:

Clarke Hopkins Clarke

Project No. 200523

FINAL Report – 07/10/22

1st Floor 132 Upper Heidelberg Road Ivanhoe Vic 3079
PO Box 417 Ivanhoe Vic 3079
Ph: (03) 9490 5900
www.trafficworks.com.au

DOCUMENT CONTROL RECORD

Document prepared by:

Trafficworks Pty Ltd

ABN 59 125 488 977

1st Floor 132 Upper Heidelberg Rd Ivanhoe Vic 3079


PO Box 417 Ivanhoe Vic 3079

Ph (03) 9490 5900

www.trafficworks.com.au

DISCLAIMER

The information contained in this document is intended to be received, used and relied upon by the named addressee or client only for the purpose for which it has been prepared. Trafficworks Pty Ltd does not warrant the accuracy or relevance of the information, including by implication, contained in this document if it is used or relied upon by any person other than the named addressee or client. Copying, reproduction including by electronic means, unauthorised use or disclosure of this document is prohibited except with the express written authorisation of Trafficworks Pty Ltd.

Document Control				
Report Title		Lignum Road, Moama NSW K-12 School Green Travel Plan (Preliminary)		
Project Number		200523		
Client		Clarke Hopkins Clarke		
Client Contact		Aram Lello (Studio Leader)		
Rev	Date Issued	Revision Details / Status	Prepared by	Authorised by
Preliminary Draft	28/09/22	issued for review	Chris Blair	Stuart Redman / Kate Kennedy
FINAL	07/10/22	The preliminary plan issued to the client	Chris Blair	Stuart Redman / Kate Kennedy

EXECUTIVE SUMMARY

Clarke Hopkins Clarke has engaged Trafficworks to prepare a preliminary Green Travel Plan for the proposed K-12 school on Lignum Road in Moama. This is in response to comments relating to the NSW Department of Planning and Environment Secretary's Environmental Assessment Requirements (SEAR).

The Green Travel Plan for the development includes:

- identification of green travel objectives and targets for the development
- the creation of an action plan, including promotion of the green travel plan and incentives to encourage sustainable transport options for staff and students
- an evaluation process to measure the success of the green travel plan against the objectives and targets.

The purpose of the Green Travel Plan is to encourage staff and students to choose sustainable transport options over the use of private vehicles to reduce car trips to the subject site. These sustainable transport options include public transport, walking, cycling and car sharing.

TABLE OF CONTENTS

1	INTRODUCTION	1
2	EXISTING CONDITIONS	2
2.1	Subject site.....	2
2.2	Road network	3
3	PROPOSED DEVELOPMENT	5
3.1	Proposed development summary	5
4	SUSTAINABLE TRANSPORT	6
4.1	School bus operation	6
4.2	Public transport network	6
4.3	Pedestrian and cyclist network	7
5	GREEN TRAVEL PLAN	9
5.1	Green targets.....	9
5.2	Action plan.....	10
5.3	Monitoring and review	11
	ATTACHMENT A – DEVELOPMENT PLANS	13

1 INTRODUCTION

Clarke Hopkins Clarke has engaged Trafficworks to prepare a preliminary Green Travel Plan for the proposed K-12 school on Lignum Road in Moama. This is in response to comments relating to the NSW Department of Planning and Environment Secretary's Environmental Assessment Requirements (SEAR).

A Green Travel Plan was carried out to:

- review public transport options in the vicinity of the site
- review the surrounding pedestrian network and identify the availability of safe pedestrian crossing facilities
- review the surrounding bicycle network and the proposed bicycle facilities on site

A Green Travel Plan for the development will include:

- identification of green travel objectives and targets for the development
- the creation of an action plan, including promotion of the green travel plan and incentives to encourage sustainable transport options for staff and students
- an evaluation process to measure the success of the green travel plan against the objectives and targets

2 EXISTING CONDITIONS

2.1 Subject site

The subject site (Lot 76 of DP751159) is located approximately 1.5 km northwest of the Moama town centre within the Murray River Council (the Council). The subject site falls within a General Residential (R1) Zone and comprises vacant land bounded by Kiely Road to the north and Lignum Road to the west.

The subject site is located within the Development Plan for the Arthurs Estate residential subdivision. The subject site and the surrounding area are shown in Figure 1, and the zoning map is shown in Figure 2.

Figure 1: Location Plan (reproduced with permission from Melway Publishing Pty Ltd)

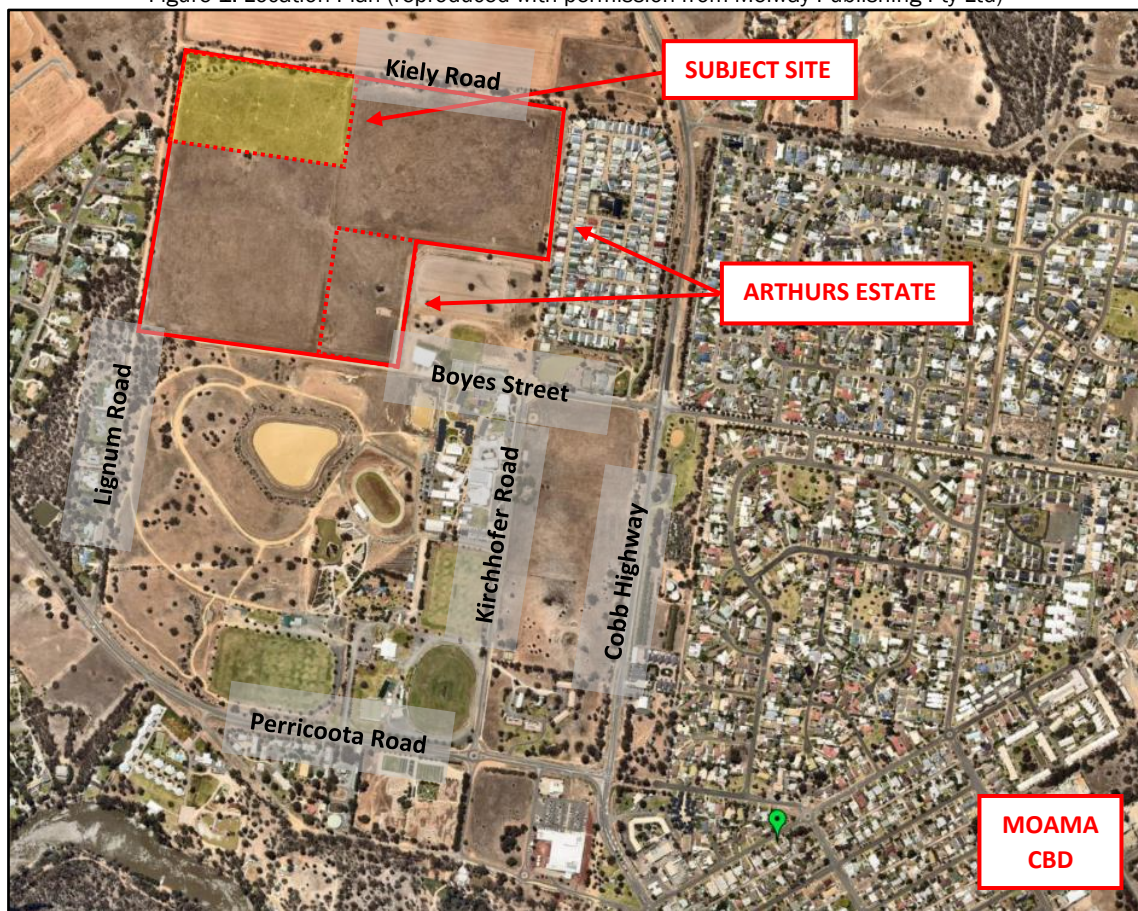
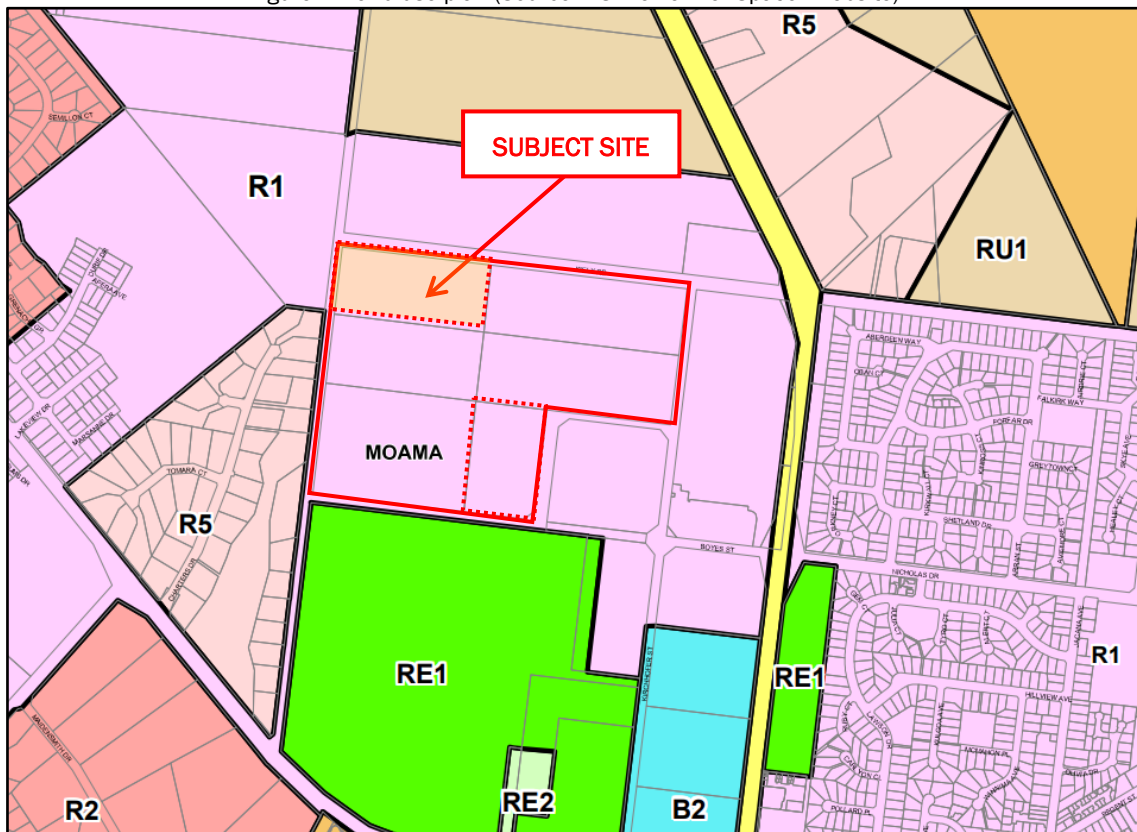


Figure 2: Land use plan (Source: NSW ePlanner Spatial Website)



2.2 Road network

Lignum Road is a local access street managed by the Council. It is generally aligned in a north-south direction, approximately 2 km in length, and provides a connection to Perricoota Road to the south and Martin Road to the north (Refer to Photos 1 and 2).

Photo 1: Lignum Road looking south (works were occurring at the time of the inspection to construct and seal the road)



Lignum Road is a two-way sealed local road (recently constructed and sealed for the full length by the Council) near the proposed development with a road width of approximately 6.4 m. The default urban speed limit of 50 km/h is applicable along this section of Lignum Road.

Photo 2: Lignum Road looking north



Kiely Road, adjacent to the subject site, is an unmade road within a tree-lined road reserve managed by the Council. It is generally aligned in an east-west direction. No access is proposed to/from the subject site. Hence the road will not need to be constructed as part of the proposed development on the subject site.

3 PROPOSED DEVELOPMENT

3.1 Proposed development summary

It is proposed to construct a K-12 school developed over four (4) phases, as detailed in Table 1.

Table 1: Stages of development

Phase	Student numbers		
	Primary school	Secondary school	Total
1	60	-	60
2	210	-	210
3	210	90	300
4	210	180	390

In addition, a café is proposed within the school canteen, which will be open to the public during the afternoon school pick-up and will serve parents, students and school staff.

A total of 76 on-site car parking spaces are proposed, including

- 41 staff only car parking spaces (including one accessible bay)
- 31 parents kiss and drop car parking spaces (including one accessible bay).

Vehicular access to the site is proposed via two crossovers to Lignum Road and pedestrian-only access to the adjoining Arthurs Estate residential subdivision.

The proposed development plans are shown in Attachment A.

4 SUSTAINABLE TRANSPORT

4.1 School bus operation

The proposed school allows three (3) buses to be simultaneously parked along the Lignum Road frontage.

4.2 Public transport network

No existing bus services travel near the subject site along Lignum Road and Kiely Road. There is one bus stop on Boyes Street approximately 165 m east of the Kirchhofer Street intersection on Route 5 (5 Echuca – 24 Lane).

The timetable for route 5 (reproduced in Table 2) does not currently coincide with school pick-up and drop-off times.

Table 2: Route 5 – Boyes Street timetable

Route 5 – Boyes Street	Timetable		
To Echuca	9:43 am	11:48 am	1:48 pm
To 24 Lane	11:17 am	1:17 pm	5:17 pm

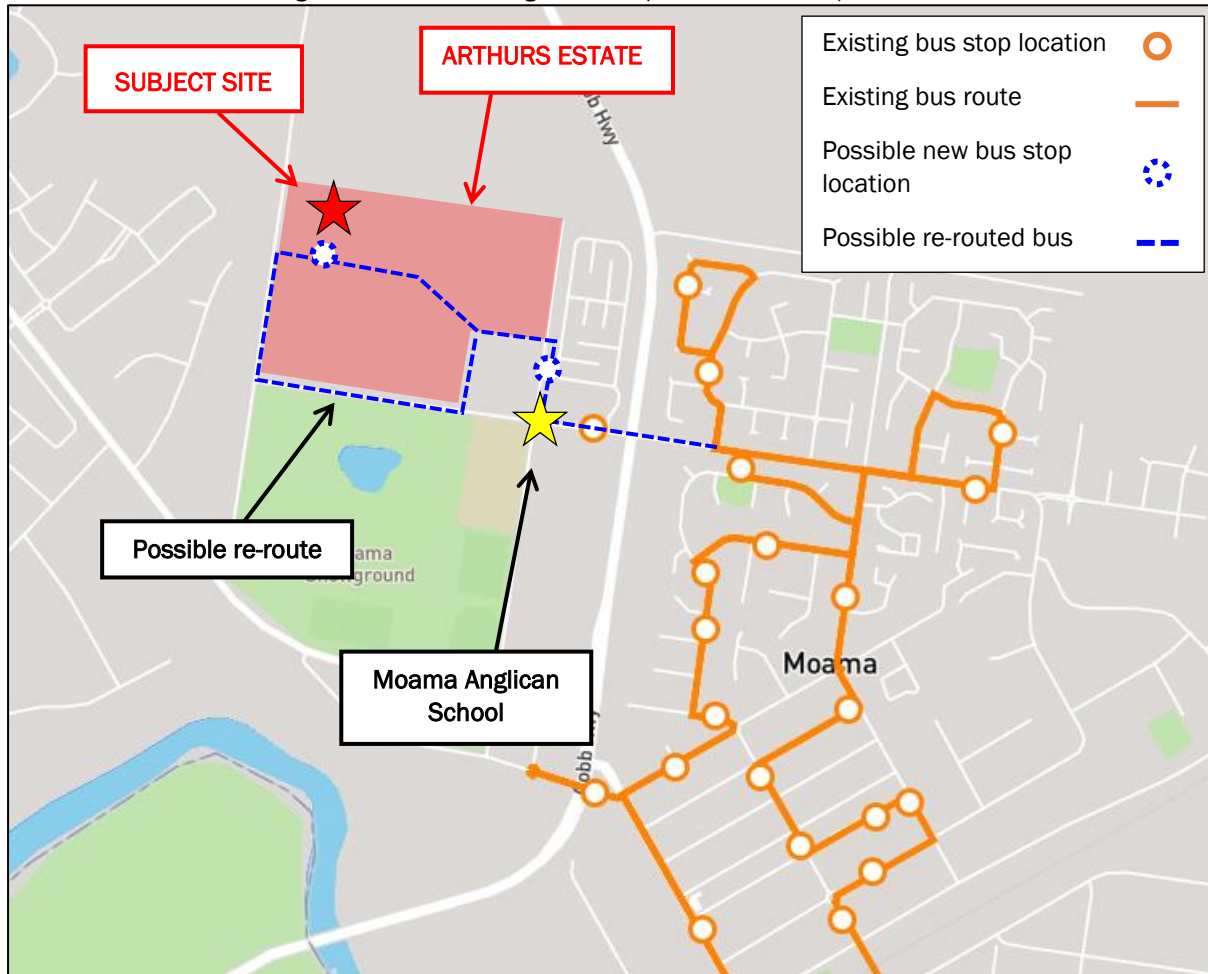
The town service bus (route 3: Circular Echuca - Moama) may be rerouted as a result of the development to service the Arthurs Estate, including the proposed school and the existing Moama Anglican School (refer to Figure 3).

The existing route timetable for the closest stop (Nile Street) is reproduced in Table 3. The timetable indicates current service times that could service the school during drop-off /pick-up times.

Table 3: Route 3 - Nile Street timetable

Route 3 – Nile Street	Timetable					
AM	8:22 am	8:51 am	8:57 am	10:22 am	10:57 am	
PM	12:22 pm	12:57 pm	2:22 pm	2:57 pm	4:22 pm	4:57 pm

Figure 3: Route 3 existing route and possible extension / re-route



4.3 Pedestrian and cyclist network

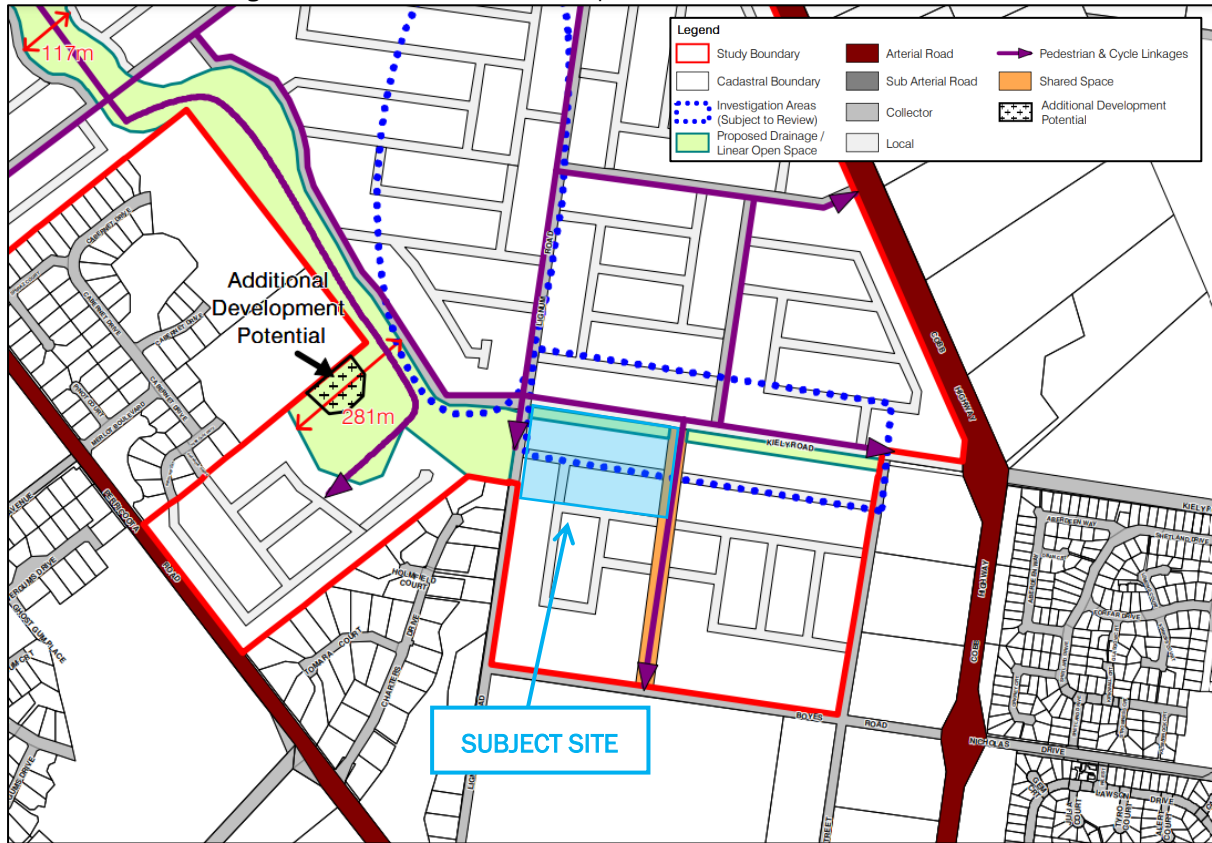
A network of pedestrian and cycling linkages is proposed within the wider Arthurs Estate development site as part of the Moama North West Master plan. This includes providing shared space along the site's access road between Kiely Road and Boyes Street.

Extended pedestrian and cycling linkages are also proposed along Kiely Road and Lignum Road. These paths will link the proposed K-12 school with the Moama Anglican Grammar School and support recreational and commuter paths to help provide sustainable travel options for students and staff.

All footpaths and shared path road crossings within the development site must be designed to meet adequate pedestrian sight distance requirements. Any landscaping proposed within the verge will need to be carefully considered to ensure drivers' line of sight to pedestrians is maximised.

Figure 4 provides an extract of the movement network plan in the Moama North West Masterplan.

Figure 4: Moama North West Masterplan - Movement Network Plan Extract



5 GREEN TRAVEL PLAN

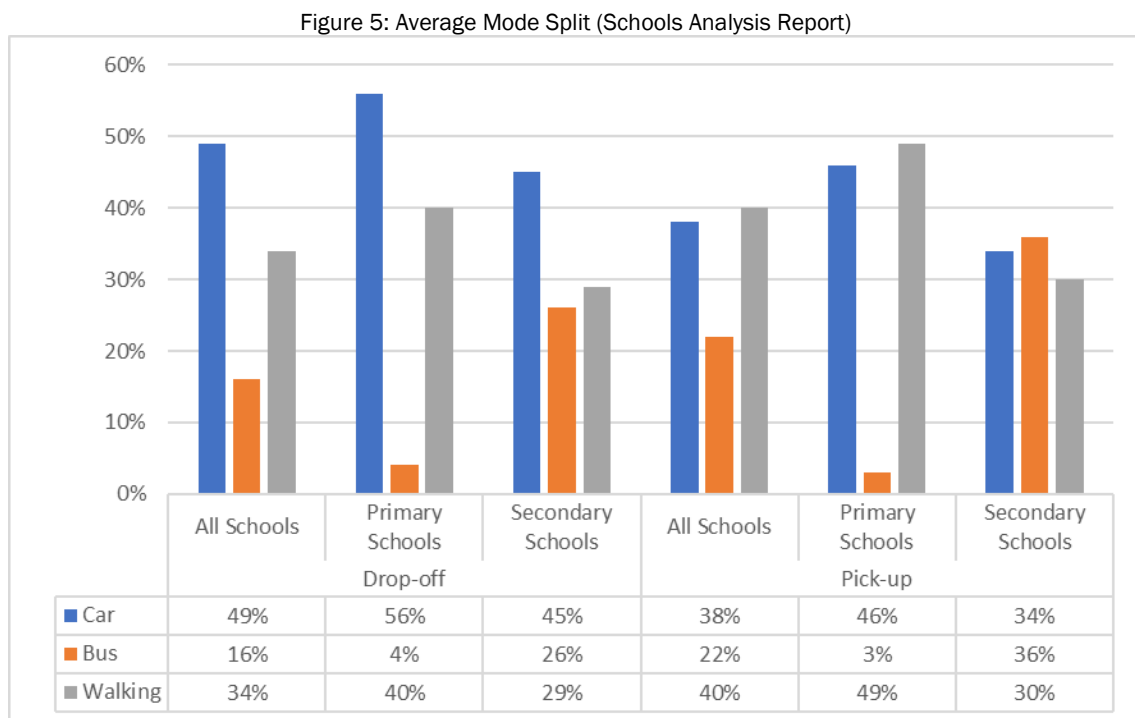
The purpose of the Green Travel Plan is to encourage school users to choose sustainable transport options over private vehicles to reduce single-occupant trips for staff and the reliance on cars to pick up and drop off students. These sustainable transport options include public transport, walking, cycling and carpooling.

As part of the Green Travel Plan, green targets are set from typical travel to school methods outlined in the *Roads and Maritime Services Trip Generation Surveys, Schools Analysis Report*. As the Green Travel Plan is for a new school, no existing data can be sourced.

An action plan is also provided to achieve these targets. The Green Travel Plan also requires regular monitoring and review to ensure that these targets are met and whether additional actions are necessary due to changes in travel patterns.

5.1 Green targets

The green targets for the school have been estimated based on the typical mode splits outlined in the *Schools Analysis Report*, which was developed following observations of 22 schools approved by RMS (now TfNSW) in urban and regional areas (refer to Figure 5).



Given that the K-12 school will include both primary and secondary components, the 'all schools' mode splits have been selected as the existing travel patterns on which to base the targets. These baseline numbers are as follows:

Table 2: All Schools - Mode Split Survey (Schools Analysis Report)

Mode	Drop-off	Pick-up
Car	49%	38%
Bus	16%	22%
Walking	34%	40%

It is recommended to undertake a mode of travel survey once the school is fully operational to determine the actual mode splits for staff and students and determine if additional adjustments are required.

Based on the assumed mode splits above, the following aspirational targets have been selected to provide ambitious but achievable goals for the proposed K-12 school.

Table 3: Proposed K-12 School – Green Targets

Mode	Drop-off	Pick-up
Car	30%	20%
Bus	25%	30%
Walking / Cycling	45%	50%

5.2 Action plan

An action plan has been developed as part of the Green Travel Plan to encourage staff and students to use transport other than car trips. The action plan implementation aims to achieve the sustainable transport green targets specified in Section 5.1.

Table 4 details the list of actions and relative timeframes for staff and students of the K-12 school.

Table 4: Green Travel Plan - Action List

Action	Users	Timeframe
1 General		
1.1 provide staff with Green Travel welcome packs, which include information on available sustainable transport options	staff	on-going
1.2 encourage staff to take sustainable transport to commute to work	staff	on-going
1.3 adoption of a car-pooling system to reduce reliance on single occupancy vehicles with priority parking provided to sharers	staff	on-going
1.4 promote sustainable travel events such as “World Environment Day”	staff and students	annually
1.5 Establish a ‘Green Committee’ to advocate and organise green travel initiatives (both new and those included in this Green Travel Plan).	staff, students and parents	on-going
1.6 Establish a ‘Travel Coordinator’ role who will liaise with state and local transport providers to monitor and update road safety	Staff	on-going

2	Public transport		
2.1	encourage student uptake of school bus services to reduce the reliance on vehicle trips	students	on-going
3	Walking and cycling		
3.1	provide covered bicycle and scooter parking across the school	staff and students	on-going
3.2	provide well maintained change rooms, showers and lockers	staff	on-going
3.3	ensure a sufficient number of on-site bicycle parking spaces are provided to satisfy the demand	staff and students	on-going
3.4	provide on-site bicycle toolkit and repair equipment for staff and students who cycle to the school	staff and students	on-going
3.3	promote 'Ride to School Day'	staff and students	annually
3.4	undertake bike skills classes as part of the school curriculum to encourage cycling uptake	students	on-going
3.5	work with Council or the developer to provide high quality footpaths, safe road crossings, greenery and landscaping to encourage the desirability of walking to the school	staff and students	on-going
4	Other		
4.1	undertake a review and update of the Green Travel Plan to ensure that the actions and the nominated goals are being achieved.	school	on-going

5.3 Monitoring and review

To ensure that the green targets are being met through the action plan implementation, the Green Travel Plan should be monitored after the development is completed and reviewed annually. The monitor and review process may include:

- questionnaire surveys of staff, students and parents to document their method of travel to the school
- car parking occupancy surveys to determine the utilisation of the car parking areas during pick up, drop off and normal school activities
- bicycle parking occupancy surveys to determine the utilisation of the on-site bicycle parking facilities
- review the action plan to determine if all the actions are implemented, and the information is up to date
- review the action plan to determine if actions require changes or improvements.

If a review of the Green Travel Plan determines that a green target is not met through the implementation of the action plan, additional measures may be taken to assist in achieving the green targets. These may include:

- reallocation of the on-site car parking spaces between staff and pick up / drop off to ensure that the spaces are fully utilised
- review the bicycle parking demand to determine if additional bicycle parking spaces are required
- provide additional information on the available sustainable transport within the vicinity of the school.

ATTACHMENT A – DEVELOPMENT PLANS

Figure A1: Site Plan



Figure A2: Precinct Master Plan (Ground Floor)



