OPERATIONAL TRANSPORT MANAGEMENT PLAN

Emanuel School
20 Stanley Street, Randwick

Reference: 19.191r04v03
Date: July 2021

TRAFFIX
TRAFFIC & TRANSPORT PLANNERS

Suite 2.08, 50 Holt St
Surry Hills, NSW 2010

t: (02) 8324 8700
w: www.traffix.com.au

DOCUMENT VERIFICATION

Job Number	19.191			
Project	Emanuel School, Randwick			
Client	Emanuel School			
Revision	Date	Prepared By	Checked By	Signed
v03	8 July 2021	Shenara Wanigasekera	Ben Liddell	

TRAFFIC CONTROL PLAN CERTIFICATES

Prepare a Work Zone Traffic Management Plan			
Name	Ben Liddell	**Certificate No.**	0051952767

CONTENTS

1. INTRODUCTION

TRAFFIX has been commissioned by Emanuel School to prepare an Operational Transport Management Plan (OTMP) report for the redevelopment of the Adler Building located at 20 Stanley Street, Randwick. The development is approved under the Development Application Number DA/40/2020, which was granted by Randwick City Council on 29 October 2020.

Conditions 22, 23, 24 and 25 of the Development Consent relate to the preparation of an Operational Transport Management Plan (OTMP) for the subject development. Reference should also be made to the Traffic Impact Assessment Report (*Ref: 19.191r01v05, dated 24 January 2020*) and Request for Additional Information Statement (*Ref: 19.191r02v03, dated 25 June 2020*), that was prepared by TRAFFIX and accompanied the development application.

The report is structured as follows:

- Section 2: Traffic management objectives
- Section 3: Background information
- Section 4: Overview of site operations
- Section 5: Establishing base line data
- Section 6: Future travel targets
- Section 7: Future travel strategies
- Section 8: Monitoring and review process
- Section 9: Presents the overall conclusions

2. TRAFFIC MANAGEMENT OBJECTIVES

This OTMP addresses several conditions within the Development Consent issued by the Council, dated 29 October 2020. These conditions are outlined as follows:

Operational Transport and Management Plan (OTMP)

22. *The applicant must prepare and implement (within 3 months of the issuing of any development consent and prior to the issuing of any Construction Certificate) an Operational Transport Management Plan for the Emanuel School in consultation with Council and the local community, which must identify mode share targets for the travel strategies that target a reduction (and insure no increase) in private vehicle parking and trips to the site. The OTMP must be approved by Council's Integrated Transport Department:*

a) *Prior to the issue of any Construction Certificate and must include details regarding the travel strategies and interim traffic management measures (including details for management of the drop off/pick up zones);*

Refer to **Section 4.4** and **Section 7**.

b) *Prior to the issue of any Occupation Certificate and must include details regarding the travel strategies and the final traffic management measures (including details for management of the drop off/pick up zones), and taking the monitoring results (as required by condition 25) into account.*

Refer to **Section 4.4.2** and **Section 7**. The proposed Monitoring and Review measures are detailed within **Section 8**. The final traffic management measures will be further refined subject to the findings of the independent road safety audit.

23. *The OTMP must provide details of travel strategies and must address the following matters for each:*

a) Objectives and targets.
b) Timing.
c) Responsibility
d) Funding

e) *Implementation*

f) *Monitoring regime to evaluate each strategy; and*

g) *Monitoring of whether the overall strategies are meeting the targeted reductions in private car trips.*

Refer to **Section 4.4**

24. *In formulating the OTMP, the following must also be prepared and undertaken:*

a) *A detailed Green Travel Plan is to be prepared in accordance with the Transport for NSW condition 17. The Green Travel Plan is to provide targets for the reduction of private car usage and shall determine the number of additional bicycle spaces required on site;*

Please refer to the Green Travel Plan for the school which has been prepared separately (Ref: 19.191r03v02 dated 29 June 2021)

b) *A Road Safety Evaluation is to be prepared in accordance with the Transport for NSW Condition 15. The recommendations of the RSE are to be implemented into the OTMP;*

A road safety audit will be undertaken in the near future and the findings will be used to adjust the existing traffic management measures as necessary.

c) *Further analysis of the current traffic and parking situation of the existing surrounding areas, including additional surveys, is to be undertaken, the results of which are to be utilised to form the above.*

Additional surveys will be undertaken as part of the annual review process.

d) *The OTMP is to require the school to have no students driving to school Monday to Friday.*

Will refer to legal advice provided to the school.

25. *The school must make the approved OTMP, any updated OTMP and results of the monitoring and independent auditing conducted as part of the OTMP, publicly available on the school's website and available to the CCC:*

Refer to **Section 8.**

3. BACKGROUND INFORMATION

3.1 Location and Site

The site is located at 20 Stanley Street, Randwick and is legally known as Lot 1 and 2 on DP 709331. More specifically, it is commonly known as Emanuel School and is located on the northern side of Stanley Street, north-west of the intersection of Avoca Street and Stanley Street. In a regional context, it is located approximately 1.75 kilometres south-west of Bondi Junction and five (5) kilometres south-east of Sydney Central Business District (CBD).

The site has an irregular configuration and has a total site area of 1.472 ha. It has a southern frontage of 102 metres to Stanley Street, an eastern frontage of 178 metres to Avoca Street, a western frontage of 176 metres to Chepstow Street and a northern boundary of 67 metres to a neighbouring residential property and a section of Stephen Street.

The site currently provides three (3) vehicular crossings to Chepstow Street and two (2) vehicle crossings to Stanley Street.

A Location Plan including the enrolment boundaries for 2020 is presented in **Figure 1**, with a Site Plan included in **Figure 2**.

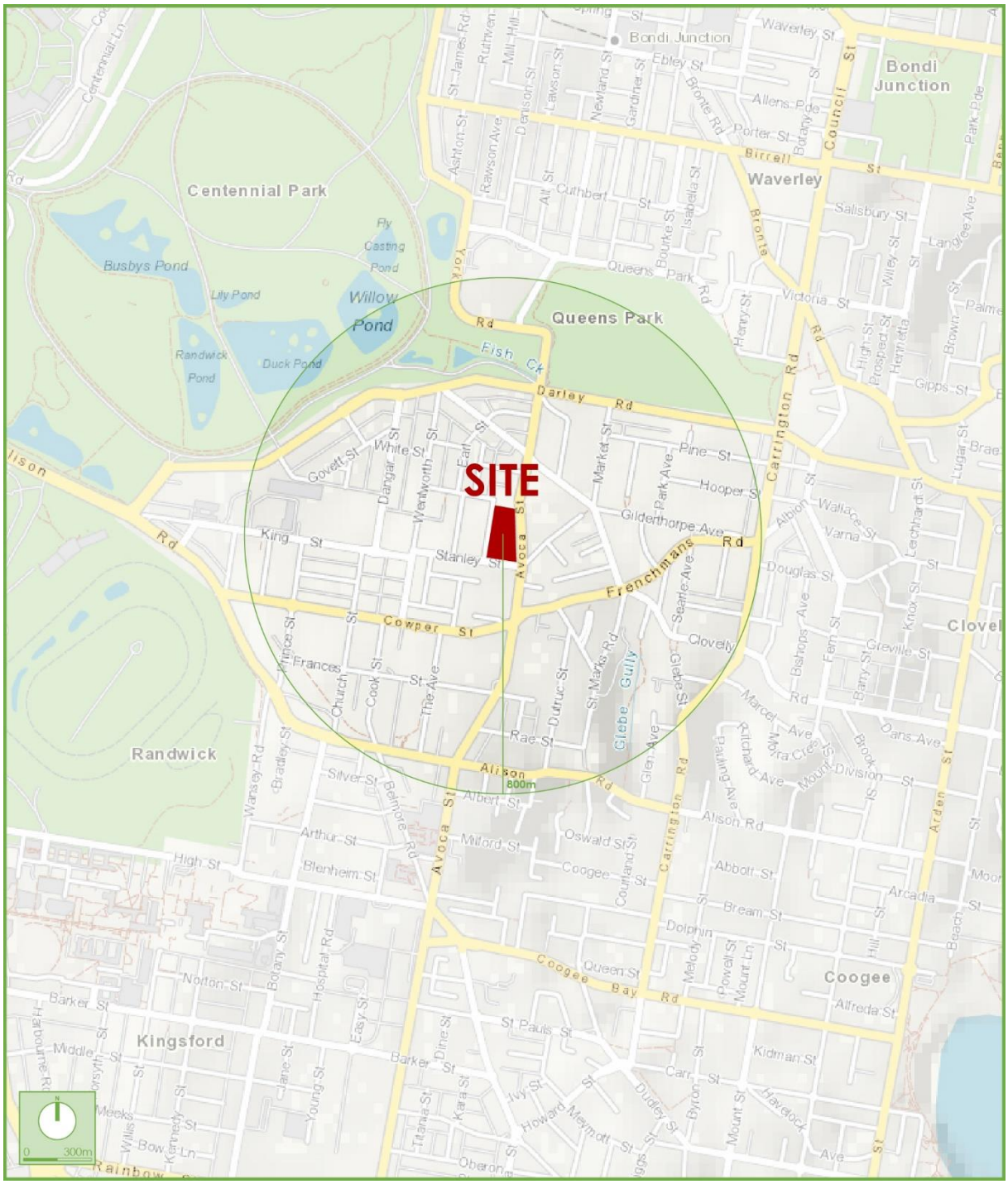

Figure 1: Location Plan

Figure 2: Site Plan

3.2 Road Network

The road hierarchy in the vicinity of the site is shown in **Figure 3** with the following roads of particular interest:

- Avoca Street: an Unclassified Regional Roads (7330) that generally runs in a north-south direction between Darley Road in the north and Anzac Parade in the south. Within the vicinity of the site, Avoca Street is subject to a 60km/h speed zoning and accommodates one lane of traffic in either direction. School zone restrictions apply between the hours 8:00am - 9:30am and 2:30pm – 4:00pm on school days, reducing the speed limit to 40km/h. A no parking restriction applies between 7:30am-9:30am and 2:30pm-4pm along the western side of Avoca Street with supplementary 'School Drop-off Pick up Zone' signage.

- Stanley Street: a local road that generally runs in an east-west direction between Avoca Street in the east and Wentworth Street in the west. Within the vicinity of the site, Stanley Street is subject to a 50km/h speed zoning and accommodates a single lane of traffic in either direction. School zone restrictions apply between the hours 8:00am - 9:30am and 2:30pm – 4:00pm on school days, reducing the speed limit to 40km/h. A no parking restriction applies between 7:30am-9:30am and 2:30pm-4pm along the northern side of Stanley Street (adjacent school) with supplementary 'School Drop-off Pick up Zone' signage. A bus zone also applies adjacent the school between 7:30am-4pm on school days.

- Chepstow Street: a local road that generally runs in a north-south direction between Stephen Street in the north and Stanley Street in the south. Within the vicinity of the site, Chepstow Street is subject to a 50km/h speed zoning and accommodates a single lane of traffic in either direction. School zone restrictions apply between the hours 8:00am - 9:30am and 2:30pm – 4:00pm on school days, reducing the speed limit to 40km/h. Kerbside parking is generally permitted within the vicinity of the site.

- Stephen Street: a local road that generally runs in an east-west direction between Chepstow Street in the east and Wentworth Street in the west. Within the vicinity of the site, Stephen Street is subject to a 50km/h speed zoning and accommodates a single lane of traffic in either direction. The eastern section of Stephen Street is subject to school zone restrictions between the hours 8:00am - 9:30am and 2:30pm – 4:00pm on school days, reducing the speed limit to 40km/h. Kerbside parking is generally permitted within the vicinity of the site.

The site is conveniently located with respect to the local and arterial road systems serving the region, with connections to the north and south using Avoca Street and Wentworth Street.

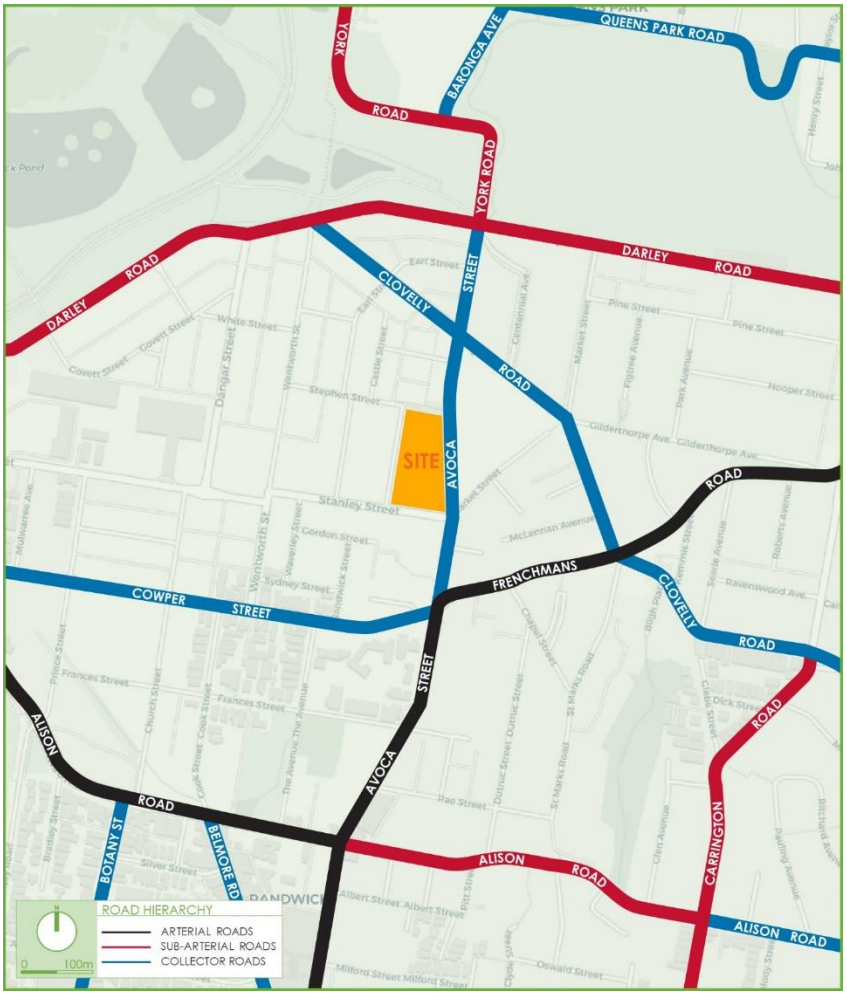

Figure 3: Road Hierarchy

3.3 Key Intersections

Three (3) key intersections have been identified in the vicinity of the site. These intersections are located at the junction of main thoroughfares that will be utilised by users associated with future developments.

3.3.1 Avoca Street and Stanley Street

Figure 4: Intersection of Avoca Street and Stanley Street (Source: NearMap)

It can be seen from **Figure 4** that the intersection of Avoca Street and Stanley Street is a three-legged priority intersection with Avoca Street having priority over Stanley Street. The main attributes of each approach are outlined below:

- Avoca Street (north and south legs)
  - The southbound approach provides a single through lane which allows for right turns onto Stanley Street.
  - The northbound approach provides a single through lane which allows for left turns onto Stanley Street.

- Stanley Street (west leg)
  - The eastbound approach provides a single lane which allows for left and right turns onto Avoca Street.

3.3.2 Stanley Street and Wentworth Avenue

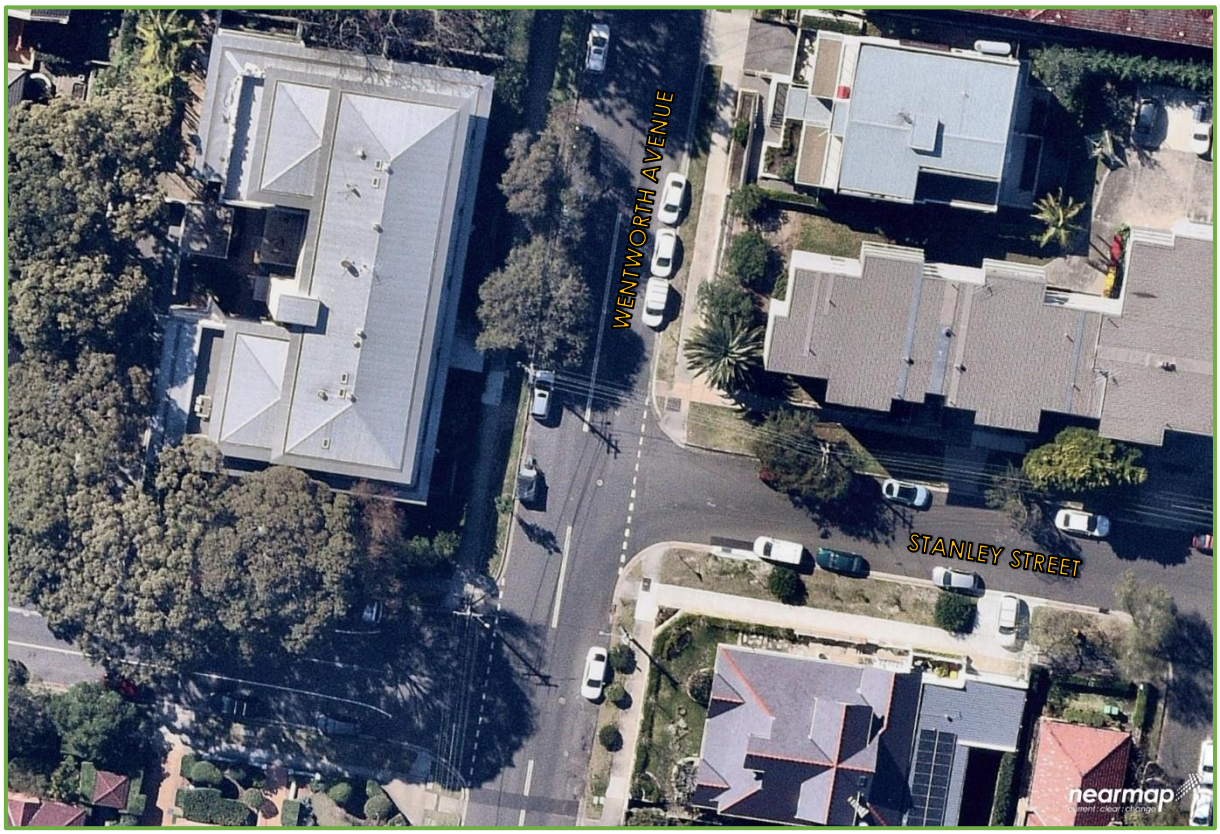

Figure 5: Intersection of Stanley Street and Wentworth Avenue (Source: NearMap)

It can be seen from **Figure 5** that the intersection of Stanley Street and Wentworth Avenue is a three-legged priority intersection with Stanley Street required to give way to Wentworth Avenue. The main attributes of each approach are outlined below:

- Wentworth Avenue (north and south legs)
  - The southbound approach provides a single through lane which allows for left turns onto Stanley Street.
  - The northbound approach provides a single through lane which allows for right turns onto Stanley Street.
- Stanley Street (east leg)

- The westbound approach provides a single lane which allows for left and right turns onto Wentworth Avenue.

3.3.3 Stephen Street and Wentworth Avenue

Figure 6: Intersection of Stephen Street and Wentworth Avenue (Source: NearMap)

It can be seen from **Figure 6** that the intersection of Stephen Street and Wentworth Avenue is a three-legged priority intersection with Stanley Street required to give way to Wentworth Avenue. The main attributes of each approach are outlined below:

- Wentworth Avenue (north and south legs)
  - The southbound approach provides a single through lane which allows for left turns onto Stephen Street.
  - The northbound approach provides a single through lane which allows for right turns onto Stephen Street.
- Stephen Street (west leg)

- The westbound approach provides a single lane which allows for left and right turns onto Wentworth Avenue.

3.4 Peak Period Intersection Performance

Traffic surveys were undertaken of the intersections mentioned above, which are considered to be most critical in relation to the site. These counts were undertaken on 23 September 2019 during the network peak periods, being between 7:00am and 9:00am (Morning Peak Period) and 3:00pm and 6:00pm (Afternoon/evening peak period).

The traffic volumes in these surveys formed the volumes for software modelling undertaken to assess intersection performance characteristics under existing traffic conditions. The SIDRA Intersection 8 model produces a range of outputs, the most useful of which are the Degree of Saturation (DoS) and Average Vehicle Delay per vehicle (AVD). The AVD is in turn related to a level of service (LoS) criteria. These performance measures can be interpreted using the following explanations:

DoS - the DoS is a measure of the operational performance of individual intersections. As both queue length and delay increase rapidly as DoS approaches 1, it is usual to attempt to keep DoS to less than 0.9. When DoS exceeds 0.9 residual queues can be anticipated, as occurs at many major intersections throughout the metropolitan area during peak periods. In this regard, a practical limit at 1.1 can be assumed. For intersections controlled by roundabout or give way/stop control, satisfactory intersection operation is generally indicated by a DoS of 0.8 or less.

AVD - the AVD for individual intersections provides a measure of the operational performance of an intersection. In general, levels of acceptability of AVD for individual intersections depend on the time of day (motorists generally accept higher delays during peak commuter periods) and the road system being modelled (motorists are more likely to accept longer delays on side streets than on the main road system).

LoS - this is a comparative measure which provides an indication of the operating performance of an intersection as shown in **Table 1** below.

Table 1: Intersection Performance Indicators (RMS)

Level of Service (LoS)	Average Delay per Vehicle (sec/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	Less than 14	Good Operation	Good Operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and space capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	42 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode
F	More than 70	Unsatisfactory and requires additional capacity	Unsatisfactory and requires other control mode or major treatment

A summary of the modelled results is provided below in **Table 2**.

Table 2: Existing Intersection Performances

Intersection	Control	Period	Degree of Saturation	Average Delay (s)	Level of Service
Avoca Street and Stanley Street	Give Way	AM	0.305	13.2	**A**
		PM	0.472	14.7	**B**
Stanley Street and Wentworth Street		AM	0.062	5.5	**A**
		PM	0.046	5.2	**A**
Stephen Street and Wentworth Street		AM	0.050	5.2	**A**
		PM	**0.038**	**5.0**	**A**

As evident from the Table 2 above, the intersection of Avoca Street/Stanley Street, Stanley Street/Wentworth Street and Stephen Street/Wentworth Street all operate with LoS A or B, with spare capacity during the AM and PM peak periods.

3.5 Nearby Resident Parking Areas

Randwick Council describes resident parking schemes as the following:

"Randwick City Council operates a Resident Parking Scheme that gives parking priority on the street to residents who cannot park on their own property. The Resident Parking Scheme allows eligible residents to obtain a parking permit to park without time limits in a Resident Parking Zone, in their Area. Resident parking zones are identified by parking time limit signs which display additional wording such as "Permit Holders Excepted Area RA6".

Streets surrounding the school are located within the 'RA6' resident parking scheme area which is shown in **Figure 7** below.

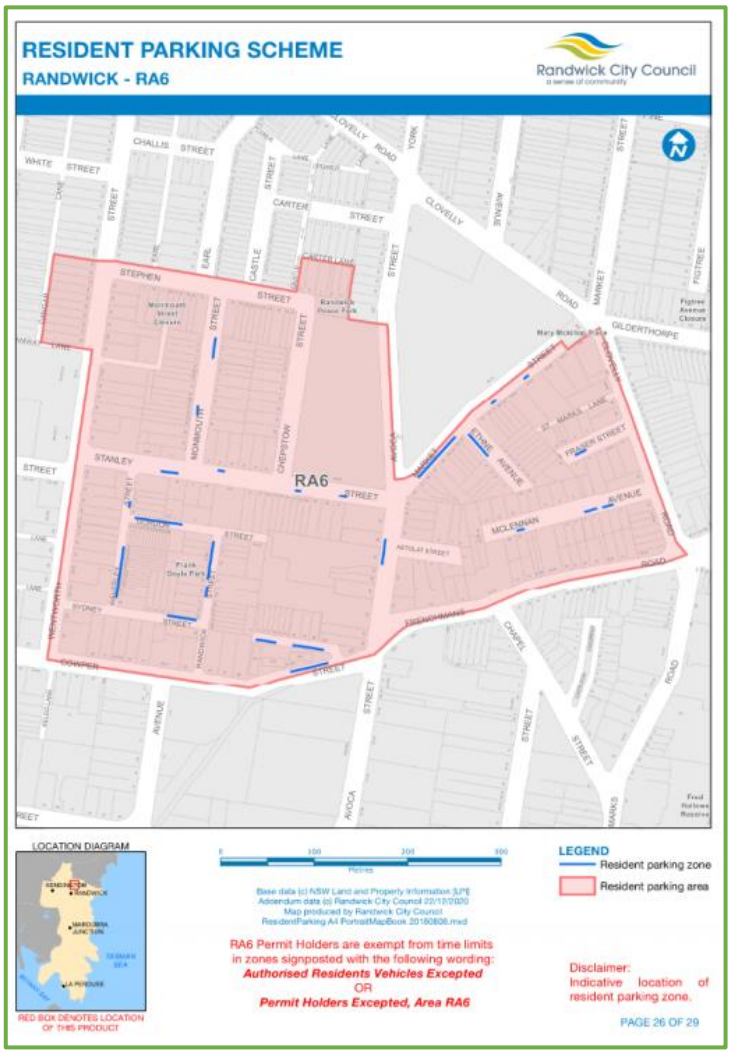

Figure 7: RA6 Resident Parking Scheme Area

(Source Randwick Council)

As can be seen from the Figure 7, residents immediately surrounding the school have access to resident parking zones along Stanley Street, Chepstow Street, Monmouth Street, Market Street and Ethne Avenue. Randwick Council conducts online surveys of each household within the respective parking scheme area every four (4) years to determine if new parking zones should be installed. Council has advised that an individual street requires 51% of residents to request for a residential parking zone for Council to consider installation of appropriate signage. That is, if 10 residents respond, and 6 are in favour of a resident parking zone, then Council will consider the installation of six (6) residential parking zone spaces along the street. As mentioned above, surveys are undertaken every four (4) years with the 'RA6' zone last surveyed in September 2020.

4. OVERVIEW OF SITE OPERATIONS

4.1 School Capacity

The school has an approved capacity for 138 staff and 920 students, with the hours of operation generally between 8:30am and 3:30pm during school days.

4.2 Sustainable Transport Options

4.2.1 Public Transport Services

The school is located within 400 metres of several bus stops. These bus stops offer several bus routes as summarised below:

Table 3: Bus Routes

Route Number	Route Name	Route Number	Route Name
314	Coogee to Bondi Junction via. Randwick Junction	X39	Clovelly to City Martin Place (Express Service)
316	Eastgardens to Bondi Junction via. Randwick Junction	X40	Clovelly to City Museum (Express Service)
317	Eastgardens to Bondi Junction via. Randwick Junction and Beauchamp Road	348	Wolli Creek to Bondi Junction
338	Clovelly to Central Railway Square	357	Mascot to Bondi Junction via. Kingsford and Randwick
339	Clovelly to City Gresham Street	400	Bondi Junction to Sydney Airport

In addition to these services, Bondi Junction Railway Station is located approximately 1.9 kilometres north of the site. This station provides services on the T4 – Eastern Suburbs and Illawarra Line, providing connections to the Sydney CBD.

4.2.2 School Bus Services

In addition to the numerous public bus services, the site is serviced by the 683E school bus which runs between Emanuel School and Watsons Bay. The public transport and school bus services are shown in **Figure 8** below.

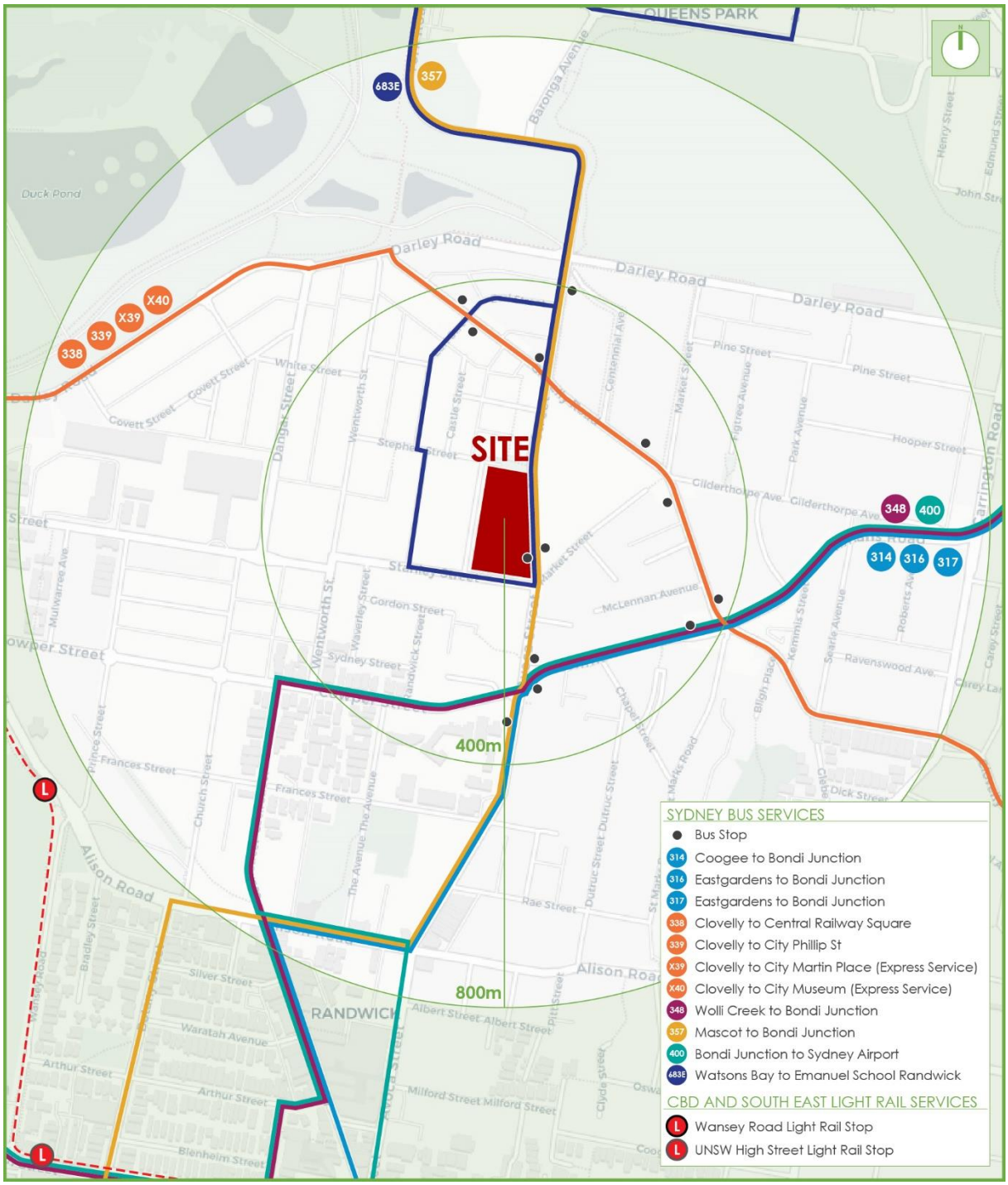

Figure 8: Public Transport and School Bus Route

No changes to the aforementioned bus routes and services are proposed. Accordingly, these bus services and facilities are considered appropriate to cater for the student population.

4.3 Parking Provisions

4.3.1 Off-Street Parking

The school provides 19 off-street spaces including 11 spaces under the science block and eight (8) spaces adjacent the Kornmehl Centre (pre-school). The majority of these space are for staff use with the parking spaces adjacent to the pre-school being used for drop-off and pick-up by parents of pre-school students.

The school will discourage students from driving to school and will promote use of public transport and active transport.

4.3.2 On-Street Parking

Local roads surrounding the school provide a number of on-street parking options for staff, parents and students. Kerbside parking restrictions include all-day parking, timed no parking, timed bus zones and no stopping.

Unrestricted on-street parking is available near the school at the following locations:

- Chepstow Street;
- Monmouth Street;
- Stanley Street;
- Stephen Street; and
- Market Street.

The following drop-off and pick-up parking restrictions are available adjacent the school:

- Avoca Street: Approximately 100m of 'No Parking 7:30am – 9:30am, 2:30pm-4:00pm School Days' with a supplementary 'School Drop Off Pick Up Zone' sign.
- Stanley Street: Approximately 16m of 'No Parking 7:30am – 9:30am, 2:30pm-4:00pm School Days' with a supplementary 'School Drop Off Pick Up Zone' sign.

Remaining sections of kerbside parking adjacent the school comprise unrestricted parking, no stopping restrictions and bus zones.

4.4 Drop-off and Pick-up

4.4.1 Parking Provision

The school will retain the existing parking restrictions along the Stanley Street and Avoca Street frontage of the school for drop-off and pick-up activities. These parking restrictions state 'No Parking, 7:30am-9:30am, 2:30pm-4:00pm, School Days'.

The Stanley Street frontage is utilised by years 7 to 12 in the morning and afternoon and the Avoca Street frontage is utilised by years K to 12 for drop-off in the morning only. In the afternoon, the school implements the "Go with the Flow" operations along Avoca Street, and this is discussed in further detail below.

Accordingly, the on-street provisions would result in an estimated total of 19 drop-off and pick - up spaces, which are subject to a traffic management strategy as explained in **Section 4.4.2** to reduce impacts on the road network and allow for continuous flow of traffic along Avoca Street.

Additionally, eight (8) spaces located within the northern end of the site are allocated for use by parents of children that attend the pre-school (Kornmehl). Parents/caretakers are permitted to park their car for up to 10 minutes while dropping-off or picking up their children.

The on-site provisions are shown in **Figure 9** below.

4.5 Student Drivers

It is noted that Condition 24 states that "*this OTMP is to require the school to have no students driving to school Monday to Friday.*" The school has sought legal advice regarding this condition which concludes that it would be impossible for the school to enforce this condition on a practical level, noting the school has no legal jurisdiction to impose the means by which each student travels to school. The full legal advice letter can be viewed in **Appendix A**.

Nevertheless, the school will continue to encourage students to utilise alternative modes of transport to/from the school through the introduction of the Travel Access Guide.

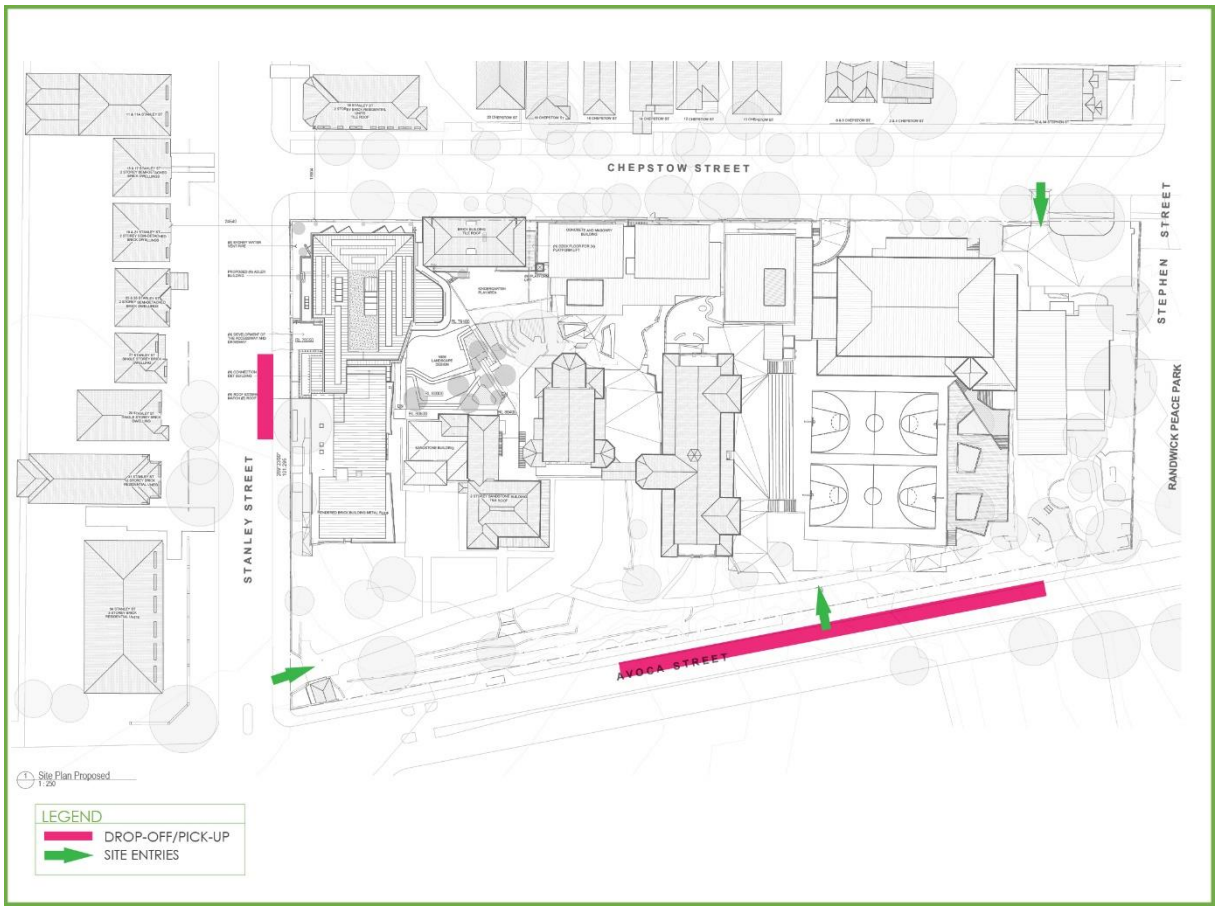

Figure 9: Drop-off and Pick-up Area and Pedestrian Site Entries

4.5.1 Operational Management Arrangements

Pre-School (Kornmehl) Drop-Off and Pick-Up

The school offers a total of five (5) internal parking spaces for drop-off and pick-up. Access to these spaces is provided via Chepstow Street, at the northern end of the school. Entry into the carpark is managed by the staff and parents and carers are permitted to park up to 10 minutes within a space. The school has also requested parents of the school to not park in front of the Peace Park adjacent to the school via correspondence such as the school newsletter.

Years K to Y12 Drop-Off and Pick-Up

In order to increase the efficiency of the drop-off and pick-up area, the following operational management arrangements have been adopted by the school and are proposed to continue:

- Deployment of supervisors to monitor arrivals of parents, based on the school's capacity to provide adequate resources;
- In the afternoon peak period, teachers will be on hand to announce vehicle arrivals and allocate students to the correct drop-off and pick-up spaces along Avoca Street;
- Avoca Street will be subject to the 'Go with the Flow' operational procedures which involve the following:
  - Vehicles drive to allocated collection point only at the Peace Park end of Avoca; Street ensuring that no vehicles stop in the middle of the drop-off and pick-up area;
  - All parents are to remain in their car;
  - A staff member will release the child when the car arrives at the collection point; and
  - If vehicles are unable to join the kerbside queue, they are to follow the 'Go with the Flow' procedure and circulate around the block as shown in **Figure 10** below.
- The school will provide parent education in the form of advertising material on the school website/newsletter to inform parents of:
  - Formal drop-off and pick-up area along Avoca Street;
  - 'Go with the flow' traffic circulation arrangement to ensure that vehicles that cannot access the drop-off and pick-up area are not queuing on the road;
  - Encouraging parents to remain within their vehicle for improved efficiency; and
  - 'No Parking' restrictions, being two (2) minute duration for a car to stand and drivers to remain within three (3) metres of the vehicle.
- The school actively promotes road safety to parents, carers and visitors of the school through the newsletter and other forms of media.

In light of the above, these operational arrangements are considered appropriate and increase the efficiency of the area, thereby minimising potential queuing impacts along the surrounding roads. It should be noted that the above initiatives may need to be revised subject to the findings of the independent road safety audit, which is set to be undertaken in the near future.

Figure 10: Drop-Off and Pick-Up Traffic Flow

4.6 Active Travel

4.6.1 School Zones and Crossings

The school is located within 'School Zones' that are subject to 40km/h speed zoning at 8:00am-9:30am and 2:30pm-4:00pm on school days at the following approximate locations:

- Avoca Street between Stanley Street and Clovelly Road;
- Stanley Street between Monmouth Street and Avoca Street; and
- Stephen Street between Castle Lane and Stanley Street.

A pedestrian crossing is provided at along the site frontage. This is a 'Wombat Crossing' on Avoca Street, north of the intersection with Market Street. A pedestrian refuge is also provided on Stanley Street at the intersection with Avoca Street.

4.6.2 Pedestrian Accesses

The school provides two (2) student pedestrian entry and exit points, as summarised below:

- One (1) pedestrian access on Stanley Street near the intersection with Avoca Street;
- One (1) pedestrian access on Avoca Street; and
- One (1) pedestrian access on Chepstow Street.

All students are required to enter and leave the school through these accesses, which provide connections to the existing footpaths surrounding the school, as well as the designated drop-off and pick-up and bus stop areas along Stanley Street and Avoca Street.

4.6.3 Bicycle Facilities

The school provides a total of 15 bicycle parking spaces for staff and students within the school grounds. These spaces are connected to the surrounding pedestrian footpath network, noting that students are permitted to ride along pedestrian footpaths until the age of 16.

In addition to the above, the school is situated within the vicinity of various proposed cycle routes, as identified within the Randwick City Council's Bicycle Plan, with the closest route being along Darley Road. These bicycle routes therefore provide connections towards Moore Park and Kensington in the west and Clovelly and Bronte in the east. The relevant cycle infrastructure is presented in **Figure 11**.

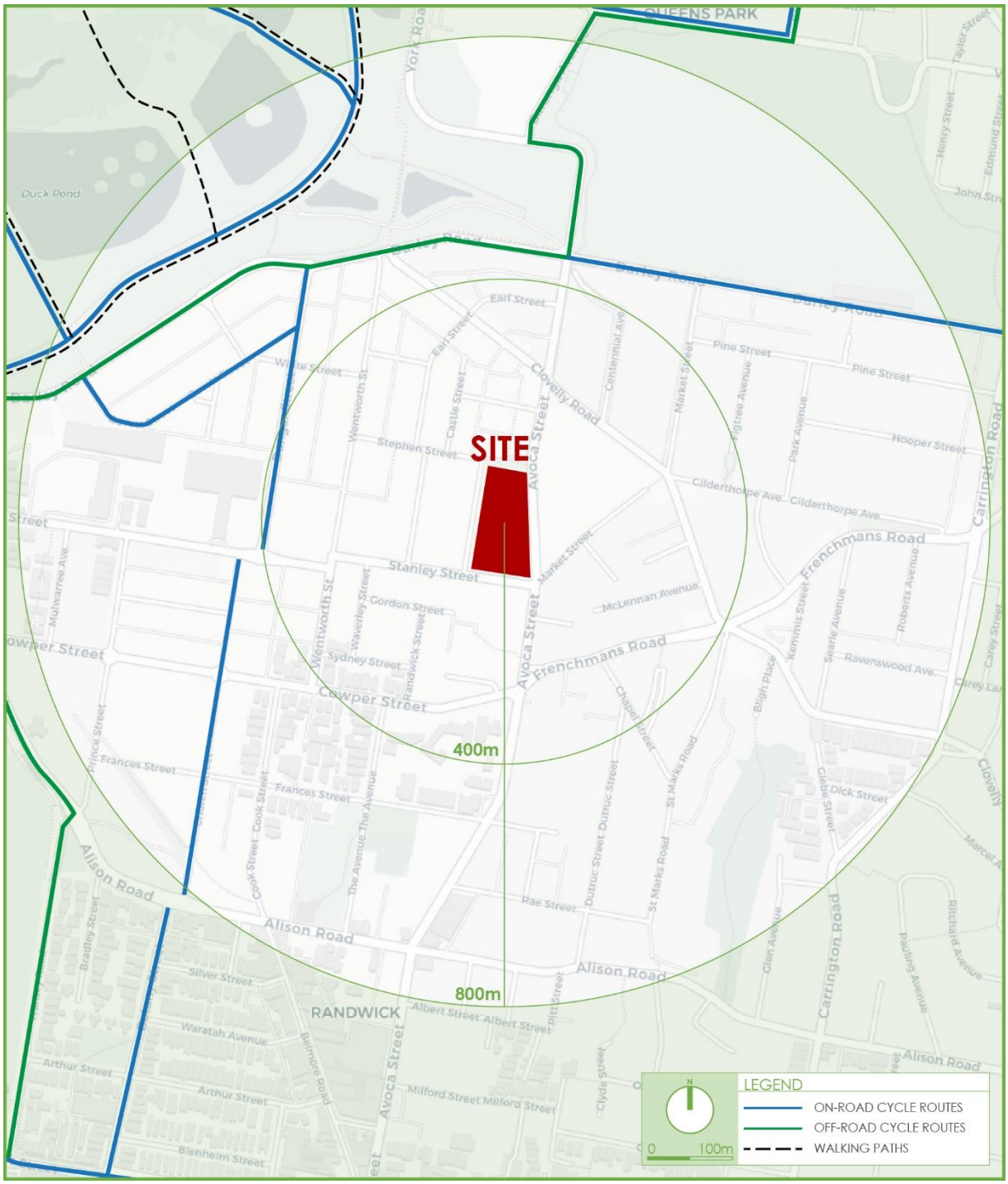

Figure 11: Cycle Infrastructure

4.7 Other Vehicles

4.7.1 Bus Services

The school will utilise the bus zone on Stanley Street for coach and school bus services. The management of the indented bus bay is summarised as follows.

School Operated Bus

The school currently operates a 7.73m long Fuso 'Rosa' bus which is currently utilised to transport student to and from external school activities. The bus is parked within the school grounds via the existing driveway access on Stanley Street. The proposed 'Adler' building and associated landscape works have been designed to allow the bus to enter the school grounds in a forward direction, turnaround within the site, and exit onto Stanley Street in a forward direction.

School Buses

The school bus route utilises the Bus Zone located along the site frontage to Stanley Street. School correspondence and promotional information would educate parents about bus safety, this may include the following.

- Wait for their respective children at the same side of the road of the bus stop and never call your child to cross the road;
- Supervising children to and from the bus stop;
- Have discussions with their children on how to proceed, should they miss their bus or take the wrong bus; and
- Educating and practicing how to safely cross the road with their children.

4.7.2 Refuse Collection and Service Vehicles

General waste collection for the school occurs daily between Monday to Friday. Recycling bin collection occurs once a fortnight and paper recycling also occur fortnightly, on the alternating week to recycling collection. Therefore, at most up to two (2) waste collection vehicles will arrive at the school on any one day.

All waste collection currently occurs kerbside at the Stanley Street and Chepstow Street preschool gates for collection by council garbage vehicles.

No access is provided for servicing vehicles, however it is envisaged that they would utilise parking along the street frontages outside of drop-off and pick-up hours.

4.7.3 Emergency Vehicles

Emergency Vehicles are exempt from parking restrictions and therefore would be permitted to park along any of the school frontages if it is safe to do so.

5. ESTABLISHING BASELINE DATA

5.1 Context

In order to assess existing travel characteristics of the school development, online travel mode questionnaire surveys were prepared by TRAFFIX and distributed by the school to all staff, parents/guardian (ELC & K to Year 6) and students (Year 7 to 12).

The online questionnaire was open for responses for an eight-day period from 23rd September 2019 to 1st October 2019. A sample rate of approximately 46% of students and 73% of staff was collected and completed. The survey included a range of questions which were primarily aimed to gain an understanding of average car occupancies and travel modes in the morning and afternoon school peak periods in order to understand the existing development characteristics. The key results of these surveys are discussed in the following sections.

5.2 Travel Mode Splits

Table 4 presents the existing staff travel modes, whilst **Table 5** and **Table 6** present the existing student travel modes during the AM and PM school peak periods. Travel mode data will be used in later sections to determine general travel characteristics of the existing educational development.

Table 4: Staff Travel Modes – AM and PM School Peak Periods

Travel Modes	AM Peak	PM Peak
By Car (as driver)	85.7%	85.7%
By Car (as passenger – dropped off/picked up)	1.9%	1.0%
By Car (as passenger – carpool with other staff who park at/near school)	0%	0%
Public Transport - Bus	4.8%	5.7%
Public Transport - Other	1.9%	1.9%
Cycle	1.9%	1.9%
Walk	3.8%	3.8%

Based on the above survey results; approximately 87% of staff utilise private vehicles to travel to/from the school with the remaining staff utilising other modes of transport (including public transport and walking).

Table 5: Student Travel Modes (ELC & K to Year 6) – AM and PM School Peak Periods

Travel Modes	AM Peak	PM Peak
By Car (as a passenger – dropped off by parent/guardian)	79.1%	67.7%
By Car (as driver)	0%	0%
By Car (as passenger – carpool with other student driving)	0%	1.3%
School Bus	12.0%	22.2%
Public Transport - Bus	5.1%	3.2%
Public Transport - Other	0%	0%
Cycle	0.6%	0.6%
Walk	3.2%	3.8%
Extra-Curricular activities on site	N/A	1.3%

Table 6: Student Travel Modes (Year 7 to12) – AM and PM School Peak Periods

Travel Modes	AM Peak	PM Peak
By Car (as a passenger – dropped off by parent/guardian)	50%	26%
By Car (as driver)	4.4%	4.4%
By Car (as passenger – carpool with other student driving)	2.4%	2.4%
School Bus	20.4%	42.4%
Public Transport - Bus	13.6%	12.8%
Public Transport - Other	0.8%	0.4%
Cycle	1.6%	1.6%
Walk	6.8%	9.6%
Extra-Curricular activities on site	N/A	0.4%

Tables 5 and 6 demonstrate that 79.1% of students between Preschool and Year 6 are dropped off by car in the morning and 67.7% picked up in the afternoon. 50% of students in Years 7-12 are dropped off in the mornings and 26% picked up in the afternoons.

A proportion of students between Preschool and Year 6, 17.09%, utilise bus transport in the morning, increasing to 25.31% in the afternoons. Students between the Year 7 and 12 showed a greater uptake in bus transport with 34% in the mornings and 55% in the afternoons.

5.2.1 Staff Travel

The results of the travel questionnaires completed by the staff at Emanuel School are outlined in the tables below. **Tables 7** to **11** present the surveyed travel mode shares, arrival and departure times of the existing staff and parking locations.

Table 7: Staff Travel Modes to Emanuel School

Travel Modes	Number of Staff (Average)	Proportion (AM Peak)
By Car (as driver)	118	85.7%
By Car (as passenger – dropped off/picked up)	3	1.9%
By Car (as passenger – carpool with other staff who park at/near school)	0	0%
Public Transport - Bus	7	4.8%
Public Transport - Other	3	1.9%
Cycle	3	1.9%
Walk	5	3.8%

Table 8: Staff Travel Modes from Emanuel School

Travel Modes	Number of Staff (Average)	Proportion (PM Peak)
By Car (as driver)	118	85.7%
By Car (as passenger – dropped off/picked up)	1	1.0%
By Car (as passenger – carpool with other staff who park at/near school)	0	0%
Public Transport - Bus	8	5.7%
Public Transport - Other	3	1.9%
Cycle	3	1.9%
Walk	5	3.8%

Table 9: Parking Location of Staff at Emanuel School

Parking Location	Number of Staff (Average)	Proportion
Within School Grounds	5	4.4%
Market Street	11	8.9%
Avoca Street	33	27.8%
Stanley Street	9	7.8%
Chepstow Street	21	17.8%
Stephen Street	13	11.1%
Monmouth Street	4	3.3%
Castle Street	3	2.2%
Other	20	16.7%

Table 10: Arrival Time of Staff at Emanuel School

Arrival Time	Number of Staff (Average)	Proportion
Prior to 7:00am	11	7.6%
7:00am – 8:00am	104	75.2%
8:00am – 9:00am	20	14.3%
9:00am – 10:00am	1	1.0%
After 10:00am	0	0%
Other	3	1.9%

Table 11: Departure Time of Staff at Emanuel School

Departure Time	Number of Staff (Average)	Proportion
Prior to 3:00pm	4	2.9%
3:00pm – 4:00pm	25	18.1%
4:00pm – 5:00pm	78	56.2%
5:00pm – 6:00pm	20	14.3%
6:00pm – 7:00pm	9	6.7%
After 7:00pm	1	1.0%
Other	1	1.0%

The key findings from the staff travel mode surveys are summarised below:

- 87% of staff drive a car in the AM and PM periods.
- 5% of staff utilise public transport to and from the school.
- 4% of staff walk to and from the school.
- 4% of staff park on the school property, whilst 96% park on the surrounding streets.
- For the purpose of reviewing trip arrival patterns, 75% of staff arrived at the school between the hours of 7:00am and 8:00am and 56% of staff leave the school between the hours of 4:00pm and 5:00pm.

5.2.2 Students – ELC & K to Year 6

The result of the travel questionnaires completed by parents of students in ELC to Year 6 at Emanuel School are outlined in the tables below. **Tables 12** to **16** present the surveyed travel mode shares, arrival and departure times of the existing students.

Table 12: ELC & K to Year 6 Travel Modes to Emanuel School

Travel Modes	Number of Students (Average)	Proportion (AM Peak)
By Car (as a passenger – dropped by parent/guardian)	293	79.1%
By Car (as passenger – carpool with other student driving)	0	0%
School Bus	46	0.0%
Public Transport - Bus	19	12.0%
Public Transport - Other	0	5.1%
Cycle	2	0.0%
Walk	12	0.6%
Other	0	3.2%

Table 13: ELC & K to Year 6 Travel Modes from Emanuel School

Travel Modes	Number of Students (Average)	Proportion (PM Peak)
By Car (as a passenger – picked up by parent/guardian)	251	67.7%
By Car (as passenger – carpool with other student driving)	5	1.3%
School Bus	82	22.2%
Public Transport - Bus	12	3.2%
Public Transport - Other	0	0%
Cycle	2	0.6%
Walk	14	3.8%
Other	0	0%
Extra-Curricular activities on site	5	1.3%

Table 14: Private Vehicle Occupancy of Students (ELC & K to Year 6) at Emanuel School

Private Vehicle Occupancy	AM	PM
	Proportion	Proportions
1	28%	31%
2 or more[1]	72% car sharing	69% car sharing

[1] Car occupancies of more than 2 may include students from Year 7 to 12.

Table 15: Arrival Time of Students (ELC & K to Year 6) at Emanuel School

Arrival Time	Number of Students (Average)	Proportion
Prior to 8:00am	75	20.3%
8:00am – 8:15am	269	72.8%
8:15am – 8:30am	7	1.9%
8:30am – 8:45am	2	0.6%
8:45am - 9:00am	7	1.9%
After 9:00am	0	0%
Other	9	2.5%

Table 16: Departure Time of Students (ELC – Year 6) at Emanuel School

Departure Time	Number of Students (Average)	Proportion
Prior to 3:00pm	0	0%
3:00pm – 3:15pm	21	5.7%
3:15pm – 3:30pm	19	5.1%
3:30pm – 3:45pm	276	74.7%
3:45pm – 4:00pm	28	7.6%
After 4:00pm	7	1.9%
After 4:00pm (Emanuel OOSH)	12	3.2%
Other	7	1.9%

The key findings of the student travel mode surveys for students in ELC & K to Year 6 are as follows:

- 79% of students get dropped off in the morning with 72% of these students arriving in the same vehicle in groups of 2 or more, and 68% of students get picked up in the afternoon with 68% of these students departing in the same vehicle in groups of 2 or more.
- 17% and 25% students utilise bus transport (school bus and public buses) in the morning and afternoon respectively.
- 4% of students walk or cycle to school in the morning and walk or cycle home in the afternoon.

5.2.3 Students – Year 7 to 12

The result of the travel questionnaires completed by a sample of students between Year 7 and 12 at Emanuel School are outlined in the tables below. **Table 17** to **21** present the surveyed travel mode shares, arrival and departure times of the existing students.

Table 17: Year 7 to 12 Travel Modes to Emanuel School

Travel Modes	Number of Students (Average)	Proportion (AM Peak)
By Car (as a passenger – dropped by parent/guardian)	229	50.0%
By Car (Student driving and parking at/near school)	20	4.4%
By Car (as passenger – carpool with other student driving)	11	2.4%
School Bus	93	20.4%
Public Transport - Bus	62	13.6%
Public Transport - Other	4	0.8%
Cycle	7	1.6%
Walk	31	6.8%
Other	0	0%

Table 18: ELC – Year 7 to 12 Travel Modes from Emanuel School

Travel Modes	Number of Students (Average)	Proportion (PM Peak)
By Car (as a passenger – picked up by parent/guardian)	119	26.0%
By Car (Student driving)	20	4.4%
By Car (as passenger – carpool with other student driving)	11	2.4%
School Bus	194	42.4%
Public Transport - Bus	58	12.8%
Public Transport - Other	2	0.4%
Cycle	7	1.6%
Walk	44	9.6%
Extracurricular Activities	2	0.4%
Other	0	0%

Table 19: Private Vehicle Occupancy of Students (Year 7 to 12) at Emanuel School

Private Vehicle Occupancy	AM	PM
	Proportion	Proportions
1	38%	26%
2 or more[1]	62% car sharing	74% car sharing

[1] Car occupancies of more than 2 may include students from ELC & K to year 6.

Table 20: Arrival Time of Students (Year 7 to 12) at Emanuel School

Arrival Time	Number of Students (Average)	Proportion
Prior to 8:00am	122	26.8%
8:00am – 8:15am	276	60.4%
8:15am – 8:30am	38	8.4%
8:30am – 8:45am	0	0%
8:45am - 9:00am	4	0.8%
After 9:00am	0	0%
Other	16	3.6%

Table 21: Departure Time of Students (Year 7 to 12) at Emanuel School

Departure Time	Number of Students (Average)	Proportion
Prior to 3:00pm	5	1.2%
3:00pm – 3:15pm	5	1.2%
3:15pm – 3:30pm	7	1.6%
3:30pm – 3:45pm	399	87.2%
3:45pm – 4:00pm	33	7.2%
After 4:00pm	4	0.8%
After 4:00pm (Emanuel OOSH)	2	0.4%
Other	2	0.4%

The key findings of the student travel mode surveys for students in Year 7 to 12 are as follows:

- 54% of students get dropped off or drive to school in the morning with 62% of these students arriving in the same vehicle in groups of 2 or more, and 30% of students get picked up or

drive themselves home in the afternoon with 74% of these students departing in the same vehicle in groups of 2 or more.

- 34% and 55% students utilise public transport (school bus and public buses) in the morning and afternoon respectively.
- 8% of students walk or cycle to school in the morning, and 11% students walk or cycle home in the afternoon.

6. FUTURE TRAVEL TARGETS

6.1 Reference Travel Modes

For the purposes of this assessment, the morning (AM) and afternoon (PM) data was averaged for both staff and students travel modes. These reference travel modes are outlined in **Table 22** and **Table 23** below.

Table 22: Reference Travel Modes - Staff

Travel Mode	Staff (%)
By Car (as driver)	85.7%
By Car (as passenger – dropped off/picked up)	1.4%
By Car (as passenger – carpool with other staff who park at/near school)	0%
Public Transport - Bus	5.3%
Public Transport - Other	1.9%
Cycle	1.9%
Walk	3.8%

Table 23: Reference Travel Modes - Students

Travel Mode	ELC & K to Year 6 (%)	Year 7 to12 (%)
By Car (as a passenger – dropped off by parent/guardian)	73.4%	38%
By Car (as driver)	0%	4.4%
By Car (as passenger – carpool with other student driving)	0.7%	2.4%
School Bus	17.1%	31.6%
Public Transport - Bus	4.2%	13.2%
Public Transport - Other	0%	0.6%
Cycle	0.6%	1.6%
Walk	3.5%	8.2%

It can be seen from Table 22 the primary travel modes for staff comprised car driver at 87.1%, and public transport (bus) travel at 5.3%. As summarised in Table 23, students between ELC to Year 6 predominantly utilised cars (passenger dropped off by parent/guardian) with 17.1% using a school bus and 4.2% using public buses. Students in Years 7 to 12 primarily utilise cars, with 38% being dropped off as passengers and only 4.4% driving themselves to school. 31.6% of students between these years utilised the school bus and 13.2% utilised public buses.

6.2 Suggested Travel Targets

6.2.1 Staff Targets

The travel mode targets for staff at the school have been separated into a medium-term target of 5 years and a long-term target of 10 years. These suggested targets are summarised in **Table 24**, with justifications for the main travel modes discussed thereafter.

Table 24: Suggested Travel Mode Targets for Staff

Travel Mode	Reference		Targets for Staff			
	%	No. Staff	5-Year	No. Staff	10-Year	No. Staff
By Car (as driver)	85.7%	118	80.7% (-5%)	-7	75.7% (-10%)	-14
By Car (as passenger – dropped off/picked up)	1.4%	2	1.4% (±0%)	±0	1.4% (±0%)	±0
By Car (as passenger – carpool with other staff who park at/near school)	0%	0	1.0% (+1%)	+1	2.0% (+2%)	+3
Public Transport - Bus	5.3%	7	6.3% (+1%)	+1	7.3% (+2%)	+3
Public Transport - Other	1.9%	3	2.9% (+1%)	+1	3.9% (+2%)	+3
Cycle	1.9%	3	2.9% (+1%)	+1	3.9% (+2%)	+3
Walk	3.8%	5	4.8% (+1%)	+1	5.8% (+2%)	+3

A brief methodology for establishing the main targets for a total of 138 staff are provided below:

- Car Driver

  The primary aim of this GTP is to gradually reduce the reliance on private vehicle usage to a target of 75.7% (decrease of 10%), which equates to approximately 14 staff in 10 years. This is considered achievable through the use of the strategies and initiatives discussed in **Section 7.**

- Public Transport

  The above reduction in car driver usage would subsequently result in increases to the other travel modes, with public

	transport usage targeted at 11.2% or an additional six (6) staff in 10 years.
• Active Travel	An increase for active travel (walking and cycling) is also envisaged with a target of 9.7% or an additional six (6) staff in 10 years. This is considered realistic given the location of the site with respect to the various walking and cycling routes in the locality.
• Carpool	Staff will also be encouraged to carpool with targeted increases of 1% or one (1) staff and 2% or three (3) staff in 5 and 10 years, respectively.

6.2.2 Student Targets - ELC & K to Year 6 Students

The travel mode targets for students at the school have been separated into a medium-term target of 5 years and a long-term target of 10 years. These suggested targets are summarised in **Table 25** for ELC to Year 6 students, with justifications for the main travel modes discussed thereafter.

Table 25: Suggested Travel Mode Targets for ELC & K to Yr 6 Students

Travel Mode	Reference		Targets for Students			
	%	No of Students	5-Year	No of Students	10-Year	No of Students
By Car (as a passenger – dropped off by parent/guardian)	73.9%	278	69.9% (-4%)	-15	65.9% (-8%)	-30
By Car (as driver)	0.0%	0	0% (±0%)	±0	0% (±0%)	±0
By Car (as passenger – carpool with other student driving)	0.7%	3	1.2% (+0.5%)	+2	1.7% (+1%)	+4
School Bus	17.1%	64	18.6% (+1.5%)	+6	20.1% (+3%)	+11
Public Transport - Bus	4.2%	16	5.2% (+1.5%)	+4	6.2% (+2%)	+8
Public Transport - Other	0.0%	0	0% (±0%)	±0	0% (±0%)	±0
Cycle	0.6%	2	1.1% (+0.5%)	+2	1.6% (+1%)	+4
Walk	3.5%	13	4.0% (+0.5%)	+2	4.5% (+1%)	+4

A brief methodology for establishing the main targets for a total of 376 students between ELC and Year 6 are provided below:

- Drop-off/Pick-up — The aim of this GTP is to reduce the dependency on private vehicle usage, however for primary school aged students, the primary travel mode is envisaged to be parents/guardians dropping off or picking up their children. Accordingly, a gradual decrease in car usage is considered appropriate with a target of 65.9% for primary school aged students in 10 years which would result in a decrease of 30 students dropped off to school by car.
- School and Public Bus — The above reduction in car drop-off/pick-up would subsequently result in increases to the other travel modes, with 20.1% and 6.2% targets for the school bus and public bus services. This results in an increase of 11 students travelling by school bus in the 10 year target and an increase of eight (8) students travelling to school by public bus in the 10 year target.

- Active Travel

  An increase for active travel (walking and cycling) is also envisaged with a target of 6.1% in 10 years for primary school aged students which would result in an increase of 23 students walking or cycling to school. This is considered achievable given the school's bicycle facilities, as well as the surrounding pedestrian footpaths and cycle network.

6.2.3 Student Targets – Year 7 to Year 12

The travel mode targets for students at the school have been separated into a medium-term target of 5 years and a long-term target of 10 years. These suggested targets are summarised in **Table 26** for Year 7 to Year 12 students, with justifications for the main travel modes discussed thereafter.

Table 26: Suggested Travel Mode Targets for Year 7 to Year 12

Travel Mode	Reference		Targets for Students			
	%	No of Students	5-Year	No of Students	10-Year	No of Students
By Car (as a passenger – dropped off by parent/guardian)	38.0%	184	33.0% (-5%)	-24	28.0%	-48
By Car (as driver)	4.4%	21	3.4% (-1%)	-5	2.4%	-10
By Car (as passenger – carpool with other student driving)	2.4%	12	1.4% (-1%)	-5	0.4%	-10
School Bus	31.6%	153	33.6% (+2%)	+10	35.6%	+19
Public Transport - Bus	13.2%	64	14.2% (+1%)	+5	15.2%	+10
Public Transport - Other	0.6%	3	0.6% (±0%)	±0%	0.6%	±0%
Cycle	1.6%	8	3.6% (+2%)	+10	5.6%	+19
Walk	8.2%	40	10.2% (+2%)	+10	12.2%	+19

A brief methodology for establishing the main targets for a total of 484 students between year 7 and 12 are provided below:

- Pick-up/Drop-off

  The aim of this GTP is to reduce the dependency on private vehicle usage. For secondary students, a reduced target of 10% is envisaged in 10 years and is considered achievable

through strategies discussed in **Section 7**. This is equivalent to a reduction of 48 students travelling to school by car.

- Driving to School: As above, the primary aim of this GTP is to reduce the dependency on private vehicle usage for secondary students. A target of 2.4% car drivers is envisaged in 10 years and is considered achievable. This is equivalent to a reduction of 10 students driving to school.
- School and Public Bus: The above reduction in car drop-off/pick-up would subsequently result in increases to the other travel modes, with 35.6% and 15.2% targets for the school bus and public bus services, for secondary students respectively. This is equivalent to an increase of 19 student catching the school bus and an increase of 10 students catching a public bus in the 10-year strategy.
- Active Travel: An increase for active travel (walking and cycling) is also envisaged with a target of 17.8% in 10 years for secondary school aged students. This is considered achievable given the school's bicycle facilities, as well as the surrounding pedestrian footpaths and cycle network. This would be equivalent to an increase of 39 students travelling to school by active transport.

7. FUTURE TRAVEL STRATEGIES

7.1 Transport Access Guide

7.1.1 Objectives and Targets

Emanuel School has prepared a draft Green Travel Plan and supplementary Travel Access Guide (TAG) as part of Condition 17 of the DA Consent. The objective of the TAG is to assist in encouraging sustainable travel modes by providing details and information about the available public transport services within proximity of the site, as well as local bicycle and walking routes.

7.1.2 Timing

The Travel Access Guide will be made available to all staff, students and parents/caregivers prior to issue of the Construction Certificate.

7.1.3 Responsibility

The school's Travel Coordinator (TBC – assigned to existing staff member) is responsible for the distribution of the TAG through appropriate communication channels.

7.1.4 Funding

The school will fund the distribution of the TAG.

7.1.5 Implementation

The TAG will be made available to all staff, students and parents/caregivers through communication channels, including a physical copy from the school's administration office and digital copies via the school website and email communication.

7.1.6 Monitoring Regime

The TAG will be monitored on an annual basis.

7.1.7 Monitoring Targets

As the distribution of the TAG is being managed in house, the interest and uptake of the TAG can be easily monitored. TAG usage questions will also be incorporated into the annual questionnaire surveys to obtain empirical data.

The school will publish the results of the monitoring and independent auditing publicly available on the school's website and available to the Community Liaison Committee.

7.2 On-site Staff Parking and Management

7.2.1 Objectives and Targets

The school currently provides a total of 19 off-street parking spaces including 11 spaces under the science block and eight (8) spaces adjacent the Kornmehl Centre (pre-school). Travel mode surveys (discussed in more detail in Section 5), established that 118 or 85.7% of staff members were travelling to the site via private vehicle. It is considered that the school will maintain up to 138 FTE staff and if travel modes are maintained this will see up to 118 private vehicles requiring parking with up to 99 vehicles utilising on-street facilities.

Emanuel School is proposing to promote active travel and public transport amongst staff to see a shift in the mode splits.

7.2.2 Timing

On-site car parking spaces will continue to be managed by the school as required. Active travel and public transport will be promoted by the school through the implementation of the TAG discussed above.

7.2.3 Responsibility

The school's Travel Coordinator (TBC – assigned to existing staff member) is responsible for the management of on-site staff car parking.

7.2.4 Funding

The Travel Coordinator role will be assigned to an existing staff member.

7.2.5 Implementation

On-site parking management is ongoing.

7.2.6 Monitoring Regime

The on-site parking utilisation will be monitored on an annual basis.

7.2.7 Monitoring Targets

The school will publish the results of the monitoring and independent auditing publicly available on the school's website and available to the Community Liaison Committee.

7.3 Carpool Program

7.3.1 Objectives and Targets

The objective of a carpool scheme is to encourage staff and parent/caregivers of students to coordinate travel and schedules where practical. It should be noted that a carpool initiative may not be appropriate during the current COVID-19 pandemic, and the school will continue to monitor the situation and implement strategies in-line with NSW health advice.

7.3.2 Timing

The school will implement the carpool initiatives prior to issue of the Construction Certificate whilst taking into consideration up to date advice from NSW Health regarding the COVID-19 pandemic.

7.3.3 Responsibility

The school's Travel Coordinator (TBC – assigned to existing staff member) is responsible for the management of carpool initiative.

7.3.4 Funding

The school will fund the carpool initiative.

7.3.5 Implementation

The school will implement a car-pool scheme for staff and parents/carers of students involving a physical on-site notice board and a web-based notice board via Facebook or another similar form of social media. These message boards will provide a way for staff and parents/carers to coordinate travel and schedules with their respective colleagues and classmates, where practical.

7.3.6 Monitoring Regime

Carpool utilisation will be monitored on an annual basis.

7.3.7 Monitoring Targets

The school will publish the results of the monitoring and independent auditing publicly available on the school's website and available to the Community Liaison Committee.

7.4 School Student Transport Scheme

7.4.1 Objectives and Targets

Emanuel School will promote the uptake and usage of the School Student Transport Scheme (SSTS), which enables eligible students to have free/subsidised travel to and from school. The objective of this initiative is to encourage the uptake of public transport usage for students.

7.4.2 Timing

The school will encourage the STSS within the Green Travel Plan prior to issue of the Construction Certificate.

7.4.3 Responsibility

The school's Travel Coordinator (TBC – assigned to existing staff member) is responsible for the distribution of information relating to the SSTS.

7.4.4 Funding

The school will fund the distribution of SSTS information.

7.4.5 Implementation

SSTS information will be made available to all students and parents/caregivers through communication channels, including the school's website and newsletter.

7.4.6 Monitoring Regime

SSTS usage will be monitored on an annual basis.

7.4.7 Monitoring Targets

SSTS usage questions will be incorporated into the annual questionnaire surveys to obtain empirical data.

The school will publish the results of the monitoring and independent auditing publicly available on the school's website and available to the Community Liaison Committee.

7.5 Cycling Routes

7.5.1 Objectives and Targets

Cycling provides an alternative choice for staff and students to be more active and reduce reliance on private vehicles and congestion around school sites. The objective of providing cycling routes to staff, students and parents/caregivers is to promote active travel and to encourage a mode shift away from private vehicles.

7.5.2 Timing

Cycling routes have been provided in **Figure 11** of this OTMP. The routes should be reviewed annually to ensure any changes or additions to routes in the local area are reflected. Once the new facilities are built the school will review the policy of cycling for students.

7.5.3 Responsibility

It is the responsibility of the school's Travel Coordinator (TBC – assigned to existing staff member) to maintain route updates, organise active travel promotional documentation and ensure facilities are provided to enable staff and students to utilise cycling routes.

7.5.4 Funding

The school will assign the Travel Coordinator role to an existing staff member to review and update information (TAG) relating to of public cycle routes.

7.5.5 Implementation

Cycling routes are presented in this OTMP. A comprehensive TAG is considered to be the most effective travel planning measure to encourage travel by alternative means other than private vehicle. The TAG provides relevant transport and access information that would be relayed to school employees and students. In addition, the school proposes bicycle parking on the site in order to encourage additional cycle trips with employees safe in the knowledge that secure bike parking is available. This TAG information that is provided to staff and students include:

- Local public transport facilities and network maps;
- Local walking and cycling route maps;
- STSS Information; and
- Carpool information.

A TAG has been and will continue to be distributed to staff members on staff days prior to the commencement of a semester and to new staff when starting employment with the school. The TAG is presented in the Green Travel Plan prepared separately (Ref: 19.191r03v02 dated 29 June 2021).

The school shall provide active travel education to all students annually and promote active travel through annual events such as 'Walk to School' and 'Walk to Work' days.

7.5.6 Monitoring Regime

Cycling usage will be monitored on an annual basis.

7.5.7 Monitoring Targets

Bicycle usage questions will be incorporated into the annual questionnaire surveys to obtain empirical data.

The school will publish the results of the monitoring and independent auditing publicly available on the school's website and available to the Community Liaison Committee.

7.6 Bicycle Parking Provision

7.6.1 Objectives and Targets

The campus currently provides 15 bicycle spaces for staff and students. The objective of providing bicycle parking is to promote a mode shift from reliance on private vehicle usage to other modes of transport. The school will consider the installation of additional bicycle parking should demands increase.

7.6.2 Timing

The school will encourage bicycle usage within the Green Travel Plan prior to issue of the Construction Certificate.

7.6.3 Responsibility

It is the responsibility of the school to provide bicycle parking and to provide additional spaces should there be an increase in demand. TRAFFIX will ensure the design and installation of the facility comply with *AS2890.3 (2015) Parking Facilities Part 3: Bicycle Parking Facilities*.

7.6.4 Funding

The promotion and cost of supply/installation of bicycle racks will be provided by the school.

7.6.5 Implementation

Bicycle parking information will be made available to all students and parents/caregivers through communication channels, including the school's website and TAG. In addition to the above, the school could consider implementing the following initiatives to further encourage bicycle usage:

- Bicycle educational programs for students;
- Ride to Work Day for staff;
- Ride to School Day for students; and

- NSW Bike Week for the school.

Finally, it is also recommended that the school undertake bicycle educational programs (e.g. Bike Ed) for all students (Kindergarten to Year 6). This in turn would assist in establishing bicycle usage at an early stage, which could carry over to high school.

7.6.6 Monitoring Regime

Cycling usage will be monitored on an annual basis.

7.6.7 Monitoring Targets

Bicycle usage questions will be incorporated into the annual questionnaire surveys to obtain empirical data. The Travel Coordinator will regularly monitor the usage of on-site parking.

The school will publish the results of the monitoring and independent auditing publicly available on the school's website and available to the Community Liaison Committee.

8. MONITORING AND REVIEW

8.1 Process

A monitoring and review process for the OTMP will be set out by school management to reflect any travel mode shifts and changes to public transport services.

Regular review of the success measures outlined in this report should be undertaken to determine whether alternative or supplementary measures are necessary. It is recommended that a survey will be conducted every 12 months to monitor the progress of targets as documented above. The survey will include (and will not be limited to) transport modal splits for staff and students.

This evaluation will provide a reliable overview of the areas in which the OTMP is operating effectively, and which areas require more attention. It is noted that the above targets are primarily indicative, and the travel plan and targets will require on-going evaluation and fine-tuning. Revisions of this OTMP will also consider any community feedback received by the school. The results of the annual review will be made publicly available on the school's website and available to the Community Liaison Committee.

8.2 Collecting Data

It is suggested that annual surveys be conducted in order to monitor the different travel modes of both staff and students. These surveys will also include analysis of bicycle parking facilities, car occupancy rates and utilisation of drop-off and pick-up areas. An evaluation of the school's bus service will be conducted at this time which includes an evaluation to determine the need for any additional services.

8.3 Promotional Information

In the lead up to any major events to be conducted at the school, promotional information is to be provided to staff and parents of the school via the school's newsletter/website, as well as letter box drops to the surrounding residents. This promotional information will include:

- Date and time of the event;
- Description of the event;

- Contact details of event organiser or link to website for further information; and
- School contact information.

9. CONCLUSIONS

This OTMP report has been prepared for the redevelopment of the Emanuel School Adler Building, located at 20 Stanley Street, Randwick. The development is approved under Application Number DA/40/2020, which was granted by Randwick City Council on 29 October 2020. In summary,

- The school has a total capacity for 138 staff and 920 students, with the hours of operation generally between 8:30am and 3:30pm during school days.
- The school proposes to retain the 19 off-street spaces within the school boundaries and no changes are proposed regarding their use and operation which is mainly used by staff and for pre-school drop-off and pick-up.
- The school will retain the existing parking restrictions along the Avoca Street frontage of the school for drop-off and pick-up activities. This results in approximately 19 drop-off and pick-up spaces and the existing traffic management procedures are described in detail within Section 4.4.2. These measures may be subject to change once the findings of the independent road safety audit are established.
- The school provides 15 on-site bicycle parking spaces for students and staff. The school is willing to provide additional on-site spaces (in-line with demand) as active travel modes are encouraged.
- Questionnaire surveys undertaken in October 2019 establish the 'base line' travel data for staff and students at the school.
- Future travel mode targets are outlined in Section 6, with the aim of reducing the reliance on private vehicle trips to/from the site. Strategies to work towards these targets are presented in Section 7, outlining the objectives, timing, responsibility, funding, implementation, regime and monitoring of each strategy.
- A monitoring and review process is set to be undertaken annually to provide a reliable overview of the areas in which the OTMP is operating effectively, and which areas require more attention.

APPENDIX A

Legal Advice Letter

COLEMAN GREIG
LAWYERS

ALL CORRESPONDENCE
PO Box 260 Parramatta NSW 2124
DX 8226 Parramatta NSW

SYDNEY CBD OFFICE
Level 39, 19 Martin Place
Sydney NSW 2000

20 May 2021

Our Ref: ANA:2204869

Mr Andrew Watt
Principal
Emanuel School
20 Stanley Street
RANDWICK NSW 2031

Dear Sir

Emanuel School – Randwick Council Determination
File Ref: F2012/00032

I understand Randwick Council is considering including a condition of building approval that students are forbidden to drive to school. From my perspective, this would be impossible to enforce on a practical level and not an appropriate condition to be included.

My reasoning includes the fact that the roads the students will drive on legally are public thorough fares and the school has no jurisdiction over those nor the surrounding streets. Furthermore, the jurisdiction surrounding streets would be a mix between the State Government and different Councils and potentially not just solely Randwick Council but, potentially, Waverley Council or other Councils.

While I understand Council's apparent concern is probably in relation to parking rather than driving, this could be addressed in other ways, such as restricted parking which has recently been implemented in surrounding areas and furthermore, from my understanding, the Building Application does not provide for any increase in numbers of students attending the school, so there would be no increase in traffic than existing in any event.

The school has no jurisdiction over the students when they are outside the school's grounds (with limited exceptions such as organised sporting events and the like), so does not have any legal jurisdiction to impose the means by which each student comes to the school, whether by public transport, walking, by bike, drop off from a friend or parent or, when old enough and able to do so, by driving. Of course, the capacity to drive is limited to a small amount of the students, being those who have the appropriate licence to drive and access to a car.

Yours faithfully

Andrew Aitken
Principal Lawyer
D +61 2 9895 9326
E aaitken@colemangreig.com.au