



# OPERATIONAL TRANSPORT MANAGEMENT PLAN

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**Emanuel School**  
**20 Stanley Street, Randwick**

Reference: 19.191r05v06  
Date: October 2023

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## DOCUMENT VERIFICATION

Job Number	19.191			
Project	Emanuel School, Randwick			
Client	Emanuel School			
Revision	Date	Prepared By	Checked By	Signed
v06	16 October 2023	Shenara Wanigasekera	Ben Liddell	

## SAFEWORK NSW CERTIFICATES

### Prepare a Work Zone Traffic Management Plan

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# 1. INTRODUCTION

TRAFFIX has been commissioned by Emanuel School to prepare an updated 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 (DA/40/2020 dated 29 October 2020), Section 4.55 Application (DA/40/2020/A dated 2 December 2021) and Section 4.55 Application (DA/40/2020/B dated 31 December 2021).

Conditions 22, 23, 24, 25, and 121 of the Development Consent (DA/40/2020) relate to the preparation of an Operational Transport Management Plan (OTMP) for the subject development. An OTMP was prepared for the school in 2022 using data gathered in 2019 and 2020, prior to construction activities at the subject site. This data serves as an initial “baseline” for annual updates to the OTMP and reference should be made to the 2022 OTMP in this regard (Ref: 19.191r04v11 dated 21 February 2022).

This OTMP and management measures are assessed on updated survey data for 2023. The results of the 2023 traffic surveys and this OTMP have been presented to and discussed with the Emanuel Community Consultative Committee (CCC) on the 29<sup>th</sup> May 2023.

As part of the ongoing consultation with the community via the CCC, this report acknowledges a number of CCC requests, in particular, additional intersection counts and extended on-street car parking surveys.

The school has confirmed that it will continue to work with the CCC to improve annual traffic survey data, including an ongoing effort to maximise the staff and student participation rates in annual surveys, where possible.

The report is structured as follows:

- Section 2: Traffic management objectives
- Section 3: Background information
- Section 4: Overview of site operations
- Section 5: Outlines the travel mode surveys
- Section 6: Outlines the traffic surveys

- Section 7: Future travel targets
- Section 8: Current travel strategies
- Section 9: Monitoring and review process
- Section 10: CCC consultation summary
- Section 11: Presents the overall conclusions

## 2. TRAFFIC MANAGEMENT OBJECTIVES

### 2.1 Overview

The target audience of this plan are staff, students, visitors of Emanuel School and residents in the vicinity of the school. In order to achieve best outcomes and adapt to changes to pedestrian, parking and traffic movements within the survey area, the OTMP will continue to be a live document which will be monitored and updated following annual traffic surveys and changes to pedestrian / traffic behaviours. The aim of the annual review is to monitor staff/student travels modes, monitor traffic volumes at key intersections, monitor on-street parking demands and identify areas in need of improvement. This OTMP continues to address several conditions contained with the Development Consent issued by Council on 29 October 2020. Notably, the following conditions are relevant.

### 2.2 General Conditions

#### **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 (sic) 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 8.**

- 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 8**. The proposed Monitoring and Review measures are detailed within **Section 9**. The traffic management measures have been further refined taking into consideration 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 8**.

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 Audit is to be prepared in accordance with the Transport for NSW Condition 15. As the school is currently operating at the approved capacity, an existing stage road safety audit should be undertaken as part of the RSA. The recommendations of the RSA are to be implemented into the OTMP;*

An existing stage road safety audit has been undertaken and the findings have been used to refine the existing traffic management measures as necessary. A summary of the key RSA findings is presented in **Section 3.5**.

- 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 school is to actively discourage students from driving to school Monday to Friday and is to ensure that:*
- 1. the number of students driving to school does not exceed 20 students at any one time until the end of term (4) 2026; and*
  - 2. The number of students driving to school does not exceed 10 students at any one time thereafter. The OTMP and the Green Travel Plan shall include provision to this effect.*

Refer to **Section 4.5**.

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 9**.

## 2.3 Operational Conditions

121. *Prior to the commencement of the operation of the new facilities, the applicant must provide verification that all required OTMP measures have been correctly implemented and targets achieved to the satisfaction of Council.*

Refer to **Section 7**.

## 2.4 OTMP Objectives

The primary objective of the Emanuel School OTMP are as follows:

- Reduces the number of private vehicle trips to/from the school;
- Promote sustainable and alternative modes of travel;
- Ensure the safety of staff, students, and the public impacted by traffic during operation;

- Manage the safe and efficient drop-off and pick-up activities associated with school operations; and
- Minimise impacts to the local road network.

## 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 Peace Park.

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

A Location Plan is presented in **Figure 1**, with a Site Plan included in **Figure 2**.



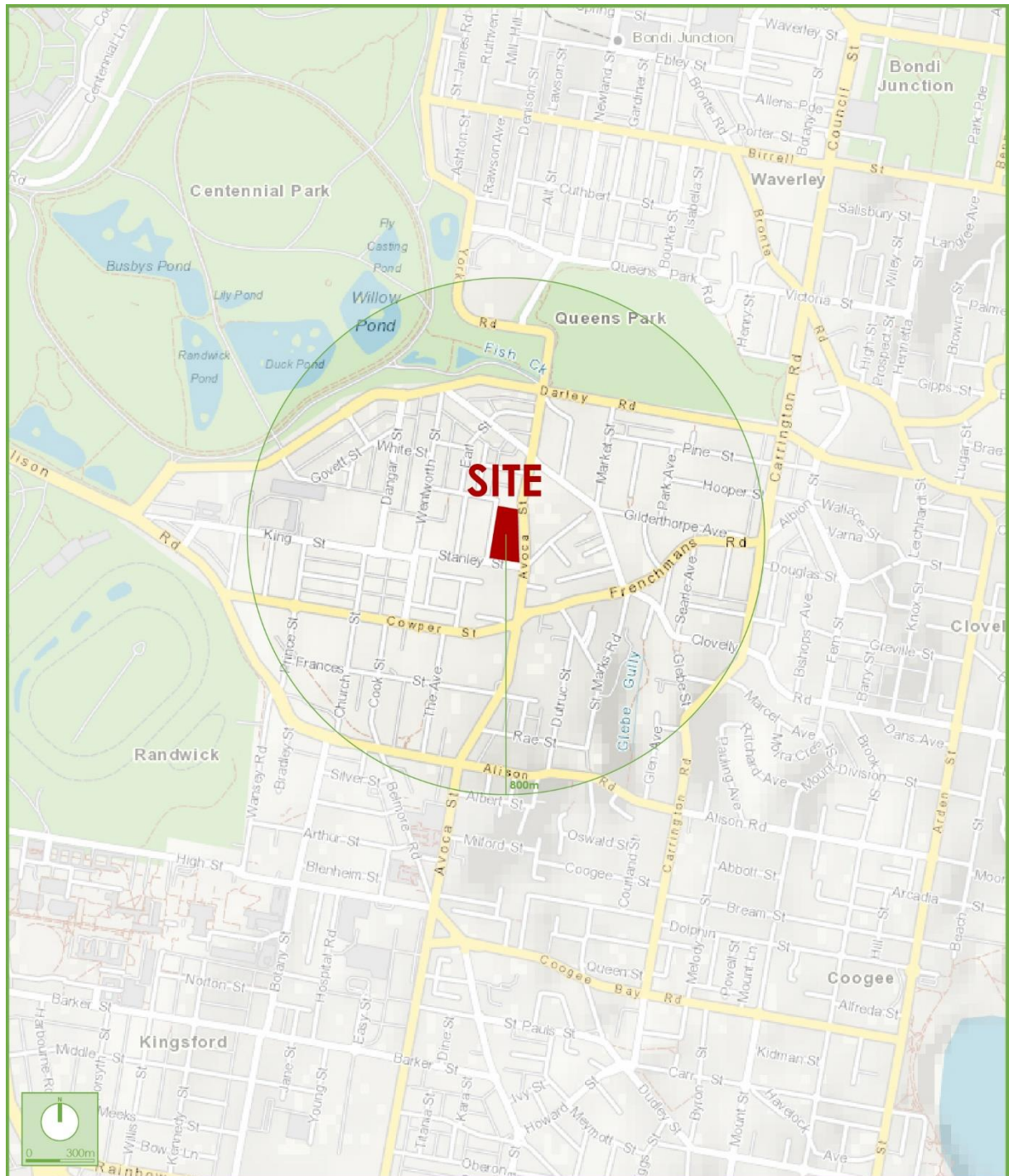


Figure 1: Location Plan





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.
- **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.

➤ **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. Chepstow Street is subject to a 50km/h speed zoning and permits two-way travel. 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 along both kerbs which reduces the roadway width to approximately 3.6m along certain sections.

➤ **Monmouth Street:**

a local road that generally runs in a north-south direction between Stephen Street in the north and Stanley Street in the south. Monmouth Street is subject to a 50km/h speed zoning and permits two-way travel. Kerbside parking is generally permitted along both kerbs which reduces the roadway width to approximately 4.6m along certain sections.

➤ **Market Street:**

a local road that generally runs in an east-west direction between a cul-de-sac in the east and Avoca Street in the west. Market Street is subject to a 50km/h speed zoning and accommodates a single lane of traffic in either direction. Kerbside parking is permitted within the vicinity of the site.

➤ **Ethne Avenue:**

a local road that generally runs in a northwest to southeast direction between a cul-de-sac in the east and Market Street in the north. Ethne Avenue is subject to 50km/h speed zoning and accommodates a single lane of traffic in either direction. Kerbside parking is permitted within the vicinity of the site.

➤ **Astolat Street:**

a local road that generally runs in an east to west direction between a cul-de-sac in the east and Avoca Street in the west. Astolat Street is subject to a 50km/h speed zoning and permits two-way travel. Kerbside parking is generally permitted along both kerbs.

- **Carter Street:** a local road that generally runs in an east-west direction between Avoca Street in the east and Castle Street in the west. Carter Street is subject to a 50km/h speed zoning and permits two-way travel. Kerbside parking is generally permitted along both kerbs which reduces the roadway width to approximately 3.0m along certain sections.
  
- **Castle Street:** a local road that generally runs in a north-south direction between Power Lane in the north and Stephen Street in the south. Within the vicinity of the site, Castle Street is subject to a 50km/h speed zoning and permits two-way travel. Kerbside parking is generally permitted along both kerbs which reduces the roadway width to approximately 4.9m along certain sections.
  
- **Earl Street:** a local road that generally runs in a north-south direction between Avoca Street in the north and Stephen Street in the south. Within the vicinity of the site, Earl Street is subject to a 50km/h speed zoning and accommodates a single lane of traffic in either direction. 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.



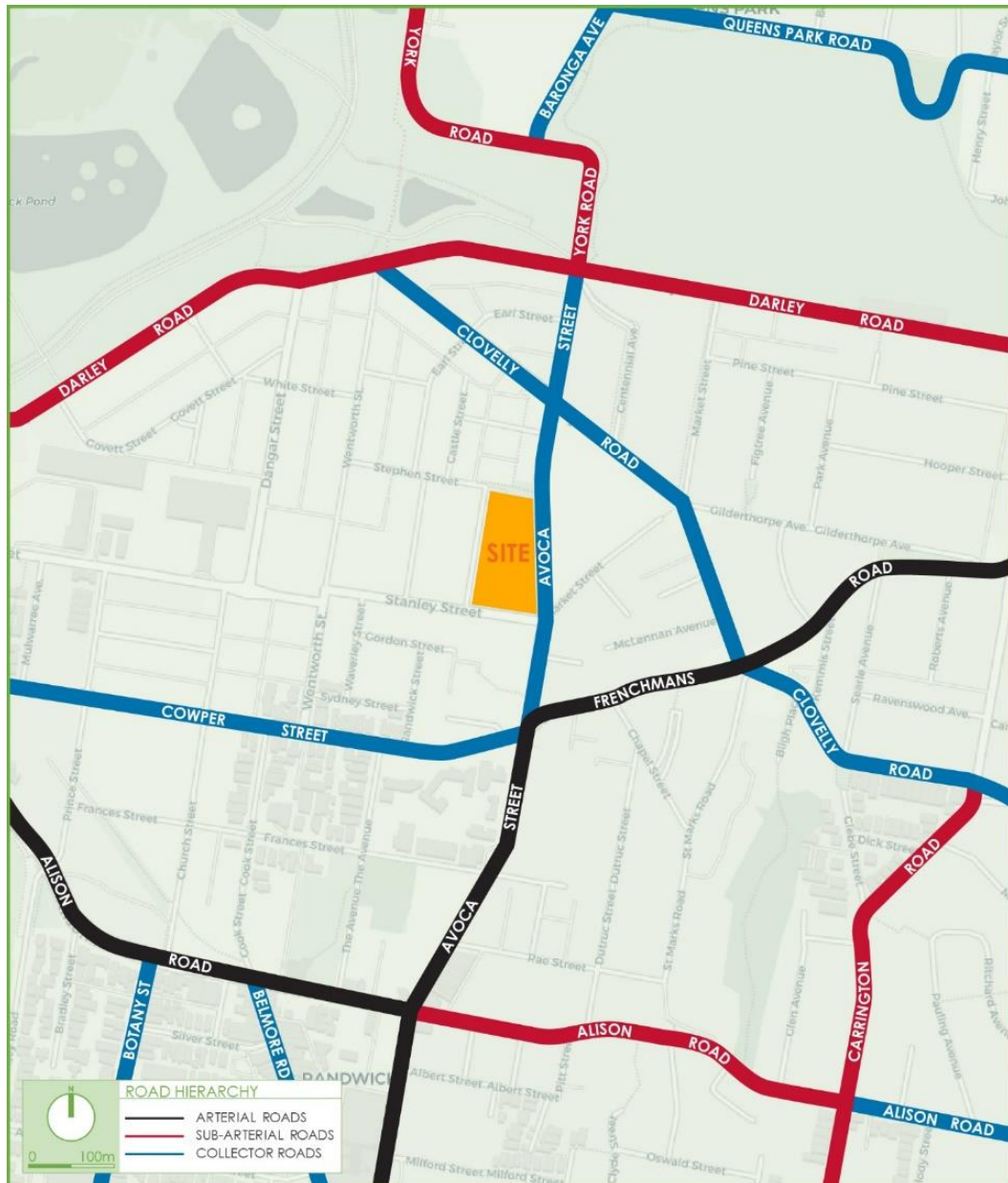


Figure 3: Road Hierarchy

### 3.3 Key Intersections

Nine (9) 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 the development.

### 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 Avoca Street and Market Street



**Figure 5: Intersection of Avoca Street and Market Street (Source: NearMap)**

It can be seen from **Figure 5** that the intersection of Avoca Street and Market Street is a three-legged priority intersection with Avoca Street having priority over Market 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 left turns onto Market Street.
  - The northbound approach provides a single through lane which allows for right turns onto Market Street.
- Market Street (east leg)
  - The westbound approach provides a single lane which allows for left and right turns onto Avoca Street.

### 3.3.3 Avoca Street and Carter Street



**Figure 6: Intersection of Avoca Street and Carter Street (Source: NearMap)**

It can be seen from **Figure 6** that the intersection of Avoca Street and Carter Street is a three-legged priority intersection with Avoca Street having priority over Carter 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 Carter Street.
  - The northbound approach provides a single through lane which allows for left turns onto Carter Street.
- Carter Street (west leg)
  - The eastbound approach provides a single lane which allows for left and right turns onto Avoca Street.



### 3.3.4 Stephen Street and Chepstow Street



**Figure 7: Intersection of Stephen Street and Chepstow Street (Source: NearMap)**

It can be seen from **Figure 7** that the intersection of Stephen Street and Chepstow Street is a two-legged intersection with no priority movements. The main attributes of each approach are outlined below:

- Stephen Street (west leg)
  - The eastbound approach provides a single through lane which allows for right turns onto Chepstow Street.
- Chepstow Street (south leg)
  - The northbound approach provides a single lane which allows for left turns onto Stephen Street.

### 3.3.5 Stanley Street and Chepstow Street



**Figure 8: Intersection of Stanley Street and Chepstow Street (Source: NearMap)**

It can be seen from **Figure 8** that the intersection of Stanley Street and Chepstow Street is a three-legged priority intersection with Stanley Street having priority over Chepstow Street. The main attributes of each approach are outlined below:

- Stanley Street (east and west legs)
  - The westbound approach provides a single through lane which allows for right turns onto Chepstow Street.
  - The eastbound approach provides a single through lane which allows for left turns onto Chepstow Street.
- Chepstow Street (north leg)
  - The southbound approach provides a single lane which allows for left and right turns onto Stanley Street.



### 3.3.6 Stanley Street and Monmouth Street



**Figure 9: Intersection of Stanley Street and Monmouth Street (Source: NearMap)**

It can be seen from **Figure 9** that the intersection of Stanley Street and Monmouth Street is a three-legged priority intersection with Stanley Street having priority over Monmouth Street. The main attributes of each approach are outlined below:

- Stanley Street (east and west legs)
  - The westbound approach provides a single through lane which allows for right turns onto Monmouth Street.
  - The eastbound approach provides a single through lane which allows for left turns onto Monmouth Street.
- Monmouth Street (north leg)

- The southbound approach provides a single lane which allows for left and right turns onto Stanley Street.

### 3.3.7 Stephen Street and Monmouth Street



**Figure 10: Intersection of Stephen Street and Monmouth Street (Source: NearMap)**

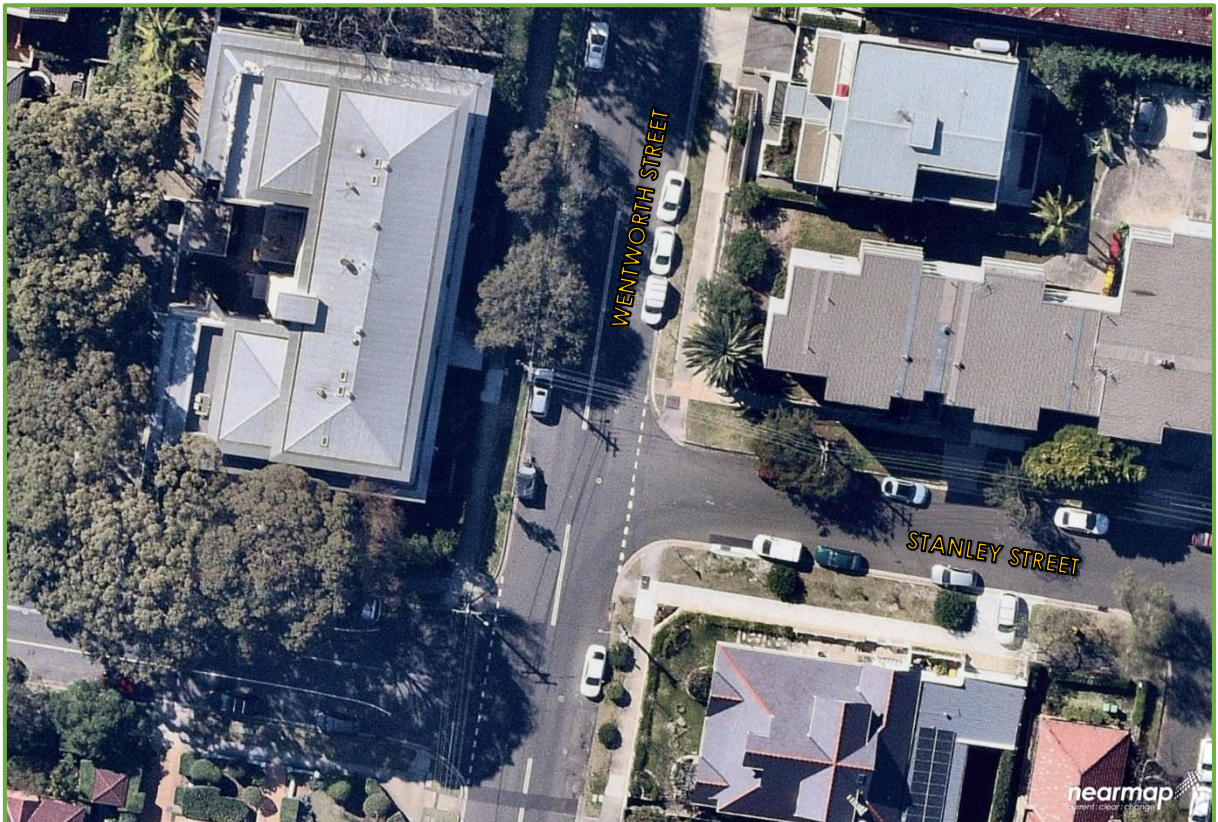
It can be seen from **Figure 10** that the intersection of Stephen Street and Monmouth Street is a three-legged priority intersection with Stephen Street having priority over Monmouth Street. The main attributes of each approach are outlined below:

- Stephen Street (east and west legs)
  - The eastbound approach provides a single through lane which allows for right turns onto Monmouth Street.
  - The westbound approach provides a single through lane which allows for left turns onto Monmouth Street.
- Monmouth Street (south leg)



- The northbound approach provides a single lane which allows for left and right turns onto Stanley Street.

### 3.3.8 Stanley Street and Wentworth Street



**Figure 11: Intersection of Stanley Street and Wentworth Street (Source: NearMap)**

It can be seen from **Figure 11** that the intersection of Stanley Street and Wentworth Street is a three-legged priority intersection with Stanley Street required to give way to Wentworth Street. The main attributes of each approach are outlined below:

- Wentworth Street (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 Street.

### 3.3.9 Stephen Street and Wentworth Street



**Figure 12: Intersection of Stephen Street and Wentworth Street (Source: NearMap)**

It can be seen from **Figure 12** that the intersection of Stephen Street and Wentworth Street is a three-legged priority intersection with Stanley Street required to give way to Wentworth Street. The main attributes of each approach are outlined below:

- Wentworth Street (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)

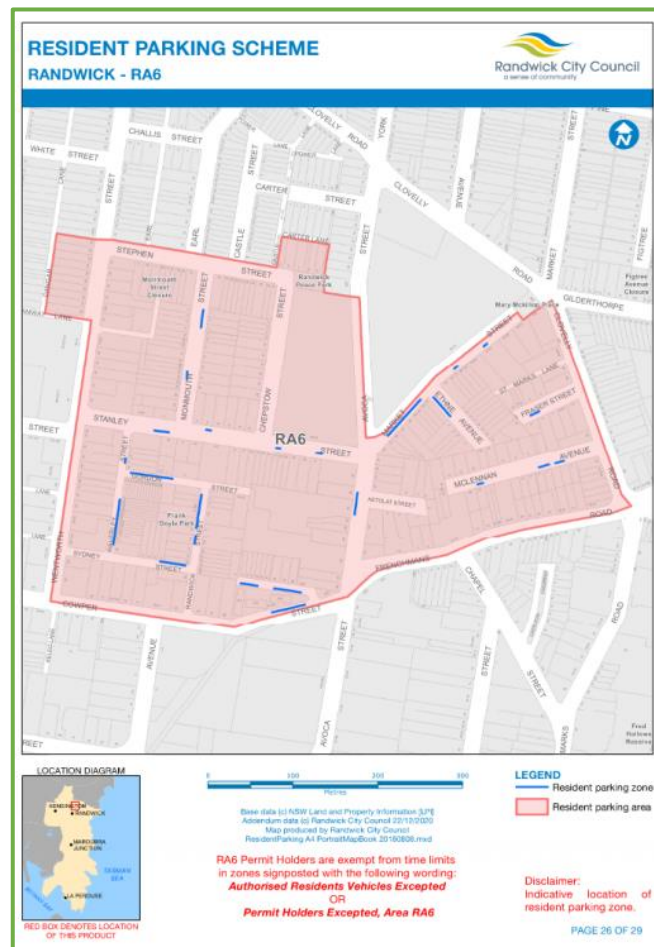
- The westbound approach provides a single lane which allows for left and right turns onto Wentworth Street.

### 3.4 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 13** below.



**Figure 13: RA6 Resident Parking Scheme Area**

(Source Randwick Council)

As can be seen from the Figure 13, a number of streets surrounding the school have residential parking scheme spaces, including Stanley Street, Monmouth Street, Market Street and Ethne Avenue. The number of spaces on each street (as of June 2023) is outlined below:

- Stanley Street: Six (6) spaces.
- Monmouth Street: Six (6) spaces.
- Market Street: Nine (9) spaces.
- Ethne Avenue: Seven (7) spaces).

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. Resident parking scheme surveys are undertaken every four (4) years with the 'RA6' zone last surveyed in September 2020.

### 3.5 Road Safety Audit

As discussed in Section 2, Conditions 15 and 24 of the DA Consent requires the preparation of an existing stage Road Safety Audit (RSA) to be undertaken in accordance with the NSW Centre for Road Safety Guidelines and Austroads Guide to Road Safety Part 6. The independent existing stage RSA undertaken by DC Traffic Engineering (Ref: TRF-PROJ-0032-01 ES RSA EMANUEL REV 1) is presented in **Appendix A**. Whilst the RSA identified 14 potential road safety problems, the project team considered that items 4, 5, 7, 10, 11a/b, 12c and 13 items are within the jurisdiction of the school. As such, a brief overview of each item is detailed below, and reference should be made to the full report in **Appendix A**.

**Table 1: RSA Findings and Remediation Measures**

RSA Reference	Overview of Finding	Remediation Measures by School
4	Back of queue along Avoca Street sometime extends across the existing bus stop/bus zone.	Traffic wardens will continue to monitor the 'Go With The Flow' scheme and vehicle queues to ensure bus zones are kept clear. Traffic wardens will report repeat offenders to the school for follow up as per the school's Traffic and Parking Policy.
5	Restricted space around the Chepstow Street driveway access due to parked vehicles. General narrowness of Chepstow Street limits two-way traffic flow.	The 'Go With The Flow' scheme outlined in Section 4.4 minimises traffic movements along Chepstow Street as per the RSA finding.
7	Vehicles parked and students dropped off with the existing no stopping restriction at the intersection of Stanley Street and Chepstow Street.	The school will continue to discourage illegal driving behaviour in line with current NSW Road Rules and the Traffic and Parking Policy. Information provided to parents clearly outlines designated pick-up and drop-off zones for students.
10	Drivers unloading passengers outside of the designated drop-off area. Makeshift 'Go With The Flow' scheme signs clamped to existing sign posts.	Traffic wardens will continue to monitor the 'Go With The Flow' scheme and vehicle queues to ensure drivers are dropping off passengers within designated drop-off zones.  The school will also create improved signage that does not require clamping to sign posts.
11a/b	Temporary signage placed on the kerb to reinforce parking signage. School to ensure sign is not placed outside of the existing bus zone times.	The school will continue to ensure that the signage is only placed between the existing bus zone hours (7:30am-4pm School Days).
12c	Trees overhanging Avoca Street footpath.	The school will ensure that the school's vegetation is pruned to ensure it does not overhang adjacent footpaths.
13	Leaf litter near Avoca Street access gate.	The school will ensure leaf litter in this area is cleared during the maintenance schedule.

The items listed in **Table 1** above have been included/implemented into this OTMP Report and the school's Traffic and Parking Policy as necessary. As such, Conditions 15 and 24 of the DA Consent are considered met.

## 4. OVERVIEW OF SITE OPERATIONS

### 4.1 School Capacity

In line with Condition 117 and 118 of DA/40/2020, the school has an approved onsite capacity for 138 Full Time Equivalent (FTE) staff at any time and 920 students (inclusive of 60 Early Learning Centre places), with the hours of operation generally between 8:00am and 4:00pm during school days.

More specifically, the school has confirmed the following employment numbers:

- 106 teaching staff with the FTE being 98.32;
- 59 non-teaching staff with the FTE being 46.01; and
- There are approximately 6-8 staff working off-site each day.

### 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 2: Bus Routes**

Route Number	Route Name	Route Number	Route Name
339	Clovelly to Central Belmore Park	356	Eastgardens to Bondi Junction
339X	Clovelly to City Museum (Express Service)	390X	La Perouse to Bondi Junction (Express Service)

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 14** below.



**Figure 14: Public Transport and School Bus Route**

## 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 spaces 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, visitors and parents. 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;
- Market Street;
- Castle Street;
- Earl Street;
- Carter Street; and
- Astolat 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 existing parking restrictions along the Stanley Street and Avoca Street for drop-off and pick-up activities 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. Avoca Street frontage is utilised by years K to 12 for drop-off in the morning and afternoon which the school implements the "Go With The Flow". This is discussed in further detail below.

Accordingly, the on-street provisions result in approximately 19 drop-off and pick - up spaces, which are subject to a traffic management strategy outlined in **Section 4.4** to reduce impacts on the road network and allow for the 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/caregivers 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 drop-off and pick-up provisions are shown in **Figure 15** below.

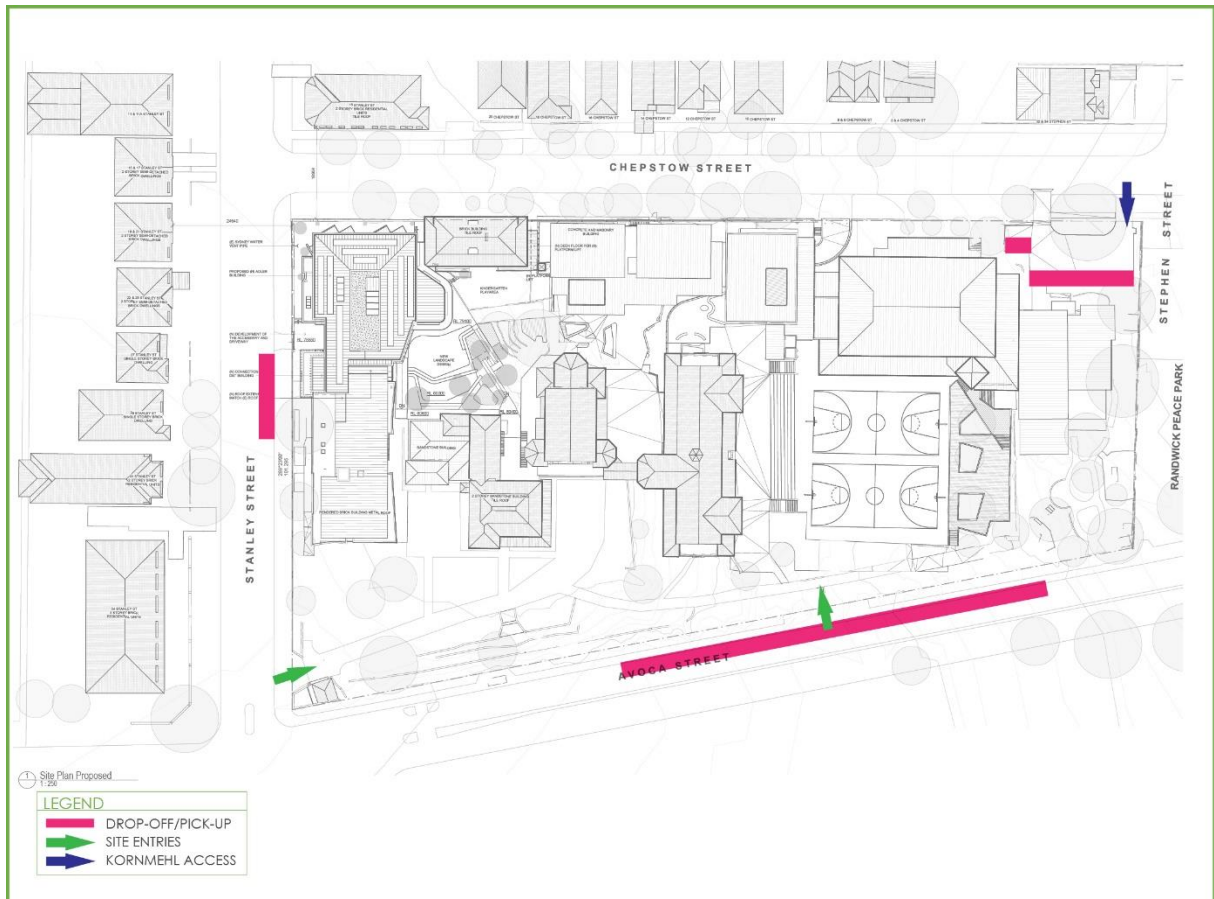


Figure 15: Drop-off and Pick-up Area and Pedestrian Site Entries

#### 4.4.2 Operational Management Arrangements

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

The school offers a total of eight (8) 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. In order to increase the efficiency of the drop-off and pick-up area, the following operational management arrangements are adopted by the school and are proposed to continue. Reference should also be made to Emanuel's Traffic and Parking Policy which is presented in **Appendix B**.

- A designated Traffic Warden is on-site between 7:45am to 8:30am and 3:00pm to 4:00pm on Stephen Street and is responsible for positioning signs at the driveway, moving cars along, maintaining traffic flow within the car park and reporting parents/caregivers who breach road rules;

- The Traffic Warden is required to wear a hi-vis vest and carry ID. The warden will also carry a notebook for reporting purposes;
- The Kornmehl car park is subject to 'Go With The Flow' operational procedures which involve the following:
  - All parents/caregivers will be encouraged to approach the car park from the north along Stephen Street;
  - All vehicles are to enter through the first driveway;
  - Parents/caregivers can stay for a maximum of 10-minutes;
  - All vehicles leaving the car park are required to turn right towards Stephen Street. This movement is illustrated in the **Figure 16** below; and
  - Parents required to travel south will be encouraged to use either Monmouth Street or Wentworth Street.
- Kornmehl gates are to be used by Kornmehl students, their Kindy to Year 2 siblings and Kornmehl staff. **Kornmehl gates will not open until 8am for vehicles or pedestrians.**
- All other students, visitors, and staff are not to use Kornmehl gates.
- The school and Council are considering the following options for pedestrian access into the Kornmehl Centre:
  1. Implementation of Operational Management Plan whereby Kornmehl pedestrian access will only be permitted to enter when there is a Security Guard and/or Traffic Controller present. Either the Security Guard or Traffic Controller will escort pedestrian(s) safely onto the dedicated pedestrian access within the site.
  2. School zone on Avoca Street outside the Northern gate (Noting this will require Integrated Transport input and approval).
  3. Installing dedicated pedestrian gate adjacent driveway.
  4. Installing a bollard on the entry driveway to dedicate portion of driveway as pedestrian access with line marking.

Whilst the above options are considered and approved by Council, in the interim Option 1 above will be trialled.

- Parents/caregivers are not permitted to park within Peace Park or double park along Chepstow Street/Stephen Street. The traffic warden will monitor, and report repeat offenders;
- Parents/caregivers are encouraged to plan their trips to/from the school to reduce congestion on the local road network; and

- Parents/caregivers are encouraged not to park along Carter Street to assist with the GWTF scheme.

It is noted that families often have children at both Kornmehl and in the primary school. Therefore, the following operational management arrangements are adopted by the school and are proposed to continue:

- Parents can walk their Emanuel School child (K-2 only) through the Kornmehl garden in the mornings between 8:00am and 8:20am and help them to open the gate that leads up to Emanuel School;
- In the afternoons, any primary school children needing to come down to Kornmehl to be collected, must follow the instructions from the Primary School supervising teacher. High school students will not be permitted access via carpark;
- A teacher is allocated to supervise the children and bring them down to the pre-school;
- The children will wait at the side gate of the Kornmehl garden and be handed over to their parent/caregiver;
- K-2 children will be brought all the way down to the Kornmehl side gate by a Primary teacher from 3:20pm;
- K-2 children will thus be able to be collected from Kornmehl between 3:20pm and 3:30pm;
- The teacher will hand K-2 children over to their parents/caregivers at the side gate by the guard hut;
- All families with children in Years 3-6 will continue to pick up from the side gate (Avoca Street) from 3:35pm. These children will be brought down by a separate teacher in the afternoon;
- Children who are waiting will be supervised by a Primary School teacher and may not play on any of the equipment while they are waiting;
- Parents who are waiting for children to come down from Primary School, may not park in the Kornmehl car park for longer than the allocated 10 minutes;
- Primary School children in Years 3-6, will only be brought down around 3:35pm. Parents/caregivers are not to arrive any earlier than 3:30pm to pick up their Kornmehl child to allow space in the car park for the second pick up;
- Families with children in K-2 and 3-6 will need to come at 3:30pm to collect their Kornmehl child and then collect their other children from the side gate (Avoca Street) at 3:35pm; and

- Families are to use the paved pathway down the side of the car park to exit safely and not walk across the path of cars that are collecting children. Parents/caregivers are encouraged to be vigilant and make sure children are always supervised in the car park.



Figure 16: Pick-Up and Drop-Off Movements for Pre-School (Kornmehl)

### ***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 are adopted by the school and are proposed to continue. Reference should also be made to Emanuel's Traffic and Parking Policy which is presented in **Appendix B**.

- Two (2) designated Traffic Wardens begins their shift at 7:30am to 8:30am on Stanley Street and are responsible for moving cars along from the bus zone located along Stanley Street to Avoca Street;
- The Traffic Warden is also present for the afternoon pick-up period along Avoca Street. They are primary responsible for the following:
  - Ensuring vehicle are continually moving along Avoca Street.
  - Moving along cars parking in the 'no stopping' and bus zones located on the south end of Avoca Street.
  - Advising parents to follow the GWTF procedure until a space is available in the queue.
  - Assisting students getting in and out of vehicles.
- 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 afternoon 'Go With The Flow' operational procedures which involve the following:
  - Vehicles drive to the designated collection point at the northern end of the pick-up area 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 vehicles.
  - Two (2) 'student release teachers' call the names of the first four (4) vehicles to arrive at the northern end of the pick-up area via radio.
  - A duty teacher located inside the school grounds will call out these names via a megaphone.
  - A staff member will release the children at the collection point.
  - 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 17** and **Figure 18**

below. It is emphasised that parents/care givers will be advised not to use Market Street and to following the GWTF routes presented below. If issues persist, the school will meet with parent/caregivers, request support from Council and take further action should non-compliances continue.

- Parents/caregivers are encouraged not to park along Carter Street to assist with the GWTF scheme.
- The school will provide parent/caregiver education in the form of advertising material on the school website/newsletter to inform:
  - 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, caregivers, 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.



Figure 17: Drop-Off and Pick-Up Traffic Flow for Northbound Vehicles





Figure 18: Drop-Off and Pick-Up Traffic Flow for Southbound Vehicles

## 4.5 Student Drivers

It is noted that Condition 24 (d) states the following:

*The school is to actively discourage students from driving to school Monday to Friday and is to ensure that:*

- 1. the number of students driving to school does not exceed 20 students at any one time until the end of term (4) 2026; and*
- 2. The number of students driving to school does not exceed 10 students at any one time thereafter. The OTMP and the Green Travel Plan shall include provision to this effect.*

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. In addition to this, the school implements a student parking “exclusion zone” which is depicted in **Figure 19** below. This information is provided to students to discourage them from parking in this area. Whilst this cannot be legally enforced, it would form the basis of information provided by the school to discourage students from parking in the vicinity of the school.

The targets outlined in Condition 24 (d) above are reflected in the future travel mode targets discussed in Section 7 below.



Figure 19: Student Parking Exclusion Zone



## 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 'Wombat Crossing' is located on Avoca Street, north of the intersection with Market Street. A pedestrian refuge is provided on Stanley Street at the intersection with Avoca Street and a raised entry treatment is provided at the intersection of Stanley Street and Chepstow Street.

### 4.6.2 Pedestrian Accesses

The school provides three (3) 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 via the Kornmehl car park. This access is to operate as detailed in Section 4.4.2 above.

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.

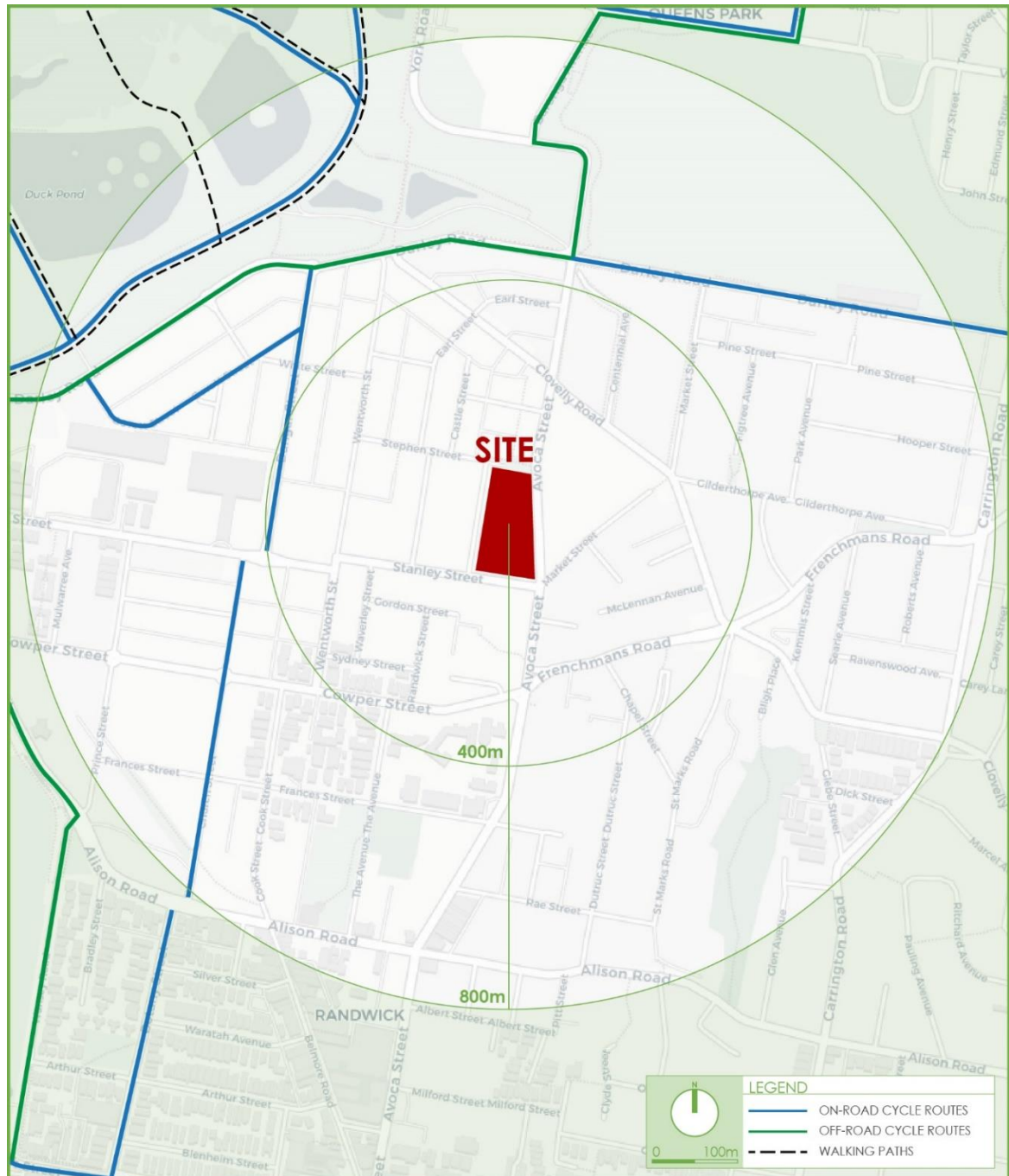
### 4.6.3 Bicycle Facilities

The school provides a total of 20 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 20**.



**Figure 20: 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 'Adler' building and associated landscaping has been constructed 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 educates parents about bus safety, and 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 Waste 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 at the Chepstow Street preschool gates for collection by council's 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. TRAVEL MODE SURVEYS

### 5.1 Context

In October 2019 TRAFFIX undertook a travel mode survey of both the staff and students on site as part of the development application traffic study. The survey results are presented in the Traffic Impact Assessment Report dated 24 January 2020 and established the existing mode share for both students and staff travelling to and from the site. The current student enrolments and staff employment is summarised in **Table 3** below.

This section seeks to identify current travel mode patterns for both students and staff at Emanuel School. To enable this analysis, questionnaire surveys were distributed via the Survey Monkey website to staff and parents of school children between 20 March 2023 and 2 May 2023. The surveys include 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.

It is noteworthy that the “baseline” data was collected 3.5 years ago, prior to the COVID pandemic. Whilst travel behaviour is slowly returning to normal, public transport usage is still below pre-COVID levels and that working-from-home has increased, particularly on Fridays. These trends should be taken into consideration when reviewing the 2023 data.

The key results of these surveys are discussed in the following sections.

**Table 3: Number of Students and Staff**

Class	Count (Enrolment Records)	Count (Surveyed)	% (Surveyed)
<b>STAFF</b>	<b>165</b>	<b>132</b>	<b>80.0%</b>
ELC – Year 6	438	149	34.0%
Year 7 -Year 12	479	371	77.5%
<b>TOTAL STUDENTS</b>	<b>917</b>	<b>520</b>	<b>56.7%</b>



## 5.2 Travel Mode Splits

### 5.2.1 Staff Travel

The results of the travel questionnaires completed by the staff at Emanuel School are outlined in the tables below. **Table 4** to **Table 6** present the surveyed travel mode shares and parking locations.

**Table 4: Staff Morning Travel Modes to Emanuel School**

AM Travel Modes	2019	2023
By Car (as driver)	85.7%	79.6%
By Car (as passenger)	1.9%	5.3%
Public Transport – Bus	4.8%	7.6%
Public Transport – Other	1.9%	0%
Cycle	1.9%	3.0%
Walk	3.8%	4.5%

**Table 5: Staff Afternoon Travel Modes from Emanuel School**

PM Travel Modes	2019	2023
By Car (as driver)	85.7%	79.6%
By Car (as passenger)	1.0%	3.8%
Public Transport - Bus	5.7%	6.8%
Public Transport - Other	1.9%	0%
Cycle	1.9%	3.8%
Walk	3.8%	6.0%

**Table 6: Parking Location of Staff at Emanuel School**

Parking Location	2019	2023
Within School Grounds	4.4%	3.8%
Market Street	8.9%	12.4%
Avoca Street	27.8%	40.0%
Stanley Street	7.8%	3.8%
Chepstow Street	17.8%	4.8%
Stephen Street	11.1%	16.2%
Monmouth Street	3.3%	5.7%
Castle Street	2.2%	0%
Other	16.7%	13.3%

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

- 79.6% of staff drive a car in the AM and PM periods. This is a 6.1% decrease from the 2019 baseline travel mode surveys.
- 7.6% of staff utilise public transport to travel to school and 6.8% to travel from school. This is an increase of 2.8% in the AM and 1.1% in the PM periods.
- 4.5% and 6% of staff walk to and from school respectively. This is an increase of 0.7% in the AM and 2.2% in the PM periods.
- 3.8% of staff park on the school property, whilst 96.2% park on the surrounding streets. This reflects a small decrease in the percentage of staff parking on-site.

## 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 7 to 9** present the surveyed travel mode shares, and car occupancies of the existing students.

**Table 7: ELC & K to Year 6 AM Travel Modes to Emanuel School**

AM Travel Modes	2019	2023
By Car (as a passenger – dropped by parent/guardian)	79.2%	74.5%
By Car (as passenger – carpool)	0%	1.3%
School Bus	12%	12.8%
Public Transport - Bus	5.1%	2.0%
Public Transport - Other	0%	0%
Cycle	0.5%	1.3%
Walk	3.2%	8.1%

**Table 8: ELC & K to Year 6 PM Travel Modes from Emanuel School**

PM Travel Modes	2019	2023
By Car (as a passenger – picked up by parent/guardian)	67.7%	60.4%
By Car (as passenger – carpool)	1.3%	2.0%
School Bus	22.2%	19.5%
Public Transport - Bus	3.2%	6.7%
Public Transport - Other	0%	0.7%
Cycle	0.6%	1.3%
Walk	3.8%	8.1%
Extra-Curricular activities on site	1.3%	1.3%

**Table 9: 2023 Private Vehicle Occupancy of Students (ELC & K to Year 6) at Emanuel School**

Private Vehicle Occupancy	AM Proportions	PM Proportions
1	17%	23.3%
2 or more <sup>1</sup>	83% car sharing	76.7% car sharing

<sup>1</sup> Car occupancies of more than 2 may include students from Year 7 to 12.

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

- 74.5% of students get dropped off in the AM with 83% of these students arriving in the same vehicle in groups of 2 or more. 60.4% of students get picked up in the PM with 76.7% of these students departing in the same vehicle in groups of 2 or more. Overall, there has been a decrease in the percentage of students (ELC-6) arriving and departing by car compared to 2019 data.

- 14.8% and 26.2% students utilise bus transport (school bus and public buses) in the AM and PM, respectively. There has been a slight decrease (2.3%) in the percentage of students arriving to school by bus in the AM compared to 2019 data. However, in the PM there has been an increase (0.8%) in the percentage of students departing the school by bus.
- There has been an increase of 5.7% in the morning as well as an increase of 5% in the afternoon of students walking or cycling to and from school.

### 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 10** to **12** present the surveyed travel mode shares and car occupancies of the existing students.

**Table 10: Year 7 to 12 AM Travel Modes to Emanuel School**

AM Travel Modes	2019	2023
By Car (as a passenger – dropped by parent/guardian)	50.0%	62.0%
By Car (Student driving)	4.4%	4.9%
By Car (as passenger – carpool)	2.4%	2.4%
School Bus	20.4%	13.2%
Public Transport – Bus	13.6%	10.2%
Public Transport – Other	0.8%	0.3%
Cycle	1.6%	0.8%
Walk	6.8%	6.2%
Extracurricular Activities	0%	0%



**Table 11: Year 7 to 12 PM Travel Modes from Emanuel School**

PM Travel Modes	2019	2023
By Car (as a passenger – picked up by parent/guardian)	26.0%	34.2%
By Car (Student driving)	4.4%	4.0%
By Car (as passenger – carpool with other student driving)	2.4%	2.2%
School Bus	42.4%	36.7%
Public Transport - Bus	12.8%	12.7%
Public Transport - Other	0.4%	0%
Cycle	1.6%	0.8%
Walk	9.6%	9.4%
Extracurricular Activities	0.4%	0%

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

Private Vehicle Occupancy	AM Proportions	PM Proportions
1	32%	25.2%
2 or more <sup>1</sup>	68% car sharing	74.8% car sharing

<sup>1</sup> Car occupancies of more than 2 may include students from ELC & K to year 6.

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

- 69.3% of students get dropped off or drive to school in the AM with 68% of these students arriving in the same vehicle in groups of 2 or more. 40.4% of students get picked up or drive themselves home in the PM with 74.8% of these students departing in the same vehicle in groups of 2 or more. Overall, there has been an increase in high school students getting dropped off/picked-up or driving in both the morning (+12.5%) and afternoon (+7.6%). This increase may be a result of extracurricular activities (before or after school) of the 2023 cohort or day of the week (parents may be working from home on Fridays etc.).
- 23.4% and 49.4% of students utilise public transport (school bus and public buses) in the AM and PM respectively. This reflects an overall decrease in usage of public and school buses of -10.6% in the morning and -5.8% in the afternoon compared to 2019 data for high school students.
- There is a slight decrease of 1.4% in the AM and a decrease of 1% in the PM of students walking or cycling to and from school when comparing the 2023 data to the 2019 data.

## 6. TRAFFIC SURVEYS

### 6.1 Intersection Surveys

As agreed by the school, Council and the CCC, nine (9) public road intersections were to be surveyed in 2023 to gain an understanding of the traffic movements at each intersection and to gauge the effectiveness of the OTMP. The intersection traffic surveys were conducted on Friday 3 March 2023 between 6am - 10am and 2pm – 6pm, encompassing the school's peak traffic generating periods. It is noted that the 'base line' traffic volumes captured in 2019 only comprised three (3) intersections, being Avoca Street/Stanley Street, Wentworth Street/Stanley Street and Wentworth Street/Stephen Street.

The following intersections were surveyed in 2023:

1. Avoca Street and Carter Street;
2. Avoca Street and Market Street;
3. Avoca Street and Stanley Street;
4. Chepstow Street and Stanley Street;
5. Monmouth Street and Stanley Street;
6. Wentworth Street and Stanley Street;
7. Wentworth Street and Stephen Street;
8. Earl Street, Stephen Street and Monmouth Street; and
9. Stephen Street and Chepstow Street.

A map outlining the survey locations is presented in **Figure 21** below:

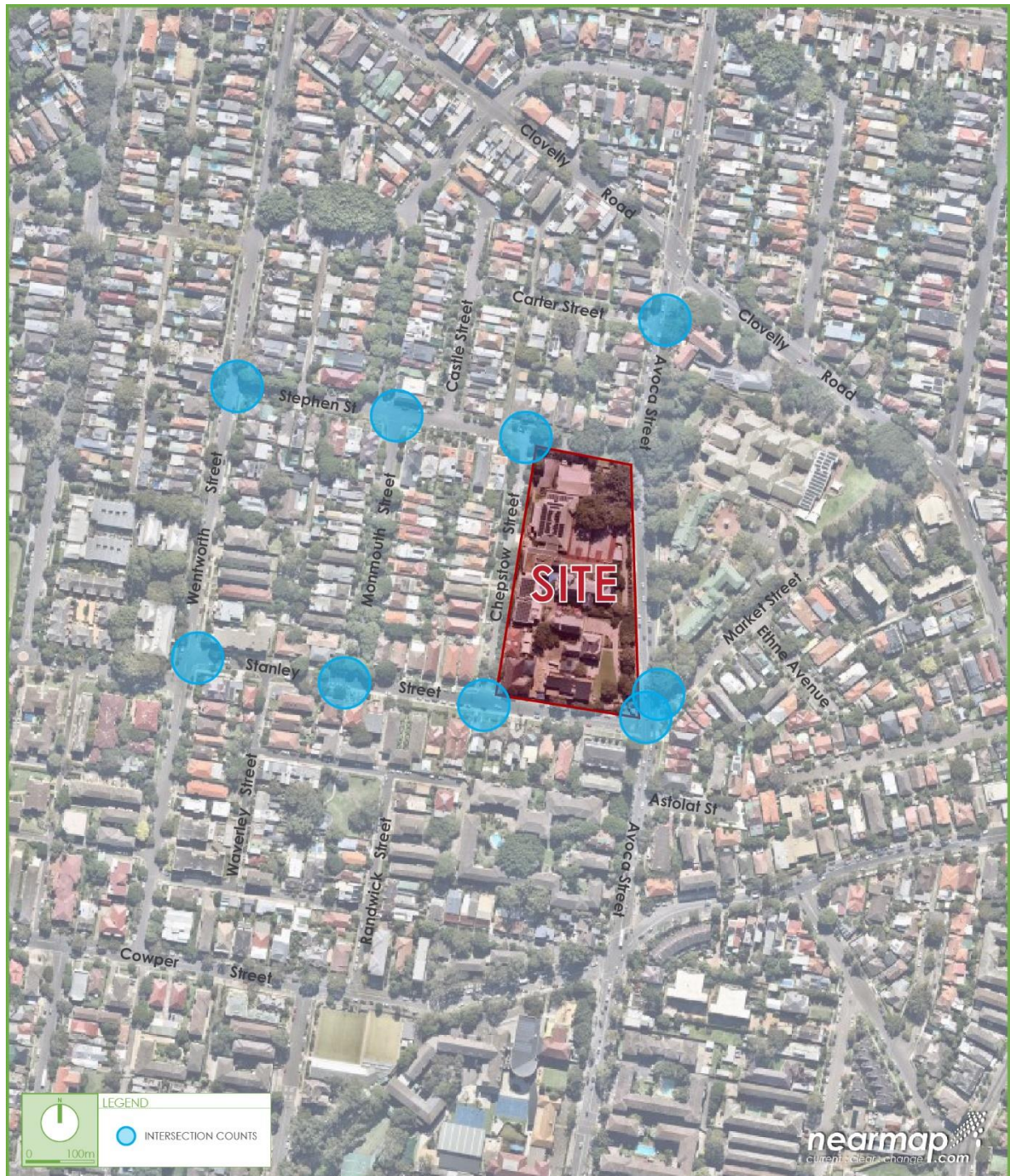


Figure 21: Intersection Survey Locations

## 6.2 Intersection Survey Results

The intersection traffic survey results are presented in **Table 13** below. The table outlines the number of northbound, eastbound, southbound, westbound, and total vehicles through each of the nine (9) intersections in the AM and PM peak hours. It is noted that the volumes include light and heavy vehicles. As mentioned above, only three (3) of the key intersections were previously surveyed, thus, limited trends can be derived for the remaining six (6) intersections at this stage until more data is obtained through the annual studies.

**Table 13: Intersection Count Traffic Volumes**

Intersection	Year		Traffic Volumes During Peak Periods (veh)									
			AM					PM				
			NB	EB	SB	WB	TOTAL	NB	EB	SB	WB	TOTAL
Avoca Street and Carter Street	2019		No Data Collected									
	2023		665	-	463	102	1,230	405	-	510	32	947
	2019-2023	No.	-	-	-	-	-	-	-	-	-	-
		%	-	-	-	-	-	-	-	-	-	-
Avoca Street and Market Street	2019		No Data Collected									
	2023		77	4	29	-	110	380	34	530	-	944
	2019-2023	No.	-	-	-	-	-	-	-	-	-	-
		%	-	-	-	-	-	-	-	-	-	-
Avoca Street and Stanley Street	2019		619	-	382	153	1,154	392	-	439	96	927
	2023		682	-	371	102	1,155	409	-	481	79	969
	2019-2023	No.	63	-	-11	-51	1	17	-	42	-17	42
		%	9.7%	-	-2.9%	-40.0%	0.1%	4.2%	-	9.1%	-19.4%	4.4%
Chepstow Street and Stanley Street	2019		No Data Collected									
	2023		29	151	-	97	277	17	99	-	113	229
	2019-2023	No.	-	-	-	-	-	-	-	-	-	-
		%	-	-	-	-	-	-	-	-	-	-
Monmouth Street and Stanley Street	2019		No Data Collected									
	2023		37	164	-	120	321	29	94	-	115	238
	2019-2023	No.	-	-	-	-	-	-	-	-	-	-
		%	-	-	-	-	-	-	-	-	-	-
Wentworth Street and Stanley Street	2019		80	46	155	-	281	44	28	114	-	186
	2023		95	98	198	-	391	71	71	215	-	357
	2019-2023	No.	15	52	43	-	110	27	43	101	-	171
		%	17.1%	72.2%	24.4%	-	32.7%	47.0%	86.9%	61.4%	-	63.0%
Wentworth Street and Stephen Street	2019		74	28	128	-	230	53	23	99	-	175
	2023		83	35	111	-	229	41	25	76	-	142
	2019-2023	No.	9	7	-17	-	-1	-12	2	-23	-	-33
		%	11.5%	22.2%	-14.2%	-	-0.4%	-25.5%	8.3%	-26.3%	-	-20.8%



Table 13: Intersection Count Traffic Volumes

Intersection	Year	Traffic Volumes During Peak Periods (veh)									
		AM					PM				
		NB	EB	SB	WB	TOTAL	NB	EB	SB	WB	TOTAL
Earl Street, Stephen Street and Monmouth Street	2019	No Data Collected									
	2023	47	56	90	66	259	49	41	65	68	223
	2019-2023	No.	-	-	-	-	-	-	-	-	-
		%	-	-	-	-	-	-	-	-	-
Stephen Street and Chepstow Street	2019	No Data Collected									
	2023	-	8	47	48	103	-	0	41	48	89
	2019-2023	No.	-	-	-	-	-	-	-	-	-
		%	-	-	-	-	-	-	-	-	-

In addition to the result summary table above, the AM and PM peak hour traffic volumes are presented in **Figure 22** and **Figure 23** below. It should be noted that the volumes presented in Figures 22 and 23 are at public road intersections only and do not relate to Kornmehl driveways.

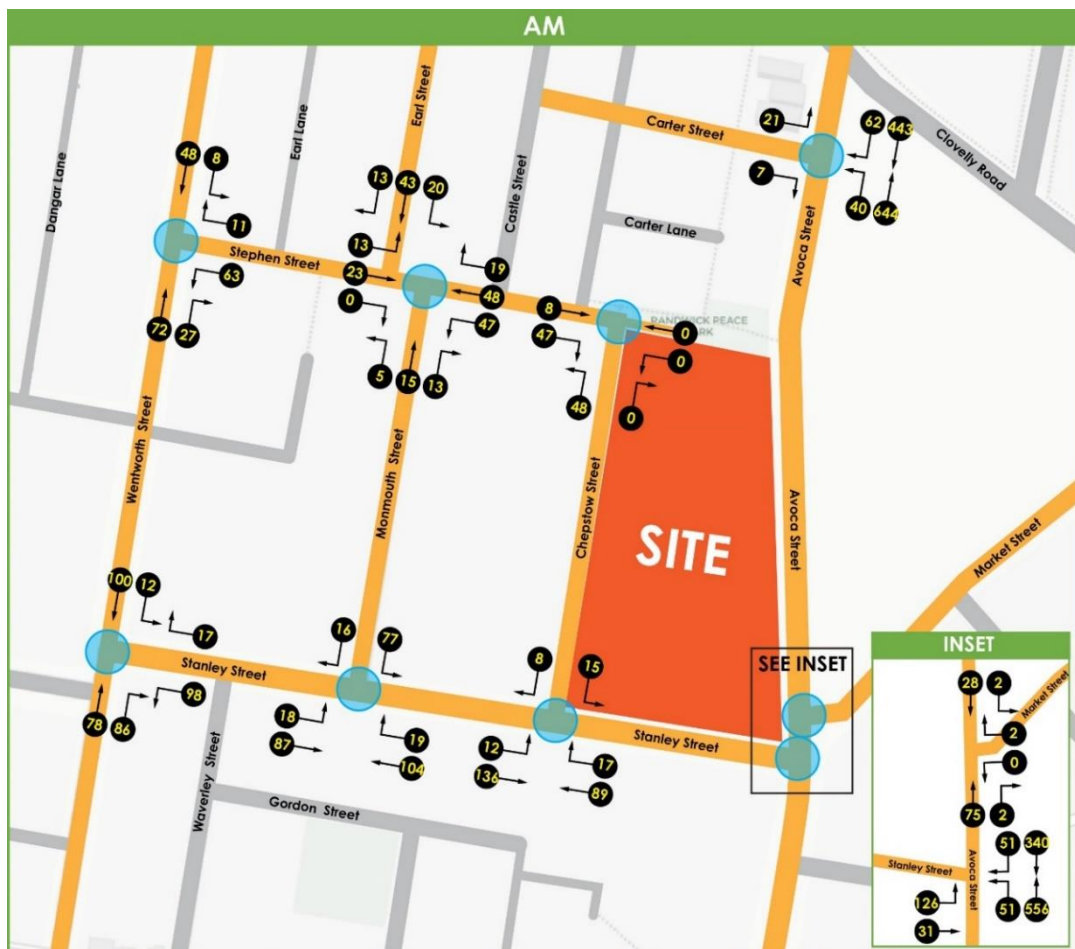


Figure 22: AM Peak Hour Volumes

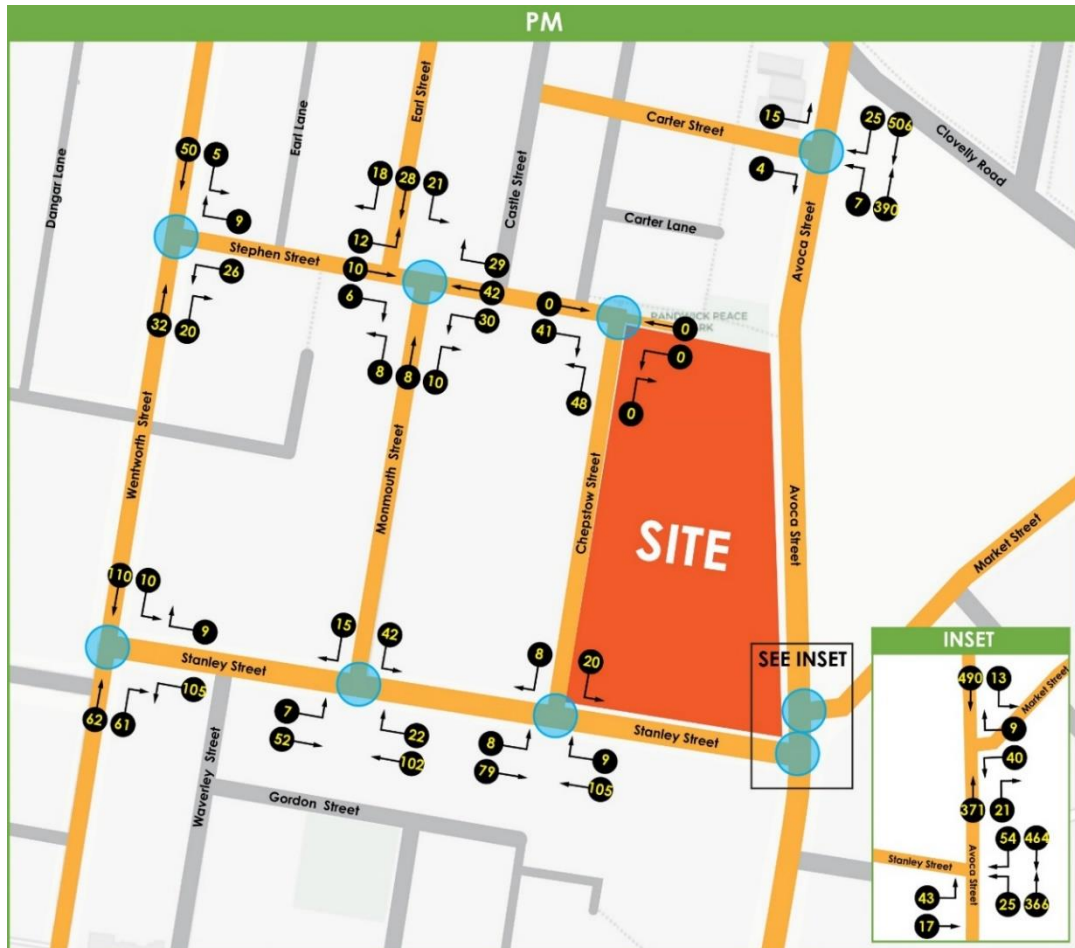


Figure 23: PM Peak Hour Volumes

### 6.3 Results Discussion

The intersection of Avoca Street and Stanley Street has seen a negligible traffic increase in the AM peak (0.1%) and a minor increase in the PM peak (4.4%). Notably, there has been a 9.7% increase in northbound vehicles and a 40% decrease in westbound vehicles. This may be associated with the "Go With The Flow" scheme operated and promoted by the school.

The intersection of Wentworth Street and Stanley Street has seen a moderate traffic increase in the AM peak (32.7%) and PM peak (63%). Notably, there has been a 72.2% and 86.9% increase in eastbound vehicles in the AM and PM, respectively. Again, this may be associated with the "Go With The Flow" scheme with parents/caregivers attempting to join the queue on Stanley Street.

The intersection of Wentworth Street and Stephen Street has seen a negligible traffic decrease in the AM peak (-0.4%) and a moderate decrease in the PM peak (-20.8%). Notably, there has been a 22.2% increase in eastbound vehicles in the AM peak and a decrease in northbound vehicles (-25.5%) and southbound vehicles (-26.3%) in the PM peak. The increase in eastbound vehicles may be related to vehicles approaching the pre-school drop-off area along Stephen Street in accordance with the Chepstow Street vehicle access arrangements detailed in this report.

## 6.4 Baseline Parking Surveys

On-street parking surveys were undertaken surrounding the school on Monday 15 June 2020 during the morning (6:00am to 10:00am) and afternoon (2:00pm to 6:00pm) peak periods at 15-minute intervals. The following key statistics were derived from the 2020 survey.

- Total spaces available     421 on-street parking spaces
- In the AM period the following conclusions were made:
  - A maximum of 378 (89.8%) vehicles parked and 43 (10.2%) vacant spaces at 8:45am and 9:00am
  - An average of 336 (79.9%) vehicles parked and 85 (20.1%) vacant spaces.
- In the PM period the following conclusions were made:
  - A maximum of 374 (88.8%) vehicles parked and 47 (11.2%) vacant spaces at 3:00pm.
  - An average of 314 (74.7%) vehicles parked and 107 (25.3%) vacant spaces.

A summary of the on-street parking availability for the 2020 surveys presented in **Chart 1** and **Chart 2** below:

Chart 1: Baseline On-Street Parking Demand between 9:00-9:15am

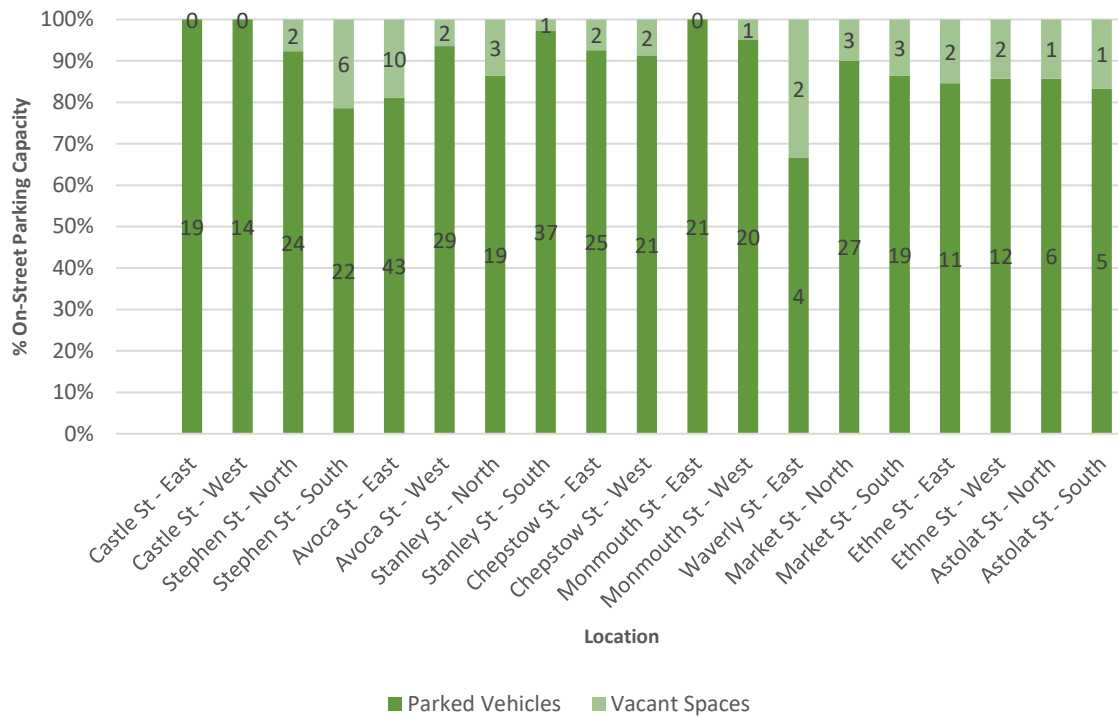
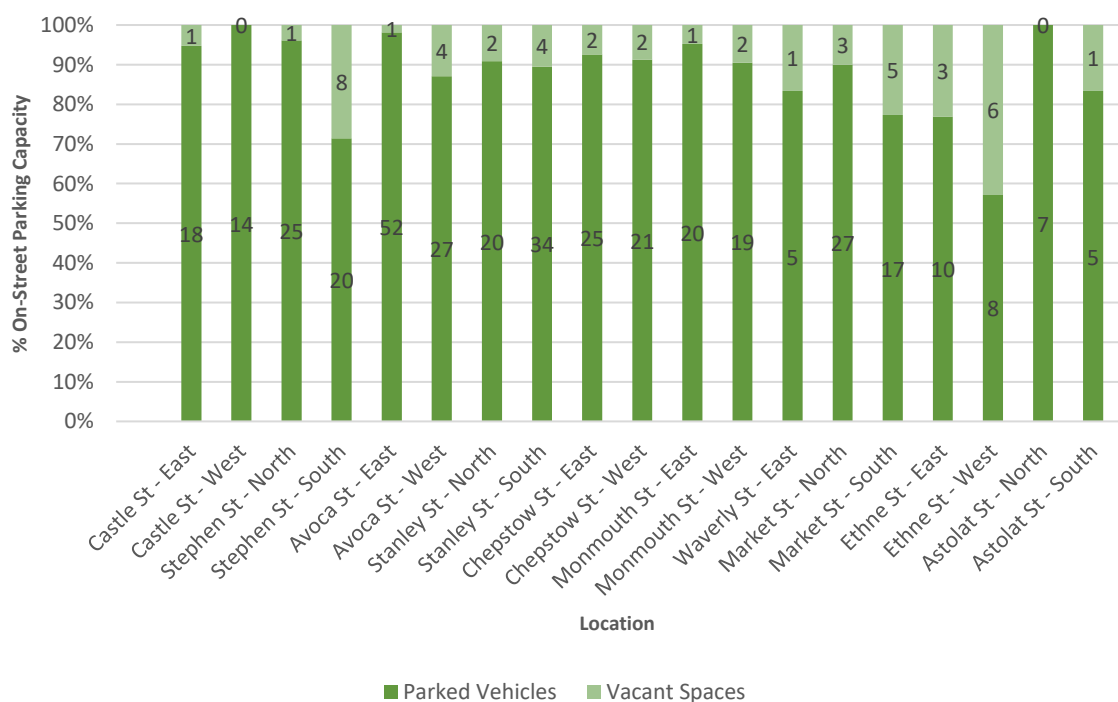


Chart 2: Baseline On-Street Parking Demand between 3:00-3:15pm





It was concluded that the majority of surveyed streets were identified to have spare capacity and in general the parking surveys indicated an increased demand for on-street parking from 6am to 9am and decreased steadily from 3pm to 4:45pm. This corresponded to the school's start and finish times and reinforced that adequate on-street car parking is available for residents outside of school hours and during school holiday periods.

## 6.5 2023 Parking Surveys

In order to determine the on-street parking capacity within the vicinity of the school, an on-street parking survey was conducted on Friday 3 March 2023 during the morning (6:00am to 10:00am) and afternoon (2:00pm to 6:00pm) peak periods at 15-minute intervals. It should be noted that additional streets were included in the 2023 surveys in response to discussions with the CCC. In addition, the school was still under construction, with between 30 and 40 workers on-site at any given time. This survey comprised the following streets which were of particular concern to local residents:

➤ Castle Street, between Carter Street and Stephen Street	(22 spaces);
➤ Stephen Street, between Wentworth Street and Chepstow Street	(50 spaces);
➤ Stanley Street, between Avoca Street and Wentworth Street	(61 spaces);
➤ Avoca Street, between Carter Street and Cowper Street	(83 spaces);
➤ Chepstow Street, between Stephen Street and Stanley Street	(49 spaces);
➤ Monmouth Street, between Stephen Street and Stanley Street	(51 spaces);
➤ Waverly Street, between Stanley Street and Gordon Street	(6 spaces);
➤ Market Street, between Avoca Street and the cul-de-sac	(60 spaces);
➤ Ethne Street, between Market Street and the cul-de-sac	(25 spaces);
➤ Astolat Street, between Avoca Street and the cul-de-sac	(13 spaces).
➤ Carter Street between Castle Street and Avoca Street	(36 spaces); and
➤ Earl Street between Stephen Street and Challis Street	(42 spaces).
<b>TOTAL</b>	<b>498 spaces</b>

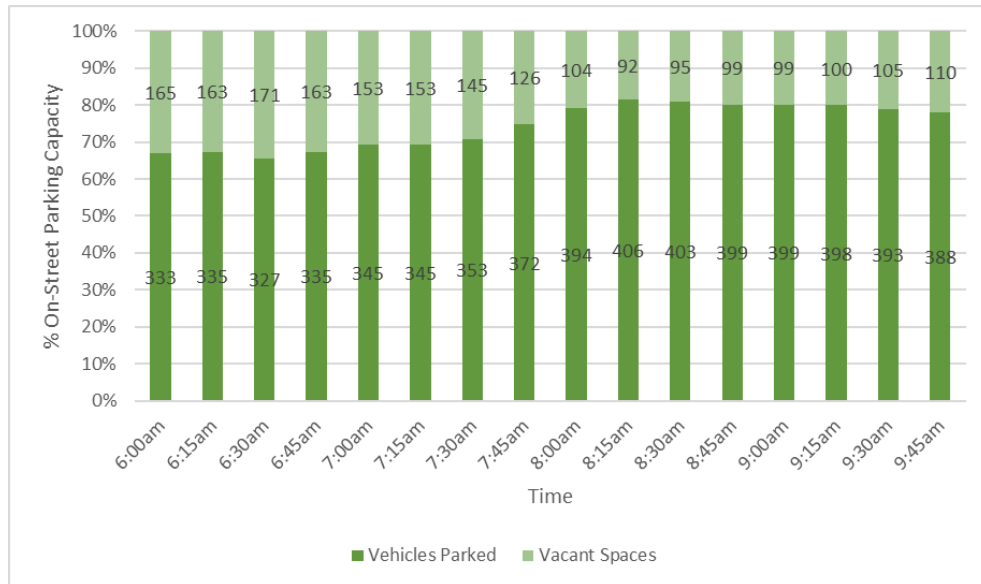
A map outlining the survey locations is presented in **Figure 24** below:



**Figure 24: On-street Car Parking Survey Area**

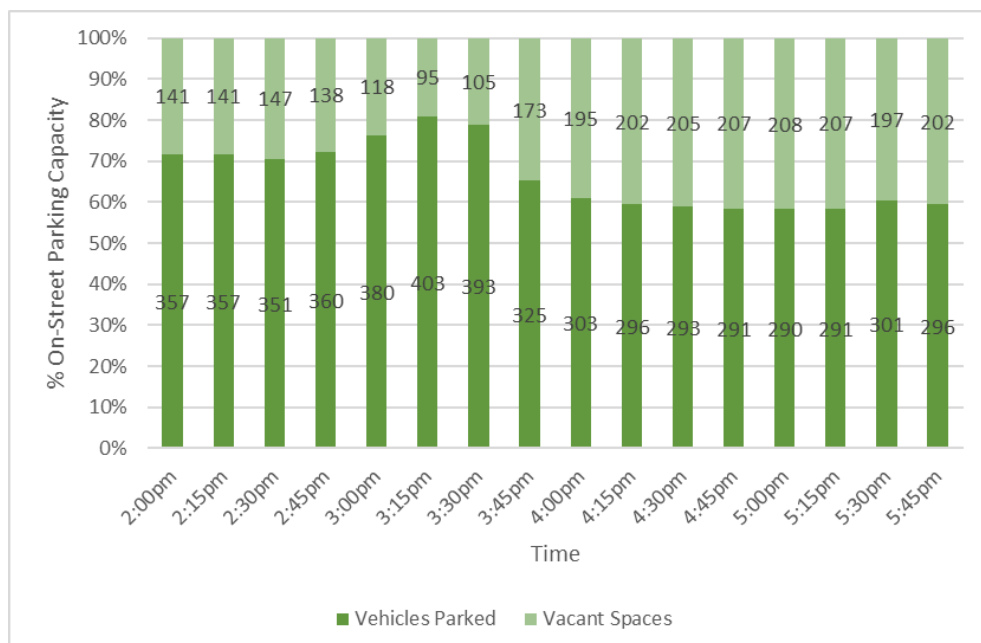
It can be seen from the above, that the survey indicated a total capacity for 498 on-street parking spaces. The overall survey results have been presented in **Chart 3** and **Chart 4** below for the morning and afternoon surveys.

**Chart 3: On Street Parking Capacity between 6:00am and 10:00am**



It can be seen from Chart 3 that during the morning period, the on-street parking surveys identified spare capacity, with a maximum of 406 (81.5%) vehicles parked and 92 (18.5%) vacant spaces at 8:15am and 8:30am. On average, there were 370 (74.4%) vehicles parked and 128 (25.6%) vacant spaces.

**Chart 4: On-Street Parking Capacity between 2:00pm and 6:00pm**

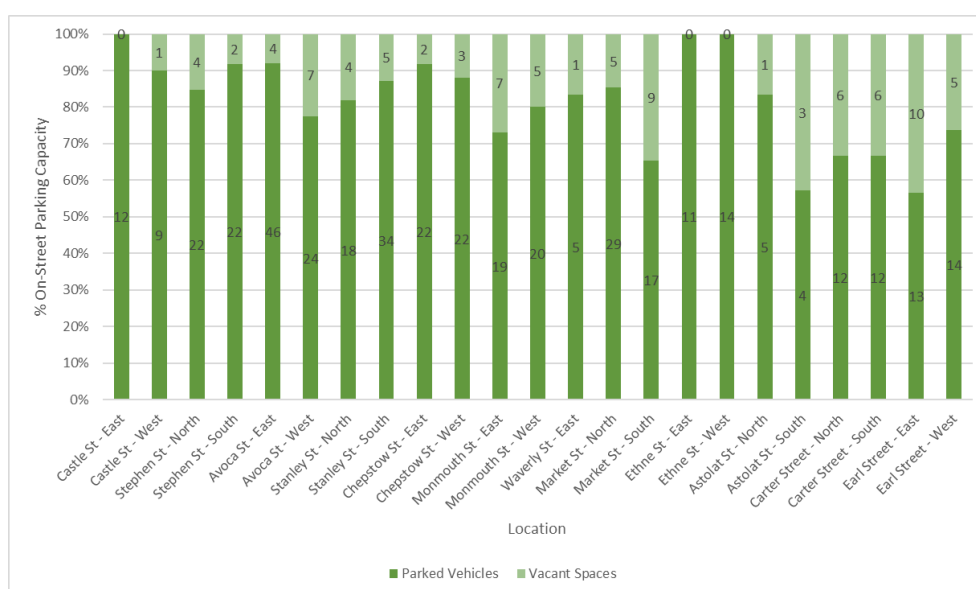




It can be seen from Chart 4 that during the afternoon period, the on-street parking surveys identified spare capacity, with a maximum of 403 (80.9%) vehicles parked and 95 (19.1%) vacant spaces at 3:15pm. On average, there were 330 (66.4%) vehicles parked and 168 (33.6%) vacant spaces.

As identified by the overall parking surveys, the peak parking demands were identified at 8:15am during the morning peak period and 3:15pm during the afternoon peak period. These peak parking demands have been analysed in further detail and are summarised in **Chart 5** and **Chart 6** below for the morning and afternoon peak periods, respectively.

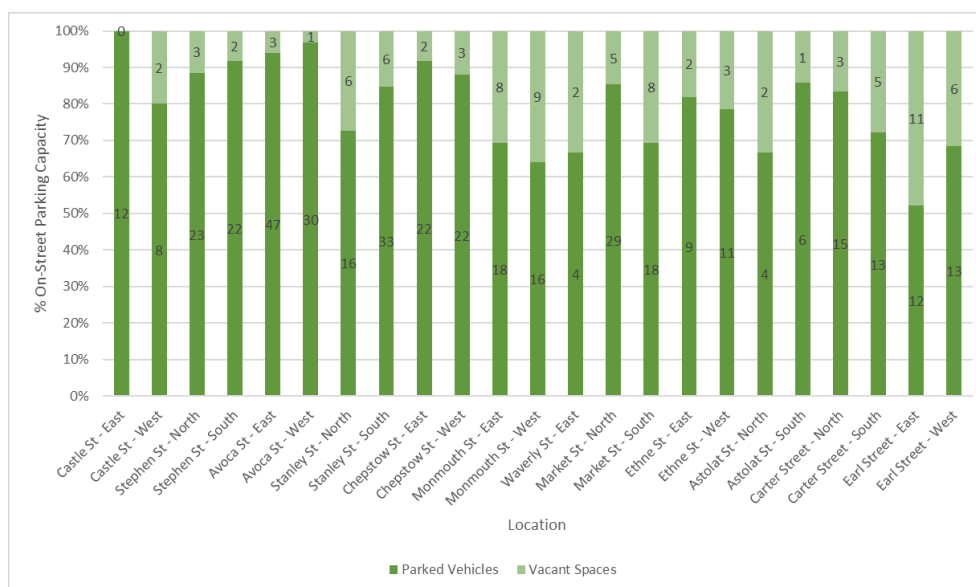
**Chart 5: On-Street Parking Capacity between 8:15am and 8:30am**



It can be seen from Chart 5 the majority of surveyed streets were identified to have spare capacity, with Earl Street providing 15 available on-street spaces. These results reflect general parking behaviour, noting that teachers will seek parking spaces in proximity to the school.



Chart 6: On-Street Parking Capacity between 3:15pm and 3:30pm



It can be seen from Chart 6 that all of the streets surveyed had spare capacity noting that Earl Street and Monmouth Street had 17 spaces available.

In summary, the parking surveys indicate that the demand for on-street parking increased steadily from 6am to 8:15am and decreased steadily from 3:15pm to 4:15pm which is consistent with the baseline survey observations. During the morning period, availability of on-street parking reduced from 171 spaces to 92 spaces, representing a demand of 79 parking spaces. During the afternoon period, availability of parking increased from 95 spaces to 208 spaces, representing an increased capacity of 113 spaces. These trends correspond to the school's start and finish times and reinforces the fact that adequate on-street car parking is available for residents outside of school hours and during school holiday periods. It should be noted that the aforementioned demands cannot be entirely contributed to the school, noting the nearby St Margaret Mary's Primary School, the Mt St Joseph's Home, and construction activity.

A comparison between the 2020 surveys and 2023 surveys is outlined in **Table 14** and **15** below:

**Table 14: On-Street Car Parking Comparison - AM**

AM Peak Period	% Parked Vehicles		% Difference
Location	2020	2023	
Castle Street - East	100%	100%	0%
Castle Street - West	100%	90%	-10%
Stephen Street - North	92%	85%	-8%
Stephen Street - South	79%	92%	13%
Avoca Street - East	81%	92%	11%
Avoca Street - West	94%	77%	-16%
Stanley Street - North	86%	82%	-5%
Stanley Street - South	97%	87%	-10%
Chepstow Street - East	93%	92%	-1%
Chepstow Street - West	91%	88%	-3%
Monmouth Street - East	100%	73%	-27%
Monmouth Street - West	95%	80%	-15%
Waverly Street - East	67%	83%	17%
Market Street - North	90%	85%	-5%
Market Street - South	86%	65%	-21%
Ethne Street - East	85%	100%	15%
Ethne Street - West	86%	100%	14%
Astolat Street - North	86%	83%	-2%
Astolat Street - South	83%	57%	-26%
Carter Street - North	N/A	67%	N/A
Carter Street - South	N/A	67%	N/A
Earl Street - East	N/A	57%	N/A
Earl Street - West	N/A	74%	N/A

**Table 15: On-Street Car Parking Comparison – PM**

PM Peak Period	% Parked Vehicles		% Difference
Location	2020	2023	
Castle Street - East	95%	100%	5%
Castle Street - West	100%	80%	-20%
Stephen Street - North	96%	88%	-8%
Stephen Street - South	71%	92%	20%
Avoca Street - East	98%	94%	-4%
Avoca Street - West	87%	97%	10%
Stanley Street - North	91%	73%	-18%
Stanley Street - South	89%	85%	-5%
Chepstow Street - East	93%	92%	-1%
Chepstow Street - West	91%	88%	-3%
Monmouth Street - East	95%	69%	-26%
Monmouth Street - West	90%	64%	-26%
Waverly Street - East	83%	67%	-17%
Market Street - North	90%	85%	-5%
Market Street - South	77%	69%	-8%
Ethne Street - East	77%	82%	5%
Ethne Street - West	57%	79%	21%
Astolat Street - North	100%	67%	-33%
Astolat Street - South	83%	86%	2%
Carter Street - North	N/A	83%	N/A
Carter Street - South	N/A	72%	N/A
Earl Street - East	N/A	52%	N/A
Earl Street - West	N/A	68%	N/A

Overall, the surveys confirmed approximately 19% free capacity in the survey area during morning and afternoon peak periods, representing approximately 95 car parking spaces. Streets near the school experienced the highest demand, however this was expected noting the general demand for parking near places of work. This would be the same for any school or place of work where staff utilise private vehicles to travel to/from work.

The school itself is still under construction which typically attracts between 30-40 workers on a typical day. This should be taken into consideration when analysing the on-street parking demands in the proximity of the site, particularly in the morning peak period where worker arrivals would overlap with the arrival period for students. It is expected that once construction

is completed, the availability of parking within the area would improve above the levels surveyed.

Based on the 2023 surveys it is concluded that the on-street car parking availability has improved since the introduction of the OTMP.



## 7. FUTURE TRAVEL TARGETS

### 7.1 2023 Modal Splits

For the purposes of this assessment, the AM and PM data was averaged for both staff and student travel modes. This method is consistent with the previous OTMP which was prepared prior to the redevelopment of the Adler Building.

### 7.2 Approved Staff Travel Targets

#### 7.2.1 Baseline 2019 Modal Splits

For reference in the following discussions, the baseline travel mode survey data is summarised in **Table 16** below:

**Table 16: 2019 Baseline Travel Modes for Staff**

Travel Mode	2019 Baseline	
	%	No. Staff
By Car (as driver)	85.7%	118
By Car (as passenger)	1.4%	2
Public Transport - Bus	5.3%	7
Public Transport - Other	1.9%	3
Cycle	1.9%	3
Walk	3.8%	5

This baseline data should be referred to when considering the changes in travel modes that have already occurred and can be used to determine if the development is on track to meet the travel targets as discussed in the following sections.

#### 7.2.2 Staff Targets

The travel mode targets for staff at the school have been separated into a medium-term target of 5 years (2027) and a long-term target of 10 years (2032). These approved targets that were discussed with Council are summarised in **Table 17**, with discussion regarding the current travel modes, progress and required changes thereafter.

**Table 17: Approved Travel Mode Targets for Staff and 2023 Modal Splits**

Travel Mode	2023 Modal Splits		Approved Targets for Staff			
	%	No. Staff	5-Year (2027)	Comments	10-Year (2032)	Comments
By Car (as driver)	79.6%	110	80.7%	Surpassed	75.7%	On Track
By Car (as passenger)	4.6%	6	2.2%	Surpassed	2.4%	Surpassed
Public Transport – Bus	7.6%	10	6.3%	Surpassed	7.3%	Surpassed
Public Transport – Other	0%	0	2.9%	Work Needed	3.9%	Work Needed
Cycle	3.4%	5	2.9%	Surpassed	3.9%	On Track
Walk	5.3%	7	4.8%	Surpassed	5.8%	On Track

As can be seen in comparison to the 2019 baseline data, there has been a positive shift away from private vehicles driving to site onto other forms of transport such as bus, and active transport (walking and cycling).

## 7.3 Approved Student Targets – ELC & K to Year 6 Students

### 7.3.1 Baseline 2019 Modal Splits

As above, the baseline travel mode survey data for ELC & K to Year 6 students is summarised in **Table 18** below:

**Table 18: 2019 Baseline Travel Modes for ELC & K to Year 6 Students**

Travel Mode	2019 Baseline	
	%	No. Students
By Car (as a passenger – dropped by parent/guardian)	73.9%	322
By Car (as passenger – carpool)	0.7%	3
School Bus	17.1%	75
Public Transport – Bus	4.2%	18
Public Transport – Other	0.0%	0
Cycle	0.6%	3
Walk	3.5%	15

It is noted that at this time, 436 students were enrolled for year groups ELC & K to Year 6. This baseline data should be referred to when considering the changes in travel modes that have already occurred and can be used to determine if the development is on track to meet the travel targets as discussed in the following sections.

### 7.3.2 ELC & K to Year 6 Student Targets

The travel mode targets for students at the school have been separated into a medium-term target of 5 years (2027) and a long-term target of 10 years (2032). These approved targets that were discussed with Council are summarised in **Table 19**, with discussion regarding the current travel modes, progress and required changes thereafter.

**Table 19: Approved Travel Mode Targets for ELC & K to Yr 6 Students and 2023 Modal Splits**

Travel Mode	2023 Modal Splits		Approved Targets for Students			
	%	No of Students	5-Year (2027)	Comments	10-Year (2032)	Comments
By Car (as a passenger – dropped by parent/guardian)	67.8%	297	69.9%	Surpassed	65.9%	On Track
By Car (as passenger – carpool)	2.0%	9	1.2%	Surpassed	1.7%	Surpassed
School Bus	16.2%	71	18.6%	On Track	20.1%	On Track
Public Transport - Bus	4.4%	19	5.2%	On Track	6.2%	On Track
Public Transport - Other	0.4%	2	0%	NA	0%	NA
Cycle	1.3%	6	1.1%	Surpassed	1.6%	On Track
Walk	8.1%	35	4%	Surpassed	4.5%	Surpassed
*For the purposes of this assessment, the average of the 'Extra-curricular activities on-site' travel mode has been distributed between 'Car (as passenger – dropped by parents/guardians)' and 'Car (as passenger – carpool)',						

It can be summarised that whilst the reduction in students dropped off by parents/guardians is currently meeting the 5-year targets, more students are to be encouraged to use buses as a mode of transport. This will be encouraged through the strategies discussed in **Section 8**.

## 7.4 Approved Student Targets – Year 7 to Year 12

### 7.4.1 Baseline 2019 Modal Splits

As above, the baseline travel mode survey data for Year 7 to Year 12 students is summarised in **Table 20** below:

**Table 20: 2019 Baseline Travel Modes for Year 7 to Year 12 Students**

Travel Mode	2019 Baseline	
	%	No. Students
By Car (as a passenger – dropped by parent/guardian)	38.0%	184
By Car (Student driving)	4.4%	21
By Car (as passenger – carpool)	2.4%	12
School Bus	31.6%	153
Public Transport - Bus	13.2%	64
Public Transport - Other	0.6%	3
Cycle	1.6%	8
Walk	8.2%	40

It is noted that at this time, 484 students were enrolled for year groups Year 7 to Year 12. This baseline data should be referred to when considering the changes in travel modes that have already occurred and can be used to determine if the development is on track to meet the travel targets as discussed in the following sections.

#### **7.4.2 Year 7 to Year 12 Student Targets**

The travel mode targets for students at the school have been separated into a medium-term target of 5 years (2027) and a long-term target of 10 years (2032). These approved targets that were discussed with Council are summarised in **Table 21**, with discussion regarding the current travel modes, progress and required changes thereafter.



**Table 21: Suggested Travel Mode Targets for Year 7 to Year 12**

Travel Mode	2023 Modal Splits		Approved Targets for Students			
	%	No of Students	5-Year (2027)	Comments	10-Year (2032)	Comments
By Car (as a passenger – dropped off by parent/guardian)	48.1%	230	33.0%	Work Needed	28.0%	Work Needed
By Car (as driver)	4.5%	21	2.1%	Work Needed	1.7%	Work Needed
By Car (as passenger – carpool)	2.3%	11	1.4%	Surpassed	0.4%	Surpassed
School Bus	25.0%	120	34.6%	Work Needed	35.6%	Work Needed
Public Transport - Bus	11.5%	55	14.5%	Work Needed	15.8%	Work Needed
Public Transport - Other	0.2%	1	0.6%	Work Needed	0.6%	Work Needed
Cycle	0.8%	4	3.6%	Work Needed	5.6%	Work Needed
Walk	7.8%	37	10.2%	Work Needed	12.2%	Work Needed

As can be seen from the above, the number of vehicle trips for Year 7 to Year 12 has increased compared to baseline data. The school is encouraged to continue to actively promote the travel strategies outlined in Section 8, including the distribution of the TAG, promote carpooling, School Student Transport Scheme, and active travel.

## 8. CURRENT TRAVEL STRATEGIES

### 8.1 Transport Access Guide

#### 8.1.1 Objectives and Targets

Emanuel School has a 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.

#### 8.1.2 Timing

The Travel Access Guide is made available to all staff, students, and parents/caregivers.

#### 8.1.3 Responsibility

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

#### 8.1.4 Funding

The school funds the distribution of the TAG.

#### 8.1.5 Implementation

The TAG is 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.

#### 8.1.6 Monitoring Regime

The TAG is monitored on an annual basis.

### **8.1.7 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 Consultative Committee (CCC).

## **8.2 On-site Staff Parking and Management**

### **8.2.1 Objectives and Targets**

The school provides a total of 11 off-street staff parking spaces under the science block. The school will maintain up to 138 FTE staff at any time and if travel modes are maintained this will see up to 110 private vehicles requiring parking with up to 99 vehicles utilising on-street facilities.

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

### **8.2.2 Timing**

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

### **8.2.3 Responsibility**

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

### **8.2.4 Funding**

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

### **8.2.5 Implementation**

On-site parking management is ongoing.

### **8.2.6 Monitoring Regime**

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

### **8.2.7 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 CCC.

## **8.3 Carpool Program**

### **8.3.1 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.

### **8.3.2 Timing**

The school has implemented the carpool initiatives whilst taking into consideration up to date advice from NSW Health.

### **8.3.3 Responsibility**

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

### **8.3.4 Funding**

The school is encouraging the carpool initiative however there is currently no additional funding for this strategy.

### **8.3.5 Implementation**

The school has implemented 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 provide a way for staff and parents/carers to coordinate travel and schedules with their respective colleagues and classmates, where practical.

### **8.3.6 Monitoring Regime**

Carpool utilisation will be monitored on an annual basis.

### **8.3.7 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 CCC.

## **8.4 School Student Transport Scheme**

### **8.4.1 Objectives and Targets**

Emanuel School promotes the 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.

### **8.4.2 Timing**

The school encourages the STSS within the Green Travel Plan which has been made available to students.

### **8.4.3 Responsibility**

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

### **8.4.4 Funding**

The school is funding the distribution of SSTS information.

### **8.4.5 Implementation**

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



#### **8.4.6 Monitoring Regime**

SSTS usage will be monitored on an annual basis.

#### **8.4.7 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 CCC.

### **8.5 Cycling Routes**

#### **8.5.1 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.

#### **8.5.2 Timing**

Cycling routes have been provided in Figure 20 of this OTMP. The routes will 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.

#### **8.5.3 Responsibility**

It is the responsibility of the school's Travel Coordinator (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.

#### **8.5.4 Funding**

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

### **8.5.5 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 and relays this information to school employees and students. In addition, the school provides 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 includes:

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

A TAG 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 provides active travel education to all students annually and promote active travel through annual events such as 'Walk to School' and 'Walk to Work' days.

### **8.5.6 Monitoring Regime**

Cycling usage will be monitored on an annual basis.

### **8.5.7 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 CCC.

## 8.6 Bicycle Parking Provision

### 8.6.1 Objectives and Targets

The campus currently provides 20 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.

### 8.6.2 Timing

The school encourages bicycle usage within the Green Travel Plan which has been distributed to staff and students prior to issue of the Construction Certificate.

### 8.6.3 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*.

### 8.6.4 Funding

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

### 8.6.5 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 has considered 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, the school has commenced running 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.

#### **8.6.6 Monitoring Regime**

Cycling usage will be monitored on an annual basis.

#### **8.6.7 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 CCC.

### **8.7 Parent/Caregiver Education**

#### **8.7.1 Objectives and Targets**

The school periodically provides educational material to parents/caregivers to promote the 'Go with the Scheme'. Educational material will relate to the school's drop-off and pick-up arrangements and will include the 'Go With The Flow Scheme' operations, access routes to/from designated drop-off and pick-up areas, traffic warden roles and locations, and pick-up arrangements for parents with multiple children. The objective of this initiative is to encourage parents/caregivers to follow the school's drop-off/pick-up arrangements.

#### **8.7.2 Timing**

The school will continue to promote educational material and the 'Go With The Flow' scheme to parents and caregivers.

#### **8.7.3 Responsibility**

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

**8.7.4 Funding**

The school funds the promotion of educational material.

**8.7.5 Implementation**

Educational materials have been made available to all parents/caregivers through communication channels, including the school's website and newsletter.

**8.7.6 Monitoring Regime**

Educational material will be continually monitored/reviewed, as required.

**8.7.7 Monitoring Targets**

Educational material 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 CCC.



## 9. MONITORING AND REVIEW

### 9.1 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 CCC.

### 9.2 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.

### 9.3 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.

## 10. CCC CONSULTATION

### 10.1 Consultation Meetings

The following CCC consultation meetings have been undertaken to date:

- Monday 29 May 2023 between 6pm and 8pm.
- Monday 17 July 2023 between 6pm and 8pm.

### 10.2 Key Changes

A number of changes to the Draft Operational Traffic Management Plan have been made as a result of CCC discussions and include the following key items:

- Updated site description.
- Amended staff/student population description and core operating times.
- Amended bus route table and public transport figure.
- Amended pedestrian access figure (Figure 15).
- Update to Section 4.6.2.
- Update to Table 3.
- Addition of Figures 22 and 23.
- Clarification of 5 and 10 year target years
- Update conclusion.

## 11. CONCLUSIONS

This updated 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 Development Application (DA/40/2020 dated 29 October 2020), Section 4.55 Application (DA/40/2020/A dated 2 December 2021) and Section 4.55 Application (DA/40/2020/B dated 31 December 2021). In summary,

- The school has a total capacity for 138 FTE staff onsite at any time and 920 students (inclusive of 60 Early Learning Centre places), with the hours of operation generally between 8:00am and 4:00pm during school days. Currently 144.33 FTE staff are employed, and 917 students are enrolled at the school.
- The travel mode data to date is presented in **Section 5** with future travel target discussed within **Section 7**.
  - The Staff Travel Mode Surveys when compared to 5-year travel targets and the baseline 2019 data show that generally there has been a reduction in reliance on private vehicles. With regards to staff data, the school has already surpassed the 5-year targets to reduce private vehicle usage. It is concluded that this target has been met.
  - The Travel Mode Surveys for ELC to Year 6 conducted in 2023 show that when compared to 5-year travel targets and the baseline 2019 data, there has been a reduction in reliance on private vehicles for these grades. Overall, the travel mode surveys showed that these years groups were either on track to meeting their 5-year travel mode targets or had already surpassed the 5-year targets. It is concluded that this target is on-track to be met.
  - For Years 7 to Year 12, the comparison between 2023 travel mode data, the 5-year travel targets, and baseline 2019 data showed that generally work is needed in order for the school to reach the 5-year travel mode targets. It should be noted that this is the first year of review and strategies will continue to be implemented with the aim of shifting travel modes to meet the 5-year targets gradually. It is concluded that additional work is required to meet the target.
- Since the OTMP for the school was approved in 2022, the school has implemented the strategies outlined in Section 8 including, the distribution of a Travel Access Guide, Management of on-site staff parking and a carpool program. In addition, the school has

also worked to provide education for both students and parents/caregivers regarding the School Student Transport Scheme, on-site bicycle parking and cycling routes. The school will further promote these strategies to students between Year 7 and Year 12 in order to work towards meeting the 5-year travel mode targets. It is concluded that the primary objective has been met in this regard.

- In response to a DA condition of consent, an existing stage Road Safety Audit (RSA) was undertaken by DC Traffic Engineering (Ref: TRF-PROJ-0032-01 ES RSA EMANUEL REV 1). Remediations measures have been proposed for the items that were considered to be within the jurisdiction of the school. Reference should be made to the full report in Appendix A. Of note, Council has been re-notified of the RSA and relevant items such as improvements to signage under Council's jurisdiction are required to be rectified. It is concluded that the primary objective has been met in this regard.
- The school continues to commit to continuing to educate parents on the 'Go With The Flow' traffic management procedure that is implemented for the school. Traffic wardens monitor the 'Go With The Flow' scheme and have reported an improvement in general traffic flow. It is concluded that the primary objective has been met in this regard.
- The 2023 intersection counts generally reflected increases and decreases at each of the key intersections, consistent with the implemented 'Go With The Flow' traffic management scheme. As with any school development, the afternoon pick-up period will result in an increase in vehicle trips to and from the school. However, the implemented strategies aim to minimise congestion along Avoca Road by ensuring that school traffic is moved along if there is insufficient area within the pick-up zone to accommodate the vehicle. It is concluded that the primary objective has been met in this regard.
- The 2023 on-street parking surveys confirmed approximately 19% free capacity in the survey area during the morning and afternoon peak periods, representing approximately 95 car parking spaces. As can be expected with any school of place of work, streets closest to the school experienced the highest demand. It was noted that the school is currently under construction which typically attracts between 30-40 workers on a typical day. Once construction is completed, the availability of parking within the area is expected to improve above the levels surveyed. It is concluded that the primary objective has been met in this regard. It is concluded that the primary objective has been met in this regard.
- This OTMP will continue to be reviewed as per the suggested monitoring and review measures outlined in **Section 9**.

- Conditions 22, 23, 24, 25, and 121 have been addressed in this OTMP in accordance with the Condition of Consent. The OTMP measures have been correctly implemented and the key targets have been met.



# APPENDIX A

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Road Safety Audit

Traffix

Emanuel School, Randwick

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Existing stage road safety audit





Traffix

Emanuel School, Randwick

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Existing stage road safety audit

**Authors**

Damien Chee



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**Report No**

TRF-PROJ-0032-01 ES RSA EMANUEL REV 1

**Date**

21/11/2021

This report has been prepared for Traffix.



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## Appendices

Appendix A  
Road Safety Audit Checklist



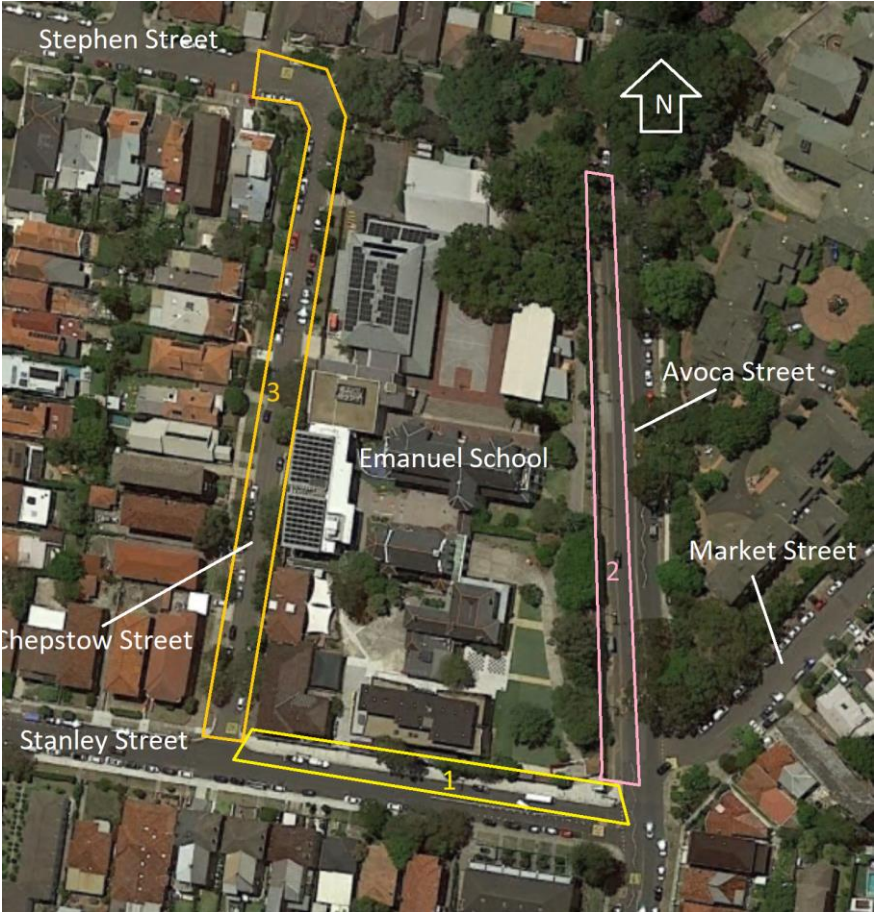
# 1 Project and audit details

## 1.1 Audit details

Details of the road safety audit have been summarised in Table 1.

**Table 1** Details of the road safety audit.

<b>Audited project</b>	The school zone associated with the Emanuel School, at 18-20 Stanley Street, Randwick.
<b>Client/ contact</b>	Ben Liddell Senior Engineer Traffix Ph: 0410 460 043 E: <a href="mailto:Ben.Liddell@traffix.com.au">Ben.Liddell@traffix.com.au</a>
<b>Audit type</b>	<i>Existing stage</i> road safety audit.
<b>Purpose and background</b>	<p>The Emanuel School (Applicant) has lodged development application DA/40/2020 described as:</p> <p>Integrated development for concept plan approval to redevelop the Emanuel School site including increase in students from 785 to 920, Stage 1 works including demolition of the Adler Building and part demolition of other structures to facilitate new three storey building (educational establishment) including landscaping and associated works (state Heritage Item &amp; Heritage Conservation Area).</p> <p>Condition 15 of the Notice of Determination stated the following:</p> <p>The Applicant shall, both at the detailed design stage and prior to commencement of the new school operations, conduct a Road Safety Evaluation (refer to NSW Centre for Road Safety's <i>Guidelines for Road Safety Auditing Practices</i> and Austroads <i>Guide to Road Safety Part 6: Road Safety Audit</i>) on all relevant sections of road utilised for bus and private vehicle pickup and drop off. Appropriate road safety measures and/or traffic management measures shall be implemented based on the outcomes of the RSE.</p> <p>According to the NSW Centre for Road Safety's <i>Guidelines for Road Safety Auditing Practices</i>, a Road Safety Evaluation "involves a road safety audit, a crash investigation and a review of the speed zone. It is a formal examination of existing roads and road related areas from the perspective of all road users with the intention of identifying road safety deficiencies and areas of risk that have led to or could lead to road crashes. It is conducted by an independent, qualified team of professionals".</p> <p>On 13/9/2021, Modification Application DA/40/2020/B was lodged. This applied for modifications to Conditions 15 and 24 to replace the requirement for a <i>Road Safety Evaluation</i> with a <i>Road Safety Audit</i>. NSW Centre for Road Safety's <i>Guidelines for Road Safety Auditing Practices</i> defines a Road Safety Audit as "a formal examination of proposed or existing roads and road related areas from the perspective of road users and with the intention of identifying road safety deficiencies and areas of risk that could lead to road crashes. It does not consider crash history. It is conducted by an independent, qualified team of professionals".</p> <p>This report documents the processes and findings of an <i>existing stage</i> road safety audit of the sections of road used for bus and private vehicle pickup and drop off.</p>
<b>Scope of audit</b>	<p><u>Spatial scope</u></p> <p>Condition 15 of the Notice of Determination made specific reference to all sections of road used for bus and private vehicle pick up and drop off. From a preliminary inspection of the site, the following road sections were identified which meet these criteria:</p> <ul style="list-style-type: none"><li>▪ The eastbound direction of Stanley Street, from Chepstow Street to Avoca Street being the southern frontage of the school where the northern kerbline is used for bus and private vehicle road-to-kerb access. This section is bounded in yellow and labelled "1" in the aerial photo on the next page.</li></ul>

<p><b>Scope of audit (cont'd)</b></p>	<ul style="list-style-type: none"> <li>▪ The northbound direction of Avoca Street, from Stanley Street to Randwick Peace Park (a small reserve and walk-through connection from Stephen Street to Avoca Street). The western kerbline of Avoca Street is used as a private vehicle drop off and pick up zone. This section is bounded in pink and labelled "2" in the aerial photo below.</li> <li>▪ Stephen Street-Chepstow Street from the northern boundary of the school zone to Stanley Street. This road is used to access a small car park and drop off/ pick up zone on the western side of the school. This section is bounded in orange and labelled "3" in the aerial photo below.</li> </ul>  <p><b>Above:</b> The road network surrounding Emanuel School and the sections under the spatial scope of this road safety audit.</p> <p><u>Temporal scope</u></p> <p>The reported road safety audit findings were based on the conditions ("version") of the site as inspected at the following times/ dates:</p> <ul style="list-style-type: none"> <li>▪ Preliminary walk-over and drive-through inspection between 1030-1130h on 28/10/2021.</li> <li>▪ AM school zone inspection between 0800-0930h on 4/11/2021.</li> <li>▪ PM school zone inspection between 1430-1320h on 15/11/2021.</li> </ul>
<p><b>Team details</b></p>	<p>Damien Chee, DC Traffic Engineering (level 3 and lead auditor – RSA-02-0094). Linda Chee, DC Traffic Engineering (Level 2 road safety auditor - RSA-02-1069).</p>
<p><b>Methodology</b></p>	<p>The road safety audit was undertaken using the following methodology:</p> <ul style="list-style-type: none"> <li>▪ Preliminary walk-over and drive-through inspection between 1030-1130h on 28/10/2021.</li> <li>▪ AM school zone inspection between 0800-0930h on 4/11/2021.</li> <li>▪ PM school zone inspection between 1430-1320h on 15/11/2021.</li> <li>▪ The road safety review findings have been documented in this report in accordance with the NSW Centre for Road Safety's <i>Guidelines for Road Safety Auditing Practices</i> (2011).</li> <li>▪ This report includes a completed checklist as sourced from the Austroads <i>Guide to Road Safety Part 6A: Implementing Road Safety Audits</i>.</li> </ul>

## 1.2 Responding to the audit report

Road safety audits provide the opportunity to highlight potential road safety problems and have them formally considered by the project manager in conjunction with all other project considerations.

The responsibility for the project rests with the project manager, not with the auditor. The project manager is under no obligation to accept the audit findings. Also, it is not the role of the auditor to agree to, or approve the project manager's responses to the audit.


## 1.3 Previous audits

There were no previous road safety audit reports of direct relevance to this audit, that were issued to the audit team.

## 2 Safety audit findings

The road safety audit findings are documented in Table 2.

**Table 2** Road safety audit findings.

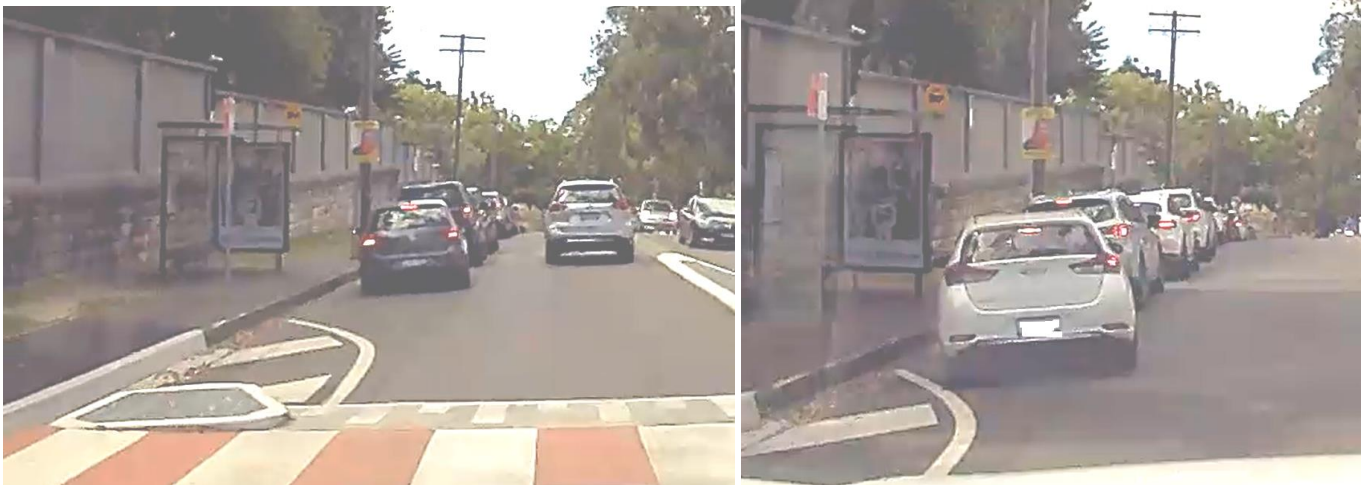
Ref	Location	Road safety audit finding	Priority
1	Pedestrian refuge island on Stanley Street at its intersection with Avoca Street.	<p>A pedestrian refuge is in place on Stanley Street to the immediate west of its intersection with Avoca Street. The audit team notes the following issues:</p> <ul style="list-style-type: none"> <li>The refuge island lacks visual prominence and many drivers may fail to see it or acknowledge that this is a potential standing area for pedestrians. Typically, hi-vis handrails would be provided to enhance the prominence of the refuge and provide some degree of protection to pedestrians (ie. they act as a deterrent against deliberate vehicle encroachment close to or over the island). The refuge island has been poorly marked (outlined). This could be made more visually prominent if the painted median edgelines extended around the island in entirety (with required leading and trailing offsets as per Austroads <i>Guide to Road Design part 4A</i>). A KEEP LEFT sign should also be provide at the western end of the island and faced towards the west.</li> <li>There are no advanced warning signs that there is a refuge in the road ahead. Drivers may lack awareness of the function of this island and the potential for pedestrians (including short pedestrians and clusters of pedestrians) to be standing on this island.</li> <li>As a side note, the refuge island (particularly the eastern island) could be used to accommodate a second GIVE WAY sign to improve the prominence and awareness of this priority rule.</li> </ul> <div data-bbox="488 751 1843 1187">  </div> <p><b>Left:</b> Looking south across Stanley Street at the pedestrian refuge. <b>Right:</b> Looking eastbound along Stanley Street. The refuge island lacks visual prominence and there is potential for improvement via handrails, a KEEP LEFT sign and by better outlining the island.</p>	High

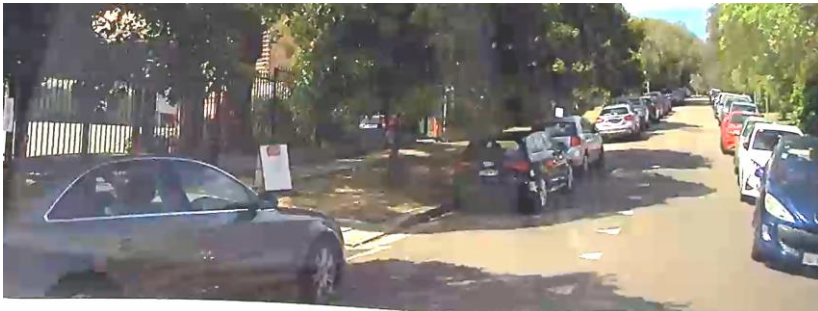




Ref	Location	Road safety audit finding	Priority
2	Northern kerblines of Stanley Street at its eastern end (near Avoca Street).	<p>The audit team notes the following signage issues on the northern kerblines of Stanley Street at its eastern end:</p> <ul style="list-style-type: none"> <li>▪ The bus stop “J-pole” partially obscures the SCHOOL ZONE sign (left-hand image). Drivers may fail to see part or all of the sign including its speed limit and timed conditions.</li> <li>▪ The J-pole is also leaning and at risk of collapsing or leaning towards the roadway (see middle image). This may topple or lean into the path of a road vehicle.</li> <li>▪ The SCHOOL ZONE sign is low-mounted (less than 2m headroom clearance to its base). This may pose as a head-clash hazard for pedestrians.</li> <li>▪ The GIVE WAY sign at the interface with Avoca Street is low-mounted and lacks visual prominence. The sign is also bent (see right-hand image) indicating that it has been impacted.</li> </ul> <div data-bbox="488 496 1881 1091">  <p>The left photograph shows a street corner with a yellow 'SCHOOL ZONE' sign and a '40' speed limit sign. A bus stop J-pole is positioned in front of the school zone sign, partially obscuring it. The middle photograph shows a close-up of the J-pole, which is leaning significantly towards the road. The right photograph shows a 'GIVE WAY' sign that is bent and tilted, with a circular convex mirror mounted below it.</p> </div> <p><b>Left:</b> Looking east on Stanley Street towards the SCHOOL ZONE sign which is partially blocked by a bus stop J-pole. <b>Middle:</b> The leaning J-pole sign. <b>Right:</b> The bent GIVE WAY sign.</p>	Medium


Ref	Location	Road safety audit finding	Priority
3	Bus access to the northbound bus stop on Avoca Street to the north of the wombat crossing.	<p>There is a northbound bus stop on the western kerbline of Avoca Street to the north of the wombat crossing. The combined effect of (i) the blister islands of the wombat crossing and (ii) the limited road length (approximately 10m) between the crossing and the bus shelter presents very little road length for buses to manoeuvre and stop “square to the kerbline”. As shown in the left-hand image, the northbound bus must first clear the kerb blisters when moving over the crossing. From this point (assuming the bus needs to stop at this bus stop), the bus then needs to shift and manoeuvre to the kerbline. As shown in the right-hand image, since there is limited length to make this lateral shift movement, the bus is likely to be on an angle to the kerb when stopped at the bus shelter. This means pedestrians may not have direct kerb-to-bus and bus-to-kerb access. That is, they may need to move from or onto the road surface first. This presents risks of slips, trips and falls due to the larger step height from road surface to the bus deck.</p> <p>Alternatively, if the bus continues northwards to then be able to stop “square to kerb”, the passengers would need to move from the shelter to the bus.</p> <p>The added safety impact is that by stopping at an angle to the kerbline, the rear right-hand portion of the bus is likely to be exposed to rear-end impact by passing northbound vehicles.</p> <div data-bbox="488 563 1888 1082">  </div> <p><b>Left:</b> Looking north towards the bus stop. As shown, a northbound bus first needs to clear the kerb blisters associated with the wombat crossing. <b>Right:</b> It then needs to manoeuvre to the kerbline. Due to the short (10m) length between the crossing and bus shelter, the bus may not be able to stop “square to the kerb” at the point of the bus shelter.</p>	Medium




Ref	Location	Road safety audit finding	Priority
4	Western kerbline of Avoca Street during afternoon pick up period.	<p>Generally, the audit team commends the traffic management plan utilised by the school. The Avoca Street pick up zone generally operated smoothly with school staff keeping the line moving and working to make the car loading process as efficient as possible. The audit team also notes that the dwell times were generally reasonable and very few vehicles were observed waiting excessively long durations for their passengers to board. The car loading activities are confined to the area near the school gate which also means that the rest of the queued platoon progresses forward until reaching the loading area. This makes the process tidy as all vehicles pull back out into the traffic stream from the head-of-queue (rather than at intermediate locations).</p> <p>However, the audit team did observe that the back of queue extends into the bus zone near the wombat crossing (see images below). This is generally not a problem when there are no buses. However, it presents a risk if a bus arrives and needs to access the kerbline to pick up or drop off passengers. Some back-of-queue management may be needed by school staff, such as directing vehicles to proceed around the block if a bus arrives and needs to access the kerbline. Drivers should be made aware of NSW Road Rule 183 – that it is illegal to stop in a bus zone.</p> <div data-bbox="488 528 1845 1015">  </div> <p><b>Left:</b> Looking northbound along Avoca Street towards the back of queue. The last few vehicles are within the signposted bus zone.  <b>Right:</b> A similar situation with the last vehicle pulling into the kerbside space at the southern end of the bus zone.</p>	Medium


Ref	Location	Road safety audit finding	Priority
5	Drop off and pick up zone at the pre-school via Chepstow Street.	<p>A gated car park is in place on the eastern side of Chepstow Street and contains an <i>inbound only</i> gate and an <i>outbound only</i> gate. This generally facilitates drop off and pick up activities to the pre-school. However, as shown below, there is very little width available in Chepstow Street due to vehicles being parked either side of the road. The narrow channel between the parked cars has the following safety impacts:</p> <ul style="list-style-type: none"> <li>There is restricted space when turning into the inbound gate (see top image). There would be risks of nuisance impacts with parked cars.</li> <li>There is restricted space when turning out of the outbound gate (see bottom image). There would also be risks of nuisance impacts with parked cars.</li> <li>The vehicles parked immediately adjacent to the outbound gate would reduce the visibility of the outbound driver, to the conflicting traffic streams approaching from the north and south. This could lead to poor gap detection and selection and consequential crashes,</li> <li>Generally, Chepstow Street is severely limited as a two-way traffic environment. With vehicles parked either side of the road, there is no passing clearance available in the event of two opposing vehicles or in the event that a vehicle needs to pass around another stopped vehicle. Furthermore, there are very few opportunities for vehicles to pull to the side to allow the opposing vehicle to pass. This limited width introduces <i>head-on</i> crash conflicts. Alternatively, if vehicles come head-to-head without incident, one of the vehicles may be forced to reverse to a wider point in the road to allow the other vehicle to pass. The reversing movement would also be a high risk with the multitude of parked cars and pedestrians around.</li> </ul> <div style="display: flex; justify-content: space-around; align-items: flex-start;">  <div style="text-align: right;"> <p><b>Top:</b> Looking southbound along Chepstow Street with the inbound driveway on the left-hand side.</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start;">  <div style="text-align: right;"> <p><b>Bottom:</b> Looking southbound along Chepstow Street with the outbound driveway on the left (adjacent to the garbage bins).</p> </div> </div>	Medium

Ref	Location	Road safety audit finding	Priority
6	Stanley Street to the east of Monmouth Street.	<p>The image below shows the western boundary of the school zone on Stanley Street, located just east of Monmouth Street. Although this section of the road is outside the spatial scope of the audit, the signposting conditions at this point affect the safety and operation of the school zone ahead, which includes the northern kerbline of Stanley Street <i>within</i> the scope of the audit.</p> <p>As shown, the left-hand SCHOOL ZONE sign is visually obscured by a tree. The speed limit numeral cannot be seen or read. Also, the timed conditions may be partially obscured as well. The right-hand (paired) sign is also partially obscured by overhanging tree foliage. Together, these signs may lack effectiveness in establishing the boundary to the school zone and making drivers aware of the 40km/h speed limit. The lowered speed limit is perhaps the single most influential factor in determining the road safety performance and conditions within the school environment. If drivers fail to see these signs, or alternatively, choose to disregard them due to the poor visibility conditions, this could jeopardise the safety of drivers and pedestrians in the school zone ahead.</p>  <p><b>Above:</b> At the western boundary to the school zone, both SCHOOL ZONE signs re obscured by tree foliage.</p>	Medium



Ref	Location	Road safety audit finding	Priority
7	Back of queue on Stanley Street frontage.	<p>During the morning drop off period (as inspected), several vehicles were observed stopping and even unloading passengers on the northern kerbline of Stanley Street immediately east of Chepstow Street. As seen below, this is within the section of kerb signposted as a NO STOPPING zone. Drivers should be made aware that this is a breach of the road rules and penalties may apply. Drivers should be advised to avoid stopping in areas signposted as <i>no stopping</i> zones. There is a lack of clarity whether a vehicle in a slow-moving queue that is required to stop momentarily constitutes an act of stopping or whether it is considered to be “queuing”. This report will not advise either way. However, the most conservative position would be not to stop OR join a queue if that means the vehicle will be in a <i>no stopping</i> zone. Whilst there is potential debate regarding <i>stopping</i> versus <i>queuing</i>, the act of dropping off or picking up passengers removes all doubt. That is, once that act happens, the vehicle would be deemed to have <i>stopped</i>, and in this case, illegally stopped.</p>  <p><b>Above:</b> Two examples where vehicles unloaded passengers in the no stopping zone immediately east of Chepstow Street.</p>	Medium






Ref	Location	Road safety audit finding	Priority
8	Northern kerbline of Stanley Street to the east of Chepstow Street.	<p>At the western-most section of Stanley Street along the school frontage, there is a short length of kerbline signposted as an accessible parking space. Furthermore, the parking space is conditionalised by the time period from 0730-0900h and 1430-1600h on school days. This means that during these periods, this kerbline only allows for parking by vehicles with a disabled parking permit. By default, it also means that outside these time periods, since there is an absence of any other signposted rule, that parking is allowed for indefinite periods. The audit team notes the following issues:</p> <ul style="list-style-type: none"> <li>▪ Despite the legal interpretation of the signposted parking rules, there is an overhead sign stating SCHOOL DROP OFF AND PICK UP ZONE. This implies that any parking or stopping in this zone (ie. to the east of this signpost), should be limited to short-dwell times, where the driver remains with the vehicle, and solely for the purpose of picking up or dropping off students. This contravenes the actual legal interpretation. Legally, vehicles with a disabled parking permit should be able to park as long as they like during the periods of 0730-0900 and 1430-1600h on school days. Outside these periods, any vehicle is allowed to park in this space for an indefinite period. The SCHOOL DROP OFF AND PICK UP ZONE sign should perhaps be relocated to the downstream post and placed above the NO PARKING sign labelled F.</li> <li>▪ As an accessible parking space, there is no ramped connection from the roadway to the footpath. Any wheelchairs/ walking frames that are unloaded from the vehicle to the road surface will have no convenient means of accessing the footpath. They would be required to mount and descend the kerb when alighting and boarding their vehicle.</li> <li>▪ The time period of 0730-0900h on school days, does not align with the school zone period of 0800-0930h. This is a point of inconsistency.</li> </ul>  <p><i>Left: Looking eastbound along Stanley Street showing the accessible parking space at the western-most end of the school frontage (on the northern kerbline).</i></p>	Low

Ref	Location	Road safety audit finding	Priority
9	Northern kerbline of Stanley Street along school frontage.	<p>Further to item 8, there is an inconsistency between the signposted times of the <i>no parking</i> rule and the actual school zone period. As seen in the left-hand image, much of the northern kerbline of Stanley Street is signposted as a NO PARKING zone between the periods of 0730-0930h and 1430-1600h on school days. The <i>no parking</i> rule means that drivers are allowed to stop for short periods as long as they remain with their vehicle. This allows drivers to stop on this kerbline when picking up or dropping off students. The parking signs (regulatory signs) are accompanied by supporting signs reassuring drivers that this is a school drop-off and pick up zone. The morning period of 0730-0930h implies that this <i>no parking</i> rule applies in the morning drop off period. However, this is not consistent with the signposted school zone period of 0800-0930h. This is not meant to imply that the parking sign is incorrect. Rather, it is quite the opposite. If there are a significant volume of drop offs as early as 0730h which therefore require the kerb to be kept clear of parked vehicles, then perhaps the SCHOOL ZONE periods should be adjusted to have an earlier commencement time of 0730h as well. Those earlier arriving students should also have the benefit of a lowered speed limit and other school zone related rules.</p> <p>It should be noted that this decision should not be made lightly. The audit team notes that there are overlapping school zones with Moriah College to the north and Randwick Public School/ Centennial Park School to the south. If the school zone period on the SCHOOL ZONE signs are adjusted, and some of the signs relevant to Emanuel School double up as signs for the other schools, then this may create inconsistencies with the timed periods for the school zone rules for the other schools.</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p><b>Left-hand image:</b> One of the NO PARKING signs along the northern kerbline of Stanley Street where conditionalised time periods of 0730-0930h and 1430-1600h are stated.</p> <p><b>Right-hand image:</b> The SCHOOL ZONE sign at the eastern end of Stanley Street where the typical school zone periods are stated including the morning period of 0800-0930h.</p> </div> </div>	Low




Ref	Location	Road safety audit finding	Priority
10	Makeshift signs on the northern kerbline of Stanley Street.	<p>There are two makeshift signs on the northern kerbline of Stanley Street marking out a short section of kerbline as a year 7-12 pick up and drop off zone. Furthermore, the sign states that a maximum of three cars are allowed to load/ unload in this zone. The audit team commends this practice as keeps the loading and unloading activity at the head of the rank, rather than allowing trailing vehicles to load and unload. This also means that vehicles should only pull out of the rank and re-enter the eastbound traffic stream of Stanley Street after they load/ unload passengers at this point. It creates a tidier arrangement rather than allowing vehicles to pull out at any point in the rank.</p> <p>Notwithstanding this, the audit team notes the following:</p> <ul style="list-style-type: none"> <li>From observations, many drivers are not complying with this practice. Many drivers were observed loading and unloading passengers either upstream of or downstream of this zone. This randomises the vehicle movements, particularly creating more unpredictable pulling out locations and movements. See also item 7.</li> <li>The signs are makeshift and subject to weather damage. They may also fade and become ineffective. Also, the method of attachment with clamped sign stems is not ideal as the sign may collapse or topple. Pedestrians and vehicles may inadvertently impact the clamps. More durable signs and safer mounting/ display methods should be considered.</li> </ul> <div style="display: flex; align-items: center;">   <div style="margin-left: 20px;"> <p><b>Left-hand image:</b> A short section of kerbline just upstream of the bus zone is marked out as a Y7-12 pick up and drop off zone.</p> <p><b>Right-hand image:</b> These makeshift signs are attached to the pre-existing parking signposts and also state that a maximum of three cars can load and unload at any one time. The signs also imply that the loading/ unloading activity should only happen at the head of the rank.</p> </div> </div>	Low

Ref	Location	Road safety audit finding	Priority
11a	Northern kerblines of Stanley Street: Inconsistencies between signposted BUS ZONE rules and makeshift signs.	<p>There is a signposted bus zone on the northern kerblines of Stanley Street along the school frontage. The BUS ZONE signs (see left-hand image) are conditionalised with stated periods of 0730-1600h on school days. This means that the kerblines only operate as a bus zone during these periods. Outside these periods, since there is an absence of any other parking restrictions, it means that any vehicle can park along this kerblines for indefinite periods.</p> <p>A makeshift sign has been placed at ground level with the stated advice DESIGNATED BUS ZONE – NO STOPPING ANY TIME – PLEASE DO NOT STOP OR PARK HERE (see right-hand image). If this sign is only in place during the periods of 0730-1600h, then it is mostly reasonable and consistent with NSW Road Rule 183. However, this sign should not be left in place outside the periods of 0730-1600h on school days as the kerblines does in fact allow parking and stopping outside these periods.</p> <p>Furthermore, and raised more for the sake of awareness, the NO STOPPING ANY TIME advice is depicted as a “parking sign” which is misleading. The kerblines does in fact allow parking and stopping outside the stated periods of the BUS ZONE sign.</p> <p>Care should also be taken to ensure that this makeshift sign is not in the bus body overhang footprint. Typically, when a bus pulls up against a kerblines, there may be a degree of bus body overhang over the kerblines. The overhanging bus body could impact the sign.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;">   <div style="margin-left: 20px;"> <p><b>Left-hand image:</b> The BUS ZONE sign is conditionalised and applies to the period of 0730-1600h on school days.</p> <p><b>Right-hand image:</b> The makeshift sign is somewhat misleading since it implies that drivers cannot stop or park along this kerblines at any time. However, this is relatively benign if this sign is only displayed between 0730-1600h on school days and removed (not displayed) outside these periods.</p> </div> </div>	Low

Ref	Location	Road safety audit finding	Priority
11b	Northern kerbline of Stanley Street: Inconsistencies between signposted BUS ZONE rules and makeshift signs.	<p>Continued from item 11a...</p>  <p><b>Left-hand image:</b> Despite the additional makeshift sign, from observation, there were some non-compliant parking practices observed.</p>	Low




Ref	Location	Road safety audit finding	Priority
12a	Western footpath of Avoca Street along the school frontage – Narrow path width and path obstructions.	<p>A footpath is in place on the western side of Avoca Street along the school frontage. Throughout most of its length, it is a narrow path with limited width for pedestrians to pass each other. This is especially considering the large volumes of pedestrians that would use this path and the potential for clusters of waiting students and parents. Also, since the footpath is immediately adjacent to the roadway and kerbline, much of its width would be occupied by car loading and unloading activities as well as opened doors.</p> <p>Furthermore, there are numerous obstructions on the footpath which create narrow squeeze points. Some examples are depicted below with descriptions in the captions. This is not considered an exhaustive list of sites. Rather, it is a selection of examples to illustrate the issue and prompt consideration of a more holistic investigation and treatment.</p> <div data-bbox="488 418 1400 1062">  <p><b>Left:</b> A section of the footpath to the south of the wombat crossing where a parking sign has created a residual width of 1m of footpath. This presents a squeeze point for pedestrians. Note also how there is a worn down strip of grass which indicates frequent foot traffic over this area. This is most likely due to the squeeze point imposed by the pole.</p> <p><b>Top right:</b> Another squeeze point at the wombat crossing created by a utility pole and streetlight. This is also critical since it is the entry-egress point from the wombat crossing where pedestrians would need to manoeuvre into and out of the crossing. For example, it would be difficult to manoeuvre a pram from the crossing to the footpath due to the utility pole. Not surprisingly, there is also a worn down strip of grass adjacent to this squeeze point.</p> <p><b>Bottom right:</b> The bus shelter also presents squeeze points both in front and behind. As shown in this photo, the path around the rear of the shelter is approximately 1m wide. The path in front of the shelter is 0.9m wide. The path in front of the shelter may not be useable if there are bus passengers waiting or loading/ unloading from a bus. The utility pole marked by the red arrow leaves a 0.9m residual width in the footpath as well.</p> </div>	Low

Ref	Location	Road safety audit finding	Priority
12b	Western footpath of Avoca Street along the school frontage – Narrow path width and path obstructions.	<p>Continued from item 12a...</p>  <p><b>Left:</b> The area outside the school gate has a widened section of footpath which has merit since this area has a high pedestrian occupation demand. This includes teachers and students gathered around the gate when entering, egressing or when moving towards their pick up vehicle. This is also an area frequently used by parents arriving on foot to pick up their children. This photo is included as a good example and to highlight the opportunities for further improving pedestrian amenity at other locations along the Avoca Street frontage.</p>	Low



Ref	Location	Road safety audit finding	Priority
12c	Western footpath of Avoca Street along the school frontage – The impact of overgrown tree foliage on residual path width.	<p>In addition to trees, poles and the bus shelter as discussed in item 12a, there are also some cases where the residual footpath width is reduced due to overhanging tree foliage. The overhanging tree foliage presents both a lateral width restriction (ie. reducing the effective width of the footpath) and a vertical clearance restriction (ie. reducing the headroom clearance for pedestrians). Generally, the tree foliage should be pruned back to improve spatial clearance for pedestrians.</p>  <p><b>Left:</b> Looking north along the western footpath of Avoca Street where overhanging tree foliage has reduced the effective width of the footpath available for pedestrian transit. This site is to the south of the wombat crossing towards the southern end of the school campus. <b>Right:</b> Looking north along the western footpath of Avoca Street where the overhanging tree foliage restricts both lateral and vertical clearance. This portion of kerbline is used for drop off and pick up activities.</p>	Low

Ref	Location	Road safety audit finding	Priority
13	Western side of Avoca Street at entry to pre-school.	<p>At the time of the inspections, there was a large volume of leaf litter in the path between the Avoca Street western footpath and the pre-school entrance. This leaf litter and debris may reduce the slip-resistance for pedestrians with risks of slips and fall events. Any fall events could also be towards the live traffic/ parking lane.</p>  <p><b>Above:</b> The large volume of leaf litter reduces slip-resistance for pedestrians moving to and from this gate (to the pre-school).</p>	Low



Ref	Location	Road safety audit finding	Priority
14	Wombat crossing over Avoca Street to the north of Market Street.	<p>During the morning school zone period, the wombat crossing was controlled by a school crossing supervisor (see top image). However, in the afternoon period (bottom image and as inspected) there was no crossing supervisor in place. This is an anomaly, and the audit team were uncertain as to why one school zone period benefits from this road safety resource whilst this is not matched in the afternoon school zone period.</p> <div data-bbox="488 320 1272 788" data-label="Image"> </div> <div data-bbox="488 793 1272 1153" data-label="Image"> </div> <p><b>Top:</b> There was a school crossing supervisor on the wombat crossing during the inspected morning school zone period.</p> <p><b>Bottom:</b> During the afternoon school zone period (as inspected), there was no school crossing supervisor in place.</p>	To note

### 3 Concluding statement

*DC Traffic Engineering* has undertaken an *existing stage* road safety audit of the project in accordance with the methodology outlined in Section 1 of this report.

Issues identified have been noted in this report for the Project Manager to review, assess, and where appropriate, make the necessary recommendations to improve safety.



Damien Chee  
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Accredited Level 3 Road Safety Auditor (RSA-02-0094)  
DC Traffic Engineering Pty Ltd

## Appendix A

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### Road Safety Audit Checklist



Checklist questions	Comments
<b>6.1 Road alignment and cross section</b>	
<b>1 Visibility</b> <ul style="list-style-type: none"> <li>▪ sight distance Is sight distance adequate for the speed of traffic using the route?</li> <li>▪ Is adequate sight distance provided for intersections and crossings? (eg. pedestrian, cyclist, cattle, railway)</li> <li>▪ Is adequate sight distance provided at all private driveways and property entrances?</li> </ul>	<p>Poor visibility to SCHOOL ZONE sign noted.</p> <p>Poor visibility from outbound gate of pre-school to Chepstow Street.</p>
<b>2 Design speed</b> <ul style="list-style-type: none"> <li>▪ Is the horizontal and vertical alignment suitable for the (85th percentile) traffic speed?</li> <li>▪ If not are: <ul style="list-style-type: none"> <li>○ Warning signs installed? Advisory speed signs installed?</li> <li>○ Are the posted advisory speeds for curves appropriate?</li> </ul> </li> </ul>	Yes.
<b>3 Speed limit/speed zoning</b> <ul style="list-style-type: none"> <li>▪ Is the speed limit compatible with the function, road geometry, land use and sight distance?</li> </ul>	Poor visibility to SCHOOL ZONE sign noted.
<b>4 Overtaking</b> <ul style="list-style-type: none"> <li>▪ Are safe overtaking opportunities provided?</li> </ul>	<p>Lack of passing clearance in Chepstow Street due to narrow channel between parked cars.</p> <p>Risk of <i>rear-end</i> impact with northbound buses on Avoca Street when they stop at an angle to the kerb (due to the wombat crossing).</p>
<b>5 Readability by drivers</b> <ul style="list-style-type: none"> <li>▪ Is the road free of elements which may cause confusion? For example: <ul style="list-style-type: none"> <li>○ Is alignment of the roadway clearly defined?</li> <li>○ Has disused pavement (if any) been removed or treated?</li> <li>○ Have old pavement markings been removed properly?</li> <li>○ Do tree lines follow the road alignment?</li> <li>○ Does the line of street lights or the poles follow the road alignment?</li> </ul> </li> <li>▪ Is the road free of misleading curves or combinations of curves?</li> </ul>	Yes.
<b>6 Widths</b> <ul style="list-style-type: none"> <li>▪ Are medians and islands of adequate width for the likely users?</li> <li>▪ Are traffic lane and carriageway widths adequate for the traffic volume and mix?</li> <li>▪ Are bridge widths adequate?</li> </ul>	Lack of passing clearance in Chepstow Street.

Checklist questions	Comments
<b>7 Shoulders</b> <ul style="list-style-type: none"> <li>Are shoulders wide enough to allow drivers to regain control of errant vehicles?</li> <li>Are shoulders wide enough for broken down or emergency vehicles to stop safely?</li> <li>Are shoulders sealed?</li> <li>Are shoulders trafficable for all vehicles and road users? (I.e. are shoulders in good condition)</li> <li>Is the transition from road to shoulder safe? (no drop-offs)</li> </ul>	NA.
<b>8 Crossfalls</b> <ul style="list-style-type: none"> <li>Is appropriate superelevation provided on curves?</li> <li>Is any adverse crossfall safely managed (for cars, trucks, etc.)?</li> <li>Do crossfalls (carriageway and shoulder) provide adequate drainage?</li> </ul>	NA.
<b>9 Batter slopes</b> <ul style="list-style-type: none"> <li>Are batter slopes traversable by cars and trucks which run off the road?</li> </ul>	NA.
<b>10 Drains</b> <ul style="list-style-type: none"> <li>Are roadside drains and culvert end walls traversable?</li> </ul>	Yes.
<b>6.2 Auxiliary lanes</b>	
<b>1 Tapers</b> <ul style="list-style-type: none"> <li>Are starting and finishing tapers located and aligned correctly?</li> <li>Is there sufficient sight distance to the end of the auxiliary lane?</li> </ul>	NA.
<b>2 Shoulders</b> <ul style="list-style-type: none"> <li>Are appropriate shoulder widths provided at merges?</li> <li>Have shoulder widths been maintained beside the auxiliary lane?</li> </ul>	NA.
<b>3 Signs and markings</b> <ul style="list-style-type: none"> <li>Have all signs been installed in accordance with the appropriate guidelines?</li> <li>Are all signs conspicuous and clear?</li> <li>Does all linemarking conform to these guidelines (particularly three merge arrows)?</li> <li>Is there advance warning of approaching auxiliary lanes?</li> </ul>	NA.
<b>4 Turning</b> <ul style="list-style-type: none"> <li>Have right turns from the through lane been avoided?</li> <li>Is there advance warning of turn lanes?</li> </ul>	NA.
<b>6.3 Intersections</b>	
<b>1 Location</b> <ul style="list-style-type: none"> <li>Are all intersections located safely with respect to the horizontal and vertical alignment?</li> <li>Where intersections occur at the end of high speed environments (eg. at approaches to towns), are there traffic control devices to alert drivers?</li> </ul>	Yes.

Checklist questions	Comments
<b>2 Visibility</b> <ul style="list-style-type: none"> <li>▪ sight distance <ul style="list-style-type: none"> <li>○ Is the presence of each intersection obvious to all road users?</li> <li>○ Is the sight distance appropriate for all movements and all users?</li> <li>○ Is there stopping sight distance to the rear of any queue or slow moving turning vehicles?</li> <li>○ Has the appropriate sight distance been provided for entering and leaving vehicles?</li> </ul> </li> </ul>	Poor visibility from outbound gate on Chepstow Street due to parked cars.
<b>3 Controls and delineation</b> <ul style="list-style-type: none"> <li>▪ Are pavement markings and intersection control signs satisfactory?</li> <li>▪ Are vehicle paths through intersections delineated satisfactorily?</li> <li>▪ Are all lanes properly marked (including any arrows)?</li> </ul>	Yes.
<b>4 Layout</b> <ul style="list-style-type: none"> <li>▪ Are all conflict points between vehicles safely managed?</li> <li>▪ Is the intersection layout obvious to all road users?</li> <li>▪ Is the alignment of kerbs obvious and appropriate?</li> <li>▪ Is the alignment of traffic islands obvious and appropriate?</li> <li>▪ Is the alignment of medians obvious and appropriate?</li> <li>▪ Can all likely vehicle types be accommodated?</li> <li>▪ Are merge tapers long enough?</li> <li>▪ Is the intersection free of capacity problems which may produce safety problems?</li> </ul>	The pick up and drop off operations generally worked smoothly due to the traffic management plan implemented by the school. Some non-compliances were observed.
<b>5 Miscellaneous</b> <ul style="list-style-type: none"> <li>▪ Particularly at rural sites, are all intersections free of loose gravel?</li> </ul>	Yes.
<b>6.4 Signs and lighting</b>	
<b>1 Lighting</b> <ul style="list-style-type: none"> <li>▪ Is lighting required and if so, has it been adequately provided?</li> <li>▪ Is the road free of features which interrupt illumination (eg. trees or overbridges)?</li> <li>▪ Is the road free of lighting poles which are a fixed roadside hazard?</li> <li>▪ Are frangible or slip-base poles provided?</li> <li>▪ Ambient lighting: if it creates special lighting needs, have these been satisfied?</li> <li>▪ Is the lighting scheme free of confusing or misleading effects on signals or signs?</li> <li>▪ Is the scheme free of any lighting black patches?</li> </ul>	Yes. Although this is less relevant to school zone periods.

Checklist questions	Comments
<b>2 General signs issues</b> <ul style="list-style-type: none"> <li>Are all necessary regulatory, warning and direction signs in place? Are they conspicuous and clear?</li> <li>Are the correct signs used for each situation, and is each sign necessary?</li> <li>Are all signs effective for all likely conditions (eg. day, night, rain, fog, rising or setting sun, oncoming headlights, poor lighting)?</li> <li>If restrictions apply for any class of vehicle, are drivers adequately advised?</li> <li>If restrictions apply for any class of vehicle, are drivers advised of alternative routes?</li> </ul>	Signage issues noted.
<b>3 Sign legibility</b> <ul style="list-style-type: none"> <li>In daylight and darkness, are signs satisfactory regarding: <ul style="list-style-type: none"> <li>visibility: <ul style="list-style-type: none"> <li>Clarity of message?</li> <li>Readability/legibility at the required distance?</li> </ul> </li> </ul> </li> <li>Is sign retroreflectivity or illumination satisfactory?</li> <li>Are signs able to be seen without being hidden by their background or adjacent distractions?</li> <li>Is driver confusion due to too many signs avoided?</li> </ul>	SCHOOL ZONE signs at western end of scheme on Stanley Street are obscured by tree foliage.
<b>4 Sign supports</b> <ul style="list-style-type: none"> <li>Are sign supports out of the clear zone?</li> <li>If not, are they: <ul style="list-style-type: none"> <li>Frangible?</li> <li>Shielded by barriers (eg. guard fence, crash cushions)?</li> </ul> </li> </ul>	Yes. This is a low-speed environment.
<b>6.5 Markings and delineation</b>	
<b>1 General Issues</b> <ul style="list-style-type: none"> <li>Is the line marking and delineation: <ul style="list-style-type: none"> <li>Appropriate for the function of the road?</li> <li>Consistent along the route?</li> <li>Likely to be effective under all expected conditions? (day, night, wet, dry, fog, rising and setting sun position, oncoming headlights, etc)</li> </ul> </li> <li>Is the pavement free of excessive markings? (eg. unnecessary turn arrows, unnecessary barrier lines, etc.)</li> </ul>	The median refuge on Stanley Street could be augmented better with outlines (edgelines).
<b>2 Centrelines, edgelines, lane lines</b> <ul style="list-style-type: none"> <li>Are centrelines, edgelines, and lane lines provided? If not, do drivers have adequate guidance?</li> <li>Are RRPM's required?</li> <li>If RRPM's are installed, are they correctly placed, correct colours, in good condition?</li> <li>Are profiled (audible) edgelines provided where required?</li> <li>Is the linemarking in good condition?</li> <li>Is there sufficient contrast between linemarking and pavement colour?</li> </ul>	Yes.

Checklist questions	Comments
<b>3 Guideposts and reflectors</b> <ul style="list-style-type: none"> <li>Are guideposts appropriately installed?</li> <li>Are delineators clearly visible?</li> <li>Are the correct colours used for the delineators?</li> <li>Are the delineators on guard fences, crash barriers and bridge railings consistent with those on guideposts?</li> </ul>	NA.
<b>4 Curve warning and delineation</b> <ul style="list-style-type: none"> <li>Are curve warning signs and advisory speed signs installed where required?</li> <li>Are advisory speed signs consistent along the route?</li> <li>Are the signs correctly located in relation to the curve? (ie. not too far in advance)</li> <li>Are the signs large enough?</li> <li>Are chevron alignment markers (CAMs) installed where required?</li> <li>Is the positioning of CAMs satisfactory to provide guidance around the curve?</li> <li>Are the CAMs the correct size?</li> <li>Are CAMs confined to curves (not used to delineate islands, etc)?</li> </ul>	NA.
<b>6.6 Crash barriers and clear zones</b>	
<b>1 Clear zones</b> <ul style="list-style-type: none"> <li>Is the clear zone width traversable (i.e. drivable)?</li> <li>Is the clear zone width free of rigid fixtures? (if not, can all of these rigid fixtures be removed or shielded?)</li> <li>Are all power poles, trees, etc., at a safe distance from the traffic paths?</li> <li>Is the appropriate treatment or shielding provided for any objects within the clear zone?</li> </ul>	NA. This is a low-speed environment.
<b>2 Crash barriers</b> <ul style="list-style-type: none"> <li>Are crash barriers installed where necessary?</li> <li>Are crash barriers installed at all necessary locations in accordance with the relevant guidelines?</li> <li>Are the barrier systems suitable for the purpose?</li> <li>Are the crash barriers correctly installed?</li> <li>Is the length of crash barrier at each installation adequate?</li> <li>Is guard fence attached correctly to bridge railings?</li> <li>Is there sufficient width between the barrier and the edge line to contain a broken down vehicle?</li> </ul>	NA. This is a low-speed environment.
<b>3 End treatments</b> <ul style="list-style-type: none"> <li>Are end treatments constructed correctly?</li> <li>Is there a safe run off area behind breakaway terminals?</li> </ul>	NA. This is a low-speed environment.
<b>4 Fences</b> <ul style="list-style-type: none"> <li>Are pedestrian fences frangible?</li> <li>Are vehicles safe from being "speared" by horizontal fence railings located within the clear zone?</li> </ul>	NA.



Checklist questions	Comments
<b>5 Visibility of barriers and fences</b> <ul style="list-style-type: none"> <li>Is there adequate delineation and visibility of crash barriers and fences at night?</li> </ul>	NA.
<b>6.7 Traffic signals</b>	
<b>1 Operations</b> <ul style="list-style-type: none"> <li>Are traffic signals operating correctly?</li> <li>Are the number, location and type of signal displays appropriate for the traffic mix and traffic environment?</li> <li>Where necessary, are there provisions for visually impaired pedestrians (eg. audio-tactile push buttons, tactile markings)?</li> <li>Where necessary, are there provisions for elderly or disabled pedestrians (eg. extended green or clearance phase)?</li> <li>Is the controller located in a safe position? (i.e. where it is unlikely to be hit, but maintenance access is safe)</li> <li>Is the condition (especially skid resistance) of the road surface on the approaches satisfactory?</li> </ul>	There are no traffic signals in the audited area.
<b>2 Visibility</b> <ul style="list-style-type: none"> <li>Are traffic signals clearly visible to approaching motorists?</li> <li>Is there adequate stopping sight distance to the ends of possible vehicle queues?</li> <li>Have any visibility problems that could be caused by the rising or setting sun been addressed?</li> <li>Are signal displays shielded so that they can be seen only by the motorists for whom they are intended?</li> <li>Where signal displays are not visible from an adequate distance, are signal warning signs and/or flashing lights installed?</li> <li>Where signals are mounted high for visibility over crests, is there adequate stopping sight distance to the ends of traffic queues?</li> <li>Is the primary signal free from obstructions on the nearside footway to approaching drivers? (trees, light poles, signs, bus stops, etc)</li> </ul>	There are no traffic signals in the audited area.
<b>6.8 Pedestrians and cyclists</b>	
<b>1 General issues</b> <ul style="list-style-type: none"> <li>Are there appropriate travel paths and crossing points for pedestrians and cyclists?</li> <li>Are safety fences installed where necessary to guide pedestrians and cyclists to crossings or overpasses?</li> <li>Are safety barriers installed where necessary to separate vehicle, pedestrian and cyclist flows?</li> <li>Are pedestrian and bicycle facilities suitable for night use?</li> </ul>	Issues noted with pedestrian refuge on Stanley Street.

Checklist questions	Comments
<b>2 Pedestrians</b> <ul style="list-style-type: none"> <li>Is there adequate separation distance between vehicular traffic and pedestrians on footways?</li> <li>Is there an adequate number of pedestrian crossings along the route?</li> <li>At crossing points is fencing oriented so pedestrians face oncoming traffic?</li> <li>Is there adequate provision for the elderly, the disabled, children, wheelchairs and baby carriages (eg. holding rails, kerb and median crossings, ramps)?</li> <li>Are adequate hand rails provided where necessary (eg. on bridges, ramps)?</li> <li>Is signing about pedestrians near schools adequate and effective?</li> <li>Is signing about pedestrians near any hospital adequate and effective?</li> <li>Is the distance from the stop line to a cross walk sufficient for truck drivers to see pedestrians?</li> </ul>	Issues noted with pedestrian refuge on Stanley Street.
<b>3 Cyclists</b> <ul style="list-style-type: none"> <li>Is the pavement width adequate for the number of cyclists using the route?</li> <li>Is the bicycle route continuous (i.e. free of squeeze points or gaps)?</li> <li>Are drainage pit grates 'bicycle safe'?</li> </ul>	Yes.
<b>4 Public transport</b> <ul style="list-style-type: none"> <li>Are bus stops safely located with adequate visibility and clearance to the traffic lane?</li> <li>Are bus stops in rural areas sign posted in advance?</li> <li>Are shelters and seats located safely to ensure that sight lines are not impeded? Is clearance to the road adequate?</li> <li>Is the height and shape of the kerb at bus stops suitable for pedestrians and bus drivers?</li> </ul>	Bus access to kerb on Avoca Street noted as an issue.
<b>6.9 Bridges and culverts</b>	
<b>1 Design features</b> <ul style="list-style-type: none"> <li>Are bridges and culverts the full formation width?</li> <li>Are bridge and culvert carriageway widths consistent with approach conditions?</li> <li>Is the approach alignment compatible with the 85th percentile travel speed?</li> <li>Have warning signs been erected if either of the above two conditions (i.e. width and speed) are not met?</li> </ul>	NA.
<b>2 Crash barriers</b> <ul style="list-style-type: none"> <li>Are there suitable traffic barriers on bridges and culverts and their approaches to shield errant vehicles?</li> <li>Is the connection between barrier and bridge safe?</li> <li>Is the bridge free of kerbing which would reduce the effectiveness of barriers or rails?</li> </ul>	NA.
<b>3 Miscellaneous</b> <ul style="list-style-type: none"> <li>Are pedestrian facilities on the bridge appropriate and safe?</li> <li>Is fishing from the bridge prohibited? If not, has provision been made for "safe" fishing?</li> <li>Does delineation continue over the bridge?</li> </ul>	NA.

Checklist questions	Comments
<b>6.10 Pavement</b>	
<b>1 Pavement defects</b> <ul style="list-style-type: none"> <li>Is the pavement free of defects (eg. excessive roughness or rutting, potholes, loose material, etc) which could result in safety problems (eg. loss of steering control)?</li> <li>Is the condition of the pavement edges satisfactory?</li> <li>Is the transition from pavement to shoulder free of dangerous edge drop offs?</li> </ul>	Narrow footpaths on the Avoca Street frontage.
<b>2 Skid resistance</b> <ul style="list-style-type: none"> <li>Does the pavement appear to have adequate skid resistance, particularly on curves, steep grades and approaches to intersections?</li> <li>Has skid resistance testing been carried out where necessary?</li> </ul>	Yes.
<b>3 Ponding</b> <ul style="list-style-type: none"> <li>Is the pavement free of areas where ponding or sheet flow of water could contribute to safety problems?</li> </ul>	Yes.
<b>4 Loose stones/material</b> <ul style="list-style-type: none"> <li>Is the pavement free of loose stones and other material?</li> </ul>	Loose leaf litter near pre-school gate noted.
<b>6.11 Parking</b>	
<b>1 General issues</b> <ul style="list-style-type: none"> <li>Are the provisions for or restrictions on parking satisfactory in relation to traffic safety?</li> <li>Is the frequency of the parking turnover compatible with the safety of the route?</li> <li>Is there sufficient parking for delivery vehicles so that safety problems due to double parking do not occur?</li> <li>Are parking manoeuvres along the route possible without causing safety problems? (eg. angle parking)</li> <li>Is the sight distance at intersections and along the route, unaffected by parked vehicles?</li> </ul>	<p>Stopping and unloading practices in <i>no stopping</i> zones noted.</p> <p>Queueing noted in <i>no stopping</i> zones and bus zones.</p>
<b>6.12 Provision for heavy vehicles</b>	
<b>1 Design issues</b> <ul style="list-style-type: none"> <li>Are overtaking opportunities available for heavy vehicles where volumes are high?</li> <li>Does the route generally cater for the size of vehicle likely to use it?</li> <li>Is there adequate manoeuvring room for large vehicles along the route, at intersections, roundabouts, etc.?</li> <li>Is access to rest areas and truck parking areas adequate for the size of vehicle expected? (Consider acceleration, deceleration, shoulder widths, etc.)</li> </ul>	NA. Low demand.

Checklist questions	Comments
<b>2 Pavement/shoulder quality</b> <ul style="list-style-type: none"> <li>Are shoulders sealed at bends to provide additional pavement for long vehicles?</li> <li>Is the pavement width adequate for heavy vehicles?</li> <li>In general, is the pavement quality sufficient for the safe travel of heavy and oversized vehicles?</li> <li>On truck routes, are reflective devices appropriate for truck drivers' eye heights?</li> </ul>	NA.
<b>6.13 Floodways and causeways</b>	
<b>1 Ponding, flooding</b> <ul style="list-style-type: none"> <li>Are all sections of the route free from ponding or flow across the road during wet weather?</li> <li>If there is ponding or flow across the road during wet weather, is there appropriate signposting?</li> <li>Are floodways and causeways correctly signposted?</li> </ul>	NA.
<b>2 Safety of devices</b> <ul style="list-style-type: none"> <li>Are all culverts or drainage structures located outside the clear roadside recovery area?</li> <li>If not, are they shielded from the possibility of vehicle collision?</li> </ul>	NA.
<b>6.14 Miscellaneous</b>	
<b>1 Landscaping</b> <ul style="list-style-type: none"> <li>Is landscaping in accordance with guidelines (eg. clearances, sight distance)?</li> <li>Will existing clearances and sight distances be maintained following future plant growth?</li> <li>Does the landscaping at roundabouts avoid visibility problems?</li> </ul>	Overhanging tree foliage affects spatial clearance for pedestrians on western side of Avoca Street, and also blocks driver visibility to signage on Stanley Street.
<b>2 Temporary works</b> <ul style="list-style-type: none"> <li>Are all locations free of construction or maintenance equipment that is no longer required?</li> <li>Are all locations free of signs or temporary traffic control devices that are no longer required?</li> </ul>	Yes.
<b>3 Headlight glare</b> <ul style="list-style-type: none"> <li>Have any problems that could be caused by headlight glare been addressed (eg. a two-way service road close to main traffic lanes, the use of glare fencing or screening)?</li> </ul>	Yes.
<b>4 Roadside activities</b> <ul style="list-style-type: none"> <li>Are the road boundaries free of any activities that are likely to distract drivers?</li> <li>Are all advertising signs installed so that they do not constitute a hazard?</li> </ul>	Yes.
<b>5 Errant vehicles</b> <ul style="list-style-type: none"> <li>Is the roadside furniture on the verges and footways free of damage from errant vehicles which could indicate a possible problem, hazard or conflict at the site?</li> </ul>	NA. This is a low-speed environment.

Checklist questions	Comments
<b>6 Other safety issues</b> <ul style="list-style-type: none"> <li>▪ Is the embankment stability safe?</li> <li>▪ Is the route free of unsafe overhanging branches?</li> <li>▪ Is the route free of visibility obstructions caused by long grass?</li> <li>▪ Are any high wind areas safely dealt with?</li> <li>▪ If back to back median kerbing is used is it: <ul style="list-style-type: none"> <li>○ Adequately delineated?</li> <li>○ Obvious where it starts?</li> <li>○ Obvious at intersections?</li> <li>○ Unlikely to be a hazard to pedestrians?</li> </ul> </li> </ul>	NA.
<b>7 Rest Areas</b> <ul style="list-style-type: none"> <li>▪ Is the location of rest areas and truck parking areas along the route appropriate?</li> <li>▪ Is there adequate sight distance to the exit and entry points from rest areas and truck parking areas at all times of the day?</li> </ul>	NA.
<b>8 Animals</b> <ul style="list-style-type: none"> <li>▪ Is the route free from large numbers of animals (eg. cattle, sheep, kangaroos, koalas, wombats, etc.)?</li> <li>▪ If not, is it protected by animal-proof fencing?</li> </ul>	NA.



## APPENDIX B

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### Traffic and Parking Policy



# EMANUEL SCHOOL

## Emanuel School Traffic Warden and GWTF flow procedures

In an ongoing effort to provide the more efficient traffic management system for our Go with The Flow (GWTF) and morning drop off times this document has been put together to outline the new procedures for the safe management at both our student release times and general boundary parking of our campus.

This document outlines the daily operational procedures for the Emanuel school Traffic Warden, GWTF students release staff and parents/guardians.

## Avoca Street GWTF procedures

### Traffic Warden

The Traffic Warden is to wear the Hi-Viz vest always provided and carry their ID. The warden will also carry a note book and pen for reporting purposes.

The traffic warden will begin their shift at **8am to 9am** at Avoca Street. They will be responsible for positioning the school signs along Stanley st and will be tasked primarily with moving cars along from parking in the bus zone around to the Avoca drop off point.

This will keep the area clear for the STA and excursion buses of vehicles in the Stanley area to assist with the flow of traffic.

The Traffic Warden will be on position from **3:00pm to 4:00pm** on Avoca Street. They will be responsible for placing out the traffic cones, the rules of parking and parental pick zone signs daily.

Once signs are placed out the traffic warden will be primarily responsible for.

- Continually moving GWTF vehicles along Avoca to the “parental pick up/drop off point” located at nth end of the campus
- Moving along vehicles parked in the no stopping and bus zones located at the sth end of GWTF
- Advising the parents in these zones to continue around GWTF again until space has opened in the que
- Reporting to the school any parents or guardians who violate the parking restrictions repeatedly for follow up
- Assisting students getting in/out of vehicles
- Return all GWTF equipment after use

### GWTF Avoca Street Teacher Procedure pick up

At 3:15pm daily the GWTF Student release teacher and Duty Teacher will proceed to the Avoca gate for GWTF. Security will provide a megaphone and radios for communication of the staff on duty.

GWTF will operate with 4x staff to maintain;

1. **“2 x Student release teachers” (outside )** call the names out of first 4 cars arrived at the set “Parental Pick up Zone” at the nth (Kornmehl) end of GWTF over the radio provided. Please do not call out cars beyond this point to assist with the flow of traffic. If cars have moved out of the zone continually ask cars to move down.

**Students must wait until all vehicles have stopped before entering**

2. **"Duty teacher" (inside)** will be provided the names of the students called over the radio via the megaphone for release only in the parental pick-up Zone, the students will be released from the grounds and walk down to enter their vehicles.
3. **"Traffic warden"** will be on position to continually asking the cars to move down and not park in the bus zone, watch the flow and report the issues raised

To ensure the most efficient movement of traffic please continually remind parents;

- Parents are to continually move down as the flow will be determined by position in the que not by call out any more
- Do not park and exit your vehicle but remain in the que
- Only have children enter from the kerb and not enter from Avoca Street

### **Parents Avoca GWTF procedures**

We have invested significant time and effort to put measures in place that will reduce waiting times and address safety concerns generated by congestion and unsafe behaviour. In addition to the new signage, restricted access to Music room entrance and our Traffic Warden, who will seek to support our Go with The Flow (GWTF) process and to ensure that cars do not park illegally in bus zones. This will keep the area clear for the STA and excursion buses in Stanley Street.

Your support of this new role to keep your children safe, and in following the process outlined below, would be greatly appreciated:

1. Drive to allocated collection point only at the Peace Park end of Avoca Street (please do not stop midway in line and walk to the gate or collect your child). Students will be released one at a time, when car arrives at the collection point.
2. Remain in your car, so that your child/ren can approach and access the car from the footpath.
3. Drop off your child/ren any time after 7:30am
4. Respond in a polite and respectful manner to staff providing directions.

If you are unable to join the que due to available positions, we ask that you follow the GWTF and continue around the block until space becomes available.

Following the path and flow of traffic please proceed to **Carter st** to **Castle st** to **Stephen st** to **Monmouth St-Stanley St** then return to **Avoca St** to re-join the que.

Reference maps below.





Get in and out of the car using the 'safety door'

- The rear kerb side door of the car is the 'safety door'
- Teach your children to get in and out of the car by the 'safety door'
- Never allow children to get out of the car on the traffic side
- This is extremely important with young children (ref. RTA)

The following behaviours put children at risk outside the school:

- Calling children across the road
- Dropping children on the wrong side of the road
- Leaving children in a vehicle without adult supervision
- Double parking
- Parking in no stopping
- Parking in a bus zone or driveway
- Making an illegal U-turn (ref. RTA)

Under no circumstances stop or park behind the pedestrian crossing at the corner of Avoca & Stanley Streets. Parking unsafely can put children's lives at risk. Increased fines and loss of demerit points apply.

**PLEASE:** Help us ensure the safety of all students, staff, and families. Help us to be good neighbours. Always observe the parking signs outside the school. They are designed to keep children safe.

## Kornmehl preschool GWTF procedure

### Traffic Warden

The Traffic Warden is to wear the Hi-Viz vest always provided and carry their ID. The warden will also carry a notepad and pen for reporting purposes.

The traffic warden will begin their shift at **7:30am to 8:30am** on Stephen Street. They will be responsible for positioning the school access stop signs along entry and will be tasked primarily with moving cars along



maintaining the carpark flow of traffic, timing and collecting reporting of parents who double park or breach rules. The Traffic Warden will be on position from **3:00pm to 4:00pm** on. They will be responsible for placing out the traffic cones, the rules of parking and parental pick zone signs daily. Once signs are placed out the traffic warden will be primarily responsible for.

- Continually moving GWTF vehicles along Stephen st to the “parental pick carpark” located
- Moving along vehicles double parked, in the no stopping and blocking driveways at the entrance
- Advising the parents in these zones to continue around GWTF again until space has opened in the que
- Reporting to the school any parents or guardians who violate the parking restrictions repeatedly for follow up with Property Manager & Principal
- Return all GWTF equipment after use

### Parents Kornmehl GWTF procedures

- Kornmehl GWTF procedures vary to the Primary school carpark access from pick up and drop off parents/ careers must approach the campus from Wentworth Avenue or Monmouth only.
- Enter through first gate for drop off and pick up.
- **Cars in the car park cannot stay longer then 10-minutes.**
- When leaving Parents/grandparents must not turn left onto Chepstow str out of the Kornmehl car park during drop-off and pick up times.
- Parents will have to turn right and go one block down and using Monmouth Street or Wentworth for pick up and drop off. This will make the world of difference to the traffic flow and to our neighbours who are trying to get out of their houses at these peak times.
- DO NOT park in Peace Park, illegally or double park down Stephens St while waiting to get into the Kornmehl gates. Traffic wardens will be monitoring the traffic at peak times and will be reporting repeat offenders.
- Your co-operation is much appreciated and ensures the safety of all the children and families in the Pre-school, as well as ensuring car spaces in the car park are available during peak times.
- Timing of your pickup is going to be crucial please ensure you have made ample arrival times for your child’s pick-up time as to not cause congestion by waiting to make this work for everyone.

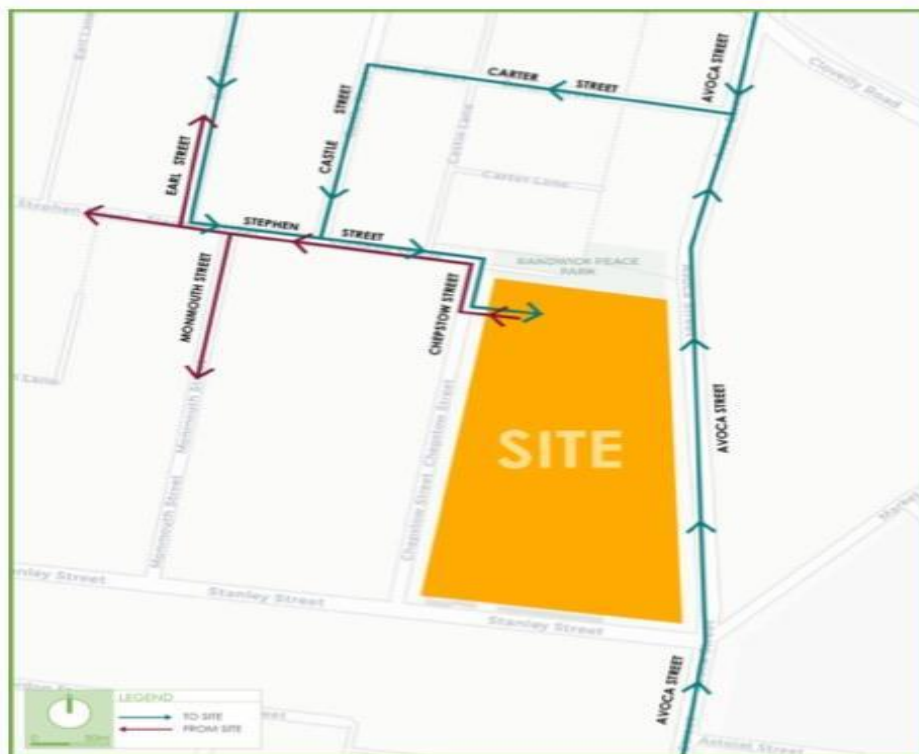
### Kornmehl Sibling families

Families with children in both Kornmehl and in the Primary School, can do one drop-off and pick up through the Kornmehl side gate where the security guard hut is situated.

- Parents can walk their Emanuel School child up (**K-2 only**) through the Kornmehl garden in the mornings between 8am and 8.20am and help them to open the gate that leads up to Emanuel School. Primary School children must then walk up on their own to their classrooms.
- In the afternoons, any Primary School children needing to come down to Kornmehl to be collected, must follow the instructions from the Primary School k-2 may vary from 3-6. High school will not be permitted access via carpark.
- A teacher will be allocated to supervise the children and bring them down to the Pre-school.
- The children will wait at the side gate of the Kornmehl garden and be handed over to their parent/carer.
- K-2 children will be brought all the way down to the Kornmehl side gate by a Primary teacher from 3.20pm.
- K-2 children will thus be able to be collected from Kornmehl between 3.20pm and 3.30pm.
- The teacher will hand K-2 children over to their parents/carers at the side gate by the guard hut.
- All families with children in Years 3-6 will continue to pick up from the side gate from 3.35pm. These children will be brought down by a separate teacher in the afternoon.
- Children who are waiting will be supervised by a Primary School teacher and may NOT play on any of the equipment while they are waiting.
- **Parents who are waiting for children to come down from Primary School, may not park in the Kornmehl car park for longer than the allocated 10 minutes. Plan your arrival accordingly**

- Primary School children in Years 3-6, will only be brought down around 3.35pm. DO NOT arrive any earlier than 3.30pm to pick up your Kornmehl child to allow space in the car park for the second pick up.
- Families with children in K-2 and 3-6 will need to come at 3.30pm to collect their Kornmehl child and then collect their other children from the side gate at 3.35pm.
- Families are to use the paved pathway down the side of the car park to exit safely and NOT walk across the cars that are collecting children. Please be vigilant and make sure your children are always supervised in the car park.

Please see maps below for reference.



It is the responsibility of the parents of the child to ensure all carers/grandparents and nannies are aware of the carpark pick up protocols in the morning and afternoon.

PLEASE: Help us ensure the safety of all students, staff and families. Help us to be good neighbours. Always observe the parking signs outside the school. They are designed to keep children safe.

