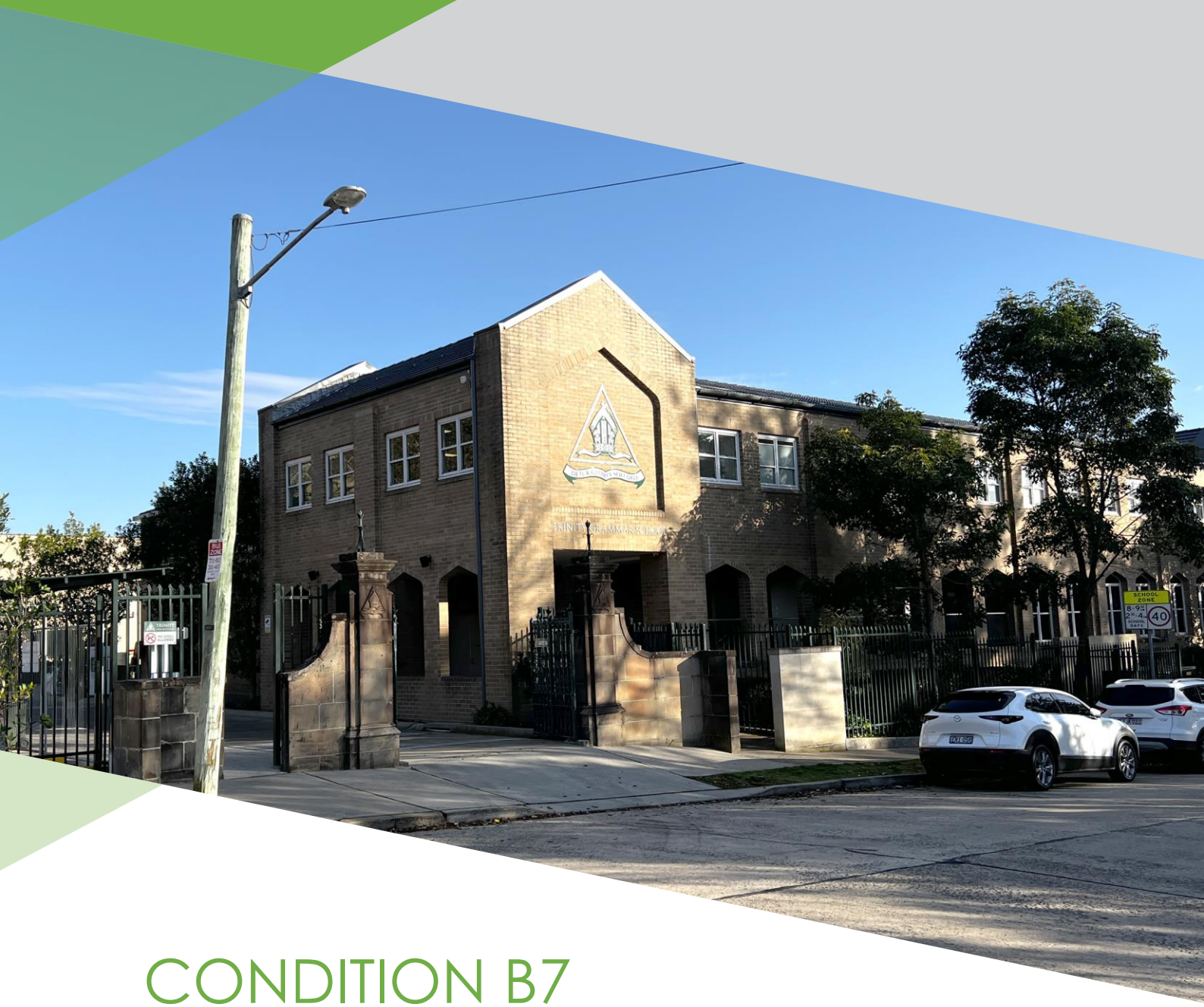
TRAFFIX
TRAFFIC AND TRANSPORT PLANNERS



CONDITION B7
INDEPENDENT AUDIT REPORT

Trinity Grammar School
119 Prospect Road and 50-52 Seaview Street, Summer Hill

Reference: 23.048r03v05
Date: September 2024

Suite 2.08, 50 Holt St
Surry Hills, NSW 2010

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

DOCUMENT VERIFICATION

Job Number	23.048			
Project	Trinity Grammar School			
Client	Bloompark Consulting Pty Ltd			
Revision	Date	Prepared By	Checked By	Signed
v05	16/09/2024	Neil Caga Stephan Hoang	Neil Caga	

TRAFFIX

CONTENTS

1. INTRODUCTION

TRAFFIX has been commissioned by Bloompark Consulting Pty Ltd on behalf of Trinity Grammar School to address Condition B7 of the Modification of Development Consent (SSD-10371-Mod-1) that was granted by the Independent Planning Commission on 24 September 2021.

Specifically, Condition B7 sets out the requirements for a suitably qualified independent auditor (**DC Traffic Engineering**) in consultation with an independent traffic consultant (**TRAFFIX**) to verify the performance of the Jubilee carpark and drop-off / pick-up facilities, as a result of the proposed increase (+60 students and +44 staff) and maximum increase (+445 students and +44 staff) in school populations, as stated below:

*B7. Prior to each staged increase in student and staff numbers (**from the base number of 1655 students and 277 FTE staff**) as described in the Staging Report in condition B12, the Applicant must submit to the satisfaction of the Planning Secretary the results of an independent audit to verify the performance of the Jubilee car park and the drop-off / pick-up facilities. The independent audit must:*

a) Be prepared by a suitably qualified independent auditor, in consultation with an independent traffic consultant, as agreed by the Planning Secretary;

b) Conduct traffic surveys and compare the results against the traffic reports in the EIS to verify that the following operational outcomes have been achieved;

i. The capacity of the Jubilee car park drop-off / pick-up facilities can accommodate the pick-up/drop-off demand within the site during peak AM and PM periods;

ii. The demand for queuing spaces at the Jubilee car park is accommodated within the site;

iii. Off-site impacts including but not limited to queuing on Victoria Street is minimised as far as practicable;

iv. There is adequate capacity in the car park to accommodate an increase in vehicle movements as a result of the proposed staged increase in student numbers.

c) *Be completed on three consecutive school days f or the duration of the day when all grades (K-12) and students are planned to be on site and must state the student and staff numbers present on the data collection dates.*

This monitoring report has been prepared in accordance with Condition B7 of the SSDA Consent and is based on field observations undertaken during a 3-day period between 27 February 2024 and 29 February 2024, inclusive. The independent audit report is structured as follows:

Section 2: Outlines the Audit Report requirements

- Section 3: Details the methodology
- Section 4: Analysis of site inspection results
- Section 5: Concludes the report

2. INDEPENDENT AUDIT REPORT REQUIREMENTS

This independent audit report has been prepared in response to the Modification of Development Consent (SSD-10371-Mod-1) Condition B7, which has been reproduced in **Table 1**.

Table 1: Condition B7 and Report Responses

Condition	Report Reference
a) Be prepared by a suitably qualified independent auditor, in consultation with an independent traffic consultant, as agreed by the Planning Secretary;	The Planning Secretary has agreed for TRAFFIX (independent traffic consultant) and DC Traffic Engineering (independent auditor) to prepare this independent audit report.
b) Conduct traffic surveys and compare the results against the traffic reports in the EIS to verify that the following operational outcomes have been achieved:	**Section 4**
i. The capacity of the Jubilee car park drop-off / pick-up facilities can accommodate the pick-up / drop-off demand within the site during peak AM and PM periods;	**Section 4.1**
ii. The demand for queuing spaces at the Jubilee car park is accommodated within the site;	**Section 4.2**
iii. Off-site impacts including but not limited to queuing on Victoria Street is minimised as far as practicable; and	**Section 4.3**
iv. There is adequate capacity in the car park to accommodate an increase in vehicle movements as a result of the proposed staged increase in student numbers.	**Section 4.4**
c) Be completed on three consecutive school days for the duration of the day when all grades (K-12) and students are planned to be on site and must state the student and staff numbers present on the data collection dates.	**Section 3.1**

Reference should also be made to the Independent Auditor Report prepared by DC Traffic Engineering (independent auditor) included in **Appendix A**.

3. METHODOLOGY

3.1 Survey Duration and School Populations

In accordance with Condition B7(b), parking, traffic and site inspections were undertaken on three (3) consecutive school days on Tuesday (27/02/2024), Wednesday (28/02/2024) and Thursday (29/02/2024), inclusive. It is understood that all grades (K-12) were on-site during the survey period, with the student and staff (mix of full-time, part-time and casual) attendance on each day outlined below.

- Tuesday 27 February 2024
  - 1,601 students and 303 staff in attendance.
- Wednesday 28 February 2024
  - 1,634 students and 290 staff in attendance.
- Thursday 29 February 2024
  - 1,621 students and 290 staff in attendance.

It should be noted that the staff and student attendance numbers can vary from the actual survey numbers due to varying school operations, sick/other leave and the mix of FTE and casual staff on the day.

3.2 Traffic Counts

In accordance with Condition B7(b), traffic surveys were undertaken at the key intersections surrounding the development. This survey data was analysed and compared to the EIS traffic report, with the results identifying minor changes in average intersection delay and is generally consistent with the approved modelling undertaken within the EIS traffic report.

Accordingly, all key intersections were identified to experience minimal traffic impacts, with the surrounding road network anticipated to readily accommodate the proposed increase (+60 students and +44 staff) and maximum increase (+445 students and +44 staff) in school populations.

3.3 Site Inspections

In accordance with Condition B7(b), TRAFFIX has undertaken site inspections at the abovementioned 3-day survey period during the morning peak period (7:00am-9:00am) and the afternoon peak period (2:30pm-4:30pm) to determine/observe the following:

i. The capacity of the basement car park drop-off / pick-up facilities;
ii. Queuing capacity for the basement drop-off / pick-up spaces;
iii. Potential on-street queuing at the Victoria Street vehicular access; and
iv. Queuing capacity within the basement car park.

The above key monitoring and observations were recorded and discussed in **Section 4** of this report, with the individual site inspection observation notes included within **Appendix B**.

4. SITE INSEPCTION ANALYSIS

4.1 Drop-Off and Pick-Up Capacity

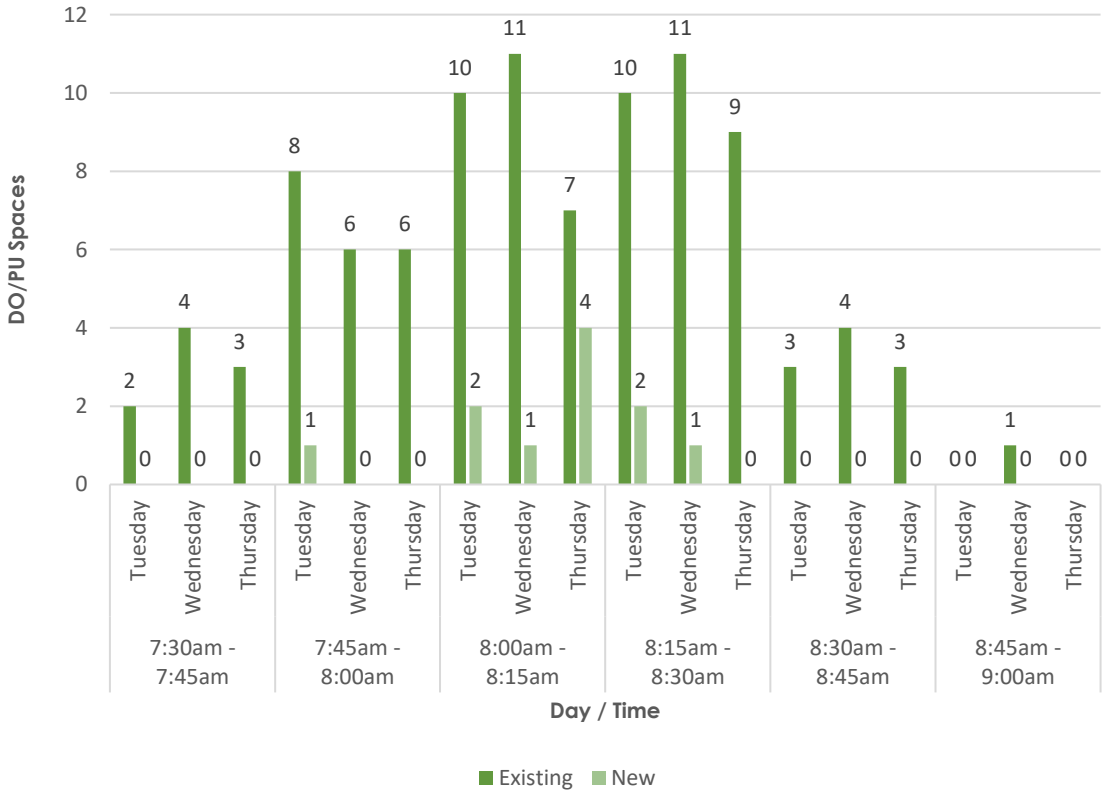
The site inspections identified a total of 28 drop-off and pick-up (DO/PO) spaces, comprising 18 existing spaces and 10 new spaces, noting the following key aspects:

- The number of vehicles recorded during the survey represent the peak number of occupied DO/PU spaces at any given time during each 15-minute interval for each carpark; and
- The average dwell time for each vehicle was generally between 30-60 seconds, excluding parents/carers waiting to pick-up juniors between 2:30-3:00pm.

The monitoring and survey data during each individual site inspection are included in **Appendix B**, with the averaged results outlined below.

4.1.1 Morning Peak Period

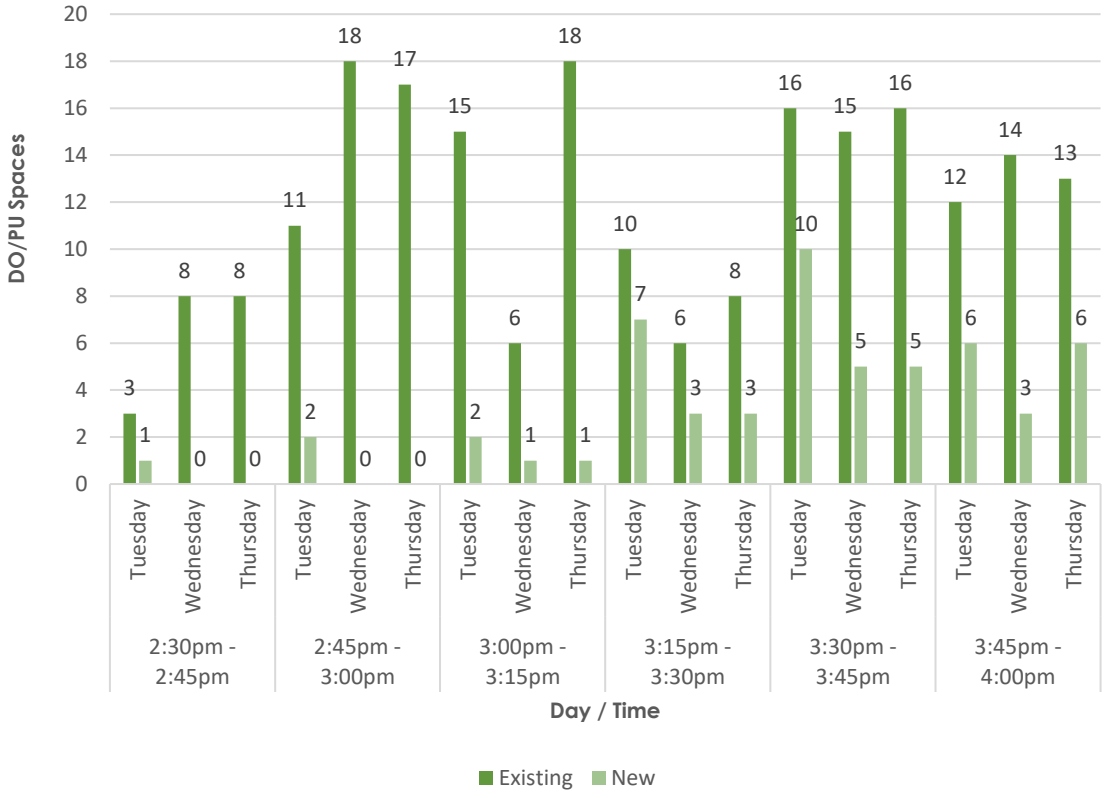
Chart 1: Carpark DO/PU Peak Capacity – Morning Peak



It can be seen from **Chart 1** that during the morning, the peak parking demand for DO/PU spaces was identified between 8:00am-8:30am with 12 parked vehicles (42.9%) and 16 vacant spaces (57.1%) at any given time. On average, there were six (6) parked vehicles (21.6%) and 22 vacant spaces (78.4%) at any given time throughout the morning peak period.

4.1.2 Afternoon Peak Period

Chart 2: Carpark DO/PU Peak Capacity – Afternoon Peak



It can be seen from **Chart 2** that during the afternoon, the peak parking demand for DO/PU spaces was identified between 3:30pm-3:45pm with 26 parked vehicles (92.9%) and two (2) vacant spaces (7.1%) at any given time. It should be emphasised that this parking demand represents the peak number of occupied DO/PU spaces at any given time, i.e. 26 spaces were not being utilised throughout the entire 15-minute period, noting general vehicle dwell times of 30-60 seconds. On average, there were 15 parked vehicles (53.4%) and 13 vacant spaces (46.6%) at any given time throughout the afternoon peak period.

4.1.3 Summary

In summary,

- The internal carpark areas provide sufficient DO/PU spaces during both peak periods to accommodate the existing and proposed school population;

  There was a general under-utilisation of the new DO/PU spaces within the new carpark area, given that no operational classrooms were situated nearby. Once the classrooms are operational, the demand for DO/PU spaces within the new carpark are envisaged to increase, with vehicles anticipated to be distributed throughout both carparks;

  There was a small proportion of vehicles observed to driving with excessive speed within the basement. Consideration should be given to speed calming devices (e.g. speed humps) within the DO/PU areas of the basement carpark;

- Staff traffic marshals were observed at each zebra crossing of the existing and new carpark areas. Furthermore, additional staff have been observed within the carpark during the afternoon peak period, including:
  - Staff member at the northwest corner of the carpark and near the start of the DO/PU spaces to direct vehicles and direct parents/carers of high school students to alternate unmarked DO/PU spaces. Vehicles parked in this area would be directed to DO/PU spaces along the eastern side, once parents/carers of the junior students depart; and
  - Staff members were observed to wait within the waiting area for junior students that announce vehicles and assist students to enter their respective vehicle.

  Parents/carers of junior students were observed to provide students' family names on their windscreen to better assist staff to match students with vehicles; and

- Appropriate signage, line-marking and barriers have been provided within the carpark to guide vehicle movements, designate DO/PU spaces and provide DO/PU safety rules and arrangements.

4.2 Off-Street Queuing

The basement carpark provides one-way traffic circulation in a clockwise direction and provides approximately 120 metres (equivalent to 20 vehicles) of off-street queuing area, noting the following observations:

There was no off-street queuing within the carpark during the morning peak period, with parents/carers observed to drop students off and exit via the new carpark;

There was minimal off-street queuing (generally 5-10 vehicles) within the carpark observed during the afternoon peak period, due to the following:

- Parents/carers parked within the DO/PU spaces waiting to pick-up juniors between 2:30pm-3:00pm; and
- There were an increased number of vehicles observed during the afternoon peak period on Thursday (29/02/2024), which was likely attributed to extreme weather conditions at the time of the survey (40°C+).

- Vehicles queuing for DO/PU spaces were not observed to extend to the bottom of the ramp and as such, all off-street queuing was able to be accommodated within the carpark;
- Excluding parents/carers parked within the DO/PU spaces waiting to pick-up juniors, the average dwell time for each vehicle was generally between 30-60 seconds. This represents a high turnover for DO/PU spaces, resulting in minimal off-street queuing within the carpark;
- In reference to the survey data in **Section 4.1**, the demand for DO/PU spaces did not reach full capacity for both carparks and as such, off-street queuing was generally kept to a minimum.

In summary, the increased number of DO/PU spaces in conjunction with generally high turnover for these spaces, resulted in minimal off-street queuing within the basement carpark that was not observed to extend to the vehicular access. Accordingly, the off-street queuing area within the basement carpark is envisaged to readily accommodate the proposed increased number of staff and students.

4.3 On-Street Queuing

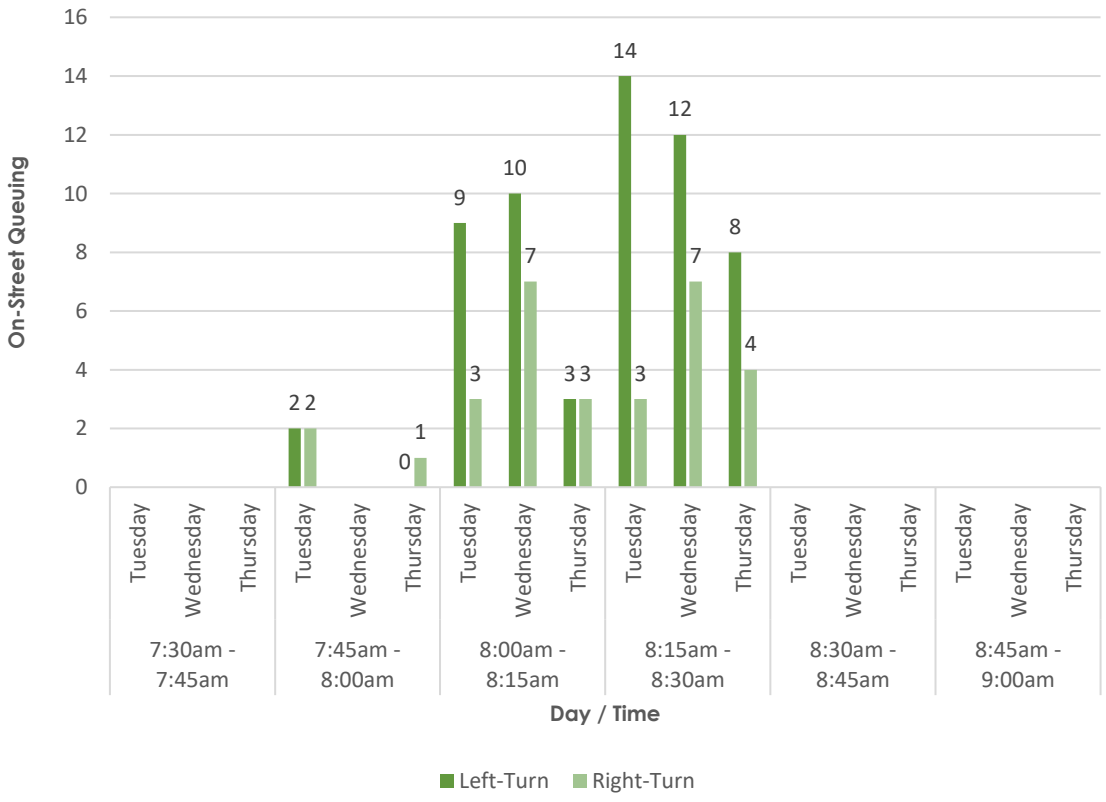
The monitoring survey included observations at the Victoria Street vehicular access of the basement carpark, noting the following key aspects:

- For the purposes of this assessment, queuing was recorded when vehicles were prevented from entering the vehicular access due to stationary vehicles at the ramp;
- The number of vehicles recorded during the survey represent the peak number of on-street vehicles queuing at the vehicular access at any given time during each 15-minute interval;
- The duration of on-street queuing was observed to occur for generally 1-5 minutes, except during an extreme weather event on Thursday (40°C+) afternoon.

The monitoring and survey data during each individual site inspection are included in **Appendix B**, with the averaged results outlined below.

4.3.1 Morning Peak Period

Chart 3: Carpark Vehicular Access Peak Queuing – Morning Peak



It can be seen from **Chart 3** that the peak on-street queuing at the vehicular access was observed between 8:15am-8:30am, with the following aspects noteworthy:

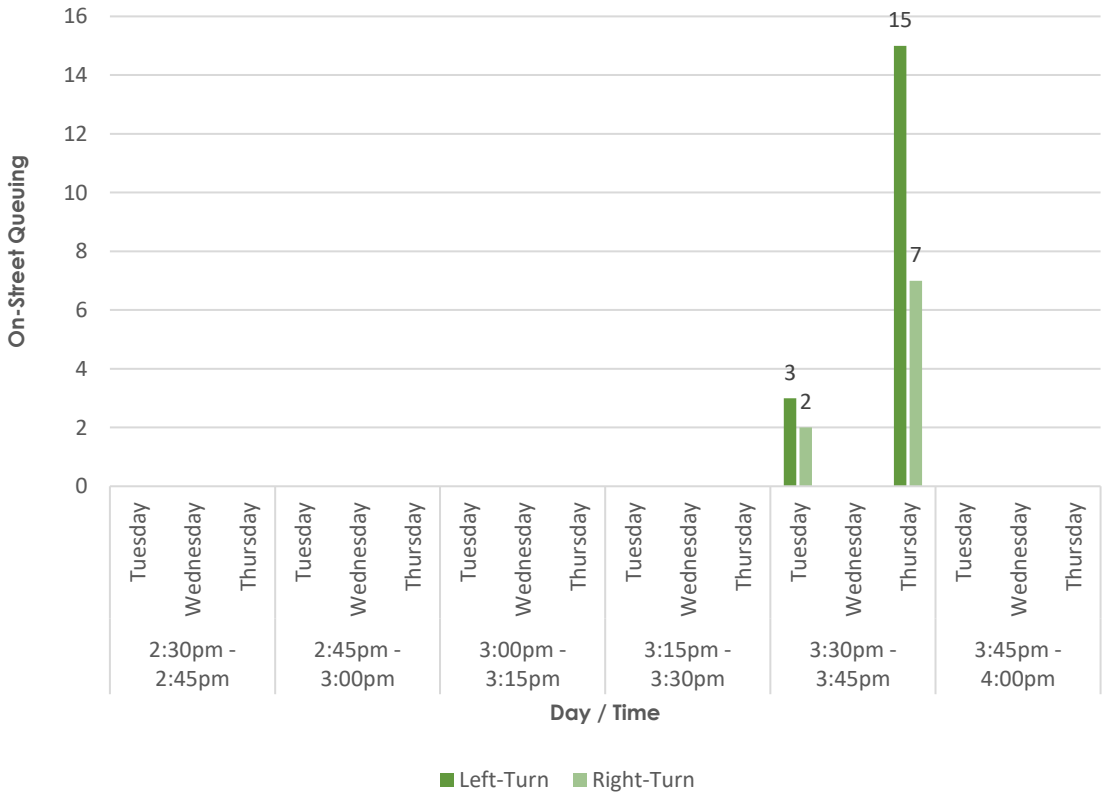
On-street queuing was observed between 8:00am-8:30am, with the vehicular access clear from 8:30am onwards;

- There was a maximum average queue of 19 vehicles (12 left and 7 right) on Wednesday between 8:15am-8:30am; and

The maximum on-street queue was observed to occur for approximately 5-minutes (Tuesday and Wednesday), with less than 1-minute queuing observed on the Thursday.

4.3.2 Afternoon Peak Period

Chart 4: Carpark Vehicular Access Peak Queuing – Afternoon Peak



It can be seen from **Chart 4** that the peak on-street queuing at the vehicular access was observed between 3:30pm-3:45pm, with the following aspects noteworthy:

On-street queuing was observed between 3:30pm-3:45pm, with the vehicular access clear from outside this period;

- There was a maximum average queue of 22 vehicles (15 left and 7 right) confined to Victoria Street on Thursday;
- The maximum on-street queue was observed to occur for approximately 14-minutes (Thursday), with less than 1-minute queuing observed on Tuesday and Wednesday; and

It should be noted that there was extreme heat (40°C+) conditions observed on Thursday (28/02/2024), which may have contributed to additional parents picking up their children, given that there was minimal queuing observed on Tuesday and Wednesday.

4.3.3 Summary

In summary,

There was typical on-street queuing at the vehicular access during both peak periods. It should be emphasised that on-street queuing is not an uncommon occurrence for school developments, with queuing for Trinity Grammar School generally kept to a minimum (approximately 1-5 minutes duration);

- Traffic marshal was present at the vehicular egress-access throughout the survey period during the morning (7:30am-9:00am) and afternoon (2:30pm-4:00pm) peak periods;
- The queuing for the internal DO/PU spaces were not observed to extend to the bottom of the ramp, i.e. off-street queuing for DO/PU spaces was not the cause on-street queuing;

Rather, on-street queuing was generally observed due to entering vehicles negotiating a 'U-turn' manoeuvre at the bottom of the ramp. It was observed that a small proportion of large vehicles would conduct additional movements within this area to access the main circulating aisle of the carpark.

Accordingly, on-street queuing at the Victoria Street vehicular access of the basement carpark was generally kept to a minimum (approximately 1-5 minutes duration), with the vehicular access envisaged to readily accommodate the proposed increased number of staff and students.

4.4 Monitoring Summary

In summary, the on-site observations and recordings undertaken by TRAFFIX between 27/02/2024 and 29/02/2024 demonstrate that the new basement carpark is generally compliant with Condition B7(b), noting the following:

i. The internal carpark provides sufficient DO/PU spaces to accommodate a proposed increase in school population, with a minimum of 16 vacant spaces observed in the morning and two (2) vacant spaces in the afternoon, noting a typical vehicle dwell time of 30-60 seconds;

ii. Off-street queuing from the DO/PU spaces was not observed to extend to the vehicular access and as such, the basement carpark is able to accommodate the demand for queuing spaces;

iii. On-street queuing at the Victoria Street access was generally minimised and typically occurred for 1-5 minute durations, except on the afternoon peak period on Thursday (40°C+ weather conditions); and

iv. The internal carpark provides sufficient capacity to accommodate the proposed increase in school population, given the available DO/PU spaces and internal queuing areas.

5. CONCLUSIONS

In summary:

This Monitoring Report has been prepared for Bloompark Consulting Pty Ltd on behalf of Trinity Grammar School to address Condition B7 of the Modification of Development Consent (SSD-10371-Mod-1).

Condition B7 sets out the requirements for suitably qualified independent auditor (**DC Traffic Engineering**), in consultation with an independent traffic consultant (**TRAFFIX**) to conduct traffic surveys and compare the results against the TTM Traffic Report that accompanied the EIS to verify the operational outcomes.

In accordance with Condition B7, TRAFFIX conducted parking, traffic and site inspections during three (3) consecutive school days between 27/02/2024 and 29/02/2024, noting the following key operational outcomes:

- Traffic count surveys were analysed and found to be consistent with the approved modelling results undertaken within the EIS traffic report;
- The internal carpark provides sufficient DO/PU spaces to accommodate a proposed increase in school population;
- Off-street queuing from the DO/PU spaces was not observed to extend to the vehicular access and as such, the basement carpark is able to accommodate the demand for queuing spaces;
- On-street queuing at the Victoria Street access was generally minimised and typically occurred for 1-5 minute durations; and
- The internal carpark provides sufficient capacity to accommodate the proposed increase in school population, given the available DO/PU spaces and internal queuing areas.

Accordingly, the key intersections and internal carpark (DO/PU spaces and internal queuing areas) are envisaged to readily accommodate the proposed increase (+60 students and +44 staff) and maximum increase (+445 students and +44 staff) in school populations.

We trust the above is of assistance and request that you contact the report author should you have any queries or require any further information.

APPENDIX A

Independent Auditor Report

Ref: TRI-PROJ-0001-05 Auditor commentary on independent traffic report Rev 2

30/7/2024

Joel Tan
Project Manager
Bloompark
E: jtan@bloompark.com.au

Dear Joel,

Independent auditor commentary on independent traffic report for Trinity Grammar - Condition B7 of the Modification Development Consent (SSD-10371-MOD).

Condition B7 of the Modification Development Consent (SSD-10371-MOD) for Trinity Grammar, stipulates the following:

B7. Prior to each staged increase in student and staff numbers (from the base number of 1655 students and 277 FTE staff) as described in the Staging Report in condition B12, the Applicant must submit to the satisfaction of the Planning Secretary the results of an independent audit to verify the performance of the Jubilee car park and the drop-off/ pick-up facilities. The independent audit must:

- *a. be prepared by a suitably qualified independent auditor, in consultation with an independent traffic consultant, as agreed by the Planning Secretary;*
- *b. conduct traffic surveys and compare the results against the traffic reports in the EIS to verify that the following operational outcomes have been achieved:*
  - *i. the capacity of the Jubilee car park drop-off/ pick-up facilities can accommodate the pick-up/drop-off demand within the site during peak AM and PM periods;*
  - *ii. the demand for queuing spaces at the Jubilee car park is accommodated within the site;*
  - *iii. off-site impacts including but not limited to queuing on Victoria Street is minimised as far as practicable;*
  - *iv. there is adequate capacity in the car park to accommodate an increase in vehicle movements as a result of the proposed staged increase in student numbers;*
- *c. be completed on three consecutive school days for the duration of the day when all grades (K-12) and students are planned to be on site and must state the student and staff numbers present on the data collection dates.*

Sub-condition (a)

This sub-condition states that the report must be prepared by a suitably qualified independent auditor, in consultation with an independent traffic consultant, as agreed by the Planning Secretary. The original statement is worded in the wrong order. Typically, an independent traffic consultant would conduct the surveys and field investigations, and prepare a report. Once the report is prepared, an independent auditor would then check the report and comment on whether the assessments were conducted satisfactorily, and whether the results are accurate and reasonable. This stance was confirmed by the Independent Planning Commission.

In these respects, Traffix were engaged as the independent traffic consultant. Since Traffix did not prepare the original traffic impact assessment report submitted with the development application, this is acceptable. Traffix is a reputable and experience company in preparing traffic assessments for

development proposals. As such, the requirement for an independent and qualified traffic consultant has been satisfied.

DC Traffic Engineering was engaged as the independent auditor to review Traffix assessment report. DC Traffic Engineering contains personnel that are accredited as road safety auditors under the NSW register of road safety auditors. In particular, I as the nominated auditor, have conducted more than 1000 independent road safety audits spanning over a 25-year timeframe. I also have had no prior involvement with the traffic assessments conducted at the development application stage and as such I am sufficiently independent to act as the independent auditor. In these respects, the requirement for an independent auditor has also been satisfied.

Sub-condition (b)(i)

This sub-condition requires the independent traffic consultant to demonstrate that the capacity of the Jubilee car park drop-off/ pick-up facilities can accommodate the pick-up/drop-off demand within the site during peak AM and PM periods.

Section 4.1 of the independent traffic report states that there are 28 drop off and pick up spaces being comprised of 18 original spaces and 10 additional spaces created as part of the Modification works. An observational study was carried out by Traffix which involved recording the maximum number of spaces used at any one time. The results for the AM and PM periods were captured in Chart 1 and 2 in the Traffix report respectively. Since the maximum rate of vehicle occupation in the drop off/ pick up facility varies second-by-second, the results were simplified by stating the maximum number of vehicles in the drop off/ pick up facility set 15-minute periods during the AM and PM peak periods. In the AM case, a maximum occupancy of 12 vehicles was recorded (Wednesday 0800-0815h, and again on Wednesday 0815-0830h). In the PM case, a maximum occupancy of 26 vehicles was recorded (Tuesday 1530-1545h). As this was less than the capacity of 28 spaces, Traffix concluded that this sub-condition has been satisfied, and that the capacity of the car park drop off and pick up facilities can accommodate the AM and PM peak demands.

The raw survey results are included in Appendix A of the Traffix report. The authors and reviewers of the report, have been named at the front of the report. It is expected that these authors and reviewers would be able to vouch for these survey and assessment results in any legal or tribunal hearing. As such, there is confidence in these results and I, as the nominated auditor, am satisfied that this sub-condition has been demonstrated.

Sub-condition (b)(ii)

This sub-condition requires that the demand for queuing spaces at the Jubilee car park can be accommodated within the site. A critical flaw in the wording of this condition is that there is no definition for “queuing”. This could be interpreted as a rank of cars that are completely stationary with minimal front-to-back separation, as they wait to be “processed” through the system. Alternatively, it could also be interpreted as a platoon of slow-moving cars, that are slowly processing through a common transaction point. The lack of clarity, and the diverse range of interpretations means that demonstrating this sub-condition was challenging from the outset.

A key admission that needs to be made is that Sub-condition (b)(i) already demonstrated that the demand for pick ups and drop offs could both be accommodated within the drop off and pick up facilities. This observation already proves that there is little risk of overflow queuing from the drop off/ pick up zone, since this facility did not even fill up in the first place. To a large extent, sub-condition (b)(i) already somewhat nullifies sub-condition (b)(ii). Notwithstanding this, the Traffix report stated that there was no on-site queuing (stated in the report as “off-street” queuing) during the AM peak. This is expected as the drop off transaction is very quick consisting of a drop-and-leave practice.

The Traffix report stated that there was in the order of 5-10 vehicles forming on-site queues during the PM peak. Furthermore, the report indicated that many of these vehicles queued in the actual drop off and pick up facility itself and hence were part of the sub-condition (b)(i) assessment.

It is worth noting that there is approximately 120m of on-site queuing space before the queue would spill back to the external road. This is a very large queuing and circulation capacity.

In these respects, the results are realistic and there is confidence in these results.

Sub-condition (b)(iii)

This sub-condition stipulates that off-site impacts including but not limited to queuing on Victoria Street should be minimised as far as practicable.

Similar to the commentary for Sub-condition (b)(ii), a key flaw with his condition, is that there is no definition for “queuing”. The Traffix report has therefore offered a definition as being when vehicles arriving at the site were prevented from entering the car park due to the presence of other vehicles in the driveway ahead.

Another flaw with this condition is that it is very subjective with the required impact being “minimised as far as reasonably practicable”. In these respects, the assessment for sub-conditions (b)(i), and (b)(ii) already demonstrated that a reasonable attempt has been made to cater for all queue-related impacts on-site. The drop off and pick up facility has a capacity of 28 cars. Furthermore, there is approximately 120m of queuing space within the car park before any queue spills back and encroaches into Victoria Street. In these respects, Sub-condition (b)(iii) is somewhat already negated and nullified due to the assessments for the earlier sub-conditions.

Humouring this sub-condition, the Traffix report stated that there was on-street queuing observed between 1530-1545h with queues reaching 15 vehicles in the southbound left-turn stream, and seven vehicles in the northbound right-turn stream. In my opinion, this is expected at most schools due to the highly intensified peak periods, and the tendency of parents and carers to arrive at the school earlier than the end-of-school bell. This earlier arrival generates more dwell time in the PM peak which is vastly different to the drop-and-leave characteristic of the AM peak.

The maximum observed 15-vehicle queue is considered a low impact and since the wording of the sub-condition is very loose, there is no basis for claiming that this is unsatisfactory. That is, the combined effect of the 28 on-site drop off/ pick up spaces and the 120m of on-site queuing area are measures that limit the potential for off-site queuing, and even if there is off-site queuing, it (15 vehicle queue) is contained within Victoria Street. Therefore, this sub-condition is satisfied.

Sub-condition (b)(iv)

This sub-condition stipulates that there is adequate capacity in the car park to accommodate an increase in vehicle movements as a result of the proposed staged increase in student numbers.

The assessments carried out by Traffix indicate that there is spare, un-used capacity in the drop off and pick up zones. The report also indicates that most queuing is fully contained on site due to the 120m of on-site queuing and circulation length. As such, their claims that there is spare capacity to accommodate increases in student numbers is plausible and reasonable. As the auditor, I have confidence in these conclusions.

Further to the above, I wish to outline the following:

- Much of the risk could be further improved by *managing* the demand rather than *catering* to it. For example, the assessments showed that the peak periods, especially for PM pick ups occurs in a very intensified and short period. *Peak-demand spreading* is an effective method for attenuating the risks. For example, staggering departure times, and encouraging parents/student to select alternative times to perform the pick up transactions. This would have much more marked benefits compared with increasing the physical capacity of the internal facilities.
- The assessments demonstrated that there is sufficient on-site capacity to handle the demand and that there should be sufficient spare capacity to absorb future demands including growths in student numbers. Even if this was not the case, the solution should not be fixated on increasing physical capacity. In traffic engineering, there is a well-established and proven concept of *induced capacity*. This means that given flexibilities in transport mode choice, if more capacity is provided for one mode, it will simply create more demand for that mode of transport. In the case of private car transport, if more queuing and pick up space was created, this could also have a negative effect in generating more private car usage, through modal shifts from (say bus/train/walking). This concept should be considered with future growths in

student numbers as often the supply of additional capacity is the generator of more traffic problems.

Sub-condition (c)

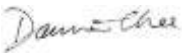
This condition required that the surveys be carried out on three consecutive school days when all grades K-12 were in attendance. Details of staff and student numbers for the three survey dates of 27/2/2024, 28/2/2024 and 29/2/2024 were provided in Section 3.1 of the Traffix report. These numbers demonstrate very consistent attendance rates, and hence presumably private car generation rates for these three dates. This is considered satisfactory.

Conclusion

As the nominated auditor for the independent traffic report, I have reviewed the traffic report, and critiqued the survey and assessment results. The conclusions drawn in the report are all reasonable and have responded to all the sub-conditions under Condition B7 of the Modification Consent. Overall, I have confidence in the traffic report that the risks are generally low and confined either within the site, or with short-duration impacts being confined to Victoria Street.

If there are any questions regarding this letter, please contact me at the details below.

Kind regards



Damien Chee
Accredited level 3 road safety auditor (RSA-02-0094) and Lead Auditor
DC Traffic Engineering
M: 0403 238 386
E: Damien.chee@dctrafficengineering.com.au

APPENDIX B

Site Inspection Data

TUESDAY - 27 February 2024

Time	Queuing (Max)		Carpark DO/PU	Illegal Driving		On-Street DO/PU		Internal DO/PU		Additional Comments
	Left	Right		Right-Turn	U-Turn	Kerbside	NS	Existing	New	
Morning Peak Period (7:30am to 9:00am)										
7:30am - 7:45am	0	0	0	0	0	0	0	2	0	
7:45am - 8:00am	2	2	0	0	0	1	0	8	1	OSQ (< 1 min)
8:00am - 8:15am	9	3	1	0	1	2	0	10	2	OSQ (< 1 min)
8:15am - 8:30am	14	3	0	0	0	0	0	10	2	OSQ (8:25am-8:30am)
8:30am - 8:45am	0	0	0	0	0	0	0	3	0	
8:45am - 9:00am	0	0	0	0	0	0	0	0	0	
Afternoon Peak Period (2:30pm to 4:00pm)										
2:30pm - 2:45pm	0	0	0	0	0	0	0	3	1	Parents waiting for juniors
2:45pm - 3:00pm	0	0	0	0	0	0	0	11	2	Parents waiting for juniors
3:00pm - 3:15pm	0	0	0	0	0	0	0	15	2	
3:15pm - 3:30pm	0	0	0	0	0	0	0	10	7	
3:30pm - 3:45pm	3	2	1	0	0	0	0	16	10	OSQ (3:39pm-3:40pm)
3:45pm - 4:00pm	0	0	1	0	0	0	0	12	6	

Legend *OSQ - On-Street Queuing* *NS - No Stopping*

WEDNESDAY - 28 February 2024

Time	Queuing (Max)		Carpark DO/PU	Illegal Driving		On-Street DO/PU		Internal DO/PU		Additional Comments
	Left	Right		Right-Turn	U-Turn	Kerbside	NS	Existing	New	
Morning Peak Period (7:30am to 9:00am)										
7:30am - 7:45am	0	0	0	0	0	0	0	4	0	
7:45am - 8:00am	0	0	0	0	0	0	0	6	0	
8:00am - 8:15am	10	7	0	0	3	4	1	11	1	OSQ (8:01am-8:06am)
8:15am - 8:30am	12	7	0	0	1	1	0	11	1	OSQ (8:16am-8:20am)
8:30am - 8:45am	0	0	0	0	0	0	0	4	0	
8:45am - 9:00am	0	0	0	0	0	0	0	1	0	
Afternoon Peak Period (2:30pm to 4:00pm)										
2:30pm - 2:45pm	0	0	0	0	0	0	0	8	0	Parents waiting for juniors
2:45pm - 3:00pm	0	0	0	0	0	0	0	18	0	Parents waiting for juniors
3:00pm - 3:15pm	0	0	0	0	0	0	0	6	1	
3:15pm - 3:30pm	0	0	0	0	0	0	0	6	3	
3:30pm - 3:45pm	0	0	0	0	1	0	0	15	5	OSQ (3:39pm-3:40pm)
3:45pm - 4:00pm	0	0	0	0	0	0	0	14	3	

Legend *OSQ - On-Street Queuing* *NS - No Stopping*

THURSDAY - 29 February 2024

Time	Queuing (Max)		Carpark DO/PU	Illegal Driving		On-Street DO/PU		Internal DO/PU		Additional Comments
	Left	Right		Right-Turn	U-Turn	Kerbside	NS	Existing	New	
Morning Peak Period (7:30am to 9:00am)										
7:30am - 7:45am	0	0	0	0	0	0	0	3	0	
7:45am - 8:00am	0	1	0	0	0	0	0	6	0	
8:00am - 8:15am	3	3	0	0	0	0	0	7	4	OSQ (<1min)
8:15am - 8:30am	8	4	0	0	0	0	0	9	0	OSQ (<1min)
8:30am - 8:45am	0	0	0	0	0	0	0	3	0	
8:45am - 9:00am	0	0	0	0	0	0	0	0	0	
Afternoon Peak Period (2:30pm to 4:00pm)										
2:30pm - 2:45pm	0	0	0	0	0	0	0	8	0	Parents waiting for juniors
2:45pm - 3:00pm	0	0	0	0	0	0	0	17	0	Parents waiting for juniors
3:00pm - 3:15pm	0	0	0	0	0	0	0	18	1	
3:15pm - 3:30pm	0	0	0	0	0	0	0	8	3	
3:30pm - 3:45pm	15	7	0	0	0	0	0	16	5	OSQ (3:30pm-3:44pm)
3:45pm - 4:00pm	0	0	0	0	0	0	0	13	6	

Legend *OSQ - On-Street Queuing* *NS - No Stopping*