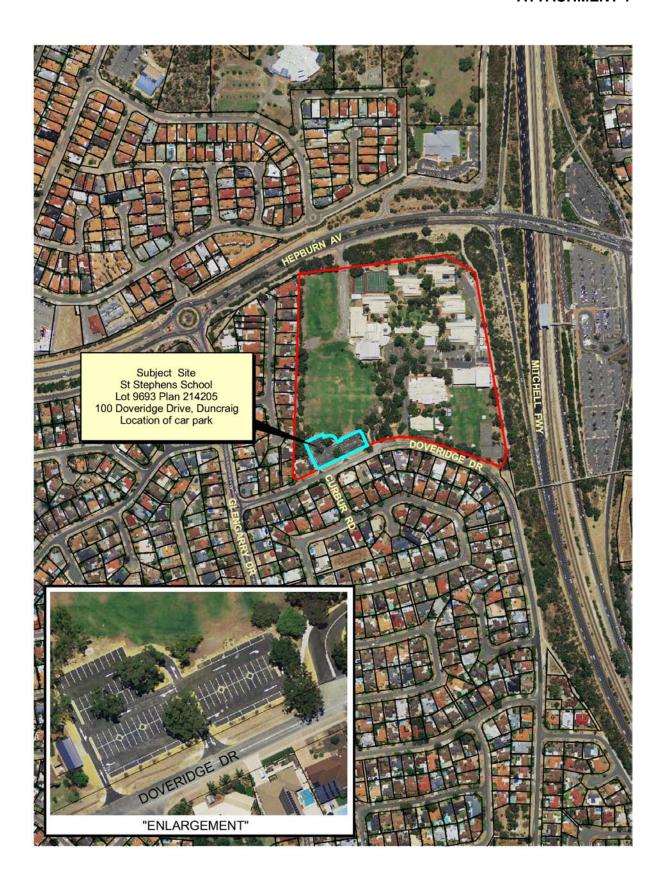
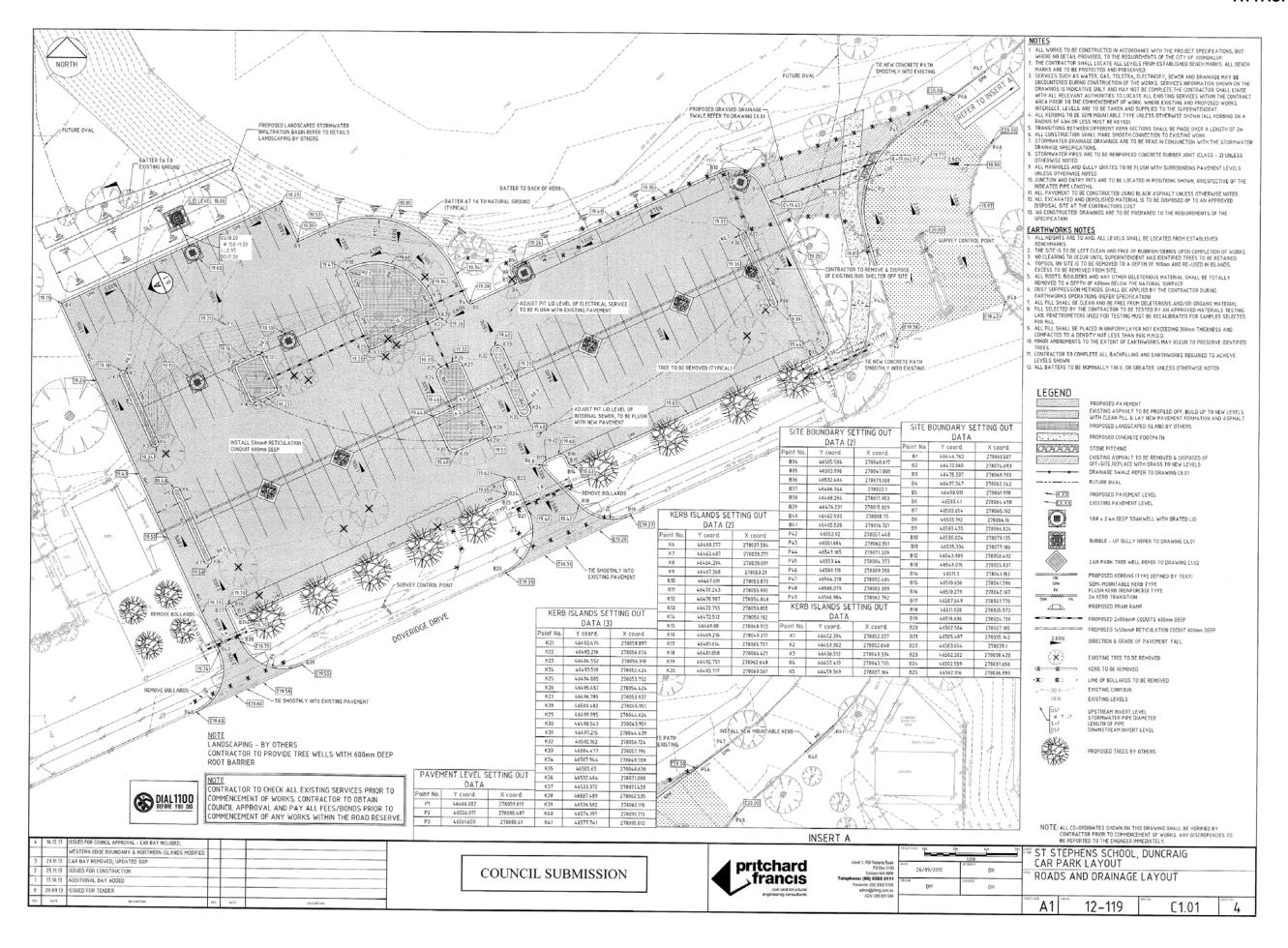
#### **ATTACHMENT 1**







# Proposed Car Park Use Change St Stephen's School, Duncraig Parking Assessment Report

PREPARED FOR: St Stephen's School

June 2014

## **Document history and status**

Author	Revision	Approved by	Date approved	Revision type
Paul Ghantous	r01	B Bordbar	30/06/14	Draft
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## 1.0 Introduction

This Parking Assessment Report has been prepared by Transcore on behalf of St Stephen's School in Duncraig. The subject of this report is the proposed change in usage of the recently constructed 104 bay car park at the south west corner of the school (shown in Figure 1).

An application for a temporary car park at this site was submitted to City of Joondalup in October 2012. The application was approved with a condition that the car park be utilised for the purposes of staff parking only.

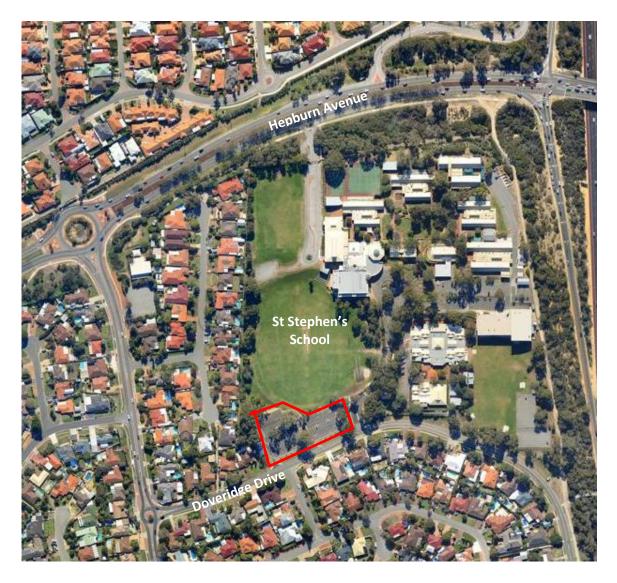


Figure 1: Subject car park location

The site was previously used as an informal grass parking area for all users with parking capacity for around 60 vehicles.

The car park has been constructed formally and an application has been submitted to City of Joondalup on the 10<sup>th</sup> April 2014 (DA14-0439), for the removal of the condition for the car park to be used by staff only. The school wishes to allow the car park to be used by the entire school community (including parents, students and general visitors to St Stephen's).

Transcore has been engaged by St Stephen's School to assess the existing usage of the car park and the traffic impact of removing the condition of approval restricting car park usage to staff only.

As part of this assessment, Transcore undertook a detailed parking inventory of the school and a parking utilisation survey during a typical PM school peak hour pick-up/drop-off period.

Accordingly, this Parking Assessment Report presents the parking inventory at selected locations at the school, and documents the results of the parking utilisation survey.

## 2.0 Subject Car Park Details

St Stephen's School is situated within the City of Joondalup and as such the City of Joondalup *District Planning Scheme No.2* is applicable to the school.

The relevant parking requirements as set out in the scheme are detailed in Table 1.

Table 1: City of Joondalup applicable car parking requirements

Element	Requirement			
Primary School	2 per classroom (min 10 bays)			
High School	2 per classroom (min 10 bays)			

A review of the District Planning Scheme indicates that no specific requirements are set out for the allocation of parking within a school.

The subject car park currently provides 104 car bays. A one-way entry driveway is provided from the abutting Doveridge Drive at the western end of the car park. A separate exit driveway with left and right turn provision connects to Doveridge Drive at the centre of the car park.

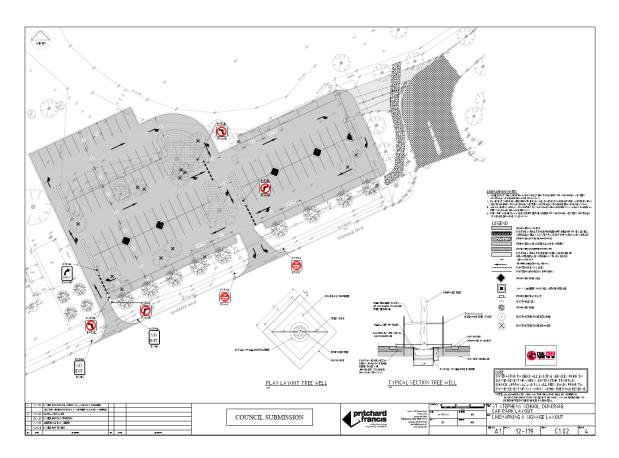


Figure 2: Subject car park layout, circulation and access

As detailed in Figure 2, a one-way circulation system has been implemented in the car park. The separate entry and exit in combination with the one-way circulation system optimises car park usage and efficiency.

General on site observations indicate that the car park exit has adequate sight lines for both directions of travel to and from Doveridge Drive.



Figure 3: Sightline from car park exit looking east



Figure 4: Sightline from car park exit looking west

As shown in Figure 5, a "Staff Parking Only" sign is currently provided at the car park entry.



Figure 5: Existing car park entry signage

General observation of the car park in the middle of a typical school day indicates that the car park is under-utilised during the day. As shown in Figure 6, the car park is currently only 20% to 30% utilised throughout the day.



Figure 6: Typical usage during school days (photo taken Friday 20<sup>th</sup> June 2014 at 12:00pm)

## 3.0 Parking Utilisation Survey

## 3.1 Survey Area

The various parking areas at St Stephen's School were identified and allocated specific parking zones as labelled in Figure 7.



Figure 7: Parking survey zones

A site visit was undertaken on Wednesday 25<sup>th</sup> June 2014 during which a detailed parking inventory was established for all the parking zones presented in Figure 7.

Parking utilisation surveys were then undertaken for selected parking zones on Wednesday 25<sup>th</sup> June 2014 covering the typical school day afternoon (PM) peak hour period. The utilisation survey was undertaken between the hours of 2:30pm and 4:00pm and covered the period of time immediately before and after the end of the school pick up period. Based on discussions with school staff and Transcore's own experience the PM pick up period is the busiest school period with the most demand on parking.

The parking utilisation survey was undertaken for all zones with exception to Zone H, which was considered to be outside the scope of this parking study.

Surveyors counted the number of vehicles in each parking zone every 15 minutes, and distinguished between staff parking and visitor parking (including parent pick-ups).

## 3.2 Parking Inventory

The inventory of parking for each survey zone is detailed in Table 2 below.

**Parking Zone Notes** Supply Staff parking only. Α 66 В 39 Staff parking only. 21 bays are provided for staff. C A hatched, kiss and ride strip is also provided in this area which can 21 accommodate approximately 8 vehicles parked parallel. 10 visitor bays are provided. D 10 Pick-up, drop-off and bus parking is also accommodated in this zone. Ε 20 Staff parking only F 150\* \* estimated overflow parking on oval. <u>G</u> 104 Staff parking only. (Subject car park) High School pick-up and drop-off Н 15 ī 50\* Informal, two-hour verge parking. \* estimated capacity of 50 vehicles.

**Table 2: Surveyed Parking Inventory** 

As detailed in Table 2, an estimated total of 274 parking spaces are available within the school. This does not include the queuing capacity in zone D. In addition to those 274 spaces, approximately 50, informal parking spaces are available on the verge abutting the school on Doveridge Drive and another 150 informal spaces can be provided as overflow parking on the school oval.

## 3.3 Parking Utilisation

The total parking utilisation for the surveyed zones during the survey period is detailed in Tables 3 & 4 below. The total number of occupied bays in each zone was recorded at 15 minutes intervals.

**Table 3: Surveyed parking utilisation** 

Zone	14:30	14:45	15:00	15:15	15:30	15:45	16:00	Supply
Α	55	53	51	50	51	50	43	66
В	26	24	24	21	20	12	11	39
С	21	24	27	16	16	18	15	29
D	5	6	8	7	7	6	9	10
Е	16	16	14	12	12	12	11	20
G	19	19	44	42	27	29	25	104
I	14	21	50	50	40	31	33	50

**Table 4: Percentage parking occupancy** 

Zone	14:30	14:45	15:00	15:15	15:30	15:45	16:00	Supply
Α	83%	80%	77%	76%	77%	76%	65%	66
В	67%	62%	62%	54%	51%	31%	28%	39
С	72%	83%	93%	55%	55%	62%	52%	29
D	50%	60%	80%	70%	70%	60%	90%	10
Е	80%	80%	70%	60%	60%	60%	55%	20
G	18%	18%	43%	41%	26%	28%	24%	104
I	28%	42%	100%	100%	80%	62%	66%	50

## 3.4 Survey Findings

The parking utilisation survey results and onsite observation of parking activity were analysed and the following key findings were identified as being relevant to the proposed removal of the condition restricting car park usage:

- ♣ Parking utilisation in the staff parking zones A and B was fairly consistent throughout the survey period, with utilisation dropping slightly by 4:00pm. This indicates that parents and other visitors generally comply with applicable restrictions for these staff parking areas.
- ♣ The staff parking bays in zone C were generally respected and not utilised for parent pick-up. The kiss and ride area was fully occupied between 2:45pm and 3:15pm but the queue did not extend or obstruct the main school driveway (zone D).
- Queuing in the pick-up and drop-off facility in zone D never extended back to Doveridge Drive. A maximum of 10 vehicles were observed queuing in the facility.
- ➡ The verge parking abutting the school on Doveridge Drive was 100% utilised between 3:00pm and 3:30pm. During this time, some cars were observed to double-park on the verge.
- ♣ The subject car park (zone G) was underutilised prior to the start of the PM peak period. The car park was only 18% occupied with 19 cars parked. During the survey period, the utilisation of the car park more than doubled to 43%. The results indicate that some non-staff users were parking in the car park at this time. These were mainly parents parking for pick-up and to a lesser extent other visitors to the school.

## 4.0 Impact of Change in Car Park Usage

## 4.1 Short Term Impact

The survey results and onsite observations indicate that parents and other visitors are generally compliant with the existing "Staff Only" usage restriction of the subject car park. However during the peak traffic periods, the verge parking (zone I) is fully occupied, and as a result at this time non-staff users were observed to park in the subject car park.

Prior to construction of the car park, the grassy area where the car park is located was used as informal parking for up to 60 vehicles for all users. It is therefore considered that there was a demand for parking at this location prior to construction of the subject car park.

The proposed removal of the existing condition restricting car park usage would formalise and permit non-staff parking in the subject car park. During a typical school day, it is expected that the car park would continue to be underutilised for most of the day.

No additional traffic would be expected to be generated to / from the school or on Doveridge Drive on typical school days during off-peak periods as a result of allowing non-staff users to park in the subject car park.

This is supported by the parking utilisation recorded for zone I (which is the informal verge parking). Zone I was only 28% utilised prior to the PM peak period. Therefore during typical off-peak periods there is currently spare parking capacity in zone I which can accommodate extra cars if the latent demand for parking was present. Allowing non-staff users to park in the subject car park will only give them an option to park in a formalised off-street car park which is safer and has less impact on non-school traffic on Doveridge Drive passing the site.

During peak pick-up and drop-off periods the existing verge parking in zone I is fully occupied. Visitors and parents had the option of parking in the informal grassed area at the subject site prior to construction of the car park. During this time, up to 60 vehicles could be accommodated at the site.

The subject car park is currently underutilised even during the surveyed peak PM school period. The survey results indicate that some visitors do utilise the car park during the PM peak period, when the parking in zone I is fully utilised.

It is considered that no additional traffic would be generated to the school during the peak traffic periods as a result of allowing non-staff users to utilise the subject car park. If the car park usage was changed then it would be expected that the parking utilisation will increase during peak periods and verge parking in zone I would potentially decrease. This is supported by the fact that the subject car park site has been historically used for informal parking by all users, so no

increase in traffic will result from permitting non-staff users to use the newly constructed car park at the same site.

## 4.2 Medium Term Impact

The original development application for the subject car park specified that the purpose of constructing the formal car park at the site is to temporarily serve as staff parking during the first stage of implementation of the school master plan. During the first stage of the master plan, the existing staff parking areas in zones A and B will not be available for staff at all times.

If all the surveyed staff vehicles in zones A and B were relocated to the subject car park, approximately 100 vehicles would be parked in the subject car park prior to the start of the PM peak period.

Therefore when staff parking in zones A and B is not available, there will be limited parking available in the subject car park for non-staff parking.

It should be noted that this is a temporary stage during master plan implementation and that staff parking will be relocated to an alternate location after implementation. It is also noted that the master plan is currently being reviewed by St Stephen's and may change, including the staging and timing of implementation.

Parking for all users should currently be permitted in the subject car park as it otherwise will continue to be an underutilised and inefficient school asset.

St Stephen's School have advised that parking strategy and traffic management will be reviewed prior to any implementation of master plan stages.

## 4.3 Long Term Impact

Based on the latest iteration of the master plan, the subject car park will be removed in the long term after implementation of the relevant master plan stages. The subject car park will be replaced by a school oval. Alternate parking for staff and visitors will be provided at another location. According to the latest iteration of the master plan, parking will be provided in several basement parking and pickup/drop off facilities. Therefore changing the existing usage of the subject car park will not have any impact on the current iteration of the master plan and will have no traffic impact on school operations in the long term.

## 5.0 Conclusions

This Parking Assessment Report has been prepared by Transcore on behalf of St Stephen's School in Duncraig. The subject of this report is the proposed change in usage of the recently constructed 104 bay car park at the south west corner of the school.

The school wishes to allow the car park to be used by the entire school community (including parents, students and general visitors to St Stephen's).

This parking assessment has considered the existing usage of the car park and the traffic impact of removing the existing condition of use.

As part of this assessment, Transcore undertook a detailed parking inventory of the school and a parking utilisation survey during a typical PM school peak pickup/drop-off period.

The results of the parking inventory and utilisation surveys indicate a very high level of compliance in staff parking zones A and B. In general there is also compliance with the existing staff only restriction in the subject car park outside the surveyed school peak traffic period.

During the surveyed PM peak school traffic period, the informal verge parking on Doveridge Drive abutting the subject site was fully utilised and as a result some parents were observed to park in the subject car park.

The subject car park was significantly under-utilised during the entire survey period.

Removal of the existing condition of usage would formalise and permit non-staff parking in the subject car park. During a typical school day, it is expected that the car park would continue to be underutilised for most of the day. However this situation will result in more efficient use of this car park.

No additional traffic would be expected to be generated to / from the school or on Doveridge Drive on typical school days a result of allowing non-staff users to park in the subject car park. Parking has historically been available for all users at the same site, with informal parking to accommodate up to 60 vehicles available prior to construction of the car park.

In the medium term staff currently parking in zones A and B will temporarily have to park in the subject car park during master plan implementation. It is noted that the master plan is currently being reviewed by St Stephen's and may change, including the staging and timing of implementation.

Therefore in the proposed change of use for the subject car park will improve efficiency, reduce verge parking demand and will not result in increased traffic generation or traffic on Doveridge Drive.

No long term traffic impact on Doveridge Drive will result from changing the usage of the subject car park as it is planned to be a temporary car park which will eventually be replaced by a school sports oval in the long term in accordance with the current master plan.



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24 July 2014

St Stephens School 100 Doveridge Drive **DUNCRAIG WA 6023** 

Attention: Kirstie Morrisey

Dear Kirstie,

**RE: Removal of Condition of Car Park Approval** 

#### INTRODUCTION & BACKGROUND

This letter is prepared as an addendum to the Parking Assessment Report (reference t14116pgr01b) which has been prepared by Transcore on behalf of St Stephen's School in Duncraig.

The subject of this letter and the Parking Assessment Report is the proposed removal of condition of car park approval for the recently constructed 104 bay car park at the south west corner of St Stephens School. This particular approval condition limited the use of this car park to school staff only.

Subsequent to submission of the request for the removal of the approval condition and supporting Parking Assessment Report, a follow up meeting between St Stephens School, Transcore and City of Joondalup was conducted on 22/07/14 to discuss issues raised by City of Joondalup technical officers.

The outcome of the meeting was that Transcore would provide further information as to the schools' intended use for the car park. In addition, further information is to be provided as to what steps the school will take to manage the use of the car park for its intended use.

The technical issues raised by City of Joondalup have been addressed in this supplementary letter under the following respective headings:

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#### INTENDED CAR PARK USAGE

- ➡ It is intended that the subject car park be utilised by any visitor to St Stephens School. It will primarily be used by staff, authorised students, and visitors to the school.
- "Kiss and Drive" will not be available or permitted in the car park.
- ♣ Parents may park in the car park if there is a car parking bay available. However parents may not stop in parking aisles for "Kiss and Drive" activity. Some parents will park in the car park to meet with teachers, pay bills and conduct other business throughout the day and after school hours.
- Although not encouraged some parents may also use this car park to drop-off and pickup students without undertaking a "kiss and drive" activity.

#### PROPOSED CAR PARK MANAGEMENT

- ♣ The proposed management of the car park will be discussed at the appropriate School Traffic Management Committee meeting.
- ♣ Appropriate signage will be installed at car park entry to advise that "Kiss and Drive" is strictly prohibited.
- ♣ Parents will be advised through the various school communication mediums including newsletters, facebook and email distribution on the appropriate and safe use of the car park. The communication will reinforce that "Kiss and Drive" is not permitted in the car park and that no vehicles can stop in parking aisles for pick-up / drop-off activity.
- ♣ For the first two weeks after implementation of the car park management plan, staff will be present in the car park on a daily basis during the peak AM and PM school pickup and drop-off periods to ensure appropriate and safe use of the car park. No vehicles will be permitted to stop in parking aisles for "Kiss and Drive" activity.
- If required a follow up message will be communicated to parents.
- ♣ After the initial implementation period, staff will do random checks of the car park to enforce appropriate usage and follow up communication with parent will occur if inappropriate activity is observed.
- ♣ Parents picking up or dropping of a high school student will be encouraged to use the existing high school "Kiss and Drive" facility (not in the subject car park).
- ♣ Even though the location of this car park is not convenient for the use by primary school parents, primary school parents will be encouraged not to use the subject car park and to utilise the existing primary school "Kiss and Drive" and car park facility.
- If parents require to drop-off or pickup students then they will be encouraged to park in the 17 parking bays running along the northern boundary of the car park prior to using remaining bays in the carpark.
- ♣ The management strategy will be reviewed as part of the regular School Traffic Management Committee meetings.

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#### **AVAILABILITY OF PARKING BAYS FOR PARENTS**

Based on the survey results detailed in the Parking Assessment Report prepared by Transcore, the subject car park recorded a peak utilisation of 44 bays during the surveyed PM peak time.

If the existing condition of car park approval is removed the school anticipates that up to 30 high school students will use the car park during school hours. Assuming that around 15 school visitors/parents will also use the car park, utilisation is expected to increase to around 89 car bays, leaving only about 15 bays available for parents who may want to use this car park to drop-off or pickup students (but not "kiss and drive").

Based on this assessment, there will be limited car parking bays available for parents during school pickup and drop-off times. The car park will be routinely monitored to ensure appropriate and intended use.

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#### **CONCLUSIONS**

Based on the Parking Assessment Report, parking survey results and supplementary information provided in this letter, it is considered that the car park will be fit for purpose if the existing condition of car park approval is removed. However, the school requires some flexibility in managing the car park as it progresses through the various stages of Masterplan implementation and is hence seeking the removal of the existing condition of approval to limit the use of this car park to "staff only".

Ultimately the school is responsible for the management of this car park and safety of its users. The school is committed to ensure safe and appropriate use of this car park and will enforce a "no kiss and drive" policy through communication with and education of parents and students. This policy will be documented in a management strategy which is intended to be endorsed by the School Traffic Management Committee.

Parents will be encouraged to use existing high school and primary school student kiss and drive facilities. It is anticipated that there will be limited parking available for parents who wish to drop-off or pickup students within this car park and these parents will be encouraged to use the 17 bays along the northern boundary of the car park to minimise potential conflicts between vehicles and students on foot.

During the initial stages of school Masterplan implementation this car park will be fully occupied by staff and ultimately it will be removed all together. However in the short term, the car park is currently an under-utilised school asset and therefore the school is seeking the removal of the existing condition of approval.

I trust the information contained in this letter suitably addresses the technical queries raised by City of Joondalup.

Yours truly,

**Paul Ghantous** 

Saul Shark

Senior Traffic & Transport Engineer

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