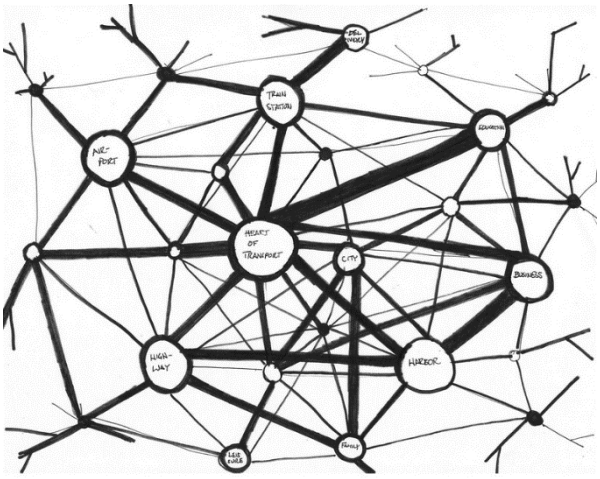
TSA

ABN: 79 943 737 368

TRAFFIC AND PARKING IMPACT STATEMENT

401 HOXTON PARK ROAD, HINCHINBROOK (PROPOSED ALTERATIONS AND ADDITIONS TO GOOD SAMARITAN CATHOLIC COLLEGE)



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1. INTRODUCTION

This Practice has been engaged by Sydney Catholic Schools to undertake an assessment of the likely traffic and parking impacts associated with the refurbishment of an existing school building for Good Samaritan Catholic College, located at 401 Hoxton Park Road, Hinchinbrook ('Subject Site'). The proposed development is expected to accommodate an increase in the student population from 1300 to 1350 students. No changes are proposed to the existing vehicular access arrangements, on-site parking (including the student pick-up/drop-off) areas and internal circulation as part of the subject development.

The purpose of this report is to assess and document the likely traffic and parking impacts resulting from the proposal and to recommend, where appropriate treatments to ameliorate any such impacts. In this regard, this report undertakes assessment of the following:

- The existing parking and traffic demand generated by the current school operations;

- The projected additional parking and traffic demand generated by the subject proposal;

- The suitability and safety of the existing access, parking and internal circulation arrangements with respect to accommodating the planned increase in school population; and

- The existing traffic conditions in the immediate vicinity of the subject site and the ability of the surrounding road network to accommodate the additional traffic demand estimated to be generated by the proposed development.

This report has been prepared pursuant to State Environmental Planning Policy (Education Establishments and Child Care Facilities Clause 57) 2017.

This report should be read in conjunction with the architectural plans prepared by JDH Architects, copies of which are submitted under separate cover.

2. SITE DETAILS

2.1 Site Location

The subject site is located on the northern side of Hinchinbrook Road, between Wilson Road and Dorrigo Avenue, Hinchinbrook. This location is shown in the context of its surrounding road network and land use in **Figures 1** and **2** overleaf.

2.2 Site Description

The subject site provides a property description of Lot 11 in DP 1209742 and a street address of 401 Hoxton Park Road, Hinchinbrook. The site forms an irregularly shaped parcel of land providing a single frontage of approximately 577m to Hoxton Park Road. The total site area is approximately 74,062m^2.

2.3 Existing Uses

The site currently accommodates the campus of Good Samaritan Catholic College, a co-educational school, accommodating 1300 students (between Years 7 – 12), and 120 staff. The hours of operation of Good Samaritan Catholic College is between 9:00am to 3:00pm.

The school campus currently accommodates a number of buildings, providing learning and administration facilities in conjunction with on-site student recreation, play and sporting areas. In this regard, a majority of the school buildings are located within the central portions of the site with recreation, play and sporting areas located adjoining the peripheries of the site.

The school is currently serviced by an at-grade passenger vehicle parking area containing a total of 128 car parking spaces, an internal bus bay & turnaround facility and a designated student pick-up/drop-off area (forming part of the internal roadway). The landlocked nature of the school site is such that vehicular access is facilitated by an existing driveway, which forms the northern leg of the signalised intersection with Hoxton Park Road and First Avenue, at the southern property boundary. Pedestrian access to the school currently links with the northern footpath of Hoxton Park Road.

The abovementioned on-site developments and school operational periods are proposed to remain unaltered as part of the subject proposal.

In addition to the above, it is acknowledged that the western portion of the site is occupied by St Joseph's Trades Skill Centre, which provides vocational training to TAFE students. It is understood following discussions with school representatives that this facility (despite catering to some Year 11 and 12 students from Good Samaritan Catholic College), essentially operates as a separate entity. In this regard, the existing Trades Skill Centre is serviced by a vehicular driveway off Hoxton Park Road, which connects with an off-street parking area containing 77 spaces that is separate to the vehicular access arrangements and parking provision associated with Good Samaritan Catholic College.

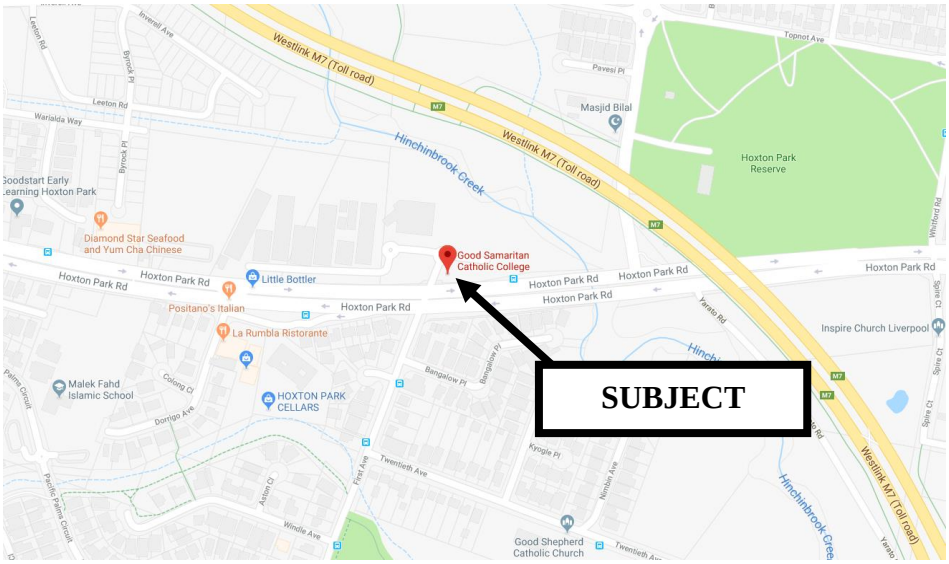
It is noted that no modifications are proposed to the Trades Skill Centre as part of the separate Development Application for Good Samaritan Catholic College.

2.4 Surrounding Uses

The site is adjoined by the following mix of land uses:

- A public recreational reserve (Hoxton Park Reserve) to the east;
- A restaurant development to the west; and
- Residential development (detached dwellings) to the north and south (on the opposite side of Hoxton Park Road) of the site.

FIGURE 1
SITE LOCATION – ROAD NETWORK CONTEXT



Source: Google Maps (Accessed 8/03/18)

FIGURE 2
SITE LOCATION – LOCAL LAND USE CONTEXT

Source: Google Maps (Accessed 8/03/18)

3. PROPOSED DEVELOPMENT

3.1 Built Form/School Demographic Changes

Development consent is sought from Council for proposed alterations and additions to an existing educational establishment, which involves modifications to an existing building (denoted as Block T in the architectural plans, an extract of which is reproduced in **Figure 3** below) to accommodate new classrooms, open learning spaces and general amenities (e.g. washrooms, etc.).

The abovementioned Development Application works are anticipated to facilitate an increase in the school population from 1300 to 1350 students. The current staff level of 120 employees is understood to remain unchanged as part of the subject proposal.

FIGURE 3
PROPOSED DEVELOPMENT

Source: Extract of the Drawing No. CD-02 prepared by JDH Architects

From an internal traffic and parking perspective, it is noted that the existing on-site parking layout (including internal bus bay & turnaround area and student pick-up/drop-off zone), internal circulation, vehicular and pedestrian access arrangements are to also remain unaltered.

4. ACCESS & PARKING CONSIDERATIONS

4.1 Access Arrangements

4.1.1 Vehicular Access

The on-site school parking and internal manoeuvring areas are serviced by an internal road, which forms the northern leg of the signalised intersection with Hoxton Park Road and First Avenue. This internal road provides a width of 12m comprising the following:

- Two exit lanes comprising an exclusive left turn lane and a shared through and right turning lane; and
- A single entry lane.

4.1.2 Pedestrian Access

Pedestrian access to the school is provided via a gate located at the southern property boundary, providing connectivity between northern Hoxton Park Road footpath and internal pedestrian walkway on-site.

4.2 Parking Provision

The existing school provides an internal passenger vehicle parking area containing 128 formally marked spaces.

4.2.1 Council Parking Requirements

Liverpool City Council provides locally sensitive parking requirements within Part 1 of *Liverpool Development Control Plan* (DCP) *2008* for educational establishments as follows:

1 space per 1 staff member, plus 1 space per 30 students

Based on a proposed future student and staff population of 1350 students and 120 staff, a total of 165 car parking spaces is required to be provided in accordance with DCP 2008. Whilst the existing parking provision represents a shortfall to Council's DCP parking requirement, it should be noted that the parking rates specified within DCP 2008, which are generally reflective of long term parking demand associated with the school, can be considered to be somewhat excessive for the following reasons:

- The majority of school students are not of legal driving age. As such, only a small portion of students are expected to park on-site for the entire duration of the school operational period;

- The on-site student pick-up and drop-off arrangement have been observed to be an instantaneous process, with generally no-parking within the on-site parking spaces; and

- Visitors to the site are anticipated to park within the internal passenger vehicle parking area for short to medium periods only. As such, a high parking turnover is envisaged within the parking area allocated for visitors.

Based on the above discussion, the long term parking demands associated with the formal internal passenger vehicle parking area is expected to be predominantly generated by parking corresponding to full time employees. Based on a current employment level of 120 staff, which is understood to remain unchanged as part of the subject proposal, a long term parking requirement of up to 120 spaces can be expected. This assessment represents a worst case peak situation, as it assumes that there is there is no staff absenteeism and employees travel to and from the site by private vehicle means (i.e. the effects of carpooling and the use of alternative means of travel such as walk trips and public transport are not incorporated in the assessment).

Considering the site currently provides a total of parking provision of 128 spaces, the peak long term parking demand potentially generated by the school can be adequately accommodated. In any case, in order to further investigate the adequacy of the existing on-site parking provision to accommodate the future parking demand generated by the proposed development, a parking study is undertaken with respect to the operational characteristics of the school.

4.2.2 Existing Operational Parking Demand

In order to ascertain an accurate indication of the existing parking demand (comprising staff and student parking) on-site during peak school operations, surveys of the various on-site parking areas were recently undertaken under the supervision of this Practice. The surveys were undertaken on a normal school day on 2 March 2018, between 8:00am – 9:00am and 2:30pm – 3:30pm to coincide with the starting and finishing periods of the school. **Table 1** below provides a summary of the results of the parking survey.

TABLE 1
EXISTING WEEKDAY ON-SITE PARKING SURVEY

Time	Spaces Occupied	Spaces Unoccupied	Total (On-Site Capacity)
Morning			
8:00am	76	52	128
8:15am	94	34	128
8:30am	102	26	128
8:45am	106	22	128
9:00am	107	21	128
Afternoon			
2:30pm	105	23	128
2:45pm	104	24	128
3:00pm	85	43	128
3:15pm	68	60	128
3:30pm	54	74	128

Table 1 indicates the following:

- There does not appear to be a significant variation in the total number of parking spaces occupied between the morning and afternoon peak school periods;

- The maximum number of spaces occupied during peak school operations was surveyed to be 107, which occurred around the morning starting period of the school; and

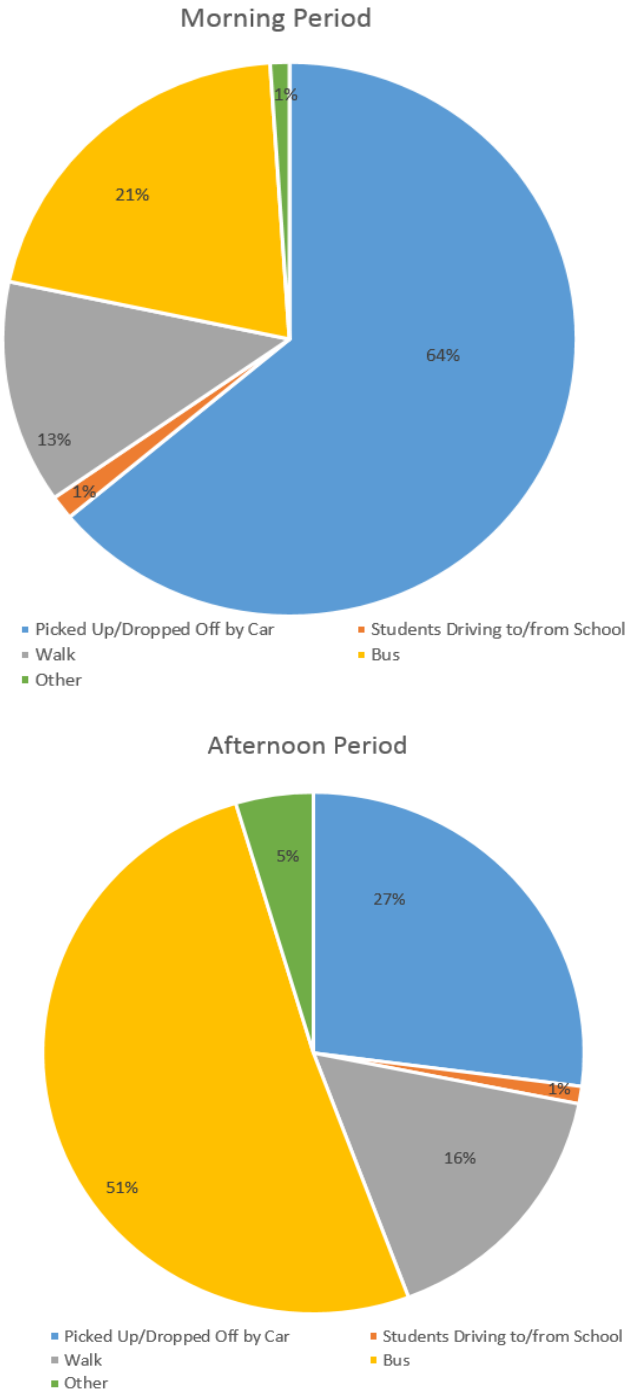
- The minimum number of vacant spaces available to accommodate additional parking was surveyed to be 21.

4.2.3 Student Travel Modes

Short term or instantaneous parking is generally closely related to student numbers. In this regard, such parking demands are largely dependent on the mode of transport in which students travel to and from the site. Student travel mode is generally a factor of various factors such as the proximity of the site to residential areas and public transport facilities and the level of parking provided on or immediately adjoining the subject site.

In order to obtain an accurate indication of the elected mode of transport for students, a student travel survey was recently undertaken under the supervision of this Practice. These surveys were undertaken on a normal school day on 22 November 2017. **Figure 3** overleaf presents a graphical representation of the existing student mode of transport.

FIGURE 3
STUDENT MODE OF TRANSPORT (RESULTS)



It is noted that the above surveys were based on 928 student respondents for both the morning and afternoon period.

Figure 3 indicates the following:

Morning Period

- Up to 64% of surveyed students (or 593 students) are dropped off at the school by private vehicle means;

- Approximately 1% of surveyed students (or 13 students) drive themselves to the school; and

- The remaining 35% of surveyed students travel to the school via a combination of walk, bus and other non-car forms of transport.

Afternoon Period

- Up to 27% of surveyed students or 251 students are picked up from the school by private vehicle means;

- Approximately 1% of surveyed students (13 students) depart the school by car; and

- The remaining 72% of surveyed students leave the school via a combination of walk, bus and other non-car forms of transport.

4.2.4 Parking Requirement Based on School Operational Characteristics

Section 4.2.2 of this report noted that the maximum parking occupancy of the on-site parking area during peak school operations is 107 spaces for the morning period and 105 spaces for the afternoon period. It is noted that that the total on-site parking occupancy generally accommodates long-term staff and student parking.

It has been previously presented that the long term parking demand generated by staff is likely to be equivalent to the total full time staff employment of the school. Since, no increase in staffing level is proposed as part of the subject application, no additional long term parking demand corresponding to employee parking is anticipated to be generated on site.

With regards to estimating the additional long term parking demand potentially generated by the increase in student population (from 1300 to 1350 students), reference is made to the survey results corresponding to the proportion of students who drive themselves to and from the school. The survey results indicate that approximately 1% of students currently drive themselves to and from the school. Application of this operational parking rate to the future intake of 50 additional students, an additional student parking demand of one space is projected to be generated.

The survey results previously presented in **Table 1**, indicate that the minimum number of on-site parking spaces available at any one time during peak school operations to be 21 spaces. In this regard, the additional parking demand of one space projected to be generated by the subject proposal, based on the assessment of operational characteristics of the school, is expected to be adequately accommodated by the existing on-site parking provision.

5. EXTERNAL TRAFFIC CONDITIONS

5.1 Surrounding Road Network

The following provides a description of the frontage road, which services direct connectivity to the school site:

Hoxton Park Road performs a State Road under the care and control of the Roads & Maritime Services. In this regard, it forms an important arterial road, providing an east-west connection between Hume Highway in the east at Liverpool and Cowpasture Road in the west at Middleton Grange. It forms a four lane divided carriageway providing two through public lanes of traffic in each direction, separated by a central median.

In the immediate vicinity of the site, Hoxton Park Road intersects with First Avenue and the school access driveway under traffic signal control. An exclusive right turn lane is provided at both Hoxton Park Road approaches to accommodate right turn movements into the school site and First Avenue. An exclusive left-turn deceleration lane is also provided at the western Hoxton Park Road approach to facilitate left-turn entry movements into the school site. Traffic flow is governed by a sign posted speed limit of 70km/hr, however 40km/h school zone speed restrictions apply between 8:00am – 9:30am and 2:30pm – 4:00pm during school days.

5.2 Existing Traffic Volumes

In order to obtain an indication of the existing performance of the adjoining public road network, peak hour morning and afternoon weekday traffic surveys were undertaken at the intersection of Hoxton Park Road/First Avenue/Site Access Road. These surveys were undertaken on 2 March 2018 between 8:00am – 9:00am and 2:30pm – 3:30pm to coincide with the starting and finishing periods of the primary school. **Figure 4** below illustrates the surveyed peak hour traffic flows at the subject intersection.

FIGURE 4
EXISTING PEAK HOUR TRAFFIC VOLUMES (8:00AM – 9:00AM AND 2:30PM - 3:30PM) INTERSECTION OF HOXTON PARK ROAD/FIRST AVENUE/SITE ACCESS ROAD

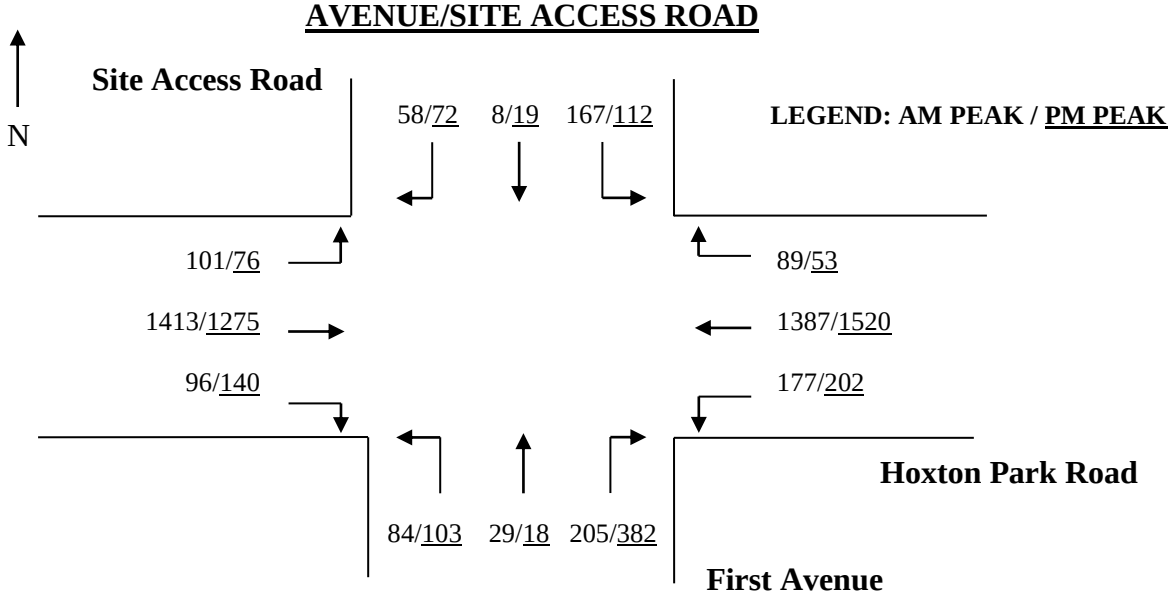


Figure 4 indicates the following:

- Hoxton Park Road accommodates two-directional traffic flows in the order of 3,200 – 3,400 vehicles per hour during peak periods commensurate with its higher order arterial function;

- Through traffic movements along Hoxton Park Road are somewhat tidal with greater volumes of vehicles travelling westbound during the morning peak whilst greater volumes of vehicles travel eastbound during the afternoon peak;

- The internal access road forming the western intersection approach was observed to carry directional traffic demands in the order of 200 – 250 vehicles per hour during peak periods; and

- First Avenue forming the southern intersection approach carries directional traffic demands in the order of 300 – 500 vehicles per hour during peak periods.

5.3 Existing Intersection Operation

In order to estimate the existing efficiency of the intersection of Hoxton Park Road/First Avenue/Site Access Road during peak morning and afternoon school periods, a SIDRA analysis has been undertaken. SIDRA is a computerised traffic arrangement program which, when volume and geometrical configurations of a network of intersections are imputed, provides an objective assessment of the operation efficiency under varying types of control (i.e. signs, signal and roundabouts). Key indicators of SIDRA include level of service where results are placed on a continuum from A to F, with A providing the greatest intersection efficiency and therefore being the most desirable by the Roads and Maritime Services.

SIDRA uses detailed analytical traffic models coupled with an iterative approximation method to provide estimates of the abovementioned key indicators of capacity and performance statistics. Other key indicators provided by SIDRA are average vehicle delay, the number of stops per hour and the degree of saturation. Degree of saturation is the ratio of the arrival rate of vehicles to the capacity of the approach. Degree of saturation is a useful and professionally accepted measure of intersection performance.

SIDRA provides analysis of the operating conditions that can be compared to the performance criteria set out in **Table 2** overleaf (being the RMS NSW method of calculation of Level of Service).

TABLE 2 LEVELS OF SERVICE CRITERIA FOR INTERSECTION		
Level of Service	**Average Delay per Vehicle (secs/veh)**	**Traffic Signals, Roundabout**
A	Less than 14	Good Operation
B	15 to 28	Good with acceptable delays & spare capacity
C	29 to 42	Satisfactory
D	43 to 56	Operating near capacity
E	57 to 70	At capacity, at signals, incidents will cause excessive delays Roundabouts require other control mode
F	> 70	Extra capacity required

The existing conditions have been modelled utilising the peak hour traffic volumes presented within **Figure 4**. **Table 3** below provides a summary of the SIDRA output data whilst full details are available upon request.

TABLE 3 SIDRA NETWORK MODELLING ANALYSIS EXISTING CONDITIONS INTERSECTION OF HOXTON PARK ROAD/FIRST AVENUE/SITE ACCESS ROAD		
	AM Peak	**PM Peak**
South: First Avenue		
Average Vehicle Delay	55.8	79.0
Degree of Saturation	0.72	0.96
Level of Service	D	F
East: Hoxton Park Road		
Average Vehicle Delay	28.6	67.3
Degree of Saturation	0.67	0.95
Level of Service	C	E
North: Site Access Road		
Average Vehicle Delay	40.3	29.7
Degree of Saturation	0.32	0.20
Level of Service	C	C
West: Hoxton Park Road		
Average Vehicle Delay	29.3	47.2
Degree of Saturation	0.72	0.90
Level of Service	B	D
Total Intersection		
Average Vehicle Delay	31.8	59.3
Degree of Saturation	0.72	0.96
Level of Service	C	E

Table 3 indicates the intersection of Hoxton Park Road/First Avenue/Site Access Road currently operates with a level of service 'C' (Satisfactory) and 'E' (At Capacity) for the AM and PM peak school periods respectively.

It is noted that First Avenue approach currently operates with a level of service 'F' during the afternoon peak period signifying a poor level of service, which is attributed to the following factors:

- The existing configuration of the road comprising an exclusive right turn lane and a shared through and left turn lane is inadequate to accommodate the heavy left and right turn traffic movements onto Hoxton Park Road; and

- The landlocked nature of First Avenue, which also services a number of schools (i.e. Good Shephard Primary School and Malek Fahd Islamic School) and residential dwellings in the surrounding precinct is such that First Avenue can be expected to attract a significant amount of inbound and outbound traffic associated with the surrounding land use.

In addition to the above, it should be noted that the through traffic volumes reflected in **Figure 4** represents less than 10% of the total traffic within the First Avenue approach, which is not expected to change with the additional traffic generated by the subject proposal. In this regard, traffic movements to the school from First Avenue is not considered the significant contributor to the poor level of service at this approach, which is also substantiated by the SIDRA analysis (showing a level of service 'B' for the through movements in the afternoon peak, representing good conditions).

It is also acknowledged, whilst not shown in **Table 3** that the level of service for right turn movements at both Hoxton Park Road approaches is 'F', which is not commensurate with our observations of the intersection during the afternoon peak period. The low right turn traffic volumes identified from our surveys is such that the queues developed within the right turn bay does not extend onto the through lanes impeding through traffic. Indeed, the maximum queue lengths reflected in the SIDRA output shows queuing to be well below the capacity of the right turn bays.

5.4 Projected School Traffic

The subject proposal is projected to generate additional traffic demand to and from the site associated with the increase in school population from 1300 to 1350 students. This additional traffic demand generated during peak school starting and finishing periods is expected to be function of the following factors:

- Concentrated arrival and departure times associated with student pick-up/drop-offs; and

- Long term parking associated with students of legal age driving themselves to and from the school.

The abovementioned factors are influenced by the likely mode of transport adopted by students and staff as well as the likely vehicle occupancy rate for students. In this regard, the traffic generation of the site can be estimated based on the following patronage and parking survey data provided by the school:

- 64% of students are expected to be dropped off by car during the AM peak and 27% of students are expected to be picked up by car during the PM peak; and

- A large portion of the surveyed students (65%), who were picked-up/dropped-off by car indicated that there were three or more) people (including the driver per vehicle. In this regard, an average vehicle occupancy rate of two students per vehicle is assumed for the purposes of this assessment.

Based on the above rates, the traffic generating potential of the additional 50 students is summarised in **Table 4** below.

TABLE 4
SUMMARY OF PROPOSED ADDITIONAL TRAFFIC GENERATING CAPABILITY OF THE SITE

	AM PEAK	**PM PEAK**
	Students Dropped Off by Car	**Students Picked Up by Car**
Inbound	16 (50 x 0.64)/2	7 (50 x 0.27)/2
Outbound	16 (50 x 0.64)/2	7 (50 x 0.27)/2
Total	32	14

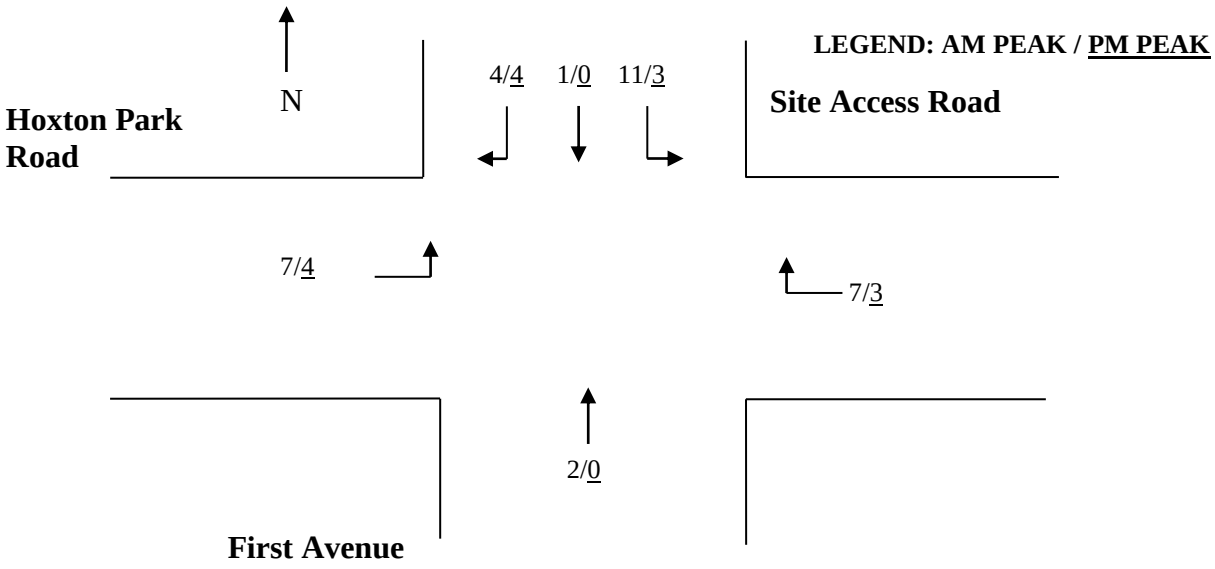
Table 4 indicates that the morning peak period is projected to generate 32 additional vehicle trips to and from the site, whilst the afternoon peak is forecasted to generate 14 additional vehicle trips to and from the site.

5.5 Trip Assignment

In order to gauge the impact of the traffic projected to be generated by the proposed development on the adjoining public road network, it is necessary to determine the impact on surrounding intersection efficiency. The objective of this section is to distribute the traffic generated by the proposed development along the major approach routes before it dissipates throughout the general road network.

It is rarely possible to precisely forecast the route that motorists will elect to utilise. Perceived traffic safety, traffic efficiency and individual preferences are all variables that will influence the traffic route selected by motorists. Nevertheless, it is common to assume that trips to the subject site will be distributed in accordance with existing traffic patterns and alterations currently observed in the surrounding road network. In this regard, the following trip assignment reflected in **Figure 5** overleaf has been formulated based on the existing surrounding traffic distributions illustrated within **Figure 3**.

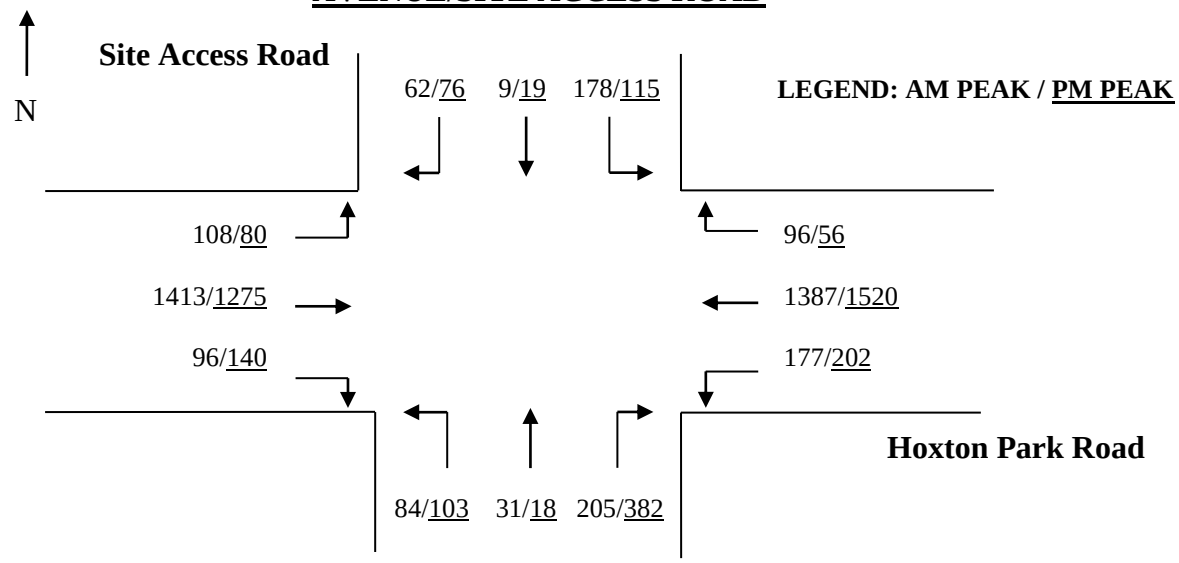
FIGURE 5
TRIP ASSIGNMENT



The projected traffic volumes at the intersection of Hoxton Park Road/First Avenue/Site Access Road during school starting and finishing periods can be estimated by adding the forecasted trip assignment presented in **Figure 5** onto the existing surveyed traffic volumes presented in **Figure 3**.

Figure 6 below provide a diagrammatical representation of the projected traffic demand.

FIGURE 6
PROJECTED PEAK HOUR TRAFFIC VOLUMES (8:00AM – 9:00AM AND 2:30PM - 3:30PM) INTERSECTION OF HOXTON PARK ROAD/FIRST AVENUE/SITE ACCESS ROAD



5.6 Projected Traffic Impacts

Utilising the projected traffic volumes presented within **Figure 6** associated with the school population increase, the site access road intersection with Hoxton Park

Road/First Avenue have been remodelled using SIDRA to determine the post-development impact on traffic safety and efficiency due to the altered traffic characteristics. A summary of the most pertinent results are indicated within **Table 5** overleaf whilst full details are available if required.

Table 5 indicates that the modelled intersection level of service is projected to remain unaltered with the additional traffic generated by the subject proposal, with some minor increases in the average vehicle delay and degree of saturation.

TABLE 5
SIDRA NETWORK MODELLING ANALYSIS
PROJECTED CONDITIONS
INTERSECTION OF HOXTON PARK ROAD/FIRST AVENUE/SITE ACCESS ROAD

	Existing Conditions		Projected Conditions	
	AM Peak	**PM Peak**	**AM Peak**	**PM Peak**
South: First Avenue				
Average Vehicle Delay	55.8	79.0	54.7	79.9
Degree of Saturation	0.72	0.96	0.71	0.96
Level of Service	D	F	D	F
East: Hoxton Park Road				
Average Vehicle Delay	28.6	67.3	29.5	65.2
Degree of Saturation	0.67	0.95	0.68	0.95
Level of Service	C	E	C	E
North: Site Access Road				
Average Vehicle Delay	40.3	29.7	39.8	29.5
Degree of Saturation	0.32	0.20	0.34	0.22
Level of Service	C	C	C	C
West: Hoxton Park Road				
Average Vehicle Delay	29.3	47.2	29.9	47.2
Degree of Saturation	0.72	0.90	0.73	0.90
Level of Service	C	D	C	D
Total Intersection				
Average Vehicle Delay	31.8	59.3	32.5	58.4
Degree of Saturation	0.72	0.96	0.73	0.96
Level of Service	C	E	C	E

The projected additional traffic generation during peak school periods is also anticipated to result in some additional queuing within the site access road approach. However, the length of the internal roadway servicing the school (which resembles a long conveyor belt) is sufficient to accommodate the extended queue length within the property of the school. In consideration of this and the above assessment, the proposed development is not expected to have any unreasonable impacts on traffic safety and efficiency from an internal and external road network perspective.

6. INTERNAL OPERATIONAL TRAFFIC & PEDESTRIAN MANAGEMENT PLAN

In order to ensure safe and efficient school operations during peak start and finish periods, it is recommended that an Operational Traffic & Pedestrian Management Plan (OTPM) be implemented. The following subsections of this report provide a summary of the key strategies which should be incorporated within the Plan, the requirement for which could be reasonably imposed by Council as a condition of Development Consent.

6.1 Operational Traffic & Pedestrian Management

6.1.1 General Items

- A Management & Safety Committee is to be established to implement the operational traffic and pedestrian management measures incorporated within this Plan and to develop further guidelines in order to ensure that on-site and off-site vehicular and pedestrian safety is maximised.

  The Committee shall comprise the school principal or his / her senior representative, a parent's representative as well as an independent traffic consultant to provide initial assistance in the implementation of the Plan and subsequent periodic guidance in ongoing review of the Plan.

- The Management & Safety Committee shall ensure that the procedures contained within the OPTM are put in place with respect to: on and off-site traffic and pedestrian management and safety issues.

- The Committee shall put in place measures which should ensure parent / guardian compliance with the Plan. These should take the form of specific instructions via student newsletters and indications that such instructions are to be observed as may be applicable to any private property and could therefore form part of the initial enrolment procedures.

- The Plan should also be subject to periodic review by the school (in consultation with Council for endorsement), to ensure that road safety issues as they relate to the public roads close the school, are appropriately documented and implemented in accordance with sound traffic engineering and road safety practices.

6.1.2 Internal Staff Parking

- Staff parking is to occur within the designated off-street parking areas that are separate to parents/visitor and pick-up/drop-off parking areas.

- Staff who wish to utilise the site parking facilities are to arrive prior to 8.00am and exit after 3.30pm on school days to minimise the interaction of this vehicle movements with the peak student set-down / pick-up periods during school start and finish periods.

6.1.3 Internal Student Pickup/Set Down

- Student drop-off / pick-up is to be undertaken within the formalised pick-up/set-down area forming part of the internal roadway.

School Start

- Parents setting-down students during the morning peak are to do so in the formalised pick-up/set-down area on-site.

- Students set-down within the area are to access the school buildings to the west via the existing pedestrian walkway.

- No staff parking is to occur within the set-down / pick-up area during the morning school start period.

- During the initial stages of the implementation of this TMP, a traffic warden (wearing an appropriate clean high visibility reflective vest) will supervise the set-down / pick-up area during the morning prior to school start to ensure that students disembark parent vehicles in a safe and efficient manner.

- Vehicles are to queue within the internal pick-up/set-down parking area.

School Finish

- The school will implement the following operational management arrangements during the afternoon school finish period:

    - Students assemble under the supervision of a warden at the pick-up area following the completion of the school day;
    - Parents display the names of children to be picked-up on the windscreen of the vehicle when entering the pick-up area; and
    - The warden supervising the student assembly area arranges for the relevant student/s to be brought to the front of the assembly area upon the arrival of the parent vehicle to the pick-up location.

- No student pick-up is to occur within the queue lane on approach to the assembly area. This is to be strictly controlled by the warden.

- No staff parking is to occur within the student pick-up area during the afternoon school finish period.

7. CONCLUSION

This report details our assessment of the traffic, access and safety considerations associated with proposed alterations and additions to Good Samaritan Catholic College, located at 401 Hoxton Park Road, Hinchinbrook. Having regard to the contents of this report, the following conclusions are now made:

- The application is expected to result in an increase in the school population from 1300 to 1350 students;

- The existing access and internal circulation/manoeuvring arrangements are capable of accommodating existing and projected school traffic in a safe and efficient manner during peak school starting and finishing times;

- The existing on-site car parking provision is assessed to be capable of servicing the projected parking demands generated by the school based on the operational characteristics of the school;

- The immediately adjoining road network (intersection of Hoxton Park Road/First Avenue/Site Access Road) currently operates with a reasonable level of service during peak periods based on the SIDRA modelling output;

- The subject projected is expected to result in an additional 32 AM and 14 PM peak hour vehicle trips to and from the site during peak school start and finish periods;

- The surrounding road network has been assessed to be capable of accommodating the additional vehicular traffic generated by the proposal in a safe and efficient manner, with no significant alterations to its existing conditions; and

- Implementation of an Operational Traffic & Pedestrian Management Plan (OTPM) is anticipated to ensure that the additional traffic generating potential of the proposed school expansion will not result in any unreasonable impacts on the surrounding road network and improve the overall efficiency & safety of the internal roads servicing the school during peak school start and finish periods.

Based on the contents contained within this report, there are no parking and traffic related issues associated with the proposed development which would prevent this Practice from recommending the proposal for Council approval.