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WA: 2656_2.1.135 RFI response 04
Friday, 11 September 2020

Amanda Gale
Senior Development Officer (Planning)
City of Newcastle
E: agale@ncc.gov.au
E: mail@ncc.gov.au

Re: DA2019-00966 – 30 Vista Parade, Kotara

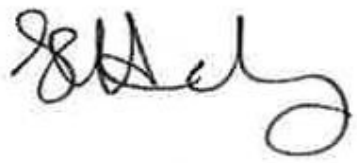
Dear Amanda,

We provide the attached Technical Design Note prepared by SECA Solution in response to the email received on Friday 28 August 2020 in regard to the above Development Application, in regard to the Internal Development Engineering (Traffic) referral

We trust addresses all queries now raised. We look forward to your favourable response to these items.

Please do not hesitate to call if you wish to discuss the above further.

Kind Regards,



Sandra Hinchey
Director
B.Arch(Hons) B.Sc(Arch) NSW ARB No.8783

Attachments:
01 SECA Solution Technical Design Note Dated 02.09.2020
02 Email 28.08.2020

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Technical Design Note

Project: St James Primary school

Subject: Response to Council RFI - DA2019-00966 – 30 Vista Parade, Kotara

Date: 11 September 2020

We provide the below information in response to emails received on Friday 20 December 2019 and Thursday 20 February 2020 providing an update on the above Development Application, which also requested additional information be provided.

New Item – Internal Development Engineering (Traffic) referral

Below is the content of the email received on 21.05.2020 requesting additional information with the Traffic

SEPP Infrastructure 2007

The application has been referred to TfNSW pursuant to SEPP Infrastructure 2007 Schedule No. 3. Tf NSW in a response dated 17 September 2019 raised no objection to the proposal and recommended the City of Newcastle (CN) consider issues relating to general road safety and driver sight lines at the proposed driveway.

Traffic Generation

The development application proposes an increase in school numbers from 385 to 630 students and an additional 15 staff, representing a 64% - 245 increase in student numbers at the school. In addition, a 79 place Early Learning Centre (Childcare) is also proposed as part of this application employing up to 22 staff across all shifts. The existing YMCA Kotara OSCH is proposed to continue to operate at the site.

The traffic consultant has estimated that the development proposal could generate in the order of 920-970 trips per day (460-485 two-way vehicle movements). This equates to around 307 trips during the morning school peak and 267 trips during the afternoon school peak.

Road Network

A general concern is raised in relation to any proposed increase in traffic associated with the school site given the existing congestion occurring in Vista Parade during peak school AM/PM periods. A traffic report has been submitted in support of this application prepared by Seca Solutions and dated 9 August 2019. The applicant does not propose any changes to the existing external road network in association with this development. The report confirms that Vista Parade is congested during the morning and afternoon peak school periods however no assessment has been undertaken of the operation of the existing school access or the new access proposed under this development.

Ground Floor, 161 Scott Street
Newcastle NSW 2300
Ph (02) 4032-7979

Response –

It is not possible to complete a Sidra traffic model for the operation of the site access as the intersections at both ends and the overall congestion is not possible to model accurately. The operation of the driveway and the 2 intersections are significantly impacted upon by local drivers interacting in a specific manner required in this location. In the morning, a significant number of parents are traveling to work themselves and the drop off times vary over a 20 minute period. This sees less of a peak demand for traffic and parents typically do not park for long in the school or street, especially with the older children who walk into the school buildings by themselves.

In the afternoon period, parents typically start arriving 20 minutes before the end of the school day, with the first parents parking on site but the majority of parents park on the other side roads i.e. Grayson Avenue or Princeton Avenue depending on where they live. By parking on these streets, parents avoid the need to drive along Vista Parade and travel past the school.

A review of the traffic operations on site in the PM pick up period shows that there is congestion for around 5-10 minutes after the school bell and then the traffic has dispersed and Vista Parade operates with very minor delays and congestion. Attempting to model this 10 minute peak with Sidra and calibrating it to reflect the drivers characteristics is not considered viable or appropriate.

In order to ascertain the pre and post traffic related impacts of this development it is recommended that the traffic consultant undertake a comprehensive observation survey of the operation of the existing school access over a minimum 3 consecutive school days and assess the proposed new access with due regard for existing road / site constraints and the resulting increase in traffic flows as a result of this development. The observation survey and assessment is also to extend to the intersections of Vista Parade/Grayson Street and Vista Parade / Princeton Avenue, due to their close proximity to the subject site.

Response –

The traffic observations completed by Seca Solution as part of the project work observed the operation of the driveway and the intersections at both ends of Vista Parade. The intersections either end of Vista Parade operate to an acceptable standard in the morning drop off period, with drivers travelling slowly through the school zone observing the lower speed limit. In the afternoon pick up period, for about 10 minutes there is traffic congestion associated with parents leaving the school site and its environs. Whilst there is congestion, there are no road safety concerns as the children are walking with an adult and use the footpaths. There is a school crossing on Vista Parade for children to cross this road, under adult supervision. After this 10 minute congested period, the traffic flows on Vista Parade are very low and there is no delays or congestion for the through traffic movements.

The traffic movements associated with the school traffic are consistent across a week and as such surveys for more than one day would not highlight differences in typically behaviour and so would not be required.

Note:

The observation surveys will be required to be undertaken during peak periods (AM /PM) of normal school operations and therefore after Covid 19 restrictions have been lifted.

Response –

The previous traffic surveys / observations were completed prior to the Covid-19 impacts and as such are reflective of normal travel demands for the school.

Matters that require particular attention during the observation survey and access assessment extend but are not limited to the following:

Impacts of right turn from Vista Parade into school site on through traffic in Vista Parade.

Response –

When traffic is waiting to turn right, it blocks the through traffic. There is not enough width to pass a car propped waiting to turn right. Observations on site show that when this occurs, drivers turning left into the school off Vista Parade stop prior to this driveway and allow the opposing driver to turn right into the school and thereby limit the extent of through traffic delays created by a car looking to turn right into the school. The width of Vista Parade does not allow for the provision of a sheltered right turn lane into the school.

Extent of queuing and delay time for vehicles in Vista Parade turning right into the school site

Response –

This varies and generally through traffic is blocked / slow moving which allows drivers to turn right into the school. Observations on site show that often a parent will provide a gap to allow another parent to enter. Delays vary considerably and can be less than 10-20 seconds depending on the sequence of parent arrivals.

Operation of the intersections of Vista Parade/Grayson Street and Vista Parade / Princeton Avenue and impact of right turn movements out of Vista Parade – extent of queuing and delay times

Response –

Both of the right turns are delayed but due to the congestion people let other drivers turn right out. Limited demands for right turn onto Princeton Avenue as dead end with parents with a destination on Princeton Parade typically parking on Princeton Parade, walking to pick up their child and then just driving home and as such do not need to turn right out of Vista Parade into Princeton Avenue. Most drivers using Vista Parade after exiting the school turn left onto Princeton Avenue.

Impact of a vehicle turning right out of the school driveway – obstruction, frequency delay times.

Response –

When turning right out the driveway, blockages can occur but most drivers turn left out. People with a destination west of the school park on Grayson Avenue and then walk to the school to pick up their child. As such the demand for the right turn out is very low. Observations on site demonstrate that drivers on Vista Parade during this time typically acknowledge a drive and allow them to exit the school as required.

This is consistent with driver behaviour noted at numerous schools observed by the staff of Seca Solution.

Benefits or otherwise of a left in / left /out restriction on the operation of the school access.

Response –

This would need a physical barrier to stop the turns else parents will ignore it. This would then force drivers to do U-turns to come back through Vista Parade and thereby create further delays and congestion. This central barrier would also need to accommodate pedestrians crossing the road and the width of Vista Parade would not permit this. This restriction would also encourage parents to drop their child on the wrong side of the road and allow the child to cross the road unsupervised which would create increased safety concerns.

Benefits or otherwise of a single lane entry/exit driveway versus a dual lane entry / single lane exit or dual lane entry and exit

Response –

A separate entry and exit has been considered to allow for one-way movement through the site, however whilst it would be beneficial to separate these movements, it is a small frontage, small car park area and this option would remove more kerb side parking as well as impact on the internal car park layout. For these reasons it was not considered viable.

Impacts of buses on traffic flows in Vista Parade - obstruction and frequency of buses

Response –

Limited bus demand on this road. Morning school bus comes before the drop off period so no impact. PM bus after the school pick up associated with St James and therefore very low traffic demands on Vista Parade at this time.

Impacts of the existing power pole located opposite the proposed driveway - within clear zone

Response –

It is considered that this power pole has no impact upon the operation of the school access and there has been no accidents noted by the school with this pole nor any noted in the accident data provided by TfNSW. This power pole is located behind the kerb line, in a similar manner to the majority of other power poles in Kotara and as such is not considered a specific safety concern for this project.

Traffic safety – Accident History

Response –

A review of the latest crash statistics published online by Transport for New South Wales indicates that there were no accidents recorded on Vista Parade over the 5-year period from 2014 and 2018. –this shows that the existing issues / concerns raised do not create any traffic safety issues in this location

<u>Parking</u>

The proposal provides for a total of 55 parking spaces (including 4 accessible car spaces) across two separate car parking areas. This includes:

- 31 spaces (25 staff and 6 visitor spaces) designated for St James Primary School. A further 2 spaces are provided for motorcycle parking.
- A total of 22 spaces is proposed for the early learning (Childcare) centre; and
- two spaces suitable for small buses associated with YMCA Kotara OSCH.

Response –

In addition to this, a drop off zone is also proposed for St James Primary School comprising 7 parallel car spaces with queuing for approximately 33 cars within the site. The proposal does not include provisions for separate car parking associated with YMCA Kotara OSCH, as it is anticipated that staff shall be able to utilise the car parking available on site (shared use).A Class 2 secure bicycle enclosure has been provided for school staff and bicycle racks for students in accordance with CN's DCP 2012.

Under CN's DCP 2012 the school requires parking at a rate of 1 space per 2 staff plus 1 space per 8 senior students, and 1 space per 100 students for visitors. A total of 49 staff and no senior students, and 630 general students equates to a parking requirement 24.5 spaces plus 6.3 spaces, a total of 30.8 spaces. Accordingly, the car parking provision for the school satisfies CN's parking requirements under DCP 2012 – refer Table No. 1.

CN's DCP 2012 parking rate for a 79 place childcare centre is 1 space per 4 children which equates to 79 divided by 4 = 19.75 spaces. The proposed childcare centre therefore satisfies the parking requirements of CN's DCP 2012. – refer Table No.1

Table No. 1 – (CN Development Control Plan 2012 (DCP 2012 - Parking Requirements)

Use	Quantity	Spaces Required
St James Primary School		
Staff	49	24.5
Visitors (1/100 students)	630	6.3
Sub-Total		**31**
Early Learning Centre		
Children Attending	79	19.75
Sub-Total		**20**
YMCA Kotara OSCH		
Staff	6	3
Sub-Total		**3**

While the onsite parking provision under this application complies with Council's DCP it is acknowledged by the consultant that on-street congestion in Vista Parade sees a number of parents elect to park on-street particularly of an afternoon and walk to the school to pick up children. It is stated that this activity will increase post development however no assessment has been undertaken.

In order to assess the parking implications of this development it is recommended that the traffic consultant undertake a detailed assessment of the extent of existing on-street parking, the likely increase post development and any adverse impacts associated with this activity, in terms of traffic congestion in surrounding streets.

Response –

Table 1 above shows that the parking provision on site meets the requirements of the Council DCP. Typically, parents choose to park away from the school on Grayson Avenue and Princeton Parade and then walk to the school especially in the afternoon pick up period. This creates some short-term parking demands on these public roads which then disperse shortly after the end of school. This parking all occurs on public road with no on-street parking restrictions, other than those required across private driveways and at intersections. Whilst this demand could increase, it is over a short timeframe during school term only and considered acceptable. The drivers generally choose to park on the side of the road that is most convenient for their end destination and drivers then leave the area in an efficient manner with no delays / congestion occurring away from the school created by this traffic.

The provision of a parent drop of zone within the site is supported although it is acknowledged that the level of utilisation of this facility will be determined by the efficiency of the operation of the proposed Vista Parade driveway entry/exit.

Note:

This parking assessment will be required to be undertaken during normal school operations and therefore after Covid 19 restrictions have been lifted.

Carpark Layout

The proposed car park layouts have been reviewed and generally considered to be acceptable subject to compliance with AS2890.1 & 6. It is however recommended that the proposed childcare / school staff carpark adjacent to Vista Parade be amended to provide for a one-way clockwise vehicle movement with the further most northern car park access being designated as the 'Entry'. This amendment should assist in reducing the potential for vehicle queuing at the Vista Parade driveway entry/exit. A 'tear-drop' kiss and drop facility comprising of 7 designated spaces and on-site storage for around 33 vehicles is provided within the site for parent drop/off pick/up activity.

Public Transport

The site is well serviced by public transport with a bus stops located in Vista Parade. School buses drop off / pickup in Vista Parade at designated public transport and school bus stops

Response –

St James is a predominantly local school serving the local catchment and hence is no demand for bus access. The age of the children does not encourage self transport by bus to the school.

Pedestrian Network

The existing pedestrian access pathway located along the eastern boundary of the site and linking Vista Parade is being retained, now also providing pedestrian access to the proposed childcare centre. Clear separation is provided between vehicle and pedestrian activity within the site.

Site Access

Access to the site is provided via a new driveway adjacent to Styx Creek on the western site boundary. This driveway is providing access to St James Primary School, the proposed early learning centre and existing YMCA Kotara OSCH. Both the driveway and the internal circulating roads are designed to accommodate two-way traffic movement, with the internal road forming a loop at its northern end allowing for parents to access the drop off zone and exit the site in a forward direction. The parking aisles for the early learning centre shall allow for one way clockwise circulation enabling vehicles to continue to circulate within the carpark and not need to re-enter the main driveway. The internal circulation roads are designed to accommodate two-way traffic movements with a minimum width of 5.5 metres.

It is requested that the traffic consultant review the operational efficiency of the proposed driveway - refer section titled 'Road Network'.

Response –

A number of options have been discussed for the internal driveway operations and the proposal allows for safe and efficient movements whilst minimising the extent of impact on the available space for parking and drop off etc.

Servicing

No dedicated service area is being provided on site.

Response –

Advice from the study team has indicated that the demands for servicing associated with St James Primary School and the proposed early learning centre are low and can typically be completed by small commercial vehicles such as a van or ute. These vehicles shall utilise designated parking spaces on-site as required.

Waste collection is proposed to occur on-site along the driveway and adjacent to bin storage areas and is managed to avoid the drop off or pick up times to ensure that this can occur in a safe manner.

Conclusion

From our work completed for the expansion of the school, it is considered that the proposal allows for continual safe operation for the school. Whilst there are existing concerns over traffic congestion, these are typical for a school and its surrounds and in the afternoon peak these typically occur over a short duration (10-15 minutes) when all the traffic is exiting the school zone. In the morning period, the traffic movements are more spread out and as such the impact is less pronounced.

Other options for the school access and layout for the car park and drop off have been considered but the proposal is considered to provide the most efficient layout, maximising the internal capacity and ensuring road safety is maintained.

If you require any further assistance, please do not hesitate to contact our office on 4032-7979.

Regards

Sean Morgan

Director

sandra@webberarchitects.com

From: Amanda Gale <agale@ncc.nsw.gov.au>
Sent: Friday, 28 August 2020 9:14 AM
To: sandra@webberarchitects.com; Tracey Webb
Cc: 'Megan Eiman'; Steven Masia
Subject: Email to Applicant - DA2019-00966 - 30 Vista Pde Kotara - Referral Response Update & Request for Information Outstanding Traffic - 28-08-20

Importance: High

Hi Sandra,

In relation to the traffic referral, I have now received assessment feedback as follows:

The previous traffic referral dated 15 May 2020 raised a number of significant traffic related issues with the proposal and concluded as follows.

Recommendation

*The application is **not** supported on traffic grounds in its present form and it is recommended that the applicant's traffic consultant undertake further traffic assessment in order to ascertain the traffic related impacts of this development proposal. In this regard attention is drawn to specific requirements under Sections – Road Network and Parking.*

The response by applicant dated 22 June 2020 is particularly brief has not provided detailed information to enable detailed assessment and consideration of the traffic related matters previously raised. It is noted that the submitted response to submissions table includes some quoted commentary from SECA Solutions however no comprehensive response prepared by a traffic consultant appears to have been submitted.

A comprehensive response based upon evidence and sound traffic engineering principles will need to be prepared by an appropriately qualified traffic consultant specifically addressing all the matters raised by Council. It is requested that this detailed response be submitted to enable further traffic assessment to be undertaken.

Flooding / drainage
In relation to the flooding / drainage re-referral response, this is currently being worked on and preliminary advice received thus far, suggests that whilst information submitted was not entirely what was asked for, there appears to be enough information for this assessment to continue and a final view formed. Again, once I receive an update direct from the officer involved, I will advise you.

In the meantime, could you attend to the traffic matters as a priority, referring back to the original RFI on traffic for the detail.

Could you please advise of an anticipated timeframe for preparation of a further response, as I will need to update staff internally and also that will assist with scheduling the matter for determination with the Regional Panel. At this stage, I had aimed to schedule for sometime in October as the Panel are particularly focused on progression of outstanding matters and determining application as a priority currently on their listings.

Kind Regards

Amanda Gale | Senior Development Officer (Planning)
City of Newcastle | Governance
Regulatory, Planning & Assessment | Development Assessment
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From: sandra@webberarchitects.com <sandra@webberarchitects.com>
Sent: Tuesday, 25 August 2020 12:09 PM
To: Tracey Webb <twebb@ncc.nsw.gov.au>
Cc: 'Megan Eiman' <megan.eiman@webberarchitects.com>; Amanda Gale <agale@ncc.nsw.gov.au>
Subject: DA2019-00966 - 30 Vista Pde Kotara - Referral Response Update

Hi Tracey,

Further to our emails from last week regarding the St James PS Kotara, have you had any feedback from the engineers with their referral response?

Regards

Sandra Hinchey
Director
B.Arch(Hons) B.Sc(Arch) NSW ARB No.8783

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Both Webber offices remain operational and practices are in accordance with the latest health advice regarding the pandemic. We have taken effective measures to enable remote working and video conferencing wherever possible. We are committed to upholding our level of service and appreciate your continued support. We wish you and your loved ones good health and future relief.

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Technical Design Note

Project: P1410 WA St James Kotara South

Subject: School Expansion & ELC - Drop Off / Pick Up

Date: 29th October 2020

Attention: Sandra Hinchey

Further to our recent discussion, we have now discussed this project with David Rynor from City of Newcastle Council and have completed additional traffic and parking surveys to observe the current traffic and parking patterns around St James school in Kotara. My discussion with David Rynor involved discussion on existing parking demands created by the school on the local roads and traffic impacts. Whilst it was accepted that Sidra modelling would not be viable for the location, due to the very specific and short timeframe for the traffic impacts, observation of the traffic was needed so that a qualitive assessment could be made of the potential traffic impacts for the school expansion.

David Rynor requested the following additional information to assist with Council 's assessment for the project:

- 3 days of traffic surveys at the intersections at both ends of Vista Parade to determine current operations and observe current delays / congestion / queues.
- 3 days of parking observations on Grayson Avenue, Vista Parade and Princeton Avenue.
- Provide an assessment of the potential impacts on traffic movements associated with the proposed increase in students at the St James site.
- Provide an assessment on the potential impacts on parking demands on-street created by the proposed increase in students at St James.

Surveys

Seca Solution staff completed traffic and parking surveys in the vicinity of St James school on Wednesday 21st October, Thursday 22nd October and Friday 23rd October 2020. These surveys covered observation of traffic movements at both ends of Vista Parade (and recorded on video camera), traffic movements in the school grounds as well as parking observations on the roads. A summary of the findings is provided below:

Traffic

- In the morning peak period, the traffic and drop off arrangements work well, mainly due to the fact that parents drop off children at various times and thus there is less of a peak in activity. Children were dropped off over a 20 minute or more period and the surveys shows that this generally works well. Some parents choose to use the drop off zone within the school, whilst others were observed walking with their children into the school. The walkers were a mixture of local parents who can walk all the way to the school and other parents who park off Vista Parade and walk to the school.
- Parents typically park on the most convenient side of the school on Princeton Parade or Grayson Avenue for trips home or on-going trip to work etc. Styx Creek forms a barrier between these two roads and their

connection to the main road network is distinct. As such, the surveys would indicate that there are very few parents driving along Vista Parade past the school. This reduces the traffic numbers on this road and improves the operation of the site access.

- For traffic exiting the school, this was a mixture of left and right turns out. An issue for the left turn out was the operation of the adjacent school crossing point – drivers here give pedestrians priority, which then means traffic cannot exit the school as they block back into the driveway. This also blocks traffic heading north-west along Vista Parade, with a near constant flow of pedestrians causing delays and congestion.
- Vista Parade became blocked with traffic trying to turn right into the school, which then caused a queue of 3 cars on Grayson Avenue trying to turn right into Vista Parade, with this happening twice.
- No queues were observed for traffic turning into Vista Parade off Princeton Avenue on any of the days. Delays here are minimal. It would seem that there is a greater catchment of students from the west of the school who access the school via Grayson Avenue.

Parking

- **In the morning period**, parents were observed using the car park opposite the school associated with the church. The children and parents then walk into the school via the school crossing. This can be a near constant stream at times, which then causes Vista Parade to become blocked and traffic cannot move or exit the school driveway when turning left out of the school.
- In the morning, there was negligible cars parked on Princeton Avenue, with the majority of parents dropping off their children only in this location and the student then walks along the footpath on Vista Parade into the school. These cars park on Princeton Avenue to both sides of Vista Parade but are there typically for less than 60 seconds. These appear to be older students using this area in this way in the morning.
- In the morning, Grayson Avenue operates in a similar manner, with a number of parents pulling up against the kerb for students to get out of cars and then walk along the verge into Vista Parade and walk into the school. These cars typically pull up for less than 60 seconds with the drivers then pulling away and proceeding along Vista Parade to leave the area.
- Parents were observed pulling up against the kerb in Vista Parade in the vicinity of the 40 km/h school zone in a legal parking area. Typically, half of these cars drop off students who then walk unaccompanied into the school with the balance walking their child into the school.
- **In the afternoon period**, parents arriving early are able to park in the school grounds in the pickup area waiting for their child to arrive.
- Other parents park on Grayson Avenue and Princeton Avenue. On Grayson Avenue, the peak on-street parking demand was observed on the Wednesday, when 19 cars were observed parked on Grayson Avenue south of Vista Parade and 20 north of Vista Parade. These were reasonably evenly split to both sides of the road. On Princeton Avenue there was a peak demand of 28 parked cars, with the majority of these parked on the northern side of Princeton Avenue adjacent to Nesbitt Park or between Vista Parade and Stayton Street. Nine cars were parked on the opposite side of the road between Stayton Street and Vista Parade.
- When the students left the school, teachers walked the children out in groups, with some students waiting for a bus, some walking along Vista Parade towards Grayson Avenue and the balance walking to Princeton Avenue. Parents waited at the corner of Princeton / Vista and Grayson / Vista for their child before walking to their cars and left the area. The vast majority of the traffic leaving the parking spaces on Grayson Avenue and Princeton Avenue do not then travel along Vista Parade.
- On the Thursday and Friday in the PM period, the observed operations were different, in that for the walkers to Grayson Avenue, the teacher walked the children to a meeting point further along Grayson Avenue, on the north-east corner of Nesbitt Park. Parents were seen parked on the western side of Nesbitt Park (19 on Thursday, 27 on the Friday) with less parking demand on Grayson Avenue.
- Both the Thursday and Friday pick up periods worked much better than the Wednesday, due to a large number of parents parking on the western side of Nesbitt Park, which reduced the impacts on Grayson

Avenue. This required the teacher to walk further from the school with the students rather than the parents picking up the children at the corner of Vista Parade and Grayson Avenue.

Previous traffic observations at the school have noted the following.

Morning (Drop Off)

- Parents who drop off their children and walk into the school typically park on-street or within St James Church opposite. Most of these vehicles park for longer than 5-10 minutes, reducing the availability of car parking during the peak drop off period. Several parents also park in the school adjacent to the informal drop off area.
- Parents who drop but (rather than park) typically use the informal kiss and drop within the school. There is a high demand for parents entering the school associated with the kiss and drop, particularly in the 20 minutes or so prior to classes commencing.
- A small number of parents exiting the school and turning right onto Vista Parade occasionally position their vehicle towards the centre of the driveway, which prevented an entering vehicle from passing. This further contributed to the delays and congestion on Vista Parade.
- Parents / students were observed to cross the driveway so as to access the existing pedestrian access to the school. Vehicles entering / exiting the school typically give way to these movements, also contributing to delays. Similarly, there are no designated crossings between this pathway and the kiss and drop.
- Operation of the children's crossing is not supervised. Students / parents currently cross Vista Parade upon arriving at the crossing. The arrival of pedestrian can see this crossing used multiple times in a single minute – this was observed during these recent traffic surveys.

Afternoon (Pick Up)

- Parents typically start arriving 25 minutes prior to the school bell. Those who arrive earlier were observed to park within the school (grass area either side of the drop off zone), at St James Church or on Vista Parade. The demands for parking increase gradually until school ends, with these demands spilling over onto Grayson Avenue and Princeton Avenue.
- Parents who park on these surrounding roads were seen to stand at either end of Vista Parade whilst waiting for their children. Similarly, parents who park at St James Church typically waited within this car park.
- Students leaving the school are managed by teaching staff. At the end of the school day, teaching staff were seen walking large groups of students (~30-50 students) from the school to the various waiting areas described above. This also included a group of students who accessed a bus to the east of the school entry.
- During this time the gate at the property boundary was closed, preventing any vehicles from entering or exiting the school. Once these groups of students had departed, this gate was reopened to allow vehicles parked on site to exit.
- In the 10 minutes following the end of the school day, there is a period of increased traffic along Vista Parade associated with parents departing. However, the overall level of delays and congestion during this time are significantly less than the morning drop off.
- More than 10 minutes after school had ended, there was a consistent although relatively low demand for parents entering / exiting the school to collect their children from OOSH.

Internal parking impacts associated with proposed expansion of school.

The proposal allows for the school to increase student numbers from the current number of 385 students to 630 students with a third teaching stream, in response to the growing demands for education. The project also involves the construction of a new Early Learning Centre (ELC) with upto 79 places available with the associated requirement for 22 staff, working across 2 separate shifts.

When reviewing the impact of the proposed expansion, it is important to note that the majority of the impact is created by the morning drop off demands and the afternoon pick up. The ELC centre allows for extended care for students between 6.30 AM and 6.30 PM, with the students generally transferring between this facility and the adjacent St James school or travel on dedicated mini-bus to other schools. The traffic impacts of this centre is outside of the normal drop off / pick up period for the school and therefore has a minor impact and has not been considered further.

Parking for the proposed expansion has been assessed against the Council DCP and is summarised below:

The demands for car parking have been calculated for the site by applying the authority rates above:

Use	Quantity	Spaces Required
St James Primary School		
Staff	49	24.5
Visitors (1/100 students)	630	6.3
Sub-Total		**31**
Early Learning Centre		
Children Attending	79	19.75
Sub-Total		**20**
YMCA Kotara OSCH		
Staff	6	3
Sub-Total		**3**

Applying the authority parking rates, the parking demand associated with St James Primary School is therefore 31 spaces (including staff and visitors). The provision of 30 designated parking spaces for staff together with 7 spaces within the primary school drop off is therefore adequate for the proposed school expansion.

Similarly, the provision of 23 car spaces for the proposed early learning centre is also adequate to support the future demands associated with this use.

No formal car parking is provided for the existing YMCA Kotara OSCH and as there are no changes proposed to the existing operation of this facility, no additional car parking is required. This facility is provided during the hours before and after school and so parking demands can be managed within the shared use of the existing parking facilities. It is noted that the provision of surplus car parking (3 spaces) adjacent to the proposed early learning centre shall be adequate to accommodate the staff car parking demands associated with this facility during the absolute peak demand when all staff are potentially on site.

The two spaces suitable for small buses are suitable to support the demands for bus parking associated with the operation of YMCA Kotara OSCH.

External impacts for parking and traffic associated with the proposed development

As per the Council request, additional surveys have been completed of the existing parking and traffic impacts associated with the school and these have then been extrapolated to assess the potential impacts of the proposed expansion of the school. As per discussion with Council, no formal traffic modelling has been prepared, as the operation of the traffic is unique and cannot be replicated as such with Sidra.

Parking

The survey of the existing external parking demands shows that traffic currently parks on Grayson Avenue, Casey Avenue and Princeton Avenue. The surveys over the 3 days showed the peak demands for this parking as:

Table 1 – Existing observed on-street parking demands

	Drop off period	Pick up period
Princeton Avenue	5	28
Grayson Avenue	5	39
Casey Avenue	0	27 (Thursday and Friday only of survey)

Traffic was observed parking on Vista Parade, but these were typically less than 60 seconds, for parents to drop off their children in the in the morning. In the afternoon parents park here with the space allowing for 15 vehicles to park.

The project allows for the student numbers to increase from the current 385 to 630, an increase of 60%. Based on this increase, the projected traffic parking is provided below:

Table 2 – Projected on-street parking demands

	Drop off period	Pick up period
Princeton Avenue	8	45
Grayson Avenue	8	62
Casey Avenue	0	43

For the parking on Grayson Avenue and Casey Avenue, it was noted that the parking and associated traffic impacts were considerably lower on the Thursday and Friday, when the teachers walked to the north-east corner of Nesbitt Park. With this arrangement, parents parked on Casey Avenue adjacent to the sports pitches and there was a lower demand on Grayson Avenue (31 cars). For the parking area along the western boundary of Nesbitt Park, the length of this 90 degree angle parking is 125 metres, so allowing for 2.7 meters width per car (as informal parking) this provides space for 46 cars to park in this location.

For Grayson Avenue, the projected parking demand is 62 vehicles. Allowing for 6 metres per car this equates to 370 metres of kerb side space being occupied. With the teachers walking the children to the north-east corner of Nesbitt Park, there will be a heavy bias towards parking to the south of Vista Parade. Grayson Avenue between Vista Parade and Springfield Avenue provides a total distance of 260 metres for parking. Along the southern side the available distance is approximately 30 parking spaces, whilst on the northern side is approximately 25 parking spaces available. This gives a total of 55 spaces south of Vista Parade. The remaining 7 spaces can be accommodated on the northern side of Vista Parade.

This parking will utilise the majority of the kerb side parking in this location, this is similar to the existing demands associated with the weekly sporting events on Nesbitt Park, particularly Saturdays during the football season. The parking demands for the football create similar or greater parking demands for 2-3 hours on a Saturday, from around 8.30 through to 11.00. The parking demands on the Saturday are near constant over the 2-3 hours, compared with the temporary parking demands associated with the school pick up, which from observation on site are a peak of around 15 minutes of an afternoon.

On Princeton Avenue, the potential parking demand is 45 cars or 270 metres of kerb. This can all be contained on the north western side of Princeton Avenue, south of Vista Parade with the school implementing a Traffic Management Plan to encourage parents to park here. This kerb side does not have any driveways and is adjacent to a grass area and Raspberry Gully shared path.

Traffic

Our observation of the traffic is that the intersection of Grayson Avenue and Vista Parade suffers from some delays in the morning drop off period, which is typically due to the near constant pedestrian demand across the marked school crossing on Vista Parade causing traffic to back up to this intersection. In the afternoon pick up period, the delays were negligible here and minor queues of less than 3 were observed on Grayson Avenue.

At the intersection of Vista Parade and Princeton Avenue, negligible delays were observed, with the vast majority of turning traffic movements being left turn out Vista Parade and right turns into Vista Parade. With Princeton Avenue being a dead end, there is very little traffic northbound on Princeton Avenue in this location.

The other important issue to note with the traffic, is that the parents park either on Grayson Avenue or Princeton Avenue based on their end destination, which means they do not then travel along Vista Parade. This means the impact on Vista Parade and the intersections at either end is very low in the afternoon pick up period.

With the proposed increase in student numbers, traffic flows could increase by approximately 60% over the current numbers. Based on the observations on site, this could increase the delays at the intersection of Grayson Avenue and Vista Parade, however the current delays are very low and clear quickly at this location, with the observed maximum right turn queue into Vista Parade being 3 cars only.

In the afternoon pick up period, no noticeable traffic delays were observed at this location.

For the intersection at Princeton Avenue and Vista Parade, no delays were observed in the morning drop off or afternoon pick up period other than drivers slowing down to negotiate the 90 degree turn. This is due to the negligible traffic flows on Princeton Avenue of the south of Vista Parade.

Recommendations

From the survey work completed to support the expansion of St James school, the following are proposed:

- Provide a crossing control person to manage the pedestrian movements across Vista Parade. The current free movement of pedestrians means that there can be significant delays for traffic on Vista Parade and for traffic exiting the site accordingly. The provision of a crossing controller would allow pedestrians to be corralled and permitted to cross the road in larger groups, thereby reducing the number of times that drivers stop to let pedestrian cross.
- Provide a management plan to direct parents to park on the western side of Princeton Avenue south of Vista Parade for the afternoon pick up, with children walking to this location under teacher control.
- Provide a management plan to direct parents to park on Casey Avenue adjacent to Nesbitt Park to collect their children. The surveys show that when this was actioned on the Thursday and Friday, the pick up arrangements worked much better than the Wednesday.

In conclusion, it is considered that with the inclusion of the above management for the school operations and specially the critical afternoon pick up activities, the impacts of the school expansion can be accommodated on the local roads with an acceptable impact for the 20 minutes typically associated with the drop off and pick up activities.

Yours sincerely,

Sean Morgan
Director