

05 April 2024

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Dear Stuart

# RE: School Development Application DA2022/0390, The Southern Parkway Forster – Response to MidCoast Council Comments

### Introduction

SCT Consulting undertook a peer review of Traffic Impact Assessments (TIA) completed by Seca Solution to support MidCoast Council's request for information regarding Development Application DA2022/0390 at Lot 1 DP 1264355.

Council has provided further comments regarding transport and traffic advice with the proposed responses included in **Table 1**.

This letter should be read in conjunction with the previous TIAs dated 7 June 2021 and 20 December 2022 and SCT's advice provided on 28 September 2023.



## Response to Council comments

#### Table 1 Response to Council comments regarding traffic and transport

| Ref   | Council comment  | Response  | Туре                      |
|-------|--|---|---------------------------|
| Acces | s Point & Circulation  |   |                           |
| A1    | The internal circulation whilst appropriate for a B99 vehicle, is not<br>accommodating of internal servicing as shown in the swept path analysis.<br>Amendment to the internal driveway is required to ensure that the service<br>vehicle does not need to complete a three-point turn in order to complete<br>the U-turn manoeuvre at the northern end of the internal road. This can be<br>resolved by increasing the radius of the internal road at the northern end.   | The internal road has been revised to accommodate the circulation of an 8.8m service vehicle in a single movement. See swept paths and internal road design attached in <b>Appendix A</b> .   | Design<br>amendment       |
| A2    | It must also be noted that both swept path analogies for the service vehicle<br>and the B99 vehicle conflict with the proposed allocated "kiss and drop"<br>area to the east of the circulation area.  | Service vehicles will be scheduled to arrive outside of school<br>peak hour pick up and drop off to avoid any conflicts with<br>vehicles using the kiss 'n drop. This can be confirmed in an<br>operational management plan which could form one of the<br>conditions of consent of the approval.   | Additional information    |
| A3    | The SEE proposes that all waste generated by the school is to be housed<br>within mobile garbage bins and taken to the kerb side for collection, which<br>would eradicate the need for a garbage truck to enter the circulation area.<br>This scenario does, however, have an impact on available on street parking<br>and a management plan has not been discussed in detail within the SEE,<br>TIA's or peer review that has been submitted to date. Further detail should<br>be provided encompassing how many bins would be required to be picked<br>up, at what times, and where they intend to locate the bins within the road<br>reserve. Consideration should be given to what impact (if any) that scenario<br>has on associated traffic movements or parking opportunities along the<br>frontage of the development. | Privately contracted waste collection is proposed, which would be<br>restricted to hours of operation outside of school peak hour pick<br>up and drop off to avoid any conflicts with vehicles using the kiss<br>'n drop. Bin collections are currently occurring four times a week.<br>This can be confirmed in an operational management plan which<br>could form one of the conditions of consent of the approval.<br>There will be a total of 8 stations located within the school<br>grounds. Students and staff have direct access to the central bin<br>stations, located outside each teaching block, undercover area<br>and library/staffroom block. Each classroom, wet area and<br>collegiate area will have a general waste and comingled recycling<br>bin, which are emptied daily into the nearest collection point. The<br>bins in each station are emptied to primary waste station. The bin<br>store is accessed from carpark, with service vehicles being able<br>to manoeuvre within that area.<br>Unrestricted on-street parking is currently available along both<br>sides of The Southern Parkway. However, observations in the<br>TIAs and a desktop study (Nearmap across multiple dates) note<br>that there is very minimal parking along The Southern Parkway | Additional<br>information |



| Ref | Council comment   | Response   | Туре                      |
|-----|---|--|---------------------------|
|     |   | adjacent to the proposed school site. Any observed parking is along the nursing home frontage only.  |                           |
|     |   | As waste collection will occur outside of school pick up and drop<br>off hours, there is little parking impact expected from waste<br>collection.  |                           |
|     |   | <ul> <li>There will be a total of 8 stations located within the school grounds. Students and staff have direct access to the central bin stations, located outside each teaching block, undercover area and library/staffroom block. Each classroom, wet area and collegiate area will have a general waste and comingled recycling bin, which are emptied daily into the nearest collection point. The bins in each station are emptied to primary waste station.</li> <li>The primary waste station will house: <ul> <li>1.1m<sup>3</sup> General Waste Bin Emptied Monday and Wednesday</li> <li>1.1m<sup>3</sup> Comingled Recycling Bin Emptied Monday and Wednesday</li> </ul> </li> </ul> |                           |
| A4  | The peer review relies heavily upon the use of the western aisle for both AM and PM "kiss and drop" manoeuvres to be undertaken that in turn, (in the opinion of the peer review) will reduce the number of on-street parking requirements within the Southern Parkway. The management plan required for this scenario to work includes the cordoning off (by staff members) of the 16 staff/visitors parking spaces as a manoeuvre into, and out of these spaces is not achievable with the parallel parking associated with the | Staff will be managing the kiss 'n drop area during pick up and drop off times (detailed below). As staff will arrive in the morning before 8:30am and depart in the afternoon after 3:30pm, there will be no expected conflict between staff parking and pick up/drop off times. Any unoccupied staff/visitor parking will be cordoned off with traffic cones prior to pick up and drop off times.  | Additional<br>information |
|     | proposed kiss and drop area.  | Proposed management of kiss 'n drop in the AM:   |                           |
|     | For the PM pick up, a suggested management approach as per the peer   | <ul> <li>Staff members will be stationed at each end of the kiss 'n<br/>drop (eastern and western side of the carpark)</li> </ul>  |                           |
|     | <ul> <li>review includes:</li> <li>"Identification of zones within the pick-up area based on the last name</li> </ul>   | <ul> <li>Staff at the western side of the carpark will facilitate the flow<br/>of cars to the eastern side of the carpark when needed, to<br/>prevent on-road queues.</li> </ul>   |                           |
|     | of the student (e.g., students with last names A-G in the first three spaces, last names H-N in the next, etc.). This reduces the chance that a student is waiting for their parent on the incorrect side of the facility, leading to longer drop-off times".   | <ul> <li>Staff at either end of the carpark will also monitor students'<br/>behaviour to enter school safely.</li> </ul>   |                           |
|     | <ul> <li>"Cars picking up students could have the last name displayed on a</li> </ul>   | Additional commentary on managing the PM pick up:  |                           |
|     | printed sheet of A4 paper on the dashboard so that staff can direct students to the correct car".   | <ul> <li>Students will wait on either side of the kiss 'n drop area based<br/>on the assigned zones (students with last names A-G in the</li> </ul>  |                           |



| Ref | Council comment   | Response   | Туре   |
|-----|---|--|--|
|     | <ul> <li>"Based on the above analysis, the probability of queues overspilling into<br/>the network is considered very low".</li> </ul>  | <ul> <li>first three spaces, last names H-N in the next, etc). Staff will be assigned to wait with the students and monitor their safety.</li> <li>Parents/carers will be directed to the right zones (based on student's last name displayed on the dashboard) by staff. Staff will guide the student to the right car when their parent has arrived.</li> <li>If a parent/carer has arrived at the kiss 'n drop before their child and has been waiting for longer than 2.5 minutes, staff will request that they recirculate via the roundabout to facilitate the pick up of other students.</li> <li>As the school will not reach the student population numbers immediately, there is opportunity for continuous improvement in the kiss 'n drop management approach – e.g. the kerb could be allocated by year group of the youngest child in the school.</li> </ul>   |  |
| A5  | <ul> <li>Regardless of any formal arrangement, it is considered that this area will inherently become a kiss and drop zone particularly for the AM peak period. This scenario of a kiss and drop on the western side of the circulation area (particularly for the PM pickup) cannot be supported on the following grounds:</li> <li>Most importantly the proposed use of the western side of the circulation area for kiss and drop movements does not comply with the associated Australian Standards. It must be noted that Figure 2.5 (notation 2) within AS28890.1 calls for an additional 300mm minimum clearance from any obstacle higher than 300mm adjacent to the through isle. Given the limitation of only 3m being available between the 60-degree angle cars and those within the proposed kiss and drop parking areas, this cannot be achieved as highlighted in the table below:</li> </ul> | The carpark design has been redesigned to ensure aisle widths<br>and space dimensions comply with AS2890.1<br>Staff management during pick up and drop off times helps to<br>facilitate pick up and drop off and reduce confusion for parents<br>and students.<br>In the event of a delay (>2.5min turnover), such as when the<br>parent/carer has arrived before the student has come to the kiss<br>'n drop zone, staff on duty will request parents to recirculate to<br>the carpark via the roundabout at the Akala Avenue intersection<br>to reduce potential queuing on The Southern Parkway.<br>The dwell time assessed – 2.5 minutes reflects a conservative<br>approach to the amount of time taken for children to find the<br>appropriate vehicle.<br>Management is proposed to reduce risk of queuing. The school<br>proposed is K-8, which involves very young children. It is not<br>realistic to have a facility which can cater for young children<br>around cars without the active management of teachers. These<br>techniques are very common in schools, for example:<br>- Oatlands Public School (refer https://oatlands-<br>p.schools.nsw.gov.au/news/2018/9/kiss-and-drop.html) | Design<br>amendment<br>Additional<br>information |



| Council comment  |   |  |  |   | Response  | Туре   |
|--|---|--|--|---|---|--|
| <ul> <li>ASINZS 2890.1:2004</li> <li>Kerb</li> <li>Aisle width<br/>(one-way), W</li> <li>3.0</li> <li>3.3</li> <li>NOTES:</li> <li>Spaces shall be located at<br/>columns.</li> <li>Where the opposite side c<br/>increased by at least 0.3</li> <li>If a single space is obstrue</li> <li>In New Zealand only, space</li> <li>FIGURE 2.5 MIN</li> <li>The scenario reliese<br/>facility itself being<br/>particularly during</li> <li>As opposed to drop<br/>as delays in stude<br/>increase estimated<br/>associated queuin</li> <li>Given the above s<br/>example, a situation</li> </ul> | If the aiste is bounded b<br>and a second at both ends, a fur-<br>ce lengths in this column<br>IMUM SPACE LEN-<br>FOR PARALLEL F<br>able to autor<br>the PM pick<br>p off, the pic<br>nts getting to<br>d turnaround<br>g.<br>uggested ma<br>on be manag  | Anagement a<br>ed whereby  | An isse Note 1)<br>An isse Note 1)<br>An isse Note 2)<br>metres<br>Space length<br>unobstructed end<br>spaces, L <sub>a</sub><br>(Note 4)<br>5.4<br>5.4<br>5.4<br>5.4<br>5.4<br>5.4<br>5.4<br>5.4  | nands<br>es such<br>will<br>for   | <ul> <li>St Columba Anglican School, Port Stephens (refer<br/>https://explain.scas.nsw.edu.au/parent-and-family-<br/>information/parking-pick-up-and-drop-off)</li> <li>Gardeners Road Public School (refer<br/>https://buildsend.com/ws/1.0/viewimage.aspx?c=Y3VN2MaB<br/>4U27pSS0tPSr2Cw8UZCwk8&amp;i=238758&amp;ct=application/pdf&amp;f<br/>=Kiss%20and%20Drop%20.pdf)</li> <li>St Josephs Catholic Primary School, Wauchope (refer<br/>https://www.wauplism.catholic.edu.au/safe-travel)</li> <li>Pittwater House (refer<br/>https://www.pittwaterhouse.com.au/assets/docs/220125-LSM-<br/>Campus-Map-and-Car-Park-Operations-2022.pdf)</li> <li>St Josephs Primary School, Charlestown (refer<br/>https://sipscharlestown.schoolzineplus.com/enews?nid=51)</li> <li>The approach of allocating spaces by last name is suggested<br/>because there are two kiss 'n drop areas, enabling students to<br/>wait in the correct areas and reduce dwell times. The school can<br/>test this approach and adjust if the allocation by last name does<br/>not reduce delays. Pittwater House, for example, separates out<br/>kiss 'n drop using two colours – red and blue, which have<br/>different characteristics (times / locations).</li> <li>St Joseph's adopts the last name approach to manage kiss 'n<br/>drop – see below. Students are lined up in last name categories,<br/>and kiss 'n drop times are staggered by five minutes to manage<br/>delays.</li> </ul> | Туре   |
| <ul> <li>Given the above s<br/>example, a situation<br/>vehicles with the s<br/>same time, and or<br/>a surname beginn<br/>available and not he<br/>what then become</li> </ul>  | uggested ma<br>on be manag<br>urname of B<br>ily the first th<br>ing with A – (<br>being utilised<br>so of the rema<br>be adequately  | ed whereby<br>rown are in t<br>ree spaces a<br>G? Assumin<br>I by other su<br>aining 4 veh<br>y and efficie  | 7 parents in separate<br>the circulation area at<br>are allocated for child<br>g that the three space<br>rnames within that bra<br>icles? How can this m<br>ntly managed in order  | the<br>ren with<br>es are<br>acket,<br>ost  |   |  |
|  | <ul> <li>ASINZS 2890.1:2004</li> <li>Kerb</li> <li>Aisle width<br/>(one-way), W</li> <li>3.0</li> <li>3.3</li> <li>NOTES:</li> <li>Spaces shall be located at<br/>columns.</li> <li>Where the opposite side of<br/>increased wit least 0.3</li> <li>If a single space is obstrut</li> <li>In New Zealand only, spa<br/>FIGURE 2.5 MIN</li> <li>The scenario relies:<br/>facility itself being<br/>particularly during</li> <li>As opposed to dro<br/>as delays in stude<br/>increase estimated<br/>associated queuin</li> <li>Given the above s<br/>example, a situation<br/>vehicles with the s<br/>same time, and or<br/>a surname beginn<br/>available and not further the sure<br/>what then become<br/>likely occurrence be</li> </ul> | ASINZS 2890.1:2004<br>Kerb $300 \text{ min}$ $\frac{1}{2100 \text{ min}}$ $\frac{1}{2100 $ | <ul> <li>ANXX 2 2890.1:2004</li> <li>Wall, fence, 300 min.</li> <li>Space length and 6.4 min.</li> <li>Where the opposite side of the alster to bounded by obstructions higher the column.</li> <li>Where the opposite side of the alster to bounded by obstructions higher the column.</li> <li>I space length in this column may be reduced to the column.</li> <li>FIGURE 2.5 MINIMUM SPACE LENGTH AND AISLE FOR PARALLEL PARKING MANCE</li> <li>The scenario relies heavily upon staff mana facility itself being able to autonomously caparticularly during the PM pick up.</li> <li>As opposed to drop off, the pickup scenario as delays in students getting to the allocate increase estimated turnaround times and p associated queuing.</li> <li>Given the above suggested management as example, a situation be managed whereby vehicles with the surname of Brown are i</li></ul> | <ul> <li>ANNEX 1990-11200</li> <li>Annex 1990-11200</li></ul> | <ul> <li>ANYZ 2 300-11001</li> <li>Walk, fence, columns etc., 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,</li></ul>  | <ul> <li>St Columba Anglican School, Port Stephens (refer http://www.il.walpian.casa.new.edu.au/parent-and-family_information/parking-pick-up-and-drop-off)</li> <li>Gardeners Road Public School (refer http://www.il.walpian.cashou.es.gev?c=Y3VN2MaB du27oSSUPSyc20.ndf)</li> <li>St Joseph's Catholic Primary School, Vauchope (refer http://www.wituset.au/parking-and-Car.Park-Operations-2022.pdf)</li> <li>St Joseph's Cathelet Power and the analysis and the analysis and the analysis and the allocation by the simulation of the analysis and the allocation by the simulation and aligns if the allocation by the simulation and aligns if the allocation by the simulation and parking the allocation by analysis and particularly during the PM pick up.</li> <li>As opposed to drop off, the pickup scenario invites many variables such as delays in students getting to the allocated zones. This in turn will increase estimated turnaround times and potentially increase associated queuing.</li> <li>Given the above suggested management approach, how would for example, a situation be managed whereby 7 parents in separate vehicles with the summe of Brown are in the circulation are at the same time, and only the first three spaces are allocated for children with a summe beginning with A – G? Assuming that the three spaces with as at the dequartely and the filteent threat care to this in drop times are staggered by five minutes to manage diay</li></ul> |



| Ref | Council comment   | Response  | Туре                |
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|     |   | Kiss and Drop Times (times are staggered)         iso       iso |                     |
| A6  | Moving forward, any amended TIA or commentary around the queuing/circulation area should not rely upon the additional 7 spaces available on the western side of the circulation area for PM pick up and should also address what impact the loss of use of these spaces will have upon on street parking demands and movements within the circulation area. Should the western kiss and drop still be pursued, then amendments would have to be made to the centre median within the circulation area effectively pushing this area to the east which would in turn allow 3.3m of isle width thereby complying with the AS on both sides of the median. It must be noted that such a change could also affect the ability for a service vehicle to perform a one motion swept path at the northern end of the | Amendments have been made to the carpark design to ensure<br>aisle widths and kiss 'n drop lane dimensions comply with the<br>standards and service vehicles are able to enter and exit the<br>carpark in one single movement.  | Design<br>amendment |



| Ref    | Council comment  | Response  | Туре                      |
|--------|--|---|---------------------------|
|        | circulation area without some amendment to the current radius of the turning head.   |   |                           |
| Queui  | ng   |   |                           |
| B1     | <ul> <li>The peer review points to an equation with the following parameters in reference to determining probable queue lengths and dwell times within the circulation area:</li> <li>"A full reproduction of the model is provided in Appendix A. The model assumptions are:</li> <li>Analysis of the afternoon pick-up period, which is assumed to be the most difficult as students need to find the correct car.</li> <li>A 30-minute drop-off and pick-up window</li> <li>120 vehicles arrive during the drop-off and pick-up window.</li> <li>The dwell time for cars is 2 minutes 30 seconds (double of previously assessed assumptions due to Council's comments)</li> <li>There are 16 parking spaces available for kiss 'n drop". (NB. 16 is a typo and the actual equation has been performed with the figure 15).</li> <li>As can be seen from the "Brown" surname scenario above, (and the fact that the available isle width does not comply with Australian Standards), it is Council's opinion that queuing times and lengths will become exacerbated within the circulation area, thereby debunking the 2% occurrence of having 3 cars in queue. Any amended TIA or commentary around the queuing/circulation area should not rely upon the additional 7 spaces available on the western side of the circulation area for PM pick up and should also address what impact the loss of use of these spaces will have upon on street parking demands and movements within the circulation area.</li> </ul> | The M/M/c queue model used to understand potential queuing takes many variables into account, including randomised arrivals (many cars arriving at once or staggered arrivals) and length of stay (short if student is already at the kiss' n drop and long if student is not at the kiss 'n drop). It only provides a probabilistic indicator of potential queuing and does not definitively mean that there will be a 3 car queue throughout the pick-up period. In the event of a delay (>2.5min turnover), where the student is not waiting at the current kiss 'n drop zone, staff on duty will request parents to recirculate to the carpark via the roundabout at the Akala Avenue intersection to reduce potential queuing on The Southern Parkway. The M/M/c queuing model was selected for the exact reason of the "Brown" surname problem, as it allows for random arrivals. The car park has sufficient capacity at the 98 <sup>th</sup> percentile worst situation. This means that the worst case is that there will be 3 cars waiting for a spot 2% of the time. This is proposed to be managed by sending vehicles around to do the loop of the facility and re-enter via the roundabout. If the allocation of spaces by last name is of significant concern to Council, it can be removed from the proposal. | Additional<br>information |
| Parkin | g  |   |                           |
| C1     | To reiterate commentary of the appraisal from the former Coordinator of Development Engineering:   | Student events typically occur during school hours and would<br>generate typical school traffic as students would start and end<br>their school day at the usual times.   | Additional information    |



| Ref | Council comment   | Response   | Туре                      |
|-----|---|--|---------------------------|
|     | "Notwithstanding the major concerns about parking during drop off and<br>pickup which have already been discussed, no consideration for out of<br>hours events for the 300 students has been provided. This would no doubt<br>result in a worst-case scenario of sprawl within the surrounding streets<br>which combined with resident parking will further exacerbate the impact on<br>Council's road network".  | There will occasionally be events that are held outside of typical school times (e.g. graduation, school formal) which may be attended by parents as well. A travel access guide (TAG) will be circulated to parents and students to remind them that there is no available parking at the school and alternative transport (public transport or carpooling) is encouraged. The primary mode choice is still expected to be cars and some carpark management is required. However, these events only occur a handful of times a year and the previous TIAs evaluated traffic during school peak hours (worst performing traffic conditions) and identified only minor impacts on the existing road network. It is not typical to design a facility for the worst case traffic impact, which may only occur a handful of times per year. This results in significant over-provision of parking, which is unused for almost the entire year. |                           |
| C2  | The new layout allows for the parking of one bus to service the school. The proposed parking bay is situated between the existing fog line and the kerb within the carriageway of The Southern Parkway. Within the first TIA, the applicant provided the following commentary: -<br>"The site shall also act as a transport hub for senior students, with a pick-up/ drop off bus service to connect through to the Taree senior campus".   | Currently two school buses (Eggins Bus Company and Forster<br>Buslines) service the Taree Campus with stops in Forster. It is<br>assumed that these buses will provide the transfer for senior<br>students. There will be two bus bays that will cater to two buses<br>at the same time. Two bus bays would also allow for delivery of<br>new bus services, which could occur as the school is operational.  | Additional<br>information |
| C3  | No consideration or commentary has been provided that outlines how many<br>busses it would take to service the school, or where additional buses would<br>queue whilst waiting for the single pick-up/ drop-down point to become<br>available. Furthermore, should the site indeed become a transport hub for<br>other students to travel to other schools within the region, then this will<br>undoubtedly create additional load on the on-street parking ability of the<br>Southern Parkway. The effect this additional loading will have, has not been<br>expanded upon or addressed in anyway. Although it is understood that bus<br>routes must be determined in conjunction with the associated bus<br>companies, Council at this point, has no indication as to what routes are<br>available or how these routes will affect the traffic movements on<br>surrounding streets. | <ul> <li>We have no information on how many students take the bus to school. Based on the previous TIA's assumption of a 30% bus mode share, about 90 students will take the bus. Comparison to other benchmarks shows that 30% is a conservative estimate:</li> <li>2022/23 Household travel survey for Port Macquarie indicates only a 5% bus mode share</li> <li>School Trip Generation Surveys (TfNSW) note &lt;15% public transport mode</li> <li>So, a 30% estimate of the bus mode share and patronage would be considered conservative (for the purposes of estimating the number of bus bays).</li> <li>The stop can service up to 4 buses in the school peak hours to allow shorter wait times for students to catch alternative buses in the PM if they miss their first bus. Timetabling of services will</li> </ul>   | Additional<br>information |



| Ref     | Council comment   | Response  | Туре   |
|---------|---|---|--|
|         |   | <ul> <li>ensure only a maximum of two buses are at the stop at a time and therefore two bus bays is sufficient.</li> <li>Council can be confident that the number of bays can confidently provide the potential bus patrons from the school.</li> <li>Current parking observations note minimal parking on The Southern Parkway directly adjacent to the school site. Although the bus zone will reduce parking availability, there is little impact expected.</li> </ul>   |  |
| C4      | Commentary provided by Councils' Traffic Team Leader indicated that bus waiting bays could be provided within the area between the fog line and the kerb outside of the schools' frontage. However, this would also have an impact on the on-street parking availability during the peak movements. There is potential for a second bus bay to be provided along the school frontage however, in terms of available space, consideration must also be given to the provision of a pedestrian crossing that links to the frontage of the site. The applicant needs to address these concerns and show clearly how these anticipated movements will be managed and what effect they will have on parking amenity with the locale. Council may entertain the extension of footpath/cycleway (provided by the applicant) in order to address some facility for the additional on-street parking demands created by the development. | Two bus bays and a pedestrian midblock crossing refuge will be<br>provided on The Southern Parkway as shown in <b>Appendix A</b> .<br>A bus zone will be implemented and no parking will be allowed<br>on the northbound side of The Southern Parkway directly<br>adjacent to the school boundary to facilitate bus movements.<br>Parking impacts are expected to be minimal as observations in<br>the TIAs and a desktop study (nearmap) note that there is<br>currently very minimal parking along The Southern Parkway<br>adjacent to the proposed school site. Any observed parking is<br>along the nursing home frontage only. | Design<br>amendment<br>Additional<br>information |
| Traffic | Flows and Generation  |   |  |
| D1      | The former Coordinator of Development Engineering made the following comments on the above topic based on the two TIA's provided to Council at the time of his appraisal:<br>"The assumed traffic flows (4,000 per day) have not been amended despite the previous comments provided. As such this part of the original RFI has not been addressed<br>Further to this and consistent with the changes made to parking rate assumptions, the amended TIA has reduced movements and the impact on the road network that drop off and pick up will have. These are compared below:   | Only midblock traffic flows were assessed in the TIAs as the<br>roundabout is a proposed intersection.<br>As a major collector road with a parking lane, The Southern<br>Parkway has been assessed in the TIAs as having a maximum<br>capacity of 900 vehicles per hour (Guide to Traffic Generating<br>Developments – typical road capacities for urban roads<br>highlighted in yellow below).   | Additional<br>information                        |
|         | Original TIA  |   |  |



#### Ref Council comment

#### Response

Туре

- 12 vehicles accessing the site via Cape Hawke Drive (east) and Akala Avenue
- 36 vehicles accessing the site via The Lakes Way / Cape Hawke Drive (west)
- 72 vehicles accessing the site from the north along The Southern Parkway

#### Amended TIA

- 7 vehicles accessing the site via Cape Hawke Drive (east) and Akala Avenue
- 20 vehicles accessing the site via The Lakes Way / Cape Hawke Drive (west)
- 40 vehicles accessing the site from the north along The Southern Parkway

Consistent with the assessment of the parking impacts, the reduction in traffic movements in the amended TIA are baseless and are not supported.

It is also noted that comments such as those provided in Section 4.3 remain unchanged:

 Overall, it is considered that the proposed project shall have a minor and acceptable impact upon the overall road safety in the locality of the subject site.

No further commentary on this topic has been provided within the latest peer review.

Traffic flows and generation numbers need to be addressed without being dependent upon the proposed western kiss and drop car parks.

Table 4.3 Typical mid-block capacities for urban roads with interrupted flow

| Type of Road          | One-Way Mid-block Lane Capacity (pcu/hr) |       |  |
|-----------------------|--|-------|--|
| Median or inner lane: | Divided Road                             | 1,000 |  |
| Median or inner lane: | Undivided Road                           | 900   |  |
|                       | With Adjacent Parking Lane               | 900   |  |
| Outer or kerb lane:   | Clearway Conditions                      | 900   |  |
|                       | Occasional Parked Cars                   | 600   |  |
| 41 F 11 F             | Occasional Parked Cars                   | 1,500 |  |
| 4 lane undivided:     | Clearway Conditions                      | 1,800 |  |
| 4 lane divided:       | Clearway Conditions                      | 1,900 |  |

Even in the worst case in the original TIA (120 vehicles), the peak hour flows on The Southern Parkway will increase up to a new level of 567 and 524 vehicles per hour in the AM and PM peak hour respectively. This is well within the 900 vehicle capacity and no major impact to traffic conditions are expected.



Yours sincerely

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# APPENDIX A UPDATED DESIGN