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Consulting Engineers, Transportation, Environmental Planners & Architects
ABN 84 095 235 957

Our Ref: 1194-1-22
Your Ref: DA2023/0775

26 September 2024

Attn: Haroula Michael
Cumberland Council
PO Box 42
Merrylands NSW 2160

Email: Haroula.Michael@cumberland.nsw.gov.au

Dear Haroula,

Re: Council RFI Letter Request for Further Information – Development Application DA2023/0775 2 Bachell Avenue Lidcombe, and Engineering Comments- Traffic and Vehicular Access and DRP panel comments.

This covering letter has been prepared to address Council's RFI letter dated 30th July 2024, Council's email requesting further information dated 29th August 2024 and the Cumberland Design Excellence Panel's comments for the meeting of 19th June 2024.

The architectural drawings have been reviewed and updated as necessary to address parking and access.

This covering letter is supported by an updated Traffic and Parking Impact Assessment (Report 34-22 Revision D) and updated Loading Dock Management Plan (Report 04-23 Revision B).

The comments are repeated below and *italicised*.

COUNCIL RFI LETTER – Dated 30 July
General Planning/Comments

Item 7
During the neighbour notification period, Council received one submission which is summarised below for your response and/or action. The key points raised in the submission are:

- *"... the number of levels which can block sunlight, cast a shadow and the visibility into windows for privacy for the owners and tenants across the road.".*
- *"...the large development will take time, truck traffic will increase, construction noise and dust or any other debris from construction will increase and degrade the environment for air quality and noise".*

Should you wish to obtain a copy of this submission you can request a copy via a GIPA request.

A Construction Management Plan can be conditioned by Council which will detail the number of truck movements per day and vehicle access routes. Vehicle access routes will not transfer through quiet residential areas.

Item 8

Please ensure that all reports and plans are also updated to reflect the matters raised throughout this letter and are consistent with the changes made.

This covering letter accompanies an updated Traffic and Parking Impact Assessment and Loading Dock management Plan.

Traffic and Vehicular access

Item 22

The vehicular crossing and the access driveway must be capable of servicing the largest vehicle. The architectural plan indicates that the largest vehicle is Medium Rigid Vehicle (MRV).

The largest vehicle, an MRV, is servicing the Ground Floor loading area (northern driveway). Passing opportunities are provided by a passing bay for an MRV. Refer to the updated swept paths provided in Appendix F of the updated Traffic and Parking Impact Assessment, which have been prepared showing that an ambulance and SRV vehicle can pass within the driveway.

Item 23

The applicant proposes to construct a roundabout at the T-junction with Rawson Street in to make provision for the vehicular access to the site. Additional comments may be raised by Council's Engineering Section-Infrastructure Design.

Noted. As of the date of this response, no additional comments have been raised.

Item 24

The mitigation measures as outlined in Appendix G of the Traffic and Parking Impact Assessment Report needs to be borne by the applicant.

The submitted traffic and parking impact assessment identified that the left turn from Railway Street to Church Street currently operated at a level of service (LOS) of F in the AM, and D in the PM. When the proposed developments traffic is added, the LOS remains at F in the AM and D in the PM. The analysis also identified that with 10 years of background growth, the same movement at the same intersection, without consideration of the proposed development, operated at a LOS of F in the AM and F in the PM.

The provision in the report to provide mitigation measure is to assist Council in identifying a solution to increase capacity to this intersection which currently operates at capacity, and will continue to operate at capacity with background growth

Refer to the town planner's response regarding costs.

Item 25

The traffic generation, based on the RMS guideline are outlined below. The total peak hour trip generation 861 vehicle trip/ hour or net/additional 839 trips…

The consideration of traffic generation was provided within Appendix I of the submitted Traffic and Parking Impact Assessment. A meeting was held on 4 September 2024 and attended by Council's engineer. On 11 September 2024, the data sources from which the trip generation is derived was provided to Council. On 25 September 2024, Council confirmed they didn't have any issue with the traffic generation rate provided. Notwithstanding, the trip generation, AM/PM spit and network distribution emulate the approach taken with TfNSW in their assessment of DA2022/0463.

Parking and Vehicle Manoeuvring

Item 26

The parking rates adopted and the calculation of parking space requirement shown on the traffic report is not consistent and supported.

Refer to the response under Item 28 which also considers this item.

Item 27

Based on the floor area shown on the plan the development must provide at least 619 parking spaces for the facility. In addition, the parking rate adopted for the proposed Dog Day care facility must be justified with the survey parking provision for facility of similar use.

Refer to the response under item 28 regarding total parking requirements.

The parking rate adopted for the Dog Day care facility has been based on the survey of a similar facility. This was provided within the submitted Traffic and Parking Impact Assessment in Appendix I.

Item 28

The architectural plan indicates that only 542 parking spaces were noted on the plan thus resulting in shortfall of more than 77 (=619-542) parking spaces, which is not supported.

This response considers the items raised under 26, 27 and 28.

The submitted Traffic and Parking Impact Assessment, Appendix I, details the rates used for certain uses where there is no rate provided in Part G of the *Cumberland DCP*. Table 2 of *CDCP Part G* does not provide a rate for specialised retail premises or bulky goods retail, and therefore the following note applies:

> *"Where a parking rate has not been specified in the table, the Guide to Traffic Generating Developments shall be used to calculate the parking requirements for the proposed development. Alternatively, a parking study may be used to determine the parking, subject to prior approval by Council."*

The parking rate for specialised retail has adopted 1.403 spaces per 100m^2 based upon RMS survey data.

For the GFA of 3432, 49 spaces have been provided. The doggy day care has adopted a rate of 1 space per 100m^2 based upon surveys. Shared car parking; 8 shared spaces has been adopted between office use and the gymnasium use. This is based upon the gymnasium trip generation profile based upon RMS data. Weekday peak generation occurs after 5:30pm.

If a rate of 1.43 spaces per 100m^2 (1/70m^2) is adopted for the specialised retail and no shared car parking between the gymnasium and office space, then the car parking would be calculated at 542 spaces.

A revised Parking **Table 3.2a** is provided below:-

Table 3.2a Parking Requirement

	Use	Area m^2 GFA	survey data	Rate - CDCP PART G3	TfNSW - RMS GTGD	Rate Decimal	Total	
Note 1A*	Specialised Retail *	3432	1/70sqm			0.0143	49	
	Light Industries	1813		1.3/100 sqm		0.013	24	
	High Technology	7112		1.3/100 sqm		0.013	92	
Note 1B*	Café	159		1/40 sqm		0.025	4	
	Food and Drink	1167		1/40 sqm		0.025	29	
Note 2*	Food and Drink Restaurant	1359		1/40 sqm		0.025	34	
Note 2*	Dog Daycare	303	1/100sqm			0.01	3	Note 6*
	Health Services	2535			4 spaces per 100m^2 GFA	0.04	101	
	Office Premises	6041		1/40 sqm		0.025	151	
Note 3 *	Centre Base Childcare Facility	711		1/4 children (106 children)	RMS Centre Based Guidelines		27	
	Subtotal						**515**	
Note 8*	Self-Storage	392		1/300 sqm		0.003	1	Note 5*
Note 4 *	Gymnasium	863		3/100m^2	3/100m^2	0.03	26	Note 5*
	Neighbourhood Shop	28		1/40 sqm		0.025	1	
Note 7*	**Total**	**25915**					**542**	

Note 1A* No rate provided in CDCP for specialised retail. A rate of 1 space per 70m2 has been adopted based on RMS survey data. Refer to Appendix I Report 15-23.

Note 1B* The rate of 1/40sqm was approved with the Planning Proposal.

Note 2* Rates taken from approved Doggy Day Care centres at 1 space/100m^2.

Note 3* Parking rate for childcare centre based on number of children. 106 children. RMS rate adopted.

Note 4* Gymnasium located within retail/commercial complex. Peak 5:30 - 6:30 pm weekdays. 8 spaces provided for Gymnasium parking can be shared with the office premises as peak activity for gymnasium occurs in the evenings after 5:30pm. RMS rate of 3/100sqm has been adopted.

Note 5* A Peak Demand Analysis has been prepared that demonstrated that this use does not peak at the same time as office use and therefore the number of spaces required can be reduced.

Note 6* Based on similar approved facilities only requires 1 space per staff and a loading space. (3 staff spaces).

Note 7* Total GFA includes lobbies and toilets but excludes self storage = 25523m2.

Parking demand profiles have been analysed using the data used in Report 19-23 Technical Paper 2 located in Appendix E of the Traffic and Parking Impact

Assessment 34-22 and this information has been included in Section 3.3.7 of the amended Traffic and Parking Impact Assessment 34-22 Revision D.
The parking demand profile is discussed in further detail under Item 31. The demand profile demonstrates that the demand peak occurs at 8:00am on weekdays with 341 car parking spaces well below the requirement for 542 spaces or (63%) of the required number of spaces. The provision of 2 car share spaces and ride share spaces will further reduce the demand for car parking. One car share space can reduce car ownership and reduce parking demand for employees. Sydney City Council, Hornsby Council, and Parramatta Council and Inner West Council and North Sydney Council all have car share parking policies. The car share and ride share provisions are incentives as detailed in the TIA Report and Green Travel Plan Report 14-23 submitted with the application. These incentives can reduce car parking by up to 10 cars for each parking space provided.

Item 29
Further, at least 27 parking spaces shall be provided for childcare centre visitor's use. There is shortfall of 2 parking spaces.

An additional 2 car parking spaces have been provided for the childcare centre. Refer to the updated architectural lower ground floor plan. We note that the provision of childcare parking is a total, not specific to staff or visitors.

Item 30
Few parking space stacked in tandem are noted, Council will not support stacked in tandem spaces.

There are a number of tandem spaces, a function of ensuring an efficient basement design noting the site's unique shape. There are also number of large office and high-tech tenancies which would require a minimum of two spaces. Therefore, the tandem spaces would be allocated to the same tenancy. It is noted that Councils DCP, Part G, Clause 4.4 Development in Business zones, provides the following control.

Visitor parking shall be clearly identified and shall not be provided in the form of stacked/ tandem parking.

The proposal does not seek to utilise the tandem parking for visitor spaces.

Item 31
As there is no provision for the visitors parking requirement, the visitors parking must be associated with the relevant land use category and allocated accordingly.

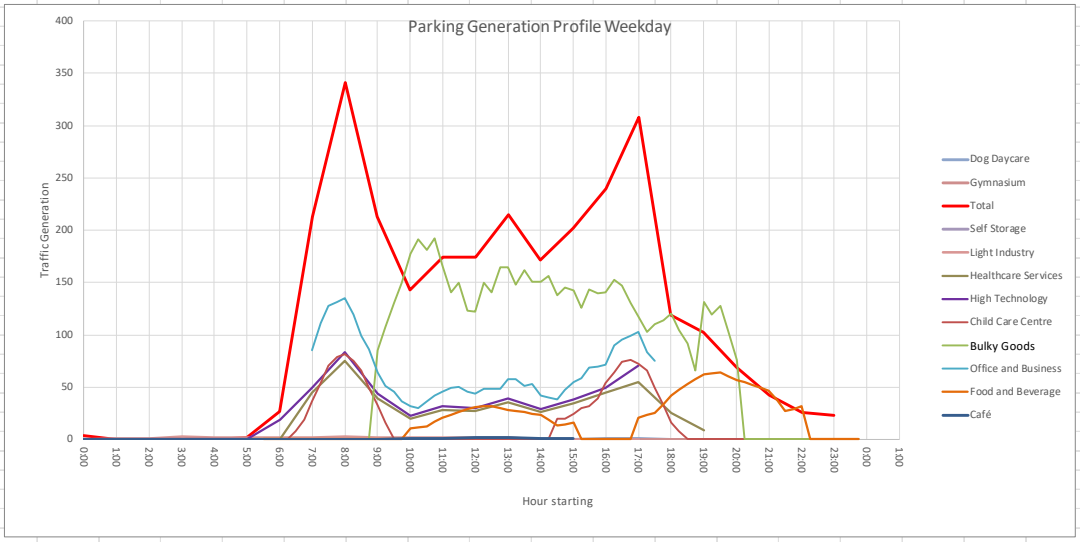
We note that Councils DCP, Park G, identifies visitor parking required for certain uses, the uses provided in the development are not those uses, therefore the DCP does not require a specific quantum of visitor parking, nor does it stipulate that visitor parking must be provided per relevant land use category, or allocated.

Noting that the parking demand varies per use, the appropriate methodology is to create shared visitor parking, This way, office visitor parking, which does not have a high weekend demand, is not sitting idle whilst the specialised retail visitor parking demand is high.

The hourly peak traffic generation demand was analysed in Technical Report 19-23 Appendix E. Parking demand has been analysed based on peak traffic generation demand per hour.

Weekday Profile

1 hour starting	Total
0:00	3
1:00	0
2:00	0
3:00	0
4:00	0
5:00	2
6:00	27
7:00	213
8:00	341
9:00	213
10:00	143
11:00	175
12:00	174
13:00	215
14:00	172
15:00	202
16:00	240
17:00	308
18:00	119
19:00	102
20:00	69
21:00	42
22:00	26
23:00	23



Parking demand on weekdays is calculated as 341 spaces at a peak time of 8:00am using the demand analysis profiles for each use. The updated Traffic and Parking Impact Assessment Report 34-22 Revision D includes Section 3.3.7 Car Parking Profile Demand Analysis.

Item 32

The double count of loading bays provide within level 2 (B2.01 to B2.10) as parking spaces is not supported. They must be retained as loading bays.

The updated Traffic and Parking Impact Assessment has revised sections 3.1, 3,3 3.4 and 3.5 and the noted spaces have been retained as loading bays.

Item 33

The submitted document indicates that the layout arrangement of the parking spaces, the circulation road/aisle width, does not appear to be allowing unobstructed free flow of Two way traffic circulation.

The swept paths showing a B99 and B85 passing on the ramps and at any two way intersection points is updated and is satisfactory. The basement and lower ground floor levels of car parking have been redesigned to show wider aisle widths where required. Refer to the revised swept path assessment in appendix F of the Traffic and Parking Impact Assessment.

Item 34

Doors opening outward to circulation road are not supported. This needs to be addressed.

Refer to amended architectural plans which have revised the door swing.

Item 35
The long section of profile of the ramp does now show the sectional gradients, the headroom clearance and the associated low level obstruction/ceiling. The information provided in the sections are incomplete. However, review of submitted sections indicate the following issues.

Find responses below for further clarification.

Item 35a
The ramp from ground level to level 2 for MRVs does not comply the requirements of AS2890.2-2018. In particular the ramp gradients, the maximum changed of gradient, the minimum travel length associates with the change of gradient, do not comply with the requirement.

Refer to appendix F of the updated Traffic and Parking Impact Assessment for revised ramp compliance diagrams.
All ramp gradients are shown on the drawings provided in Appendix F.

Item 35b
The ramp from ground level to lower ground level does not comply the requirements of SRVs as outlined in AS2890.1-2018. In particular are the ramp gradients, the change of gradient, and the minimum travel length associated to the change of gradient do not comply.

Refer to Appendix F of the updated Traffic and Parking Impact Assessment Report 34-22 Revision D for revised ramp compliance diagrams.

Item 36
The parking provision for child care centre use shall comply with user class 3A category user. In this regard the parking spaces shall be at least 2.6m wide for 6.6m wide aisle width or 2.7m for 6.2m wide aisle width. The aisle width must be 6.6m wide and the proviso of 5.8m aisle width does not comply.

The amended architectural lower ground plan has been amended.

Item 37
The loading bay 06 on the bottom of the driveway of Lower ground floor raises safety issues.

This B99 loading bay, loading bay 07, has been relocated. Refer to amended architectural plans.

Item 38
The SRV Loading bay 05 on Lower ground floor is likely to block the access to the GYM entry.

This SRV loading bay, loading bay 05, has been relocated. Refer to amended architectural plans.

Item 39

The MRV loading bay 14 does not have sufficient manoeuvring/turning space.

Refer to the updated swept path diagrams provided in Appendix F of the updated Traffic and Parking Impact Assessment.

Item 40

The swept path diagrams indicate several conflicts. Please refer to separate attachment for marked up diagrams.

All conflict areas have been reviewed and the design has been amended so that there are no conflict points. Refer to revised swept path assessment in Appendix F of the updated Traffic and Parking Impact Assessment.

Council Email Requesting further information – Dated 29 August

Comment 1
The Sidra Model provided by the applicant is unclear. A site map should be provided to indicate each location.

A diagram has now been provided in Appendix C of the updated Traffic and Parking Impact Assessment Report No 34-22 Revision D.

A network model has been created and included in a new Appendix K of Report 34-22 Revision D.

Comment 2
The applicant's traffic engineer shall provide a Sidra Network model to indicate the Level of Service in the area. The individual intersection model does not reflect the impact of the additional traffic generated by the proposed development.

Figure 2b referenced from the lodged Traffic and Parking Impact Assessment (Report No 34/22 Rev C) shows the location identified for each SIDRA intersection analysed.

SIDRA map (OSM) was inserted into the SIDRA and the geometry is checked with the on-site conditions and aerial imagery to configure the SIDRA intersection layouts.

The intersections are not usually linked in SIDRA as it is not a mesoscopic modelling software. Only intersections in close proximity should be networked where there is a potential flow-on effect from queueing or signalised intersections maybe SCATES linked.

Each intersection has been analysed as a standalone intersection given the distance apart. The intersections which could be included in a SIDRA networked model are the intersection of Bachell Avenue/Church Street, Church Street/Swete Street and Martin Street/Church Street. Please note that turning volumes for Martin Street have been estimated using the turning volumes at Sweet Street for analysis purposes. The volumes in Martin Street would probably be lower as this route would not be used for north-south trips (i.e. rat running) based upon the number of residential dwellings within Martin Street and as it only provides a connection to Rawson Street which runs east west. The updated Traffic and Parking Impact Assessment has been revised to network those identified intersections.

Comment 3
The requirement for parking spaces for each specialized retail shall be rounded to an integer, then the total amount of parking spaces required should be calculated by adding all integer together.

We take this comment to refer to each use, not each specialised retail tenancy.

Table 3.2a of the updated Traffic and Parking Impact Assessment has been updated.

Comment 4

Based on the Guide to Traffic Generating Developments, the trip generation rate for office use is listed below:

Daily vehicle trips: 10 per 100 m² gross floor area
Evening peak hour vehicle trips: 2 per 100 m² gross floor area

The applicant applied TDT20B/04a for Norwest Business Park, which adopted 2.75 trips/100 m² in the morning peak and 1.17 trips/100 m² in the afternoon peak. The applicant should provide a copy of the document for assessment.

A copy of TDT 2013/04a was provided to Council via email on 11 September 2024. Refer to Appendix D1 and D2 for trip rates.

Comment 5

The calculation of the trip generation is unclear. The applicant shall show the detailed requirements of each specialized retail based on the Guide to Traffic Generating Developments.

We take this comment to refer to each use, not each specialised retail tenancy. The trip generation rate is 2.7 vehicles/100m^2 GFA is adopted as per TDT 2013/04a bulky retail bulky retail. A copy of the trip and parking generation rates from TfNSW data analysis report was forwarded to Council via email. It is noted that the trip generation proposed for this application is consisted with that proposed for DA2022/0463 which this office was involved in and was heavily scrutinised by TfNSW. Council has confirmed by emailed on 25 September 2024 that trip generation rates used in the analysis is acceptable.

Comment 6

Trip distribution shall be provided based on the trip generation calculated in point 5 above. Assumptions regarding the trip distribution need to be clearly justified.

Assumptions for trip generation rates are provided in Appendix I of the updated Traffic and Parking Impact Assessment.

Comment 7

The turning path provided by the applicant is not satisfactory. The applicant shall ensure that an 8.8m vehicle can turn into and out of the proposed development without causing any obstruction.

Refer to amended swept path diagrams provided in appendix F of the updated Traffic and Parking Impact Assessment.

Comment 8

The maximum vehicle length allowed to enter or leave the proposed development shall be limited to 8.8m.

Noted.

Comment 9

The additional traffic impact from the proposed development needs to be assessed based on the updated network Sidra Model mentioned in point 2 above and the updated trip generation mentioned in point 5.

It is our position that the trip generation addressed in comment 5 is appropriate. We note that TDT 2013/04a has been provided to Council and we welcome further comments regarding the updated network SIDRA modelling, refer to Section 3.8 of the updated Traffic and Parking Impact Assessment which considered the outcome of said modelling.

The network modelling showed that there is very little change between the Future Development Network plus Existing Model and the Existing plus Background Traffic Growth Model to 2023. The intersections in the Network Model are operating at Levels of Service A, A and B for AM Peak Hour Traffic and A, A and C for PM Peak Hour Traffic.

CUMBERLAND DESIGN REVIEW PANEL COMMENTS – meeting 16 June
Parking, circulation and servicing

Justify the use of tandem spaces.

Refer to the response against **Item 30** of Councils RFI.

Loading of Self Storage only by B99 is not realistic. Business Model to be confirmed by specialist consultant.

The amended architectural plans have removed the self storage use from basement 1. Self storage is now only located on lower ground where it has direct SRV access.

52 bicycles parking on B1 and B2, but only 28 on LGF. Is it possible to have all bicycles on LGF? Or even on GF?

The updated Traffic and Parking Impact Assessment considers bicycle parking in Section 3.4. A total of 80 spaces is provided and 76 spaces are required. The amended architectural plans have rationalised their locations, with 45 on lower ground, and 35 on basement 1. The separation of bicycle parking across two storeys allows for allocation for visitor facilities on one storey, and staff on the other storey. Furthermore, there is no requirement in the DCP to provide a consolidated location for bicycle parking.

Aisle width of 6m is not sufficient for SRV turning / loading. Refer to AS 2890.2 Off-street commercial Parking.

Aisle widths have been amended in the current drawings to 7.1 metres for SRV parking access on Lower Ground Floor. An updated swept path assessment has been provided in appendix F of the updated traffic and parking impact assessment.

Locating 18 bicycle on the bottom of the driveway on LGF raised safety issues.

The amended architectural plans have removed and relocated these 18 bicycle spaces.

Locating loading bay on the bottom of the driveway on LGF raised safety issues.

This B99 loading bay, loading bay 07, has been relocated. Refer to amended architectural plans.

SRV Loading on LFG blocks GYM entry

This SRV loading bay, loading bay 05, has been relocated. Refer to amended architectural plans

Proposed accessible car parking spaces: B2: 1/218, B1: 1/191, LGF: 7/133. Total: 9/542. To be reviewed, especially in light of the medical use in the building. Accessible spaces headroom requirements to be checked (can be critical on B1 and B2).

Regarding the quantum of accessible parking spaces, refer to table in below. Adequate accessible parking spaces have been provided. Total disabled parking required is 9 rounded up.

Table 3.3.5b Parking Requirements-Persons with a Disability

Use	Rate	Total car parking spaces	Total Accessible Spaces
Specialised Retail	0.02	49	0.98
Light Industries*	0.01	24	0.24
High Technology*	0.01	92	0.92
Café	0.02	4	0.08
Food and Drink	0.02	29	0.58
Food and Drink Restaurant	0.02	34	0.68
Dog Daycare	0.02	3	0.06
Health Services	0.02	101	2.02
Office Premises	0.01	151	1.51
Centre Base Childcare Facility	0.02	27	0.54
Storage	0.01	1	0.01
Gymnasium	0.02	26	0.52
Neighbourhood Shop	N/A	1	
Total			**8.14**
			9 spaces rounded up

Regarding headroom requirements, the architectural plans identify a floor to floor dimension of 3.2m for B2 and B1, and 4.7m for LG. In our experience, this would result in a clear height of 2.8m for B2 and B1, and 3.5m for LG. This satisfies the requirement for a headroom clearance requirement of 2.5m.

Ambulance bay + corridor headroom is not sufficient.

In response to the Ambulance bay head room, NSW Ambulance notes that the minimum height shall be 3.8m (https://www.ambulance.nsw.gov.au/our-services/vehicle-access-specifications). The ambulance bay is located on ground floor. The next storey above is level 2. This results in a floor to floor of 7.2m, satisfying the headroom clearance.

Circulation of MRV Loading 14 is not sufficient.

Refer to the updated swept path diagrams provided in appendix F of the updated Traffic and Parking Impact Assessment Report No 34-22 Revision D.

Passing bay is blocking BG.05 loading.

The rear driveway has been increased, and the passing bay has been relocated to clear BG.05.

Vehicle access / turning of B2.01, B2.06, B2.07 is not sufficient.

Refer to updated swept path diagrams provided in Appendix F of the updated Traffic and Parking Impact Assessment. An SRV can access each of units B2.01, B2.02 and B2.07.

Does the ramp up to level 2 provide appropriate clearance for the type of vehicles expected to utilise it?

Yes. Please refer to the long sections provided in appendix F of the updated Traffic and Parking Impact Assessment,

Site Access

Potential for conflict at the merge of ramp system at the ground floor. Why does the building follow the curved driveway – this may present a collision issue.

The ramp will incorporate a traffic signal system. This requirement is addressed in the updated traffic and parking impact assessment, Section 3.4 of the updated Traffic and Parking Impact Assessment Report No 34-22 Revision D. This will give priority to the vehicles utilising the left hand ramp from the basement levels.

Vehicles exiting the car park ramp from the basement levels from the left hand ramp will have a green LED signal to exit. In the event that a SRV or car/van is exiting from level 2 the signal will go to red and vehicles will be required to wait. A sign “Wait Here on Red Signal” will be required. Notation has been provided on the Ground Floor Plan detail plan.

Alignment of the carpark entry with the roundabout at Bachell street (sic) is legible and supportable

Noted with thanks.

TABLE – Key issues, further comments and recommendations

The over 500 car parking spaces would cause big pressure on the single lane roundabout which would be congested in peak hours due to short queuing distances in the underground car park.

Whilst the site provides parking for close to 500 cars plus loading spaces, the number of spaces does not equate to the trip generation. This intersection was modelling in SIDRA and the results are shown in Table 3.7b of the submitted Traffic and Parking Impact Assessment. It should that the intersection operated at a level of service of A. Furthermore, Appendix D of AS2890.1 notes that the free-flowing capacity of a single lane is 600 vehicles/hour/lane.

Yours faithfully,

Erica Marshall-Evans
LYLE MARSHALL & PARTNERS PTY LTD