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Dear David

RC245009 Proposed Cornerstone Church, Rolleston
Response to Council Request for Further Information

Further to our recent e-mails, we understand that further to our previous review of the proposed church site layout, Selwyn District Council has issued a s 92 request, requesting further information on various issues (**RFI**). This letter responds to that request. For ease of reading we have adopted the same numbering as used in the RFI, and briefly summarised the matter raised before responding.

At the outset, we note that the Council has indicated that the seven matters of detail raised can be addressed in a Transportation Assessment. While we agree that a Transportation Assessment is one approach to addressing the matters raised, we also evaluated whether such a report was required in practice within our previous review (dated 30 November 2023) and concluded that one was not required to meet District Plan TRAN-MAT8(4) because the church would not generate traffic during the weekday 'commuter' peak hours. Accordingly we have responded to the matters identified within this letter, rather than via a Transportation Assessment.

RFI Matter 5(a): Car Parking: The extent to which on-street car parking is anticipated and how this may affect the safety and capacity of the transport network.

In our earlier work we assessed the parking provisions based on the church being designed for a maximum capacity of 1,284 people. However further correspondence has have identified that this was a miscommunication, and that in fact the church is designed for a lesser capacity. The building is arranged such that the main auditorium has capacity for 350 people, within a useable floor area of 715sqm (that is, 1 person per 2.04sqm). There is also a foyer, which is 335sqm in size. Applying the same area per person shows that this can theoretically accommodate up to 165 people. In practice, the capacity will be lower than this in order to provide for suitable egress routes and movement between doors and seating, and so for the purposes of this assessment we have applied a conservative seating capacity for 155 people (95% of the maximum theoretical capacity)

On this basis, our assessment is carried out using a maximum building capacity of 505 people.

NZTA Research Report 453 ('Trips and Parking Related to Land Use') sets out that:

- Churches are rarely full
- 1 car parking space for 3.3 seats is appropriate to match a typical Sunday attendance.
- In congested arterial road or inner-city situations, additional parking of 4 spaces per 10 seats (or higher) may be required for peak-use occasions.

We have been advised that the present size of the congregation is 350, with a typical attendance of 250. On this basis then:

- For a typical Sunday attendance, 1 car parking space for 3.3 seats is appropriate. Hence the typical congregation of 250 people equates to demand for 76 parking spaces.
- For peak use occasions, additional parking of 1 car parking space for 2.5 seats may be required. The additional 100 churchgoers would therefore require an additional 40 car parking spaces, making 116 spaces in total.
- If the church was to grow and to regularly have 505 attendees (the maximum capacity of the building) then this would require 153 car parking spaces

The church has indicated that it will likely take some time for the congregation to increase in size from current numbers and so the existing congregation of 250-350 people will therefore increase gradually over the foreseeable future.

The plans provided show that the site will provide 114 car parking spaces (disregarding the 6 parallel spaces on the southern side of the building that we previously recommended should be removed). Accordingly, for the regular church services and the (occasional) 'peak use' services, the site is essentially self-sufficient in respect of car parking. This means that there will be minimal use of the surrounding kerbside parking resources for even the maximum size of current congregations.

The church has also identified an additional area towards the immediate west of the proposed car park. Although no detailed drawings have been produced of a parking layout, the area is regular and therefore conducive to an efficient layout.

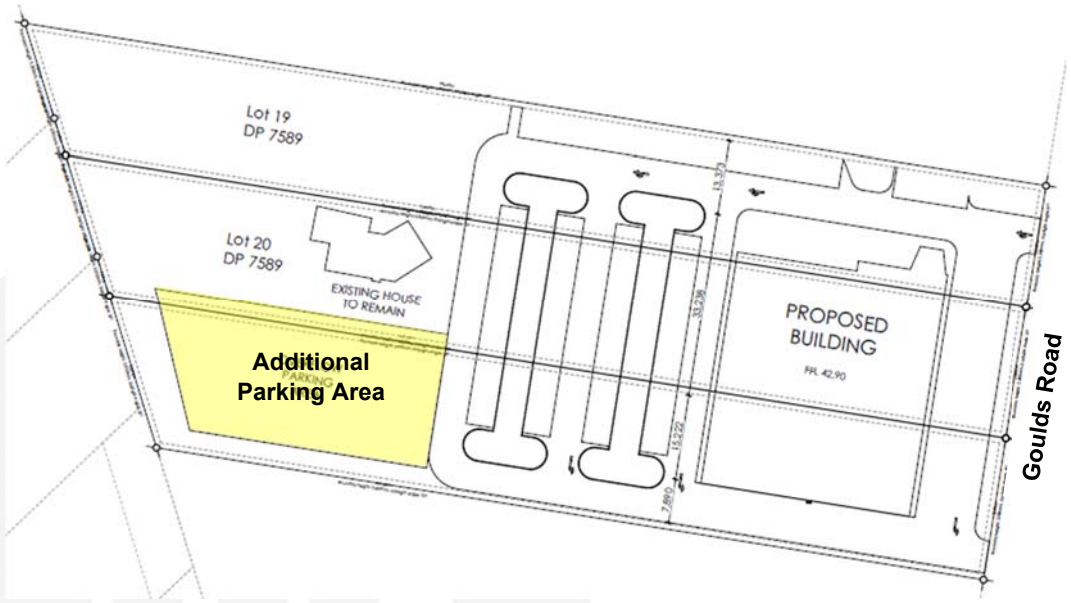

Figure 1: Additional Parking Area (Extract from Whimbrel Drawing)

This area is 1,200sqm in size. The Partially Operative Selwyn District Plan indicates that two parking spaces would be 2.5m wide and 5.4m deep, separated by an aisle of 5.8m, which then equates to 21sqm per parking space. It is highly unlikely that this degree of efficiency would be achieved, and we note that the existing car park achieves in the order of 30sqm per parking space. Applying the latter indicates that the additional car parking would provide a minimum of 40 car parking spaces.

Including these additional 40 spaces results in a total on-site parking provision of 154 spaces. As noted above, the maximum parking demand associated with the maximum occupancy of the building will be 153 spaces. Consequently the site remains self-sufficient for parking.

For clarity, we highlight that it is not expected that the additional car parking area will be formed immediately but rather, it will be formed as and when parking demands increase in future.

On this basis, we consider that initial parking provision at the church will meet the demand from the current size of the congregation, and the use of the additional area will meet the parking demand arising from the maximum capacity of the building. We therefore do not consider that on-street car parking is likely to occur, and thus the safety and efficiency of the road network would not be affected by additional parked cars.

RFI Matter 5(b): Goulds Road Arrangement / Upgrading

We agree that part of Goulds Road fronting the church is set out in a typical rural formation. We note though that there is kerb and channel which extends part-way across the frontage, and a footpath that terminates close to the site northern boundary.

Based on emails received, we understand that the church is agreeable to extending the footpath and kerb+channel across the full length of the site frontage.

The eastern side of Goulds Road already has kerb+channel in place, and so we do not consider that revisions are required on that side of the road. As the church is self-sufficient for parking, we do not consider that it gives rise to the need to manage on-street car parking on the frontage road or within the wider area.

The vehicle crossings onto Goulds Road can (and will) be designed to meet urban standards as relevant.

RFI Matter 5(c): There will also be a need to provide the half road for the extension of Rufus Street as per the ODP for the area, and a walk/cycle connection at least to that in the future.

The ODP referred to shows a proposed road running along the western boundary of the wider church lot. However the layout drawings (and Figure 1 above) show that the development does not have any direct frontage towards the west. Rather, the closest part of the proposed car park is located more than 50m away from this boundary. All vehicular and non-car access is achieved from Goulds Road, with none proposed to the west.

On that basis, it is evident that the church will have not have any effects on Rufus Street whether by motorised or non-motorised traffic. Accordingly, we are not of the view that the formation of Rufus Street is required to address any transportation-related effect of the proposal.

RFI Matter 5(d): Traffic Generation

Information received from the church shows that other activities expected to occur are:

- Small groups, meeting every second Monday 6pm to 8pm, every Tuesday 7pm to 9pm, every Wednesday 7pm to 9 pm, every Thursday 9am to 12pm and 1pm to 2pm, every Friday 6pm to 9pm ;
- Saturday meetings for youth events, working bees etc;
- Monday to Friday, 8am to 6pm for office/administrative purposes; and

- Other events are not regularly scheduled

The use of the church by these smaller groups typically occurs outside of the peak hours on the network. Although the office/administrative use will generate arrivals and departures in the peak hours, the low numbers of staff and vehicles involved means that adverse transport-related effects will not arise.

It has also been advised that when complete, it is intended to offer the use of the church building to community groups (including schools and social events agencies) for their programmes and events. However these are not yet confirmed, and so the nature or scale of these activities cannot be forecast with certainty.

It is also expected that weddings and funerals will be held. By their nature, these will be infrequent, and will range in timings/days, size and duration. However such events are not uncommon for a church.

Finally, we have been advised that it is hoped to host conferences. These will also be infrequent and variable by the time of day and the number of attendees. However, for the purposes of this assessment, we have given some consideration to the traffic-related effects if a conference was to be held that coincided with the peak hours on the adjacent roading network.

According to the MobileRoad website, Goulds Road presently carries 2,660 vehicles per day, and as a road usually caries around 10% of its daily volumes in the peak hours, this suggests a peak hour traffic volume of approximately 270 vehicles (two-way). We expect that the bulk of these vehicles will be associated with the nearby residential areas and so will be heading towards Rolleston in the morning and away from Rolleston in the evening. For the purposes of this assessment have adopted a one third / two thirds split (90 vehicles in one direction, 180 vehicles in the other direction).

It is commonly accepted that vehicle occupancy associated with travel to a conference or event is in the order of 2.5 people per car. Applying this rate in this case, the maximum capacity of the 114-space car park would be met when a conference was attended by 285 people. If the additional 40-space car parking area was to be brought into use, then the conference could be attended by 385 people. As noted above however, the capacity of the main auditorium is 350 people. Consequently, we consider that even with a very large conference, the on-site car parking would be sufficient to meet demand[1].

We have modelled the traffic flows generated by a large conference arriving and departing the site. For this we have allowed for all 154 cars to enter the site within a 30-minute period prior to a conference starting and to exit over a 30-minute period after it ends, and for these times to coincide with the peak hour traffic flows on the network. We have also allowed for a further 15% of this (22 cars) to enter and exit again, associated with drop-off activities.

With regard to the direction of this traffic, we highlight that the site location means that the bulk of traffic can be expected to arrive and depart from/to the north, as this is the direction of the bulk of the urban area of Rolleston, and the fastest route to most of Christchurch, Christchurch Airport and State Highway 1. Goulds Road (south) only forms the fastest route if the trip origin / destination is

[1] In passing, we note that the number of delegates to a conference is known in advance of it starting. Therefore if it appears likely that the permanent on-site car parking will not meet demand, this provides ample time for the church to arrange for the additional car parking area to be brought into temporary use.

associated with locations further to the south via State Highway 1 or the district road network. Accordingly, we have allowed for 75% of traffic to travel to/from the north.

For a robust assessment the analysis is based on all traffic movements to/from the site using just one vehicle crossing.

The access intersection has then been modelled using the computer software package Sidra Intersection, and the results are summarised below.

Road and Movement		Morning Peak Hour			Evening Peak Hour		
		Avg Delay (secs)	95 %ile Queue (veh)	Level of Service	Avg Delay (secs)	95 %ile Queue (veh)	Level of Service
Goulds Road (south)	L	5.6	0	A	5.6	0	A
Goulds Road (north)	R	6.7	1	A	5.9	0	A
Church Access	L	6.1	0	A	5.9	1	A
	R	8.4	0	A	7.2	1	A

Table 1: Peak Hour Levels of Service at the Gould Road / Site Access

While we acknowledge that there are a number of assumptions made above, the analysis of the site access intersection shows that it will operate with minimal queues and delays. On that basis, we consider that even if different, and more onerous parameters were used, it is highly unlikely that there would be any adverse efficiency-related effects that would arise.

We therefore conclude that even with a large conference taking place at the same time as the peak hours on the adjacent roading network, there would be no capacity-related effects arising.

It therefore also follows that for the smaller groups meeting at the church (where the traffic generation is lower) or for larger groups meeting outside of the peak hour (where traffic flows on Goulds Road are lower), the queues and delays would be even less than modelled above.

RFI Matter 5(e): Confirmation of Weekday Use

The expected use of the church building is set out above.

RFI Matter 5(f): Cycle Parking

District Plan TRAN-REQ11 (cycle parks) bases the number of spaces required on the number of people that the facility is expected to accommodate, at a rate of 1 cycle parking space per 30 people the facility is intended to accommodate for visitors, plus a further 10% for staff.

As noted above:

- A typical Sunday attendance is 250 people. This would therefore require 9 cycle parking spaces
- The congregation size is 350 people. This would therefore require 13 cycle parking spaces
- The building could hold a maximum of 505 people, and this would therefore require 19 cycle parking spaces.

We previously noted that the maximum capacity of the building is unlikely to be reached for some considerable time, and accordingly, we consider that the provision of 13 cycle parking spaces (that

is, 7 ‘hoops’/’staples’) will meet the District Plan requirements with 9 spaces (5 ‘hoops’/’staples’) meeting practical demand.

As previously noted, the plans do not presently show cycle parking spaces, but there are ample locations where they could be located.

RFI Matter 5(g): Other Matters

Pedestrian access

As set out above, the church has agreed to fund the construction of a footpath across the site frontage, existing the current provision that terminates at the northern boundary of the site. We do not consider it necessary for any further provision to be made in this regard.

Although pedestrians will potentially need to cross Goulds Road, the flat and straight alignment of the road means that sight distances are excellent, and all road users will have excellent intervisibility of one another. Anyone walking to the site is likely to be doing so outside the times of peak traffic flows on the road (as discussed in more detail above) but even if they were to be crossing the road at the busiest times, the relatively low traffic flows create ample gaps for pedestrians to cross.

The ability for the mobility impaired to cross the site accesses was noted in the RFI but we do not consider that this differs particularly from any other site access that needs to be crossed by the mobility impaired. It is possible that, if the accesses were to be considered as highly-trafficked, that tactile paving could be provided at the vehicle crossings but this is a matter than can be considered at Engineering Approvals stage.

Width of Vehicle Crossings

The comment is made that as one-way accesses, the proposed vehicle crossing width of 5.5m is too wide.

Our assessment to date has been based on the accesses functioning as two-way vehicle crossings, and on that basis we previously confirmed that the 5.5m width was suitable. However the layout of the parking means that there would be no practical issues with the operation of the car park in the event that they were to be converted to one-way operation. In this case though, we agree with the comment made in the RFI that they would need to be reduced in width, because if retained as 5.5m wide then they would potentially be used for two-way traffic. We would suggest that for one-way operation, a width of 4m would be appropriate.

Car Park Design and Circulation

The car park is designed in a standard row+aisle configuration which will be familiar to drivers and the aisles are all at least 5.5m wide, which is sufficient for two-way operation. We therefore do not agree that the layout does not provide sufficient opportunity to circulate between the aisles. Put another way, there are no vehicle movements that are restricted (or eliminated) within the layout, and so drivers will not find themselves in locations where their choice of route is constrained.

One further point is that drivers will largely be those that are familiar with the layout, as regular churchgoers. They will therefore be aware of the route choices to travel to their desired parking location. That said, we do not consider that the layout would be confusing to unfamiliar drivers (such as those attending a conference) but it would be straightforward for the church to erect

temporary signage to ensure that drivers are given advice as to where the parking is sited. We stress though that we do not consider this to be necessary.

We trust that this responds to the matters raised, but would be pleased to discuss any matters arising with you at your convenience.

Kind regards
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