May 2016
Final

103 Summers Street – Transport Impact Statement Review

Prepared For:
City of Vincent

Review Report
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Donald Veal Consultants Pty Ltd
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1. INTRODUCTION

1.1 Background

The City of Vincent has commissioned Donald Veal Consultants (DVC) to provide a review of the Transport Impact Statement (TIS) prepared by KCTT in support of a Development Application for a Child Day Care Centre at 103 Summers Street, Perth.

1.2 Scope of this Report

This independent review has been undertaken by DVC with particular focus on the accuracy of the TIS, its compliance with both the WAPC Transport Assessment Guidelines and City of Vincent Town Planning policies and its findings with respect to the likely impact of the development on the traffic and transport environment of the locality.
2. PROPOSED DEVELOPMENT

The development is identified within KCTT's report as follows:

*The proposed development will include a total gross floor area of approximately 483m², within a total land area of 1,013m². It will accommodate 68 children from 6 weeks to 5 years old and with a total of 18 staff members (i.e. Directors, teachers, carers, administrators, relief staff and chef).*

The proposed development is a Child Day Care consisting of:

<table>
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<th>Table 1 - Proposed Land Uses within the Development</th>
<th>Area (GFA)</th>
</tr>
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<tr>
<td>Child Day Care</td>
<td>483m²</td>
</tr>
<tr>
<td>Total Development</td>
<td>483m²</td>
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</table>
3. ISSUES IDENTIFIED WITHIN THE REPORT

An initial review of the TIS report has identified a number of issues that would require additional investigation and that may invalidate the findings contained within it.

The issues have been discussed below, broadly in the same order as encountered in the TIS.

3.1 Vehicular Access and Parking

3.1.1 Vehicular Access

In section 2.2.1 of the TIS, KCTT states that:

“The current layout and sight distances in Summers Street would allow for full unrestricted movement of vehicles to and from the development.”

However, the full unrestricted movement would only apply to a very small proportion of the vehicular trips generated, given that only two on-site parking bays have been provided. In addition, the presence of parked cars in the on-street bays very close to the access points may restrict visibility when exiting the site, especially when reversing. There is no provision for drivers to enter and leave the site in forward gear.

The swept path diagrams shown in Appendix 3 of the TIS only show the paths of drivers entering and leaving the site from and to the west along Summers Street. However, it is quite possible that some drivers will arrive or depart to/from the east. These movements should also be shown. The left turn into the site may be quite tight with a vehicle in the adjacent on-street parking bay, whilst visibility for the manoeuvre to reverse across the road to head east may also be compromised.

3.1.2 Crash History

In Section 2.2.2, KCTT carries out extensive analysis of the number of crashes that have occurred on the local road network, concluding that the crash rate per million kilometres travelled is lower than average. However, a brief inspection of the crashes recorded on Summers Street shows that these consist of 1 involving parking, 1 involving a pedestrian and 3 involving entering or leaving a driveway. These crash types are all relevant to this development application. The development will result in increased levels of traffic on Summers Street, along with significantly higher numbers of vehicles manoeuvring into and out of on-street parking bays as well as reversing out of the site. Pedestrian numbers will also increase. There is therefore a real danger of an increase in crashes involving these elements if the development is approved. No countermeasures to address this increase in risk are proposed in the report.

3.1.3 Parking Provision and Operation

KCTT argues that the site’s location means that the City’s parking policies do not apply, and that the level of parking provision should be determined in accordance with the Perth Parking Policy requirements. Summers Street forms the boundary of the PPMA, and it is unclear whether this is the case or not. However, in section 2.2.3 of the TIS, KCTT does refer to “the City of Vincent Planning and Building Policy Manual, Parking
and Access Policy no. 3.7.1, Parking and Access”, which indicates that the development will require 14 bays. Referring to the more recent version of this policy, no. 7.7.1, confirms this number.

At the top of Page 14 of the TIS, KCTT states that a reduction factor of 0.4352 may be employed in the number of parking bays required on site, based on four criteria detailed in Table 5. The Table is shown below:

<table>
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<tr>
<th>N°</th>
<th>Percentage Reduction</th>
<th>Adjustment Factor</th>
<th>Factors to be Justified</th>
<th>Justification of the Factors</th>
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<tr>
<td>1A</td>
<td>20%</td>
<td>0.80</td>
<td>The development is located within 400 metres of a rail station</td>
<td>East Perth Station; Midland Line is approximately 200m east from development.</td>
</tr>
<tr>
<td>2</td>
<td>20%</td>
<td>0.80</td>
<td>The development is located within 400 metres of a bus route.</td>
<td>The proposed development is located within 300m from bus stops for Route No 41, 42, 48 and 55.</td>
</tr>
<tr>
<td>3B</td>
<td>20%</td>
<td>0.80</td>
<td>The development is located within 400 metres of an existing off-street public car park with in excess of 75 car bays</td>
<td>Parking - 100m east from the proposed development, capacity more than 50 parking bays; 4h for free for customer;</td>
</tr>
<tr>
<td>6B</td>
<td>15%</td>
<td>0.85</td>
<td>The development will provide on-street bicycle facilities.</td>
<td>The layout of the proposed development shows separate bicycle parking spaces to the west side of the proposed development.</td>
</tr>
<tr>
<td>Total Adjustment Factor</td>
<td>0.4352</td>
<td></td>
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The adjustment factors quoted actually come from Table 2 of the City’s ‘Parking and Access Policy no. 7.7.1’, (3.7.1 was updated to 7.7.1 in December 2015) and are intended to be applied to the land uses identified in Table 1 of the same document. However, two of the factors in the Policy differ to those quoted in the TIS.

‘Factor 3B’ should either be a 15% reduction, not 20% or changed to Factor 3A; and Factor 6B does not appear in the table at all. There is a Factor 6, which is a 10% reduction, although it is not clear that this applies. The total adjustment factor would then be increased, resulting in a requirement for either 7 or 8 bays.

Whilst these reduction factors appear to be in line with the policy, it is debateable whether they should be applied to a Child Care Centre, where the modal choice of patrons is highly unlikely to be influenced by the proximity to a rail or bus service or the presence of bicycle racks. In addition, the presence of a nearby car park is of little value if it has no spare spaces, and of limited value to staff if it is time restricted. This is not necessarily a criticism of the TIS however.

Whether the minimum requirement is 5, 7 or 8 parking bays, the Development proposal only shows a total of 2 car parking bays being provided on site. One of these is a designated ACROD bay. The TIS suggests this should be used as a ‘shared use’ bay, but it is unclear how this would work in practice.
The TIS includes a number of statements and arguments aimed at justifying the reduced level of parking provision. The first of these to be considered is the statement above Table 10 on Page 19. Here, KCTT states:

“Please note that it is not expected that staff (team members) will be arriving to the premises in their own vehicle therefore it is not expected that they will make any traffic impact.”

No evidence has been offered to support this expectation being met.

Clearly, there is insufficient off street parking to cater for 18 staff at the proposed centre. It is, however, difficult to believe that a significant proportion of these staff will not drive to work. Whilst some may use the available public transport services in the area, those that do need, or choose, to drive will be forced to either take up 2 hour on-street parking bays, or park further afield, perhaps in the 4 hour PT Centre car park.

At the top of Page 15 of the TIS, KCTT states that:

“The maximum number of vehicles expected to access the site during the peak hour is 28. Given that the expected average dwell time is 10 minutes it is expected that 5 parking bays is sufficient to cater for peak hour demand.”

This appears to be based on the data entered into Table 6 on Page 14, which identifies a maximum of 28 vehicles per hour needing to park at the Ruth Landua Harp (RLH) centre in both the AM and PM peaks. However, there is no detail as to the actual number of bays available at this existing facility, how the resulting number of bays required has been calculated, nor any indication that the stated average dwell time was actually recorded or accurate.

In addition, the number of bays required appears to rely on the number of vehicles arriving and leaving being consistent throughout the peak hour (i.e. arriving and leaving at regular intervals), which is unlikely to be the case. Indeed, the maximum number of cars needing to park in any 30 minute period is shown as being 20. Clearly, this would require significantly more bays than 28 cars spread evenly over an hour.

Again, it is not clearly indicated whether the arrival profiles of the two facilities will be comparable. If only ‘all day care’ is to be provided, the percentage of trips generated in the peak hour may be significantly higher than at the RLH centre.

However, the identified number of bays required (5) is not provided in any case, but rather used as a measure of the number of on-street bays that might be taken up by patrons of the centre.

### 3.1.4 Pick-up / Drop off Area

The Child Care centre has no specific Pick up/Drop off area, other than the on-street parking areas.

### 3.1.1 On-street Parking

The two off street parking bays are effectively only one, as parents will generally baulk at parking in a bay marked for disabled drivers. The difficulty in reversing back out of the bay will also contribute to the vast
majority of the staff and patrons driving to the site using the adjacent on-street parking bays. On street bays are limited to 2 hours in this area, with the nearby Public Transport Centre car park having a 4 hour limit.

The availability of on-street parking has been assessed by carrying out surveys of the parking bays within 100m of the proposed facility. These surveys were carried out on a Wednesday, Thursday and Tuesday. The Tuesday was actually during school holidays, but provided similar results.

Table 8 of the TIS shows that there will be plenty of on street bays available, although the calculations are based on an unsubstantiated 10 minute dwell time.

### 3.1.2 Parking dwell times

The TIS estimates parking dwell times as being “a maximum of 5-10 minutes”. However, there is nothing to substantiate this. In the previous TIS regarding the Angove Street CCC, KCTT quoted dwell times as being “a maximum of 10-15 minutes.” It is not clear why dwell times would be less in this case.

If patrons are expected to park up to 100m away from the centre, dwell times may well be longer.

This information will be needed if any informed analysis of the impact of the development on the availability of on-street parking is to be carried out.

### 3.2 Trip Generation Calculations

Due to various assumptions and typos, the TIS contains at least five different estimates of the number of trips forecast to be generated by the development.

- “...KCTT expect this development will generate up to 200 vehicular trips per day, with 56 vehicular trips in AM peak and 56 vehicular trips in PM peak”;
- “…More realistic figure would be 170 vehicular trips per day and 56 vehicular trips in peak hour”;
- “The likely impact of the development is therefore a maximum of approximately 158 additional VPD into the road network, over and above the numbers from the existing land-use”;
- “…the total development is expected to generate approximately 170 vehicular movements per day with a forecasted impact of around 48 vehicular movements per hour in the peak hour”;
- “As shown in Section 2.5 of this report, the total development is expected to generate approximately 116 vehicular movements per day with a forecasted impact of around 33 vehicular movements per hour in the AM peak hour and 31 vehicular movements per hour in the PM peak hour.”

These estimates are primarily based on surveys carried out at a single existing child care centre in Menora.

### 3.2.1 Trip Generation Estimates

The RLH centre website states that the Menora facility offers pre and post school care, as well as full day care. This may result in more trips occurring outside the specific AM and PM peak periods. The TIS does not
contain sufficient detail of the operation of the proposed Summers Street facility to confirm whether the two sites would be comparable in this regard.

### 3.2.2 Claimed reductions in the number of vehicle trips

In the Report’s Executive Summary, KCTT states that:

“For the purpose of modelling, KCTT expect this development will generate up to 200 vehicular trips per day, with 56 vehicular trips in AM peak and 56 vehicular trips in PM peak. This is a theoretical maximum based on the figures from the Child Care Centre quoted in Point 3 above. We believe this is an absolute maximum based on 100% occupancy rate. More realistic figure would be 170 vehicular trips per day and 56 vehicular trips in peak hour. This corresponds with 85% occupancy rate.”

KCTT has used this figure of 85% occupancy on the following basis:

“It must be noted that most Childcare Centres do not operate with 100% utilisation of the licenced capacity on every operating day. This includes allowance for the following:

- The centre has not filled all of its allocated positions in each of the age groups;
- Children are away on sick leave, or on school holidays with older siblings;
- Some children are not booked for each day of the week;

It is generally estimated that centres operate with an 85% utilisation of the licenced capacity over the year due to a number of days that children attend (this ranges from 2 to 5 days a week) and seasonal adjustments (End of year and when people return to work from maternity leave).”

This argument is generally valid, but if the centre runs at ‘an average of 85% over the course of a year’, then the traffic impacts and parking requirements are likely to be higher than this level for 50% of the time.

Although perhaps not a significant factor, and notwithstanding the stated belief that no staff would drive to the site, the blanket reduction in trips generated and parking bays required to 85% appears to imply that the number of staff would also be reduced pro-rata.

The number of trips to be generated by the proposed development, and the number of parking bays required, are both based on the results of the survey undertaken at the RLH Centre in Menora. Based on the survey results, which show that RLH, with 72 children and 18 staff, generates 208 daily trips, the proposed development is therefore forecast to produce 200 trips. This figure is then reduced to 170 (85%), on the above described basis.

However, this survey was only carried out on a single day, when it is not known how many of the 72 children and 18 staff were in attendance, or whether these figures indeed represent ‘legal capacity’ or registered students. It is similarly not known whether this existing child care centre is within close proximity of sustainable transport services. In short, there is insufficient information to determine whether the survey results are representative or whether the indicated reductions are appropriate.

KCTT states in the Executive Summary that:
“The model for the child care centre is based on an expectation that a significant percentage of patrons will be from the local area. This means the centre will attract a higher rate of walking patronage than other centres typically in the Perth Metropolitan region.”

There does not appear to be any justification for this expectation, other than an assertion that:-

“the site would require significant reconfiguration to have the level of parking considered appropriate for a facility where a high volume of vehicle trips are expected. Developing a child care facility that is reliant on vehicular trip attraction will not be successful in a location such as Summers Street.”

The TIS goes on to state that the proprietors should “develop their business around promoting alternative transportation usage, such as walking and the use of public transport, and they should actively discourage the use of private motor vehicles as a singular purpose for parents to pick up / drop off their children.

It is considered unlikely that the number of parents walking to drop children off at day care would be very high. In the majority of cases, even if they live locally, the parents will drop off their charges on the way to work – which is the usual reason that the child needs to attend day care in the first place. Whether these vehicular trips to drop-off and pick-up the children are single purpose or ‘blended’, the majority will still increase the traffic on Summers Street, and still require parking.

Figure 3.1: Google results for Child Care facilities in North Perth.
The TIS also states that the proportion of parents walking their children to the centre will be higher as there is only one such centre identified by a Google search of child care centres in East Perth. However, Figure 3.1 above shows there are several more in the general area.

3.3 Traffic flow

The TIS indicates that the vast majority of the attracted traffic will arrive at the site from the west along Summers Street and leave to the west along the same street. However, there is no indication as to how these vehicles will change direction.

Very few of the vehicles will be able (or wish) to actually enter the site, as there is only one parking bay and an ACROD space, manoeuvring in and out of which is clearly difficult. In order to change direction, then, the majority of vehicles would need to perform a three point turn after parking on the street, or turn via the Public Transport Centre car park. Either solution will involve a significant increase in vehicle manoeuvring in this area.

3.4 Pedestrian Access and Safety

With almost all patrons and staff having to park on street, the number of pedestrians in this area, including very young children, will increase significantly. The number of pedestrians potentially crossing the road will increase also. Given the number of additional vehicular movements, and manoeuvres in this vicinity, more attention should be afforded by the TIS to the potential for conflicts, and the issue of safety overall.
4. CONCLUSIONS

Given the limited scope of our commission, this has been a fairly brief review of the TIS produced by KCTT. Nonetheless a number of issues have been identified, which clearly bring the reports assumptions, robustness and conclusions into question.

The TIS has failed to provide sufficient justification for the stated number of vehicle trips assumed to be generated by the development, either daily or in the peak periods. The trip generation and parking demand calculations are all based upon a single survey of another child care centre in Menora, but insufficient detail has been provided regarding this facility.

The TIS does not adequately address the various parking and access issues likely to arise from the current development layout.

The TIS does not adequately address potential pedestrian / vehicle conflicts or other road safety issues in the vicinity of the centre.

The TIS does not achieve the aim of such a document as stipulated by the WAPC Transport Impact Assessment Guidelines:

“The intent of the statement is to provide the approving authority with sufficient transport information to confirm that the proponent has adequately considered the transport aspects of the development and that it would not have an adverse transport impact on the surrounding area.”