REF: N208370

DATE: 10 March 2021

Vicinity Centres
Myer Centre Brisbane,
91 Queen Street,
Brisbane QLD 4000

Attention: Mr. Mark Kelley (Regional General Manager Development)

Dear Mark,

RE: EASTERN CREEK RETAIL OUTLET CENTRE (SSD-10457) – TRAFFIC PEER REVIEW

Further to your request, GTA Consultants (GTA), now Stantec, has undertaken a peer review of a traffic and transport report[1] (herein referred to as "The CBRK study") prepared by Colston Budd Rogers and Kafes (CBRK) for the State significant development (SSD-10457) comprising a new retail outlet centre at Lot 3 of the Eastern Creek Quarter site located in the Western Sydney Parklands.

This peer review focuses solely on the likely external impacts of the proposed development, including the appropriateness of the car parking provision and the adequacy of the adjacent road network to accommodate development generated traffic. It is noted that matters relating to the internal design of the site are not included in this review. Furthermore, the review only considers the land use proposed as part of SSD-10457 and does not comment upon the relative impact of the change in land use from previous SSD approvals.

Overview

The site is located at Rooty Hill Road South, Rooty Hill and comprises 34 hectares of land on the western side of the M7 Motorway within the Western Sydney Parklands Precinct. It is understood that just under 16 hectares of the site has been allocated as developable area (Lot 1, 2 and 3).

It is further understood that the concept plan for the site was approved in January 2015 (SSD-5175), allowing for a total gross floor area (GFA) of 52,800 square metres across the site, including 19,300 square metres in Lot 3 approved to be bulky goods use. The SSD-5175 Concept Approval has been modified nine times, resulting in an increase in the approved GFA by 3,038 square metres to 55,838 square metres.

It is understood that development on Lot 2 is now operational (convenience retail and car wash) and includes a total of 11,438 square metres GFA. Development on Lot 1 was approved in mid to late 2020 and includes a specialised retail centre, three specialised retail buildings, ancillary uses (recreation facility (indoor), vehicle repair station and café) and two pad sites, with a total of 11,487 square metres GFA[2].

[1] Traffic and transport report for a proposed concept plan for a new outlet centre at Eastern Creek Quarter Stage 3, CBRK, December 2020
[2] Eastern Creek Business Hub, State Significant Development Modification Assessment (SSD 5175 MOD 9 and SSD 8858 MOD 1), NSW Department of Planning, Industry and Environment, December 2020

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The current application (SSD-10457) seeks to amend the original Concept Plan approved under SSD-5175 as far as it relates to Lot 3. The proposed concept plan seeks to update the original approval (as modified) to include the following:

- Land uses, including retail (factory outlet), ancillary food and drink premises and recreation facilities.
- A maximum total gross floor area (GFA) of 39,500 square metres on Lot 3 which will be staged as follows:
  - Phase A: 29,500 square metres GFA
    (approx. 20,000 square metres Gross Leasable Area (GLA))
  - Phase B: 10,000m2
    (approx. 9,327 square metres Gross Leasable Area (GLA)).
- Road upgrades, as discussed later in this letter.

The previous approved concept as it relates to Lot 3 and proposed concept traffic elements are summarised in Table 1.

Table 1: Overview of Concept Proposals

Description (Lot 3)	Approved Concept	Proposed Concept
	SSD-5175	SSD-10457
Floor Area	19,300m^2 GFA	39,500m^2 GFA (approx. 29,327m^2 GFLA)
Land Use	Bulky Goods	Outlet Centre and ancillary uses including indoor/ outdoor recreation facility, amusement centre and food and drink / pop up kiosks
Parking provision	323 spaces	1,350 spaces

Car Parking Provision Review

The concept proposal includes car parking at a rate of 4.6 car spaces per 100sqm GLA (i.e., 1,350 car spaces divided by 29,327m^2 GFLA).

The CBRK study considers this provision to be appropriate, based on application of the Transport for NSW Guide for Traffic Generating Developments 2002 (Guide 2002) rate of 4.3 car spaces per 100sqm GLA for shopping centres between 20,000sqm and 30,000sqm GLA.

To assess the appropriateness of this rate for factory outlet retail, we have sought guidance from the Property Council of Australia Shopping Centre Directories for NSW, VIC, and QLD. This approach has been adopted, in lieu of solely relying on the Guide 2002 as our experience suggests the factory outlet shopping centres can often generate more car parking and traffic than traditional shopping centres. The PCA directories outline parking rates for existing factory outlets as summarised in Table 2. This data shows that the average car parking rate for factory outlet shopping centres is 5.8 car spaces per 100sqm GLA, with an 85th percentile rate of 7.1 car spaces per 100sqm GLA.

In the context of this data, we note that the proposed car parking rate (4.6 car spaces per 100sqm GLA) is comparatively on the low side, noting that only 3 of the 10 centres summarised in Table 2 have a car parking rates at or below the proposed rate. Accordingly, we consider it possible that car parking demands associated with the proposed development may exceed the available supply, which could have a consequential (and detrimental) impact on the operation of the adjacent road network during peak periods.

We would recommend that the appropriateness of the proposed car parking rate be closely considered by Council and TFNSW (given the concerns outlined above).

Table 2: Parking Rates – Existing Factory Outlets (Property Council of Australia)

State	Site	GLA (sqm)	Car Parking Provision (spaces)	Car Parking Rate (spaces/100sqm GLA)
NSW	Birkenhead Point	31,791	1,395	4.4
NSW	DFO Homebush	28,326	2,019	7.1
NSW	Tuggerah Super Centre	37,680	1,100	2.9
VIC	Brand Smart Emporium	9,259	450	4.9
VIC	DFO Essendon	52,483	2,137	4.1
VIC	DFO Moorabbin	24,688	1,362	5.5
QLD	DFO Brisbane	26,318	2,600	9.9
QLD	DFO Cairns	25,648	1,381	5.4
QLD	DFO Jindalee	13,829	980	7.1
QLD	Harbour Town	45,722	3,000	6.6
			Average	**5.8**
			85th Percentile	**7.1**

Traffic Impact Assessment Review

Scenarios

Modelling scenarios completed as part of The CBRK study are detailed in Table .

Table 3: Scenario Analysis for Modelling Traffic Impacts

No.	Scenario	Description
1	Base Condition, 2020	Existing traffic volumes (2020), including allowance for development of Lot 1.
2	Post Development, 2020	Scenario 1 with allowance for full development of site
3	Future Base Condition, 2030 [1]	Scenario 1 with allowance for 10 years growth in traffic volumes from date of traffic counts and road network improvements.
4	Post Development, 2030 [1]	Scenario 2 with allowance for full development of site.

[1] SIDRA model outputs states 2029.

Each scenario was modelled for the weekday afternoon and Saturday midday peak periods as the CBRK study notes these periods correspond to when the development traffic would likely have its greatest impact on the surrounding road network. We agree with this approach as its typical to focus traffic assessments on these two periods.

For the future base condition, however, we note that if a 10-year scenario is to be assessed, the scenario typically considers 10 years after the completion of the development rather than 10 years from date of traffic counts. Advice provided to GTA indicates that the development would likely be fully constructed by 2025-2026. As such, a 10-year scenario would typically consider 2035-2036, rather than 2030.

We would recommend that the appropriateness of the modelling scenarios is confirmed with Council / TNFSW (noting that we expect that it would be more appropriate to assesses 2025-26 base and post-development conditions, plus 2035-36 if required by Council / TFNSW).

Traffic Volumes

Traffic volumes were collected in late July 2020 for the intersections in the vicinity of the site during the weekday afternoon and Saturday midday periods.

It is presumed that this timeframe aligned with the engagement of CBRK as its considered unusual to undertake traffic surveys for a retail asset at this period (as traffic volumes to/from retail assets at this time are often far lower than those recorded in November and December).

In July 2020, it is also noted traffic volumes during peak periods may have been impacted by social distancing requirements across Sydney Metropolitan.

We would recommend that the appropriateness of the use of the July 2020 traffic data is acceptable with Council / TNFSW.

Background Growth

The CBRK study appear to adopt a traffic growth rate of approximately 2% per annum, which is applied to the arterial traffic movements only.

In a suburban area, this approach would typically be appropriate. However, in an outer suburban / higher growth area, it may potentially underestimate future volumes on the road network.

We would recommend that the appropriateness of this growth rate is confirmed with Council / TNFSW.

Traffic Generation

Lot 1 and 2

It is understood that Lot 2 was open by July 2020 and hence traffic volumes generated by this development are assumed to be captured in the traffic counts.

The CBRK study indicates that the approved Lot 1 development was expected to generate some 270 and 400 vehicles per hour during the weekday afternoon and Saturday midday periods, respectively. No specific references have been provided for these assumptions and therefore GTA is unable to confirm if this assumption is valid. By way of example, it is unclear if this includes allowance for the second pad site approved on site in December 2020 (SSD-5175 Modification 9) or the childcare centre to be constructed on Lot 2.

It is further noted that an extrapolation of the traffic volumes presented in Figure 2 in the CBRK study indicates that the Lot 2 is expected to generate some 487 vehicle trips in the afternoon peak period (i.e., 757 vehicle trips less 270 vehicle trips expected to be generated by Lot 1). For the Lot 1 floor area of 10,428 square metres, this generation equates to an existing rate of approximately 4.7 vehicle trips per 100m^2 GFA. This existing rate is discussed further below as it is noted that a significantly lower traffic generation rate is assumed in the CBRK report for the new floor area in Lot 3.

Lot 3 (Development Site)

The CBRK study adopts a retail trip rate of 1.45 and 3.24 vehicles per 100 square metres GFA for the weekday afternoon and Saturday midday peak hour, respectively, based on "surveys completed at similar outlet centres (based on catchment and size)".

In our experience, the adopted rates are very low and inconsistent with data available to GTA for direct factory outlets such as (but not limited to) DFO Homebush. (We note that DFO Homebush is approximately equal in floor area to the proposed factory outlet). Accordingly, we would dispute the assertion documented in the CBRK study that direct factory outlets are similar to bulky goods retail precincts in terms of traffic generation. To the contrary, we would contend that factory outlets are more aligned – in terms of car parking provision and traffic generation – to traditional shopping centres, if not higher in many instances.

In this regard, we note further commentary on the likely traffic generation of the proposed development as follows:

- As outlined above, the existing shopping centre in Lot 2 is estimated to generate traffic at approximately 4.7 vehicle trips per 100m^2 GFA during the weekday PM peak hour. In our experience, this rate is likely to be similar to the traffic generated by the factory outlet retail.
- The CBRK study draws car parking guidance from retail shopping centres (4.3 car spaces per 100sqm) but ignores the same data set for traffic generation. If this guide were to be used, which we would contend is likely to be more realistic for a factory outlet retail for the reasons outlined above, traffic generation rates of 5.9 and 7.5 vehicle movements per 100m^2 GLA would have been applicable for the weekday and Saturday peak hours, respectively. At a minimum (assuming the development falls into the larger size category of this guide i.e., 30,000 to 40,000 m^2 GLA), rates of 4.6 and 6.1 vehicle movements per 100m^2 GLA would have been applicable for the weekday and Saturday peak hours, respectively. This weekday rate aligns with the surveyed rate at the site,
- Traffic data sourced from DFO Homebush from July 2020 indicates that a traffic generation rate of 3 vehicle movements per 100m^2 GLA in the weekday afternoon peak period. For DFO Homebush, it is also important to note that traffic congestion on the adjacent roads supresses the site's traffic generation during peak periods. Under less constrained conditions, the traffic generation rate is likely to higher. (By way of example, on Saturdays, the peak hour traffic generation at DFO Homebush is closer to 6 vehicle movements per 100m^2 GLA, which aligns with the TFNSW shopping centre rate for that day).

Overall, we consider it unlikely that the proposed development will generate traffic at rates as low as those assumed in the CBRK report. For the weekday PM peak hour, we expect that the traffic generation is likely to be closer to 4.5 vehicle movements per 100m^2 GLA (if not higher), which is approximately three times the rate adopted rate in the CBRK study. On Saturdays, we expect the rate would be closer to 6 vehicle movements per 100m^2 GLA, which is twice the rate adopted in the CBRK study.

As the traffic generation rates recommended by GTA are significantly different to that assumed in the CBRK study, we recommend that the CBRK report is updated to adopt a higher traffic generation rate that is more aligned with empirical data and TFNSW rates.

In our view, this is appropriate not only as its supported by the abovementioned empirical data but also due to the potential concerns raised above regarding the robustness of the July 2020 base traffic data. (Further technical concerns in the SIDRA modelling are also detailed below).

Trip Distribution and Assignment

The CBRK study assumes the trip distribution to be 35% northbound and 65% southbound in each peak period. In the absence of catchment mapping for the proposed development, this distribution is considered acceptable.

The CBRK study assumes the directional split of traffic to be 50:50 between inbound and outbound traffic in each peak period. This split is consistent with the approach generally adopted for similar land uses and is considered suitable.

The CBRK study assumes that 20% of traffic generated by the site will be passing trade. We assume this is based on suggested trip discounts outlined in Guide 2002 for shopping centres between 10,000 and 30,000 square metres GLA. This guide states discounts of this nature should not apply without adequate substantiation however no justification has been provided for this assumption hence it cannot be verified.

We recommend that the validity of this assumption be confirmed by CBRK.

SIDRA Modelling

The SIDRA modelling contained within the CBRK study appears to adopt various assumptions which we consider are either unlikely or, at the least, need to be confirmed. These include:

- The modelling assumes a peak flow factor of 1.0.
- The modelling excludes the M7 interchange which likely dictates cycle timing in the network. The impact of the inclusion of this intersection may mean that the adopted cycle times are unable to be achieved.
- The modelling includes network coordination between intersections greater than 500 metres apart. This is likely to result in favourable arrival flow and improved intersection operation which may not be achievable.

In addition, it is noted that the CBRK report excludes detailed SIDRA outputs for Thursday PM peak hour 2029 scenario at the intersection of Rooty Hill Road South / Eastern Road. As this intersection is a critical gateway to the precinct which is expected to operate with a high degree of saturation, it could be limiting southbound traffic volumes at other intersections and therefore not allowing for the full amount of traffic expected.

Due to the above concerns, coupled with our view that the adopted traffic generation rates are considerably lower than those which can be expected, we recommend that the SIDRA analysis contained within the CBRK report be recompleted and greater clarity on the results be documented so that a more thorough review can be completed.

Note:

GTA has endeavoured to recomplete the SIDRA analysis documented in the CBRK report to test the impacts of increasing the traffic generation to align with our predicted volumes (i.e., an approximate tripling of traffic generation to/from the site). This analysis has also modified the design year to 2025 assuming 2% per annum growth but has generally retained all other CBRK assumptions (other than SIDRA technical assumptions e.g., cycle times).

The results of our analysis indicate that a significantly greater traffic impact than is documented in the CBRK report can be expected under post-development conditions at the Rooty Hill Road South / Eastern Road and Rooty Hill Road South / Great Western Highway intersections. Specficially, the Rooty Hill Road South / Eastern Road intersection is expected to operate with a Level of Service of F, and with a Degree of Saturation of 1.33, whilst the Rooty Hill Road South / Great Western Highway intersection is expected to operate with Level of Service of E, with a Degree of Saturation of 0.98.

In our view, this analysis indicates that mitigating road works above and beyond those nominated by CBRK will likely be required at these intersections to accommodate development generated traffic, particularly given that the results presented are only for 2025 immediate post-development conditions and make no allowance for additional traffic volume growth beyond this period.

It is noted that GTA is more than happy to share PDF results of this SIDRA analysis with Councill / TFNSW upon request.

Summary

Based on the findings of this review, we conclude the following:

- Car parking:
  - The proposed car parking rate (4.6 car spaces per 100sqm GLA) is comparatively on the low side when compared to other factory outlet retail centres in NSW, VIC and QLD.

- We consider it possible that car parking demands associated with the proposed development may exceed the available supply, which could have a consequential (and detrimental) impact on the operation of the adjacent road network during peak periods.
- We would recommend that the appropriateness of the proposed car parking rate be closely considered by Council and TFNSW.

- Traffic impacts:
  - The traffic impact assessment completed by CBRK adopts many assumptions that GTA would not adopt if we were completing the assessment.
  - Most notably, we expect that the traffic generation of the proposed development during the weekday PM is likely to be closer to three times the rate adopted by CBRK. The difference in traffic generation assumption appears to stem from CBRK's view that factory outlet retail is similar to bulky goods retail. To the contrary, we would contend that factory outlets are more aligned – in terms of car parking provision and traffic generation – to traditional shopping centres, if not higher in many instances.
  - The impact of a change in the traffic generation assumption, coupled with other relatively technical and minor assumption differences, is significant with traffic analysis completed by GTA indicating that a significantly greater traffic impact than is documented in the CBRK report can be expected under post-development conditions at the Rooty Hill Road South / Eastern Road and Rooty Hill Road South / Great Western Highway intersections.
  - In our view, our analysis indicates that mitigating road works above and beyond those nominated by CBRK will likely be required at these intersections to accommodate development generated traffic, particularly given that the results presented are only for 2025 immediate post-development conditions and make no allowance for additional traffic volume growth beyond this period.

I trust the above information is clear. Naturally, should you have any questions or require any further information, please do not hesitate to contact me on (02) 8448 1800.

Yours sincerely

GTA CONSULTANTS

Tim De Young
Director