FRASERS PROPERTY GROUP

REPORT ON THE TRAFFIC IMPLICATIONS OF THE PROPOSED PAD SITE 2

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1. INTRODUCTION

1.1. Frasers Property Group has engaged Colston Budd Rogers & Kafes Pty Ltd to prepare a report on the traffic and parking aspects associated with the proposed PAD Site 2 (fast food restaurant) at Eastern Creek. PAD Site 2 forms part of the approved specialised retail centre within Lot 1 of the Eastern Creek Business Hub. The site is located on the eastern side of Rooty Hill Road South, south of the Spine Road that provides access to the Eastern Creek Business Hub. PAD Site 2 is located on the western boundary of Lot 1. The site location is shown in Figure 1.

1.2. The Eastern Creek Business Hub has development consent for a concept plan which includes 56,438m^2 GFA within three lots comprising:

- 39,400m^2 specialised retail.
- 10,754m^2 convenience retail (including a supermarket and specialty shops);
- 3,000m^2 recreational;
- 400m^2 vehicle repair station;
- 1,200m^2 child care centre; and
- 1,684m^2 circulation.

1.3. Vehicular access to the site is approved from Rooty Hill Road South, via a new signalised intersection at Cable Place with a roundabout providing direct access to Lots 1 and 2.

1.4. Development on Lot 2 has been completed and is now operational. Development on Lot 1 was recently approved (11,398m^2) and comprises:

- 8,390m^2 specialised retail;
- 100m^2 café;
- 400m^2 tyre service centre;
- 2,010m^2 indoor recreation centre; and
- A future PAD site (498m^2).

1.2 The traffic aspects of the approved development on Lot 1 were assessed in the Supplementary Traffic Study, Eastern Creek Business Hub Amended Stage 2 DA – Proposed Specialised Retail Centre for Lot 1 – Transport Assessment (CBRK December 2019). The traffic assessment for Stage 2 was based on the future PAD site was assumed to be a McDonald's.

1.3 For the purposes of assessing the traffic and parking effects of PAD Site 2 (fast food restaurant), it has been assessed as a KFC (PAD site 1 was assessed as a McDonalds's).

1.4 The findings of the traffic assessment of the PAD Site 2 on Lot 1 are set down in Chapter 2.

2. TRAFFIC ASSESSMENT

2.1. The traffic assessment is set down through the following sections:

- site location;
- proposed development;
- parking provision;
- access, servicing and internal layout;
- traffic effects; and
- summary.

Site Location

2.2. PAD Site 2 is located at the western side of the car park of the approved Lot 1 of the Eastern Creek Business Hub. Lot 1 is located on the eastern side of Rooty Hill Road South, south of the approved Spine Road, as shown in Figure 1.

Proposed Development

2.3. PAD Site 2 is some 270m^2 GFA. It will provide 40 internal seats (no external seating) with a drive through facility. Parking will be provided within the main car park. To accommodate PAD Site 2, adjustments to the approved building footprint and car park are proposed. This results in:

- a minor increase in GFA from 11,398m^2 to 11,487m^2 (an increase of 89m^2);
- a minor reduction in parking provision from 355 spaces to 344 spaces (reduction of 11 spaces).

Parking Provision

2.4. As noted in Chapter 1, for the purposes of assessing the parking effects of PAD Site 2, it has been assessed as a KFC. For a KFC, RMS Guidelines (which are based on extensive surveys) suggest a parking provision of the greater of 1 space per 2 seats

(internal) or 1 space per 3 seats (internal plus external) plus queuing area in the drive through for 5 to 8 cars.

2.5. Based on RMS guidelines, PAD Site 2 with 40 internal seats would require 20 spaces. Parking requirements for Lot 1 (with PAD Site 2) are set out in Table 2.1.

Use	**Source**	**Parking Rate**	**Size/no.**	**Parking Requirement**
Specialised retail	Business Hub Design Guidelines	1 space per 60m^2	8,334 m^2 GFA	139
Tyre service centre	RMS and surveys of similar uses	3 space per 100m^2	400 m^2 GFA	12
Indoor recreation Centre		1 space per 30m^2	1,903m^2 GFA	64
Café		1 space per 25m^2	100m^2 GFA	4
PAD Site -1 (McDonald's)		the greater of 1 space per 2 internal seats or 1 space per 3 internal plus external seats	80 internal seats	40
PAD Site -2			40 internal seats	20
Total				**279**

2.6. Table 2.1 indicates that with PAD Site 2, the Stage 2 development of Lot 1 would require 279 parking spaces. The provision of 340 car parking spaces. As per the approved Stage 2 development 18 motor cycle spaces and 30 bicycle spaces will be provided.

2.7. The drive-through facility provides for at least 8 vehicles, clear of the access driveway and circulation aisles. The provision of queuing for 8 cars in the drive through satisfies the RMS requirement of 8 cars with provision for 4 cars from the order point. Thus queues should not block access to/from the site or queue back into the car park.

Access, Servicing and Internal Layout

2.8. Access to the site is via a new signalised intersection on Rooty Hill Road South at Cable Place. As part of the approved Stage 2 development on Lot 1 a roundabout is

provided at the end of the internal access road. The roundabout has been provided to allow vehicles access between Lots 1 and 2 and allow vehicles that inadvertently turn off Rooty Hill Road to turn around without entering either Lot 1 or Lot 2. Access to Lot 1 is from the southern side of the roundabout.

2.9. Within the car park, spaces will be 2.6 metres wide by 5.4 metres long. The disabled space will be 2.4 metres wide, with a 2.4 metre wide adjacent area for wheelchairs. The two-way circulation aisle will be a minimum of 6.6 metres wide. These dimensions satisfy the requirements of AS 2890.1:2004 and AS 2890.6:2009.

2.10. Drive through lanes will be a minimum of 3 metres wide with 0.3 metres either side where there is structure with a height clearance of 3.6 metres. These dimensions comply with the requirements of AS2890.1-2004 and AS2890.6-2009.

2.11. A loading bay is provided on the western side of the building, adjacent to the drive through order point. Deliveries will be organised to occur outside of busy periods. The loading bay has been sized to provide use by an 8.8 metre medium rigid truck. Ingress and egress will be in forward direction, with a reverse manoeuvre into the loading bay. Truck swept paths are provided in Attachment A. The number of deliveries will be low, at one or two deliveries per week. The proposed service arrangements are appropriate.

Traffic Effects

2.12. As noted in Chapter 1, for the purposes of assessing the traffic effects of PAD Site 2, it has been assessed as a KFC. RMS guidelines suggest that a KFC has a peak hour traffic generation of 100 vehicles per hour (two way) with 50% passing trade. A proportion of traffic generated would already have visited Lot 1. This has been assumed to be some 20% or 20 vehicles per hour (two-way).

2.13. The cumulative traffic effects of development within the Eastern Creek Business Hub (with PAD Site 2) on the following intersections have been undertaken using SIDRA:

- Rooty Hill Road South/Cable Place/Site Access; and
- Internal roundabout connecting Lots 1 and 2.

2.14. SIDRA analyses intersections controlled by traffic signals, roundabouts and signs and provides a number of performance measures. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. Based on average delay per vehicle, SIDRA estimates the following levels of service (LOS):

- For traffic signals, the average delay per vehicle in seconds is calculated as delay/(all vehicles), for roundabouts the average delay per vehicle in seconds is selected for the movement with the highest average delay per vehicle, equivalent to the following LOS:-

0 to 14	=	"A"	Good
15 to 28	=	"B"	Good with minimal delays and spare capacity
29 to 42	=	"C"	Satisfactory with spare capacity
43 to 56	=	"D"	Satisfactory but operating near capacity
57 to 70	=	"E"	At capacity and incidents will cause excessive delays. Roundabouts require other control mode.
>70	=	"F"	Unsatisfactory and requires additional capacity

- For give way and stop signs, the average delay per vehicle in seconds is selected from the movement with the highest average delay per vehicle, equivalent to following LOS:-

0 to 14	=	"A"	Good
15 to 28	=	"B"	Acceptable delays and spare capacity

29 to 42	=	"C"	Satisfactory but accident study required
43 to 56	=	"D"	Near capacity and accident study required
57 to 70	=	"E"	At capacity and requires other control Mode.
>70	=	"F"	Unsatisfactory and requires other control mode

2.15. It should be noted that for roundabouts, give way and stop signs, in some circumstances, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service A, except one which is at level of service E, may not necessarily define the intersection level of service as E if that movement is very small. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue was also involved.

2.16. The SIDRA analysis found that with Stage 1 and 2 traffic plus PAD Site 2:

- the intersection of Cable Place/Rooty Hill Road South/Site Access would operate with average delays per vehicle of 25 seconds per vehicle in the weekday afternoon peak hour. This represents level of service B, an acceptable level of service with spare capacity; and

- the roundabout connecting Lots 1 and 2 would operate with average delays per vehicle of 13 seconds per vehicle in the weekday afternoon peak hour. This represents level of service A/B, a good level of service. Vehicle queues between the roundabout and intersection with Rooty Hill Road would not extend between the intersections (some 100 metres apart) with westbound queues of some 58 metres and eastbound queues some 5 metres

2.17. The SIDRA analysis found that with Stages 1 to 3 traffic plus PAD Site 2:

- the intersection of Cable Place/Rooty Hill Road South/Site Access would operate with average delays per vehicle of 25 seconds per vehicle in the weekday afternoon peak hour. This represents level of service B, an acceptable level of service with spare capacity; and

- the roundabout connecting Lots 1 and 2 would operate with average delays per vehicle of 13 seconds per vehicle in the weekday afternoon peak hour. This represents level of service A/B, a good level of service. Vehicle queues between the roundabout and intersection with Rooty Hill Road would not extend between the intersections (some 100 metres apart) with westbound queues of some 40 metres and eastbound queues some 5 metres

2.18. Thus in summary the SIDRA analysis has found that with traffic from the PAD Site 2, the adjacent road network will perform at acceptable levels of service and can satisfactorily accommodate PAD Site 2 traffic

Summary

2.19. In summary, the main points relating to the traffic aspects of the PAD Site 2 are as follows:

- PAD Site 2 is located on the western Boundary of Lot 1 of the Eastern Creek Business Hub;
- the proposed parking provision is appropriate;
- the proposed access, internal layout and service arrangements are appropriate; and
- the adjacent road network can accommodate PAD Site 2 traffic.

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Location Plan

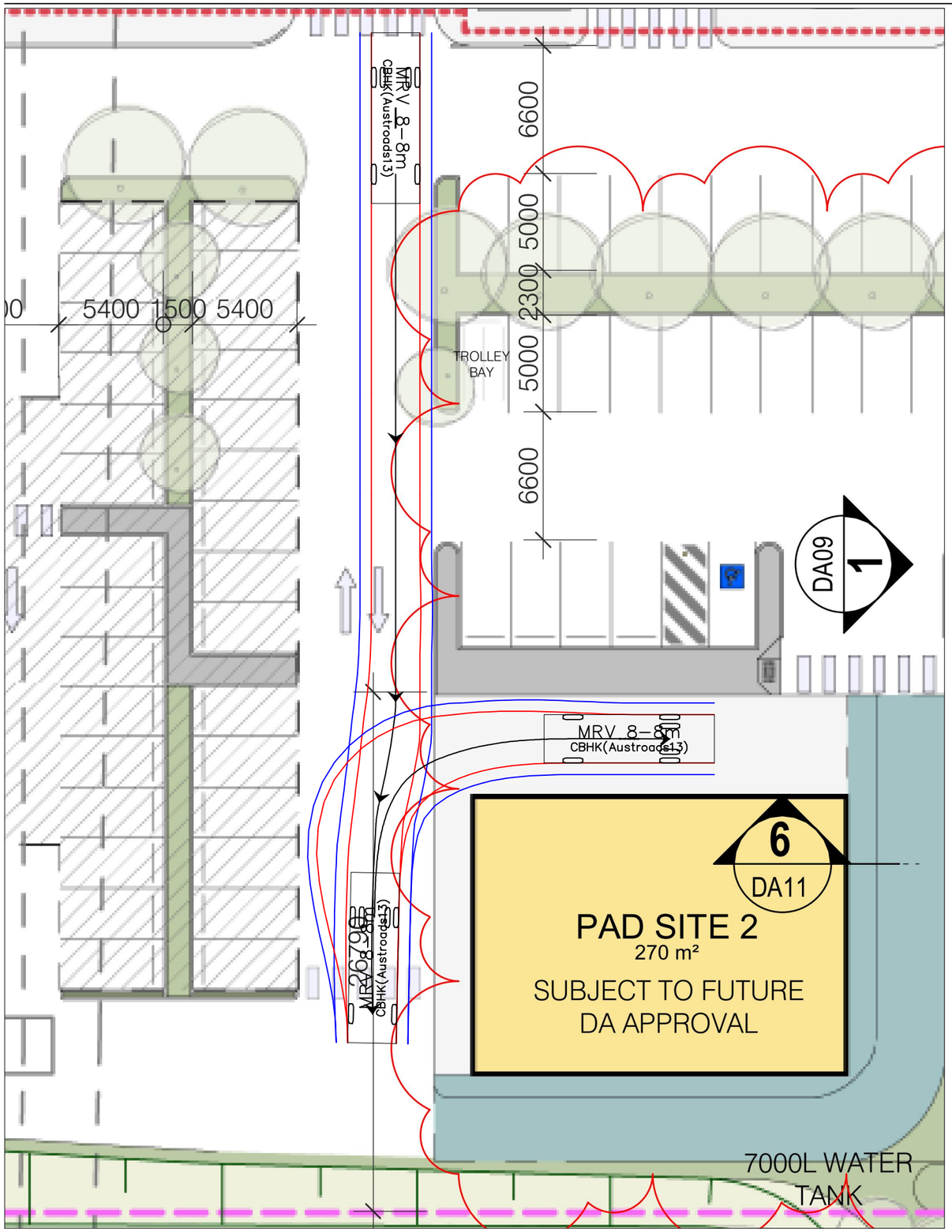
Colston Budd Rogers & Kafes Pty Ltd

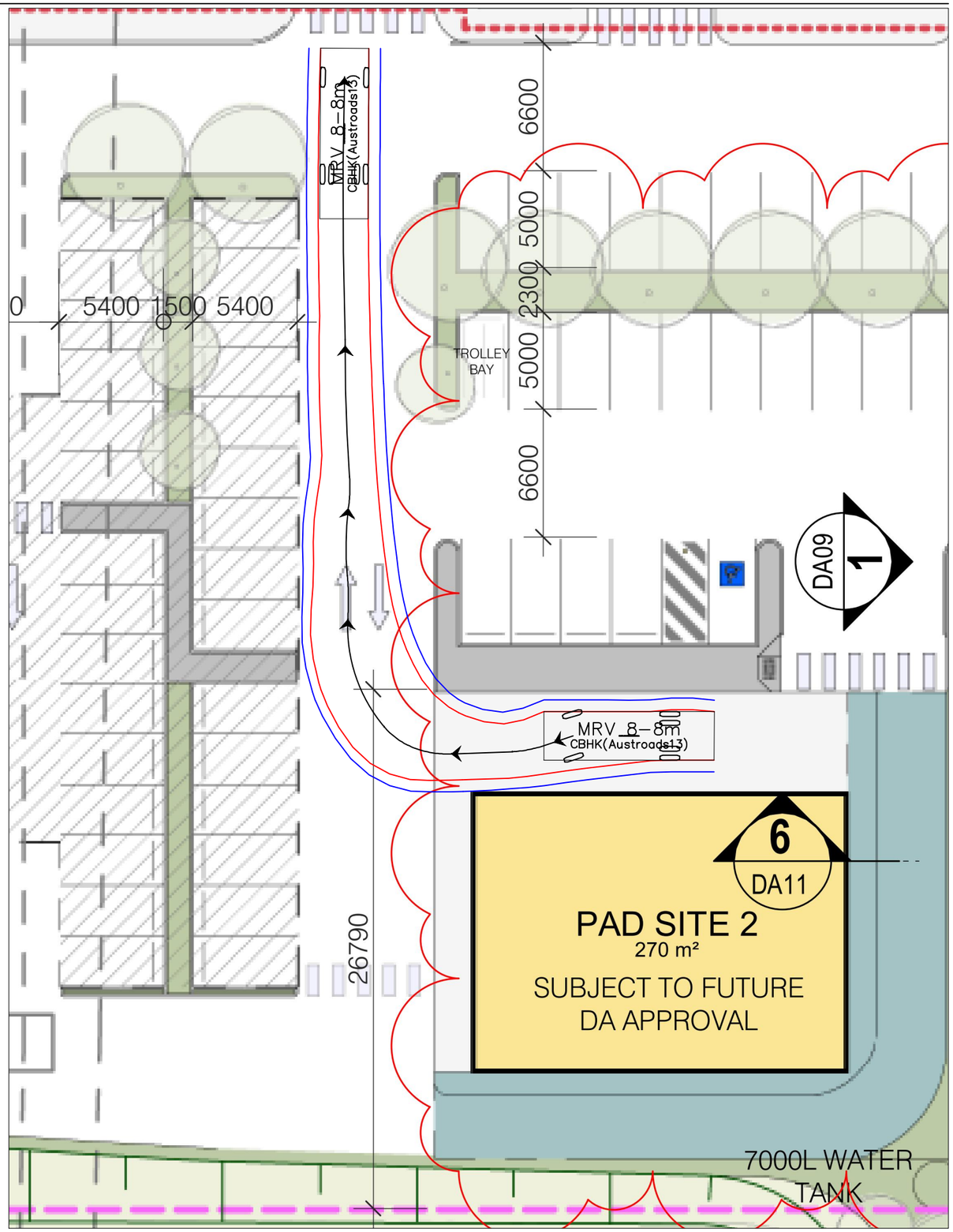
Drawn By: CBRK Pty Ltd_hs Ref: 11552 20.10.2020

Figure 1

ATTACHMENT A

VEHICLE TURN PATHS





NOTE:
SKETCH PLAN ONLY. PROPERTY BOUNDARIES, UTILITIES, KERBLINES & DIMENSIONS ARE SUBJECT TO SURVEY AND FINAL DESIGN. TRAFFIC MEASURES PROPOSED IN THIS PLAN ARE CONCEPT ONLY AND ARE SUBJECT TO FINAL DESIGN BY CIVIL ENGINEERS.

Swept Path of Vehicle Body
Swept Path of Clearance to Vehicle Body

8.8m MEDIUM RIGID VEHICLE SWEPT PATHS

DRAWN BY CBRK Pty Ltd_mc Ref: 11552 21 OCTOBER 2020

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