

Halcrow

Suite 20, 809 Pacific Highway, Chatswood NSW 2067 Australia

Tel +61 2 9410 4100 Fax +61 2 9410 4199

www.halcrow.com/australasia



Colonial First State Property Management
c/- BBC Consulting Planners
Level 2
55 Mountain Street
BROADWAY NSW 2007

30 July 2010

Attention: Mr Bob Chambers

Dear Bob

**Re: The Entertainment Quarter, Moore Park Showgrounds
Concept Plan Application for Proposed Amendments to Approved Master Plan
Response to SRDAC Comments**

In October 2009, the Sydney Regional Development Advisory Committee (SRDAC) considered the concept plan application for the above proposed development.

The Committee's recommendations and the RTA's comments on the application included the following:

2. *There are a number of discrepancies (comments attached) in the SCATES analysis undertaken for the intersections of Anzac Parade / Cleveland Street / Lang Road, Lang Road / Driver Avenue and Lang Road / Errol Flynn Boulevard. The RTA requires the intersections to be remodelled and the results submitted to the RTA prior to the consideration of any future Project Applications.*

The following presents the findings of the supplementary SCATES analysis.

Modifications to SCATES Analysis

The following modifications to the SCATES analysis prepared by Halcrow (formerly Halcrow MWT) as presented in the Concept Plan Traffic Report (March 2009) have been undertaken as per the RTA memo dated October 2009:

- AM and PM peak turn volumes adjusted to replicate RTA SCATS counts; and
- Signal Phasing adjusted.

The AM and PM peak hour flows used in the Halcrow SCATES analysis (March 2009) were based on actual surveyed intersection counts data. These surveyed flows have been compared by the RTA to SCATS counts for the same intersections.

Given the two methods of data collection and the likelihood that they were obtained on separate days, variations in the data would be expected.

However it is noted The RTA memo has only reported intersection approaches where the surveyed intersection counts used in the initial SCATES analysis are lower than the SCATS counts. No details have been provided where the SCATS counts would indicate lower than surveyed traffic flows.

Notwithstanding the above, the SCATES model has been updated and rerun with the RTA adjusted flows.

Modelled Development Scenarios

The same traffic generation scenarios considered in the Concept Application SCATES analysis have been re-analysed with the modified base traffic flow and signal phasing conditions. The scenarios considered were:

- Scenario 1 – Proportional Increase of Existing Uses
 - The additional floor area within the Entertainment Quarter site will be proportional to the existing land uses.
 - The master plan amendment represents a 52% increase in floor area. This scenario has assumed a 52% increase in traffic generation of the site compared with existing conditions.
 - Traffic distribution patterns will be the same as surveyed existing distributions.
- Scenario 2 – Commercial Orientated Development
 - This scenario assumes a greater proportion of additional floor space on the Entertainment Quarter site will be office / commercial uses.
 - This scenario represents a worst case site based traffic generation scenario with regard to impacts on the peak commuter period.
 - The following proportion of floor space uses for the additional Entertainment Quarter site floor space (26,187m²) were assessed as part of the sensitivity test.

▪ Retail / Food & Drink	15%
▪ Commercial / Office	70%
▪ Cinema/Entertainment/Recreational	15%
▪ General uses (Byron Kennedy Hal)	0%

Modified SCATES Analysis Results

Using the modifications requested by the RTA as described above, the SCATES models have been rerun for the existing (base case with no development) and with development traffic scenarios.

The results of the supplementary modelling for the AM and PM peak periods are presented in Table 1 and Table 2 respectively.

As expected the modelled operating conditions at each of the intersections (except Lang Road / Cook Road) indicates an increase in average vehicle delay. This reflects the additional flows on various approaches as per the RTA correspondence.

However the results indicate that with the exception of Anzac Parade / Lang Road / Cleveland Street intersection, modelled intersections will experience only a minor increase in average delay and continue to operate satisfactorily (with and without development).

Anzac Parade / Lang Road / Cleveland Street Intersection

At the Anzac Parade / Lang Road / Cleveland Street intersection the modified SCATES modelling indicates that this intersection experiences a LoS F in the PM peak period for the Existing (No Development) scenario.

The AM peak period was modelled to operate satisfactorily for the base and with development scenarios.

The modelled PM peak period results indicate that capacity constraints and vehicle delays would occur with and without the proposed Entertainment Quarter site. Thus intersection performance (ie. LoS F) is not necessarily the result of additional traffic generated by the Entertainment Quarter development but rather general (existing) traffic flows.

It is noted that the RTA correspondence identified the variations between observed and modelled queue lengths for the right turn movement from Cleveland Street to Anzac Parade.

The revised SCATES model has attempted to replicate observed traffic queues for this approach with the introduction of a signalised pedestrian crossing on Cleveland Street, however, modelled queues are still less than observed.

Notwithstanding the above it is noted that the Entertainment Quarter development would add very little traffic to the right turn movement from Cleveland Street to Anzac Parade and thus the existing queue lengths for this movement would not be adversely affected by the proposed Entertainment Quarter development.

Table 1 - Intersection Operation AM Peak (Previous Analysis Results shown in Brackets ¹)

Intersection	Existing Surveyed 2009		Scenario 1 Proportional		Scenario 2 Commercial	
	Level of Service	Av. Delay (sec/veh)	Level of Service	Av. Delay (sec/veh)	Level of Service	Av. Delay (sec/veh)
Anzac Pde / Lang Rd / Cleveland St	C (C)	32 (29)	C (C)	35 (31)	C (C)	36 (33)
Lang Rd / Driver Ave	A (A)	7 (4)	A (A)	5 (4)	A (A)	5 (4)
Lang Rd / Errol Flynn Bvd	A (A)	9 (2)	A (A)	11 (3)	A (A)	12 (3)
Lang Rd / Cook Rd	A (A)	4 (5)	A (A)	4 (5)	A (A)	4 (5)

Table 2 - Intersection Operation PM Peak (Previous Analysis Results shown in Brackets ¹)

Intersection	Existing Surveyed 2009		Scenario 1 Proportional		Scenario 2 Commercial	
	Level of Service	Av. Delay (sec/veh)	Level of Service	Av. Delay (sec/veh)	Level of Service	Av. Delay (sec/veh)
Anzac Pde / Lang Rd / Cleveland St	F (C/D)	166 (41)	F (D)	192 (44)	F (D)	184 (52)
Lang Rd / Driver Ave	A (A)	11 (8)	B (A)	16 (11)	B (B)	17 (15)
Lang Rd / Errol Flynn Bvd	A (A)	10 (8)	B (A)	20 (9)	B (A)	20 (11)
Lang Rd / Cook Rd	A (A)	3 (4)	A (A)	3 (4)	A (A)	3 (5)

Notes: 1. Previous Analysis shown in brackets from Concept Plan Traffic Report (Halcrow MWT, March 2009)

Summary

As discussed above, the SCATES modelling submitted with the Entertainment Quarter Concept Application has been updated and re-run to reflect the comments of the RTA correspondence.

The results of the modelling are considered to be consistent with the findings of the original SCATES model with regard to the extent of the potential implications that Entertainment Quarter development will have on the local road network.

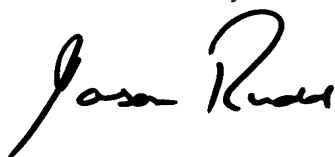
It is noted that the Anzac Parade / Cleveland Street / Lang Road intersection has been modelled to experience a LoS F in the PM Peak period for existing and with development scenarios, indicating that congestion is the result of general traffic and not necessarily the Entertainment Quarter development.

As inferred in the SRDAC correspond, modelling of intersection operation will be considered as part of any future Project Applications. It is considered that this would be the appropriate time to undertake detailed analysis when specifics of proposed land uses etc are known.

Notwithstanding the above, it is considered that the modified SCATES model (as per RTA's comments) indicates that the findings of the Concept Application Transport Report¹ remain valid for consideration of the Concept Plan development proposal of the Entertainment Quarter.

Should you have any queries or require further information, please do not hesitate to contact the undersigned.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Jason Rudd', with a stylized, cursive script.

Jason Rudd
Associate
Transport Planning

¹ Concept Plan Traffic Report (March 2009) prepared by Halcrow MWT