



Ref 10.151

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Urbis
Level 23, Darling Park Tower 2
201 Sussex Street
Sydney NSW 2000

Attention: Ian Cady, Associate Director

Re: MP 10_0113 MOD4 – Car Park Access Capacity

Dear Ian,

It is understood that the Department of Planning has requested further information regarding the basement car park ingress and egress capacity, noting that the Stage 1 MOD 4 application removes the vehicular access to the basement to the south of the Sydney Building which was previously proposed.

The previous (approved) arrangement provided two access driveways to the basement car park with a total of two entry lanes, and two exit lanes.

The arrangement proposed under MOD 4 involves a single access driveway to the basement car park at the north-western corner of the site, which provides two entry lanes, and one exit lane.

That is, the entry capacity to the basement car park is unchanged under MOD 4, however the exit capacity has reduced from two lanes to one lane.

An assessment of the theoretical entry and exit capacity against the predicted generation has been undertaken, based upon the following assumptions:

Capacity

- The assumed lane capacity assuming a card reader arrangement is 400 vehicles/hour/lane, as suggested in Appendix D of AS/NZS 2890.1:2004.

Demand

- Stage 1 will deliver 343 units, and Stage 2 will deliver an additional 297 units, providing a total of 640 units;
- The predicted traffic generation is 0.29vph / unit during the critical peak periods, consistent with the assumptions made in previous traffic analyses;
- The assumed directional split is 80% departures and 20% arrivals in the AM peak, and the reverse in the PM peak, consistent with the assumptions made in previous traffic analyses.



Application of the above assumptions provides the theoretical entry and exit capacities, and the predicted entry and exit demands as outlined in **Table 1** below.

Table 1: Access Capacity (Approved and Proposed) vs Predicted Demand

	CAPACITY				DEMAND	
	Approved		Proposed (MOD 4)		STAGE 1 Peak Direction (vph)	STAGE 1 + STAGE 2 Peak Direction (vph)
	Number of Lanes (Total)	Theoretical Capacity (vph)	Number of Lanes (Total)	Theoretical Capacity (vph)		
Entry	2	800	2	800	80	149
Exit	2	800	1	400	80	149

The table above indicates that the theoretical capacity of both the entry and the exit to the basement car park is substantially greater than the anticipated peak demands, under all scenarios. Accordingly, it is anticipated that the access will operate acceptably without congestion or queuing as a result of capacity issues.

Summary and Conclusions

On the basis of the above, the arrangements to access the basement car park proposed under MOD 4 are considered acceptable from a traffic capacity perspective.

Please contact the undersigned should you have any queries or require and further information or assistance.

Yours faithfully

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Anne Coutts
Senior Engineer