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5 March 2008

Dear Carlos

**Bungarribee Precinct: Response to Doonside Submissions**

A Sydney Regional Development Advisory Committee meeting was held on Wednesday 19 December 2007 by NSW Roads and Traffic Authority (RTA) to discuss the Part 3A application for the Western Sydney Parklands Bungarribee Precinct. The meeting was attended by the Department of Planning, Landcom and Maunsell representatives. This letter addresses the key concerns raised during the meeting.

The following key traffic issues were raised by the RTA:

- Mid block pedestrian crossings will not be approved for construction due to safety concerns.
- Signalisation of the intersection of Doonside Road/ Eastern Road is required to facilitate pedestrian movements to Doonside station.

Maunsell has considered the implications of replacing the mid block pedestrian crossings with alternative access arrangements. Nine scenarios were considered. In all options, a fourth arm is added to the existing signalised access at Doonside Road/ Douglas Road.

**Two Access Point Scenarios (Douglas Road plus one other access)**

- 1) New arm to Doonside Road/ Eastern Road roundabout (2 site accesses)
- 2) New arm to Doonside Road/ Bungarribee Road roundabout (2 site accesses)
- 3) Signalisation and new arm to Doonside Road/ Eastern Road (2 site accesses)
- 4) Signalisation and new arm to Doonside Road/ Bungarribee Road (2 site accesses)

**Three Access Point Scenarios (Douglas Road plus two other accesses)**

- 5) New arm to Doonside Road/ Eastern Road roundabout and new arm to Doonside Road/ Bungarribee Road roundabout (3 site accesses)
- 6) Signalisation and new arm to Doonside Road/ Eastern Road and Doonside Road/ Bungarribee Road (3 site accesses)
- 7) New arm to Doonside Road/ Eastern Road roundabout and signalisation and new arm to Doonside Road/ Bungarribee Road (3 site accesses)
- 8) Signalisation and new arm to Doonside Road/ Eastern Road and new arm to Doonside Road/ Bungarribee Road roundabout (3 site accesses)

Each option was assessed for the fit with pedestrian desire lines and the impact on intersection performance. The operation of signalised intersections during the morning and evening peak was tested using SIDRA Intersection 3.2. **Table 1** summarises the evaluation of the nine scenarios.

**Table 1 Scenario Evaluation Summary**

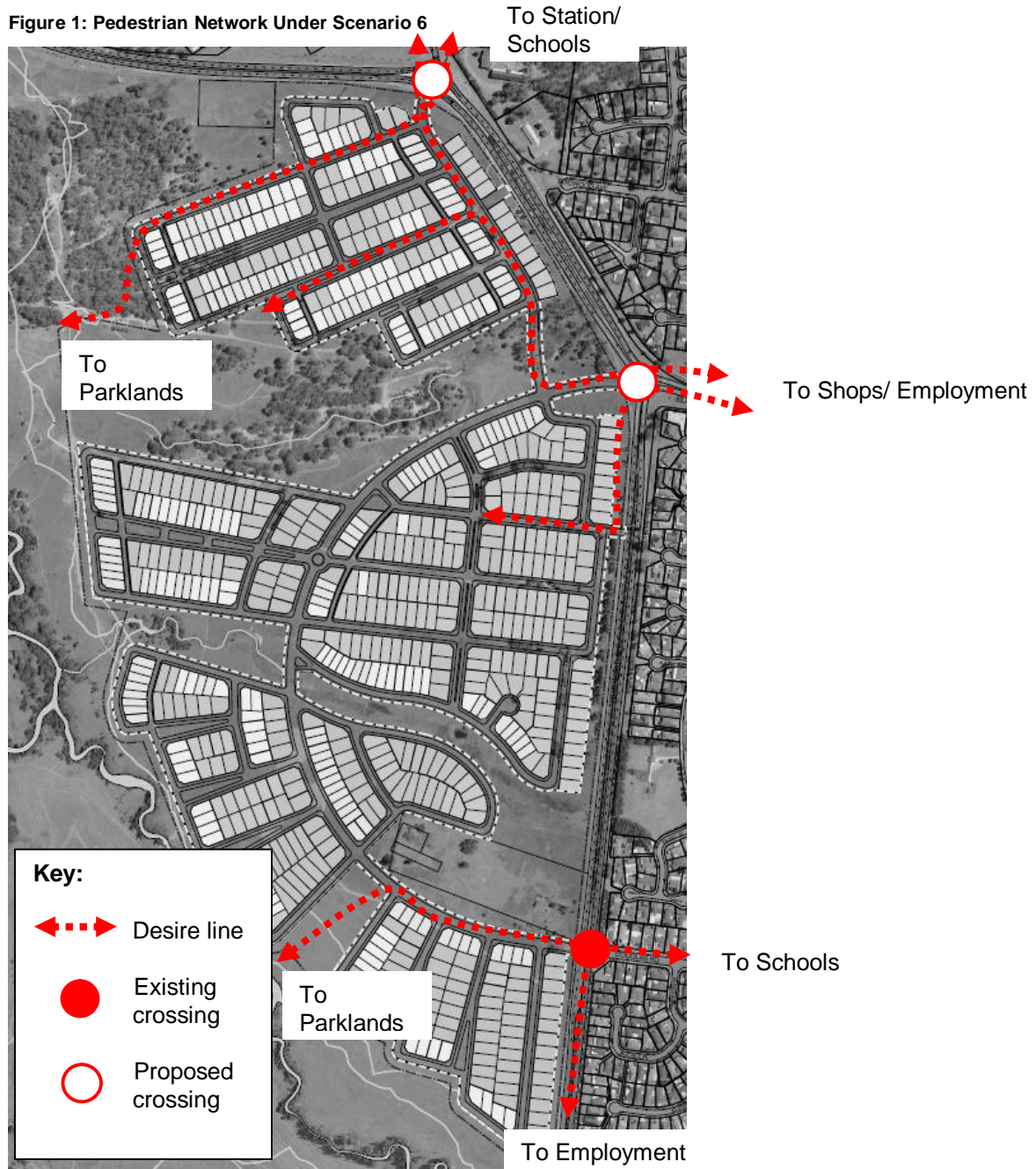
Scenario	Pedestrian Desire Lines	Pedestrian Safety	Vehicle Delay	Cost	Urban Design	Overall Score	Rank
1	Poor	Poor	Good	Good	Average	Average	5
2	Poor	Poor	Poor	Good	Good	Average	8
3	Poor	Average	Good	Average	Average	Average	6
4	Poor	Average	Average	Average	Good	Average	6
5	Good	Poor	Poor	Good	Good	Average	4
6	Good	Good	Good	Poor	Good	Good	1
7	Good	Average	Good	Poor	Good	Average/ Good	3
8	Good	Average	Good	Average	Good	Good	2
9	Good	Poor	Poor	Poor	Poor	Poor	9

A multi criteria evaluation found Scenario 6 to be the preferred of the nine options as it resolves issues of vehicle delay, pedestrian desire lines, safety and the urban design entry statement. The cost of provision of the two signalised intersections is the single negative factor.

A signalised arrangement at both Doonside Road/ Eastern Road and Doonside Road/ Bungaribee Road would provide safe crossing points for all desire lines, as illustrated by **Figure 1**.

Vehicle delay is minimised by consolidating pedestrian crossings and intersections. The results of the intersection performance assessment were satisfactory and are shown in **Table 2**. Signalisation of the Doonside Road/ Bungaribee Road intersection improves operation during the morning peak significantly over a 'without development' scenario.

Figure 1: Pedestrian Network Under Scenario 6



Source: Maunsell 2007, on Architectus 2007 base

Table 2 Intersection Performance at Doonside Road/ Eastern Road and Doonside Road/ Bungaribee (with signals)

	Vehicles (veh / hour)	Degree of Saturation	Average Delay (sec / veh)	Level of Service
<b>Base</b>				
Doonside Road/ Eastern Road AM Peak: Without Development	3,454	0.8	9.6	A
Doonside Road/ Eastern Road PM Peak: Without Development	4,180	0.8	8.6	A
Doonside Road/ Bungaribee Road AM Peak: Without Development	3,420	1.2	65.1	E
Doonside Road/ Bungaribee Road PM Peak: Without Development	3,708	0.8	12.2	A
<b>With Development: Access Scenario 6</b>				
Doonside Road/ Eastern Road AM Peak: With Development	3,525	0.9	28.5	C
Doonside Road/ Eastern Road PM Peak: With Development	4,352	0.9	34.8	C
Doonside Road/ Bungaribee Road AM Peak: With Development	3,598	0.9	46.6	D
Doonside Road/ Bungaribee Road PM Peak: With Development	3,863	0.9	43.3	D

Source: Maunsell 2007

Figures 2 and 3 illustrate the signalised layout at Doonside Road/ Eastern Road and Doonside Road/ Bungaribee Road.

Figure 2: Doonside Road/ Eastern Road: Signalised arrangement

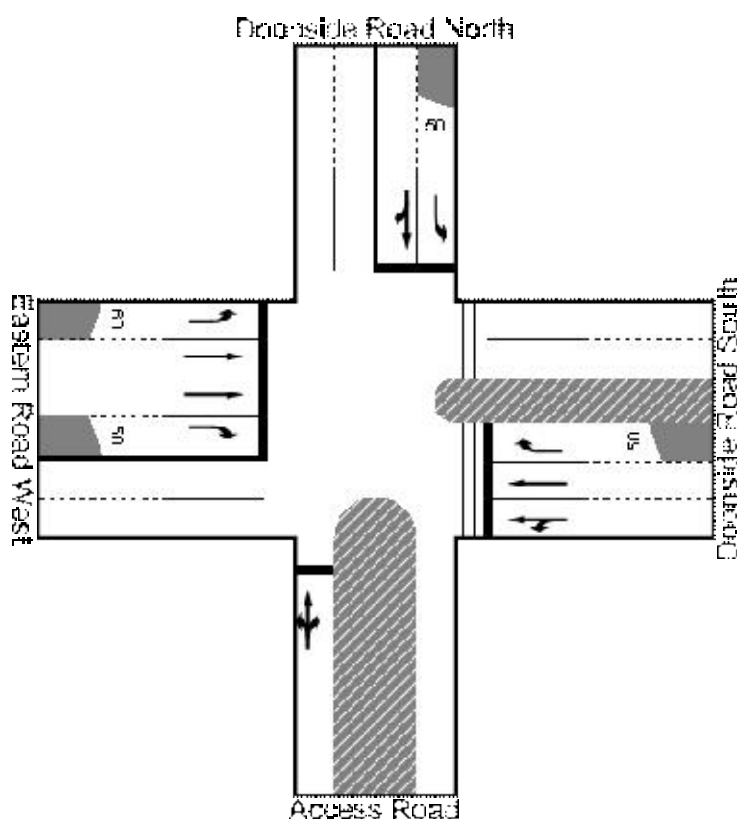
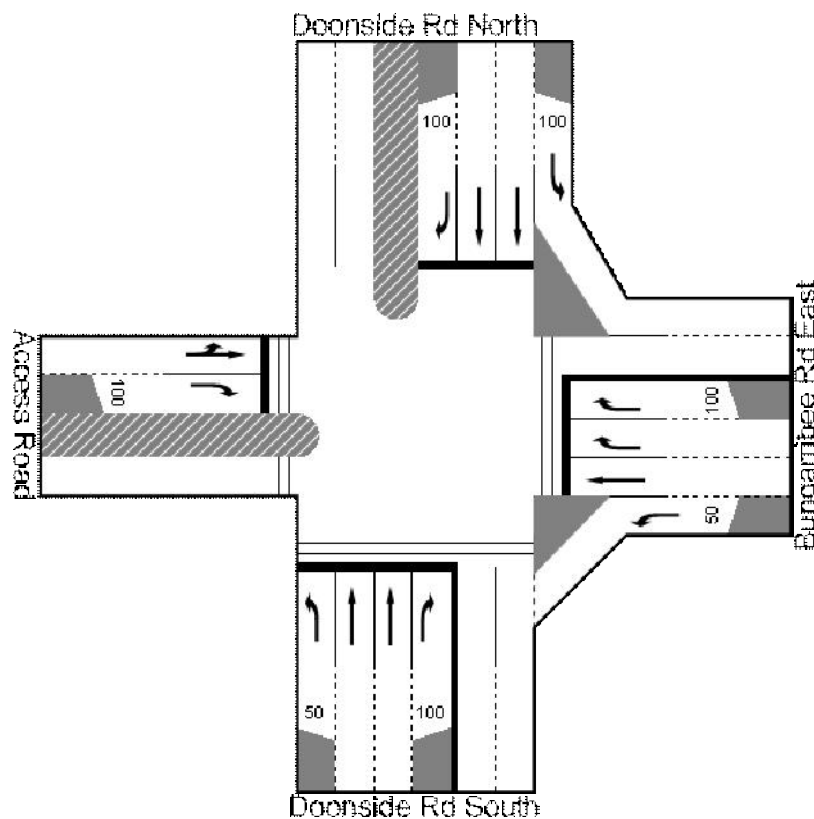


Figure 3: Doonside Road/ Bunagribbee Road: Signalised arrangement



If you require any further information in response to the stakeholder submissions, please do not hesitate to contact me.

Yours sincerely

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