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*Response to Action Items from RMS Meeting
14th of March 2013*

Royal Randwick Hotel Proposal

April 2013

Agenda

- Swept Path Analysis – Alison Road Intersection (Minute 1.1)
- Alison Road Alignment (Minute 1.5)
- Intersection Impact Analysis – SCATS vs Manual (Minute 1.7 + 1.8)
- RHT Benefits – Darley Road Round-a-bout (Minute 1.9)
- Proximity of Porte Cochere to Alison Road (Minute 1.12)
- Intersection Geometric Design (Minute 1.14)



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1.1 – Swept Path Analysis

Minute:

James Hall requested swept path analysis for the diamond RHT sequence along Alison Road.

Response:

Regulatory Requirement

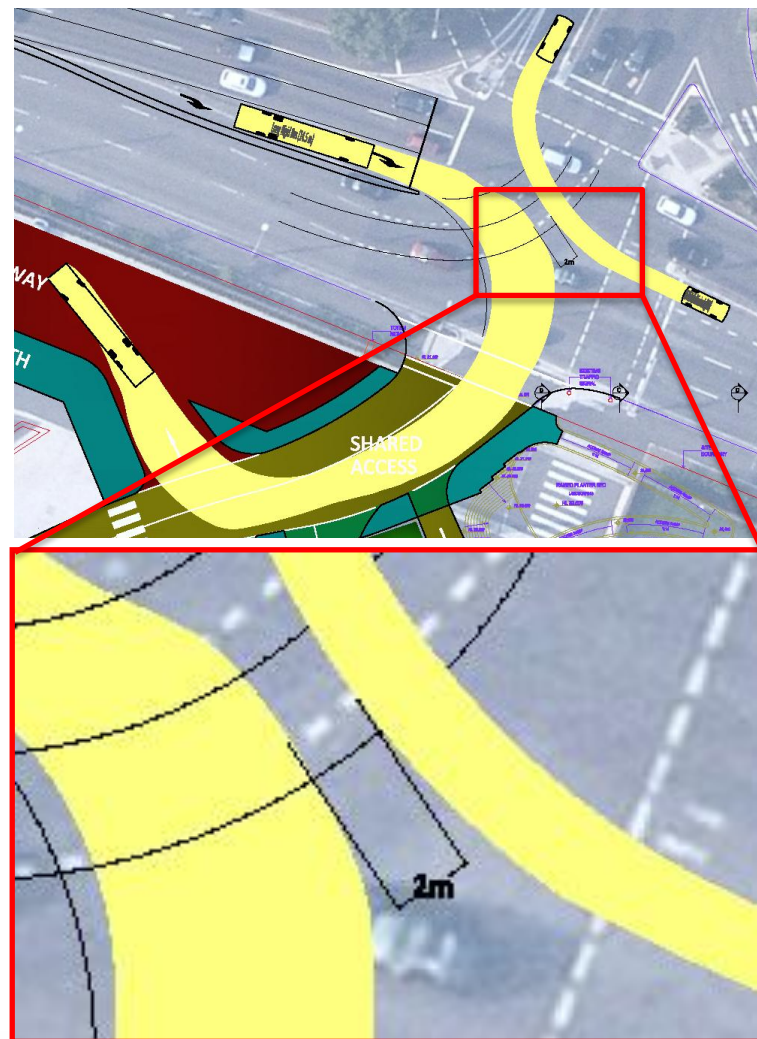
The required clearance as per Figure 7.1 of Part 4 of the Austroads Guide to Road Design is **1 metre**.

Proposed Concept Design

The intersection design provides **2 metres** clearance between a bus making the right turn into the busway and an 85th percentile car making the right turn into Darley Road.

Response

The Proposed Concept Design complies with the Regulatory Requirements with regards to swept paths for the diamond RHT sequence along Alison Road.



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1.5 – Plan/Section of Proposed Concept Design

Minute:

It was noted by RMS that the roadway narrowed on the southern side of Alison Road west of the Darley Road intersection. **Andrew Morse to review design and section of roadway.**

Response:

Regulatory Requirement

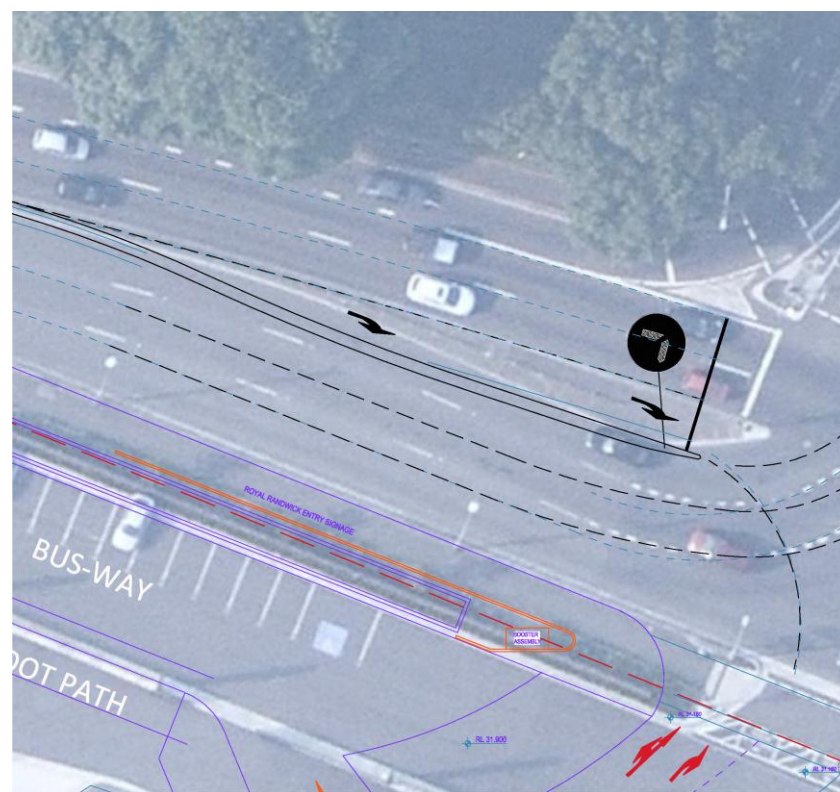
All lane widths are to comply with Section 4.2.5 of the Austroads Guide to Road Design.

Proposed Concept Design

The proposed arrangement to include a right turn lane is based on realigning the median island over a wide part of the westbound lane of Alison Road. In this regard the narrowing of this lane results in a 3.1 metre lane width, which is more than compliant with the Austroads Guide to Road Design.

Response

The Proposed Concept Design complies with the Regulatory Requirements and provides a beneficial solution both to RMS and the ATC.



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1.7-1.8 – Modelling Comparison – SCATS vs ATC

Minute:

Modelling of SCATS versus ATC (Manual) data including the proposed hotel movements to be provided.

Response:

Weekday Morning Peak Results

	Existing		Proposed	
	Manual	SCATS	Manual	SCATS
Alison Road / Darley Road	Weekday AM	Weekday AM	Weekday AM	Weekday AM
Level of Service	B	B	B	B
Average Delay	22.27	20.94	26.91	25.89
Darley Road Approach				
Level of Service	B	B	C	C
Average Delay	26.97	24.93	40.61	34.33

Results

The proposed amendments provide a **level of service of C** (versus B under existing) using both the SCATS and Manual survey data. Both models indicate an **acceptable level of service is considered**.

Special Event Peak Results

	Existing Arrangement	Proposed Arrangement	Comparison
	Special Event	Special Event	
Alison Road / Darley Road			
Level of Service	C	C	
Average Delay	32.23	29.82	-2.41
Darley Road Approach			
Level of Service	F	D	
Average Delay	84.02	50.44	-33.58

Results

The proposed amendments provide a **level of service of C** for the Alison/Darley intersection, with a 7.5% reduction in the average delay. Level of Service on the Darley Road approach is **improved** compared to the existing level of service of F. Average delay on this approach is reduced by 40%.



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1.9 – Modelling Comparison – Darley Road Round-a-Bout

Minute:

RMS saw no issue with current bus arrangements. JO noted that it was not buses but other road users who were frustrated by the buses using the Darley Road Roundabout.

Response:

Under current event day controls, the eastern southbound lane of Darley Road is closed for the exclusive use of buses. This loss of a lane causes extended queuing along Darley Road and results in fewer traffic movements through the intersection during the Darley Road green phases. The queue frequently extends back to and beyond the roundabout, which then causes the roundabout to cease to operate.

Modelling of Darley Road with and without the lane closure have been completed and results are as follows:

	Existing Arrangement	Proposed Arrangement	Comparison
Darley Road Roundabout	Special Event	Special Event	
South Approach			
Level of Service	B	B	
Average Delay	18.76	18.01	-0.75
North-east Approach			
Level of Service	F	B	
Average Delay	208.46	23.99	-184.47

Results

The proposed amendments provide an **improvement** in the **level of service B** (versus F under existing) for the North East Approach, **reducing the waiting time from 208 seconds to 24 seconds.**

This represents a significant improvement to non-bus road users.



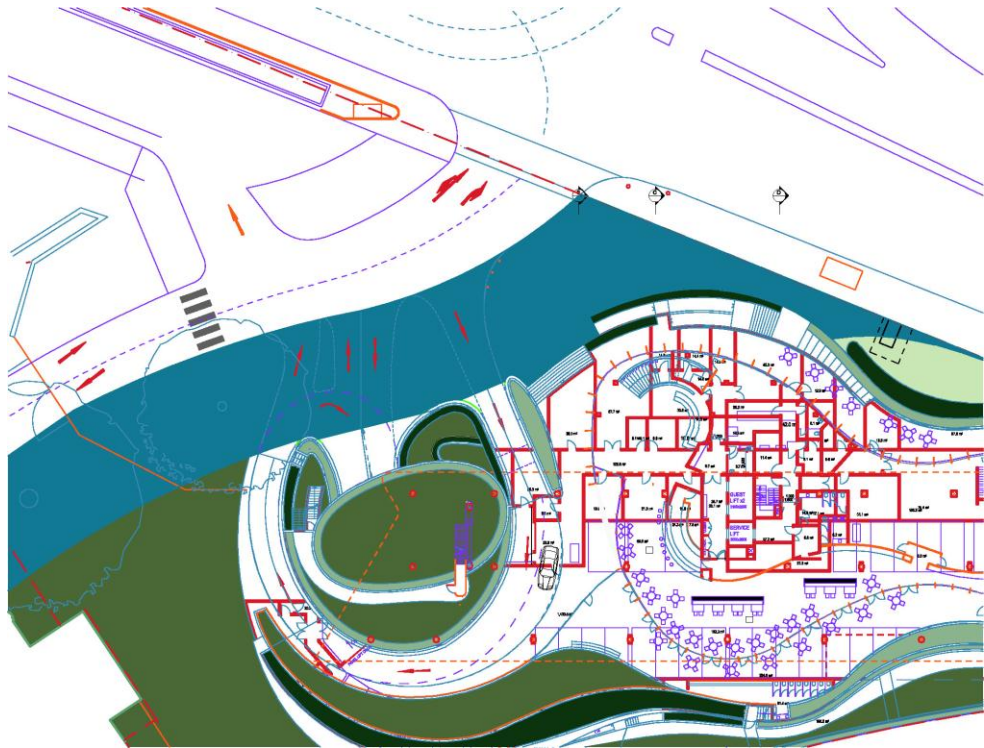
1.12 – Proximity of Porte Cochere to Alison Road

Minute:

The proximity of the Porte Cochere to Alison Road was raised by Chris Smith. JO advised that the building was being moved 2-3 metres to the south-west and revised plans would be provided.

Response:

The hotel scheme has been revised including the slight relocation of the building footprint to the south-west. This has also required an associated relocation of the basement car park ramp and the porte cochere access point, while the footway along the southern edge of the access road has been increase from 4 metres wide to over 11 metres.



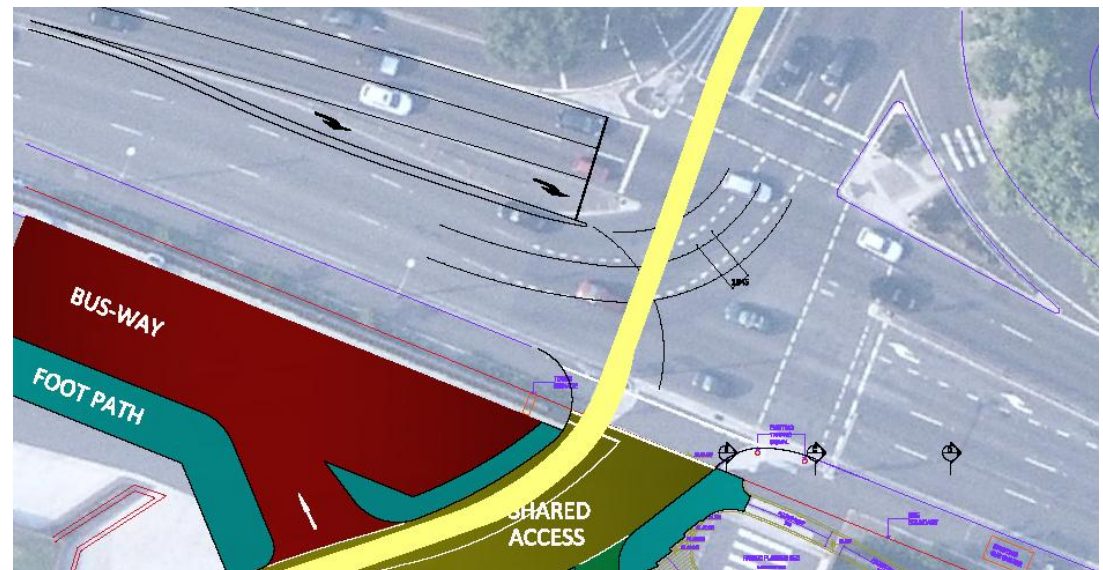
1.14 – Intersection Geometric Design

Minute:

RMS requested that the geometric design of the intersection be reviewed particularly the egress geometry from the hotel into Darley road.

Response:

The intersection has been designed so that alignments line up through the intersection, including the diamond arrangement. All alignments and dimensions comply with the relevant guidelines and will be subject to detailed Traffic Signal design and approval.



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