



Australian Government
National Capital Authority

Mr. Waite

31/07/08

PUBLIC WORKS COMMITTEE
31 JUL 2008
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Mr James Catchpole - Committee Secretary
Joint Standing Committee on Public Works
Department of the House of Representatives
PO Box 6021
CANBERRA ACT 2600

Dear Mr Catchpole,

**Bridging of Kings Avenue Over Parkes Way, Russell, ACT -
Supplementary Evidence**

I request that the Committee accept the following advice regarding traffic and business case performance data and an amended Confidential Cost Estimate break-up, as supplementary to the National Capital Authority's (NCA) submission on the Kings Avenue - Parkes Way intersection. I trust that this documentation will provide key background information and assist the Committee's consideration of the project.

The attachments setting out this advice are as follows

- Site Plan (*colour drawing*)
- Location of Future Development Sites (*colour precinct drawing*)
- Traffic and Business Case key performance indicators, and Existing Russell Roundabout key statistics.
- Confidential Cost Estimated - Updated at 28 July 2008
- ASIO letter to Public Works Committee of 28 July 2008

Should you require further information please contact Phil Waite - Director, Construction & Procurement (ph. 6271 2809, mb. 0419 699 419, email phil.waite@natcap.gov.au)

Yours sincerely,

Andrew Smith
A/g Managing Director - Projects

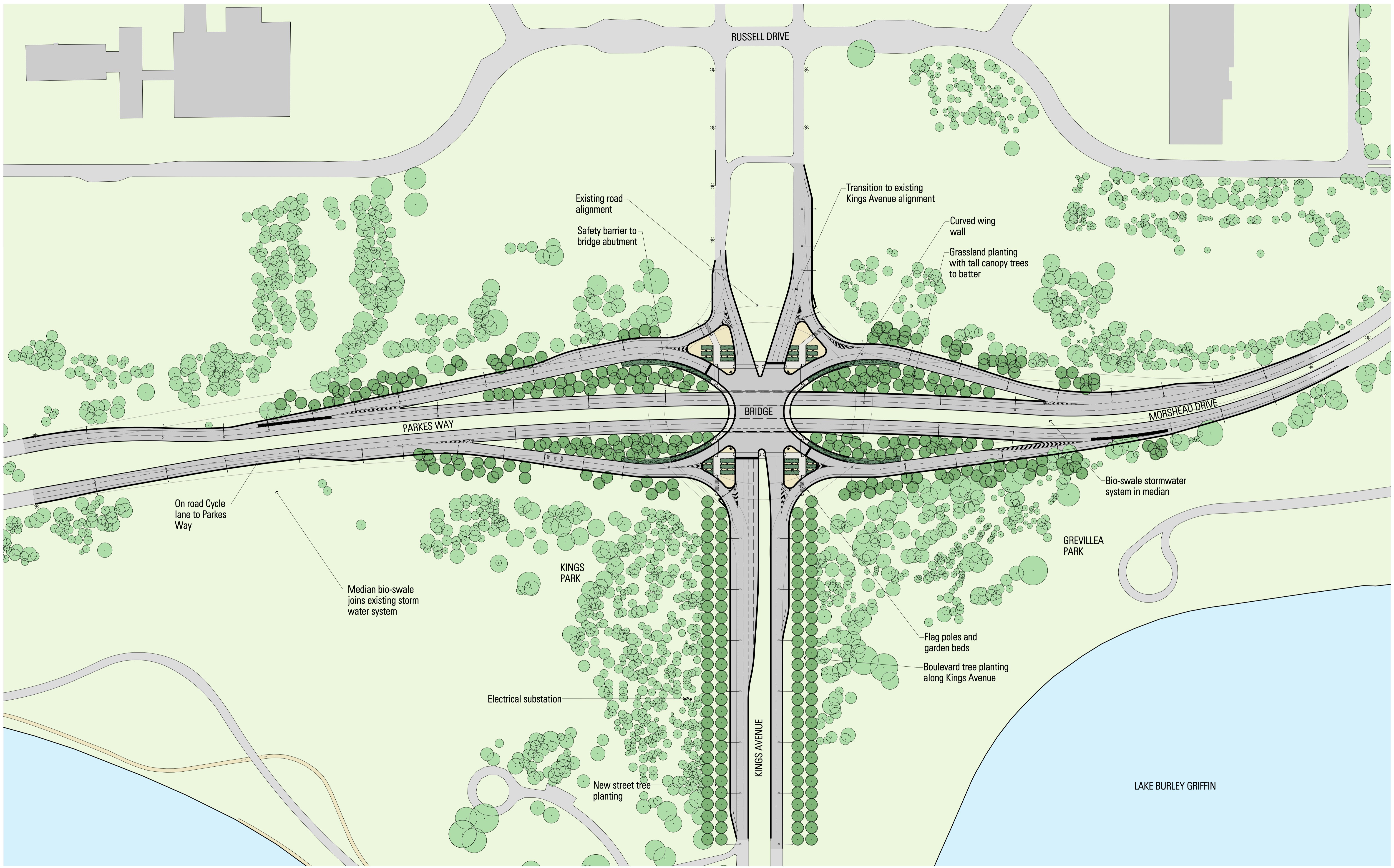
30 July 2008

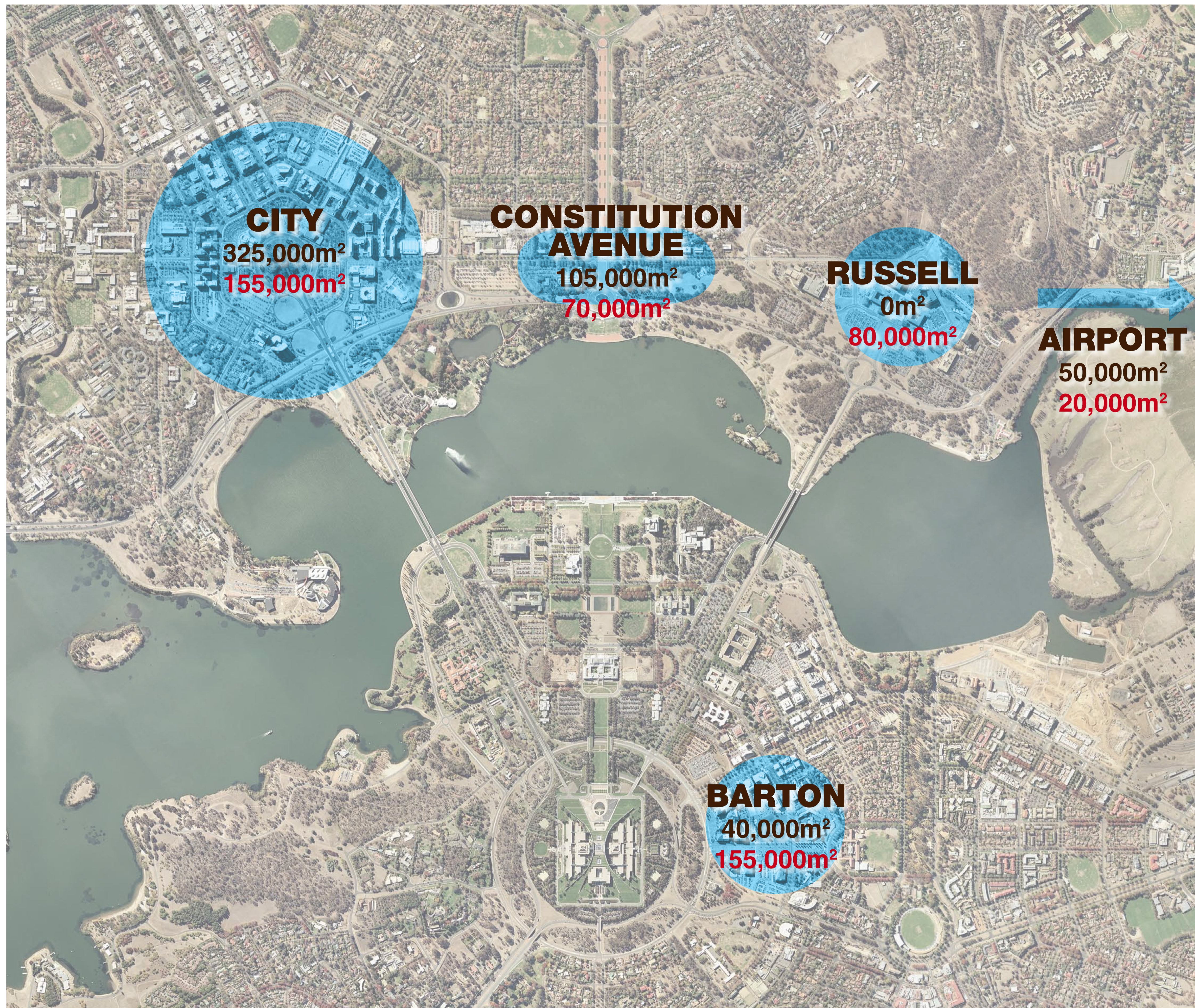
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Bridging of Kings Avenue over Parkes Way Location of Future Development Sites

■ phase 1: 520,000m² Gross Floor Area
■ phase 2: 480,000m² Gross Floor Area



Bridging of Kings Avenue over Parkes Way, ACT

28.7.08

SIDRA (*Signalised and Un-Signalised Intersection Design & Research Aid*)
Traffic & Business Case Analysis

The following SIDRA Traffic and Business Case key performance indicator analysis tests and compares traffic intersection design options. The intersection options have been tested on the basis of anticipated future building development increases of 520,000m² and 1,000,000m² gross floor area in the City, Russell, Constitution Avenue, Russell, Barton and Airport precincts. The “single point urban interchange” (SPUI) intersection design provides the best performance.

520,000m² Future Building Development

Key Performance Indicators	Existing Roundabout (“Do Nothing”)	4-Way At Grade (4 Phase)	Twin Bridge (4 Phase)	Single Point Bridge (SPUI) (3 Phase)
TRAFFIC PERFORMANCE (AM Peak Hour)				
Average Delay				
• Seconds	190	270	141	48
• % Improvement	0 %	- 42 %	26 %	75 %
• Magnitude of Improvement	0	-1.4 times	1.3 times	4.0 times
Queue Length metres	2,000	1,820	1,160	570
Average Speed km/hr	12	8	14	30
BUSINESS CASE (Annual Reductions & Savings)				
CO₂ Emissions				
• Reduction (<i>kilograms</i>)	0	- 445,000	295,000	705,000
• Cost Savings (<i>\$ million</i>)	\$0	- \$0.009 m	\$0.006 m	\$0.014 m
Safety				
• Reduction (<i>Number of accidents</i>)	0	58	73	73
• Reduction (%)	0%	51%	65%	65%
• Cost Savings (<i>\$ million</i>)	\$0	\$0.52 m	\$0.70 m	\$0.70 m
Travel Time				
• Reduction (<i>Vehicle-hours</i>)		- 110,000	30,000	130,000
• Cost Savings (<i>\$ million</i>)	\$0	-\$2.00 m	\$0.49 m	\$2.30 m
Operating Costs (<i>incl. Fuel Consumption</i>)				
• Cost Savings (<i>\$ million</i>)	\$0	- \$3.30 m	\$0.98 m	\$3.95
Total Cost Savings (<i>\$ million</i>)		- \$4.79 m	\$2.18 m	\$6.96 m



1,000,000m² Future Building Development

Key Performance Indicators	Existing Roundabout (“Do Nothing”)	4-Way At Grade (4 Phase)	Twin Bridge (4 Phase)	Single Point Bridge (SPUI) (3 Phase)
TRAFFIC PERFORMANCE (AM Peak Hour)				
Average Delay				
• Seconds	290	398	204	125
• % Improvement	0 %	- 37 %	30 %	57 %
• Magnitude of Improvement	0	-1.4 times	1.4 times	2.3 times
Queue Length metres	2,280	2,410	1,470	1,120
Average Speed km/hr	8	6	10	15
BUSINESS CASE (Annual Reductions & Savings)				
CO₂ Emissions				
• Reduction (kilograms)	0	- 485,000	725,000	1,065,000
• Cost Savings (\$ million)	\$0	-\$0.010 m	\$0.015 m	\$0.021 m
Safety				
• Reduction (Number of accidents)	0	66	84	84
• Reduction (%)	0%	51%	65%	65%
• Cost Savings (\$ million)	\$0	\$0.60 m	\$0.80 m	\$0.80 m
Travel Time				
• Reduction (Vehicle-hours)		- 130,000	120,000	210,000
• Cost Savings (\$ million)	\$0	-\$2.36 m	\$2.05 m	\$3.74 m
Operating Costs (incl. Fuel Consumption)				
• Cost Savings (\$ million)	\$0	-\$3.68 m	\$3.80 m	\$6.53
Total Cost Savings (\$ million)	\$0	-\$5.45 m	\$6.67 m	\$11.09 m

Note: Costs are at 2007 prices

Existing Russell Roundabout - Key Statistics

Accidents

- 475 accidents in the 5 year period January 2001 to December 2005
- Russell Roundabout has the highest number of accidents for an intersection in the ACT

Traffic Volume

- Over 70,000 traffic movements in 24 hour week day period
- 6,700 traffic movements at the 8.00-9.00am week day peak period