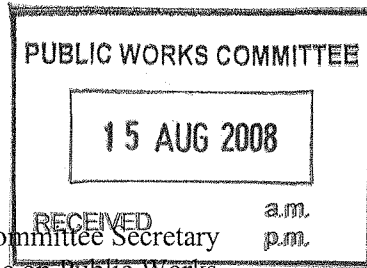




**Australian Government**  
**National Capital Authority**

Submission No. 1.7  
(Bridging of Kings Ave)

*md* 15/08/08



File No: 08/312  
Ref No: 39350

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 – PWC Committee Public Hearing of 6 August 2008**

The NCA welcomes the opportunity to provide Supplementary Evidence to the Joint Standing Committee on Public Works.

This Supplementary Evidence is intended to address

- Questions on notice.
- Key proposal issues and other view points raised at the PWC Hearing. These responses focus is on the intersection proposal and more directly connected issues, in preference to broader Canberra planning matters.

A number of specific issues have been addressed in Ms Annabelle Pegrum's concluding comments at the Hearing. Many of the wider National Capital planning issues have otherwise been considered via Amendments 59, 60 & 61 to the National Capital Plan.

The Supplementary Evidence supports the need and benefits of the proposed intersection works. In particular, this evidence confirms that

- Current and future traffic and transport needs warrant intersection improvement.
- Community and consequent cost benefits accrue.
- Appropriate analysis has been applied to developing the proposal.
- The scale and configuration of the new intersection is consistent with other grade separated traffic movements in Central Canberra.

The NCA has prepared this Supplementary Evidence to assist the Committee in its assessment of the proposal. Further clarification or background NCA reports can be provided as may be required by the Committee.

*Building the National Capital in the hearts of all Australians*

T 02 6271 2888 | F 02 6273 4427 | [www.nationalcapital.gov.au](http://www.nationalcapital.gov.au) | email [natcap@natcap.gov.au](mailto:natcap@natcap.gov.au)

Couriers & deliveries: Treasury Building, King Edward Terrace, Parkes ACT 2600 | Mailing: GPO Box 373 Canberra ACT 2601

ABN 75 149 374 427

## QUESTIONS ON NOTICE

**1** *“Will (there) be a sufficiently low level of speed limits imposed (compared to a freeway) ... for cars to be operating in a calm manner in between sets of road lights?” (From east to west on the Parkes Way underpass)*

*Proof Committee Hansard, page PW 23 – Acting Chair*

A “freeway” is characterised by having

- Operating speeds of 100-110km/hr,
- Extended sections (ie. multiple kilometres) of uninterrupted roadway,
- Increased road widths,
- Larger clear zones free of obstructions from the road edges, and
- Rural standards of lighting.

Parkes Way is an urban road and not a “freeway”. It is signposted for speeds of 80km/hr between Edinburgh Avenue (Civic West) and Kings Avenue. The Parkes Way underpass will operate at 80km/hr. Urban lighting standards are also applicable.

As part of the new intersection works it is proposed to reduce the Kings Avenue speed leading to and from Parkes Way from 80km/hr to be 60km/hr.

The overall length of Parkes Way does not, at this point in time, operate with traffic lights. Traffic lights do operate on the Edinburgh Avenue bridge overpass and will similarly operate on the proposed Kings Avenue bridge. Along the east-west route existing roundabouts operate at Coranderrk Street, ANZAC Parade and Morshead-Russell Drives.

Accordingly, traffic movement will operate in a measured manner to and from the proposed intersection.

Outside the central Canberra area, a sign posted speed of 90km/hr operates on Parkes Way from Edinburgh Avenue (Civic West) west around Black Mountain to the Glenlock Interchange.

**2** *“Will the scope of the proposed bridge “... not be intruding on that landscape (at the existing roundabout) to a sufficient degree?”*

*Proof Committee Hansard, page PW 23 – Acting Chair*

In relation to the size of the proposed intersection

- The new intersection and Kings Avenue bridge fit inside the inner edge of the existing Russell Roundabout.
- Overlay drawings show that the new on and off ramps closely follow and are largely built on top of the existing Parkes Way approach roads to the existing roundabout. While the new configuration narrows and widens at points compared to the existing roads, the net land usages effectively cancel one another out.
- At the western side of Kings Avenue, approaching the new intersection, a new 200m long left hand turn lane is added to the existing width of Kings Avenue.

Overall, there is minimal net encroachment of the roadwork design into the existing perimeter landscape. Kings Avenue generally remains at its current level. Parkes Way will continue under the Kings Ave crossing, so that the overall intersection is set into the topography and landscape.

Construction will require removal of immediately adjacent landscape, but this will be replanted on completion. There will be no net loss of trees. The trees that will be removed have been surveyed. No remnant species have been identified and none of the planted trees have been rated as being exceptional examples. Many trees to be removed are poorly developed, drought affected and have limited future life.

3 **“... we need to query with the NCA”. (“... the NCA proposes to fill the north shore of West Basin ...”)**

*Proof Committee Hansard, page PW 23 – Acting Chair*

The NCA does not intend to fill the north shore of West Basin with any fill that would be excavated from the proposed project. As stated by Mr Tony Gill (Director – Roads ACT) at the Public Hearing “The territory is negotiating with the National Capital Authority and the Department of Defence about a suitable site in Majura where we could make use of that material ...”. (*Proof Committee Hansard, page PW12*). This was also confirmed by Ms Annabelle Pegrum (Chief Executive – NCA) at the Public Hearing (*Proof Committee Hansard, page PW26*)

**KEY PROPOSAL ISSUES**

1 **Comparative Traffic/Transport Performance of Intersection Options**

Paramics and SIDRA traffic modelling demonstrate that

- the existing Russell Roundabout is at performance capacity,
- upgrade of the Russell Roundabout is required, and
- other traffic network performance shortfalls in the precinct exist or are emerging.

Based on 520,000m<sup>2</sup> GFA of future building development, SIDRA traffic analysis demonstrates that the “Average Delay” time performance for the

- existing traffic network will be at peak hour ‘gridlock’,
- proposed new Single Bridge intersection is 4.0 times better than the existing roundabout,
- Twin Bridge is a reduced to a 1.3 times improvement, and the
- 4-Way On-Grade Signalised Intersection actually performs 1.4 times worse than the existing roundabout.

Consequently, the Single Bridge intersection option has been selected given, comparatively

- the Single Bridge’s traffic performance is 3 times better than a Twin Bridge option, and
- the 4-Way On-Grade Signalised Intersection’s traffic performance would be substantially worse than the existing roundabout.

2 **Business Case, Community and Environmental Benefits**

The existing Russell Roundabout has the highest number of accidents of any intersection in the ACT (475 accidents in the period 1.1.02-31.12.05, *reference ACT Govt. Black Spot statistics*).

From construction completion community benefits and operating cost savings accrue; including marked reductions in CO<sub>2</sub> emissions, accidents and travel times.

Compared to the existing roundabout, reductions for the three (3) alternative intersection types are as summarized as follows

	<b>4-Way At Grade</b> % Reduction pa	<b>Twin Bridge</b> % Reduction pa	<b>Single Bridge</b> % Reduction pa
<b>520,000m<sup>2</sup> Building Development</b>			
CO2 Emissions	+25	-17	-40
Number of Accidents	-51	-65	-65
Travel Time	+52	-13	-60
Operating Costs	+46	-14	-55
<b>1,000,000m<sup>2</sup> Building Development</b>			
CO2 Emissions	+18	-26	-39
Number of Accidents	-51	-65	-65
Travel Time	+33	-28	-52
Operating Costs	+28	-29	-50

*Legend:*

- + means an increase in emissions, travel time and operating costs
- - means a reduction in emissions, accidents, travel time and operating costs

For the Twin Bridge option the outcomes for CO<sub>2</sub> emissions and travel time reductions are substantially less than the proposed Single Bridge option. The improvement in traffic accident reduction is similar to the Single Bridge.

Construction of a 4 Way At-Grade Signalised Intersection would increase CO<sub>2</sub> emissions and travel times when compared to the existing roundabout. Traffic accidents reduce compared to the existing roundabout, but reductions are less when compared to the Single and Twin Bridge options.

### **3 *Parkes Way - Underpass / Grade Separation***

The Griffin Society expressed the view, at various points, at the Public Hearing that an underpass solution was not appropriate.

Underpass / grade separation traffic movement at this intersection is consistent with Lord Holford's design intent.

Grade separated traffic management is an existing and frequently adopted approach in achieving efficient traffic movement in Central Canberra.

Thirteen (13) such traffic underpasses exist, as follows (*refer attached aerial photograph*)

Parkes Way already has existing underpass / grade separation at

- Commonwealth Avenue,
- Edinburgh Avenue, and
- Liversidge Street – Lennox Crossing.

The proposed Parkes Way underpass at Kings Avenue is not inconsistent with these existing Parkes Way traffic movement strategies.

In addition; underpass / grade separation exists elsewhere in the National Triangle and the Parliament House precinct, including at

- Kings Avenue – Bowen Drive underpass
- Kings Avenue – Capital Circle underpass
- Commonwealth Avenue – State Circle underpass
- Commonwealth Avenue – Flynn Drive underpass
- Commonwealth Avenue – Barrine Drive (minor) underpass
- Commonwealth Avenue – London Circuit underpass
- Federation Mall (Land Axis) – State Circle underpass
- Federation Mall (Land Axis) – Capital Circle underpass
- Melbourne Avenue – Capital Circle underpass
- Adelaide Avenue – State Circle underpass

### **4 *Single Point Urban Interchange Configuration and Appearance***

The importance of the location of the new intersection has been the subject of very careful consideration.

The design of the intersection has been the outcome of striking a balance between the issues of urban design, heritage and practical metropolitan traffic and transport management. The design

- is set into a landscape setting,
- strengthens the Kings Avenue vista,
- enhances the eastern side of the National Triangle,
- will provide a uniform Kings Avenue gradient to the Defence precinct,
- is consistent with existing Kings Avenue levels, and
- achieves a balance of compactness with longer term performance and flexibility in transport outcomes.

In assessing the configuration and design of the proposed intersection the following is noted

- The new intersection will be surrounded by and set into an extensively treed and landscaped environment. This includes
  - all perimeter sides of Parkes Way,
  - embankments on Parkes Way approaching the Kings Avenue bridge, and
  - formal tree plantings along Kings Avenue.
- The ACT Government has supported the design approach as a necessary incremental improvement within Canberra's traffic network.

## **5 *Size of the Single Point Urban Interchange***

The Griffin Society's written evidence (*Paragraph 2.12*) states a bridge span of 70m. The actual clear span of the bridge is 29m.

Direct comparison of the proposed intersection can be made with the companion traffic arrangement at the Commonwealth Avenue twin bridge crossing of Parkes Way. Comparable dimensions are as follows

- Bridge Spans – Kings Avenue 29m and Commonwealth Avenue 52m
- Overall Bridge Widths – Kings Avenue 42-54m (48m average to curved plan form) and Commonwealth Avenue 39m

The area coverage of the proposed Kings Avenue bridge is comparable with the Commonwealth Avenue bridge configuration.

## **6 *Traffic Counts***

The Griffin Society's Public Hearing evidence (*Proof Committee Hansard, page PW 16*) assumes "25,000 to 30,000 car movements a day".

Recent traffic counts of June 2008 confirmed the scale of previous surveys. There are over 70,000 traffic movements at the Russell Roundabout during a 24hr week day. At the 8-9am peak hour there are over 6,700 traffic movements. With growth in building development and population, traffic count numbers can be expected to increase over time.

## **7 *1,000,000m<sup>2</sup> Versus 1,845,000m<sup>2</sup> Future Central Canberra Built Development***

The Griffin Society's Public Hearing evidence (*Proof Committee Hansard, page PW 15*) states 1,845,000m<sup>2</sup> GFA of building can be developed in the central national area.

The Griffin Legacy assumes a 50 year timeframe. It could be imagined that building development of the above order would be realized over several decades into the future.

Traffic performance modelling of the intersection has adopted future built development of 1,000,000m<sup>2</sup> in central Canberra. This represents a robust and long term development scenario.

The 1,000,000m<sup>2</sup> has been based on existing available development sites and likely land uses, rather than newly developed sites. This future development scenario has been agreed with the ACT Government.

The predictions of traffic analysis for a larger quantum of built development, and beyond this, are much more variable. Such longer term scenarios are influenced by such factors as future

- fuel prices and sources, and effects on private vehicle usage;
- developments and uptake in modes of public transport;
- future Canberra-wide traffic network planning;
- population growth and suburban planning;
- economic and business growth, and consequent built development locations, and
- land use planning.

**8 "Footprint" Overlay Accuracy**

The Griffin Society's Public Hearing evidence (*Proof Committee Hansard, page PW 21*) states "(NCA) has not done an accurate overlay of the full construction".

The main Site Plan (*refer attached drawing*) shows the existing roundabout and approach roadways outlined underneath the proposed new intersection. This drawing shows that the new intersection design and the associated on and off ramps closely follow the existing road layout. Consequently, there is no substantial impact on adjacent designated building sites and the existing land use remains largely as is.

**9 Forward ACT Urban Planning**

The National Capital Plan (which is subordinate legislation under the Planning and Land Management Act) is directed at managing future planning and future development growth, with improved outcomes in sustainability. Accordingly, Parliamentary endorsed planning strategies are in place in the ACT.

The NCA continues to work with the ACT Government to guide the future development of the National Capital.

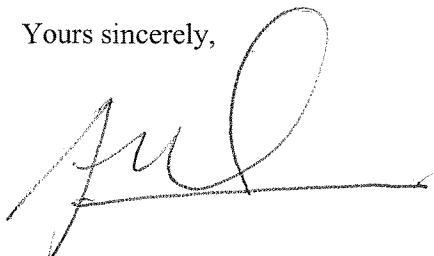
**10 Technical Reports and Data**

In line with previous advice, the NCA can provide the Committee with any of the background technical reports and data referred to in the written NCA Evidence, as may be required.

Further support information, as required, can also be provided.

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](mailto:phil.waite@natcap.gov.au))

Yours sincerely,



Andrew Smith  
A/g Managing Director - Projects

14 August 2008